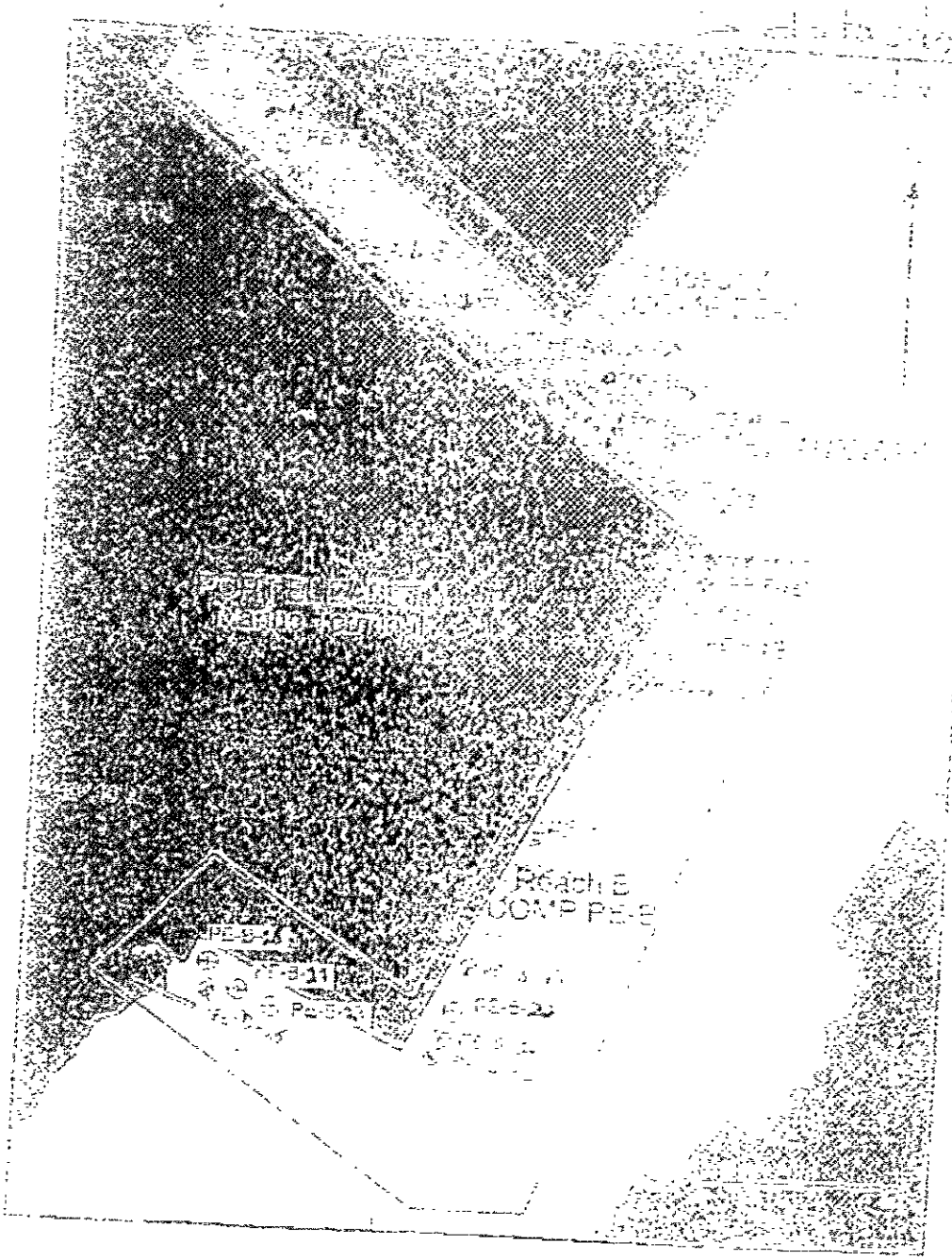

Newark Bay Study Area

NBSA-00091

Table 1

Summary of Sampling at Elizabeth Channel. Core sample lengths in feet.

Sampling Site	GPSD Coordinates	Loranc Coordinates X	Loranc Coordinates Y	Project Depth (Feet)[3]	Corrected Water Depth (feet)[2]	Targeted Core Length (feet)	Core Retrieved First/Second (feet) Sample
PE-A-1	40°41.3012'N-74°09.5271'W	27106.98	43860.35	42	34.5 (37.6)[3]	7.5	5.5/6.0
PE-A-2	40°41.2503'N-74°09.5319'W	27106.82	43859.91	42	36.3 (40.6)[3]	5.7	5.7
PE-A-3	40°41.1954'N-74°09.4951'W	27106.37	43859.25	42	35.2 (40.4)[3]	6.8	6.8
PE-A-4	40°41.1592'N-74°09.4011'W	27105.46	43858.80	42	36.6 (42.2)[3]	5.4	5.4/5.0
PE-A-5	40°41.0986'N-74°09.3283'W	27106.60	43858.01	42	34.6 (39.2)[3]	7.4	7.4
PE-A-6	40°41.9083'N-74°08.8884'W	27100.55	43855.59	42	35.8 (39.3)[3]	6.2	6.2
PE-A-7	40°40.8493'N-74°08.7964'W	27099.77	43855.01	42	35.2 (35.8)[3]	6.8	6.0
PE-A-8	40°40.7888'N-74°08.7091'W	27098.90	43854.16	42	37.3 (39.5)[3]	4.7	4.7
PE-A-9	40°40.7227'N-74°08.5936'W	27097.71	43853.52	42	37.8 (41.3)[3]	4.2	4.2
PE-A-10	40°40.6502'N-74°08.4714'W	27096.47	43852.55	42	36.8 (41.4)[3]	5.2	5.2
PE-A-11	40°40.6195'N-74°08.6829'W	27098.25	43853.21	42	37.8 (38.7)[3]	4.2	3.0
PE-A-12	40°40.6531'N-74°08.6109'W	27097.66	43852.85	42	36.5 (37.0)[3]	5.5	5.5
PE-A-13	40°40.5845'N-74°08.5127'W	27096.63	43852.09	42	33.4 (34.9)[3]	8.6	6.4/6.8
PE-B-14	40°40.3921'N-74°08.3210'W	27094.38	43849.70	42	35.4 (40.9)[3]	6.6	6.6
PE-B-15	40°40.3587'N-74°08.3352'W	27094.41	43849.48	42	36.2 (41.5)[3]	5.8	5.8
PE-B-16	40°40.3238'N-74°08.3636'W	27094.55	43849.18	42	34.2 (39.2)[3]	7.8	7.8
PE-B-17	40°40.2716'N-74°08.4018'W	27094.62	43848.59	42	36.3 (40.9)[3]	5.7	5.7
PE-B-18	40°40.2332'N-74°08.4214'W	27094.66	43848.33	42	37.2 (38.8)[3]	4.8	4.8
PE-B-19	40°39.8194'N-74°08.7191'W	27095.66	43844.63	42	37.5 (42.7)[3]	4.5	4.5
PE-B-20	40°39.7830'N-74°08.7291'W	27095.75	43844.27	42	36.9 (42.3)[3]	5.1	5.1
PE-B-21	40°39.7437'N-74°08.7754'W	27095.88	43843.77	42	38.2 (39.3)[3]	3.8	3.8
PE-B-22	40°39.6233'N-74°08.8564'W	27096.13	43842.74	42	39.1 (39.4)[3]	2.9	2.9
PE-B-23	40°39.6408'N-74°08.2391'W	27096.13	43842.74	42	38.6 (38.8)[3]	3.4	3.4
PE-B-24	40°39.6743'N-74°09.3049'W	27099.86	43843.79	42	38.5 (38.9)[3]	3.5	3.5
PE-B-25	40°39.8553'N-74°09.3592'W	27100.33	43844.01	42	35.4 (36.2)[3]	6.6	6.6
PE-B-26	40°39.7137'N-74°09.3957'W	27100.77	43844.33	42	35.1 (36.5)[3]	6.9	6.9

1 Includes two feet over dredge
2 Includes tide at time of sampling
3 Corrected MLW

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AQUA SURVEY, INC

Battelle Ocean Sciences
USACE New York District Work Order 1
TOC and Grain Size Data

Sample ID	Sample Description	Date Analyzed	TOC %	GRAVEL %	SAND %	SILT %	CLAY %	Comments
SX87	PE-A-1	11/25/95	3.85	0.00	3.45	47.00	49.55	Sample
SX88	PE-A-2	11/25/95	2.53	0.00	5.08	44.39	50.53	Sample
SX89	PE-A-3	11/25/95	3.35	0.00	4.83	43.19	51.98	Sample
SX90	PE-A-4	11/25/95	3.02	0.00	3.50	45.80	50.71	Sample
SX91	PE-A-5	11/25/95	2.48	0.00	1.88	46.03	52.09	Sample
SX92	PE-A-6	11/25/95	3.02	0.00	2.97	46.42	50.62	Sample
SX93	PE-A-7	11/25/95	3.21	0.00	2.68	43.60	53.72	Sample
SX94	PE-A-8	11/25/95	3.05	0.00	2.31	44.83	52.88	Sample
SX95	PE-A-9	11/25/95	3.12	0.00	3.75	44.69	51.55	Sample
SX96	PE-A-10	11/25/95	2.72	0.00	5.52	39.58	54.90	Sample
SX97	PE-A-11	11/25/95	3.24	0.00	2.01	46.53	51.47	Sample
SX98	PE-A-12	11/25/95	3.07	0.00	2.66	47.24	50.10	Sample
SX98	PE-A-12	11/25/95	3.10	0.00	2.17	46.71	51.12	Duplicate
SX98	PE-A-12	11/25/95	3.14	0.00	2.21	46.34	51.45	Triplicate
SX99	PE-A-13	11/25/95	2.17	0.00	5.40	41.53	53.07	Sample

Battelle Ocean Sciences
USACE New York District Work Order 1
TOC and Grain Size Data

Sample ID	Sample Description	Date Analyzed	TOC %	GRAVEL %	SAND %	SILT %	CLAY %	Comments
SY01	PE-B-14	11/25/95	2.62	0.00	15.92	36.10	47.98	Sample
SY02	PE-B-15	11/25/95	2.55	0.00	15.57	35.44	49.00	Sample
SY03	PE-B-16	11/25/95	2.78	0.00	12.92	37.97	49.11	Sample
SY04	PE-B-17	11/25/95	3.00	0.00	14.38	38.73	46.88	Sample
SY05	PE-B-18	11/25/95	1.66	0.00	12.04	33.58	54.37	Sample
SY06	PE-B-19	11/25/95	2.59	0.00	12.88	36.82	50.30	Sample
SY07	PE-B-20	11/25/95	2.80	0.00	17.63	37.44	44.93	Sample
SY08	PE-B-21	11/25/95	3.40	0.00	14.85	40.07	45.28	Sample
SY09	PE-B-22	11/25/95	2.82	1.39	17.15	36.69	44.77	Sample
SY10	PE-B-23	11/25/95	3.26	0.00	2.95	44.47	52.58	Sample
SY11	PE-B-24	11/25/95	3.36	0.00	2.63	45.77	51.61	Sample
SY12	PE-B-25	11/25/95	3.71	0.00	3.20	44.74	52.06	Sample
SY12	PE-B-25	11/25/95	3.74	0.00	3.24	44.57	52.20	Duplicate
SY12	PE-B-25	11/25/95	3.82	0.00	3.43	44.05	52.52	Triplicate
SY13	PE-B-26	11/25/95	3.80	0.00	9.42	41.19	49.40	Sample

Battelle Ocean Sciences
U.S. Army Corps of Engineers New York District
Work Order #1/#2 - Sediments

Dry Weight Table

Field Sample ID	BOS ID	Moisture (%)
PE-A-1	SX87	70.25
PE-A-2	SX88	56.86
PE-A-3	SX89	71.47
PE-A-4	SX90	66.85
PE-A-5	SX91	60.68
PE-A-6	SX92	67.68
PE-A-7	SX93	66.87
PE-A-8	SX94	68.79
PE-A-9	SX95	66.89
PE-A-10	SX96	62.50
PE-A-11	SX97	71.78
PE-A-12	SX98	73.17
PE-A-13	SX99	57.30
PE-B-14	SY01	60.66
PE-B-15	SY02	54.75
PE-B-16	SY03	64.02
PE-B-17	SY04	67.69
PE-B-18	SY05	58.43
PE-B-19	SY06	63.34
PE-B-20	SY07	67.13
PE-B-21	SY08	67.94
PE-B-22	SY09	67.06
PE-B-23	SY10	67.47
PE-B-24	SY11	66.03
PE-B-25	SY12	71.57
PE-B-26	SY13	68.81
Tuckerton Control Mud	SY14	75.80
Mud Dump Reference Sed	SY15	33.87
Reach A Composite	SY16	64.25
Reach B Composite	SY17	63.60
Reach B Composite-DUP	SY17-DUP	64.92
Reach B Composite-TRIP	SY17-TRIP	65.20
Reach A Composite-DUP	SY16-DUP	66.26
Reach A Composite-TRIP	SY16-TRIP	63.12
Sandy Hook Control Sand	SY29	18.02

Battelle Ocean Sciences
USACE/NYD Work Order 1
Sediment Metals Data
Units: ug/g dry weight

G335601-0004
January 16, 1996
Entered by: J. Rogozenski/E.Kitson
Filename: C:\Projects\ACOE\95_6.wb1

FIELD ID	BATTELLE ID	Ag ug/g	As ug/g	Cd ug/g	Cr ug/g	Pb ug/g	Cu ug/g	Ni ug/g	Zn ug/g
Reach A Composite	SY16-R1	5.16	13.7	3.78	156	252	140	35.8	299
	SY16-R2	4.83	14.5	3.62	156	255	128	32.5	284
	SY16-R3	5.78	14.6	3.66	144	200	122	41.0	257
Reach B Composite	SY17	4.92	13.6	2.37	71.5	151	112	40.5	180
Reference sediment	SY15	0.01 J	4.69	0.006 J	3.39	4.30	0.94	2.47	7.38
	SY15-MDL-1	0.30	5.41	0.028	3.98	6.14	1.12	3.06	8.88
	SY15-MDL-2	0.27	6.09	0.025	3.88	6.01	1.12	3.05	9.37
	SY15-MDL-3	0.27	4.79	0.025	4.24	6.49	1.10	2.64	9.14
	SY15-MDL-4	0.28	5.68	0.027	4.58	7.57	1.20	3.07	9.81
	KX93-CRM	0.12	8.89	0.329	35.3	20.8	5.78	12.7	41.0
	KX94-MB	<0.004 J	<0.08 J	<0.002 J	<0.03 J	<0.05 J	<0.11 J	0.40 J	<0.08 J
	KX95-MB	<0.004 J	<0.08 J	<0.002 J	<0.03 J	<0.05 J	<0.11 J	<0.24 J	<0.08 J
	PDL	0.05	2.48	0.007	1.42	3.21	0.20	0.95	1.79

J Below analyte PDL
PDL: Practical Detection Limit STD(n-1)*4.541

Battelle Ocean Sciences
USACE/NYD Work Order 1
Sediment Mercury Data
Units: ug/g wet weight

G335601-0004
January 16, 1996
Entered by: J. Rogozenski/E.Kitson
Filename: C:\Projects\ACOE\95_6.wb1

Field ID	BATTELLE ID	Hg ug/g wet
Reach A Composite	SY16-R1-HG	0.914 T
	SY16-R2-HG	0.898 T
	SY16-R3-HG	0.793 T
Reach B Composite	SY17-HG	0.895 T
Reference Sediment	SY15	<0.036 T
	SY15-MDL-1	0.075 T
	SY15-MDL-2	0.069 T
	SY15-MDL-3	0.083 T
	SY15-MDL-4	0.074 T
	KY18-CRM *	0.075 +
	KX19-MB	<0.038
	KX20-MB	<0.038
	PDL	0.026

* CRM used 1646
** Sample mass of 0.30 (0.2 /0.67) assigned for calculation of wet weight concentrations.
*** PDL: Practical Detection Limit
J Below Analyte PDL
+ Based on dry weight, percent moisture not available for CRM.
T Mercury holding time of 28 days exceeded.

Battelle Ocean Sciences
USACE/NYD Work Orders 1&2
Sediment Dioxin/Furan Data
pg/g dry weight

Sample Description	PE-A-1	PE-A-2	PE-A-3	PE-A-4	PE-A-5	PE-A-6	PE-A-7
Battelle ID	SX87	SX88	SX89	SX90	SX91	SX92	SX93
Wet Weight	10.0561	10.0778	10.097	10.1108	10.1033	10.0795	10.0072
% Moisture	70.25	56.66	71.47	66.85	60.68	67.66	68.87
Dry Weight	2.99	4.37	2.88	3.35	3.97	3.26	3.12
ANALYTE							
2,3,7,8-TCDD	105.75	92.66	72.68	73.36	174.77	75.00	60.65
1,2,3,7,8-PeCDD	19.03 U	8.70 U	17.46 U	11.46 U	8.83 U	11.26 U	11.73 U
1,2,3,4,7,8-HxCDD	9.45 J	6.28	8.94 J	6.55 J	5.70 J	6.75 J	4.58 J
1,2,3,6,7,8-HxCDD	37.68	30.32	28.11	28.38	31.10	27.51	24.90
1,2,3,7,8,9-HxCDD	21.82	21.41	23.17	20.36	22.71	22.43	16.42
1,2,3,4,6,7,8-HpCDD	755.03	658.51	528.88	528.63	573.66	537.31	403.92
OCDD	6109.11	6109.61	5293.87	5125.04	5475.05	4923.30	3934.31
2,3,7,8-TCDF	123.06	155.79	117.81	119.31	144.89	125.68	92.13
1,2,3,7,8-PeCDF	24.10 U	10.68 U	22.61 U	14.21 U	11.09 U	14.17 U	14.49 U
2,3,4,7,8-PeCDF	16.44 U	8.26 U	16.89 U	28.08	30.80	30.97	26.28
1,2,3,4,7,8-HxCDF	83.50	73.47	79.07	74.95	82.66	83.57	68.01
1,2,3,6,7,8-HxCDF	16.10 U	7.25 U	14.63 U	8.67 U	7.15 U	9.19 U	9.41 U
1,2,3,7,8,9-HxCDF	24.71 U	10.24 U	21.04 U	11.92 U	11.24 U	13.09 U	12.82 U
2,3,4,6,7,8-HxCDF	9.51 J	10.54	13.46 J	11.34 J	12.08	12.13 J	9.77 J
1,2,3,4,6,7,8-HpCDF	377.86	350.90	328.15	310.83	365.13	341.86	278.73
1,2,3,4,7,8,9-HpCDF	16.00 J	17.03	14.27 J	15.23	15.28	13.55	13.30
OCDF	573.51	579.49	481.21	499.03	595.04	518.69	464.12

Battelle Ocean Sciences
USACE/NYD Work Orders 1&2
Sediment Dioxin/Furan Data
pg/g dry weight

Sample Description	PE-A-8	PE-A-9	PE-A-10	PE-A-11	PE-A-12	PE-A-13
Battelle ID	SX94	SX95	SX96	SX97	SX98	SX99
Wet Weight	10.1626	10.0074	10.0375	10.0167	10.0138	10.1834
% Moisture	69.79	66.89	62.5	71.78	73.17	57.3
Dry Weight	3.07	3.31	3.76	2.83	2.69	4.35
ANALYTE						
2,3,7,8-TCDD	65.28	74.87	68.56	430.55	47.78	47.17
1,2,3,7,8-PeCDD	17.54 U	4.77 U	4.24 U	4.78 U	5.93 U	3.28 U
1,2,3,4,7,8-HxCDD	3.18 J	4.26 J	8.64 U	9.21 U	10.40 U	5.57 U
1,2,3,6,7,8-HxCDD	19.50	16.67	17.04	17.01	14.95	12.74
1,2,3,7,8,9-HxCDD	14.13 J	13.86	13.71	12.05	11.48	9.70
1,2,3,4,6,7,8-HpCDD	421.55	335.06	321.97	265.70	275.59	234.82
OCDD	5836.35	3236.30	3236.75	2667.58	2934.14	2363.33
2,3,7,8-TCDF	84.14	100.54	87.65	58.08	80.40	65.81
1,2,3,7,8-PeCDF	22.21 U	3.47 U	3.68 U	3.65 U	4.29 U	2.44 U
2,3,4,7,8-PeCDF	29.06	27.45	10.56 U	14.67	12.90	10.12
1,2,3,4,7,8-HxCDF	71.23	123.92	183.63	50.35	55.72	34.64
1,2,3,6,7,8-HxCDF	14.27 U	6.52 U	7.15 U	7.16 U	8.65 U	4.47 U
1,2,3,7,8,9-HxCDF	20.06 U	2.54 U	2.91 U	2.83 U	3.39 U	1.89 U
2,3,4,6,7,8-HxCDF	12.12 J	14.32	11.07	5.32	8.20	5.41
1,2,3,4,6,7,8-HpCDF	256.00	474.84	587.04	183.77	324.56	151.38
1,2,3,4,7,8,9-HpCDF	13.17 J	77.68	25.47	8.86	10.10	7.63
OCDF	538.20	1167.35	1020.88	249.68	540.85	228.43

Battelle Ocean Sciences
USACE/NYD Work Orders 1&2
Sediment Dioxin/Furan Data
pg/g dry weight

Sample Description	PE-B-14	PE-B-14	PE-B-14	PE-B-15	PE-B-16	PE-B-17	PE-B-18
Battelle ID	SY01	SY01 DUP	SY01 TRIP	SY02	SY03	SY04	SY05
Wet Weight	10.0709	10.0098	10.0555	10.0884	10.013	10.0638	10.0584
% Moisture	60.68	60.66	60.66	64.75	64.02	67.69	56.43
Dry Weight	3.96	3.94	3.96	3.56	3.60	3.25	4.38
ANALYTE							
2,3,7,8-TCDD	52.47	43.70	52.97	50.64	105.89	74.47	48.34
1,2,3,7,8-PeCDD	3.76 U	3.13 U	5.19 U	9.08 U	9.51 U	10.12 U	5.83 U
1,2,3,4,7,8-HxCDD	3.71 J	3.66 J	3.56 J	4.09 J	5.11 J	4.67 J	7.99 U
1,2,3,6,7,8-HxCDD	19.40	17.56	18.78	20.43	25.93	22.04	17.28
1,2,3,7,8,9-HxCDD	14.28	10.60	16.52	13.28	20.73	14.92	10.12 U
1,2,3,4,6,7,8-HpCDD	352.75	306.20	371.76	369.13	531.07	387.90	298.03
OCDD	3016.00	2837.09	3365.58	3734.41	5032.24	4028.75	3434.24
2,3,7,8-TCDF	85.03	84.44	87.75	95.04	123.65	110.71	94.63
1,2,3,7,8-PeCDF	2.85 U	2.41 U	4.09 U	3.89 U	4.11 U	4.43 U	5.49 U
2,3,4,7,8-PeCDF	11.29	15.33	17.26	14.87	24.01	20.30	12.23
1,2,3,4,7,8-HxCDF	40.34	34.60	44.23	51.04	70.79	54.22	40.69
1,2,3,6,7,8-HxCDF	5.52 U	4.35 U	7.50 U	2.07 U	2.14 U	2.29 U	3.92 U
1,2,3,7,8,9-HxCDF	1.98 U	1.65 U	2.75 U	4.45 U	4.17 U	4.92 U	14.62 U
2,3,4,6,7,8-HxCDF	7.22	7.60	8.16	9.02	15.95	12.13	8.24
1,2,3,4,6,7,8-HpCDF	193.26	195.68	189.65	218.65	323.24	301.66	173.61
1,2,3,4,7,8,9-HpCDF	8.11	9.35	9.84	9.90	14.73	12.07	6.49 U
OCDF	292.81	288.00	301.37	340.45	483.24	466.70	361.21

Battelle Ocean Sciences
USACE/NYD Work Orders 1&2
Sediment Dioxin/Furan Data
pg/g dry weight

Sample Description	PE-B-19	PE-B-20	PE-B-21	PE-B-22	PE-B-23	PE-B-24	PE-B-25
Battelle ID	SY06	SY07	SY08	SY09	SY10	SY11	SY12
Wet Weight	10.0532	10.046	10.0295	10.0512	10.0071	10.0152	10.0584
% Moisture	63.34	67.13	67.94	67.06	67.47	66.03	71.57
Dry Weight	3.69	3.30	3.22	3.31	3.26	3.40	2.86
ANALYTE							
2,3,7,8-TCDD	62.19	57.74	90.55	111.81	92.16	78.16	106.23
1,2,3,7,8-PeCDD	2.45 U	3.68 U	3.74 U	9.99 U	7.35 U	6.80 U	8.89 U
1,2,3,4,7,8-HxCDD	5.84	6.57	6.39	6.68 J	8.95 J	5.80 J	6.51 J
1,2,3,6,7,8-HxCDD	25.50	23.09	31.22	25.32	34.52	31.97	31.52
1,2,3,7,8,9-HxCDD	20.40	18.38	22.30	20.31	26.34	26.67	23.25
1,2,3,4,6,7,8-HpCDD	684.97	485.31	588.49	582.76	696.37	664.82	603.97
OCDD	9601.42	4590.23	6121.74	5780.97	7229.70	6742.83	6249.67
2,3,7,8-TCDF	103.68	95.25	130.51	121.55	153.30	140.01	172.67
1,2,3,7,8-PeCDF	2.40 U	3.62 U	3.65 U	6.01 U	4.55 U	4.15 U	5.17 U
2,3,4,7,8-PeCDF	18.00	21.93	23.58	20.73	29.39	23.64	21.84
1,2,3,4,7,8-HxCDF	54.83	58.11	74.17	71.77	74.39	74.39	70.24
1,2,3,6,7,8-HxCDF	1.47 U	2.31 U	2.40 U	3.01 U	2.21 U	2.03 U	2.46 U
1,2,3,7,8,9-HxCDF	2.15 U	3.62 U	3.34 U	13.33 U	9.31 U	7.74 U	10.83 U
2,3,4,6,7,8-HxCDF	12.00	11.71	13.72	13.66	17.00	16.54	15.65
1,2,3,4,6,7,8-HpCDF	253.00	282.66	341.52	331.45	370.98	341.57	325.84
1,2,3,4,7,8,9-HpCDF	12.85	13.84	14.78	15.54	21.61	15.04	15.89
OCDF	402.37	421.54	552.56	610.38	606.85	562.61	609.99

Battelle Ocean Sciences
USACE/NYD Work Orders 1&2
Sediment Dioxin/Furan Data
pg/g dry weight

Sample Description	PE-B-26	PE-B-26	PE-B-26
Battelle ID	SY13	SY13 DUP	SY13 TRIP
Wet Weight	10.1848	10.0304	10.0328
% Moisture	68.81	68.81	68.81
Dry Weight	3.18	3.13	3.13
ANALYTE			
2,3,7,8-TCDD	128.63097	83.01	77.30
1,2,3,7,8-PeCDD	3.56 U	4.10 U	3.75 U
1,2,3,4,7,8-HxCDD	8.50	5.58	5.67
1,2,3,6,7,8-HxCDD	38.92	24.14	27.86
1,2,3,7,8,9-HxCDD	30.17	20.01	23.79
1,2,3,4,6,7,8-HpCDD	808.56	696.22	854.18
OCDD	8356.27	6267.87	8022.25
2,3,7,8-TCDF	172.81	125.30	136.65
1,2,3,7,8-PeCDF	4.23 U	3.62 U	3.56 U
2,3,4,7,8-PeCDF	30.07	17.79	20.29
1,2,3,4,7,8-HxCDF	78.72	52.77	62.20
1,2,3,6,7,8-HxCDF	2.79 U	3.49 U	3.53 U
1,2,3,7,8,9-HxCDF	3.56 U	3.62 U	3.30 U
2,3,4,6,7,8-HxCDF	16.02	11.73	12.12
1,2,3,4,6,7,8-HpCDF	390.22	243.36	278.42
1,2,3,4,7,8,9-HpCDF	20.26	13.63	14.68
OCDF	653.80	429.95	480.12

USACE (1993)
Data only

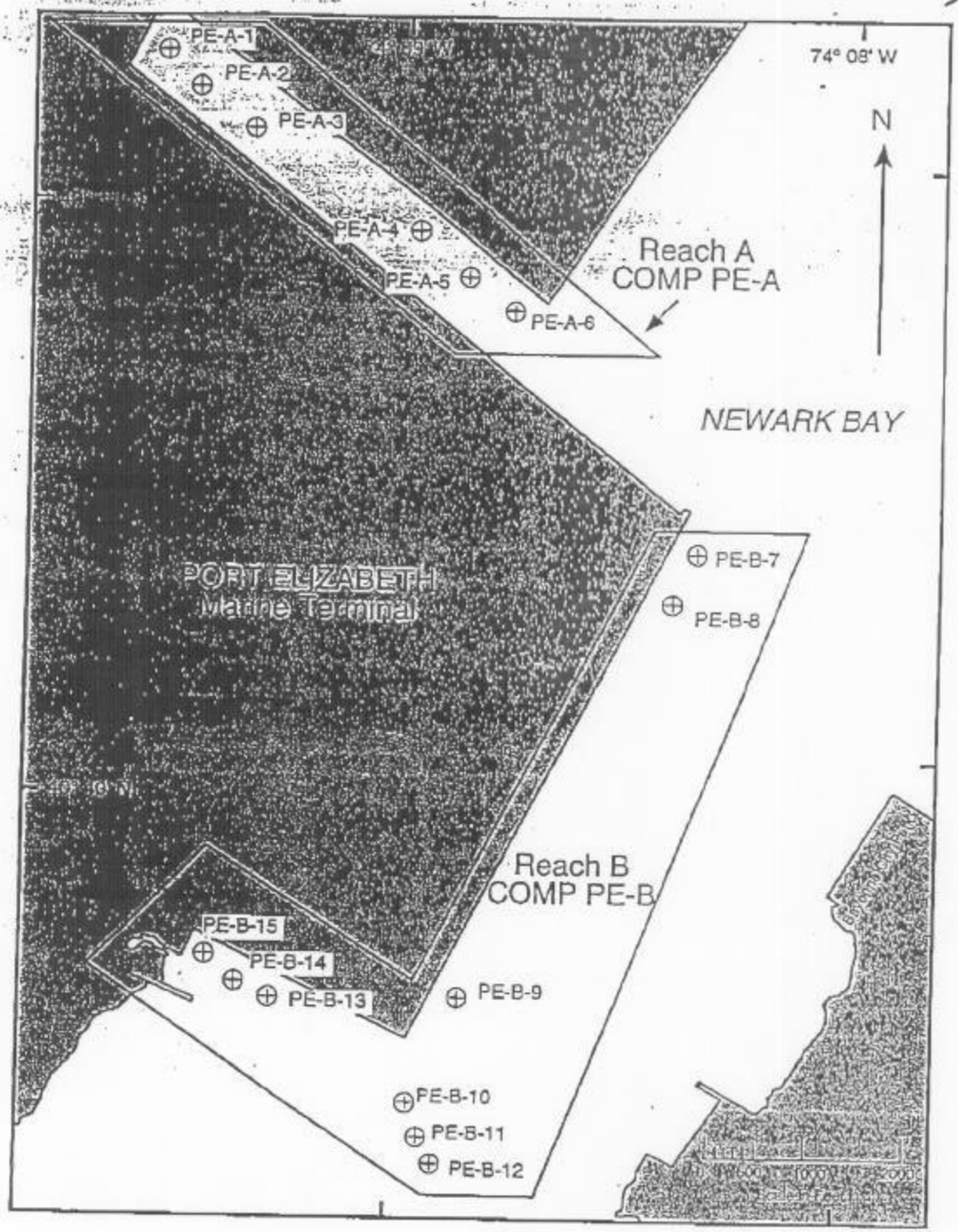

FIGURE 3.3. Location of Sampling Stations in the Port Elizabeth Project Area

1993

TABLE 3.1 (contd)

Station Designation	Replicates	Sampling Coordinates Latitude N	Longitude W	Date Sampled	Mudline Elevation (-ft MLW)	Required Depth (-ft MLW)	Required Core Length (ft)	Collected Core Length (ft)
Arthur Kill Reach C								
AK-C- 1	1	40° 32.912'	74° 15.230'	4/16/93	30.4	37.0	6.6	7.0
AK-C- 2	1	40° 32.935'	74° 15.187'	4/16/93	33.5	37.0	3.5	5.0
AK-C- 3	1	40° 32.862'	74° 14.969'	4/16/93	33.5	37.0	3.5	4.0
AK-C- 4	1	40° 33.166'	74° 14.749'	4/16/93	33.0	37.0	4.0	4.0
AK-C- 5	1	40° 33.342'	74° 14.275'	4/16/93	34.2	37.0	2.8	3.0
AK-C- 6	1	40° 33.587'	74° 13.063'	4/16/93	31.4	37.0	5.6	6.0
AK-C- 7	1	40° 33.773'	74° 12.869'	4/16/93	31.9	37.0	5.1	6.0
AK-C- 8	1	40° 33.878'	74° 12.871'	4/16/93	31.2	37.0	5.8	7.0
AK-C- 9	1	40° 34.047'	74° 12.784'	4/16/93	34.7	37.0	2.3	2.3
AK-C- 10	1	40° 34.375'	74° 12.703'	4/16/93	32.9	37.0	4.1	8.0
AK-C- 11	1	40° 34.537'	74° 12.658'	4/16/93	33.6	37.0	3.4	4.0
AK-C- 12	1	40° 34.775'	74° 12.536'	4/16/93	33.4	37.0	3.6	4.0
Port Elizabeth Reach A								
PE-A- 1	1	40° 41.388'	74° 09.595'	4/19/93	38.8	42.0	3.2	3.5
PE-A- 2	1	40° 41.148'	74° 09.446'	4/19/93	37.8	42.0	4.2	2.0
PE-A- 2	2	40° 41.148'	74° 09.446'	4/19/93	37.8	42.0	4.2	4.0
PE-A- 3	1	40° 40.964'	74° 09.190'	4/15/93	38.4	42.0	3.6	4.0
PE-A- 4	1	40° 40.996'	74° 08.972'	4/15/93	38.5	42.0	3.5	4.0
PE-A- 5	1	40° 40.962'	74° 08.894'	4/15/93	38.2	42.0	3.8	4.0
PE-A- 6	1	40° 40.817'	74° 08.713'	4/15/93	40.2	42.0	1.8	2.2
Port Elizabeth Reach B								
PE-B- 7	1	40° 40.358'	74° 08.323'	4/15/93	39.4	42.0	2.6	3.0
PE-B- 8	1	40° 40.285'	74° 08.431'	4/15/93	38.7	42.0	3.3	3.5
PE-B- 9	1	40° 39.626'	74° 08.870'	4/15/93	38.7	42.0	3.3	3.5
PE-B- 10	1	40° 39.503'	74° 08.960'	4/15/93	36.4	42.0	5.6	5.0
PE-B- 11	1	40° 39.561'	74° 09.001'	4/15/93	35.7	42.0	6.3	6.5
PE-B- 12	1	40° 39.398'	74° 08.879'	4/15/93	36.8	42.0	5.2	5.1
PE-B- 13	1	40° 39.735'	74° 09.218'	4/15/93	37.7	42.0	4.3	5.0
PE-B- 14	1	40° 39.720'	74° 09.335'	4/15/93	38.7	42.0	3.3	3.5
PE-B- 15	1	40° 39.744'	74° 09.374'	4/15/93	38.2	42.0	3.8	3.8
Hackensack River								
HR-A- 1	1	40° 42.537'	74° 07.050'	4/19/93	30.5	32.0	1.5	1.5
HR-A- 2	1	40° 42.614'	74° 06.855'	4/19/93	24.7	32.0	7.3	7.5
HR-A- 3	1	40° 42.630'	74° 06.890'	4/19/93	25.3	32.0	6.7	7.0
HR-A- 4	1	40° 42.792'	74° 06.647'	4/19/93	27.3	32.0	4.7	5.0
HR-A- 5	1	40° 43.214'	74° 06.183'	4/19/93	27.3	32.0	4.7	6.0
HR-A- 6	1	40° 43.876'	74° 05.776'	4/19/93	29.5	32.0	2.5	3.0
HR-A- 7	1	40° 44.260'	74° 05.428'	4/19/93	29.7	32.0	2.3	2.0
HR-A- 8	1	40° 44.960'	74° 04.728'	4/19/93	24.2	27.0	2.8	4.5

TABLE A.1. (contd)

Sediment Treatment	Analytical Batch	Total Percent Sand >62.4 μm	Silt 62.4-3.9 μm	Clay <3.9 μm
AK-C-6	2	14	39	47
AK-C-7	2	3	45	52
AK-C-8	2	5	46	49
AK-C-9	2	21	44	35
AK-C-10	2	20	40	40
AK-C-11	2	26	36	38
AK-C-12	2	40	37	23
Port Elizabeth Reach A				
PE-A-1	1	6	57	37
PE-A-2	1	7	51	42
PE-A-3	1	17	48	35
PE-A-4 Replicate 1	1	8	50	42
PE-A-4 Replicate 2	1	8	47	45
PE-A-4 Replicate 3	1	7	50	43
PE-A-5	1	4	51	45
PE-A-6	1	3	55	42
Port Elizabeth Reach B				
PE-B-7	1	9	52	39
PE-B-8	1	12	52	36
PE-B-9	1	13	48	39
PE-B-10	1	27	43	30
PE-B-11	1	25	42	33
PE-B-12	1	29	47	24
PE-B-13	1	6	56	38
PE-B-14	1	9	50	41
PE-B-15	1	6	50	44
Hackensack River Reach A				
HR-A-1	3	87	8	5
HR-A-2	3	14	54	32
HR-A-3	3	17	50	33
HR-A-4 Replicate 1	3	26	46	28
HR-A-4 Replicate 2	3	26	45	29
HR-A-4 Replicate 3	3	26	46	28
HR-A-5 Replicate 1	3	40	36	24
HR-A-5 Replicate 2	3	IS[b]	IS	IS
HR-A-5 Replicate 3	3	IS	IS	IS

TABLE A.2. (contd)

Sediment Treatment	Analytical TOC Batch	TOC (percent dry wt.)	Analytical Solids Batch	Percent Moisture
Arthur Kill Reach B				
COMP AK-B	4	1.85	NA	NA
AK-B-13	3	3.40	2	59
AK-B-14	3	3.13	2	55
AK-B-15	3	4.05	2	57
AK-B-16	3	4.12	2	64
AK-B-17	3	5.09	5	64
AK-B-18	3	4.41	5	59
AK-B-19	3	4.11	5	65
AK-B-20	3	4.96	5	65
AK-B-21 Replicate 1	3	3.79	5	52
AK-B-21 Replicate 2	3	3.79	NA	NA
AK-B-21 Replicate 3	3	~~3.96~~	NA	NA
		4.12±0.64		60±4.8
Arthur Kill Reach C				
AK-C-1	2	4.27	2	65
AK-C-2 Replicate 1	2	4.00	2	63
AK-C-2 Replicate 2	NA	NA	2	63
AK-C-2 Replicate 3	NA	NA	2	63
AK-C-3	2	3.61	2	68
AK-C-4	2	3.49	2	65
AK-C-5	2	3.41	2	64
AK-C-6 Replicate 1	3	3.79	2	62
AK-C-6 Replicate 2	3	3.92	NA	NA
AK-C-6 Replicate 3	3	3.83	NA	NA
AK-C-7	3	4.18	2	66
AK-C-8	3	4.57	2	64
AK-C-9	3	5.36	2	72
AK-C-10	3	4.34	2	60
AK-C-11	3	4.33	2	59
AK-C-12	3	3.63	2	62
		4.09±0.55		64.2±3.5
Port Elizabeth Reach A				
PE-A-1 Replicate 1	2	2.86	1	59
PE-A-1 Replicate 2	2	2.96	NA	NA
PE-A-1 Replicate 3	2	2.92	NA	NA
PE-A-2	2	1.51	1	48
PE-A-3	2	2.91	1	55
PE-A-4 Replicate 1	2	2.55	1	54
PE-A-4 Replicate 2	NA	NA	1	54
PE-A-4 Replicate 3	NA	NA	1	54
PE-A-5	2	2.39	1	53
PE-A-6	2	2.64	1	63
		2.49±0.57		55.3±5.2

TABLE A.2. (contd)

Sediment Treatment	Analytical TOC Batch	TOC (percent dry wt.)	Analytical Solids Batch	Percent Moisture
Port Elizabeth Reach B				
PE-B-7	2	2.41	1	59
PE-B-8	2	2.03	1	51
PE-B-9	2	2.72	1	59
PE-B-10	2	2.04	1	46
PE-B-11 Replicate 1	2	2.36	1	48
PE-B-11 Replicate 2	2	2.35	NA	NA
PE-B-11 Replicate 3	2	2.28	NA	NA
PE-B-12	2	1.87	1	43
PE-B-13	2	2.72	1	55
PE-B-14	2	2.87	1	59
PE-B-15	2	3.37	1	60
Hackensack River Reach A				
HR-A-1	4	0.35	3	18
HR-A-2	4	2.40	3	46
HR-A-3 Replicate 1	4	3.13	3	48
HR-A-3 Replicate 2	4	3.29	NA	NA
HR-A-3 Replicate 3	4	3.12	NA	NA
HR-A-4 Replicate 1	NA	2.82	3	47
HR-A-4 Replicate 2	NA	NA	3	47
HR-A-4 Replicate 3	4	NA	3	47
HR-A-5 Replicate 1	NA	3.54	3	45
HR-A-5 Replicate 2	NA	NA	3	IS[c]
HR-A-5 Replicate 3	4	NA	3	IS
HR-A-7 Replicate 1	4	10.23	3	26
HR-A-7 Replicate 2	4	10.18	NA	NA
HR-A-7 Replicate 3	4	9.98	NA	NA
HR-A-6	4	5.05	3	21
HR-A-8	4	13.4	3	34
Claremont Reach I, II, and III				
COMP CL-I	4	2.90	3	55
COMP CL-II	4	3.63	3	56
COMP CL-III	4	2.88	3	55
Reference				
Mud Dump Reference Rep 1	4	0.06	3	14
Mud Dump Reference Rep 2	4	0.06	NA	NA
Mud Dump Reference Rep 3	4	0.06	NA	NA

TABLE A.4. (contd)

Sediment Treatment	Analytical Batch	Bulk Density Wet lbs/ft^3	Bulk Density Dry lbs/ft^3	Specific Gravity
AK-C-10	2	83	33	2.58
AK-C-11	2	84	35	2.58
AK-C-12	2	84	31	2.58
Port Elizabeth Reach A				
PE-A-1	1	84	34	2.58
PE-A-2	1	93	49	2.66
PE-A-3	1	87	39	2.61
PE-A-4 Replicate 1	1	88	40	2.64
PE-A-4 Replicate 2	1	88	40	2.62
PE-A-4 Replicate 3	1	88	40	2.65
PE-A-5	1	89	42	2.59
PE-A-6	1	82	31	2.60
Port Elizabeth Reach B				
PE-B-7	1	85	35	2.59
PE-B-8	1	90	45	2.64
PE-B-9	1	84	34	2.63
PE-B-10	1	94	51	2.64
PE-B-11	1	93	49	2.64
PE-B-12	1	99	57	2.60
PE-B-13	1	86	39	2.61
PE-B-14	1	84	35	2.57
PE-B-15	1	83	33	2.63
Hackensack River Reach A				
HR-A-1	3	130	108	2.68
HR-A-2	3	95	52	2.66
HR-A-3	3	92	48	2.62
HR-A-4 Replicate 1	3	93	49	2.64
HR-A-4 Replicate 2	3	IS[a]	IS	IS
HR-A-4 Replicate 3	3	IS	IS	IS
HR-A-5 Replicate 1	3	96	53	2.62
HR-A-5 Replicate 2	3	96	53	2.65
HR-A-5 Replicate 3	3	95	53	2.62
HR-A-6	3	109	65	2.57
HR-A-7	3	112	90	2.39
HR-A-8	3	99	38	2.41
Reference				
Mud Dump Reference	3	98	84	2.70

TABLE A.19. Total Polynuclear Aromatic Hydrocarbons (TPAHs), Dry Weight, in Sediment, Federal Projects in New York and New Jersey

Sediment Treatment	Batch	PAHs (ug/kg dry weight) Total Low Molecular Weight PAHs	Total High Molecular Weight PAHs	Total PAHs
MOTBY Reach A				
Comp MT-A	1	1620	5996	7616
MOTBY Reach B				
Comp MT-B	1	2757	6429	9186
Arthur Kill Reach A				
Comp AK-A	1	1925	6431	8356
Arthur Kill Reach B				
Comp AK-B	1	3023	7681	10704
Arthur Kill Reach C				
Comp AK-C	1	3887	8809	12696
Port Elizabeth Reach A				
Comp PE-A	1	5619	15201	20820
Port Elizabeth Reach B				
Comp PE-B	1	6224	10946	17170
Hackensack River Reach A				
Comp HR-A	1	88260	217910	306170
Claremont Reach I, II, and III				
Comp CL-I	1	1205	4210	5415
Comp CL-II Replicate 1	1	2132	7501	9633
Comp CL-II Replicate 2	1	2941	9193	12134
Comp CL-II Replicate 3	1	2700	8798	11498
Comp CL-III	1	1623	6621	8244

TABLE A.20. Low Molecular Weight Polynuclear Hydrocarbons (LPAHs), Dry Weight, in Sediment, Federal Projects in New York and New Jersey

Sediment Treatment	LPAHs (µg/kg dry weight)					
	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene
Target DL[a]	4	4	4	4	4	4
Achieved DL	0.72-0.96	0.26-0.34	0.33-0.44	0.42-0.56	0.25-0.33	0.26-0.35
MDL[b] verification	0.49	0.70	0.91	0.89	1.39	0.89
MOTBY Reach A						
Comp MT-A	208	123	231	177	556	325
MOTBY Reach B						
Comp MT-B	1030	168	217	236	621	405
Arthur Kill Reach A						
Comp AK-A	305	179	151	196	675	418
Arthur Kill Reach B						
Comp AK-B	426	212	286	336	1060	683
Arthur Kill Reach C						
Comp AK-C	585	184	313	530	1340	935
Port Elizabeth Reach A						
Comp PE-A	669	310	910	770	1950	1010
Port Elizabeth Reach B						
Comp PE-B	750	213	1130	895	2330	906
Hackensack River Reach A						
Comp HR-A	10100	4970	11000	8690	31700	21800
Claremont Reach I, II, and III						
Comp CL-I	224	137	91.1	130	384	239
Comp CL-II Replicate 1	424	231	155	195	614	513
Comp CL-II Replicate 2	593	356	182	254	859	697
Comp CL-II Replicate 3	472	257	178	228	759	806
Comp CL-III	246	183	81.7	152	547	413

(a) DL Detection limit.
(b) MDL Method Detection Limit.

TABLE A.25. Sediment Herbicide Results, Including Quality Control Data, Federal Projects in New York and New Jersey

Sediment Treatment	Surrogate Percent Recovery Diphenylacetic Acid	Concentration (µg/kg) 2,4,5-T	2,4-D	Silvex
COMP MT-A	72.1	20 U[a]	100 U	NA[b]
COMP MT-B	75.3	20 U	100 U	NA
COMP AK-A	77.5	20 U	100 U	NA
COMP AK-B	72.4	20 U	100 U	NA
COMP PE-A	83.6	20 U	100 U	NA
COMP PE-B	89.2	20 U	100 U	NA
COMP HR-A	70.9	20 U	100 U	NA
COMP CL-III	69.2	20 U	100 U	NA
Quality Control Data				
Method Blank				
Blank	70.6	20 U	100 U	NM[c]
Matrix Spike				
COMP HR-A	70.9	20 U	100 U	20 U
COMP HR-A MS	77.1	20 U	321	115
Concentration Recovered	NA	NA	321	115
Amount Spiked	NA	NS	537	134
Percent Recovery	NA	NA	59.8%	85.8%
Blank Spike				
Blank	70.6	20 U	100 U	20 U
Blank MS	75.2	NA	140	399
Concentration Recovered	NA	NA	140	399
Amount Spiked	NA	NS	179	714
Percent Recovery	NA	NA	78.2%	55.9%

(a) U Undetected above given concentration.
(b) NA Not applicable.
(c) NM Not measured.

TABLE B.1. Water Chemistry for Metals, Federal Projects in New York and New Jersey

Water Treatment	Batch	Replicate	Metals (µg/L wet weight) Ag ICP/MS	Cr GFAA	Cd ICP/MS	Cu ICP/MS	Hg CVAF	Ni ICP/MS	Pb ICP/MS	Zn GFAA
Target Detection Limit			0.25	1.0	0.025	0.35	0.002	0.3	0.35	0.15
Achieved DL	1		0.006	0.054	0.023	0.12	0.00024	0.220	0.03	0.365
Achieved DL	2		0.006	0.111	0.023	0.12	0.00493	0.220	0.03	0.619
Method Detection Limit			0.007	0.163	0.025	0.143	0.000223	0.253	0.035	0.582
Dredging Site Water Samples										
Arthur Kill Reach A	1	1	0.006 U[(a)]	0.741	0.044	2.00	0.00742	1.10	0.958	8.89
Arthur Kill Reach A	1	2	0.006 U	0.741	0.044	1.96	0.00729	1.15	0.952	9.95
Arthur Kill Reach A	1	3	0.006 U	0.710	0.045	2.04	0.00714	1.12	0.985	10.30
Arthur Kill Reach B	1	1	0.11	1.85	0.104	6.42	0.069	1.91	4.32	15.3
Arthur Kill Reach B	1	2	0.051	1.79	0.104	6.22	0.0683	1.84	4.28	14.1
Arthur Kill Reach B	1	3	0.052	1.85	0.104	6.36	0.0643	1.84	4.32	15.3
Arthur Kill Reach C	1	1	0.006 U	0.710	0.062	2.80	0.0108	1.06	1.11	11.5
Arthur Kill Reach C	1	2	0.006 U	0.679	0.062	2.87	0.0103	1.09	1.11	12.4
Arthur Kill Reach C	1	3	0.006 U	0.741	0.063	2.83	0.0102	1.08	1.08	12.8
Port Elizabeth Reach A	1	1	0.006 U	0.895	0.053	3.68	0.00557	1.61	1.82	11.3
Port Elizabeth Reach A	1	2	0.006 U	0.803	0.056	3.51	0.00550	1.60	1.85	13.0
Port Elizabeth Reach A	1	3	0.006 U	0.834	0.053	3.31	0.00586	1.56	1.84	14.1
Port Elizabeth Reach B	1	1	0.006 U	1.20	0.065	2.40	0.0124	1.53	1.91	9.64
Port Elizabeth Reach B	1	2	0.006 U	1.14	0.061	2.57	0.0128	1.69	2.11	10.40
Port Elizabeth Reach B	1	3	0.006 U	1.24	0.056	2.43	0.0135	1.58	1.99	9.21
Hackensack River Reach A	1	1	0.015	1.17	0.065	3.36	0.0173	1.91	2.61	16.2
Hackensack River Reach A	1	2	0.013	1.17	0.085	3.26	0.0160	1.83	2.68	11.8
Hackensack River Reach A	1	3	0.013	1.11	0.086	3.23	0.0162	1.80	2.75	14.8
Mud Dump Site	1	1	0.006 U	0.310	0.068	1.08	0.00451	0.579	0.627	8.68
Mud Dump Site	1	2	0.006 U	0.310	0.067	1.04	0.00508	0.563	0.618	7.940
Mud Dump Site	1	3	0.006 U	0.332	0.074	1.08	0.00477	0.591	0.679	8.26
Elutriate Water Samples										
Arthur Kill Reach A	2	1	0.041	4.15	0.023 U	2.47	0.0942	3.02	1.37	6.09
Arthur Kill Reach A	2	2	0.037	4.37	0.023 U	2.21	0.0847	2.70	1.22	5.21
Arthur Kill Reach A	2	3	0.031	4.13	0.023 U	2.11	0.0861	2.46	1.15	5.41

TABLE B.1. (contd)

Water Treatment	Batch	Replicate	Metals (µg/L wet weight) Ag ICP/MS	Cr GFAA	Cd ICP/MS	Cu ICP/MS	Hg CVAF	Ni ICP/MS	Pb ICP/MS	Zn GFAA
Arthur Kill Reach B	2	1	0.026	4.40	0.023 U	3.51	0.206	2.46	1.29	3.24
Arthur Kill Reach B	2	2	0.027	4.32	0.023 U	3.39	0.213	2.38	1.30	4.13
Arthur Kill Reach B	2	3	0.025	3.86	0.023 U	3.47	0.205	2.29	1.25	3.64
Arthur Kill Reach C	2	1	0.006 U	7.27	0.215	16.7	0.721	8.13	15.7	35.0
Arthur Kill Reach C	2	2	0.006 U	7.69	0.163	16.6	0.749	6.42	12.7	39.8
Arthur Kill Reach C	2	3	0.006 U	7.77	0.164	17.3	0.662	6.31	12.6	34.3
Port Elizabeth Reach A	2	1	0.054	4.23	0.042	3.19	0.103	3.94	6.75	8.85
Port Elizabeth Reach A	2	2	0.057	4.47	0.035	3.13	0.101	3.49	5.98	12.3
Port Elizabeth Reach A	2	3	0.054	4.57	0.038	3.35	0.101	3.63	6.16	10.0
Port Elizabeth Reach B	2	1	0.053	4.50	0.028	2.76	0.123	2.09	2.13	6.49
Port Elizabeth Reach B	2	2	0.054	4.45	0.046	2.77	0.125	2.01	2.20	6.49
Port Elizabeth Reach B	2	3	0.054	4.40	0.023 U	2.64	0.116	1.85	2.06	5.90
Hackensack River Reach A	2	1	0.042	6.41	0.023 U	2.50	0.110	3.04	1.76	5.90
Hackensack River Reach A	2	2	0.036	6.54	0.023 U	2.54	0.102	3.19	1.90	5.50
Hackensack River Reach A	2	3	0.036	7.10	0.023 U	2.36	0.102	2.93	1.71	6.68
Controls	2	1	0.006 U	NA[b]	0.051	0.28	NA	0.802	0.03 U	NA
Controls	2	2	0.006 U	NA	0.056	0.28	NA	0.763	0.03 U	NA

(a) U Undetected at or above given concentration.
(b) NA Not analyzed.

TABLE B.3. Water Chemistry for Pesticides (alphabetical, Aldrin - 2,4'DDT), Federal Projects in New York and New Jersey

Water Treatment	Replicate	Batch	Sample Vol. (L)	Pesticides (ng/L wet weight) Aldrin	a-Chlordane	Dieldrin	2,4'-DDD	2,4'-DDE	2,4'-DDT
Target DL				4	14	2	11	4	20
Achieved DL				0.76	1.93	0.36	0.98	0.74	0.88
Dredging Site Water Samples									
Hackensack River Reach A	1	1	0.90	0.76 U[a]	1.93 U	3.03	0.98 U	0.74 U	0.88 U
Hackensack River Reach A	2	1	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Hackensack River Reach A	3	1	0.90	0.76 U	1.93 U	3.39	0.98 U	0.74 U	0.88 U
Arthur Kill Reach A	1	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Arthur Kill Reach A	2	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Arthur Kill Reach A	3	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach B	1	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach B	2	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach B	3	2	0.90	0.76 U	1.93 U	3.16	0.98 U	0.74 U	0.88 U
Arthur Kill Reach C	1	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Arthur Kill Reach C	2	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Arthur Kill Reach C	3	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Arthur Kill Reach B	1	1	0.90	0.76 U	1.93 U	0.36 U	3.98	0.74 U	0.88 U
Arthur Kill Reach B	2	1	0.90	0.76 U	1.93 U	3.03	3.93	0.74 U	0.88 U
Arthur Kill Reach B	3	1	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach A	1	1	0.90	0.76 U	1.93 U	3.12	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach A	2	1	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach A	3	1	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Mud Dump Site	2	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Mud Dump Site	3	2	0.90	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Mud Dump Site	4	4	0.95	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Elutriate Water Samples									
Arthur Kill Reach C	1	3	0.74	0.76 U	105	59.6	220	533	0.88 U
Arthur Kill Reach C	2	3	0.83	0.76 U	110	62.5	236	578	0.88 U
Arthur Kill Reach C	3	3	0.90	0.76 U	101	58.3	215	519	0.88 U

TABLE B.3. (contd)

Water Treatment	Replicate	Batch	Sample Vol. (L)	Pesticides (ng/L wet weight) Aldrin	a-Chlor-dane	Dieldrin	2,4'-DDD	2,4'-DDE	2,4'-DDT
Arthur Kill Reach B	1	4	0.92	0.76 U	1.93 U	6.67	95.1	84.3	0.88 U
Arthur Kill Reach B	2	4	0.96	0.76 U	1.93 U	6.42	97.3	99.8	0.88 U
Arthur Kill Reach B	3	4	0.94	0.76 U	1.93 U	10.1	207	250	0.88 U
Arthur Kill Reach A	1	3	0.91	0.76 U	3.49	0.36 U	13.1	10.4	0.88 U
Arthur Kill Reach A	2	3	0.92	0.76 U	4.00	3.86	12.3	11.1	0.88 U
Arthur Kill Reach A	3	3	0.90	0.76 U	3.67	3.93	11.9	9.78	0.88 U
Hackensack River Reach A	1	4	0.92	0.76 U	3.78	4.62	0.98 U	0.74 U	0.88 U
Hackensack River Reach A	2	4	0.95	0.76 U	4.26	0.36 U	0.98 U	0.74 U	0.88 U
Hackensack River Reach A	3	4	0.96	5.01	3.17	4.25	3.86	0.74 U	0.88 U
Port Elizabeth Reach B	1	3	0.89	0.76 U	4.89	4.77	14.4	6.95	0.88 U
Port Elizabeth Reach B	2	3	0.82	0.76 U	4.91	4.85	0.98 U	6.73	0.88 U
Port Elizabeth Reach B	3	3	0.89	0.76 U	6.34	5.29	0.98 U	9.07	0.88 U
Port Elizabeth Reach A	1	3	0.81	0.76 U	9.11	6.82	0.98 U	0.74 U	0.88
Port Elizabeth Reach A	2	3	0.80	0.76 U	9.81	6.99	0.98 U	0.74 U	0.88 U
Port Elizabeth Reach A	3	3	0.79	0.76 U	8.89	6.71	0.98 U	0.74 U	5.63
Control	1	4	0.98	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U
Control	2	4	0.96	0.76 U	1.93 U	0.36 U	0.98 U	0.74 U	0.88 U

(a) U Undetected at or above given concentration.

TABLE B.4. Water Chemistry for Pesticides (alphabetical, 4,4'-DDD - Trans Nonachlor), Federal Projects in New York and New Jersey

Water Treatment	Replicate	Batch	Sample Vol.(L)	Pesticides (ng/L wet weight) 4,4'-DDD	4,4'-DDE	4,4'-DDT	Endosulfan I	Endosulfan II	Endosulfan sulfate	Heptachlor	Heptachlor epoxide	Trans Nonachlor
Target DL				20	20	20	14	4	10	3	100	14
Achieved DL				0.28	0.84	0.50	1.00	1.00	1.00	1.02	2.14	0.57
Dredging Site Water Samples												
Hackensack River Reach A	1	1	0.90	0.28 U[a]	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	2.11	2.14 U	0.57 U
Hackensack River Reach A	2	1	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	2.14	2.14 U	0.57 U
Hackensack River Reach A	3	1	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach A	1	2	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach A	2	2	0.90	0.28 U	3.33	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach A	3	2	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Port Elizabeth Reach B	1	2	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Port Elizabeth Reach B	2	2	0.90	0.28 U	0.84 U	4.50	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Port Elizabeth Reach B	3	2	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	5.34	2.14 U	0.57 U
Arthur Kill Reach C	1	2	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.91	2.14 U	0.57 U
Arthur Kill Reach C	2	2	0.90	0.28 U	3.16	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach C	3	2	0.90	0.28 U	0.84 U	5.81	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach B	1	1	0.90	7.90	3.56	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach B	2	1	0.90	8.08	4.03	4.36	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach B	3	1	0.90	8.51	0.84 U	37.9	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Port Elizabeth Reach A	1	1	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Port Elizabeth Reach A	2	1	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Port Elizabeth Reach A	3	1	0.90	0.28 U	3.70	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Mud Dump Site	2	2	0.90	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Mud Dump Site	3	2	0.90	6.62	3.17	6.74	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Mud Dump Site	4	4	0.95	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U

TABLE B.4. (contd)

Water Treatment	Replicate	Batch	Sample Vol.(L)	Pesticides (ng/L wet weight) 4,4'-DDD	4,4'-DDE	4,4'-DDT	Endosulfan I	Endosulfan II	Endosulfan sulfate	Heptachlor	Heptachlor epoxide	Trans Nonachlor
Elutriate Water Samples												
Arthur Kill Reach C	1	3	0.74	316	1110 D[b]	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach C	2	3	0.83	354	1250 D	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach C	3	3	0.90	322	1060 D	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Arthur Kill Reach B	1	4	0.92	312	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	6.80	2.14 U	0.57 U
Arthur Kill Reach B	2	4	0.96	320	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	8.37	2.14 U	0.57 U
Arthur Kill Reach B	3	4	0.94	619	459	0.50 U	1.00 U	1.00 U	1.00 U	11.1	2.14 U	0.57 U
Arthur Kill Reach A	1	3	0.91	23.2	22.2	0.50 U	1.00 U	1.00 U	1.00 U	3.73	2.14 U	0.57 U
Arthur Kill Reach A	2	3	0.92	23.3	21.7	0.50 U	1.96	1.00 U	1.00 U	3.67	2.14 U	0.57 U
Arthur Kill Reach A	3	3	0.90	21.5	19.8	0.50 U	1.00 U	1.00 U	1.00 U	3.48	2.14 U	0.57 U
Hackensack River Reach A	1	4	0.92	0.28 U	12.1	0.50 U	3.79	1.00 U	1.00 U	3.99	2.14 U	0.57 U
Hackensack River Reach A	2	4	0.95	6.66	14.4	0.50 U	4.17	1.00 U	1.00 U	4.98	2.14 U	0.57 U
Hackensack River Reach A	3	4	0.96	5.92	10.4	0.50 U	3.21	1.00 U	1.00 U	3.91	2.14 U	0.57 U
Port Elizabeth Reach B	1	3	0.89	11.9	18.6	0.50 U	1.00 U	1.00 U	1.00 U	5.27	2.14 U	0.57 U
Port Elizabeth Reach B	2	3	0.82	10.7	18.5	0.50 U	1.00 U	1.00 U	1.00 U	4.89	2.14 U	0.57 U
Port Elizabeth Reach B	3	3	0.89	12.7	24.5	0.50 U	1.00 U	1.00 U	1.00 U	5.29	2.14 U	0.57 U
Port Elizabeth Reach A	1	3	0.81	12.6	28.9	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	2.99
Port Elizabeth Reach A	2	3	0.80	13.3	31.0	0.50 U	1.00 U	1.00 U	1.00 U	6.70	2.14 U	0.57 U
Port Elizabeth Reach A	3	3	0.79	14.7	28.7	22.8	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	2.84
Control	1	4	0.98	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U
Control	2	4	0.96	0.28 U	0.84 U	0.50 U	1.00 U	1.00 U	1.00 U	1.02 U	2.14 U	0.57 U

U Undetected at or above given concentration.
D Diluted (1:10).

TABLE B.7. Polychlorinated Biphenyls in Water Congeners 8 through 49, Federal Projects in New York and New Jersey

Water Treatment	Replicate	Batch	Sample Vol (L)	PCBs (ng/L Wet Weight) PCB 8	PCB 18	PCB 28	PCB 52	PCB 44	PCB 49
Target Detection Limit				0.5	0.5	0.5	0.5	0.5	0.5
Achieved DL				1.15	0.75	0.32	0.40	0.55	1.00
Dredging Site Water Samples									
Arthur Kill Reach A	1	2	0.90	1.15 U[(a)]	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach A	2	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach A	3	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach B	1	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach B	2	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.24
Arthur Kill Reach B	3	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach C	1	2	0.90	3.31	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach C	2	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Arthur Kill Reach C	3	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Port Elizabeth Reach A	1	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Port Elizabeth Reach A	2	1	0.90	1.15 U	0.75 U	1.67	0.40 U	0.55 U	1.11 U
Port Elizabeth Reach A	3	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Port Elizabeth Reach B	1	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Port Elizabeth Reach B	2	2	0.90	1.15 U	0.75 U	1.84	0.40 U	0.55 U	1.11 U
Port Elizabeth Reach B	3	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Hackensack River Reach A	1	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Hackensack River Reach A	2	1	0.90	1.15 U	0.75 U	1.96	0.40 U	0.55 U	1.11 U
Hackensack River Reach A	3	1	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Mud Dump Site	1	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Mud Dump Site	2	2	0.90	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.11 U
Mud Dump Site	3	4	0.95	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.05 U
Elutriate Water Samples									
Arthur Kill Reach A	1	3	0.91	1.15 U	11.5	10.8	12.7	8.77	10.8
Arthur Kill Reach A	2	3	0.92	1.15 U	9.55	9.77	12.4	8.31	10.8
Arthur Kill Reach A	3	3	0.90	1.15 U	8.79	9.01	11.4	7.58	9.91

TABLE B.7. (contd)

Water Treatment	Replicate	Batch	Sample Vol.(L)	PCBs (ng/L Wet Weight) PCB 8	PCB 18	PCB 28	PCB 52	PCB 44	PCB 49
Arthur Kill Reach B	1	4	0.92	6.69	31.5	28.7	28.6	22.5	24.8
Arthur Kill Reach B	2	4	0.96	10.7	34.5	29.6	31.0	23.7	27.8
Arthur Kill Reach B	3	4	0.94	12.7	54.2	58.3	60.1	48.9	55.2
Arthur Kill Reach C	1	3	0.74	99.5	449	489	597	495	504
Arthur Kill Reach C	2	3	0.83	91.1	457	502	595	504	572
Arthur Kill Reach C	3	3	0.90	92.5	424	460	550	463	534
Port Elizabeth Reach A	1	3	0.81	1.15 U	20.2	24.3	32.6	22.4	22.7
Port Elizabeth Reach A	2	3	0.80	1.15 U	21.1	25.5	34.8	24.8	24.4
Port Elizabeth Reach A	3	3	0.79	1.15 U	19.7	23.2	31.4	21.4	21.6
Port Elizabeth Reach B	1	3	0.89	1.15 U	16.7	18.4	19.6	13.8	14.4
Port Elizabeth Reach B	2	3	0.82	1.15 U	16.4	17.2	19.5	14.0	14.6
Port Elizabeth Reach B	3	3	0.89	3.33	20.7	22.8	25.0	17.9	19.3
Hackensack River Reach A	1	4	0.92	1.15 U	12.5	12.6	14.9	13.3	1.09 U
Hackensack River Reach A	2	4	0.95	1.15 U	0.75 U	15.5	18.5	14.7	1.05 U
Hackensack River Reach A	3	4	0.96	1.15 U	11.6	11.2	13.7	11.5	1.04 U
Control	1	4	0.98	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.02 U
Control	2	4	0.96	1.15 U	0.75 U	0.32 U	0.40 U	0.55 U	1.04 U

(a) U Undetected at or above given concentration.

TABLE B.8. Polychlorinated Biphenyls Congeners 66 through 183, Federal Projects in New York and New Jersey

Water Treatment	Replicate	Batch	Sample Vol.(L)	PCBs (ng/L wet weight) PCB 66	PCB 101	PCB 87	PCB 118	PCB 153	PCB 105	PCB 138	PCB 183
Target Detection Limit				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Achieved DL				0.42	0.19	0.35	0.23	0.17	0.17	0.18	1.00
Dredging Site Water Samples											
Arthur Kill Reach A	1	2	0.90	0.42 U[(a)]	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach A	2	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach A	3	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach B	1	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach B	2	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.71	1.11 U
Arthur Kill Reach B	3	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach C	1	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach C	2	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Arthur Kill Reach C	3	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	1.27	1.11 U
Port Elizabeth Reach A	1	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	1.26	0.18 U	1.11 U
Port Elizabeth Reach A	2	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	1.28	0.18 U	1.11 U
Port Elizabeth Reach A	3	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Port Elizabeth Reach B	1	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	1.12	0.18 U	1.11 U
Port Elizabeth Reach B	2	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.99	0.18 U	1.11 U
Port Elizabeth Reach B	3	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Hackensack River Reach A	1	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	1.6	0.18 U	1.11 U
Hackensack River Reach A	2	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Hackensack River Reach A	3	1	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	1.88	0.18 U	1.11 U
Mud Dump Reference Site	2	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Mud Dump Reference Site	3	2	0.90	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.11 U
Mud Dump Reference Site	4	4	0.95	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.05 U
Elutriate Water Samples											
Arthur Kill Reach A	1	3	0.91	7.43	6.75	0.35 U	6.82	7.70	56.0	6.54	1.10 U
Arthur Kill Reach A	2	3	0.92	8.86	7.99	0.35 U	6.21	7.96	54.6	7.14	1.09 U
Arthur Kill Reach A	3	3	0.90	7.12	6.36	0.35 U	5.76	6.45	59.0	5.85	1.11 U

TABLE B.8. (contd)

Water Treatment	Replicate	Batch	Sample Vol.(L)	PCBs (ng/L wet weight) PCB 66	PCB 101	PCB 87	PCB 118	PCB 153	PCB 105	PCB 138	PCB 183
Arthur Kill Reach B	1	4	0.92	24.8	16.2	0.35 U	13.5	12.3	0.17 U	11.2	1.09 U
Arthur Kill Reach B	2	4	0.96	26.7	17.8	0.35 U	15.3	14.1	0.17 U	12.4	1.04 U
Arthur Kill Reach B	3	4	0.94	59	40.3	0.35 U	36.4	34.1	0.17 U	29.7	1.06 U
Arthur Kill Reach C	1	3	0.74	637 D[b]	452	0.35 U	379	304	150	289	10.1
Arthur Kill Reach C	2	3	0.83	663 D	453	0.35 U	386	310	159	300	1.21 U
Arthur Kill Reach C	3	3	0.90	574 D	414	0.35 U	351	283	145	274	1.11 U
Port Elizabeth Reach A	1	3	0.81	31.3	33.7	0.35 U	27.8	38.0	12.3	32.7	1.24 U
Port Elizabeth Reach A	2	3	0.80	33.7	36.1	0.35 U	30.1	40.8	13.3	35.7	1.25 U
Port Elizabeth Reach A	3	3	0.79	30.1	31.5	0.35 U	26.4	35.3	11.4	30.2	1.27 U
Port Elizabeth Reach B	1	3	0.89	15	13.2	0.35 U	12.5	13.4	6.88 B[b]	11.6	1.12 U
Port Elizabeth Reach B	2	3	0.82	15.6	13.7	0.35 U	12.2	12.7	6.90 B	11.4	1.22 U
Port Elizabeth Reach B	3	3	0.89	22.1	19.1	0.35 U	17.2	18.0	8.16 B	15.8	1.12 U
Hackensack River Reach A	1	4	0.92	11.3	9.50	0.35 U	8.19	9.72	0.17 U	5.90	1.09 U
Hackensack River Reach A	2	4	0.95	15.2	12.0	0.35 U	9.77	12.7	0.17 U	8.49	1.05 U
Hackensack River Reach A	3	4	0.96	9.79	7.85	0.35 U	6.94	8.76	0.17 U	5.40	1.04 U
Control	1	4	0.98	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.02 U
Control	2	4	0.96	0.42 U	0.19 U	0.35 U	0.23 U	0.17 U	0.17 U	0.18 U	1.04 U

(a) Undetected at or above the given concentration.
(b) D Diluted (1:10).
(c) B Result less than five times the concentration in analyte.

TABLE B.9. Polychlorinated Biphenyls Congeners 184 through 209, Federal Projects in New York and New Jersey

Water Treatment	Replicate	Batch	Sample Vol.(L)	PCBs (ng/L wet weight) PCB 184	PCB 187	PCB 128	PCB 180	PCB 170	PCB 195	PCB 206	PCB 209
Target Detection Limit				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Achieved DL				1.00	0.35	0.29	0.32	0.35	1.12	0.23	0.24
Dredging Site Water Samples											
Arthur Kill Reach A	1	2	0.90	1.11 U[(a)]	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach A	2	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach A	3	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach B	1	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach B	2	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach B	3	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach C	1	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach C	2	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach C	3	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Port Elizabeth Reach A	1	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Port Elizabeth Reach A	2	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Port Elizabeth Reach A	3	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Port Elizabeth Reach B	1	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Port Elizabeth Reach B	2	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Port Elizabeth Reach B	3	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Hackensack River Reach A	1	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Hackensack River Reach A	2	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Hackensack River Reach A	3	1	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Mud Dump Site	2	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Mud Dump Site	3	2	0.90	1.11 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Mud Dump Site	4	4	0.95	1.05 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Elutriate Water Samples											
Arthur Kill Reach A	1	3	0.91	1.10 U	2.60	0.29 U	4.67	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach A	2	3	0.92	1.29	2.75	1.17	5.14	0.35 U	1.12 U	0.23 U	0.24 U
Arthur Kill Reach A	3	3	0.90	1.11 U	2.28	0.29 U	3.99	0.35 U	1.12 U	0.23 U	0.24 U

TABLE B.9. (contd)

Water Treatment	Replicate	Batch	Sample Vol.(L)	PCBs (ng/L wet weight) PCB 184	PCB 187	PCB 128	PCB 180	PCB 170	PCB 195	PCB 206	PCB 209
Arthur Kill Reach B	1	4	0.92	1.69	4.38	2.01	7.98	0.35 U	1.12 U	1.76	0.24 U
Arthur Kill Reach B	2	4	0.96	1.72	4.80	1.98	8.40	0.35 U	1.12 U	1.98	0.24 U
Arthur Kill Reach B	3	4	0.94	3.85	11.3	3.48	19.0	9.09	1.71	3.93	0.24 U
Arthur Kill Reach C	1	3	0.74	45.2	106	49.2	164	76.8	13.6	28.6	0.24 U
Arthur Kill Reach C	2	3	0.83	48.6	112	51.6	177	81.6	14.2	30.1	0.24 U
Arthur Kill Reach C	3	3	0.90	44.5	101	46.7	159	75.1	12.6	26.9	0.24 U
Port Elizabeth Reach A	1	3	0.81	6.61	14.4	4.87	23.7	10.5	2.77	5.58	0.24 U
Port Elizabeth Reach A	2	3	0.80	7.10	15.5	5.32	25.9	11.3	2.47	6.18	0.24 U
Port Elizabeth Reach A	3	3	0.79	5.75	13.0	4.66	21.6	9.96	2.64	5.22	0.24 U
Port Elizabeth Reach B	1	3	0.89	2.22	4.68	1.97	7.13	3.48	1.12 U	2.10	0.24 U
Port Elizabeth Reach B	2	3	0.82	1.88	4.42	1.94	8.29	3.62	1.12 U	2.21	0.24 U
Port Elizabeth Reach B	3	3	0.89	2.89	6.29	2.61	9.76	4.83	1.12 U	3.11	0.24 U
Hackensack River Reach A	1	4	0.92	1.99	0.36 U	0.29 U	4.97	0.35 U	1.12 U	0.23 U	0.24 U
Hackensack River Reach A	2	4	0.95	1.05 U	4.32	1.91	6.22	0.35 U	1.12 U	1.76	0.24 U
Hackensack River Reach A	3	4	0.96	1.04 U	3.13	1.13	4.74	0.35 U	1.12 U	0.23 U	0.24 U
Control	1	4	0.98	1.02 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U
Control	2	4	0.96	1.04 U	0.36 U	0.29 U	0.32 U	0.35 U	1.12 U	0.23 U	0.24 U

(a) U Undetected at or above given concentration.

TABLE A.5. Metals in Sediment, Federal Projects in New York and New Jersey

(Metals µg/g dry weight)

Sediment Treatment	Batch	Ag	As	Cr	Cd	Cu	Hg	Ni	Pb	Zn
Target DL[a]		0.1	0.1	0.02	0.01	0.1	0.02	0.1	0.1	0.1
Achieved DL		0.119	0.572	0.401	0.020	0.525	0.015	0.849	0.136	2.55
MDL[b] verification		0.119	0.572	0.401	0.020	0.525	0.015	0.849	0.136	2.55
MOTBY Reach A										
Comp MT-A	1	4.24	11.7	110	2.60	124	1.62	30.7	130	245
MOTBY Reach B										
Comp MT-B	1	6.59	17.4	163	3.83	191	2.59	42.8	231	342
Arthur Kill Reach A										
Comp AK-A	1	6.44	24.3	201	5.49	313	5.88	53.7	255	422
Arthur Kill Reach B										
Comp AK-B	1	6.55	45.2	238	9.11	495	12.4	61.8	293	558
Arthur Kill Reach C										
Comp AK-C	1	8.34	83.8	245	10.7	688	13.6	61.8	352	626
Port Elizabeth Reach A										
Comp PE-A, Replicate 1	1	3.96	14.3	155	3.73	177	2.99	44.0	224	395
Comp PE-A, Replicate 2	1	4.10	14.0	153	3.60	174	2.96	44.4	212	356
Comp PE-A, Replicate 3	1	4.03	14.4	156	3.69	172	3.02	44.3	208	352
Port Elizabeth Reach B										
Comp PE-B	1	4.32	15.7	150	3.35	179	3.24	45.6	171	285
Hackensack River Reach A										
Comp HR-A	1	2.38	13.4	192	2.76	119	3.42	33.4	132	248

TABLE A.7. Sediment Chlorinated Pesticide Results (alphabetical Aldrin - 4,4'-DDT), Federal Projects in New York and New Jersey

Sediment Treatment	Batch	Pesticides (µg/kg dry weight) Aldrin	alpha-Chlordane	Dieldrin	2,4'-DDD	2,4'-DDT	4,4'-DDD	4,4'-DDE	4,4'-DDT
Target DL[a]		1	1	1	1	1	1	1	1
Achieved DL		0.83-1.10	0.89-1.19	0.87-1.16	0.71-0.95	0.94-1.25	0.60-0.80	1.39-1.85	0.56-0.75
MDL[b] verification		0.30	0.14	0.67	0.10	0.53	0.49	0.21	0.30
MOTBY Reach A									
COMP MT-A	1	0.99 U[c]	3.11	6.18	12.2	0.87 U	38.7	16.5	1.72
MOTBY Reach B									
COMP MT-B	1	1.20 U	3.69	3.74	6.16	1.06 U	21.5	22.5	3.46
Arthur Kill Reach A									
COMP AK-A	1	1.21 U	7.14	3.99	60.2	1.06 U	312	127	110
Arthur Kill Reach B									
COMP AK-B	1	1.16 U	10.5	13.2	209	240	2070	250	1480
Arthur Kill Reach C									
COMP AK-C	1	1.20 U	10.3	18.9	65.9	30.9	200	166	165
Port Elizabeth Reach A									
COMP PE-A	1	1.08 U	6.95	5.32	18.0	0.95 U	45.4	49.0	1.59 U
Port Elizabeth Reach B									
COMP PE-B	1	0.91 U	4.81	3.16	17.4	0.80 U	72.6	75.6	10.2
Hackensack River Reach A									
COMP HR-A	1	0.92 U	8.12	3.43	1.08 U	0.81 U	32.1	20.2	22.9

TABLE A.8. Sediment Chlorinated Pesticide Results (alphabetical Endosulfan I - Trans nonachlor), Federal Projects in New York and New Jersey

Sediment Treatment	Batch	Pesticides (µg/kg dry weight)						
		Endosulfan I	Endosulfan II	Endosulfan Sulfate	Heptachlor	Heptachlor epoxide	Lindane	Trans-nonachlor
Target DL[a]		1	1	1	1	1	1	1
Achieved DL		1.09-1.45	0.56-0.75	0.56-0.75	0.64-0.86	0.76-1.01	1.74-2.32	0.83-1.10
MDL[b] verification		0.13	NA	NA	0.11	0.67	0.12	0.14
MOTBY Reach A								
COMP MT-A	1	0.58 J[c]	1.46 U[d]	1.46 U	1.27 U	1.08 U	0.47 U	1.13
MOTBY Reach B								
COMP MT-B	1	4.68	1.77 U	1.77 U	1.55 U	1.32 U	0.57 U	1.42
Arthur Kill Reach A								
COMP AK-A	1	21.7	1.78 U	1.78 U	1.55 U	1.32 U	0.58 U	3.65
Arthur Kill Reach B								
COMP AK-B	1	124	1.72 U	1.72 U	1.50 U	1.28 U	0.55 U	14.4
Arthur Kill Reach C								
COMP AK-C	1	134	1.78 U	1.78 U	1.55 U	1.32 U	0.57 U	2.48
Port Elizabeth Reach A								
COMP PE-A	1	7.75	1.59 U	1.59 U	1.39 U	1.18 U	0.51 U	3.36
Port Elizabeth Reach B								
COMP PE-B	1	7.85	1.34 U	1.34 U	1.17 U	0.99 U	0.43 U	2.01
Hackensack River Reach A								
COMP HR-A	1	4.47	1.36 U	1.36 U	1.19 U	1.01 U	0.44 U	0.92 U

TABLE A.11. Sediment Polychlorinated Biphenyls (PCBs) 8 through 66, Dry Weight, Including Surrogate Percent Recoveries, Federal Projects in New York and New Jersey

Sediment Treatment	Batch	Surrogate Percent Recoveries DBOFB	Surrogate Percent Recoveries CL5 (112)	PCBs (µg/kg dry weight) CL2 (8)	CL3 (18)	CL3 (28)	CL4 (52)	CL4 (49)	CL4 (44)	CL4 (66)
Target DL[a]		1	1	1	1	1	1	1	1	1
Achieved DL		NA[b]	NA	0.40-0.53	0.72-0.96	1.51-2.01	1.34-1.78	0.77-1.02	0.52-0.69	0.81-1.08
MDL[c] verification		NA	NA	0.11	0.09	0.06	0.06	NA	0.22	0.22
MOTBY Reach A										
COMP MT-A	1	59	50	7.57	18.7	38.9	47.5	36.9	19.8	32.5
MOTBY Reach B										
COMP MT-B	1	88	76	8.90	18.8	46.9	23.7	19.0	19.5	39.8
Arthur Kill Reach A										
COMP AK-A	1	65	60	9.88	25.0	36.6	26.7	19.1	22.3	36.4
Arthur Kill Reach B										
COMP AK-B	1	52	58	20.8	80.0	105	63.8	57.4	61.1	80.8
Arthur Kill Reach C										
COMP AK-C	1	77	52	17.4	85.3	118	120	109	112	179
Port Elizabeth Reach A										
COMP PE-A	1	60	54	9.17	23.5	39.0	34.2	27.8	26.1	45.4
Port Elizabeth Reach B										
COMP PE-B	1	53	53	10.0	26.7	54.9	35.3	29.5	30.5	38.4
Hackensack River Reach A										
COMP HR-A	1	40	78	9.15	16.1	41.9	43.4	33.3	35.0	36.8

TABLE A.12. Sediment Polychlorinated Biphenyls (PCBs) 101 through 187, Dry Weight, Federal Projects in New York and New Jersey

Sediment Treatment	Batch	PCBs (µg/kg dry weight) CL5 (101)	CL5 (87)	CL5 (118)	CL7 (184)	CL6 (153)	CL5 (105)	CL6 (138)	CL7 (187)
Target DL[a]		1	1	1	1	1	1	1	1
Achieved DL		0.71-0.95	0.68-0.90	0.77-1.03	0.60-0.80	0.42-0.56	0.58-0.77	0.77-1.03	0.60-0.80
MDL[b] verification		0.14	NA[c]	0.23	NA	0.42	0.13	0.38	0.19
MOTBY Reach A									
COMP MT-A	1	23.8	8.09	17.5	5.35	40.8	6.02	43.5	20.1
MOTBY Reach B									
COMP MT-B	1	19.5	8.86	20.9	2.49	25.5	6.70	45.1	8.15
Arthur Kill Reach A									
COMP AK-A	1	26.1	9.10	19.1	1.66 J[d]	25.1	4.63	34.4	7.70
Arthur Kill Reach B									
COMP AK-B	1	75.2	22.5	52.5	1.61 U	33.5	25.1	55.4	24.6
Arthur Kill Reach C									
COMP AK-C	1	87.7	41.3	88.5	11.0	82.1	29.9	105	25.2
Port Elizabeth Reach A									
COMP PE-A	1	29.7	12.7	27.4	3.10	35.4	9.40	56.2	12.6
Port Elizabeth Reach B									
COMP PE-B	1	28.4	12.0	26.4	2.53	28.9	8.00	38.0	8.81
Hackensack River Reach A									
COMP HR-A	1		1.85	9.73	2.09	13.2	3.20	17.7	5.50

TABLE A.13. Sediment Polychlorinated Biphenyls (PCBs) 183 through 209, plus 1,4-Dichlorobenzene, Dry Weight, Federal Projects in New York and New Jersey

Sediment Treatment	Batch	PCBs (µg/kg dry weight) CL7 (183)	CL6 (128)	CL7 (180)	CL7 (170)	CL8 (195)	CL9 (206)	CL10 (209)	1,4-Dichloro-benzene
Target DL[a]	1	1	1	1	1	1	1	1	NA[b]
Achieved DL		0.60-0.80	1.02-1.36	0.71-0.95	0.52-0.69	0.57-0.76	0.36-0.48	0.55-0.73	NA
MDL[c] verification		NA	0.14	0.53	0.29	0.17	0.15	0.20	NA
MOTBY Reach A									
COMP MT-A	1	4.66	4.23	20.5	142	3.64	6.15	6.57	18.1
MOTBY Reach B									
COMP MT-B	1	2.94	6.52	14.4	136	3.32	8.56	8.06	28.2
Arthur Kill Reach A									
COMP AK-A	1	3.05	5.96	14.8	1.93 U[d]	4.46	6.37	8.05	39.6
Arthur Kill Reach B									
COMP AK-B	1	5.38	2.87	29.4	457	1.69 U	2.66 U	1.75 U	82.6
Arthur Kill Reach C									
COMP AK-C	1	8.69	13.4	48.6	315	17.0	12.8	23.0	53.5
Port Elizabeth Reach A									
COMP PE-A	1	4.74	8.55	26.6	290	3.39	9.39	12.6	39.4
Port Elizabeth Reach B									
COMP PE-B	1	3.13	7.04	16.6	282	2.97	9.18	7.93	37.5
Hackensack River Reach A									
COMP HR-A	1	3.09	74.4	10.7	169	3.13	18.3	1.39 U	67.5

TABLE A.17. (contd)

Sediment Treatment	Batch	Surrogate Percent Recoveries: 2378-TCDD-13C12	2378-TCDF-13C12	2378-TCDD-37Cl4	(pg/g dry weight): 2378-TCDD	2378-TCDF	Total Percent Solids	(pg/g wet weight): 2378-TCDD	2378-TCDF
Arthur Kill Reach B									
AK-B-13	3	86	86	88	56.8	119	41	23.3	48.8
AK-B-14	3	94	90	100	1.30	2.24	45	0.59	1.01
AK-B-15 Replicate 1	3	83	90	92	46.1	41.1	43	19.8	17.7
AK-B-15 Replicate 2	3	94	81	96	43.5	39.3	43	18.7	16.9
AK-B-15 Replicate 3	3	ND	ND	ND	ND	ND	43	ND	ND
AK-B-16	3	98	90	94	60.2	46.5	36	21.7	16.7
AK-B-17	3	101	100	105	98.4	52.6	36	35.4	18.9
AK-B-18	3	94	100	99	100	332	41	41.0	136
AK-B-19	3	91	79	94	51.3	37.7	35	18.0	13.2
AK-B-20	3	97	114	99	80.9	676 U[1]	35	28.3	237 U
AK-B-21	3	94	93	94	68.6	19.2	48	32.9	9.22
Arthur Kill Reach C									
AK-C-1	2	134	110	133	77.5	366 U	35	27.1	128 U
AK-C-2	2	98	42	117	94.5	161 U	37	35.0	59.6 U
AK-C-3	2	84	70	84	19.4	32.5	32	6.21	10.4
AK-C-4 Replicate 1	2	86	90	92	15.9	60.6	35	5.57	21.2
AK-C-4 Replicate 2	2	96	87	90	67.7	31.2	35	23.7	10.9
AK-C-4 Replicate 3	2	102	71	115	41.8	94.2 U	35	14.6	33.0 U
AK-C-5	2	98	51	84	16.1	19.6	36	5.79	7.06
AK-C-6	2	96	90	93	17.0	30.7	38	6.46	11.7
AK-C-7	3	54	ND	82	46.8	ND	34	15.9	ND
AK-C-8	3	94	90	112	171	107	36	61.6	38.5
AK-C-9	3	84	97	97	61.1	80.1	28	17.1	22.4
AK-C-10	3	78	62	87	210	66.4	40	84.0	26.5
AK-C-11	3	81	82	98	105	75.1	41	43.1	30.8
AK-C-12	3	95	90	99	63.1	166	38	24.0	63.1
Port Elizabeth Reach A									
PE-A-1	1	99	114	108	77.7	22.8	41	31.9	9.35
PE-A-2	1	96	105	105	30.3	11.5	52	15.8	5.98
PE-A-3	1	96	112	103	181	29.6	45	81.5	13.3
PE-A-4	1	97	110	101	82.0	27.8	46	37.7	12.8
PE-A-5	1	82	87	95	96.6	26.9	47	45.4	12.6

TABLE A-17. (contd)

Sediment Treatment	Batch	Surrogate Percent Recoveries: 2378-TCDD-13C12	2378-TCDF-13C12	2378-TCDD-37Cl4	(pg/g dry weight): 2378-TCDD	2378-TCDF	Total Percent Solids	(pg/g wet weight): 2378-TCDD	2378-TCDF
Port Elizabeth Reach B									
PE-B-7	2	79	63	77	62.4	15.0	41	25.6	6.14
PE-B-8	2	87	47	94	42.1	36.9 U	49	20.6	18.1 U
PE-B-9	2	82	77	82	48.0	18.5	41	19.7	7.59
PE-B-10	2	84	80	84	50.6	18.2	54	27.3	9.85
PE-B-11	2	82	50	88	45.8	25.4	52	23.8	13.2
PE-B-12	2	91	45	105	63.0	42.8 U	57	35.9	24.4 U
PE-B-13	1	92	102	108	117	26.9	45	52.7	12.1
PE-B-14	2	93	77	91	80.6	28.6	41	33.0	11.7
PE-B-15	2	53	52	57	115	22.7	40	46.0	9.07
Hackensack River Reach A									
HR-A-1	4	77	74	78	24.0	5.51	82	19.7	4.52
HR-A-2	4	80	86	81	127	22.5	54	68.6	12.1
HR-A-3	4	78	36	89	449	65.8	52	233	34.2
HR-A-4	4	76	73	79	475	32.1	53	252	17.0
HR-A-5	4	76	71	79	148	27.3	55	81.4	15.0
HR-A-6	4	60	68	65	63.2	22.5	74	46.8	16.6
HR-A-7	4	88	74	85	28.1	5.77	79	22.2	4.56
HR-A-8	4	93	73	96	158	17.0	66	104	11.2
Claremont Reach I, II and III									
COMP CL-I	4	77	74	78	57.2	25.4	45	25.7	11.4
COMP CL-II	4	86	83	85	71.6	44.9	44	31.5	19.8
COMP CL-III	4	88	84	88	17.3	25.2	45	7.79	11.3

(a) DL Detection limit.
(b) NA Not applicable.
(c) MDL Method detection limit.
(d) ND No data.
(e) U Undetected at or above given concentration.

TABLE A.21. High Molecular Weight Polynuclear Aromatic Hydrocarbons (HPAHs), Dry Weight, in Sediment, Federal Projects in New York and New Jersey

Sediment Treatment	Batch	HPAHs (µg/kg dry weight)									
		Fluoranthene	Pyrene	Benzo(a)-anthracene	Chrysene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Benzo(a) pyrene	Indeno-(1,2,3-cd) pyrene	Dibenzo-(a,h) anthracene	Benzo-(g,h,i) perylene
Target DL[a]		4	4	4	4	4	4	4	4	4	4
Achieved DL		0.13-0.17	0.14-0.19	0.23-0.31	0.19-0.25	0.25-0.33	0.21-0.28	0.35-0.47	0.15-0.20	0.25-0.33	0.14-0.18
MDL[b] verification		1.03	1.30	0.31	0.84	2.21	0.74	0.97	1.65	1.65	1.48
MOTBY Reach A											
Comp MT-A	1	1280	1200	566	725	691	258	539	354	76.0	307
MOTBY Reach B											
Comp MT-B	1	1270	1090	749	877	808	313	639	334	78.3	271
Arthur Kill Reach A											
Comp AK-A	1	1060	1030	655	867	846	324	699	432	114	404
Arthur Kill Reach B											
Comp AK-B	1	1330	1330	927	1030	1090	320	729	442	116	367
Arthur Kill Reach C											
Comp AK-C	1	1380	1310	1090	1310	1330	329	818	572	155	515
Port Elizabeth Reach A											
Comp PE-A	1	3520	2930	1970	1890	1880	578	1130	635	160	508
Port Elizabeth Reach B											
Comp PE-B	1	2890	2320	1080	1290	1150	401	869	450	113	383
Hackensack River Reach A											
Comp HR-A	1	57500	44800	23400	23500	22400	8420	19400	9270	2050	7170