APPENDIX E

Sediment – Geographic Area Comparison and Statistical Outputs

ARCADIS Design & Consultancy for natural and built assets

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum Corporation

REMEDIAL INVESTIGATION REPORT
APPENDIX E – SEDIMENT STATISTICAL OUTPUTS

Newark Bay Study Area
Newark Bay, New Jersey

May 2022

CONTENTS

Statistical Outputs

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Analysis of Co-located Results

The Mixed Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	299.32964153	
1	2	264.27610765	0.01021928
2	1	263.59958085	0.00099597
3	1	263.53956856	0.00001211
4	1	263.53887952	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	1.5522
Residual	0.5098

Fit Statistics

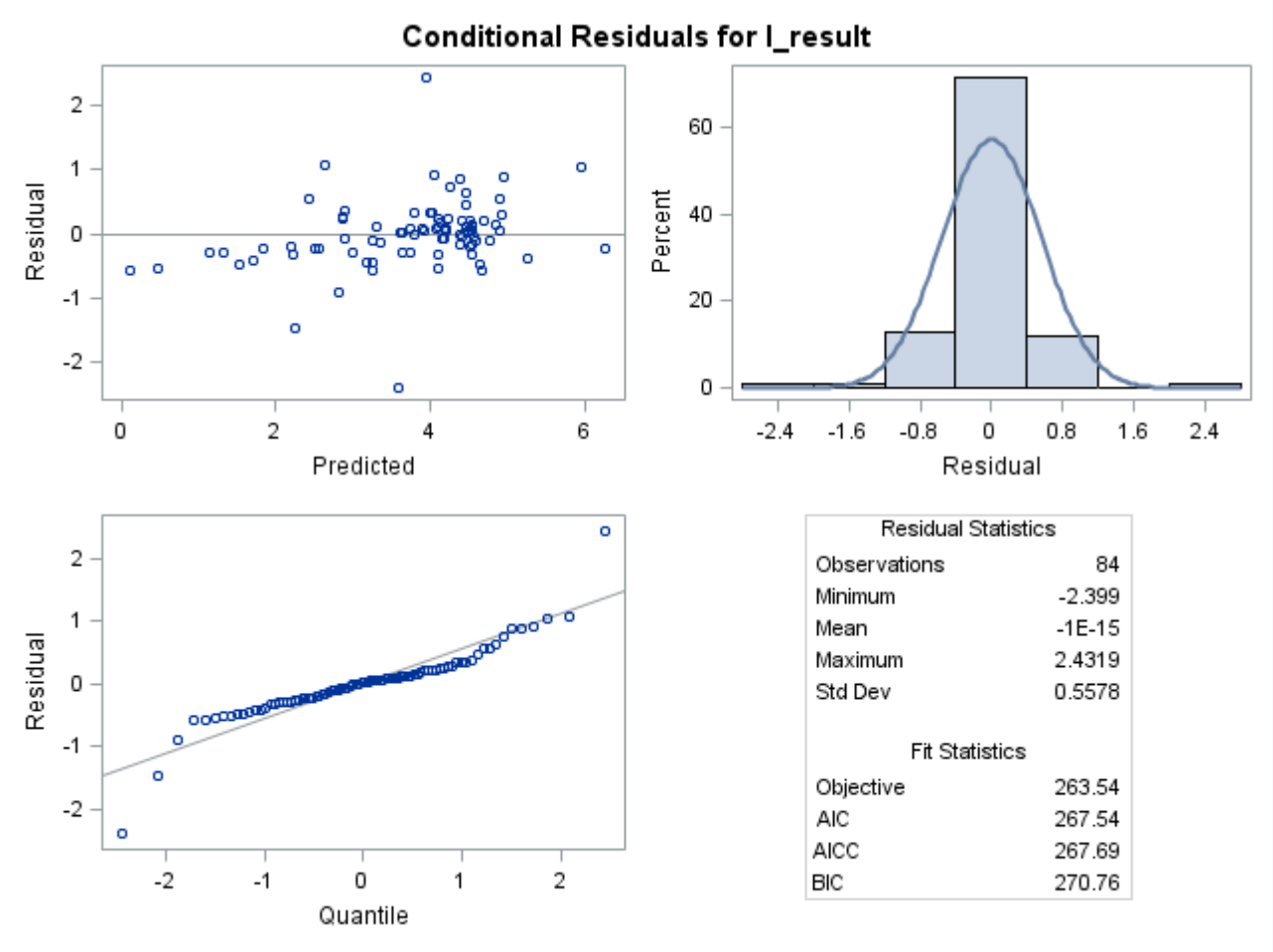
-2 Res Log Likelihood	263.5
AIC (Smaller is Better)	267.5
AICC (Smaller is Better)	267.7
BIC (Smaller is Better)	270.8

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	3.8528	0.2346	36	16.42	<.0001	0.05	3.3771	4.3286
year0	-0.03395	0.01534	46	-2.21	0.0319	0.05	-0.06483	-0.00307

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	4.90	0.0319


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -2.399
Mean -1E-15
Maximum 2.4319
Std Dev 0.5578
Fit Statistics
Objective 263.54
AIC 267.54
AICC 267.69
BIC 270.76

The Mixed Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	270.94553828	
1	2	238.53091955	0.00845927
2	1	238.10645954	0.00056931
3	1	238.08041150	0.00000318
4	1	238.08027200	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	1.0547
Residual	0.3915

Fit Statistics

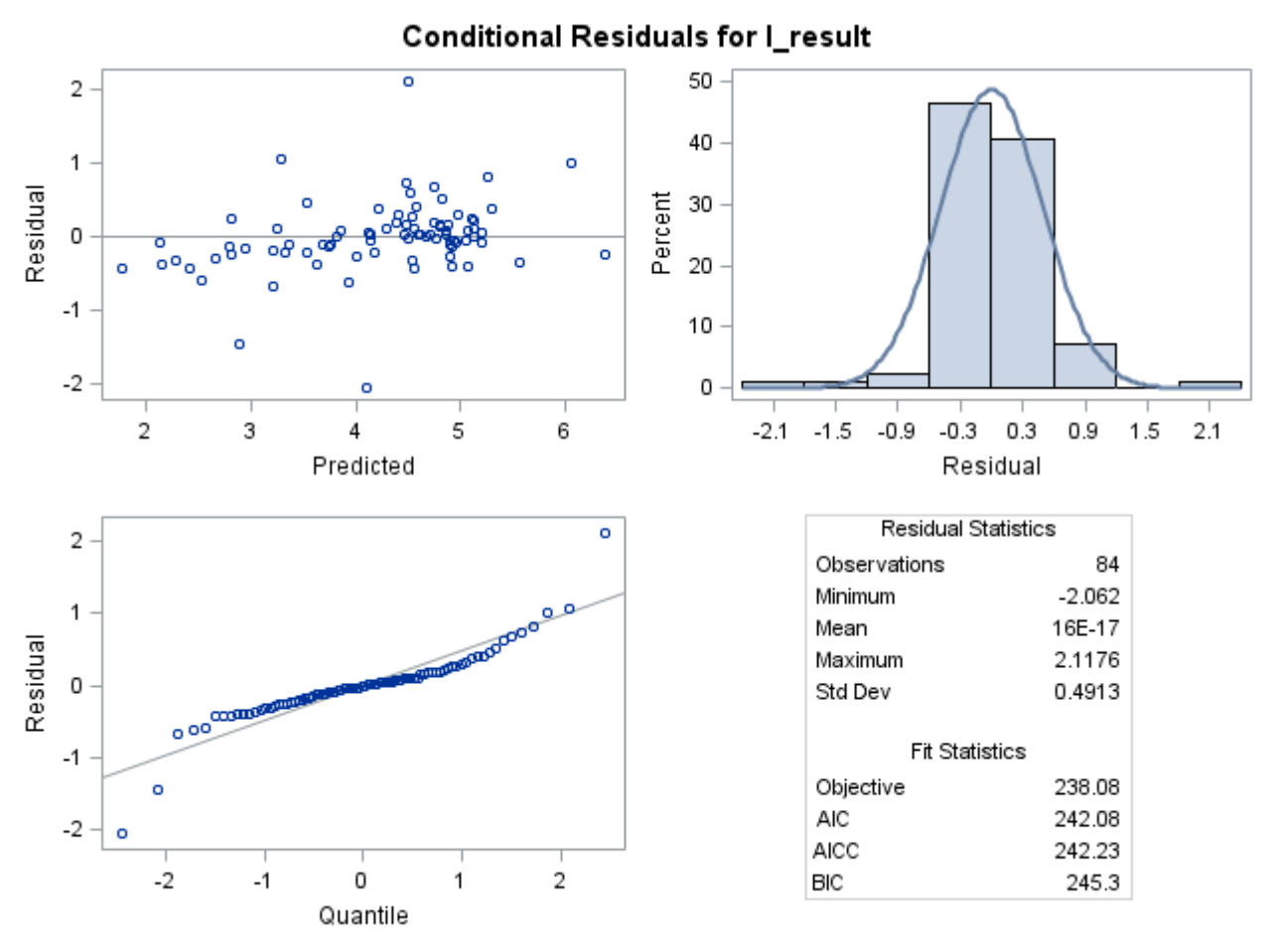
-2 Res Log Likelihood	238.1
AIC (Smaller is Better)	242.1
AICC (Smaller is Better)	242.2
BIC (Smaller is Better)	245.3

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	4.3417	0.1963	36	22.12	<.0001	0.05	3.9435	4.7398
year0	-0.03533	0.01344	46	-2.63	0.0116	0.05	-0.06239	-0.00828

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	6.91	0.0116


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -2.062
Mean 16E-17
Maximum 2.1176
Std Dev 0.4913
Fit Statistics
Objective 238.08
AIC 242.08
AICC 242.23
BIC 245.3

The Mixed Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	35	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	35
Subjects	1
Max Obs per Subject	79

Number of Observations

Number of Observations Read	79
Number of Observations Used	79
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	251.31972012	
1	2	228.21576697	0.01688613
2	1	227.34983746	0.00211516
3	1	227.25132165	0.00004310
4	1	227.24944776	0.00000002
5	1	227.24944689	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.9961
Residual	0.4315

Fit Statistics

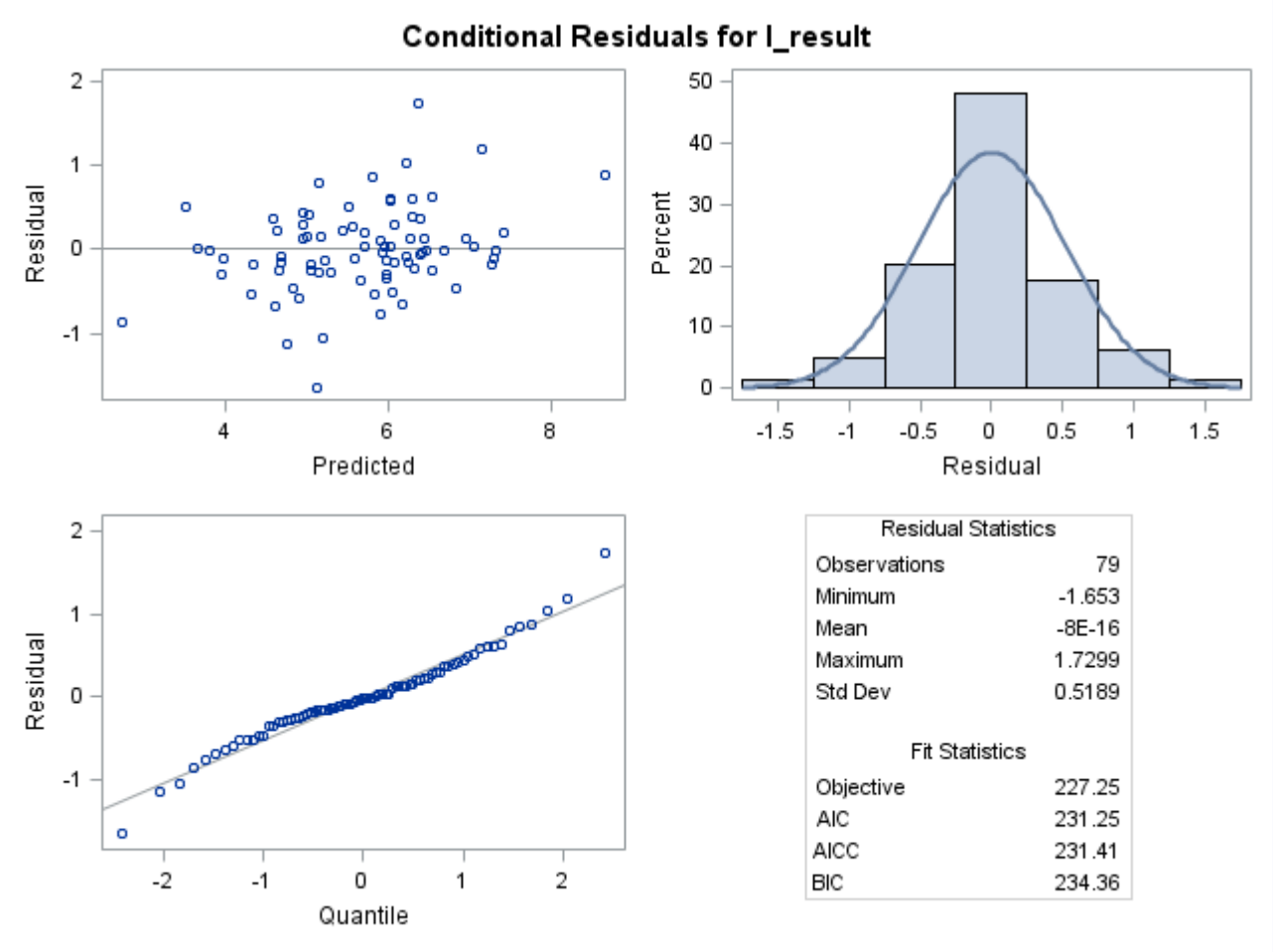
-2 Res Log Likelihood	227.2
AIC (Smaller is Better)	231.2
AICC (Smaller is Better)	231.4
BIC (Smaller is Better)	234.4

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	6.1948	0.2003	34	30.93	<.0001	0.05	5.7878	6.6018
year0	-0.1139	0.01471	43	-7.74	<.0001	0.05	-0.1435	-0.08423

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	43	59.97	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 79
Minimum -1.653
Mean -8E-16
Maximum 1.7299
Std Dev 0.5189
Fit Statistics
Objective 227.25
AIC 231.25
AICC 231.41
BIC 234.36

The Mixed Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	296.07083063	
1	2	252.86821013	0.02361099
2	1	251.41318569	0.00406615
3	1	251.18497990	0.00016250
4	1	251.17658731	0.00000031
5	1	251.17657185	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	1.6261
Residual	0.3866

Fit Statistics

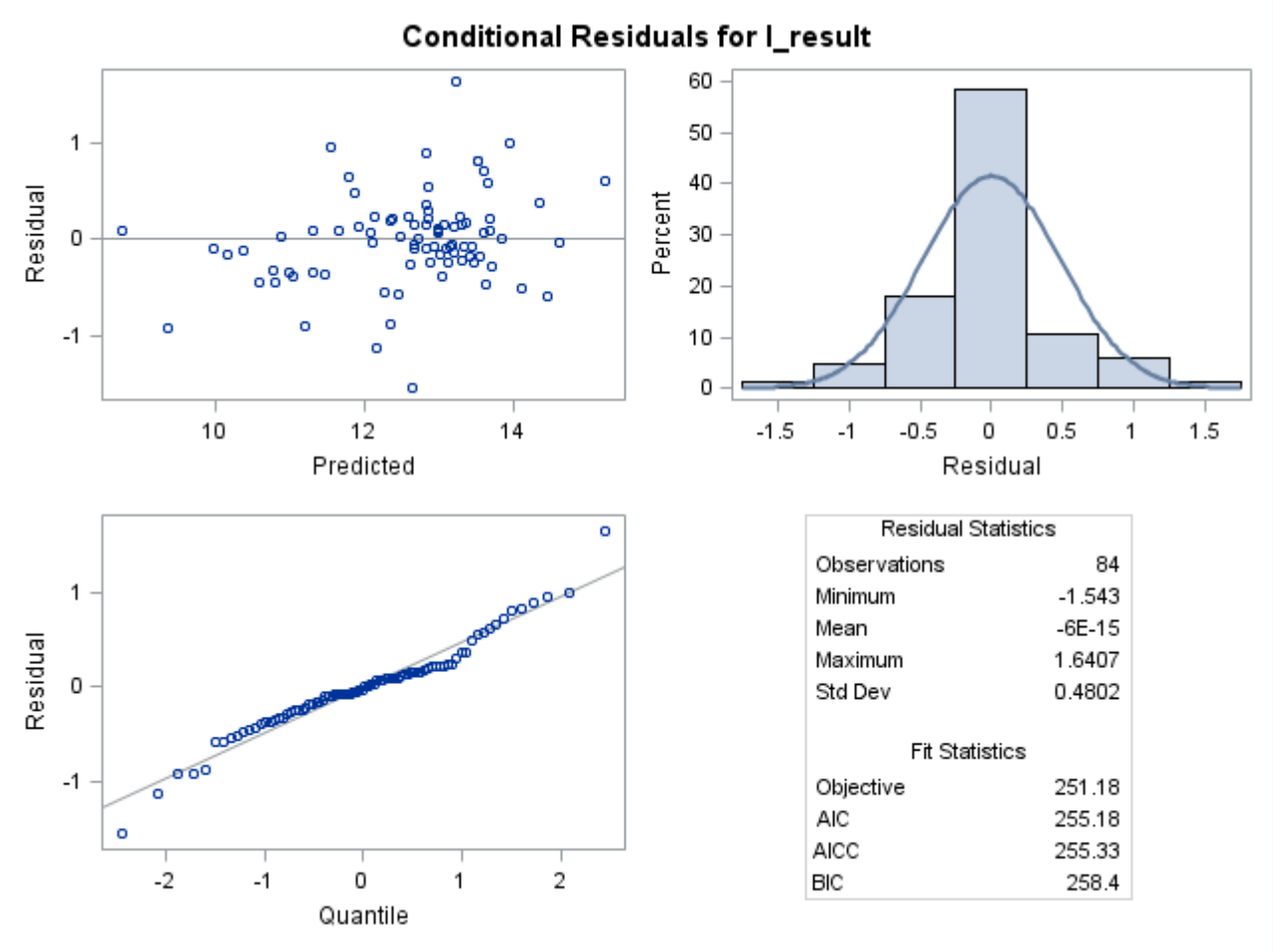
-2 Res Log Likelihood	251.2
AIC (Smaller is Better)	255.2
AICC (Smaller is Better)	255.3
BIC (Smaller is Better)	258.4

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	12.8315	0.2321	36	55.28	<.0001	0.05	12.3607	13.3022
year0	-0.05549	0.01336	46	-4.15	0.0001	0.05	-0.08239	-0.02859

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	17.24	0.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.543
Mean -6E-15
Maximum 1.6407
Std Dev 0.4802
Fit Statistics
Objective 251.18
AIC 255.18
AICC 255.33
BIC 258.4

The Mixed Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	360.62376802	
1	2	329.68940055	0.00512678
2	1	329.16021365	0.00041097
3	1	329.12149313	0.00000333
4	1	329.12119442	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	3.1408
Residual	1.2018

Fit Statistics

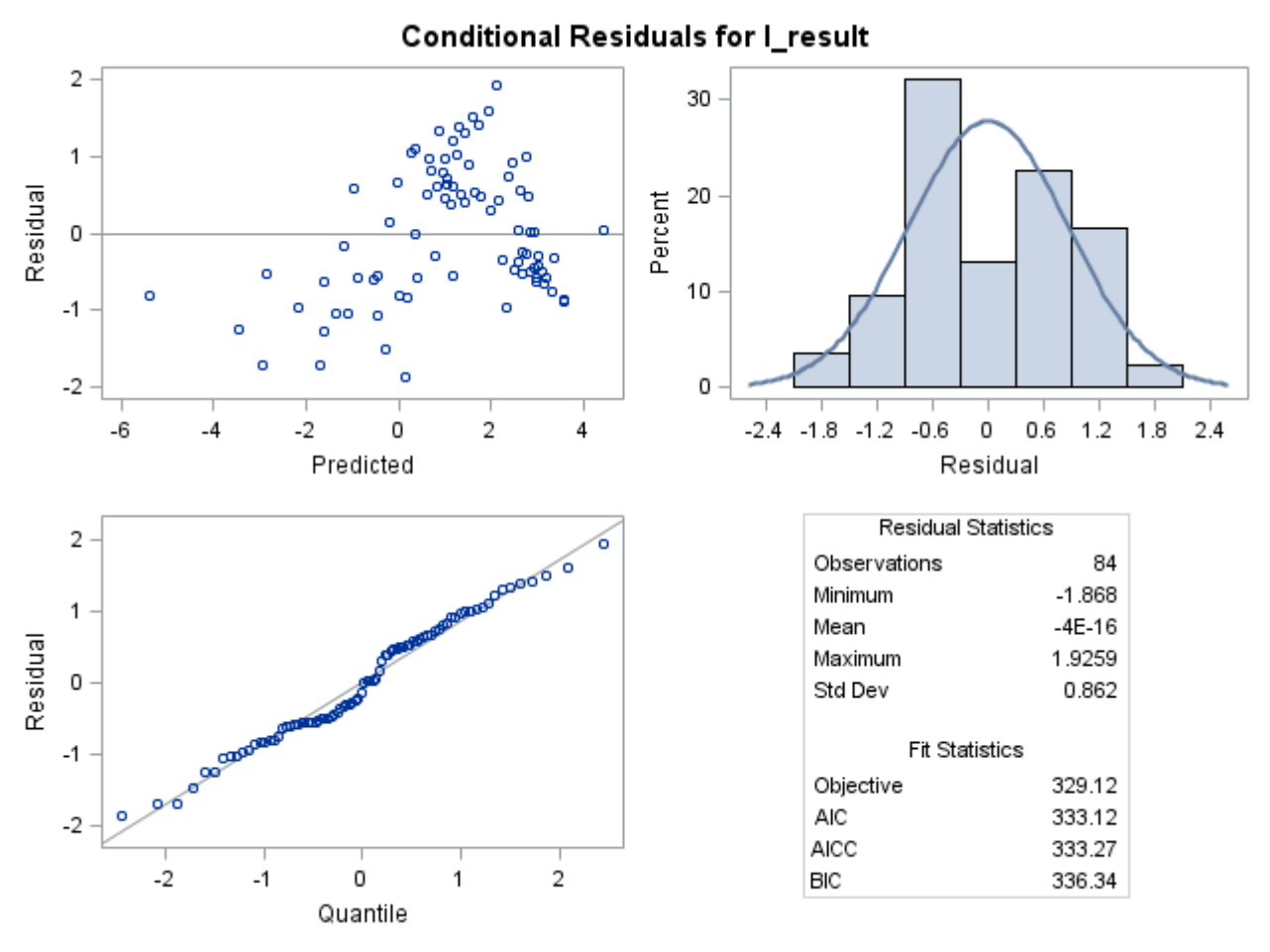
-2 Res Log Likelihood	329.1
AIC (Smaller is Better)	333.1
AICC (Smaller is Better)	333.3
BIC (Smaller is Better)	336.3

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	1.9660	0.3401	36	5.78	<.0001	0.05	1.2762	2.6558
year0	-0.1785	0.02355	46	-7.58	<.0001	0.05	-0.2259	-0.1311

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	57.48	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.868
Mean -4E-16
Maximum 1.9259
Std Dev 0.862
Fit Statistics
Objective 329.12
AIC 333.12
AICC 333.27
BIC 336.34

The Mixed Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	78

Number of Observations

Number of Observations Read	78
Number of Observations Used	78
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	262.76261486	
1	2	249.88207447	0.02183711
2	1	248.41975657	0.00415623
3	1	248.16600387	0.00019508
4	1	248.15507701	0.00000051
5	1	248.15504953	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	1.2137
Residual	0.6092

Fit Statistics

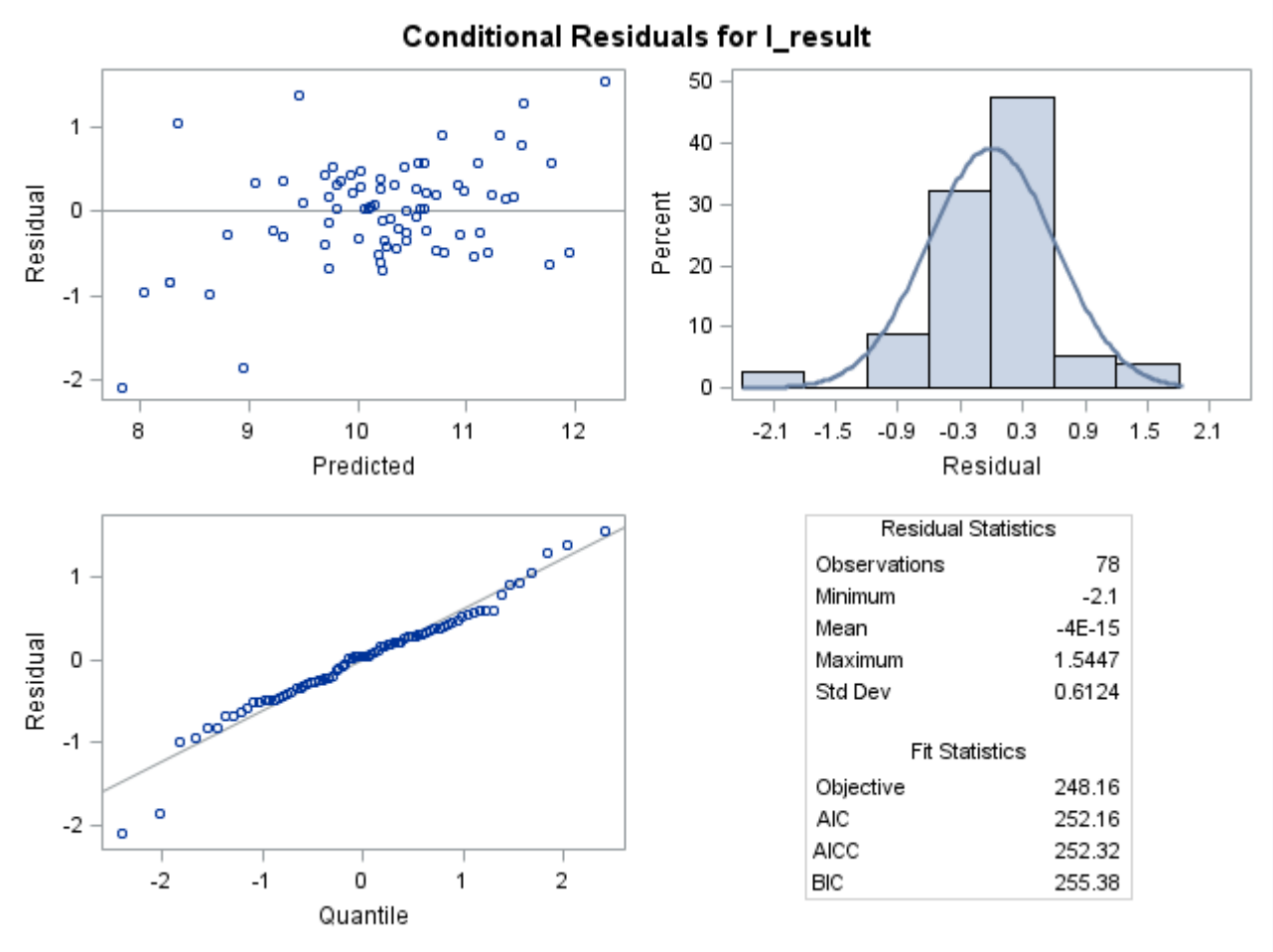
-2 Res Log Likelihood	248.2
AIC (Smaller is Better)	252.2
AICC (Smaller is Better)	252.3
BIC (Smaller is Better)	255.4

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	10.4510	0.2305	36	45.34	<.0001	0.05	9.9836	10.9185
year0	-0.04657	0.01798	40	-2.59	0.0133	0.05	-0.08291	-0.01023

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	40	6.71	0.0133


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 78
Minimum -2.1
Mean -4E-15
Maximum 1.5447
Std Dev 0.6124
Fit Statistics
Objective 248.16
AIC 252.16
AICC 252.32
BIC 255.38

The Mixed Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	251.88496067	
1	2	221.07451849	0.01034935
2	1	220.65879484	0.00068575
3	1	220.63370148	0.00000370
4	1	220.63357164	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.8267
Residual	0.3223

Fit Statistics

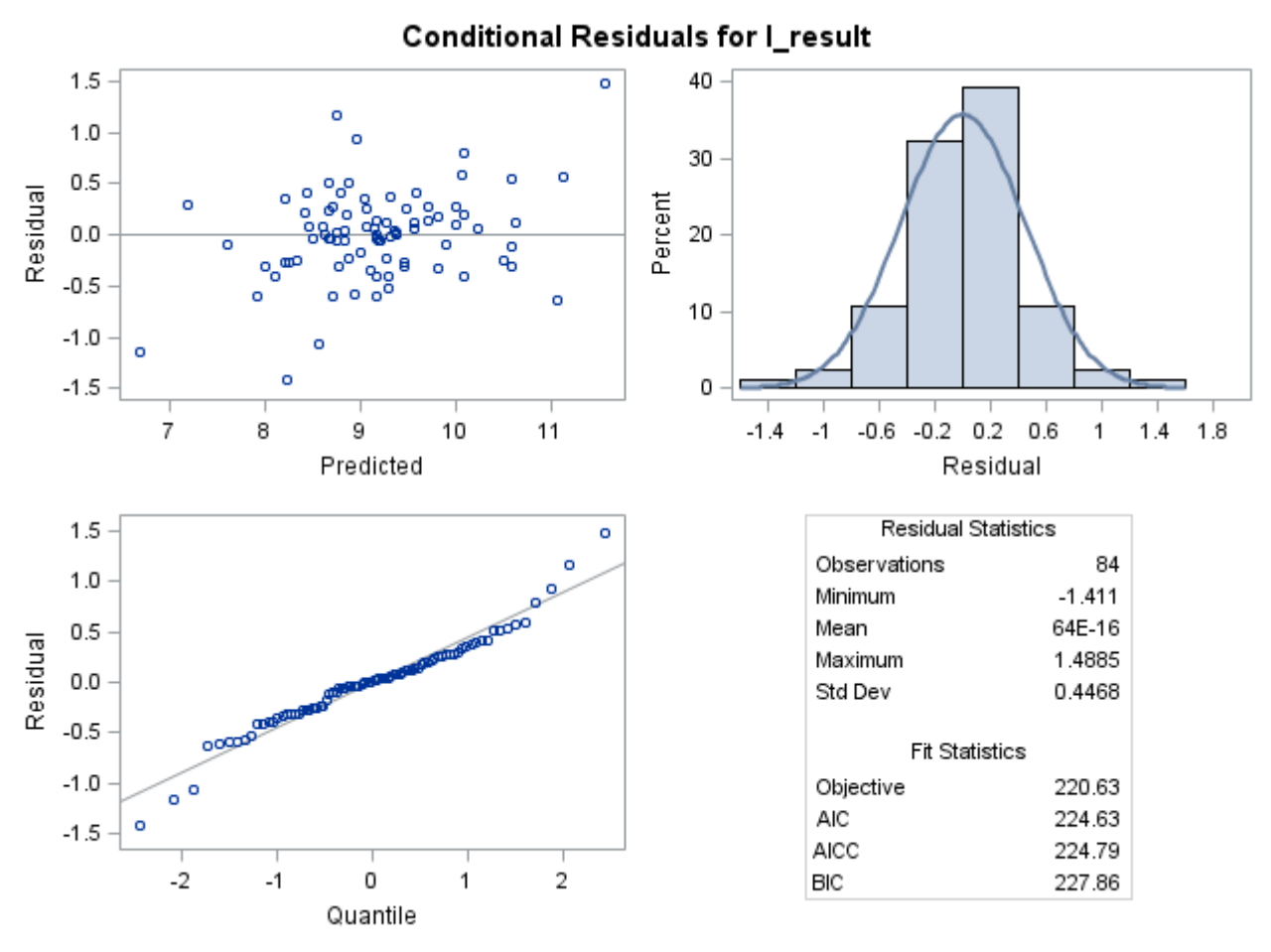
-2 Res Log Likelihood	220.6
AIC (Smaller is Better)	224.6
AICC (Smaller is Better)	224.8
BIC (Smaller is Better)	227.9

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	9.3779	0.1749	36	53.61	<.0001	0.05	9.0231	9.7327
year0	-0.04589	0.01219	46	-3.76	0.0005	0.05	-0.07044	-0.02135

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	14.16	0.0005


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.411
Mean 64E-16
Maximum 1.4885
Std Dev 0.4468
Fit Statistics
Objective 220.63
AIC 224.63
AICC 224.79
BIC 227.86

The Mixed Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	36	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	36
Subjects	1
Max Obs per Subject	80

Number of Observations

Number of Observations Read	80
Number of Observations Used	80
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	232.46950829	
1	2	215.98566376	0.00358993
2	1	215.84249504	0.00010050
3	1	215.83878151	0.00000009
4	1	215.83877823	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.6067
Residual	0.4240

Fit Statistics

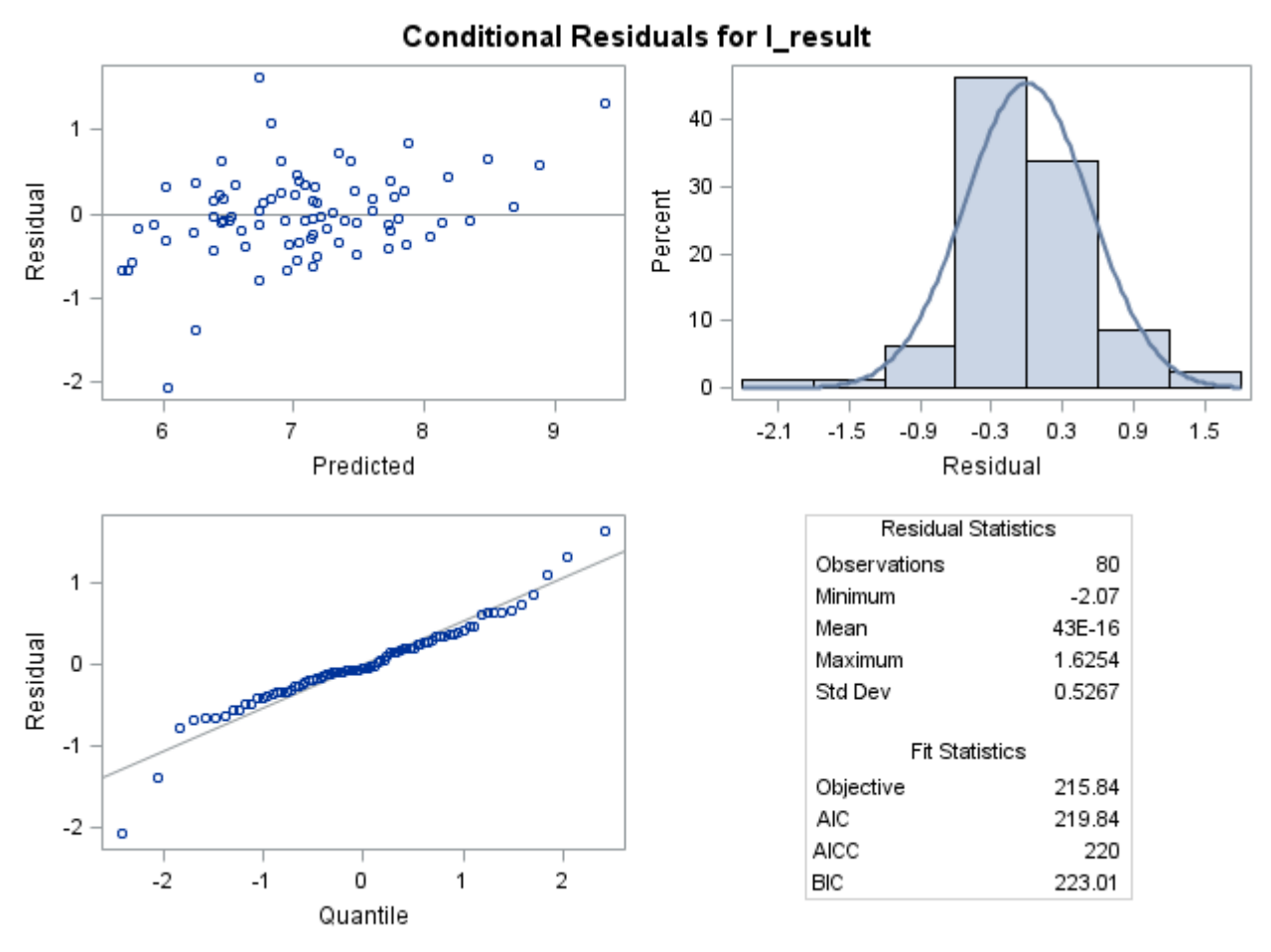
-2 Res Log Likelihood	215.8
AIC (Smaller is Better)	219.8
AICC (Smaller is Better)	220.0
BIC (Smaller is Better)	223.0

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	7.3768	0.1704	35	43.30	<.0001	0.05	7.0309	7.7227
year0	-0.06372	0.01450	43	-4.39	<.0001	0.05	-0.09297	-0.03447

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	43	19.30	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 80
Minimum -2.07
Mean 43E-16
Maximum 1.6254
Std Dev 0.5267
Fit Statistics
Objective 215.84
AIC 219.84
AICC 220
BIC 223.01

The Mixed Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	36	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	36
Subjects	1
Max Obs per Subject	73

Number of Observations

Number of Observations Read	73
Number of Observations Used	73
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	219.34715755	
1	2	206.91303670	0.02454765
2	1	205.78260689	0.00410722
3	1	205.61119654	0.00014437
4	1	205.60564195	0.00000020
5	1	205.60563426	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.8134
Residual	0.4183

Fit Statistics

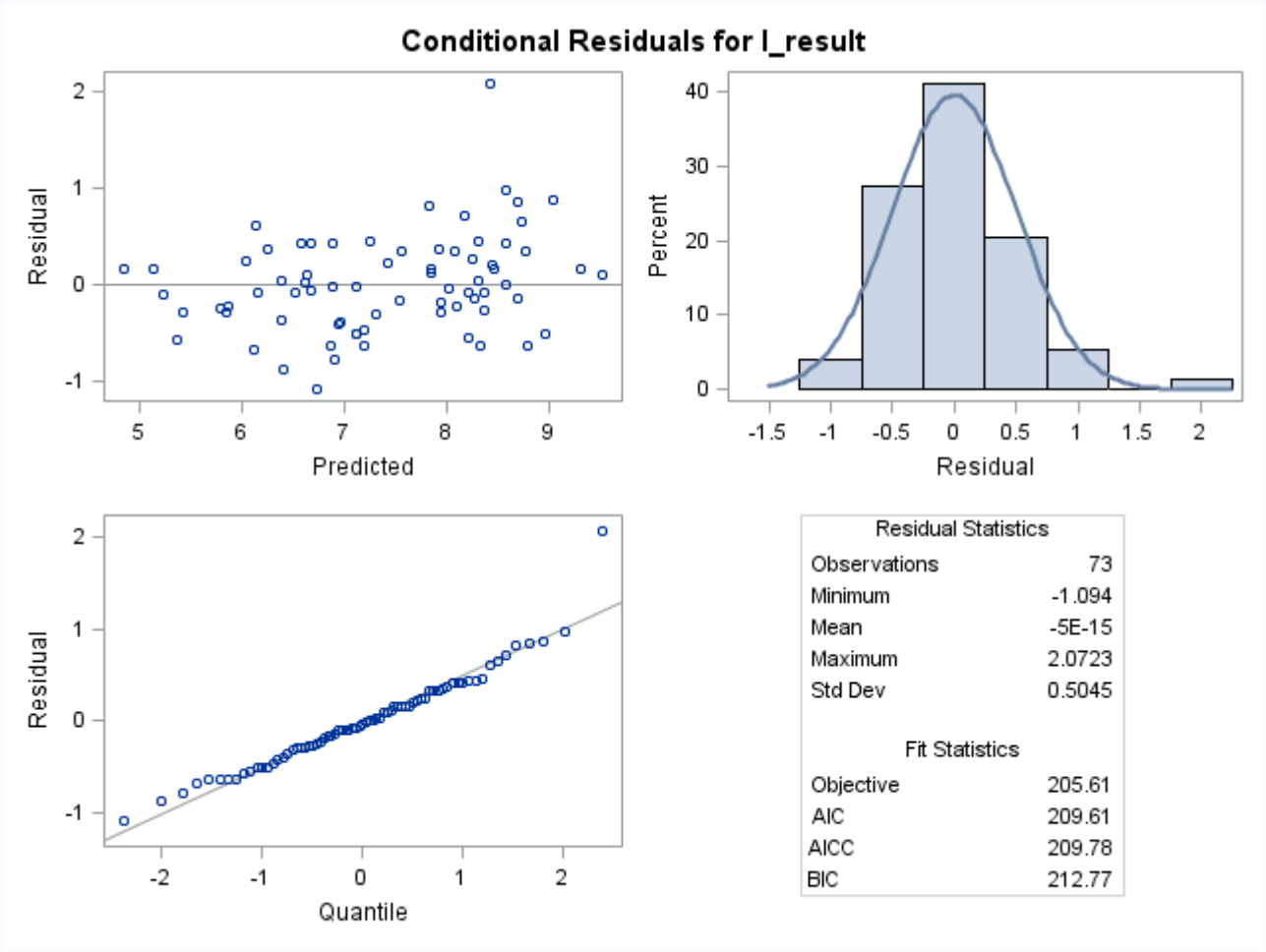
-2 Res Log Likelihood	205.6
AIC (Smaller is Better)	209.6
AICC (Smaller is Better)	209.8
BIC (Smaller is Better)	212.8

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	8.1258	0.1832	35	44.34	<.0001	0.05	7.7538	8.4978
year0	-0.1878	0.01587	36	-11.83	<.0001	0.05	-0.2199	-0.1556

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	36	140.00	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 73
Minimum -1.094
Mean -5E-15
Maximum 2.0723
Std Dev 0.5045
Fit Statistics
Objective 205.61
AIC 209.61
AICC 209.78
BIC 212.77

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Aluminum

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	101.03539718	
1	2	71.33038598	0.00911211
2	1	70.91763881	0.00059352
3	1	70.89287321	0.00000316
4	1	70.89274665	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.1298
Residual	0.05268

Fit Statistics

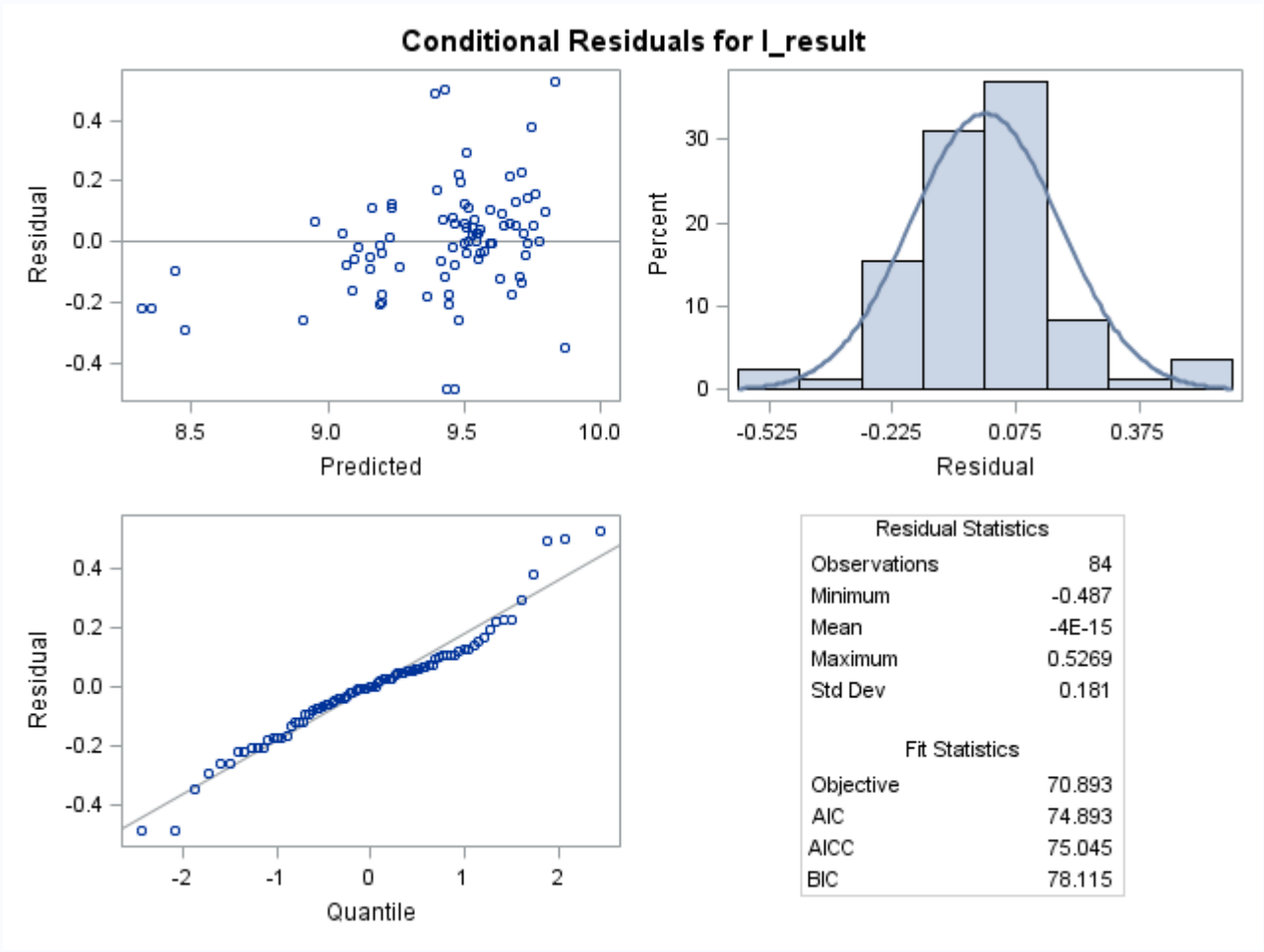
-2 Res Log Likelihood	70.9
AIC (Smaller is Better)	74.9
AICC (Smaller is Better)	75.0
BIC (Smaller is Better)	78.1

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	9.3854	0.06971	36	134.64	<.0001	0.05	9.2440	9.5268
year0	0.003692	0.004930	46	0.75	0.4578	0.05	-0.00623	0.01361

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	0.56	0.4578


Conditional Residuals for l_result
Residual
Predicted
0.4
0.2
0.0
-0.2
-0.4
8.5
9.0
9.5
10.0
Percent
Residual
30
20
10
0
-0.525
-0.225
0.075
0.375
Residual
Quantile
-2
-1
0
1
2
Residual Statistics
Observations 84
Minimum -0.487
Mean -4E-15
Maximum 0.5269
Std Dev 0.181
Fit Statistics
Objective 70.893
AIC 74.893
AICC 75.045
BIC 78.115

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	147.99811386	
1	2	116.62819085	0.03358140
2	1	115.96156405	0.00315412
3	1	115.90311437	0.00003735
4	1	115.90245912	0.00000001

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.2389
Residual	0.08797

Fit Statistics

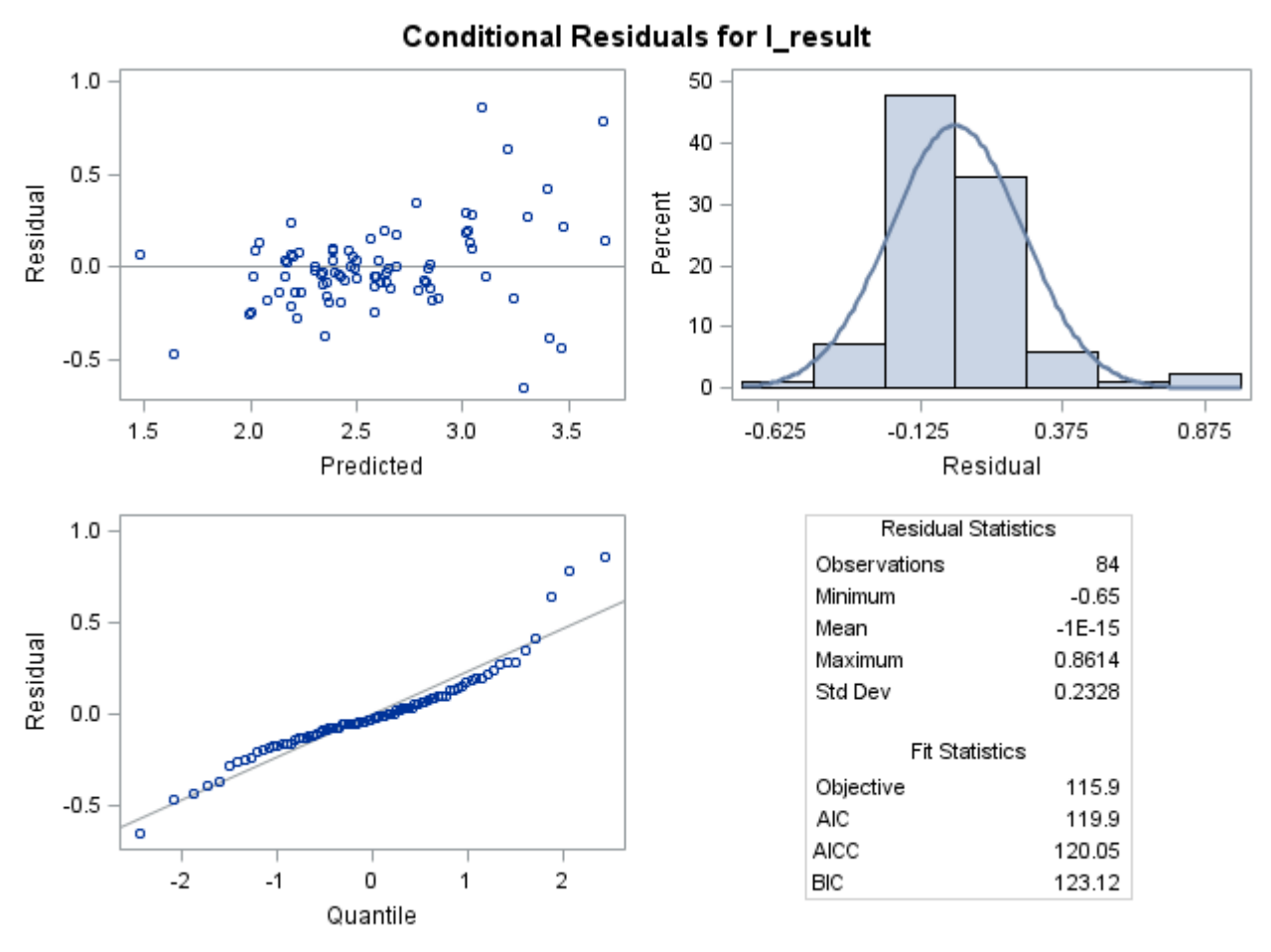
-2 Res Log Likelihood	115.9
AIC (Smaller is Better)	119.9
AICC (Smaller is Better)	120.1
BIC (Smaller is Better)	123.1

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	2.5112	0.09333	36	26.91	<.0001	0.05	2.3219	2.7005
year0	0.01779	0.006371	46	2.79	0.0076	0.05	0.004968	0.03062

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	7.80	0.0076


Conditional Residuals for l_result
Residual
Predicted
1.0
0.5
0.0
-0.5
1.5
2.0
2.5
3.0
3.5
Percent
Residual
50
40
30
20
10
0
-0.625
-0.125
0.375
0.875
Residual
Quantile
-2
-1
0
1
2
Residual Statistics
Observations 84
Minimum -0.65
Mean -1E-15
Maximum 0.8614
Std Dev 0.2328
Fit Statistics
Objective 115.9
AIC 119.9
AICC 120.05
BIC 123.12

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	82

Number of Observations

Number of Observations Read	82
Number of Observations Used	82
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	238.09715607	
1	2	212.00896238	0.02381153
2	1	211.09287590	0.00304143
3	1	210.98705104	0.00006361
4	1	210.98498731	0.00000003
5	1	210.98498630	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.7816
Residual	0.3010

Fit Statistics

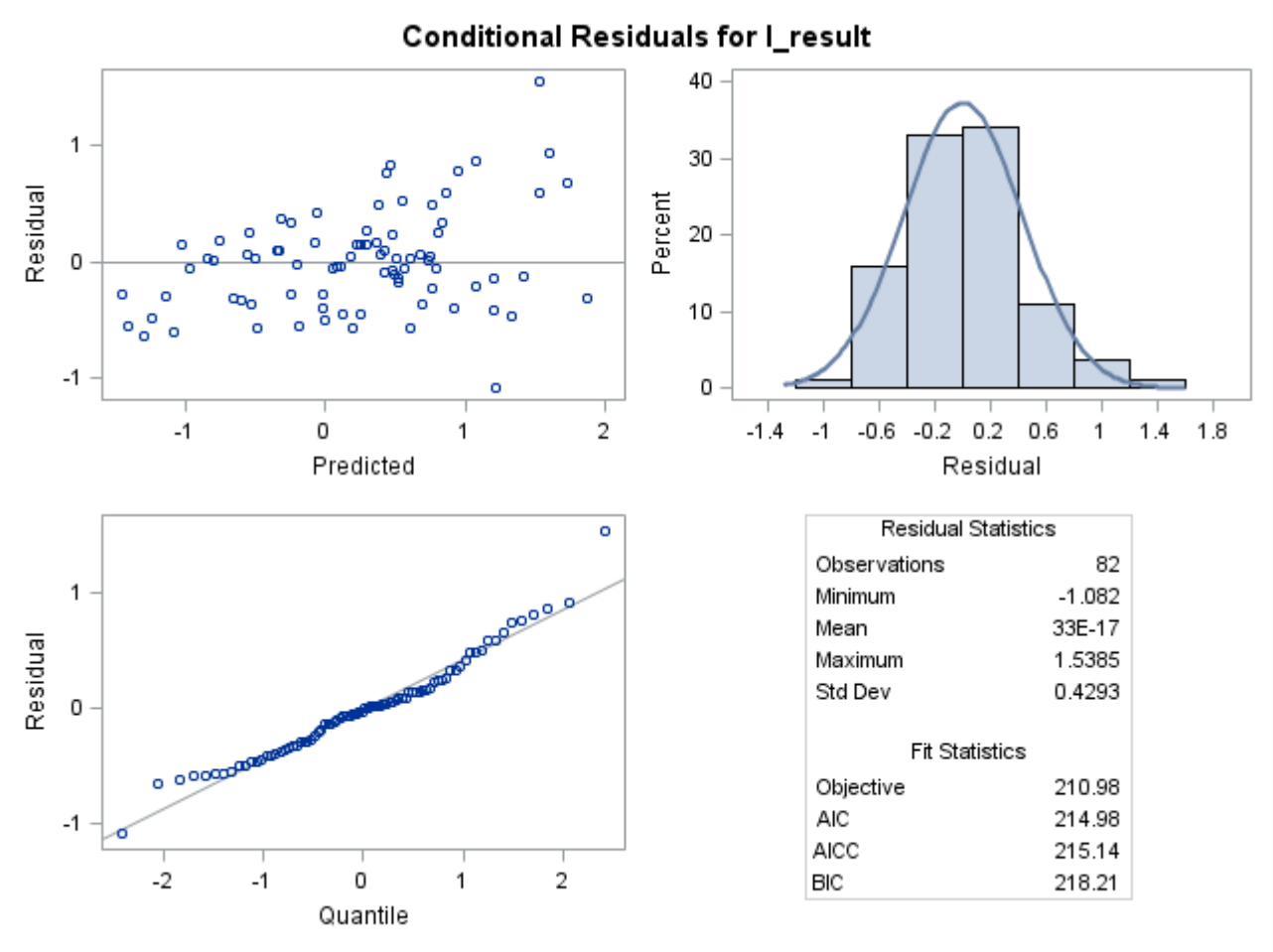
-2 Res Log Likelihood	211.0
AIC (Smaller is Better)	215.0
AICC (Smaller is Better)	215.1
BIC (Smaller is Better)	218.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	0.3447	0.1721	36	2.00	0.0528	0.05	-0.00447	0.6938
year0	-0.02876	0.01208	44	-2.38	0.0217	0.05	-0.05311	-0.00442

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	44	5.67	0.0217


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 82
Minimum -1.082
Mean 33E-17
Maximum 1.5385
Std Dev 0.4293
Fit Statistics
Objective 210.98
AIC 214.98
AICC 215.14
BIC 218.21

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	180.97664091	
1	2	154.22896450	0.34690782
2	1	153.51491559	0.04387605
3	1	153.44896816	0.00059476
4	1	153.44814493	0.00000012
5	1	153.44814477	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.3440
Residual	0.1469

Fit Statistics

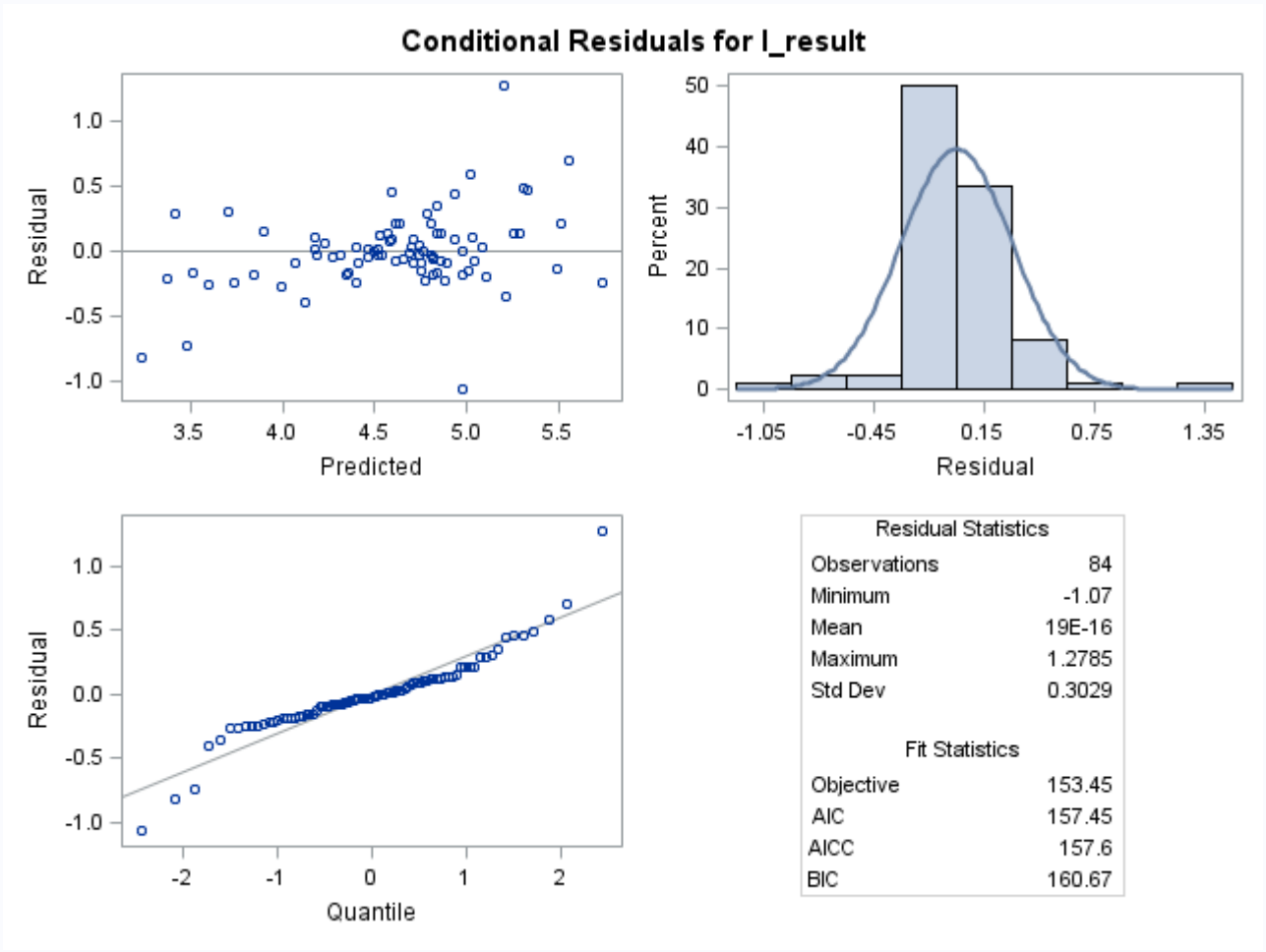
-2 Res Log Likelihood	153.4
AIC (Smaller is Better)	157.4
AICC (Smaller is Better)	157.6
BIC (Smaller is Better)	160.7

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	4.7081	0.1143	36	41.20	<.0001	0.05	4.4763	4.9398
year0	-0.02047	0.008233	46	-2.49	0.0166	0.05	-0.03704	-0.00390

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	6.18	0.0166


Conditional Residuals for l_result
Residual
Predicted
1.0
0.5
0.0
-0.5
-1.0
3.5
4.0
4.5
5.0
5.5
Percent
Residual
50
40
30
20
10
0
-1.05
-0.45
0.15
0.75
1.35
Residual
Quantile
-2
-1
0
1
2
Residual Statistics
Observations 84
Minimum -1.07
Mean 19E-16
Maximum 1.2785
Std Dev 0.3029
Fit Statistics
Objective 153.45
AIC 157.45
AICC 157.6
BIC 160.67

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	213.88567517	
1	2	169.62675125	0.18401405
2	1	167.49045667	0.04546196
3	1	167.05401357	0.00319431
4	1	167.02664972	0.00001871
5	1	167.02649645	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.6156
Residual	0.1336

Fit Statistics

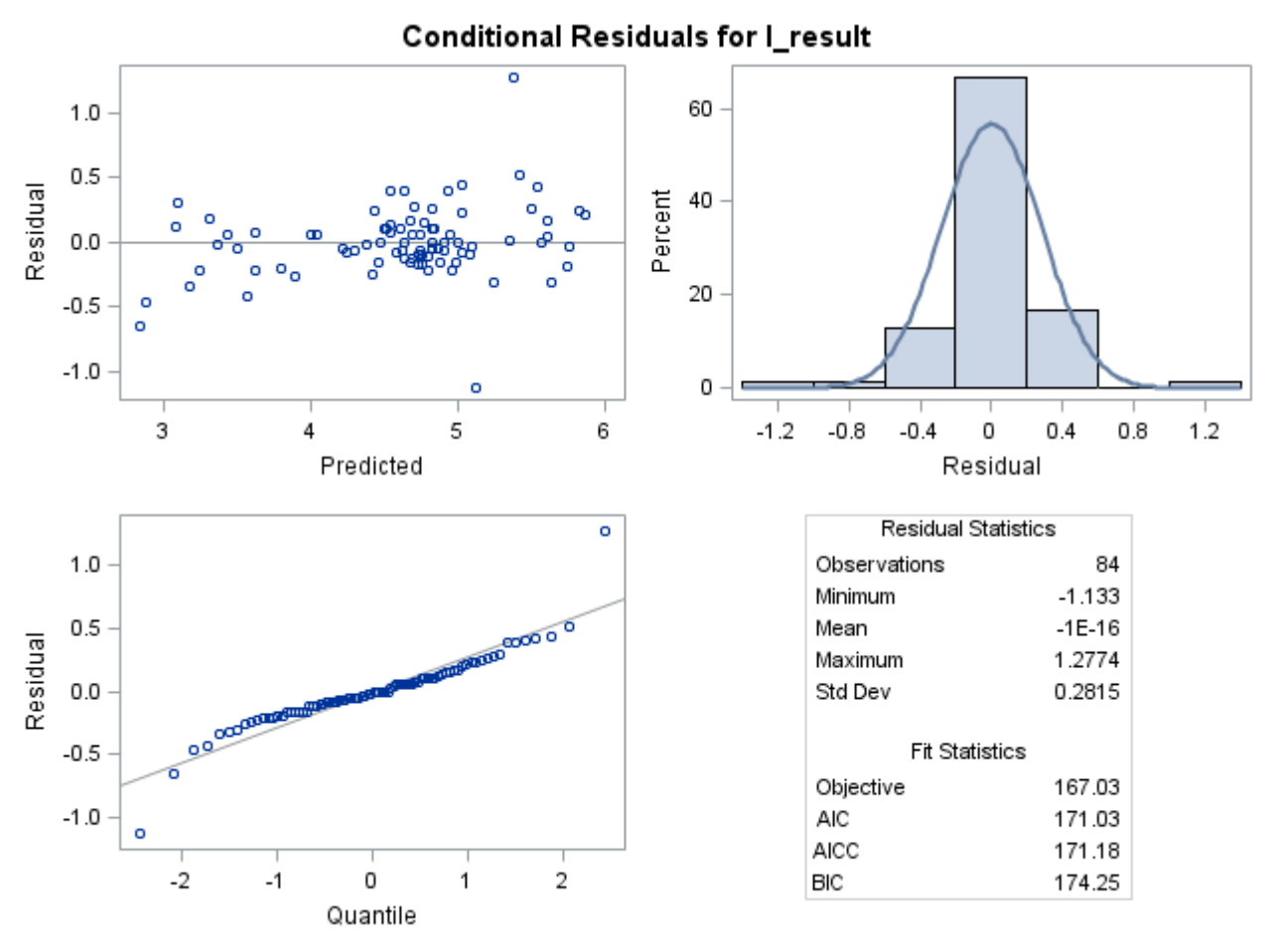
-2 Res Log Likelihood	167.0
AIC (Smaller is Better)	171.0
AICC (Smaller is Better)	171.2
BIC (Smaller is Better)	174.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	4.7166	0.1417	36	33.29	<.0001	0.05	4.4293	5.0040
year0	-0.02343	0.007857	46	-2.98	0.0046	0.05	-0.03925	-0.00762

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	8.90	0.0046


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.133
Mean -1E-16
Maximum 1.2774
Std Dev 0.2815
Fit Statistics
Objective 167.03
AIC 171.03
AICC 171.18
BIC 174.25

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	207.73530277	
1	2	172.65752187	0.09882833
2	1	171.35548988	0.01649314
3	1	171.16703731	0.00056257
4	1	171.16114550	0.00000075
5	1	171.16113777	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.5284
Residual	0.1603

Fit Statistics

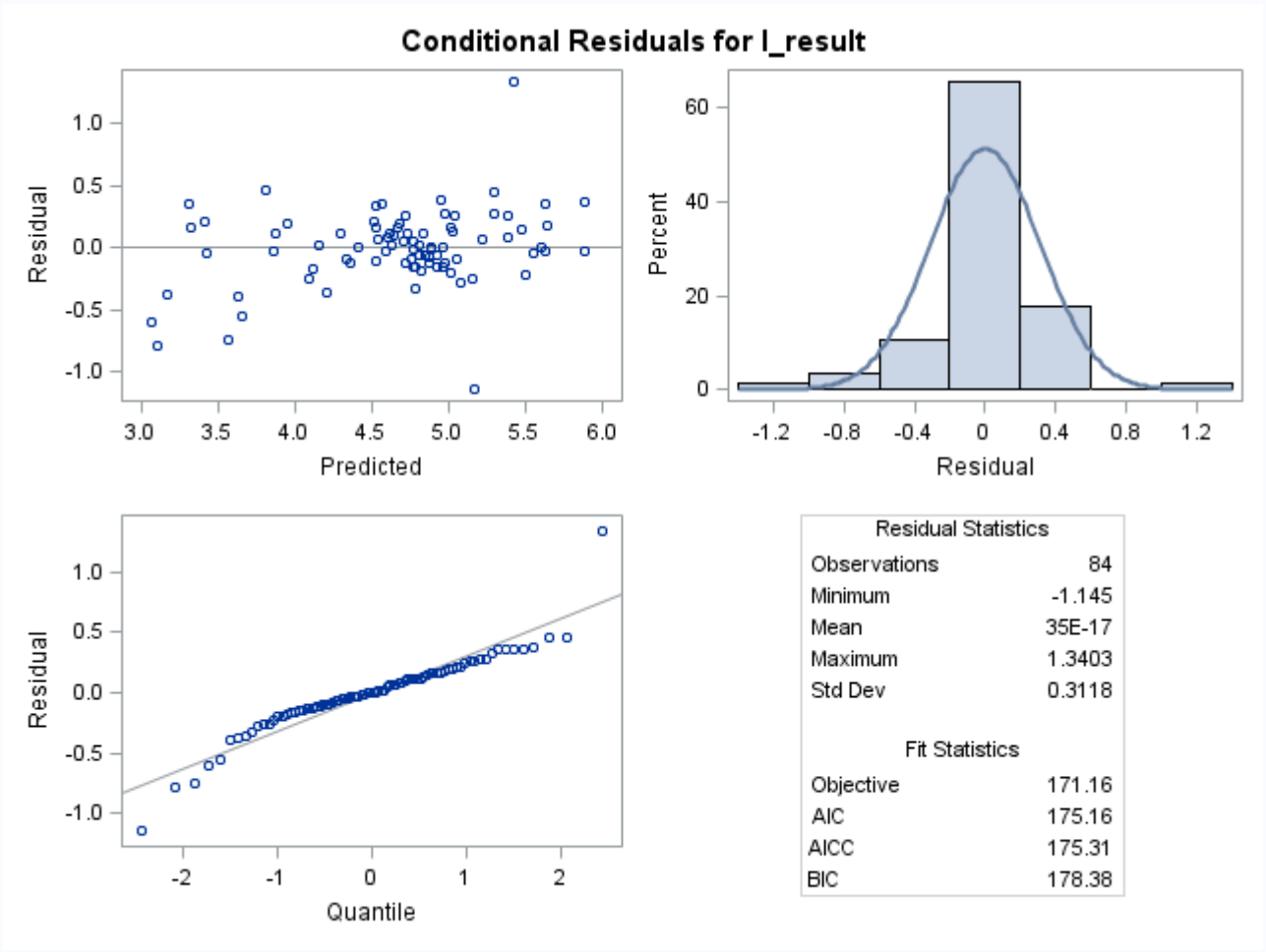
-2 Res Log Likelihood	171.2
AIC (Smaller is Better)	175.2
AICC (Smaller is Better)	175.3
BIC (Smaller is Better)	178.4

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	4.7758	0.1356	36	35.21	<.0001	0.05	4.5007	5.0508
year0	-0.02289	0.008602	46	-2.66	0.0107	0.05	-0.04020	-0.00557

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	7.08	0.0107


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.145
Mean 35E-17
Maximum 1.3403
Std Dev 0.3118
Fit Statistics
Objective 171.16
AIC 175.16
AICC 175.31
BIC 178.38

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	230.50055461	
1	2	211.81631232	0.01139233
2	1	211.41975503	0.00072434
3	1	211.39679089	0.00000358
4	1	211.39668177	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.5484
Residual	0.3402

Fit Statistics

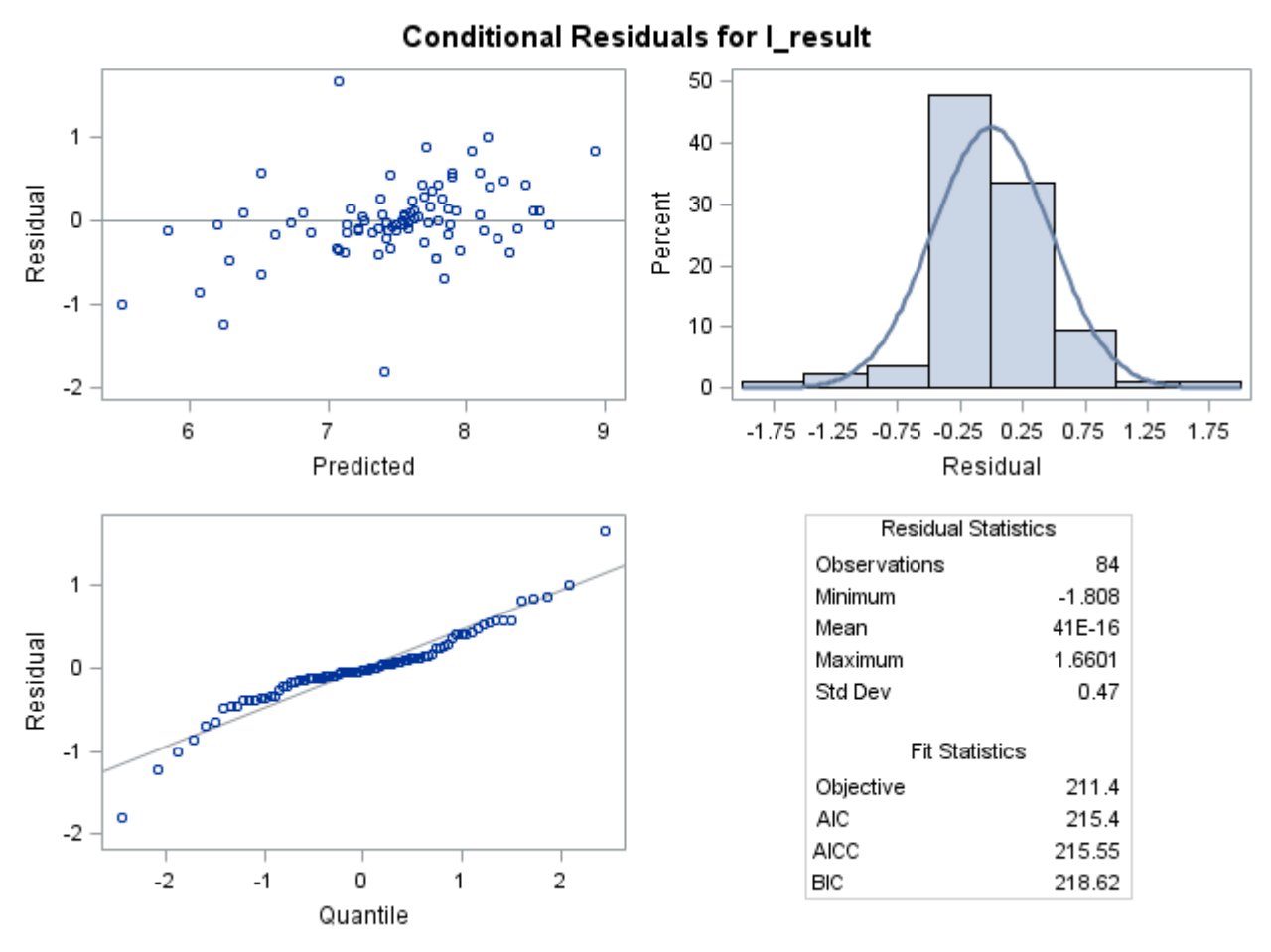
-2 Res Log Likelihood	211.4
AIC (Smaller is Better)	215.4
AICC (Smaller is Better)	215.5
BIC (Smaller is Better)	218.6

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	7.6461	0.1533	36	49.87	<.0001	0.05	7.3351	7.9570
year0	-0.02954	0.01252	46	-2.36	0.0226	0.05	-0.05474	-0.00435

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	5.57	0.0226


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.808
Mean 41E-16
Maximum 1.6601
Std Dev 0.47
Fit Statistics
Objective 211.4
AIC 215.4
AICC 215.55
BIC 218.62

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	37

Number of Observations

Number of Observations Read	37
Number of Observations Used	37
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	75.03993959	
1	1	75.03993959	0.00000000

Convergence criteria met but final Hessian is not positive definite.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.1272
Residual	0.2986

Fit Statistics

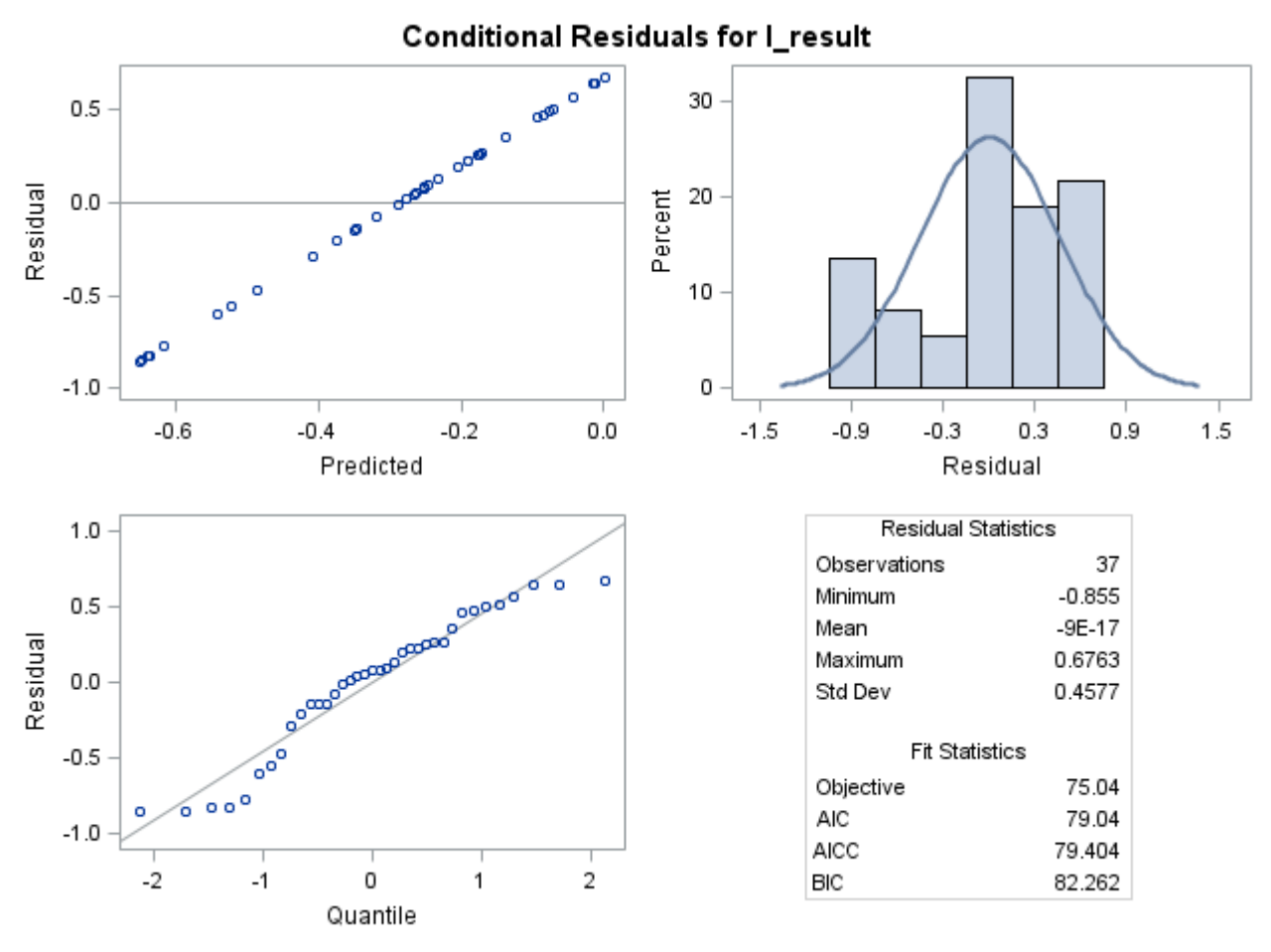
-2 Res Log Likelihood	75.0
AIC (Smaller is Better)	79.0
AICC (Smaller is Better)	79.4
BIC (Smaller is Better)	82.3

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	-0.2863	0.1073	36	-2.67	0.0114	0.05	-0.5038	-0.06869
year0	0	.	.	.	.	.	.	.

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	0	.	.	.


Conditional Residuals for l_result
Residual
Predicted
0.5
0.0
-0.5
-1.0
-0.6
-0.4
-0.2
0.0
Percent
Residual
30
20
10
0
-1.5
-0.9
-0.3
0.3
0.9
1.5
Residual
Quantile
1.0
0.5
0.0
-0.5
-1.0
-2
-1
0
1
2
Residual Statistics
Observations 37
Minimum -0.855
Mean -9E-17
Maximum 0.6763
Std Dev 0.4577
Fit Statistics
Objective 75.04
AIC 79.04
AICC 79.404
BIC 82.262

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	150.20231421	
1	2	110.47464826	0.04583267
2	1	109.37634870	0.00620969
3	1	109.23579142	0.00016196
4	1	109.23237163	0.00000013
5	1	109.23236898	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.2662
Residual	0.07206

Fit Statistics

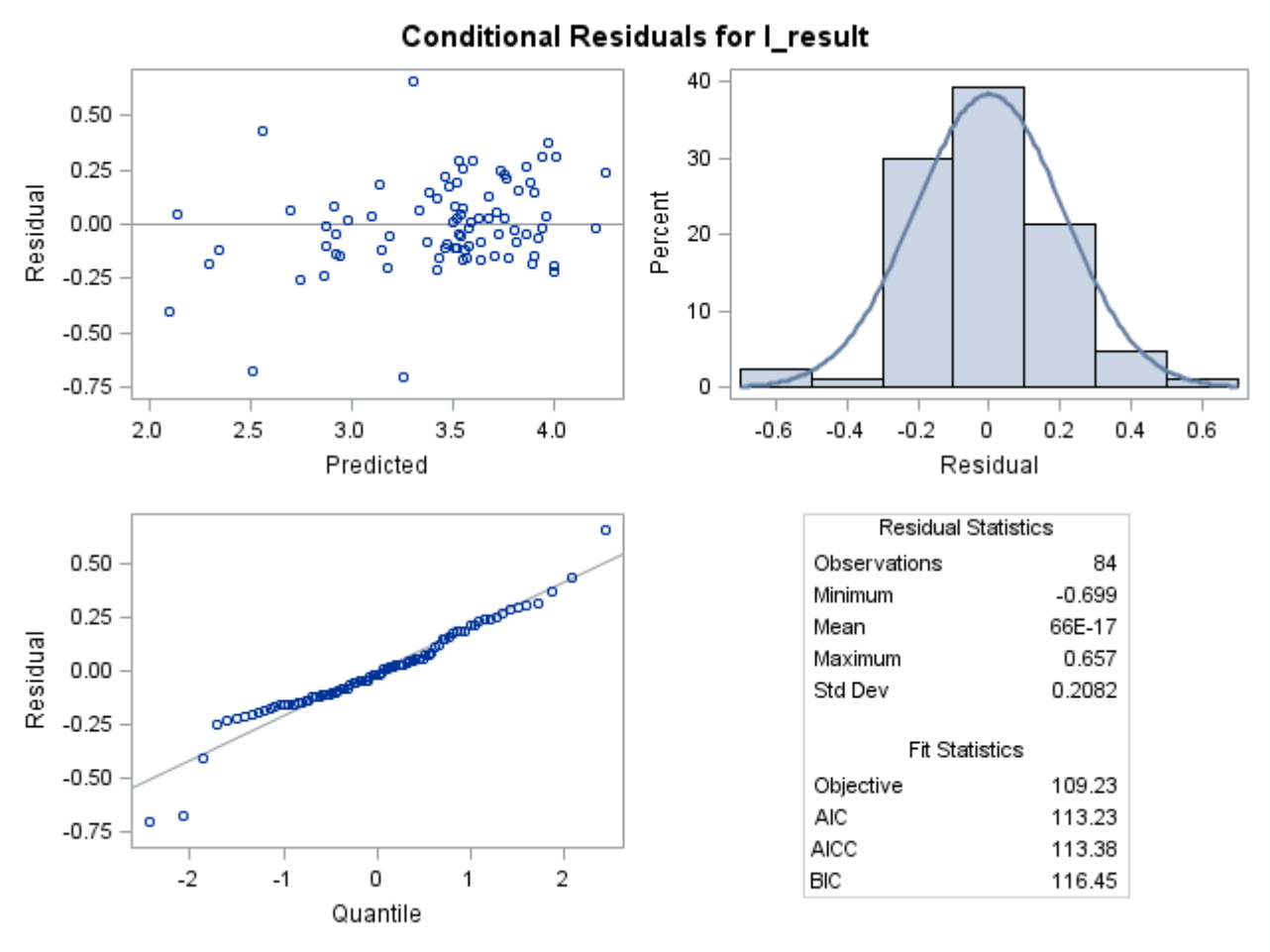
-2 Res Log Likelihood	109.2
AIC (Smaller is Better)	113.2
AICC (Smaller is Better)	113.4
BIC (Smaller is Better)	116.5

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	3.4556	0.09510	36	36.34	<.0001	0.05	3.2628	3.6485
year0	-0.00419	0.005769	46	-0.73	0.4711	0.05	-0.01580	0.007419

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	0.53	0.4711


Conditional Residuals for l_result
Residual
Predicted
0.50
0.25
0.00
-0.25
-0.50
-0.75
2.0
2.5
3.0
3.5
4.0
Percent
Residual
40
30
20
10
0
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Residual
Quantile
-2
-1
0
1
2
Residual Statistics
Observations 84
Minimum -0.699
Mean 66E-17
Maximum 0.657
Std Dev 0.2082
Fit Statistics
Objective 109.23
AIC 113.23
AICC 113.38
BIC 116.45

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	82

Number of Observations

Number of Observations Read	82
Number of Observations Used	82
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	225.98190331	
1	2	195.42501770	0.04630993
2	1	194.07554358	0.00785151
3	1	193.87034645	0.00029220
4	1	193.86332548	0.00000047
5	1	193.86331441	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.7115
Residual	0.2243

Fit Statistics

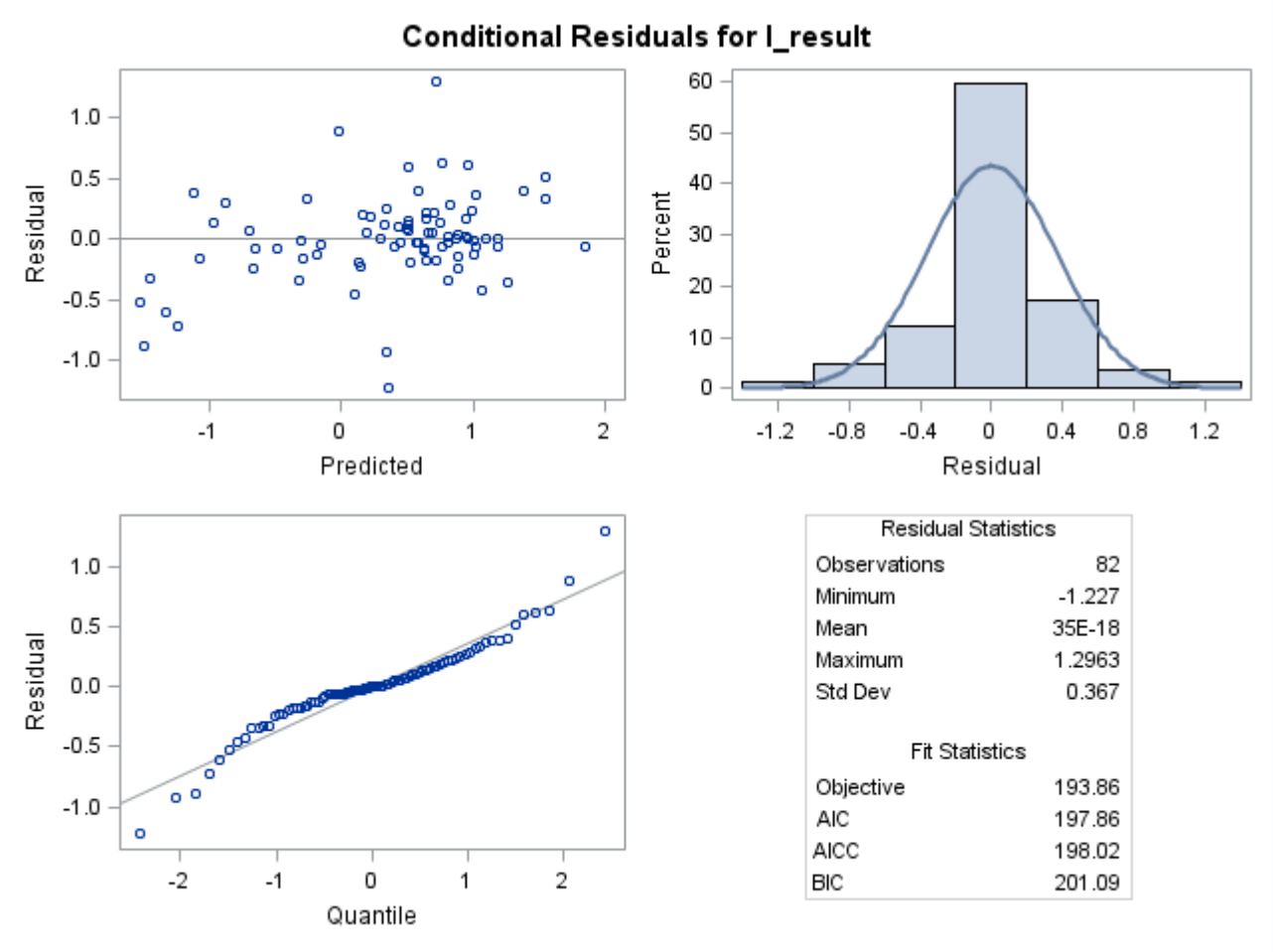
-2 Res Log Likelihood	193.9
AIC (Smaller is Better)	197.9
AICC (Smaller is Better)	198.0
BIC (Smaller is Better)	201.1

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	0.4985	0.1590	36	3.13	0.0034	0.05	0.1759	0.8211
year0	-0.03330	0.01028	44	-3.24	0.0023	0.05	-0.05401	-0.01259

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	44	10.50	0.0023


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 82
Minimum -1.227
Mean 35E-18
Maximum 1.2963
Std Dev 0.367
Fit Statistics
Objective 193.86
AIC 197.86
AICC 198.02
BIC 201.09

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	178.23628435	
1	2	146.16804477	0.34282108
2	1	145.24883773	0.03480471
3	1	145.14586920	0.00067746
4	1	145.14395978	0.00000030
5	1	145.14395894	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.3534
Residual	0.1230

Fit Statistics

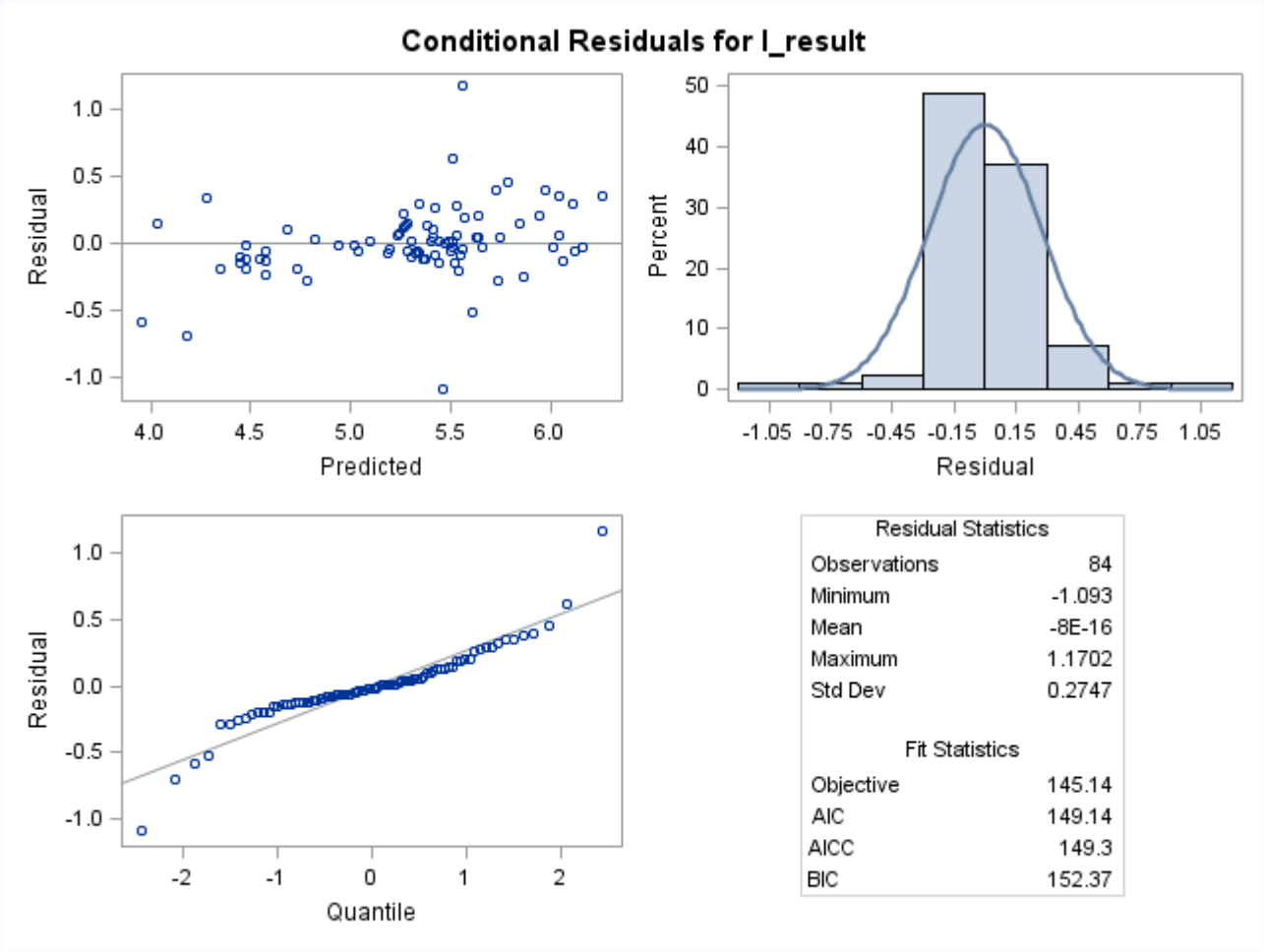
-2 Res Log Likelihood	145.1
AIC (Smaller is Better)	149.1
AICC (Smaller is Better)	149.3
BIC (Smaller is Better)	152.4

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	5.3335	0.1127	36	47.32	<.0001	0.05	5.1049	5.5621
year0	-0.00897	0.007535	46	-1.19	0.2402	0.05	-0.02413	0.006201

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	1.42	0.2402


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.093
Mean -8E-16
Maximum 1.1702
Std Dev 0.2747
Fit Statistics
Objective 145.14
AIC 149.14
AICC 149.3
BIC 152.37

The Mixed Procedure
sort=8 Parameter_group=Wet chemical_name=Total organic carbon (TOC)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	2
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	169.53104956	
1	2	153.06655729	0.22699927
2	1	152.76470453	0.01311180
3	1	152.75072942	0.00004066
4	1	152.75068776	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.2462
Residual	0.1738

Fit Statistics

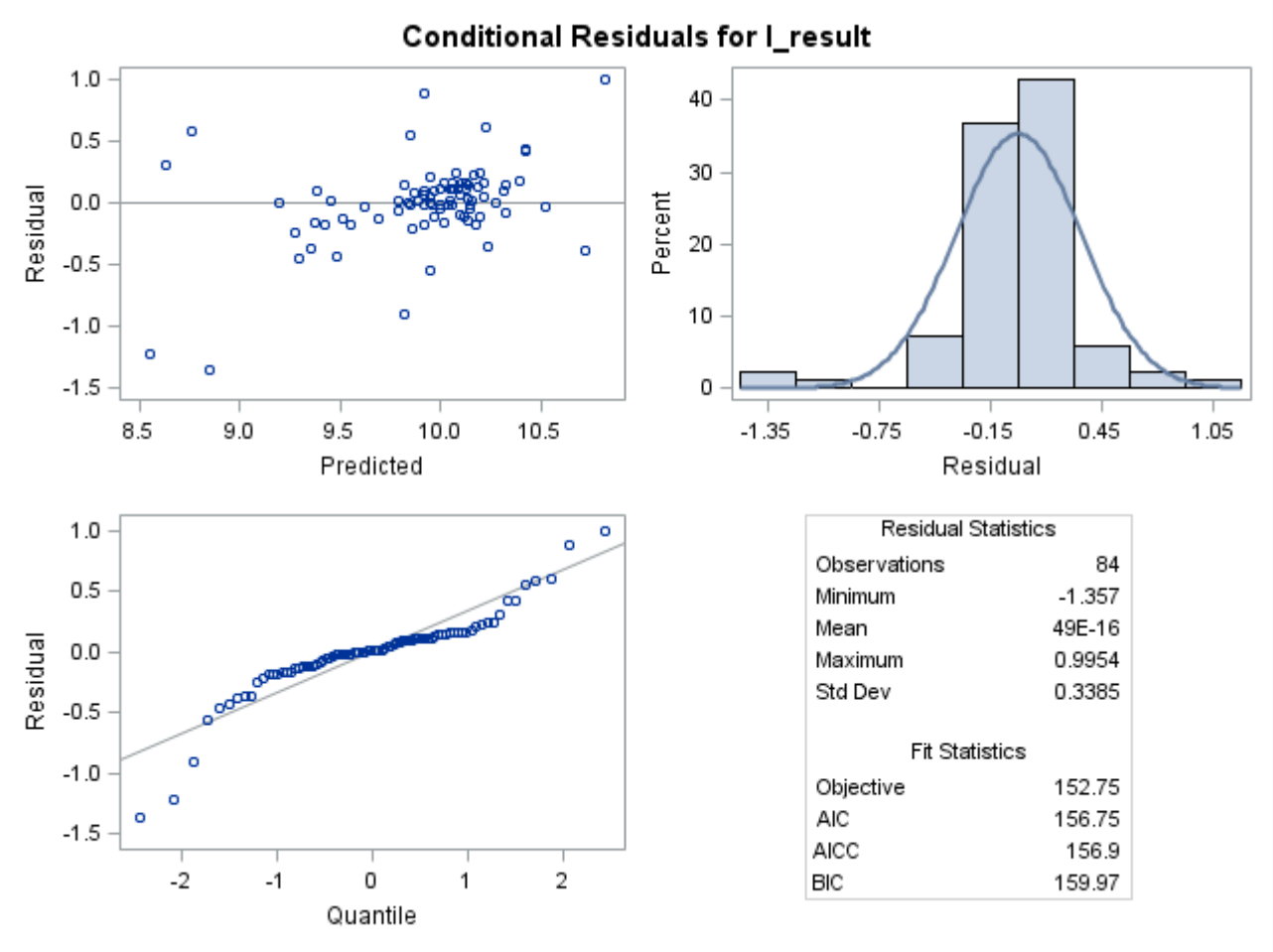
-2 Res Log Likelihood	152.8
AIC (Smaller is Better)	156.8
AICC (Smaller is Better)	156.9
BIC (Smaller is Better)	160.0

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	9.9464	0.1053	36	94.45	<.0001	0.05	9.7329	10.1600
year0	-0.00866	0.008945	46	-0.97	0.3381	0.05	-0.02667	0.009346

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	46	0.94	0.3381


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.357
Mean 49E-16
Maximum 0.9954
Std Dev 0.3385
Fit Statistics
Objective 152.75
AIC 156.75
AICC 156.9
BIC 159.97

The Mixed Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	83

Number of Observations

Number of Observations Read	84
Number of Observations Used	83
Number of Observations Not Used	1

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	291.41137637	
1	2	257.06163917	0.01042872
2	1	256.39296602	0.00101082
3	1	256.33398539	0.00001214
4	1	256.33331662	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	1.4732
Residual	0.4768

Fit Statistics

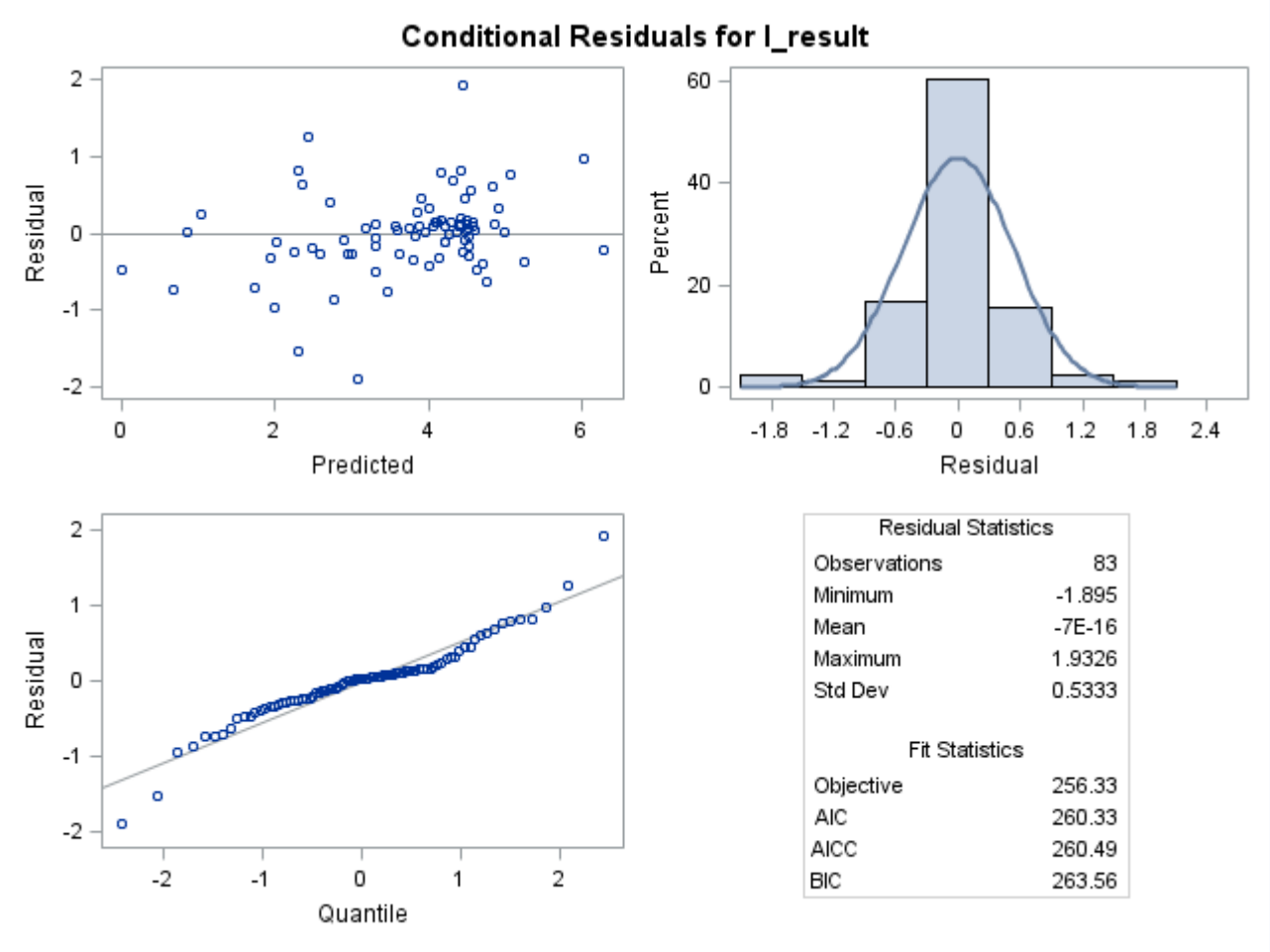
-2 Res Log Likelihood	256.3
AIC (Smaller is Better)	260.3
AICC (Smaller is Better)	260.5
BIC (Smaller is Better)	263.6

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	6.0189	0.8484	36	7.09	<.0001	0.05	4.2984	7.7395
year0	-0.02949	0.01495	44	-1.97	0.0548	0.05	-0.05961	0.000628
l_toc_frac	0.5586	0.2102	44	2.66	0.0109	0.05	0.1349	0.9823

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	44	3.89	0.0548
l_toc_frac	1	44	7.06	0.0109


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 83
Minimum -1.895
Mean -7E-16
Maximum 1.9326
Std Dev 0.5333
Fit Statistics
Objective 256.33
AIC 260.33
AICC 260.49
BIC 263.56

The Mixed Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	83

Number of Observations

Number of Observations Read	84
Number of Observations Used	83
Number of Observations Not Used	1

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	258.93849525	
1	2	226.66998732	0.01051754
2	1	226.18880688	0.00078658
3	1	226.15605386	0.00000547
4	1	226.15583649	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.9531
Residual	0.3392

Fit Statistics

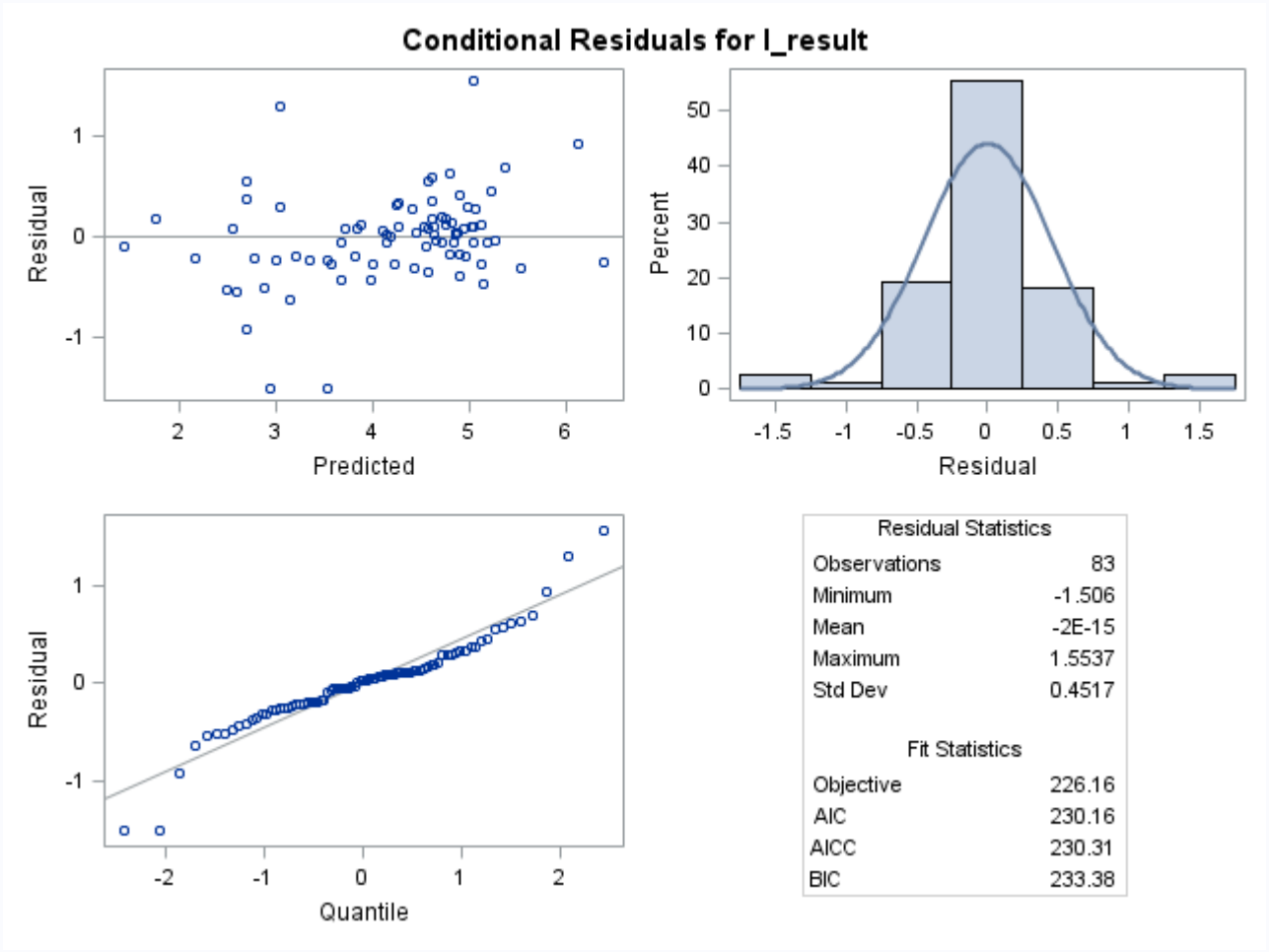
-2 Res Log Likelihood	226.2
AIC (Smaller is Better)	230.2
AICC (Smaller is Better)	230.3
BIC (Smaller is Better)	233.4

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	6.7862	0.7050	36	9.63	<.0001	0.05	5.3563	8.2161
year0	-0.03030	0.01260	44	-2.40	0.0205	0.05	-0.05570	-0.00490
l_toc_frac	0.6304	0.1750	44	3.60	0.0008	0.05	0.2777	0.9831

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	44	5.78	0.0205
l_toc_frac	1	44	12.98	0.0008


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 83
Minimum -1.506
Mean -2E-15
Maximum 1.5537
Std Dev 0.4517
Fit Statistics
Objective 226.16
AIC 230.16
AICC 230.31
BIC 233.38

The Mixed Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	35	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	35
Subjects	1
Max Obs per Subject	78

Number of Observations

Number of Observations Read	79
Number of Observations Used	78
Number of Observations Not Used	1

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	210.48477434	
1	2	197.78167337	0.00599802
2	1	197.58085420	0.00025207
3	1	197.57310464	0.00000052
4	1	197.57308904	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.4693
Residual	0.3677

Fit Statistics

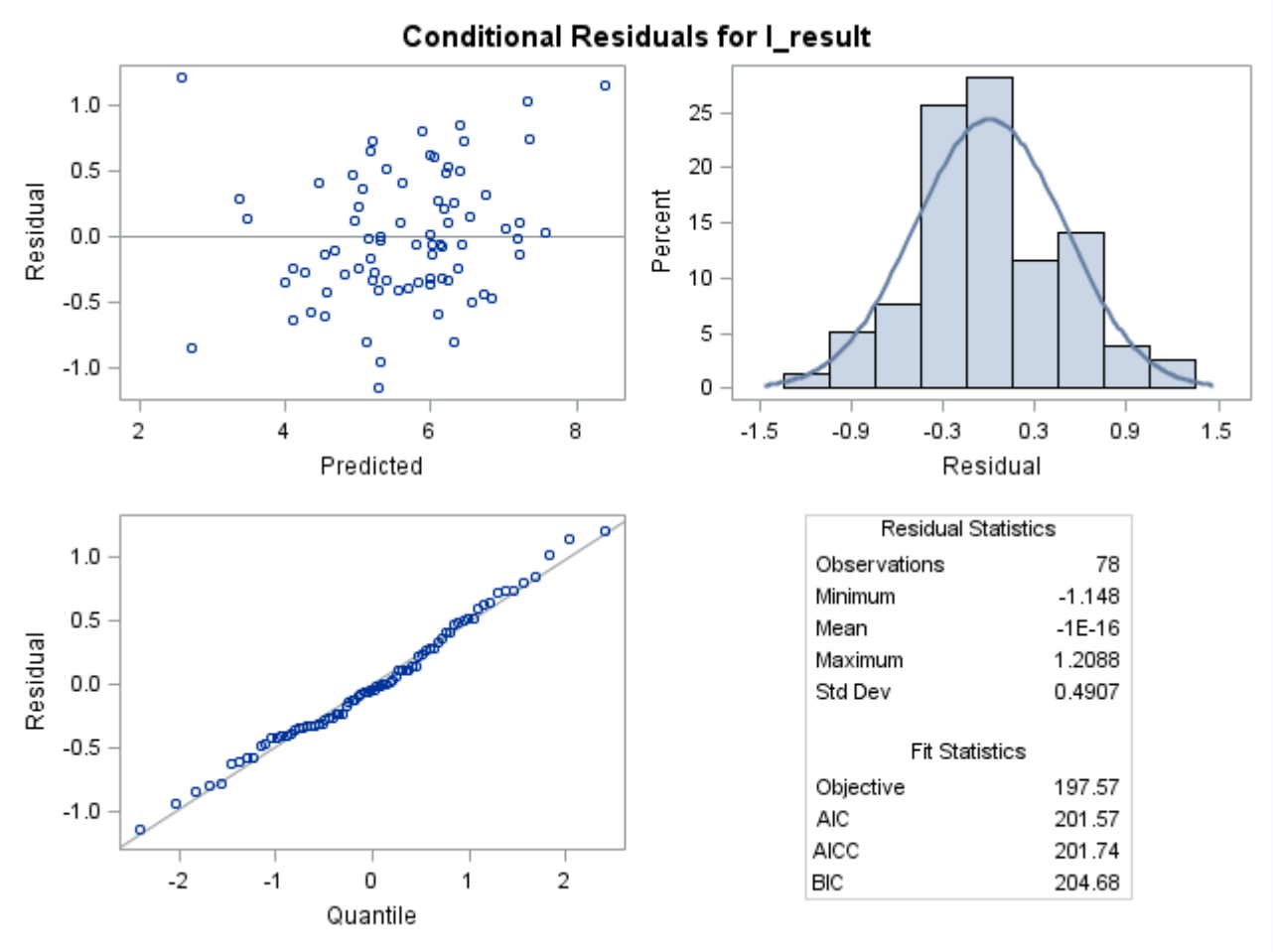
-2 Res Log Likelihood	197.6
AIC (Smaller is Better)	201.6
AICC (Smaller is Better)	201.7
BIC (Smaller is Better)	204.7

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	10.5113	0.7097	34	14.81	<.0001	0.05	9.0690	11.9536
year0	-0.1099	0.01359	41	-8.09	<.0001	0.05	-0.1374	-0.08250
l_toc_frac	1.0892	0.1750	41	6.22	<.0001	0.05	0.7358	1.4426

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	41	65.48	<.0001
l_toc_frac	1	41	38.74	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 78
Minimum -1.148
Mean -1E-16
Maximum 1.2088
Std Dev 0.4907
Fit Statistics
Objective 197.57
AIC 201.57
AICC 201.74
BIC 204.68

Total PCBs congener (209 specified)
Temporal ANCOVA Organics: Co-located Results

The Mixed Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	83

Number of Observations

Number of Observations Read	84
Number of Observations Used	83
Number of Observations Not Used	1

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	284.94196467	
1	2	244.74842909	0.02241656
2	1	243.43215032	0.00363308
3	1	243.23806579	0.00012739
4	1	243.23178735	0.00000018
5	1	243.23177852	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	1.4630
Residual	0.3654

Fit Statistics

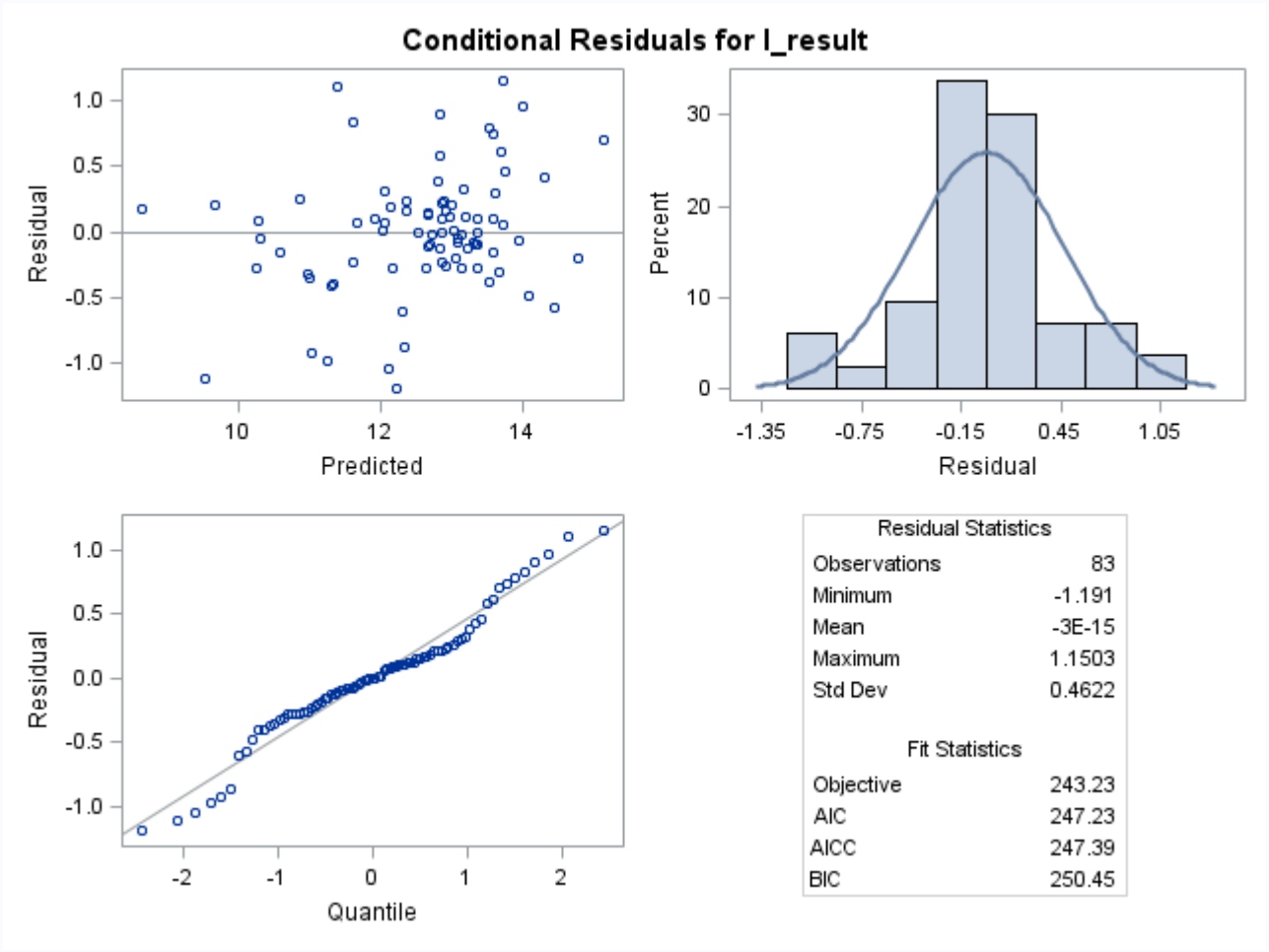
-2 Res Log Likelihood	243.2
AIC (Smaller is Better)	247.2
AICC (Smaller is Better)	247.4
BIC (Smaller is Better)	250.5

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	14.9654	0.7717	36	19.39	<.0001	0.05	13.4003	16.5304
year0	-0.05120	0.01309	44	-3.91	0.0003	0.05	-0.07758	-0.02482
l_toc_frac	0.5499	0.1902	44	2.89	0.0059	0.05	0.1666	0.9331

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	44	15.30	0.0003
l_toc_frac	1	44	8.36	0.0059


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 83
Minimum -1.191
Mean -3E-15
Maximum 1.1503
Std Dev 0.4622
Fit Statistics
Objective 243.23
AIC 247.23
AICC 247.39
BIC 250.45

Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal ANCOVA Organics: Co-located Results

The Mixed Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	83

Number of Observations

Number of Observations Read	84
Number of Observations Used	83
Number of Observations Not Used	1

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	350.44536824	
1	2	321.50144181	0.00450952
2	1	321.05068901	0.00031924
3	1	321.02153715	0.00000199
4	1	321.02136319	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	2.9030
Residual	1.1603

Fit Statistics

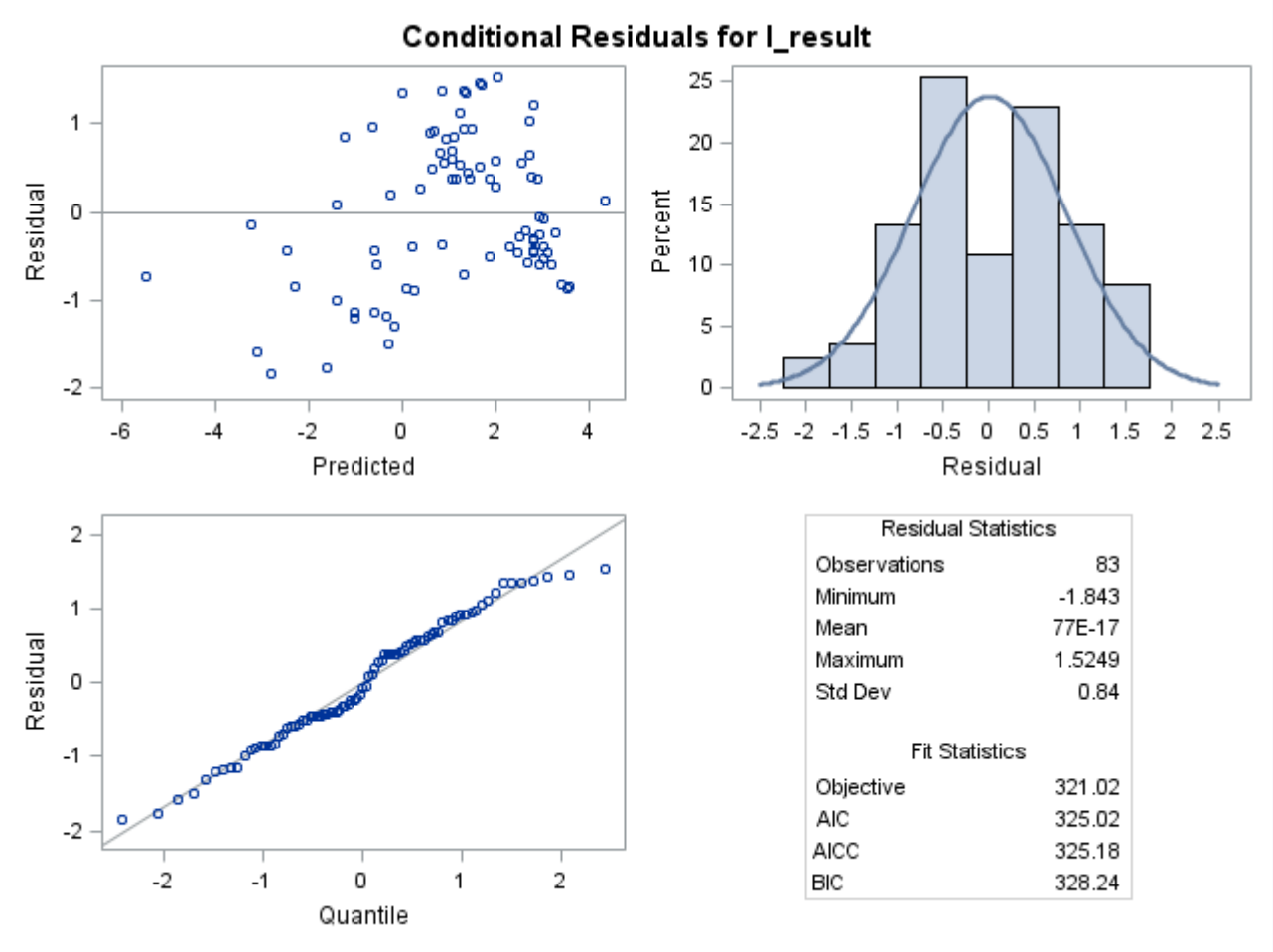
-2 Res Log Likelihood	321.0
AIC (Smaller is Better)	325.0
AICC (Smaller is Better)	325.2
BIC (Smaller is Better)	328.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	5.0784	1.2801	36	3.97	0.0003	0.05	2.4824	7.6745
year0	-0.1725	0.02330	44	-7.40	<.0001	0.05	-0.2195	-0.1256
l_toc_frac	0.8011	0.3183	44	2.52	0.0156	0.05	0.1595	1.4427

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	44	54.81	<.0001
l_toc_frac	1	44	6.33	0.0156


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 83
Minimum -1.843
Mean 77E-17
Maximum 1.5249
Std Dev 0.84
Fit Statistics
Objective 321.02
AIC 325.02
AICC 325.18
BIC 328.24

The Mixed Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	77

Number of Observations

Number of Observations Read	78
Number of Observations Used	77
Number of Observations Not Used	1

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	250.45956448	
1	2	239.99157865	0.01481841
2	1	239.07218727	0.00211346
3	1	238.95299896	0.00005385
4	1	238.95017829	0.00000004
5	1	238.95017626	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.9761
Residual	0.6025

Fit Statistics

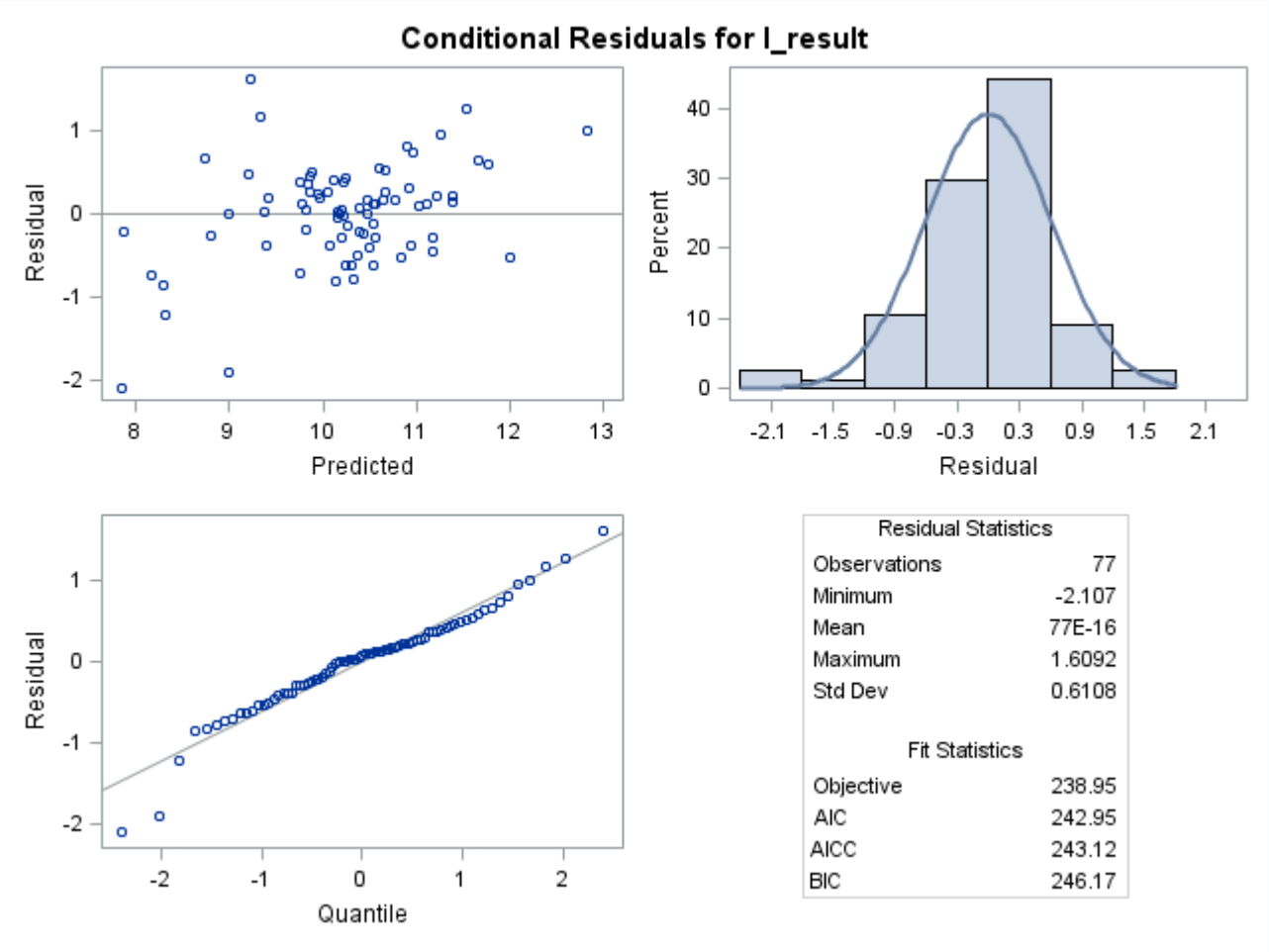
-2 Res Log Likelihood	239.0
AIC (Smaller is Better)	243.0
AICC (Smaller is Better)	243.1
BIC (Smaller is Better)	246.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	13.1833	0.9352	36	14.10	<.0001	0.05	11.2866	15.0801
year0	-0.04366	0.01791	38	-2.44	0.0196	0.05	-0.07993	-0.00740
l_toc_frac	0.6972	0.2322	38	3.00	0.0047	0.05	0.2272	1.1673

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	38	5.94	0.0196
l_toc_frac	1	38	9.02	0.0047


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 77
Minimum -2.107
Mean 77E-16
Maximum 1.6092
Std Dev 0.6108
Fit Statistics
Objective 238.95
AIC 242.95
AICC 243.12
BIC 246.17

Total HMW PAHs
Temporal ANCOVA Organics: Co-located Results

The Mixed Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	245.17910549	
1	2	201.99153516	0.03863693
2	1	200.76086700	0.00610568
3	1	200.58586904	0.00019804
4	1	200.58063204	0.00000024
5	1	200.58062580	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.8802
Residual	0.2036

Fit Statistics

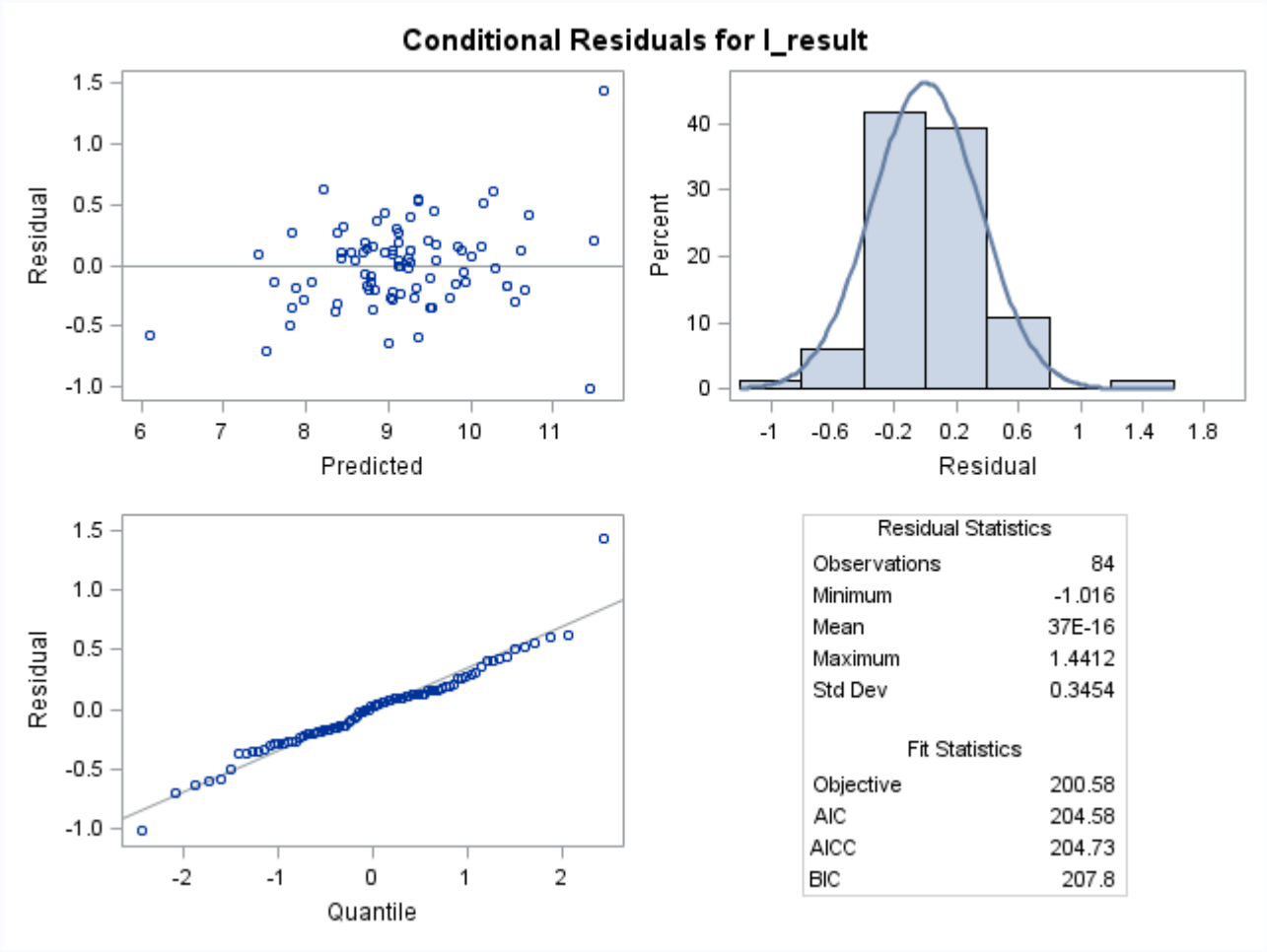
-2 Res Log Likelihood	200.6
AIC (Smaller is Better)	204.6
AICC (Smaller is Better)	204.7
BIC (Smaller is Better)	207.8

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	12.2318	0.5684	36	21.52	<.0001	0.05	11.0790	13.3845
year0	-0.03953	0.009766	45	-4.05	0.0002	0.05	-0.05919	-0.01986
l_toc_frac	0.7374	0.1399	45	5.27	<.0001	0.05	0.4555	1.0193

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	16.38	0.0002
l_toc_frac	1	45	27.76	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.016
Mean 37E-16
Maximum 1.4412
Std Dev 0.3454
Fit Statistics
Objective 200.58
AIC 204.58
AICC 204.73
BIC 207.8

Total LMW PAHs
Temporal ANCOVA Organics: Co-located Results

The Mixed Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	36	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	36
Subjects	1
Max Obs per Subject	80

Number of Observations

Number of Observations Read	80
Number of Observations Used	80
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	207.55040856	
1	2	187.07487871	0.00316275
2	1	186.99732442	0.00005065
3	1	186.99615973	0.00000001
4	1	186.99615941	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.4609
Residual	0.2737

Fit Statistics

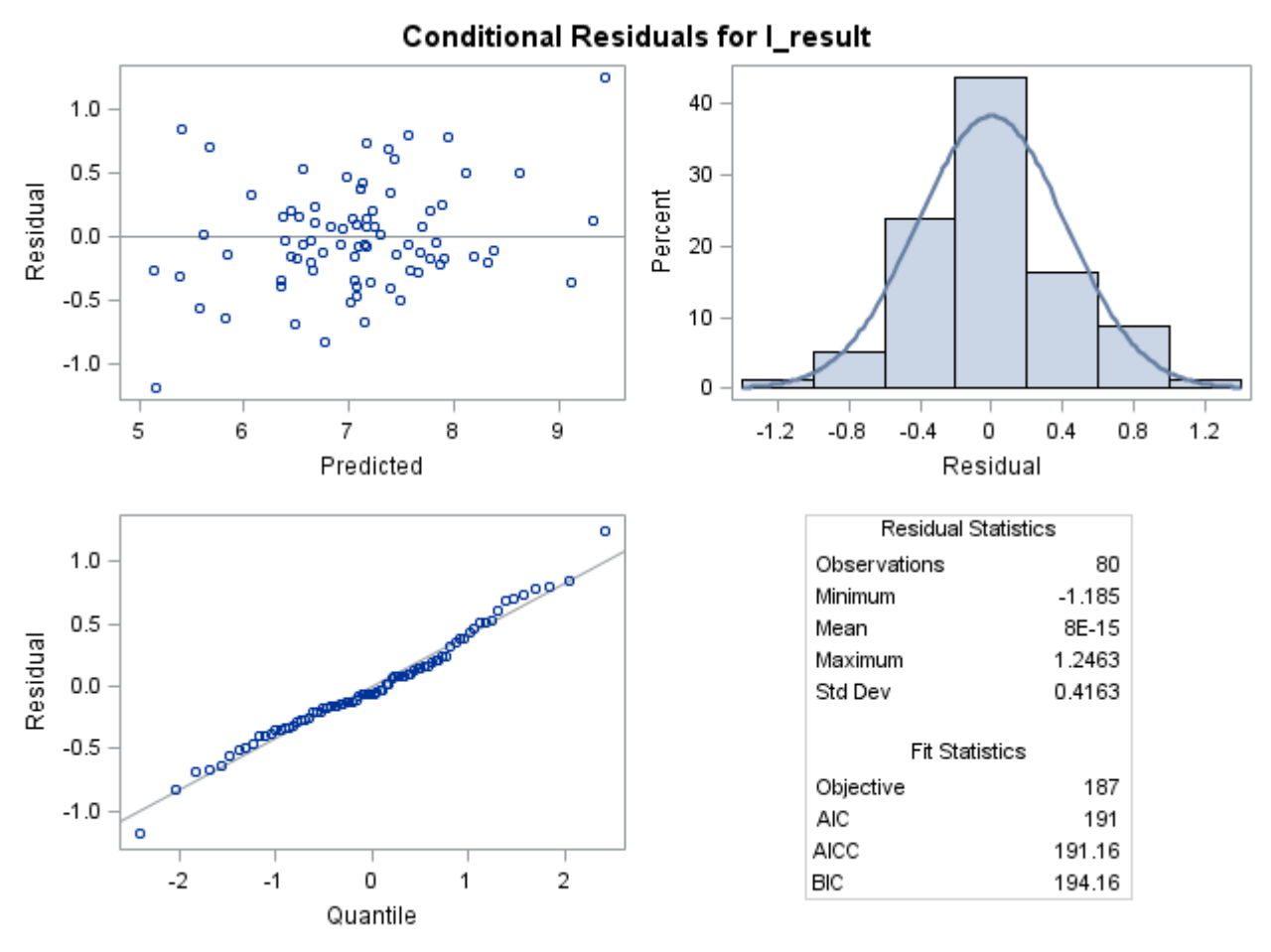
-2 Res Log Likelihood	187.0
AIC (Smaller is Better)	191.0
AICC (Smaller is Better)	191.2
BIC (Smaller is Better)	194.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	11.0460	0.6172	35	17.90	<.0001	0.05	9.7930	12.2991
year0	-0.05927	0.01169	42	-5.07	<.0001	0.05	-0.08285	-0.03568
l_toc_frac	0.9351	0.1528	42	6.12	<.0001	0.05	0.6267	1.2435

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	42	25.72	<.0001
l_toc_frac	1	42	37.44	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 80
Minimum -1.185
Mean 8E-15
Maximum 1.2463
Std Dev 0.4163
Fit Statistics
Objective 187
AIC 191
AICC 191.16
BIC 194.16

The Mixed Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	36	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	36
Subjects	1
Max Obs per Subject	73

Number of Observations

Number of Observations Read	73
Number of Observations Used	73
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	207.48541115	
1	2	200.91822037	0.01962241
2	1	200.07185586	0.00280367
3	1	199.96242155	0.00006923
4	1	199.95991119	0.00000005
5	1	199.95990952	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.6023
Residual	0.4372

Fit Statistics

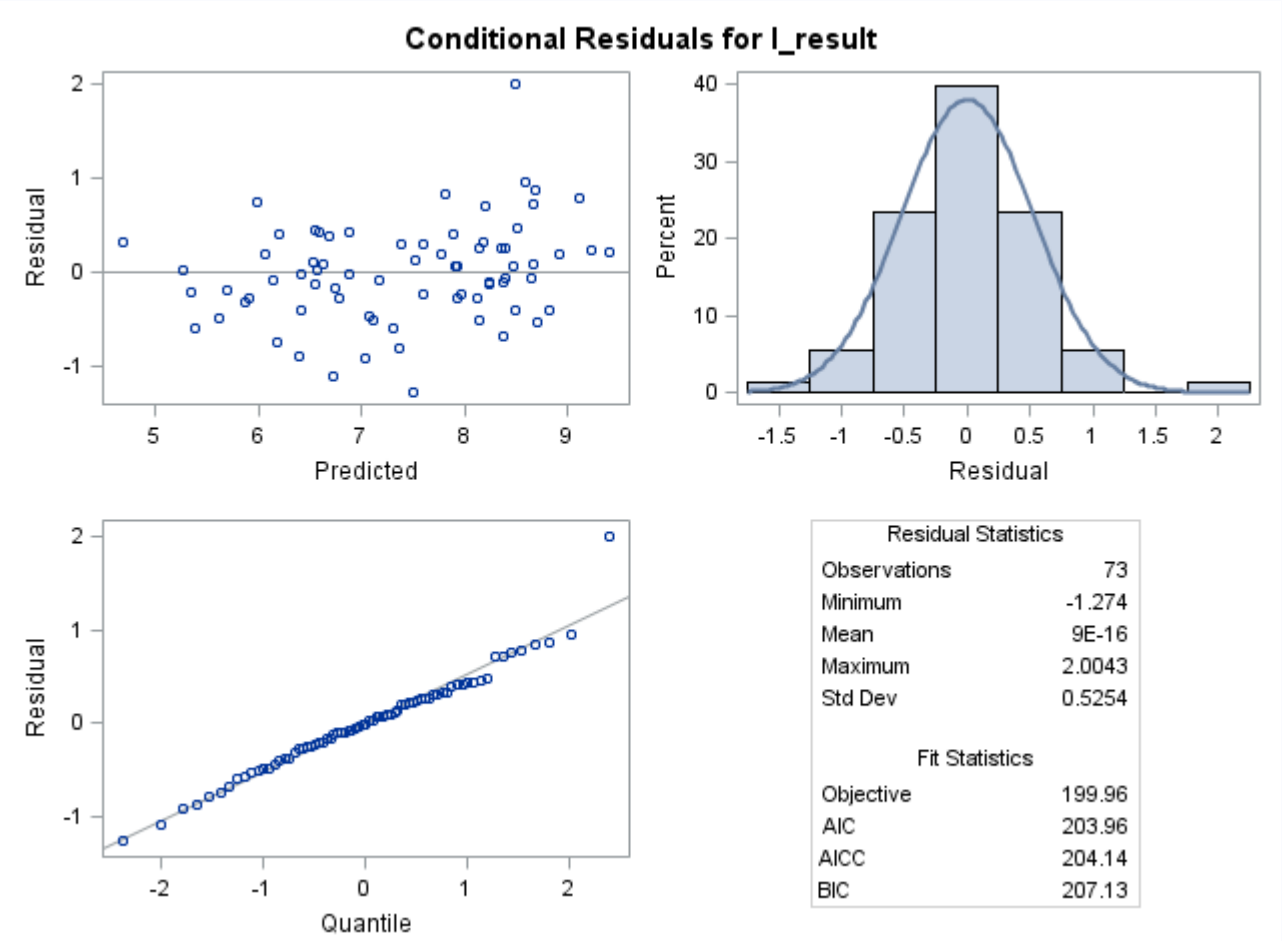
-2 Res Log Likelihood	200.0
AIC (Smaller is Better)	204.0
AICC (Smaller is Better)	204.1
BIC (Smaller is Better)	207.1

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	10.4640	0.8629	35	12.13	<.0001	0.05	8.7122	12.2158
year0	-0.1878	0.01616	35	-11.62	<.0001	0.05	-0.2206	-0.1550
l_toc_frac	0.6000	0.2175	35	2.76	0.0092	0.05	0.1584	1.0415

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	35	135.03	<.0001
l_toc_frac	1	35	7.61	0.0092


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 73
Minimum -1.274
Mean 9E-16
Maximum 2.0043
Std Dev 0.5254
Fit Statistics
Objective 199.96
AIC 203.96
AICC 204.14
BIC 207.13

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	121.12249570	
1	2	92.24807265	0.00532136
2	1	92.08202590	0.00016261
3	1	92.07730968	0.00000018
4	1	92.07730463	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.1580
Residual	0.06894

Fit Statistics

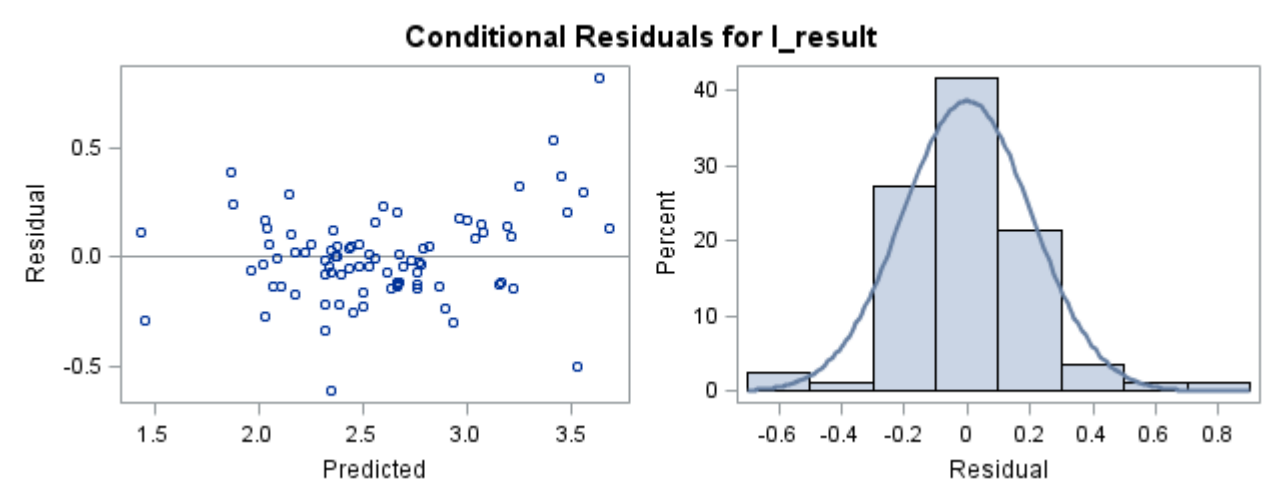
-2 Res Log Likelihood	92.1
AIC (Smaller is Better)	96.1
AICC (Smaller is Better)	96.2
BIC (Smaller is Better)	99.3

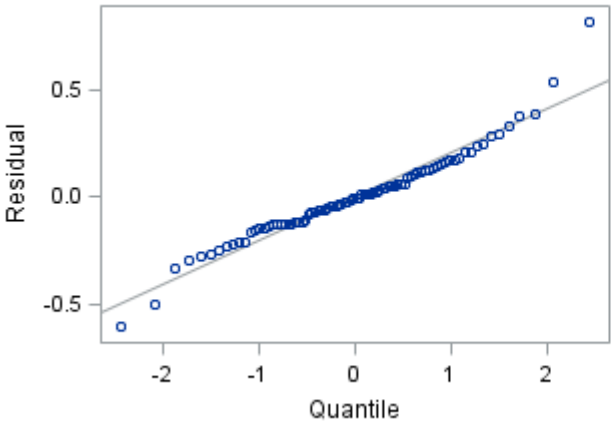
Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	5.5698	0.5575	36	9.99	<.0001	0.05	4.4392	6.7005
year0	0.01530	0.005658	45	2.70	0.0096	0.05	0.003902	0.02669
l_al_frac	0.6906	0.1246	45	5.54	<.0001	0.05	0.4396	0.9416

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	7.31	0.0096
l_al_frac	1	45	30.71	<.0001





Conditional Residuals for l_result

Residual Statistics	
Observations	84
Minimum	-0.609
Mean	48E-17
Maximum	0.8151
Std Dev	0.2065

Fit Statistics	
Objective	92.077
AIC	96.077
AICC	96.231
BIC	99.299

Cadmium
Temporal ANCOVA Metals: Co-located Results

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	82

Number of Observations

Number of Observations Read	82
Number of Observations Used	82
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	215.26782783	
1	2	190.97261342	0.01335611
2	1	190.62553192	0.00079225
3	1	190.60679357	0.00000335
4	1	190.60671730	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.5432
Residual	0.2493

Fit Statistics

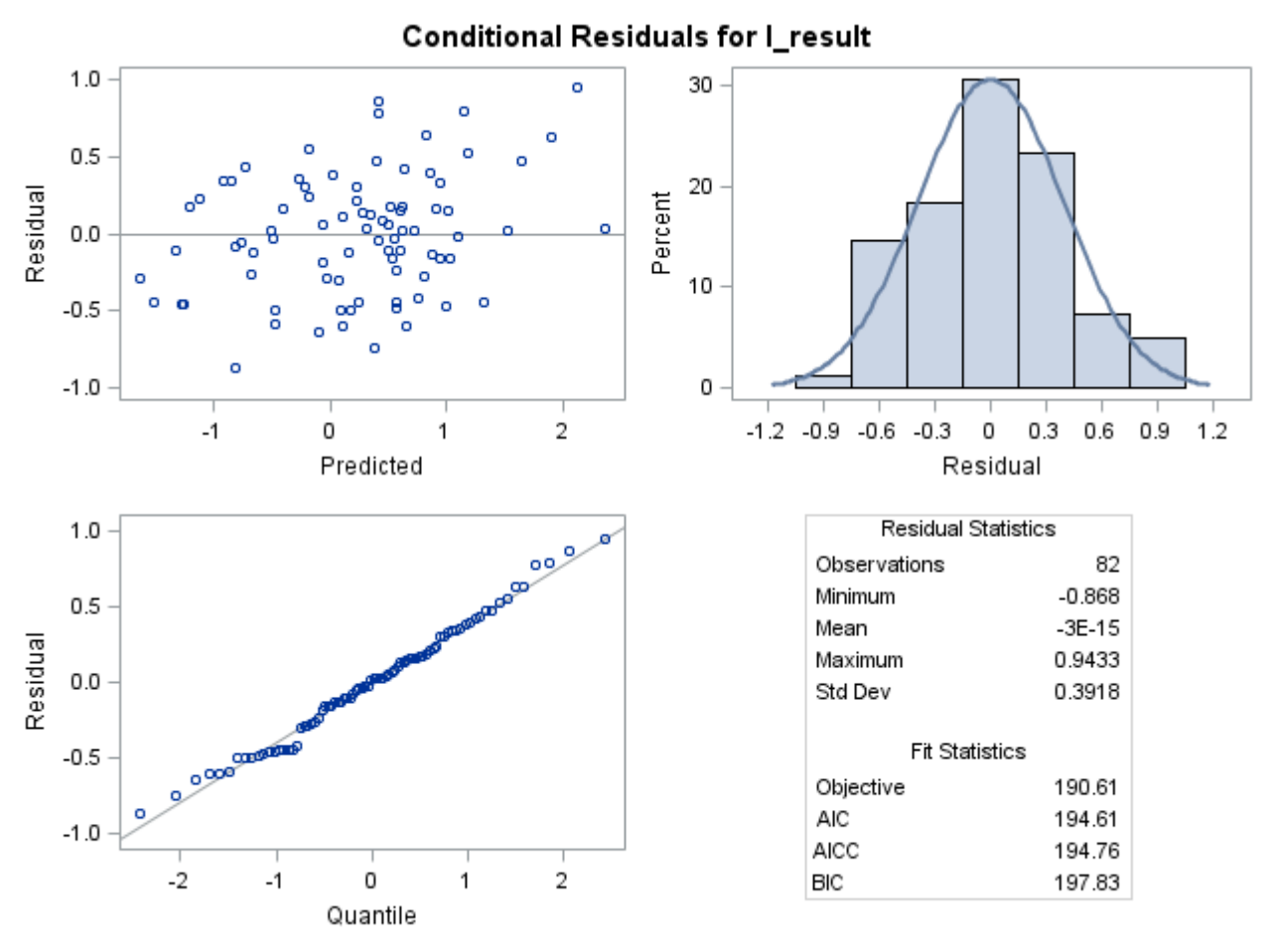
-2 Res Log Likelihood	190.6
AIC (Smaller is Better)	194.6
AICC (Smaller is Better)	194.8
BIC (Smaller is Better)	197.8

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	5.7695	1.1071	36	5.21	<.0001	0.05	3.5243	8.0148
year0	-0.03629	0.01108	43	-3.28	0.0021	0.05	-0.05864	-0.01395
l_al_frac	1.2172	0.2464	43	4.94	<.0001	0.05	0.7203	1.7140

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	43	10.73	0.0021
l_al_frac	1	43	24.41	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 82
Minimum -0.868
Mean -3E-15
Maximum 0.9433
Std Dev 0.3918
Fit Statistics
Objective 190.61
AIC 194.61
AICC 194.76
BIC 197.83

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	136.30653967	
1	2	110.76016063	0.03001419
2	1	110.09397394	0.00281854
3	1	110.03569166	0.00003325
4	1	110.03504079	0.00000001

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.1944
Residual	0.08675

Fit Statistics

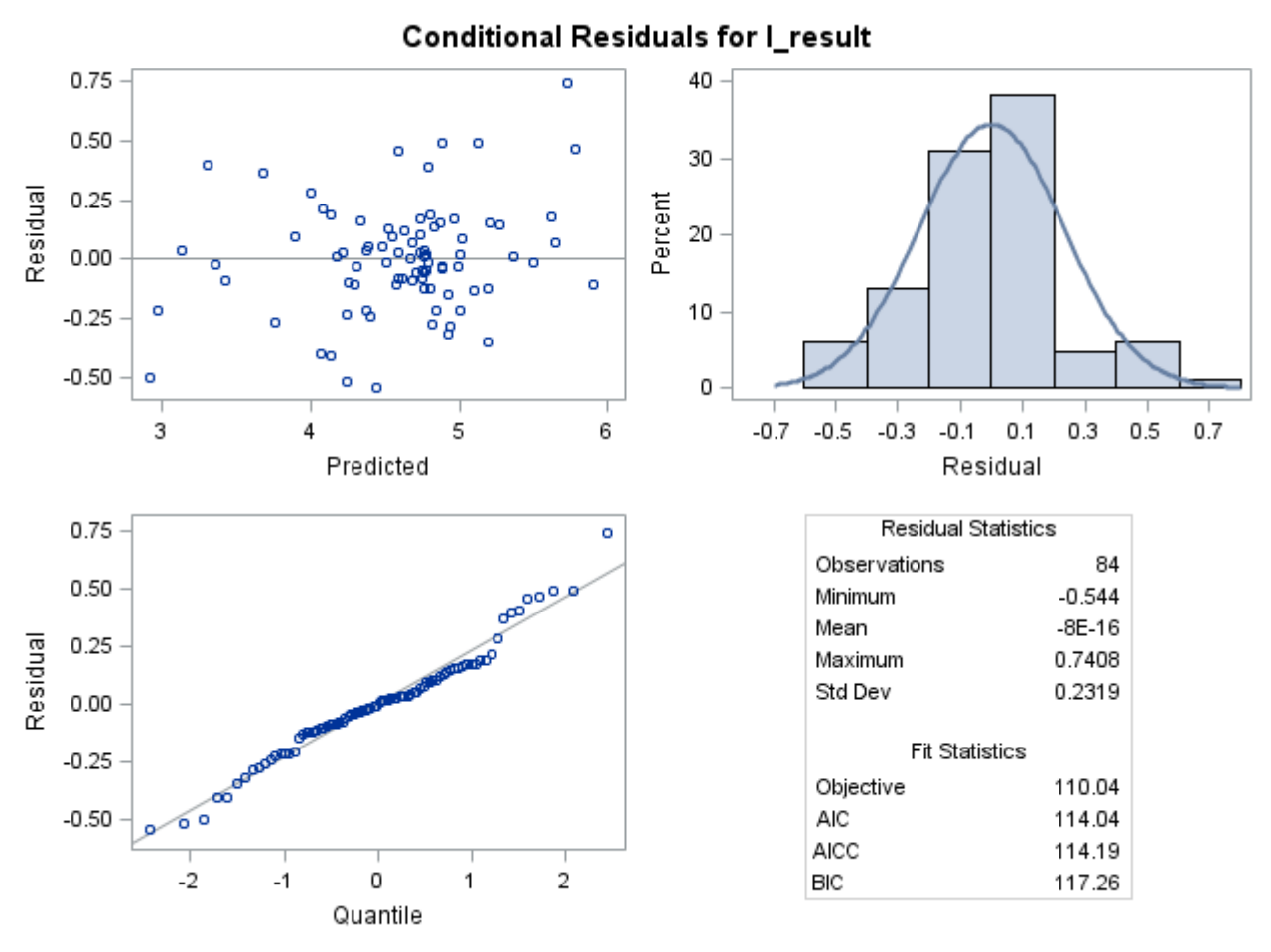
-2 Res Log Likelihood	110.0
AIC (Smaller is Better)	114.0
AICC (Smaller is Better)	114.2
BIC (Smaller is Better)	117.3

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	9.4903	0.6227	36	15.24	<.0001	0.05	8.2275	10.7531
year0	-0.02442	0.006346	45	-3.85	0.0004	0.05	-0.03720	-0.01164
l_al_frac	1.0796	0.1392	45	7.76	<.0001	0.05	0.7992	1.3600

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	14.81	0.0004
l_al_frac	1	45	60.14	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -0.544
Mean -8E-16
Maximum 0.7408
Std Dev 0.2319
Fit Statistics
Objective 110.04
AIC 114.04
AICC 114.19
BIC 117.26

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	183.19501421	
1	2	135.62787519	0.29513900
2	1	133.21655191	0.05937965
3	1	132.68014668	0.00465614
4	1	132.64032280	0.00003877
5	1	132.64000642	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.4307
Residual	0.08275

Fit Statistics

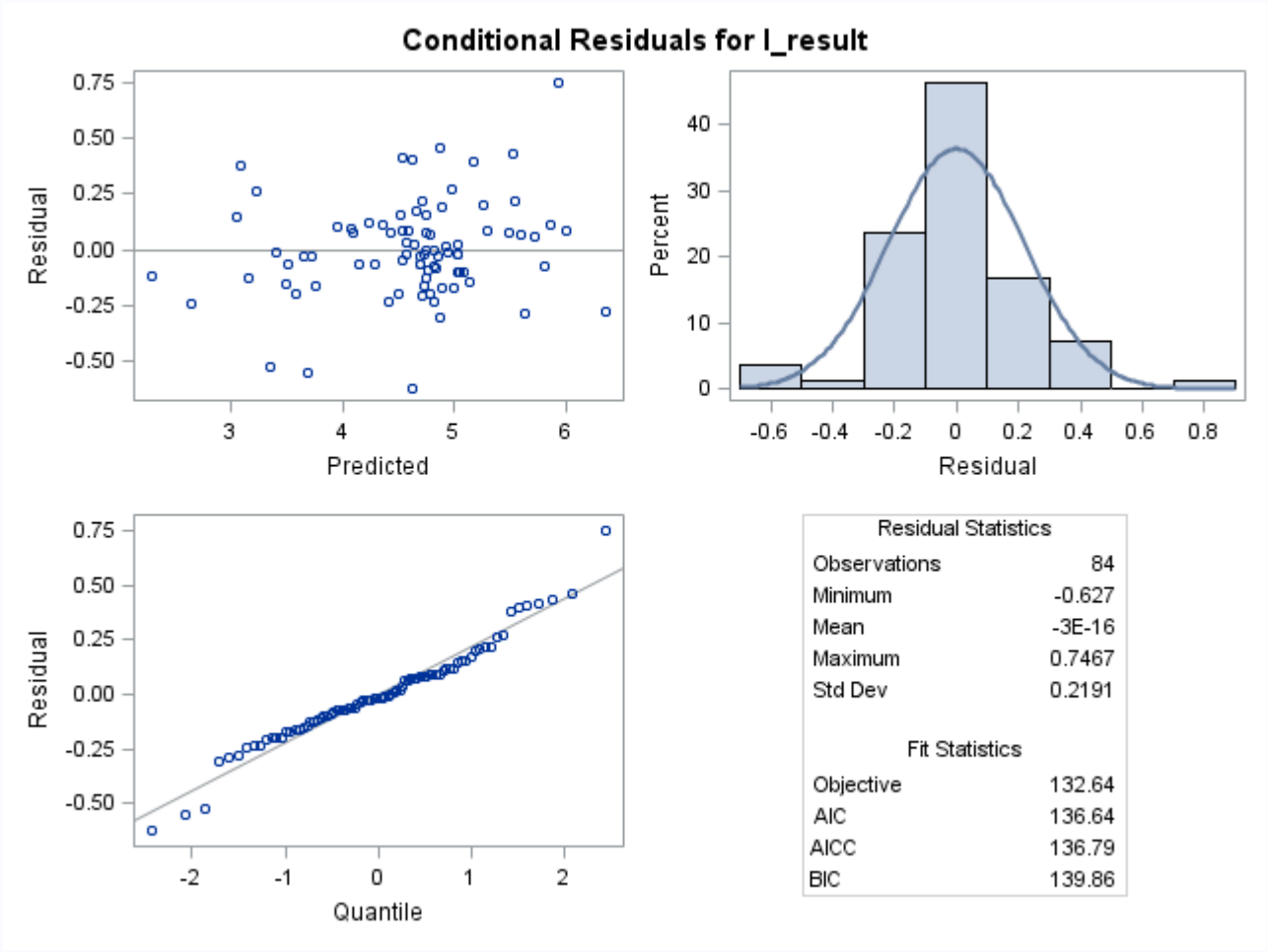
-2 Res Log Likelihood	132.6
AIC (Smaller is Better)	136.6
AICC (Smaller is Better)	136.8
BIC (Smaller is Better)	139.9

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	9.3702	0.7017	36	13.35	<.0001	0.05	7.9470	10.7933
year0	-0.02752	0.006214	45	-4.43	<.0001	0.05	-0.04004	-0.01501
l_al_frac	1.0499	0.1561	45	6.73	<.0001	0.05	0.7355	1.3643

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	19.62	<.0001
l_al_frac	1	45	45.25	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -0.627
Mean -3E-16
Maximum 0.7467
Std Dev 0.2191
Fit Statistics
Objective 132.64
AIC 136.64
AICC 136.79
BIC 139.86

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	179.35980139	
1	2	148.81903429	32.92182563
2	1	147.86319712	0.20460211
3	1	147.75139034	0.00398615
4	1	147.74913114	0.00000212
5	1	147.74912996	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.3563
Residual	0.1272

Fit Statistics

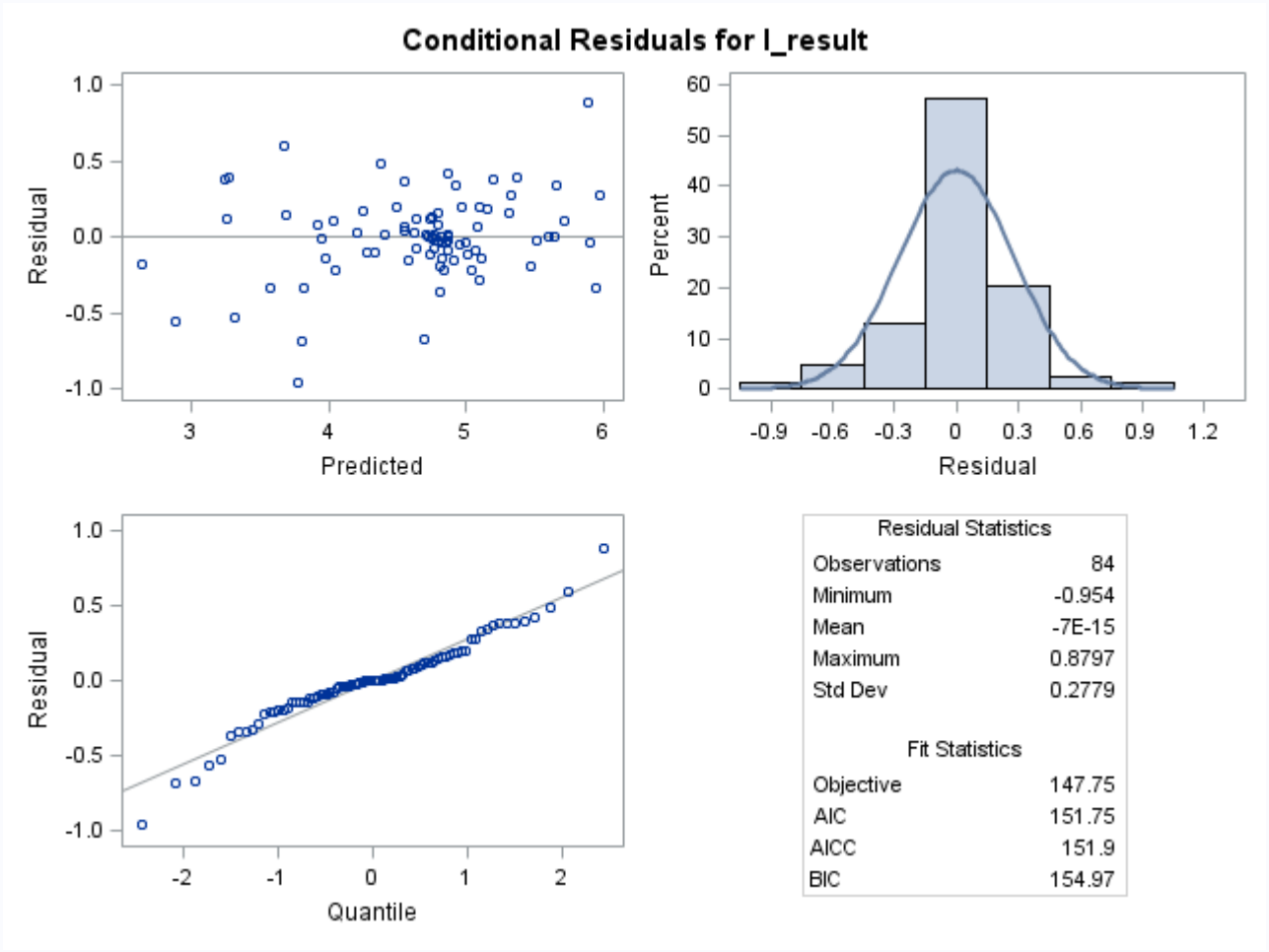
-2 Res Log Likelihood	147.7
AIC (Smaller is Better)	151.7
AICC (Smaller is Better)	151.9
BIC (Smaller is Better)	155.0

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	8.9821	0.7864	36	11.42	<.0001	0.05	7.3872	10.5771
year0	-0.02645	0.007690	45	-3.44	0.0013	0.05	-0.04194	-0.01096
l_al_frac	0.9493	0.1756	45	5.41	<.0001	0.05	0.5956	1.3031

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	11.83	0.0013
l_al_frac	1	45	29.21	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -0.954
Mean -7E-15
Maximum 0.8797
Std Dev 0.2779
Fit Statistics
Objective 147.75
AIC 151.75
AICC 151.9
BIC 154.97

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	215.32523982	
1	2	202.22260637	0.00756667
2	1	201.99745915	0.00030783
3	1	201.98904925	0.00000060
4	1	201.98903327	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.3978
Residual	0.3358

Fit Statistics

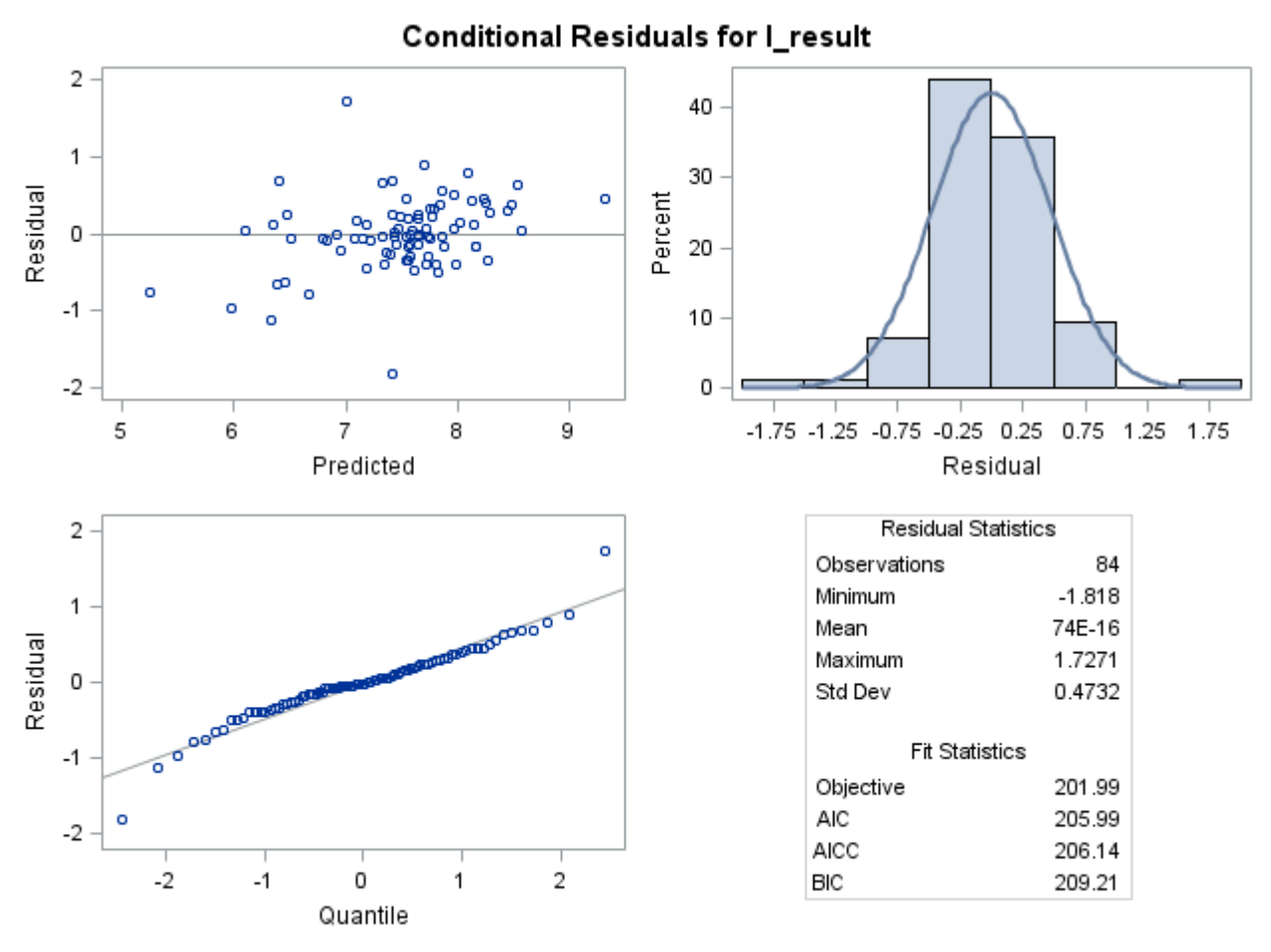
-2 Res Log Likelihood	202.0
AIC (Smaller is Better)	206.0
AICC (Smaller is Better)	206.1
BIC (Smaller is Better)	209.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	11.2677	1.0748	36	10.48	<.0001	0.05	9.0878	13.4476
year0	-0.03226	0.01246	45	-2.59	0.0129	0.05	-0.05735	-0.00718
l_al_frac	0.8182	0.2408	45	3.40	0.0014	0.05	0.3332	1.3032

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	6.71	0.0129
l_al_frac	1	45	11.54	0.0014


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -1.818
Mean 74E-16
Maximum 1.7271
Std Dev 0.4732
Fit Statistics
Objective 201.99
AIC 205.99
AICC 206.14
BIC 209.21

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	37

Number of Observations

Number of Observations Read	37
Number of Observations Used	37
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	65.12897243	
1	4	65.12897243	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	3.39E-18
Residual	0.3211

Fit Statistics

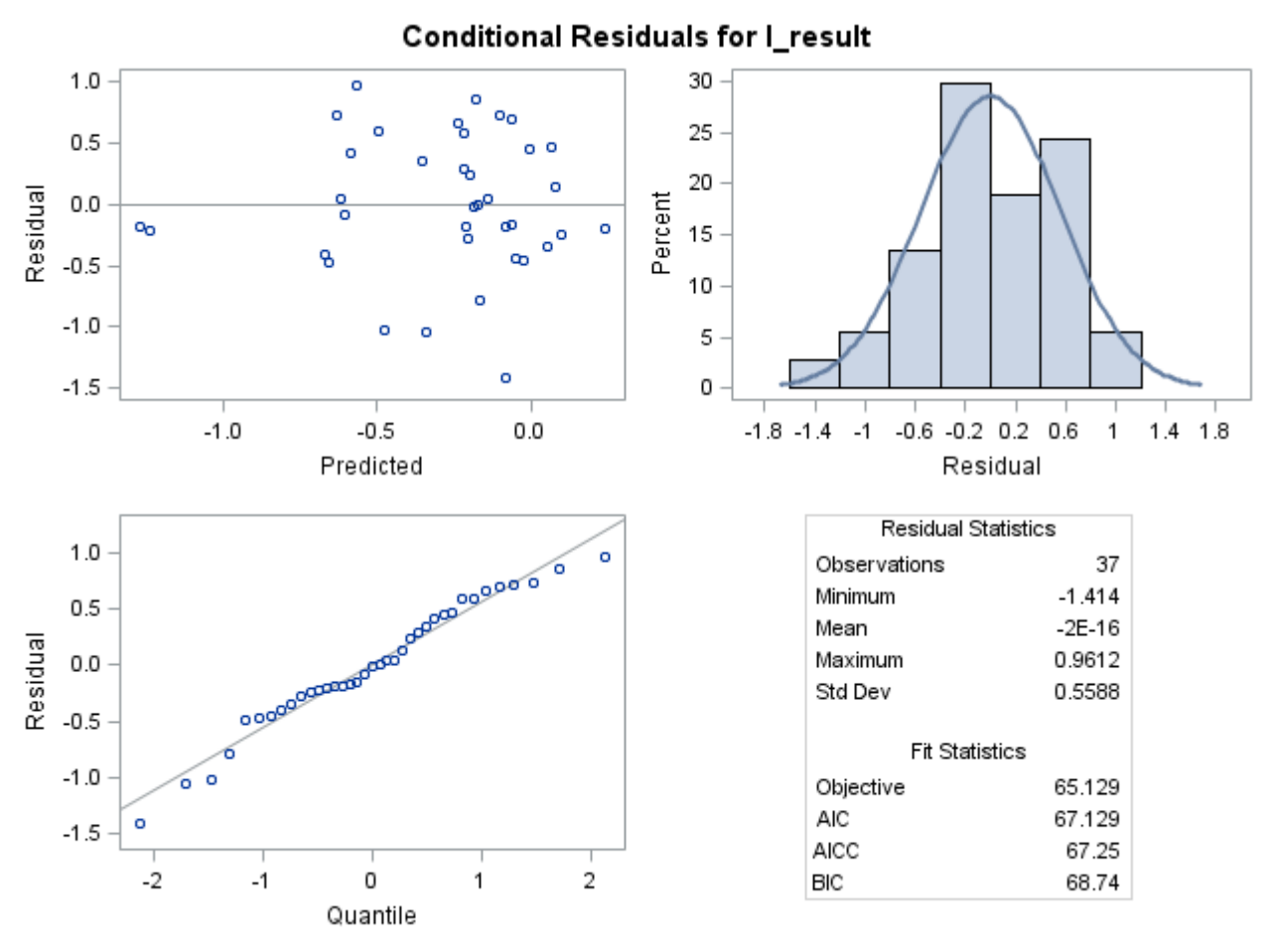
-2 Res Log Likelihood	65.1
AIC (Smaller is Better)	67.1
AICC (Smaller is Better)	67.3
BIC (Smaller is Better)	68.7

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	3.0565	0.9413	35	3.25	0.0026	0.05	1.1457	4.9674
year0	0	.	.	.	.	.	.	.
l_al_frac	0.7629	0.2138	0	3.57	.	0.05	.	.

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	0	.	.	.
l_al_frac	1	0	12.74	.


Conditional Residuals for l_result
Residual
Predicted
1.0
0.5
0.0
-0.5
-1.0
-1.5
-1.0
-0.5
0.0
Percent
Residual
30
25
20
15
10
5
0
-1.8 -1.4 -1 -0.6 -0.2 0.2 0.6 1 1.4 1.8
Residual
Quantile
-2
-1
0
1
2
Residual Statistics
Observations 37
Minimum -1.414
Mean -2E-16
Maximum 0.9612
Std Dev 0.5588
Fit Statistics
Objective 65.129
AIC 67.129
AICC 67.25
BIC 68.74

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	64.75816606	
1	2	21.98627067	0.01146605
2	1	21.12840395	0.00134296
3	1	21.03565038	0.00002461
4	1	21.03405726	0.00000001

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.09327
Residual	0.02310

Fit Statistics

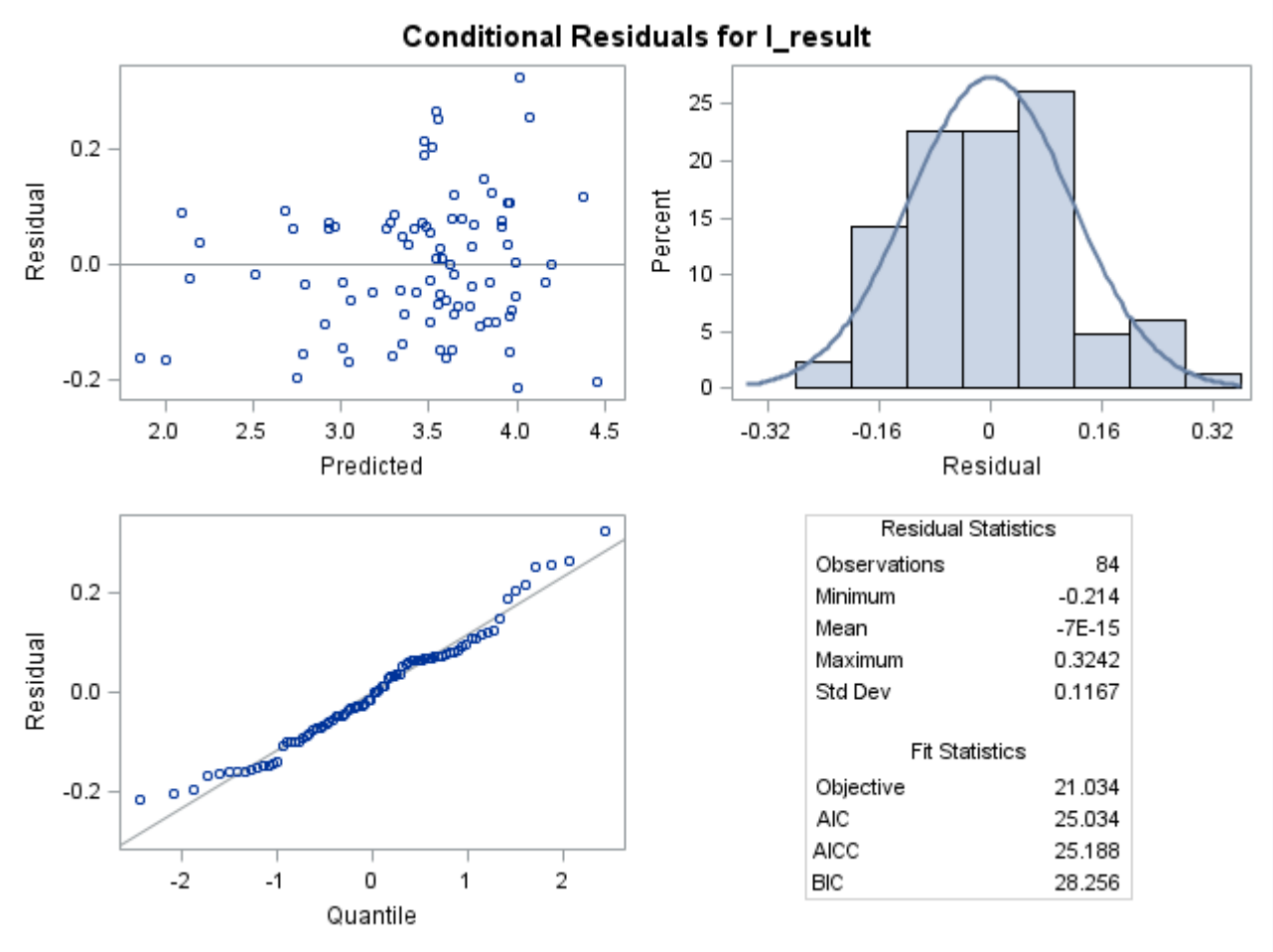
-2 Res Log Likelihood	21.0
AIC (Smaller is Better)	25.0
AICC (Smaller is Better)	25.2
BIC (Smaller is Better)	28.3

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	7.9986	0.3568	36	22.42	<.0001	0.05	7.2750	8.7222
year0	-0.00812	0.003281	45	-2.47	0.0172	0.05	-0.01472	-0.00151
l_al_frac	1.0251	0.07952	45	12.89	<.0001	0.05	0.8650	1.1853

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	6.12	0.0172
l_al_frac	1	45	166.20	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -0.214
Mean -7E-15
Maximum 0.3242
Std Dev 0.1167
Fit Statistics
Objective 21.034
AIC 25.034
AICC 25.188
BIC 28.256

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	82

Number of Observations

Number of Observations Read	82
Number of Observations Used	82
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	193.81050795	
1	2	168.71640225	0.04711039
2	1	168.06994338	0.00474637
3	1	168.01195910	0.00005879
4	1	168.01128261	0.00000001

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.4258
Residual	0.1815

Fit Statistics

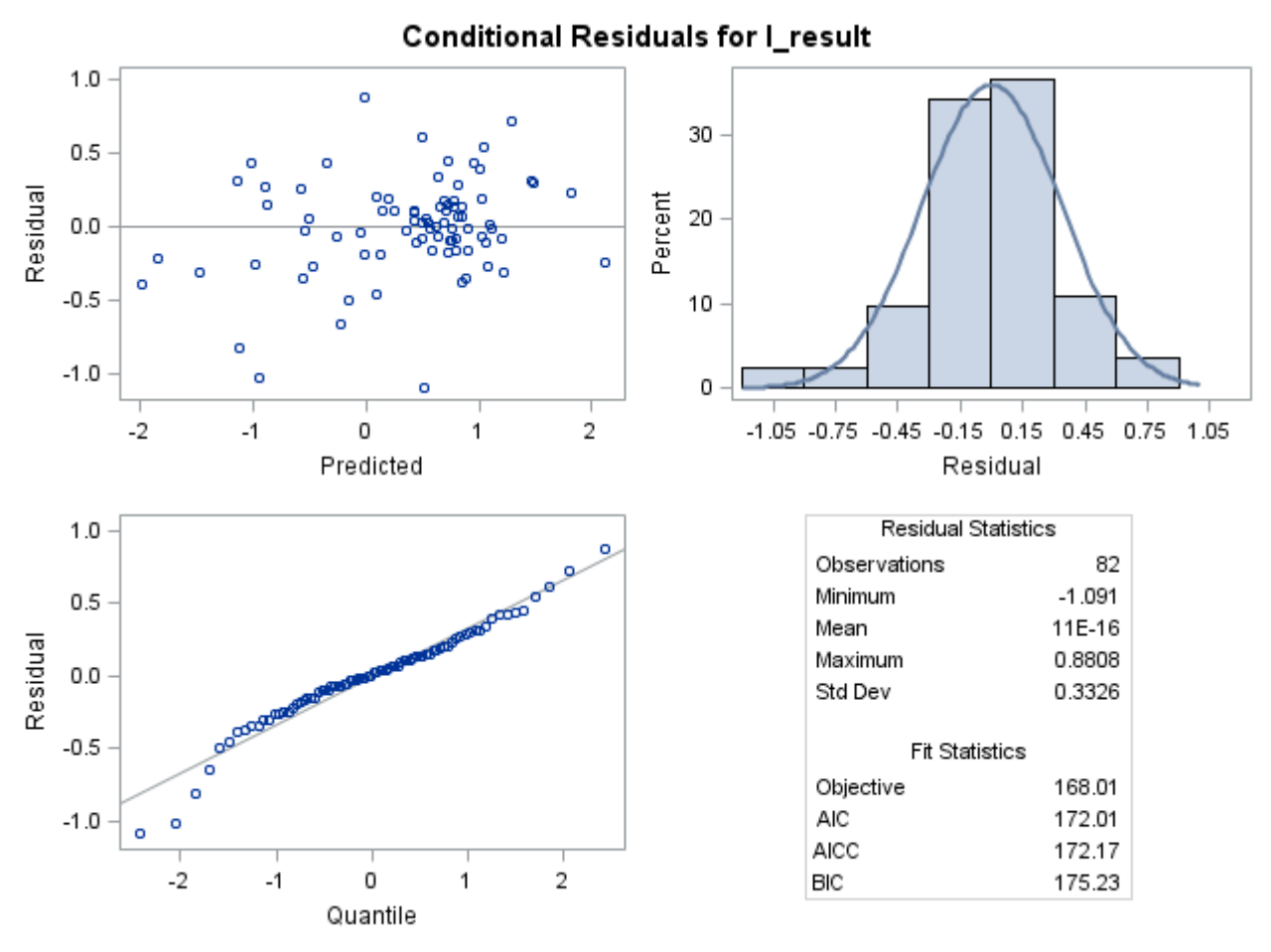
-2 Res Log Likelihood	168.0
AIC (Smaller is Better)	172.0
AICC (Smaller is Better)	172.2
BIC (Smaller is Better)	175.2

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	5.6647	0.9098	36	6.23	<.0001	0.05	3.8195	7.5099
year0	-0.03742	0.009260	43	-4.04	0.0002	0.05	-0.05610	-0.01875
l_al_frac	1.1665	0.2036	43	5.73	<.0001	0.05	0.7560	1.5771

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	43	16.34	0.0002
l_al_frac	1	43	32.84	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 82
Minimum -1.091
Mean 11E-16
Maximum 0.8808
Std Dev 0.3326
Fit Statistics
Objective 168.01
AIC 172.01
AICC 172.17
BIC 175.23

The Mixed Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Model Information

Data Set	WORK.SED_TEMP
Dependent Variable	l_result
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
COLOC_ID	37	003_247 004_242 005_070_226 012_222 013_218 014_216 015_211 019_200 020_187 023_184 032_073_359 037_352 039_342 040_350 045_403 046_106_300 050_396 051_076_335 052_078_326 053_389 054_382 055_104_294 056_077_330 057_079_325 060_080_317 062_378 063_101_292 064_374 066_290 089_237 090_227 091_364 092_344 093_327 103_289 105_394 118_232

Dimensions

Covariance Parameters	2
Columns in X	3
Columns in Z	37
Subjects	1
Max Obs per Subject	84

Number of Observations

Number of Observations Read	84
Number of Observations Used	84
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	135.94488803	
1	2	104.85450392	0.02911800
2	1	104.10394135	0.00300899
3	1	104.03167833	0.00004336
4	1	104.03069648	0.00000001
5	1	104.03069626	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
COLOC_ID	0.2054
Residual	0.07466

Fit Statistics

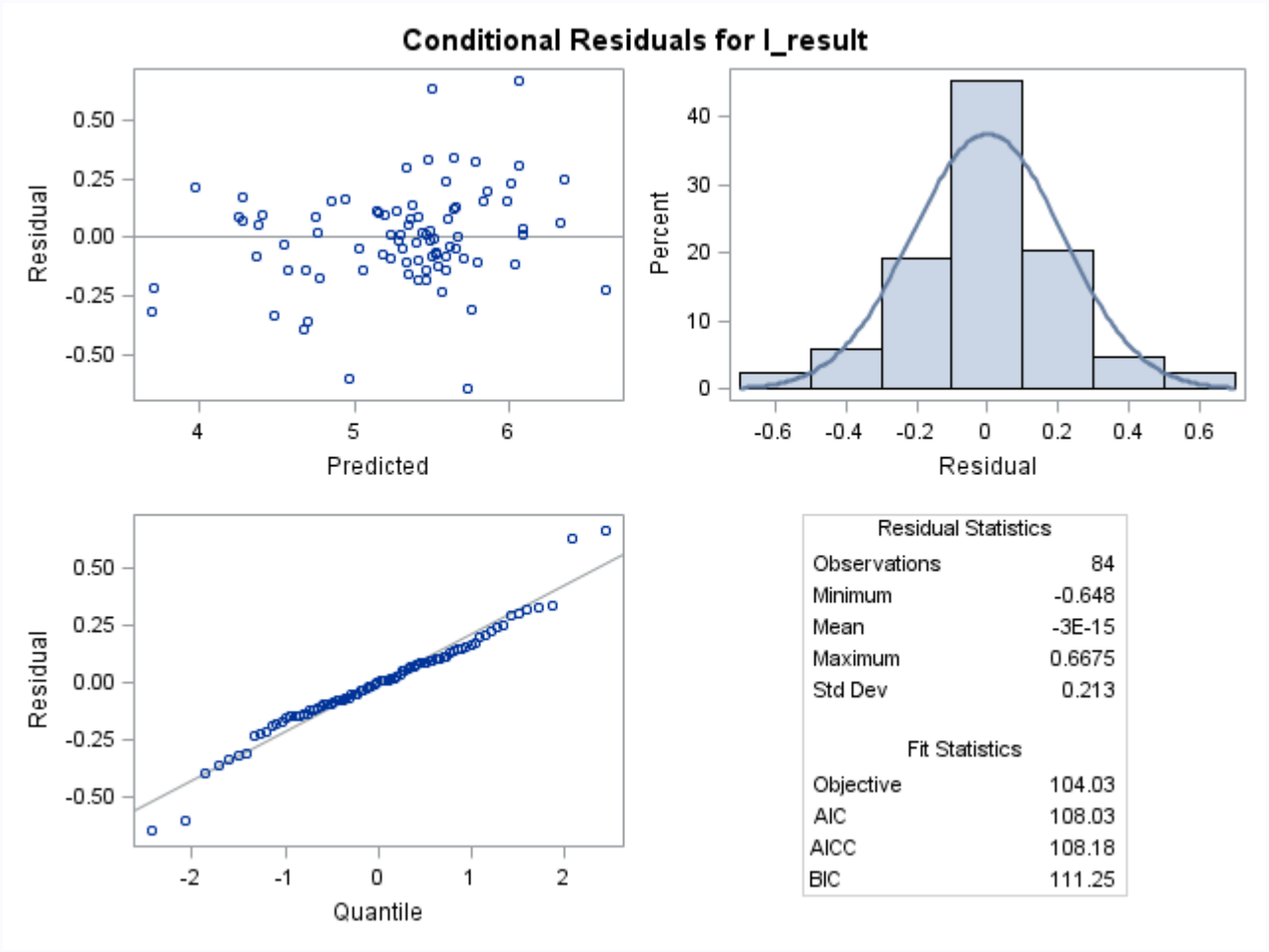
-2 Res Log Likelihood	104.0
AIC (Smaller is Better)	108.0
AICC (Smaller is Better)	108.2
BIC (Smaller is Better)	111.3

Solution for Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Intercept	9.7950	0.6005	36	16.31	<.0001	0.05	8.5772	11.0128
year0	-0.01273	0.005891	45	-2.16	0.0361	0.05	-0.02459	-0.00086
l_al_frac	1.0070	0.1341	45	7.51	<.0001	0.05	0.7368	1.2771

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
year0	1	45	4.67	0.0361
l_al_frac	1	45	56.37	<.0001


Conditional Residuals for l_result
Residual
Predicted
Percent
Residual
Residual
Quantile
Residual Statistics
Observations 84
Minimum -0.648
Mean -3E-15
Maximum 0.6675
Std Dev 0.213
Fit Statistics
Objective 104.03
AIC 108.03
AICC 108.18
BIC 111.25

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

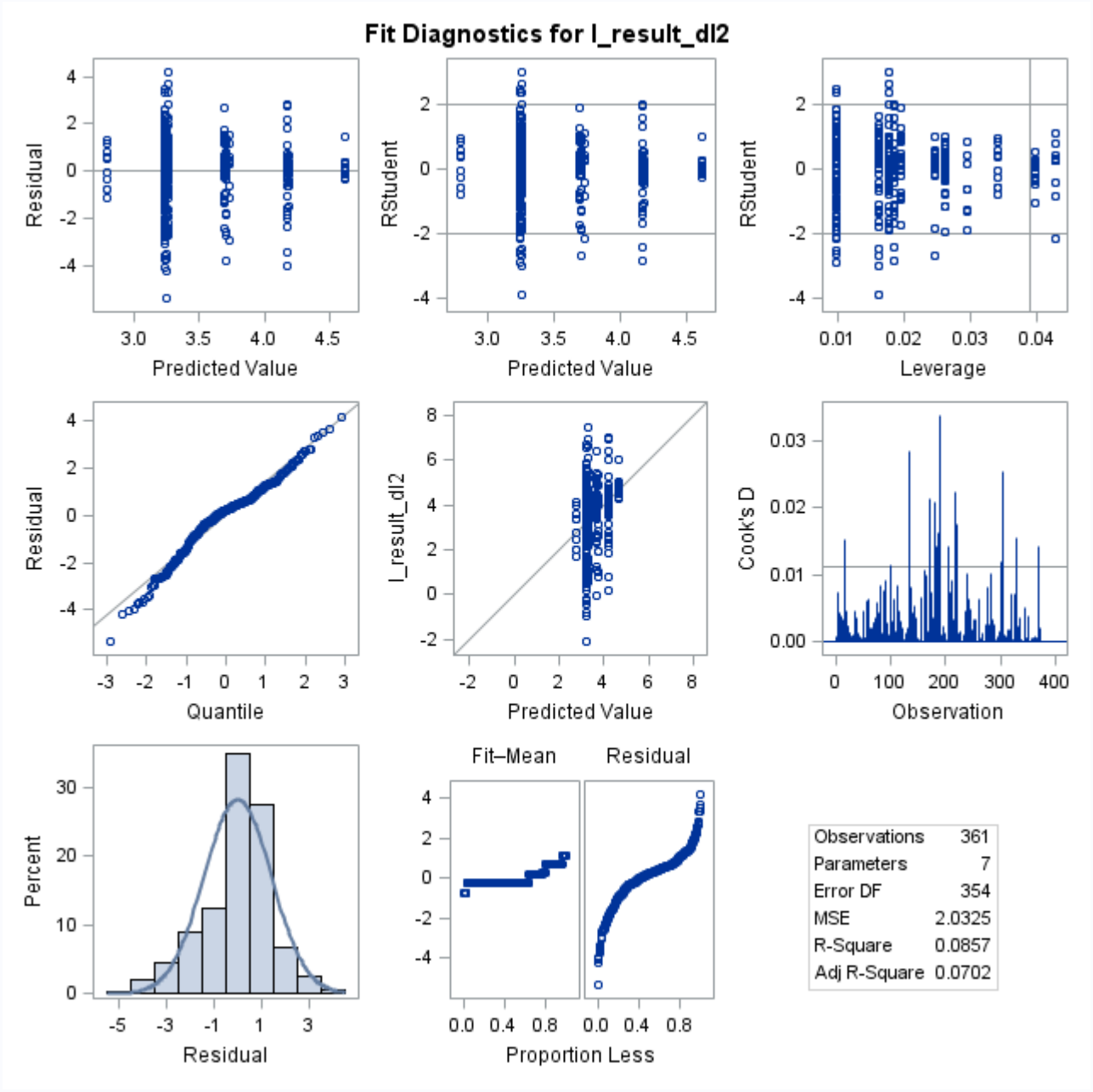
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	67.4209980	11.2368330	5.53	<.0001
Error	354	719.5217348	2.0325473		
Corrected Total	360	786.9427327			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.085675	40.57279	1.425674	3.513868

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	54.84570117	10.96914023	5.40	<.0001
time	1	12.57529679	12.57529679	6.19	0.0133

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	57.40375482	11.48075096	5.65	<.0001
time	1	12.57529679	12.57529679	6.19	0.0133


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 2.0325
R-Square 0.0857
Adj R-Square 0.0702

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way ANOVA: No interaction

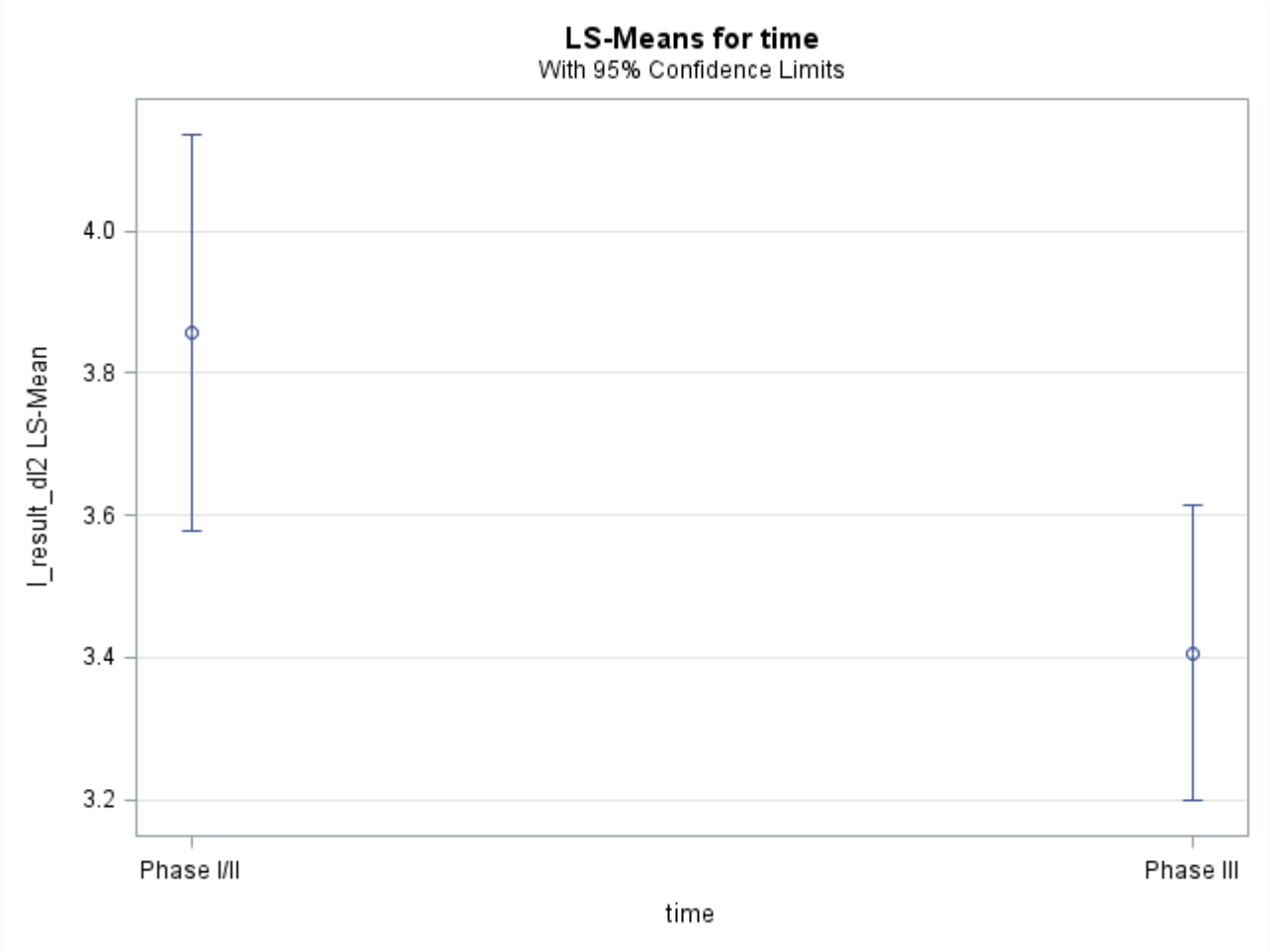
The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	3.85704611	0.0133
Phase III	3.40608402	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	3.857046	3.577896	4.136196
Phase III	3.406084	3.198505	3.613663

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.450962	0.094399	0.807525


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
4.0
3.8
3.6
3.4
3.2
Phase I/II
Phase III
time

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

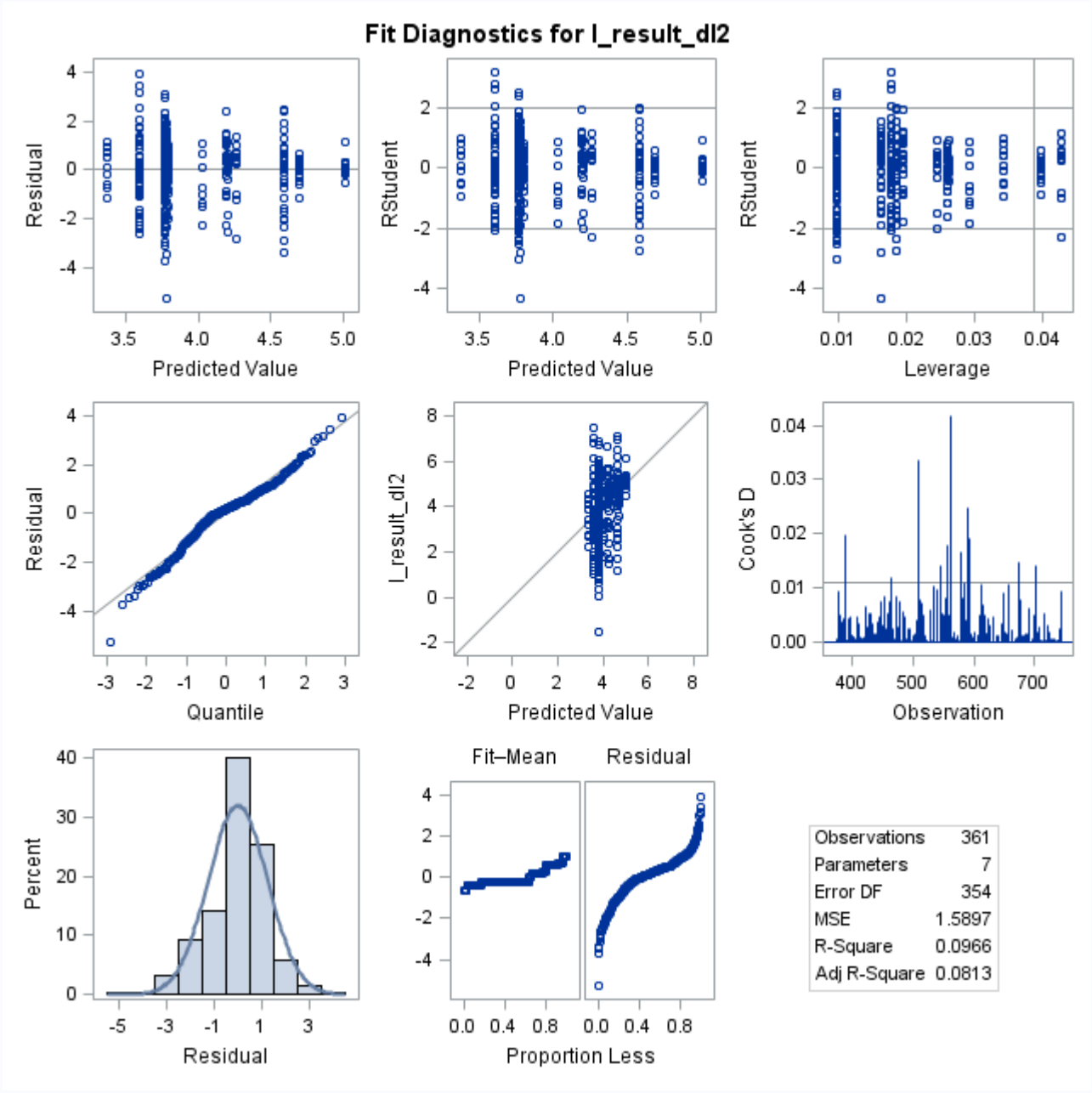
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	60.2008703	10.0334784	6.31	<.0001
Error	354	562.7368006	1.5896520		
Corrected Total	360	622.9376710			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.096640	31.56711	1.260814	3.994075

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.05577842	9.81115568	6.17	<.0001
time	1	11.14509190	11.14509190	7.01	0.0085

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.43542949	9.88708590	6.22	<.0001
time	1	11.14509190	11.14509190	7.01	0.0085


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.5897
R-Square 0.0966
Adj R-Square 0.0813

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: No interaction

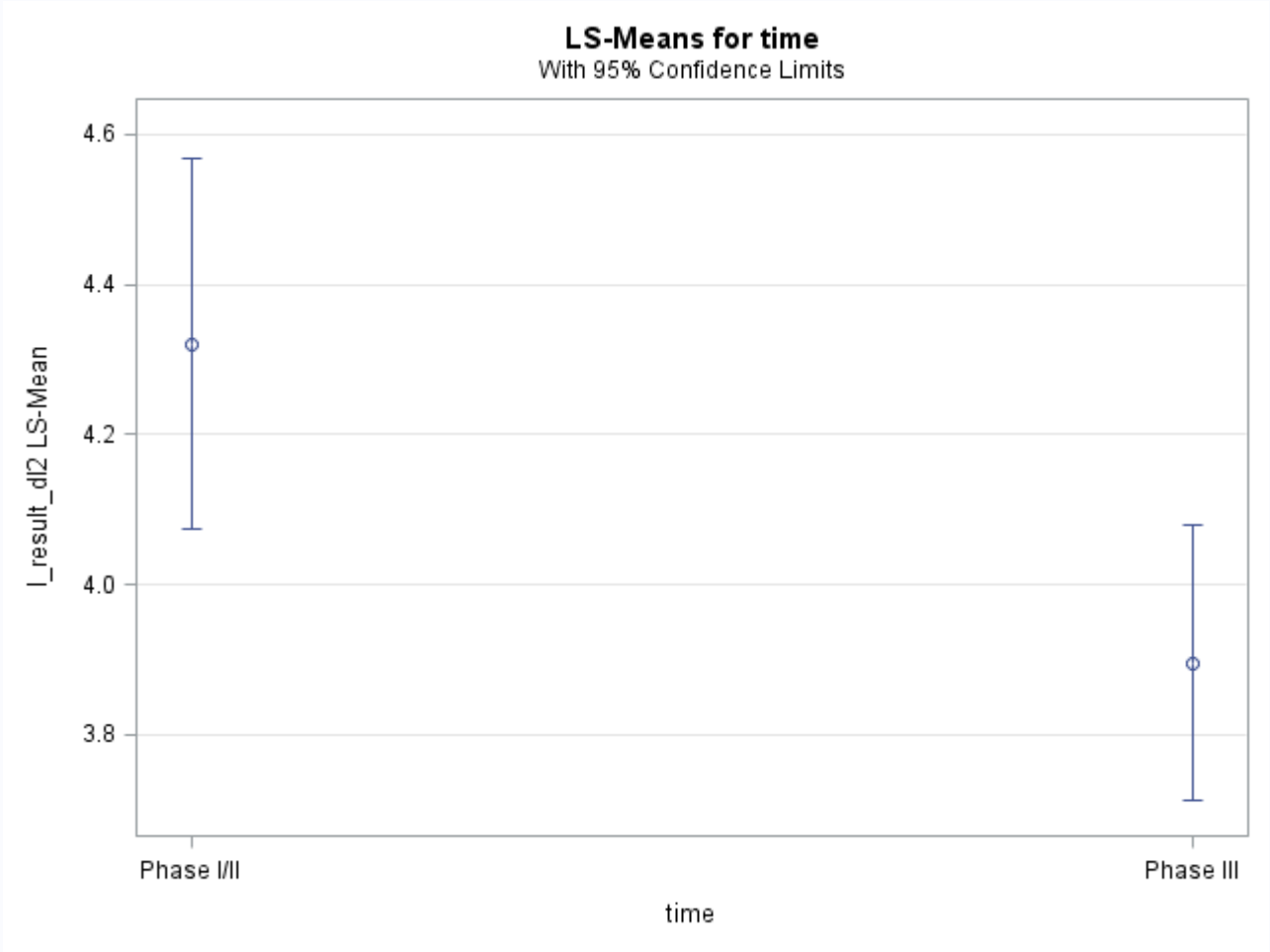
The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	4.32020771	0.0085
Phase III	3.89566369	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.320208	4.073337	4.567078
Phase III	3.895664	3.712088	4.079239

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.424544	0.109213	0.739876


LS-Means for time
With 95% Confidence Limits
4.6
4.4
4.2
4.0
3.8
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

PCBs Total PCBs (9)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PCBs Total PCBs (9)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

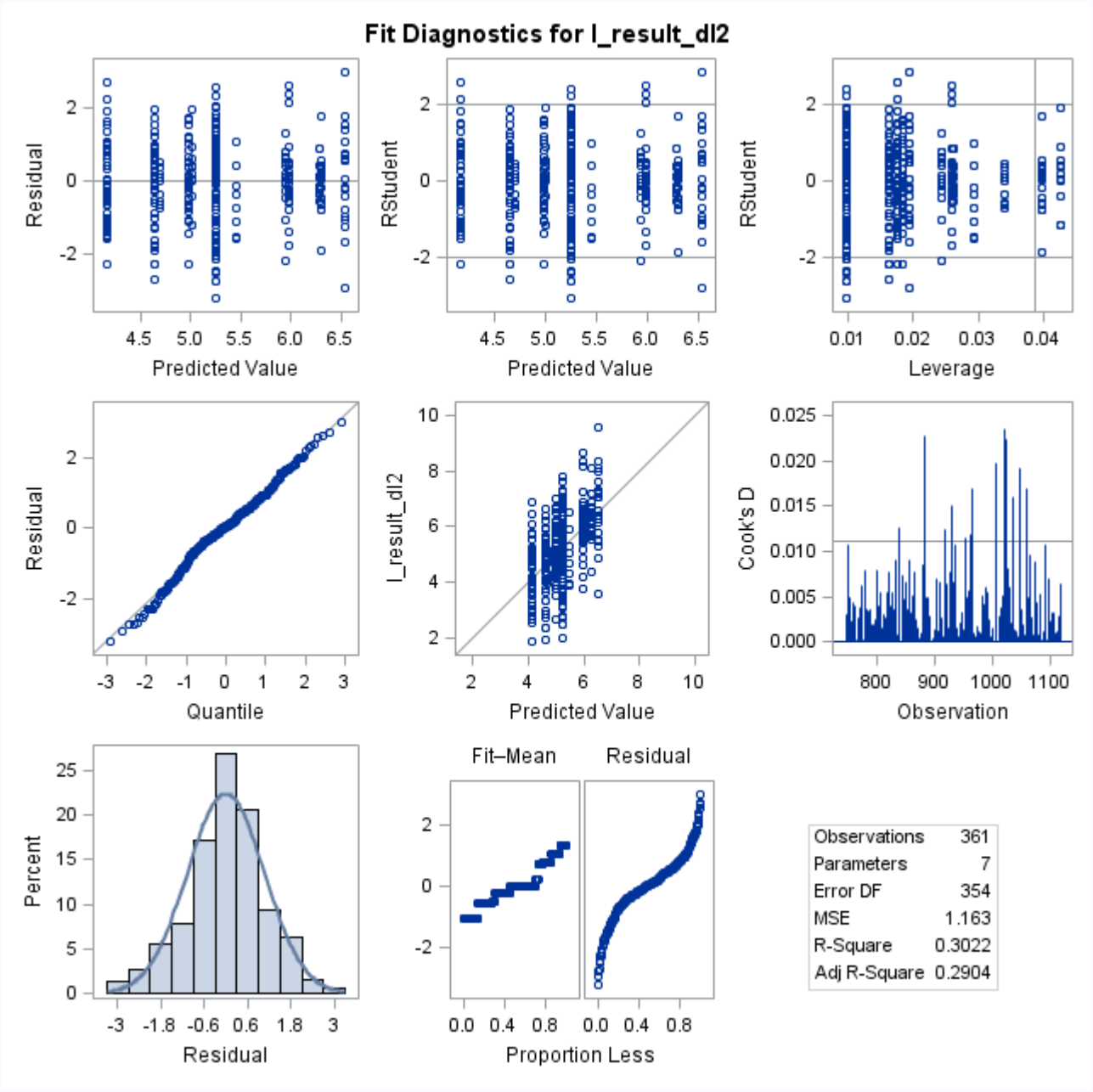
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	178.2959106	29.7159851	25.55	<.0001
Error	354	411.6898933	1.1629658		
Corrected Total	360	589.9858039			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.302204	20.64266	1.078409	5.224177

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	74.8554158	14.9710832	12.87	<.0001
time	1	103.4404948	103.4404948	88.95	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	50.4925539	10.0985108	8.68	<.0001
time	1	103.4404948	103.4404948	88.95	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.163
R-Square 0.3022
Adj R-Square 0.2904

PCBs Total PCBs (9)
Temporal Two-way ANOVA: No interaction

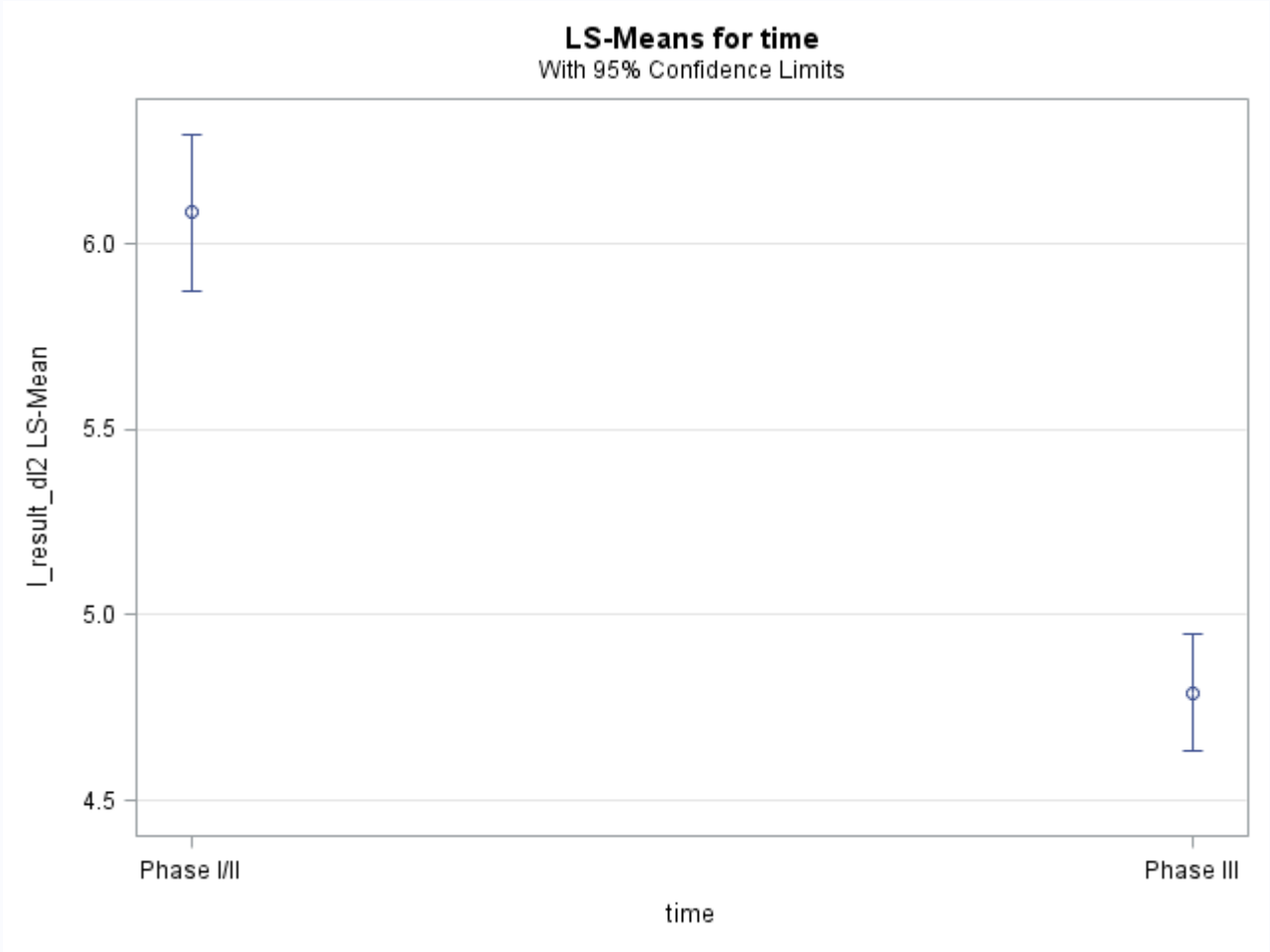
The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	6.08300479	<.0001
Phase III	4.78962461	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	6.083005	5.871850	6.294160
Phase III	4.789625	4.632608	4.946642

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	1.293380	1.023668	1.563092


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
6.0
5.5
5.0
4.5
Phase I/II
Phase III
time

PCBs Total PCBs congener (209 specified)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PCBs Total PCBs congener (209 specified)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

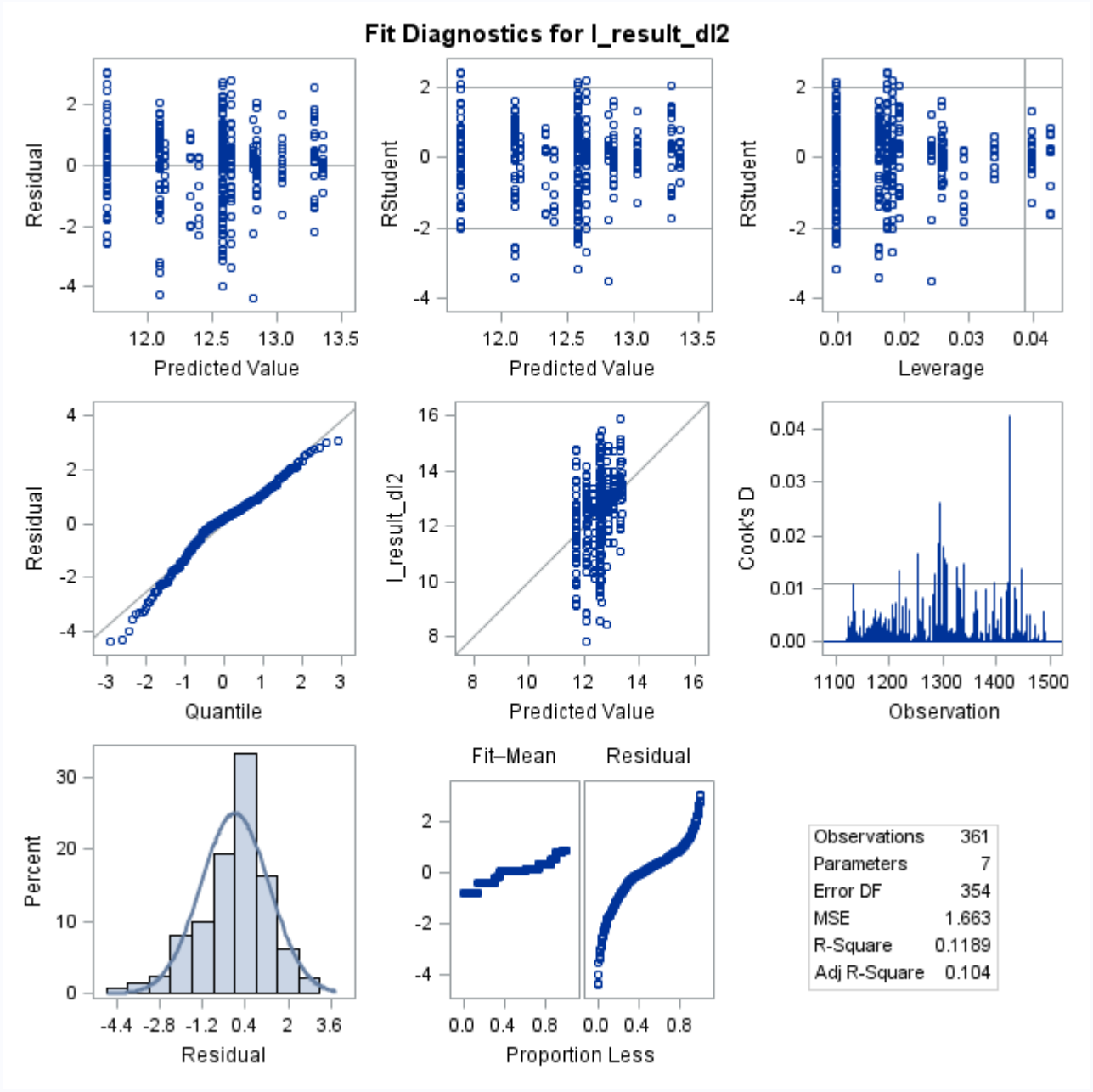
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	79.4635204	13.2439201	7.96	<.0001
Error	354	588.7023639	1.6630010		
Corrected Total	360	668.1658843			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.118928	10.31729	1.289574	12.49915

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	48.07315291	9.61463058	5.78	<.0001
time	1	31.39036748	31.39036748	18.88	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	41.60412437	8.32082487	5.00	0.0002
time	1	31.39036748	31.39036748	18.88	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.663
R-Square 0.1189
Adj R-Square 0.104

PCBs Total PCBs congener (209 specified)
Temporal Two-way ANOVA: No interaction

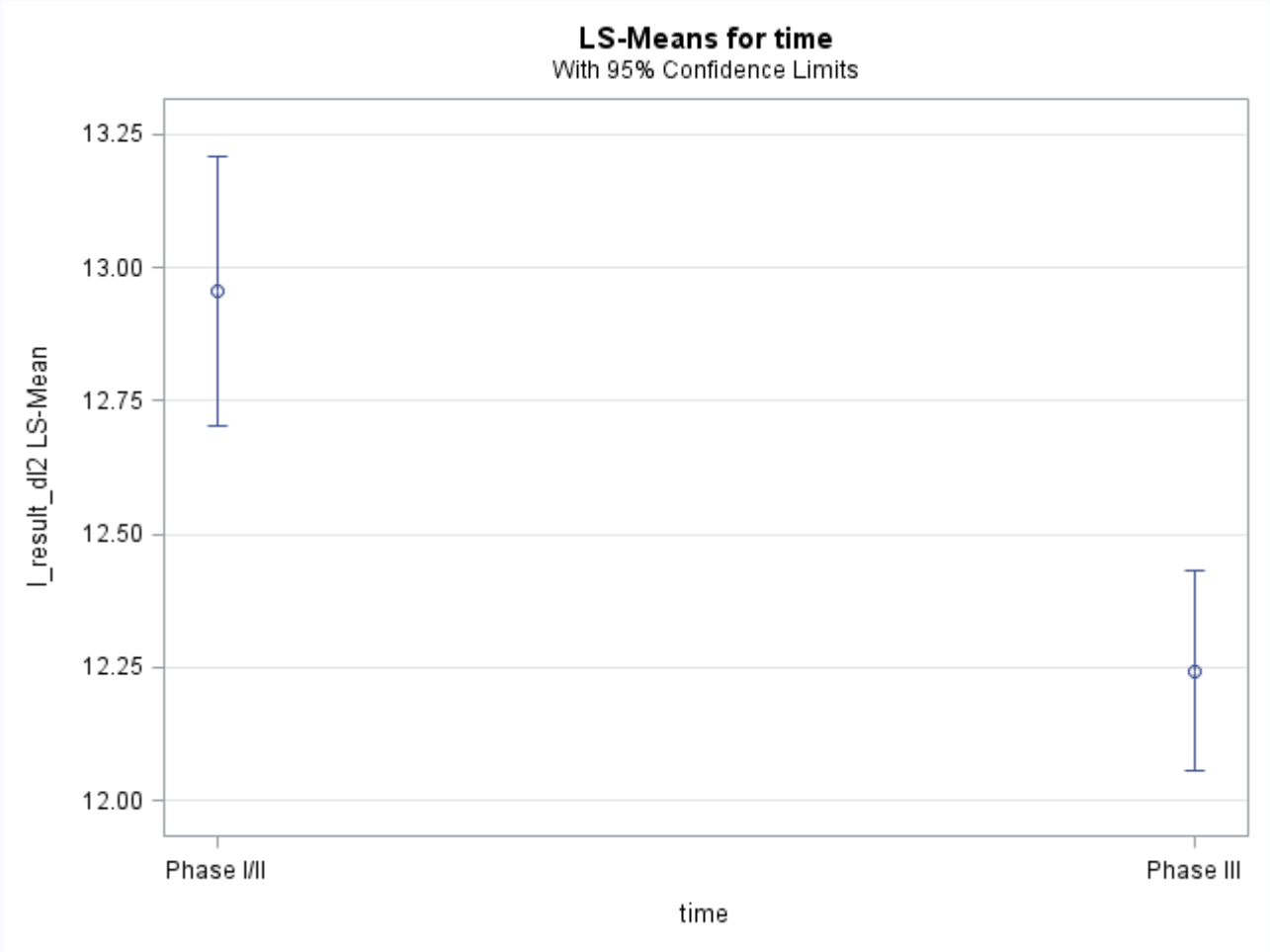
The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	12.9548639	<.0001
Phase III	12.2423733	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	12.954864	12.702362	13.207365
Phase III	12.242373	12.054610	12.430136

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.712491	0.389966	1.035015


LS-Means for time
With 95% Confidence Limits
13.25
13.00
12.75
12.50
12.25
12.00
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

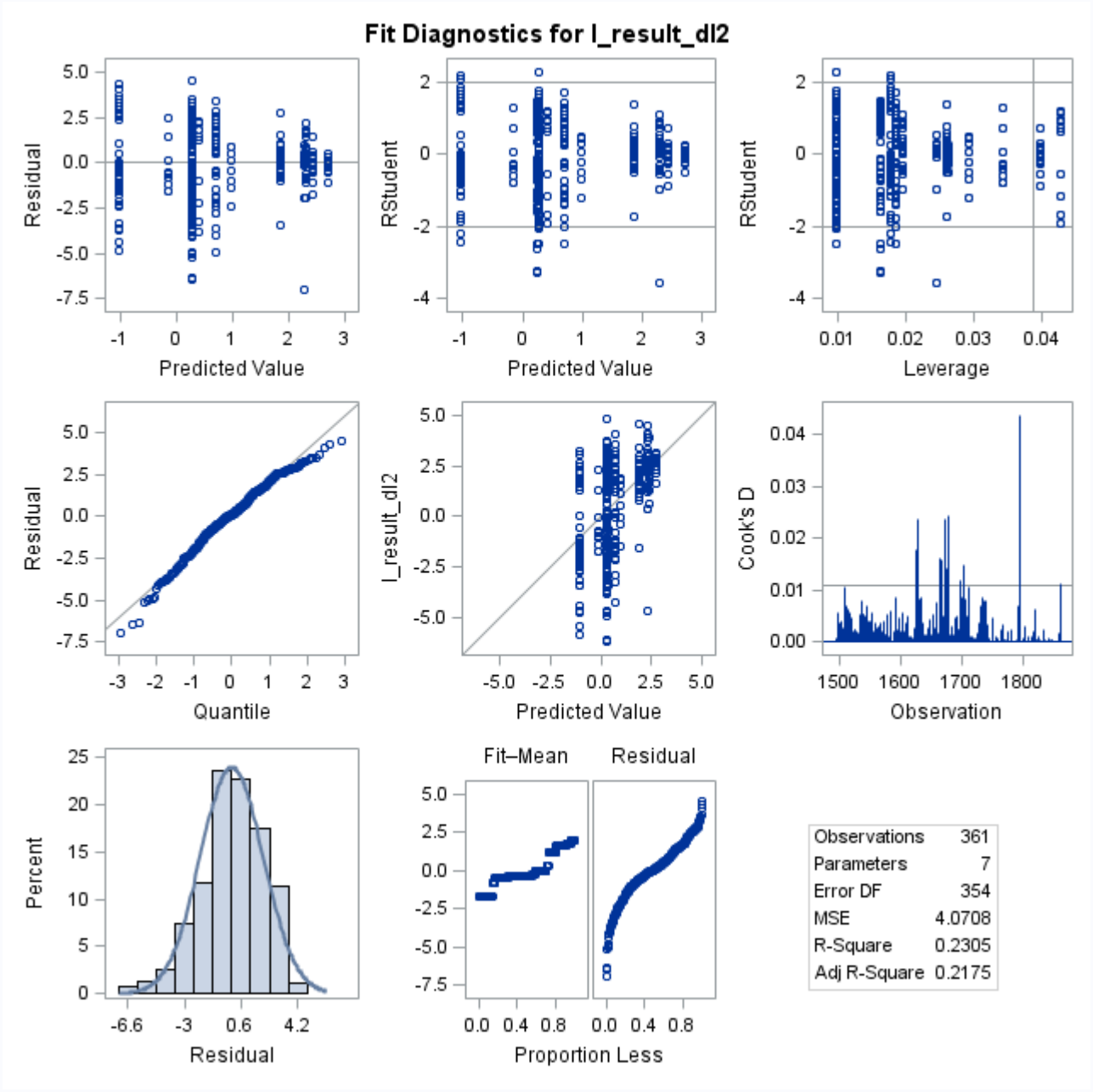
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	431.722050	71.953675	17.68	<.0001
Error	354	1441.058408	4.070786		
Corrected Total	360	1872.780457			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.230525	295.3779	2.017619	0.683064

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	179.0066472	35.8013294	8.79	<.0001
time	1	252.7154023	252.7154023	62.08	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	106.1923203	21.2384641	5.22	0.0001
time	1	252.7154023	252.7154023	62.08	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 4.0708
R-Square 0.2305
Adj R-Square 0.2175

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: No interaction

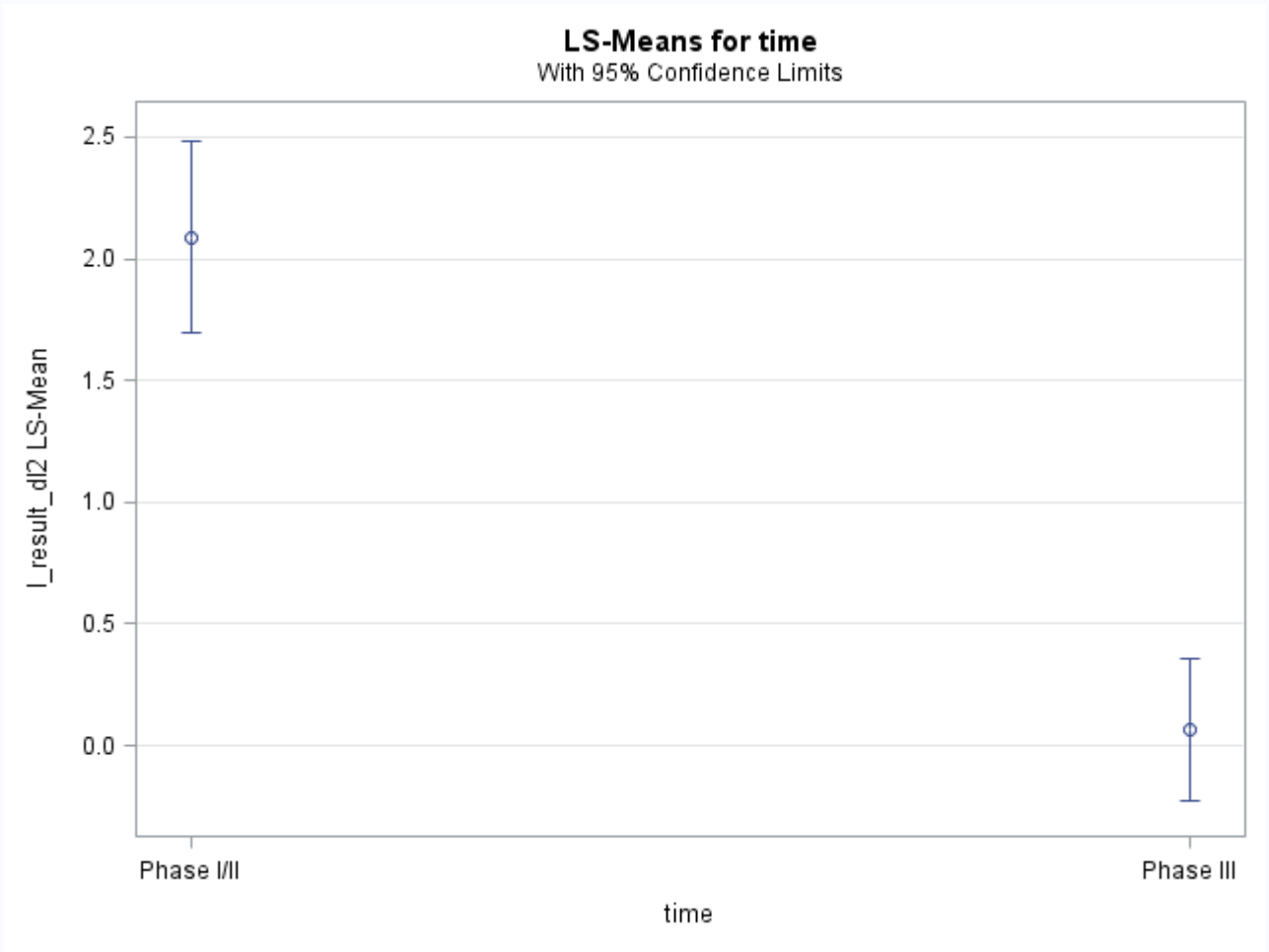
The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	2.08761567	<.0001
Phase III	0.06600852	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	2.087616	1.692561	2.482670
Phase III	0.066009	-0.227758	0.359775

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	2.021607	1.516998	2.526217


LS-Means for time
With 95% Confidence Limits
2.5
2.0
1.5
1.0
0.5
0.0
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way ANOVA: No interaction

The GLM Procedure

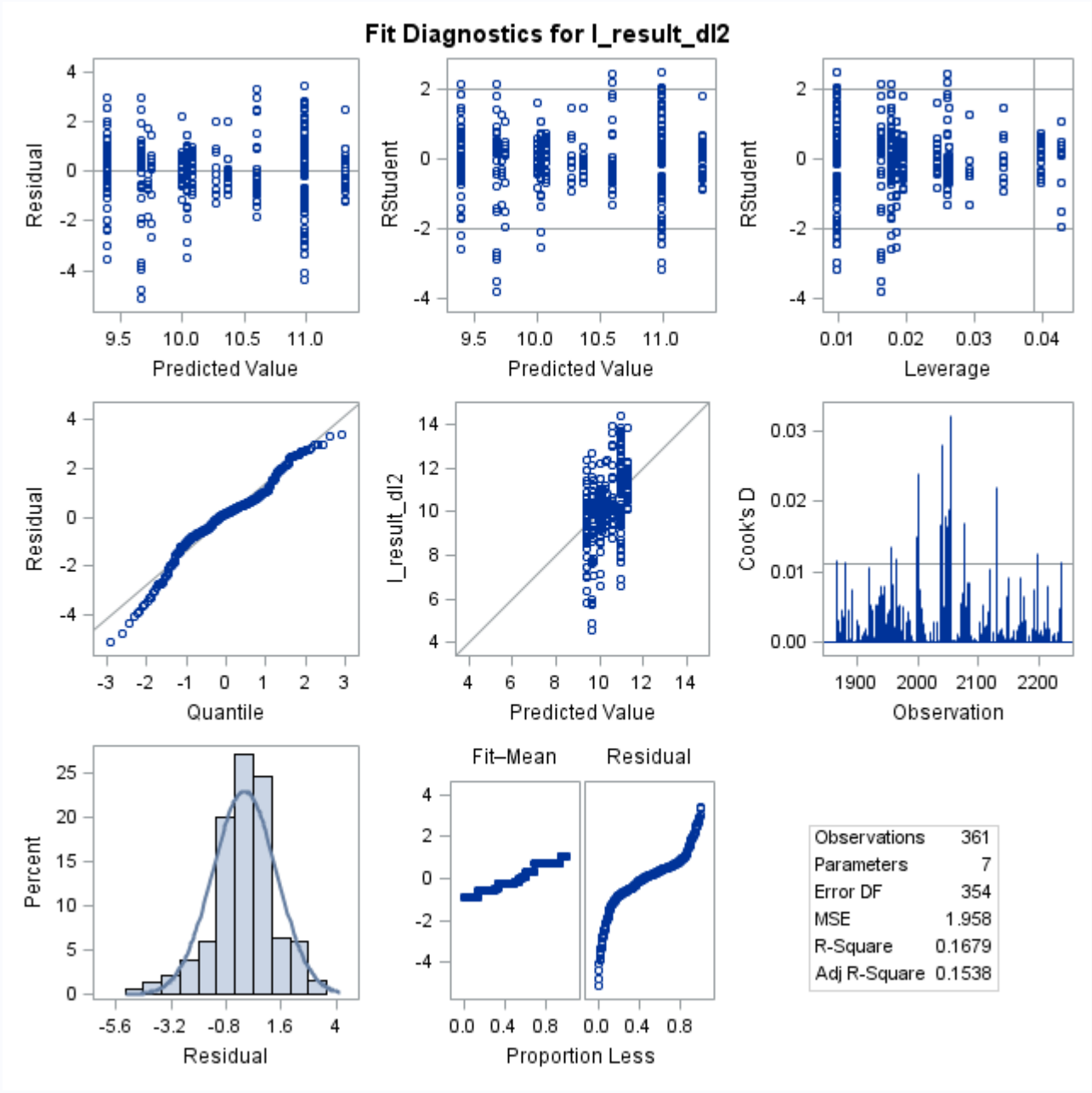
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	139.8270902	23.3045150	11.90	<.0001
Error	354	693.1273832	1.9579870		
Corrected Total	360	832.9544734			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.167869	13.63600	1.399281	10.26167

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	133.0966387	26.6193277	13.60	<.0001
time	1	6.7304515	6.7304515	3.44	0.0646

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	132.5446900	26.5089380	13.54	<.0001
time	1	6.7304515	6.7304515	3.44	0.0646


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.958
R-Square 0.1679
Adj R-Square 0.1538

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way ANOVA: No interaction

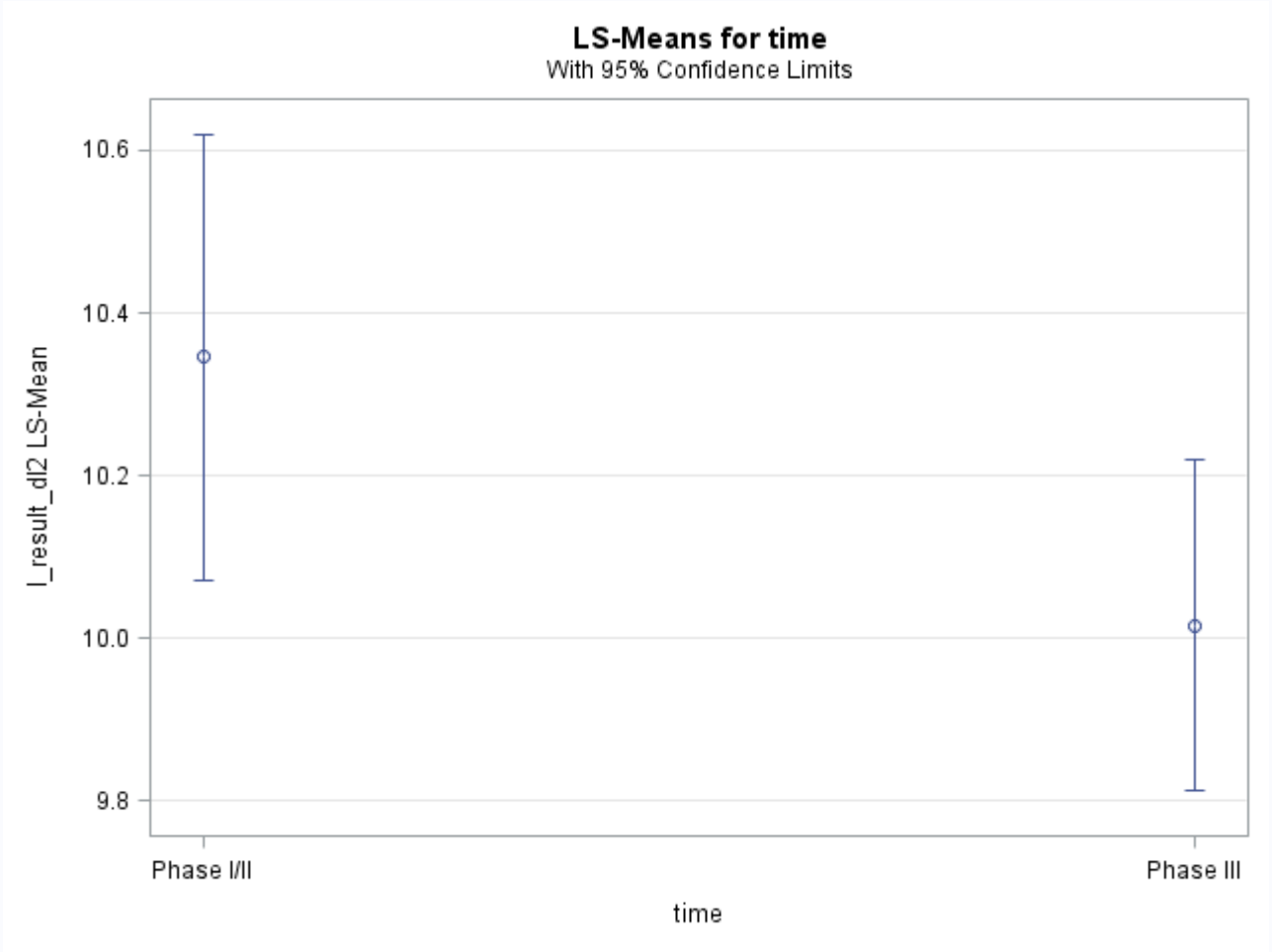
The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	10.3458142	0.0646
Phase III	10.0158985	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	10.345814	10.071832	10.619797
Phase III	10.015899	9.812162	10.219635

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.329916	-0.020047	0.679878


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
10.6
10.4
10.2
10.0
9.8
Phase I/II
Phase III
time

PAHs Total HMW PAHs
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

PAHs Total HMW PAHs
Temporal Two-way ANOVA: No interaction

The GLM Procedure

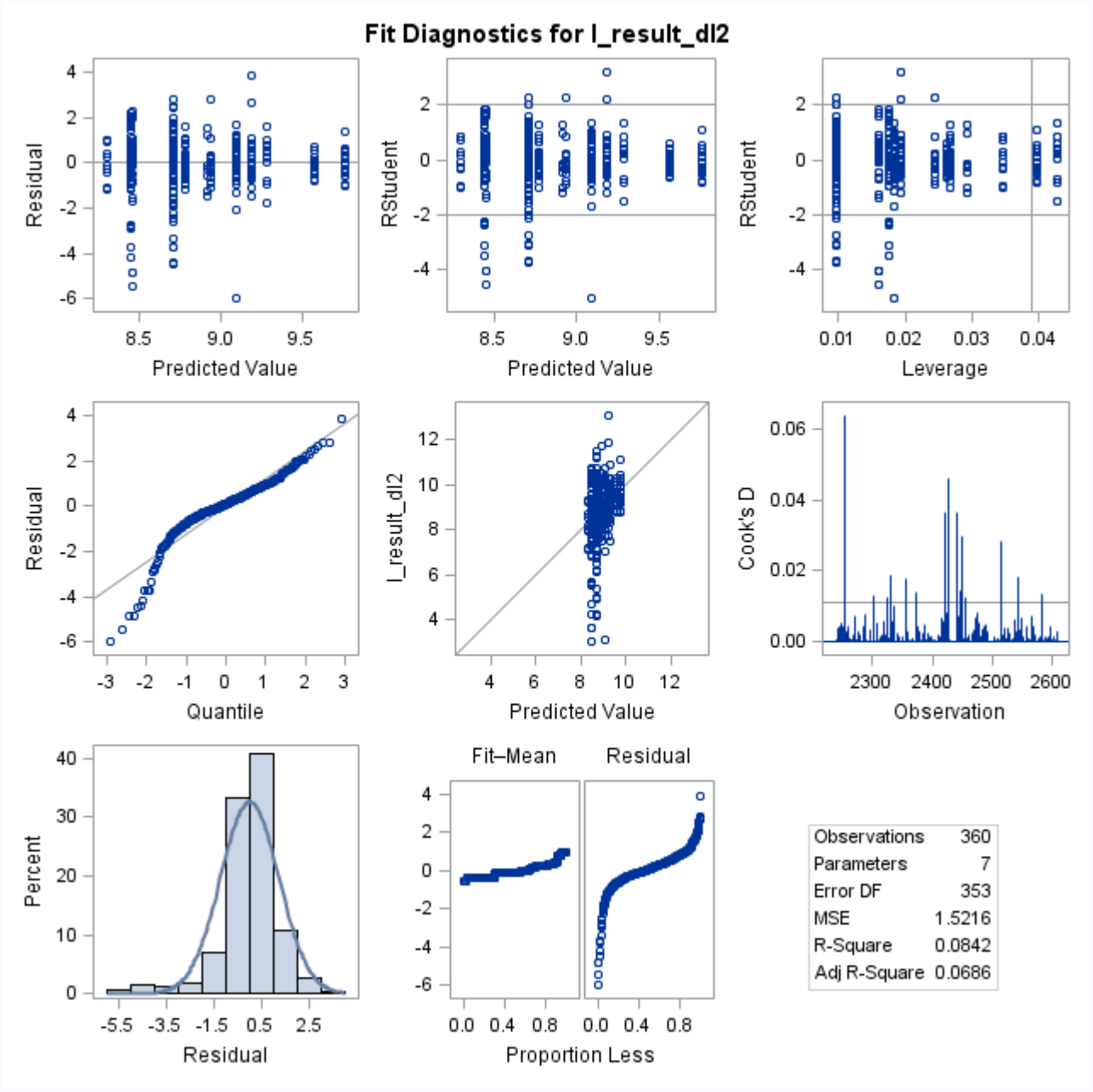
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	49.3739729	8.2289955	5.41	<.0001
Error	353	537.1268449	1.5216058		
Corrected Total	359	586.5008178			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.084184	13.98656	1.233534	8.819425

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.11077907	7.02215581	4.61	0.0004
time	1	14.26319387	14.26319387	9.37	0.0024

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	32.21903817	6.44380763	4.23	0.0009
time	1	14.26319387	14.26319387	9.37	0.0024


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 7
Error DF 353
MSE 1.5216
R-Square 0.0842
Adj R-Square 0.0686

PAHs Total HMW PAHs
Temporal Two-way ANOVA: No interaction

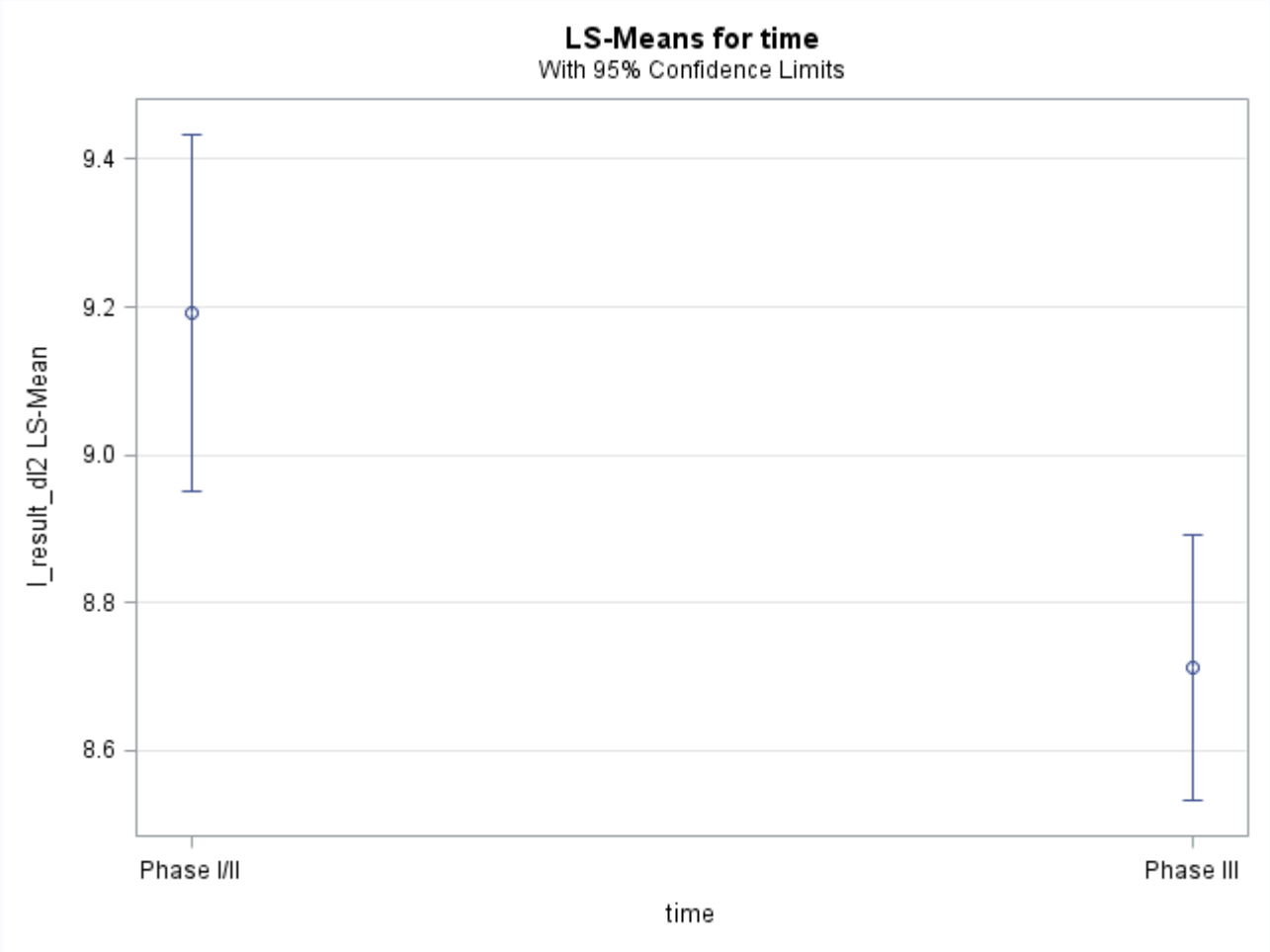
The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	9.19177414	0.0024
Phase III	8.71125075	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	9.191774	8.949675	9.433873
Phase III	8.711251	8.531523	8.890978

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.480523	0.171852	0.789195


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
9.4
9.2
9.0
8.8
8.6
Phase I/II
Phase III
time

PAHs Total LMW PAHs
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PAHs Total LMW PAHs
Temporal Two-way ANOVA: No interaction

The GLM Procedure

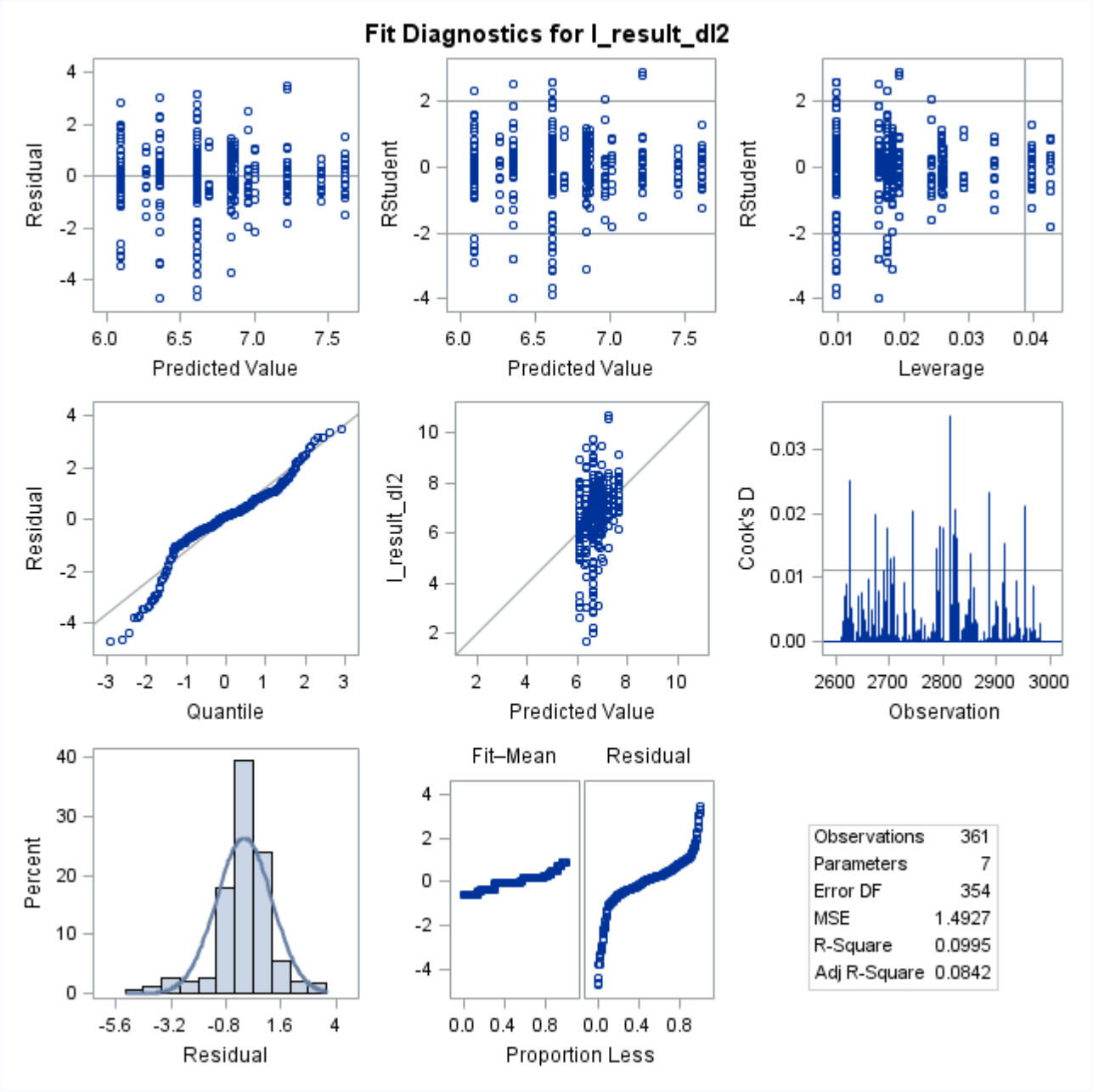
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	58.3729099	9.7288183	6.52	<.0001
Error	354	528.4159483	1.4927004		
Corrected Total	360	586.7888582			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.099479	18.26609	1.221761	6.688686

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.79531449	7.15906290	4.80	0.0003
time	1	22.57759539	22.57759539	15.13	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	28.37937482	5.67587496	3.80	0.0023
time	1	22.57759539	22.57759539	15.13	0.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.4927
R-Square 0.0995
Adj R-Square 0.0842

PAHs Total LMW PAHs
Temporal Two-way ANOVA: No interaction

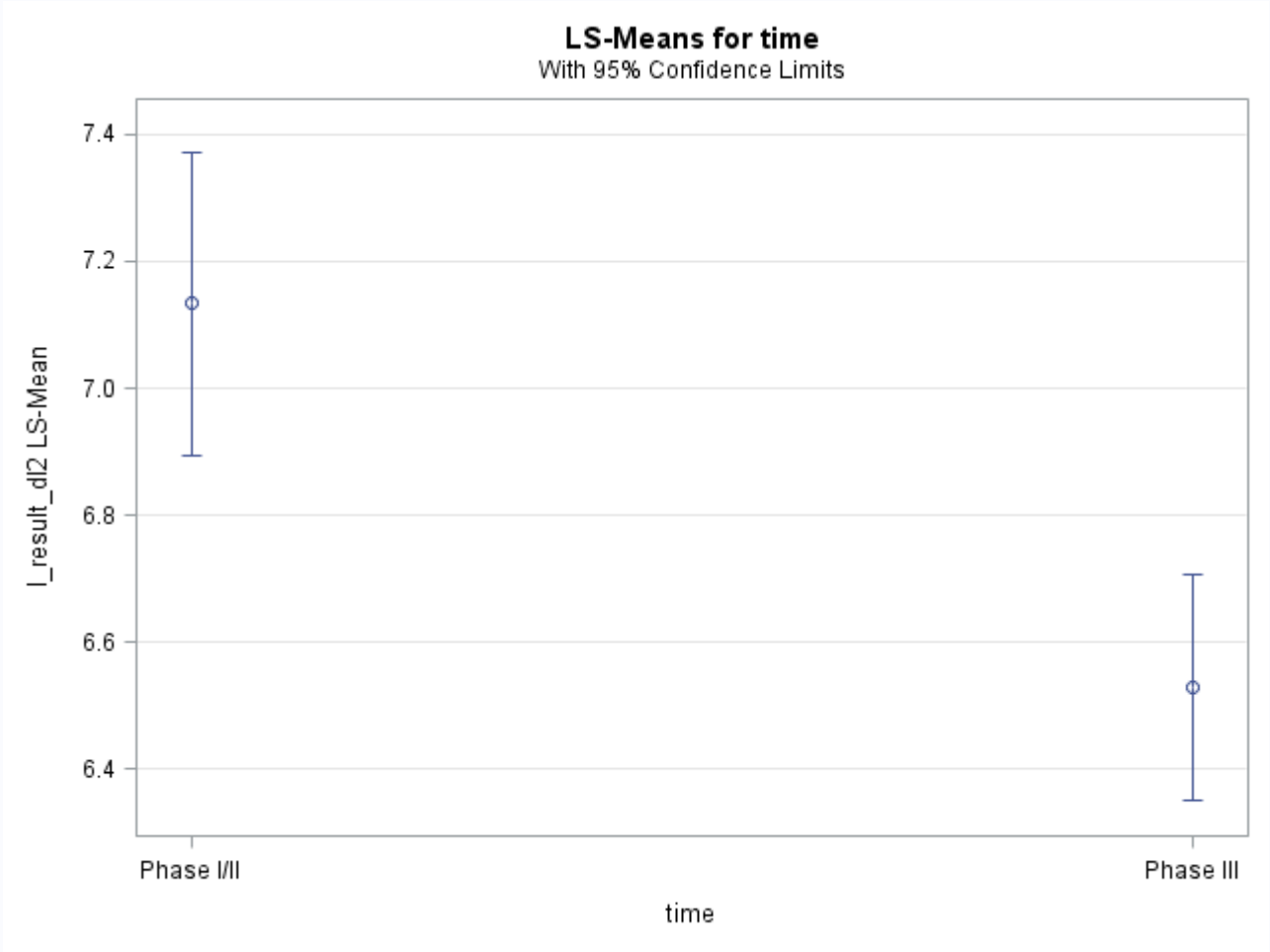
The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	7.13287395	0.0001
Phase III	6.52861965	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	7.132874	6.893650	7.372098
Phase III	6.528620	6.350730	6.706509

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.604254	0.298690	0.909819


LS-Means for time
With 95% Confidence Limits
7.4
7.2
7.0
6.8
6.6
6.4
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

PAHs Total PAH
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PAHs Total PAH
Temporal Two-way ANOVA: No interaction

The GLM Procedure

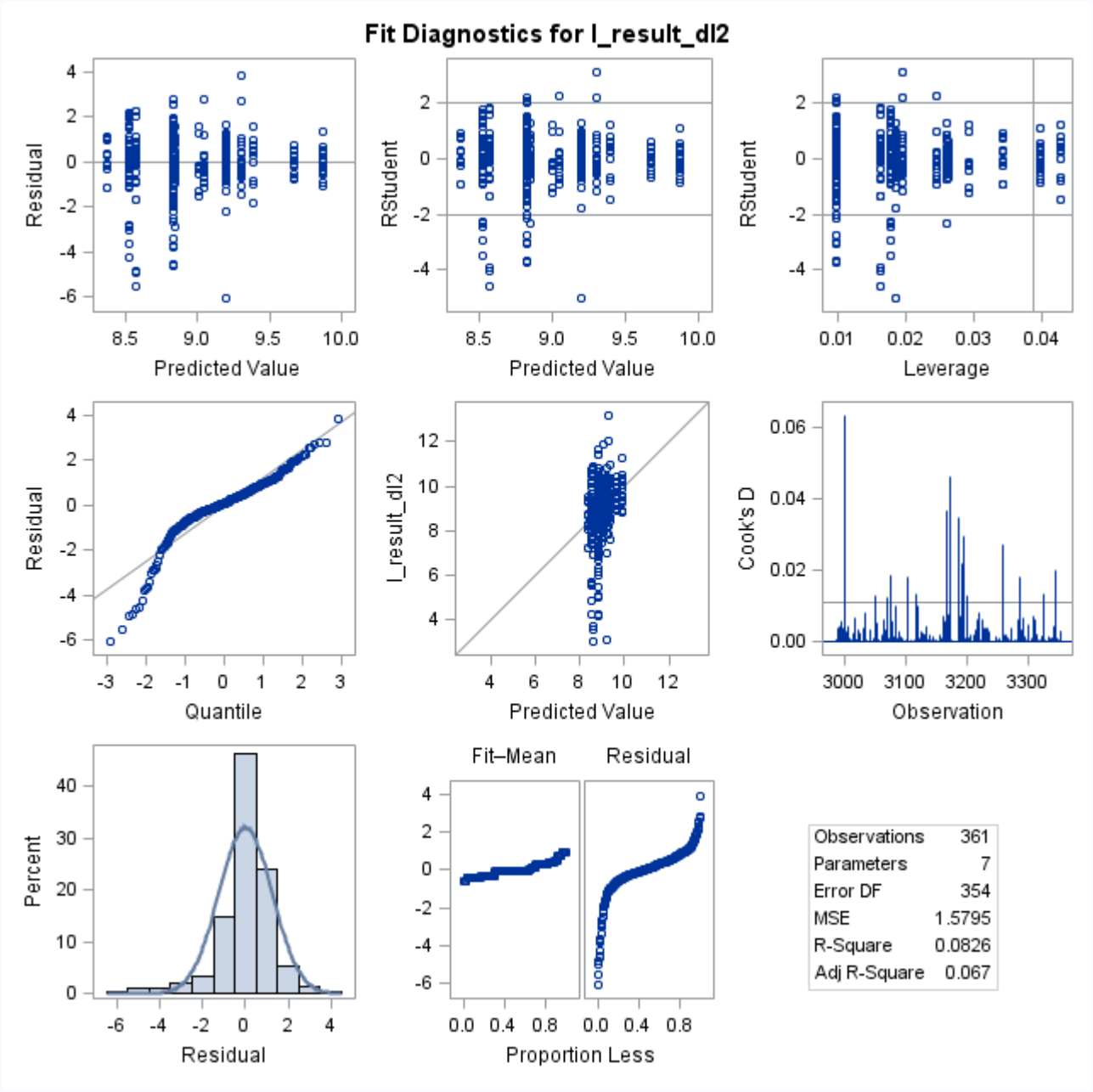
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	50.3122492	8.3853749	5.31	<.0001
Error	354	559.1469115	1.5795110		
Corrected Total	360	609.4591607			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.082552	14.08682	1.256786	8.921713

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	36.13775674	7.22755135	4.58	0.0005
time	1	14.17449248	14.17449248	8.97	0.0029

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	33.92087824	6.78417565	4.30	0.0008
time	1	14.17449248	14.17449248	8.97	0.0029


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.5795
R-Square 0.0826
Adj R-Square 0.067

PAHs Total PAH
Temporal Two-way ANOVA: No interaction

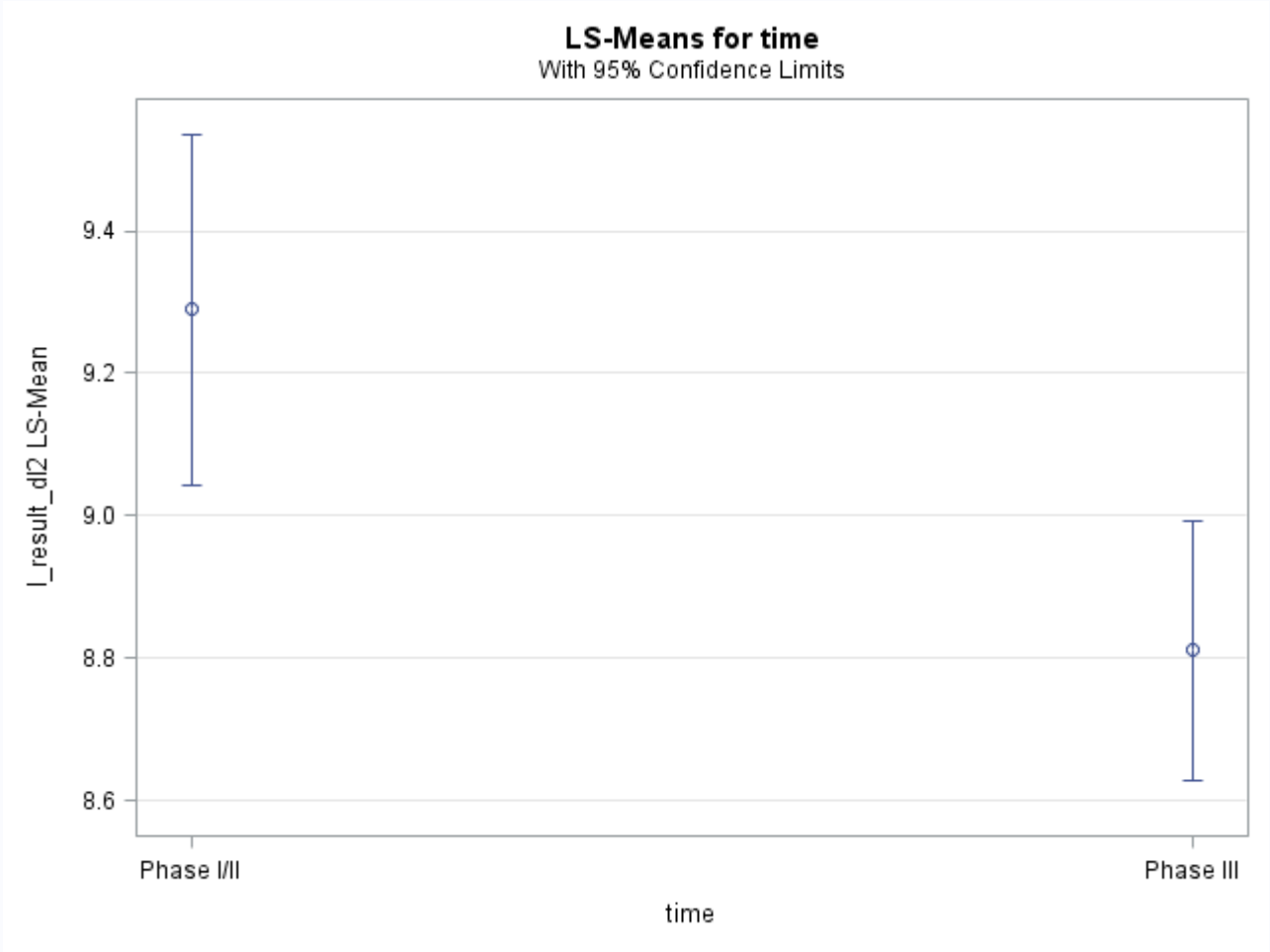
The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	9.28933360	0.0029
Phase III	8.81055507	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	9.289334	9.043252	9.535415
Phase III	8.810555	8.627566	8.993544

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.478779	0.164454	0.793103


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
9.4
9.2
9.0
8.8
8.6
Phase I/II
Phase III
time

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	371
Number of Observations Used	359

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

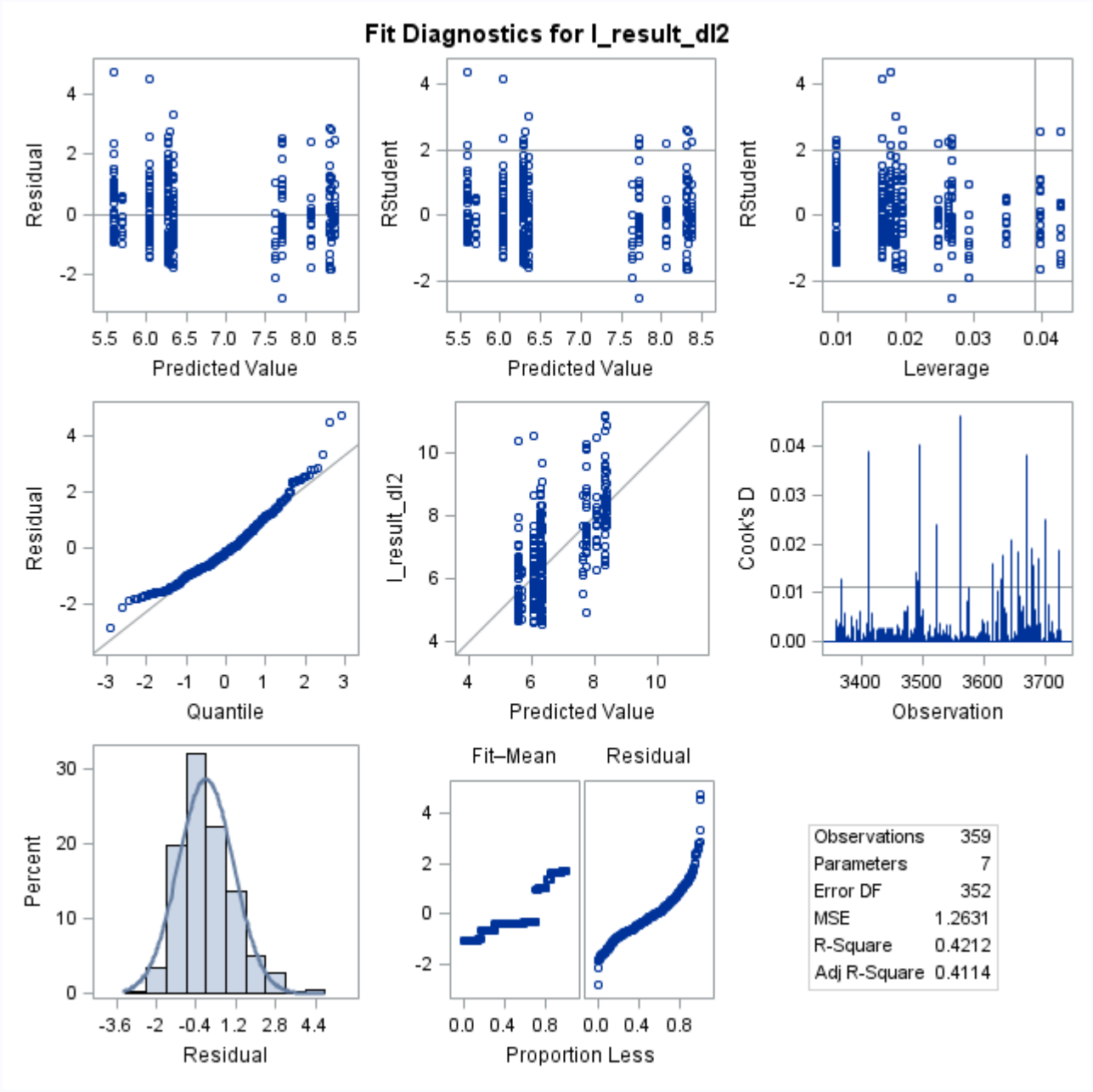
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	323.6251535	53.9375256	42.70	<.0001
Error	352	444.6270285	1.2631450		
Corrected Total	358	768.2521820			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.421249	16.85022	1.123897	6.669925

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	69.4690120	13.8938024	11.00	<.0001
time	1	254.1561415	254.1561415	201.21	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	29.0905711	5.8181142	4.61	0.0004
time	1	254.1561415	254.1561415	201.21	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 359
Parameters 7
Error DF 352
MSE 1.2631
R-Square 0.4212
Adj R-Square 0.4114

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way ANOVA: No interaction

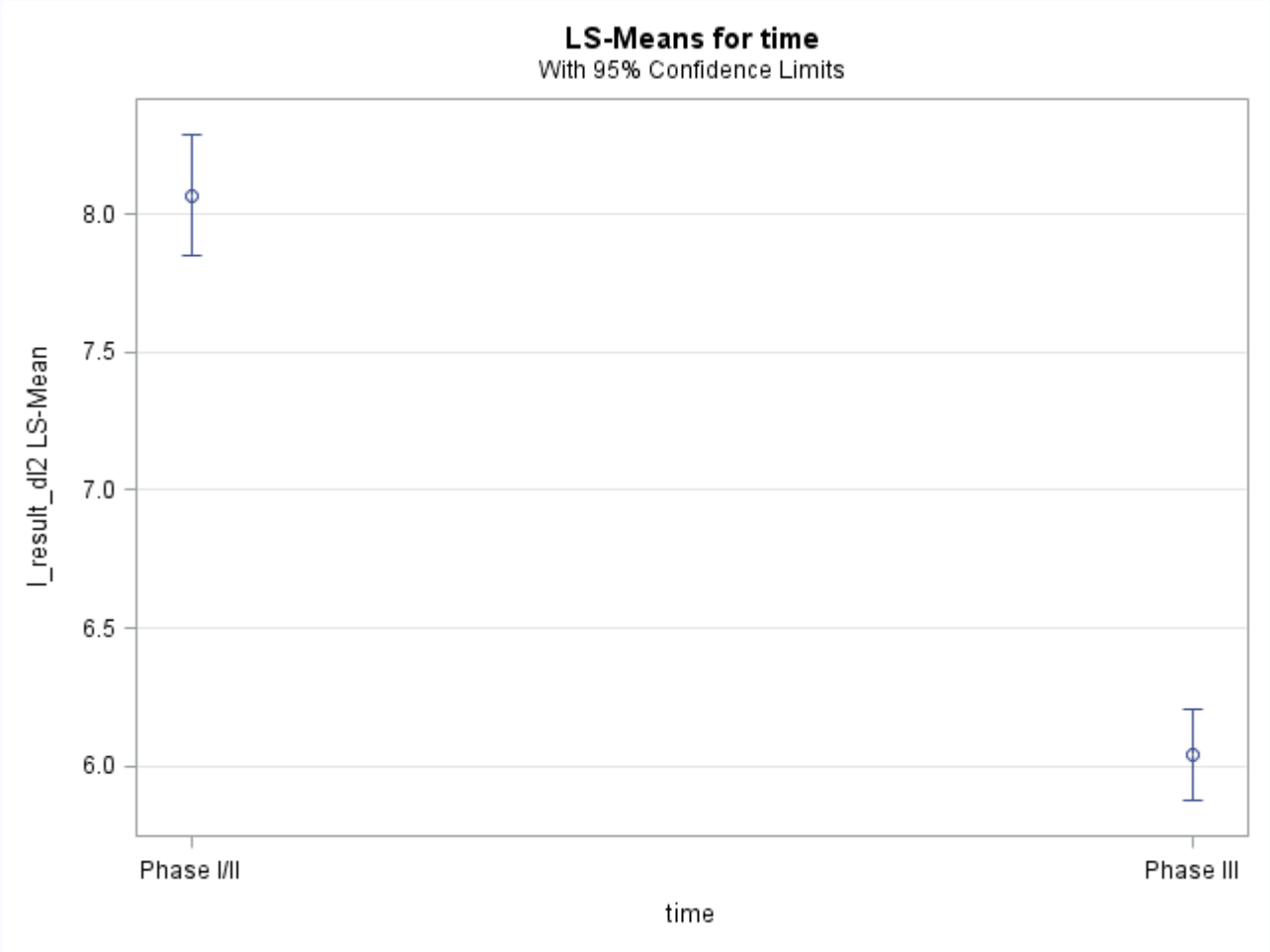
The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	8.06836423	<.0001
Phase III	6.03897050	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	8.068364	7.847781	8.288948
Phase III	6.038971	5.874980	6.202961

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	2.029394	1.748018	2.310769


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
8.0
7.5
7.0
6.5
6.0
Phase I/II
Phase III
time

Metals Aluminum
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Aluminum

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Aluminum
Temporal Two-way ANOVA: No interaction

The GLM Procedure

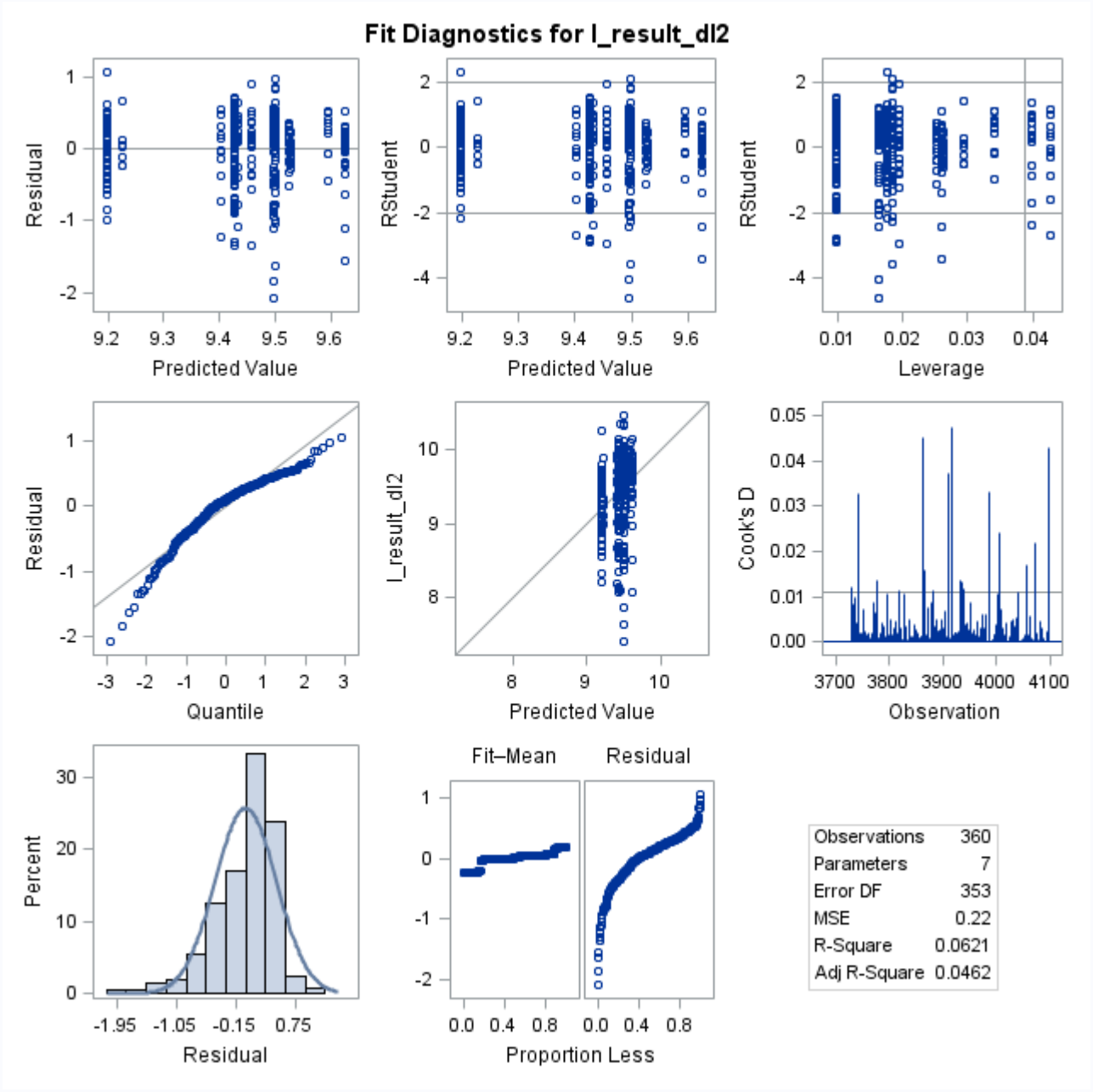
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Aluminum

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	5.14388125	0.85731354	3.90	0.0009
Error	353	77.65521077	0.21998643		
Corrected Total	359	82.79909202			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.062125	4.968665	0.469027	9.439700

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	5.09053411	1.01810682	4.63	0.0004
time	1	0.05334714	0.05334714	0.24	0.6227

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	4.53792903	0.90758581	4.13	0.0012
time	1	0.05334714	0.05334714	0.24	0.6227


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 7
Error DF 353
MSE 0.22
R-Square 0.0621
Adj R-Square 0.0462

Metals Aluminum
Temporal Two-way ANOVA: No interaction

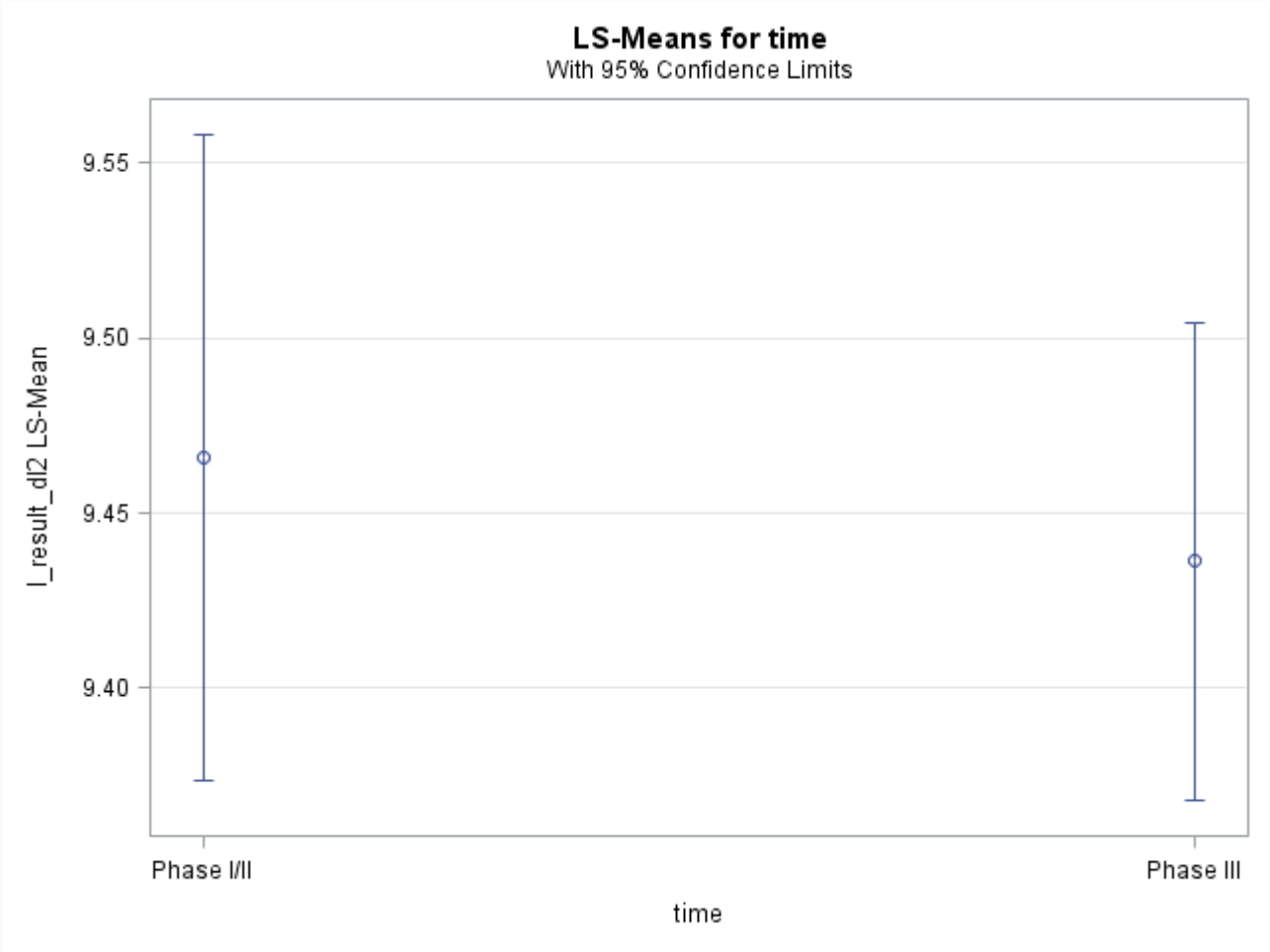
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Aluminum

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	9.46578682	0.6227
Phase III	9.43627523	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	9.465787	9.373444	9.558130
Phase III	9.436275	9.367960	9.504590

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.029512	-0.088351	0.147374


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
9.55
9.50
9.45
9.40
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Arsenic
Temporal Two-way ANOVA: No interaction

The GLM Procedure

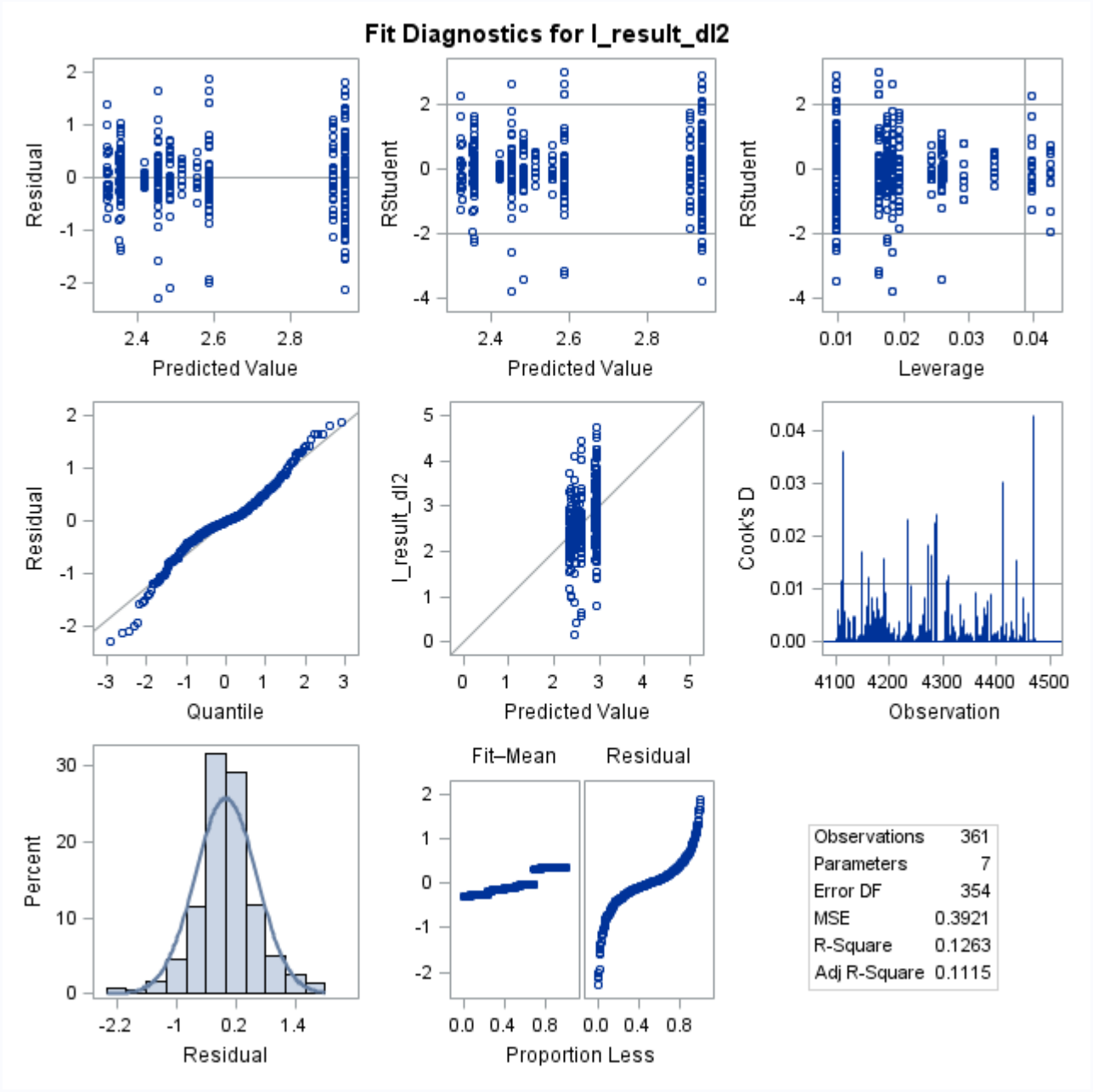
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	20.0651878	3.3441980	8.53	<.0001
Error	354	138.8122927	0.3921251		
Corrected Total	360	158.8774805			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.126293	24.06842	0.626199	2.601745

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.00121256	4.00024251	10.20	<.0001
time	1	0.06397520	0.06397520	0.16	0.6865

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	19.38375367	3.87675073	9.89	<.0001
time	1	0.06397520	0.06397520	0.16	0.6865


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 0.3921
R-Square 0.1263
Adj R-Square 0.1115

Metals Arsenic
Temporal Two-way ANOVA: No interaction

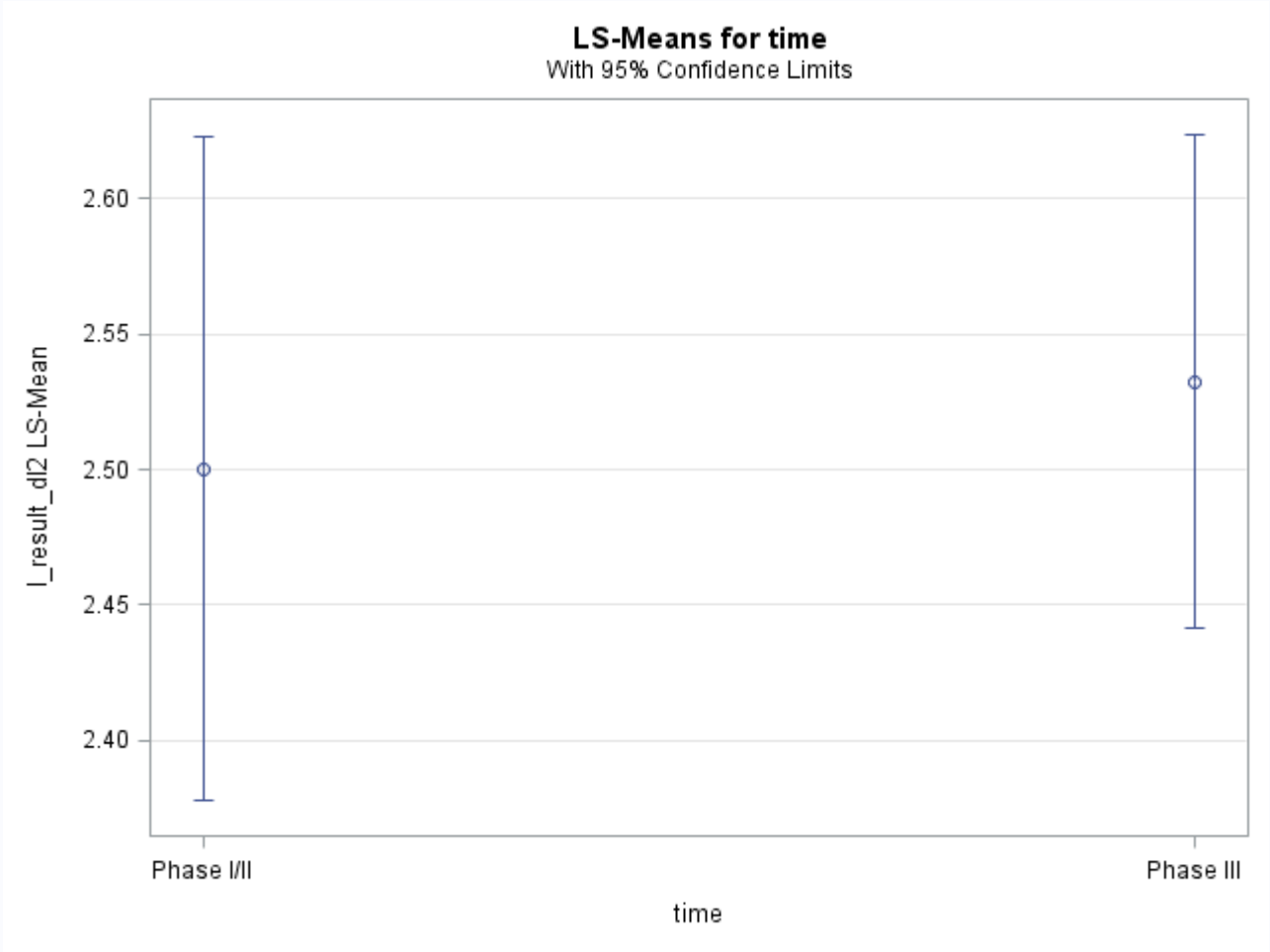
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	2.50037962	0.6865
Phase III	2.53254486	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	2.500380	2.377768	2.622991
Phase III	2.532545	2.441370	2.623720

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	-0.032165	-0.188779	0.124448


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
2.60
2.55
2.50
2.45
2.40
Phase I/II
Phase III
time

Metals Cadmium
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Cadmium
Temporal Two-way ANOVA: No interaction

The GLM Procedure

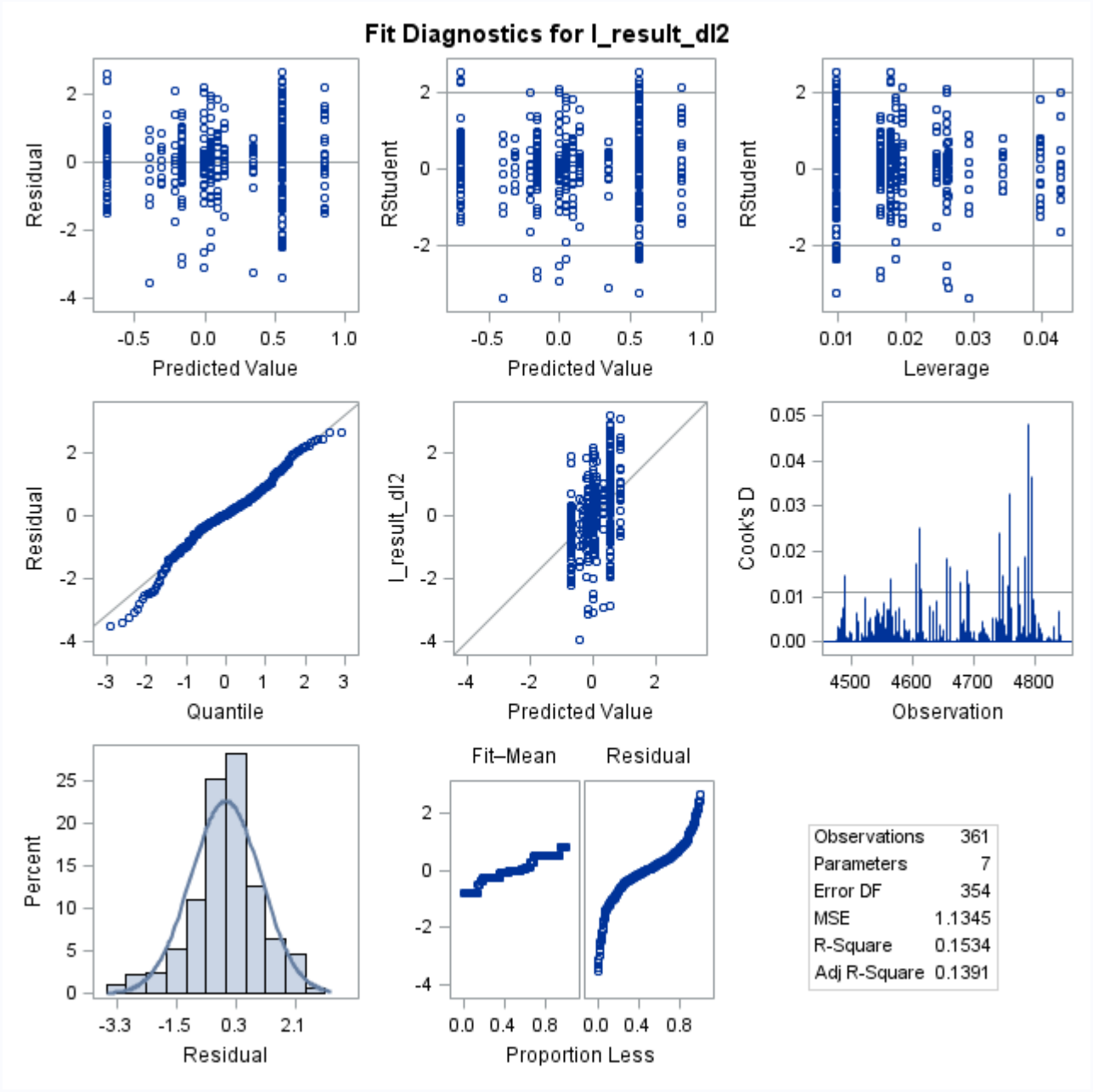
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	72.7773544	12.1295591	10.69	<.0001
Error	354	401.6293377	1.1345462		
Corrected Total	360	474.4066921			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.153407	1414.675	1.065151	0.075293

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	67.10024673	13.42004935	11.83	<.0001
time	1	5.67710762	5.67710762	5.00	0.0259

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	69.30680764	13.86136153	12.22	<.0001
time	1	5.67710762	5.67710762	5.00	0.0259


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.1345
R-Square 0.1534
Adj R-Square 0.1391

Metals Cadmium
Temporal Two-way ANOVA: No interaction

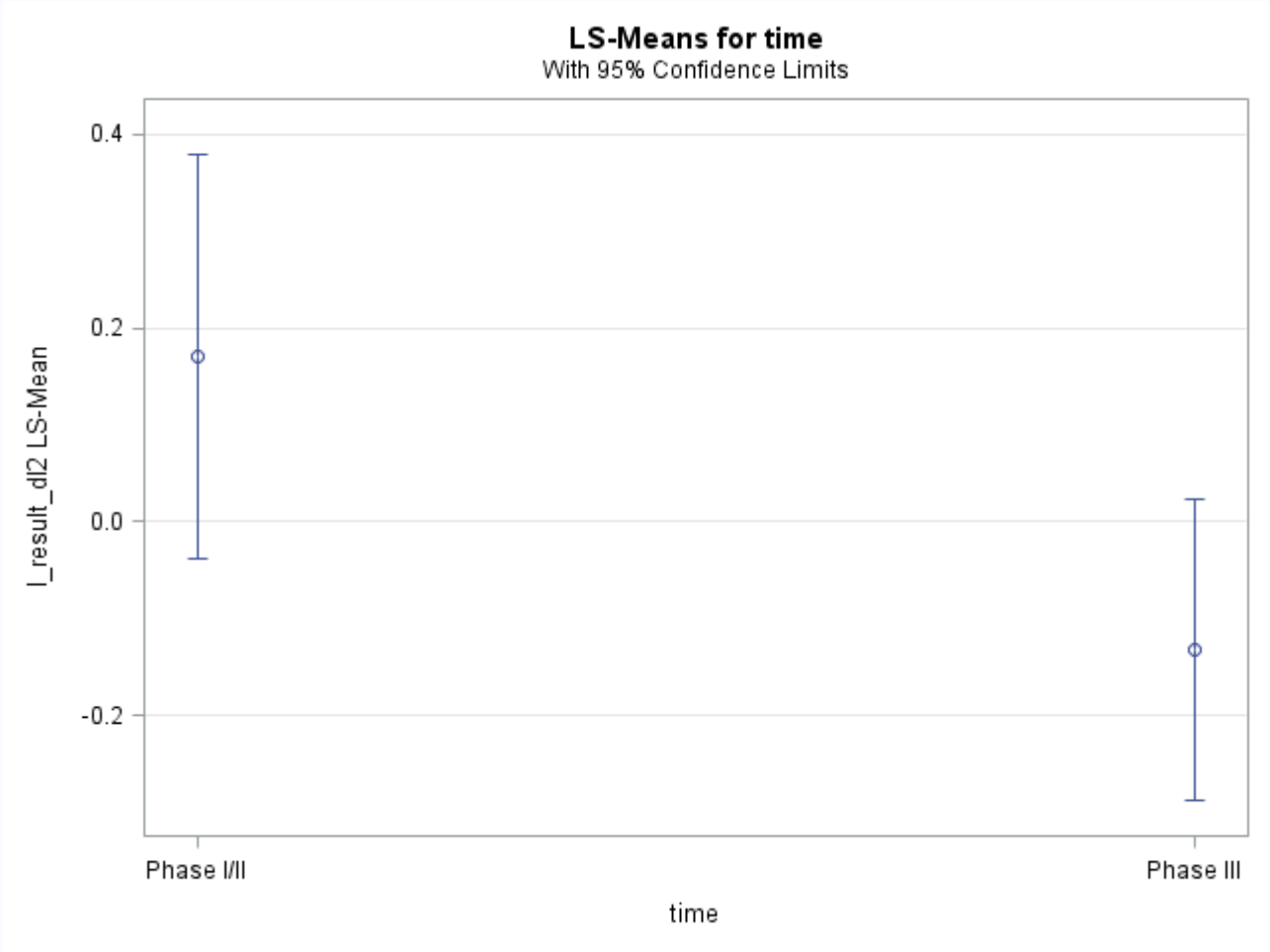
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	0.17038178	0.0259
Phase III	-0.13261950	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	0.170382	-0.038177	0.378941
Phase III	-0.132620	-0.287706	0.022467

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.303001	0.036605	0.569397


LS-Means for time
With 95% Confidence Limits
0.4
0.2
0.0
-0.2
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

Metals Chromium
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Chromium
Temporal Two-way ANOVA: No interaction

The GLM Procedure

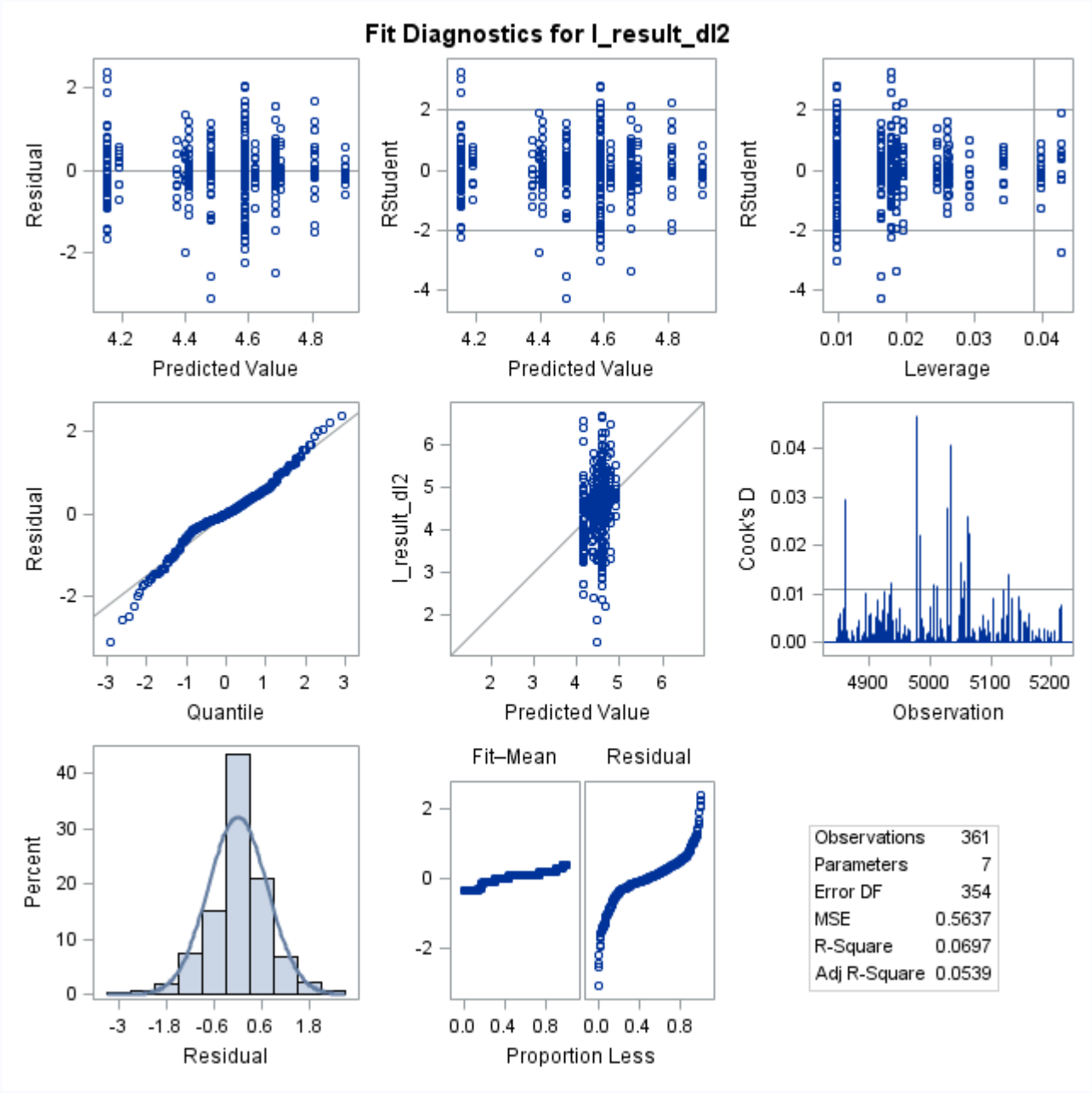
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	14.9513552	2.4918925	4.42	0.0003
Error	354	199.5398280	0.5636718		
Corrected Total	360	214.4911832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.069706	16.60878	0.750781	4.520386

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	11.92358037	2.38471607	4.23	0.0010
time	1	3.02777487	3.02777487	5.37	0.0210

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	13.01309000	2.60261800	4.62	0.0004
time	1	3.02777487	3.02777487	5.37	0.0210


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 0.5637
R-Square 0.0697
Adj R-Square 0.0539

Metals Chromium
Temporal Two-way ANOVA: No interaction

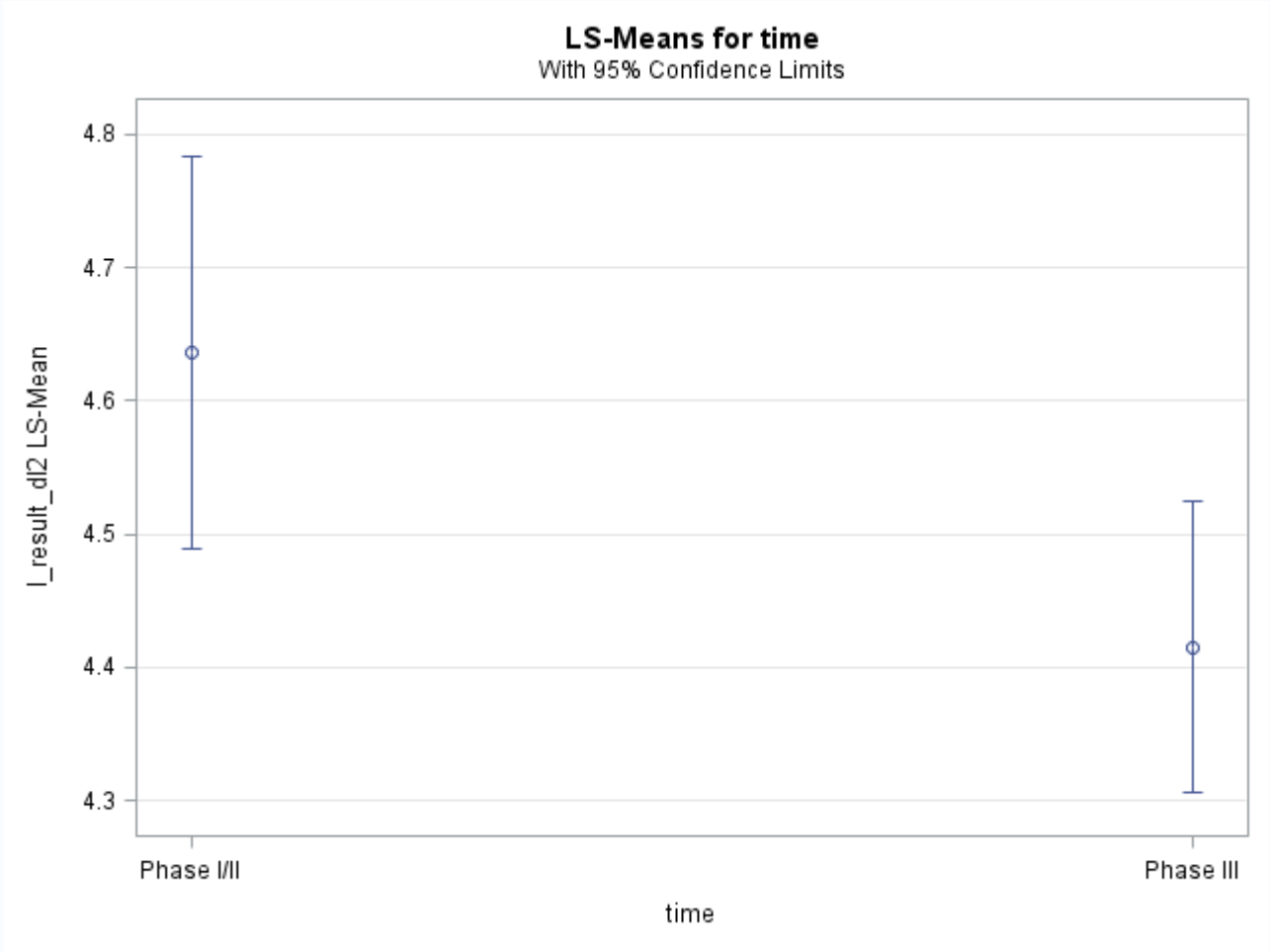
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Chromium

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	4.63613849	0.0210
Phase III	4.41485822	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.636138	4.489134	4.783143
Phase III	4.414858	4.305544	4.524172

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.221280	0.033509	0.409052


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
4.8
4.7
4.6
4.5
4.4
4.3
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	371
Number of Observations Used	359

Metals Copper
Temporal Two-way ANOVA: No interaction

The GLM Procedure

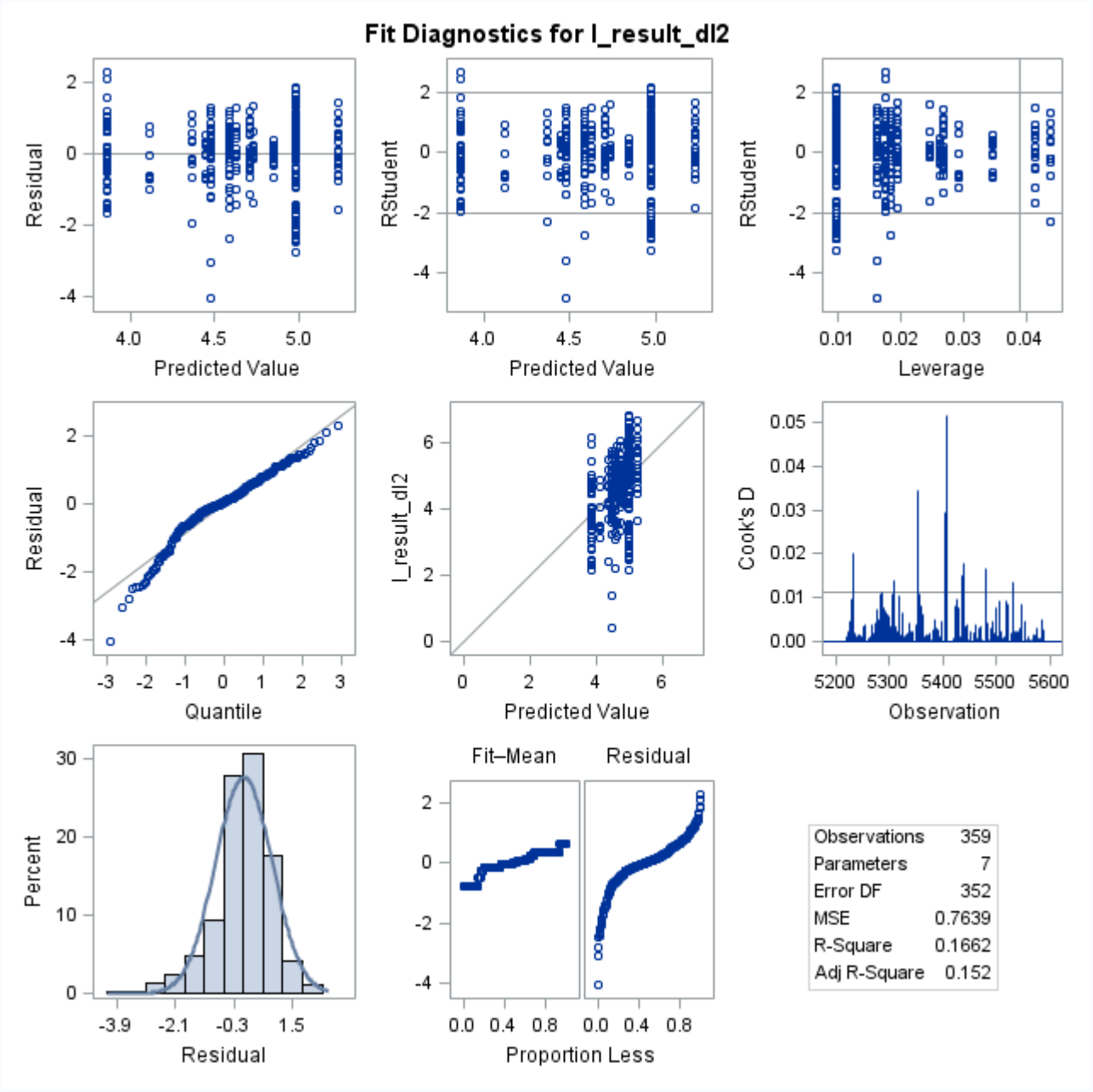
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	53.6052942	8.9342157	11.70	<.0001
Error	352	268.8771704	0.7638556		
Corrected Total	358	322.4824647			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.166227	18.93997	0.873988	4.614519

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.48800820	9.89760164	12.96	<.0001
time	1	4.11728604	4.11728604	5.39	0.0208

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.28871364	9.85774273	12.91	<.0001
time	1	4.11728604	4.11728604	5.39	0.0208


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 359
Parameters 7
Error DF 352
MSE 0.7639
R-Square 0.1662
Adj R-Square 0.152

Metals Copper
Temporal Two-way ANOVA: No interaction

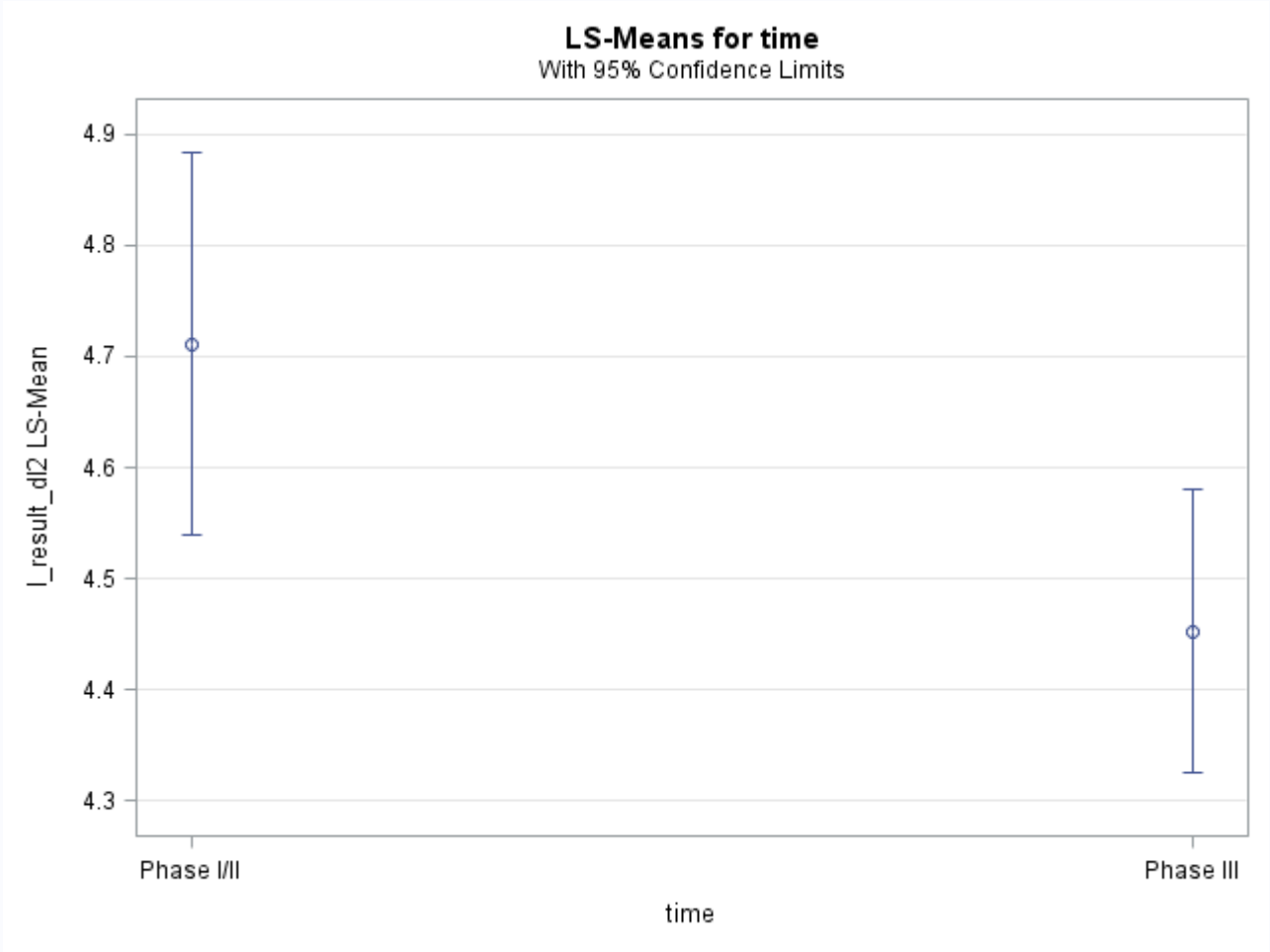
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	4.71100578	0.0208
Phase III	4.45247133	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.711006	4.538507	4.883504
Phase III	4.452471	4.324956	4.579987

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.258534	0.039525	0.477544


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
4.9
4.8
4.7
4.6
4.5
4.4
4.3
Phase I/II
Phase III
time

Metals Lead
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Lead
Temporal Two-way ANOVA: No interaction

The GLM Procedure

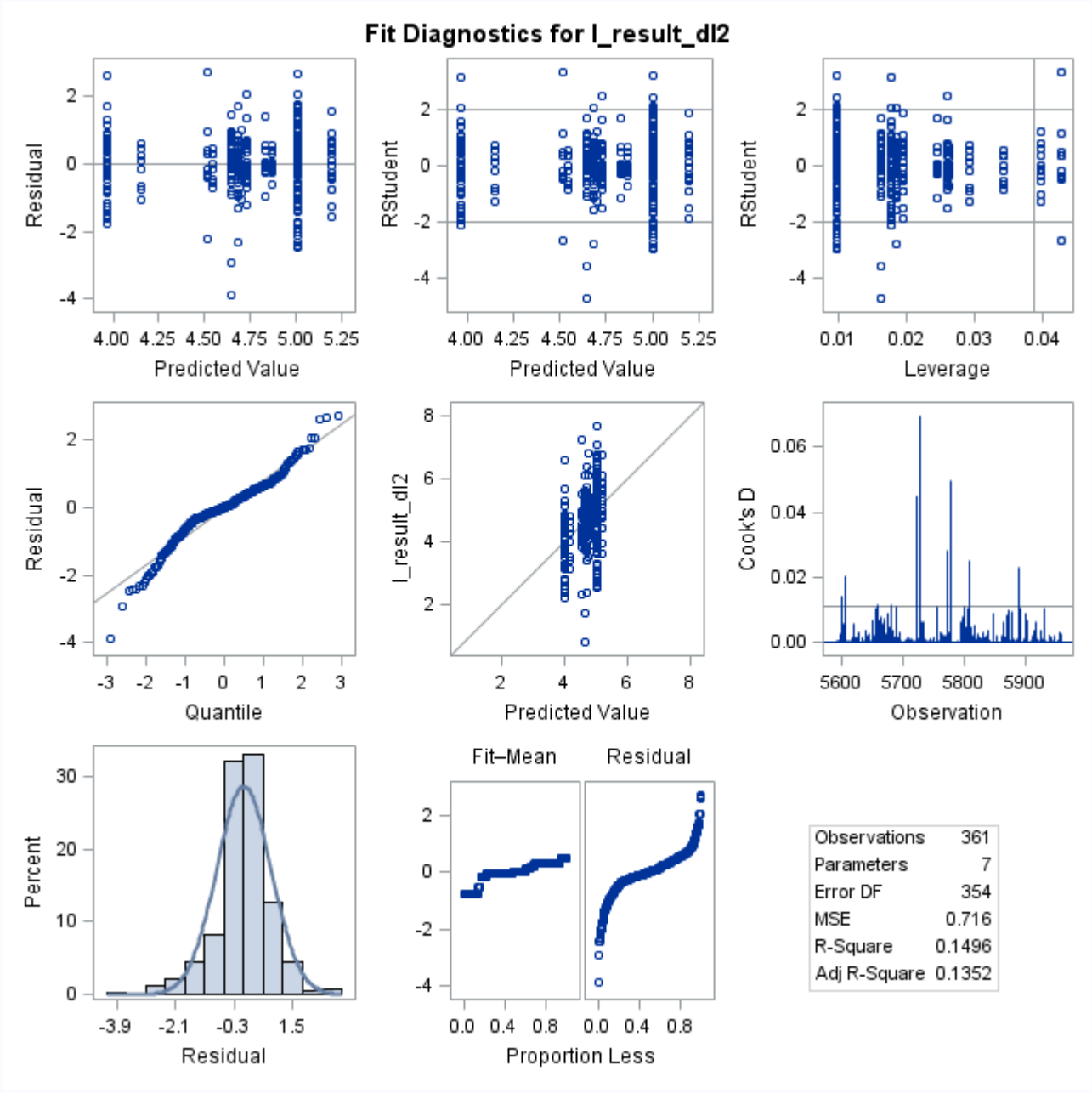
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	44.5952644	7.4325441	10.38	<.0001
Error	354	253.4650367	0.7160029		
Corrected Total	360	298.0603011			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.149618	18.05457	0.846170	4.686733

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.42158302	8.48431660	11.85	<.0001
time	1	2.17368133	2.17368133	3.04	0.0823

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.22388745	8.44477749	11.79	<.0001
time	1	2.17368133	2.17368133	3.04	0.0823


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 0.716
R-Square 0.1496
Adj R-Square 0.1352

Metals Lead
Temporal Two-way ANOVA: No interaction

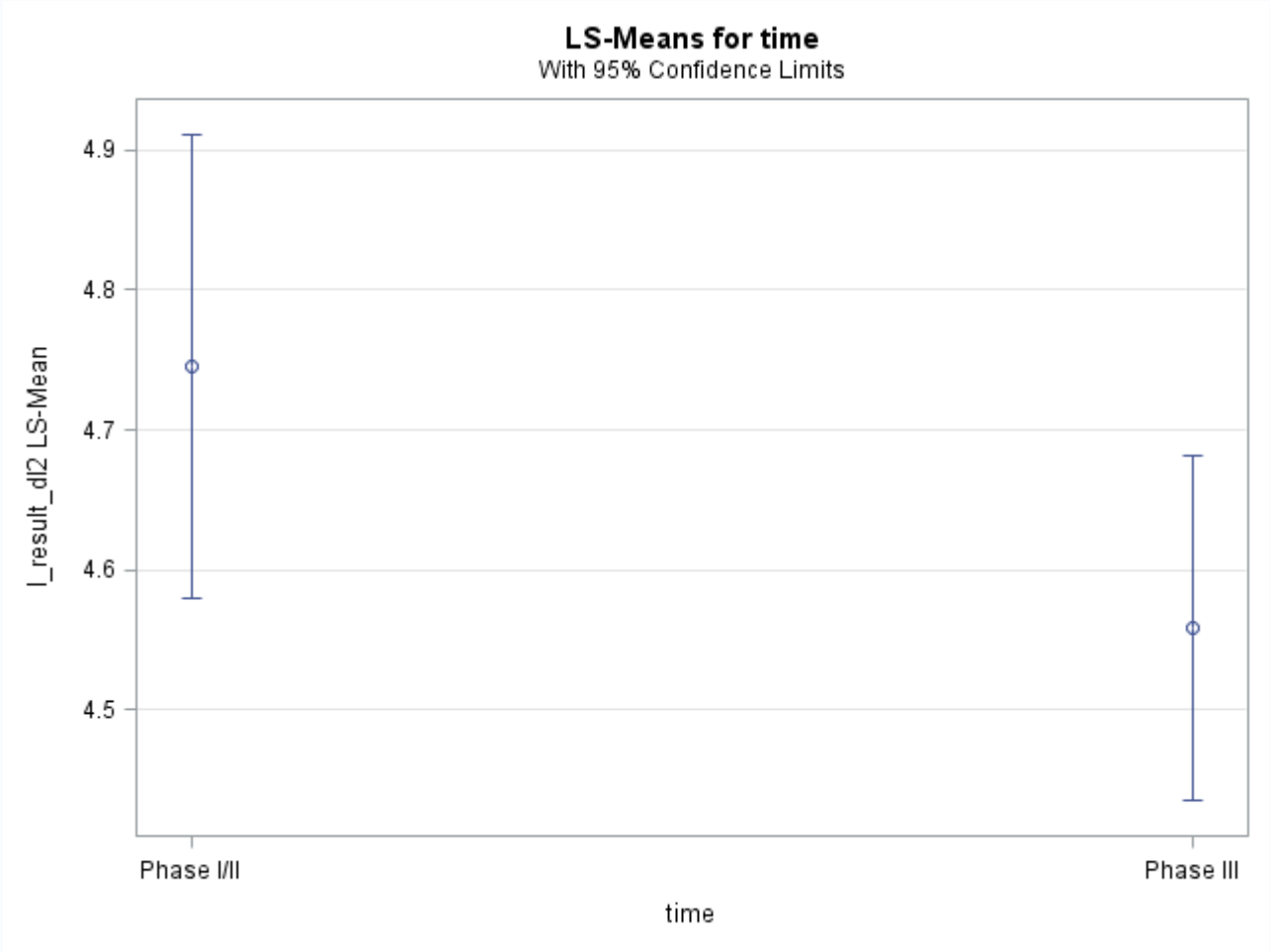
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	4.74559931	0.0823
Phase III	4.55810899	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.745599	4.579917	4.911281
Phase III	4.558109	4.434906	4.681312

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.187490	-0.024138	0.399119


LS-Means for time
With 95% Confidence Limits
4.9
4.8
4.7
4.6
4.5
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

Metals Mercury
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Mercury
Temporal Two-way ANOVA: No interaction

The GLM Procedure

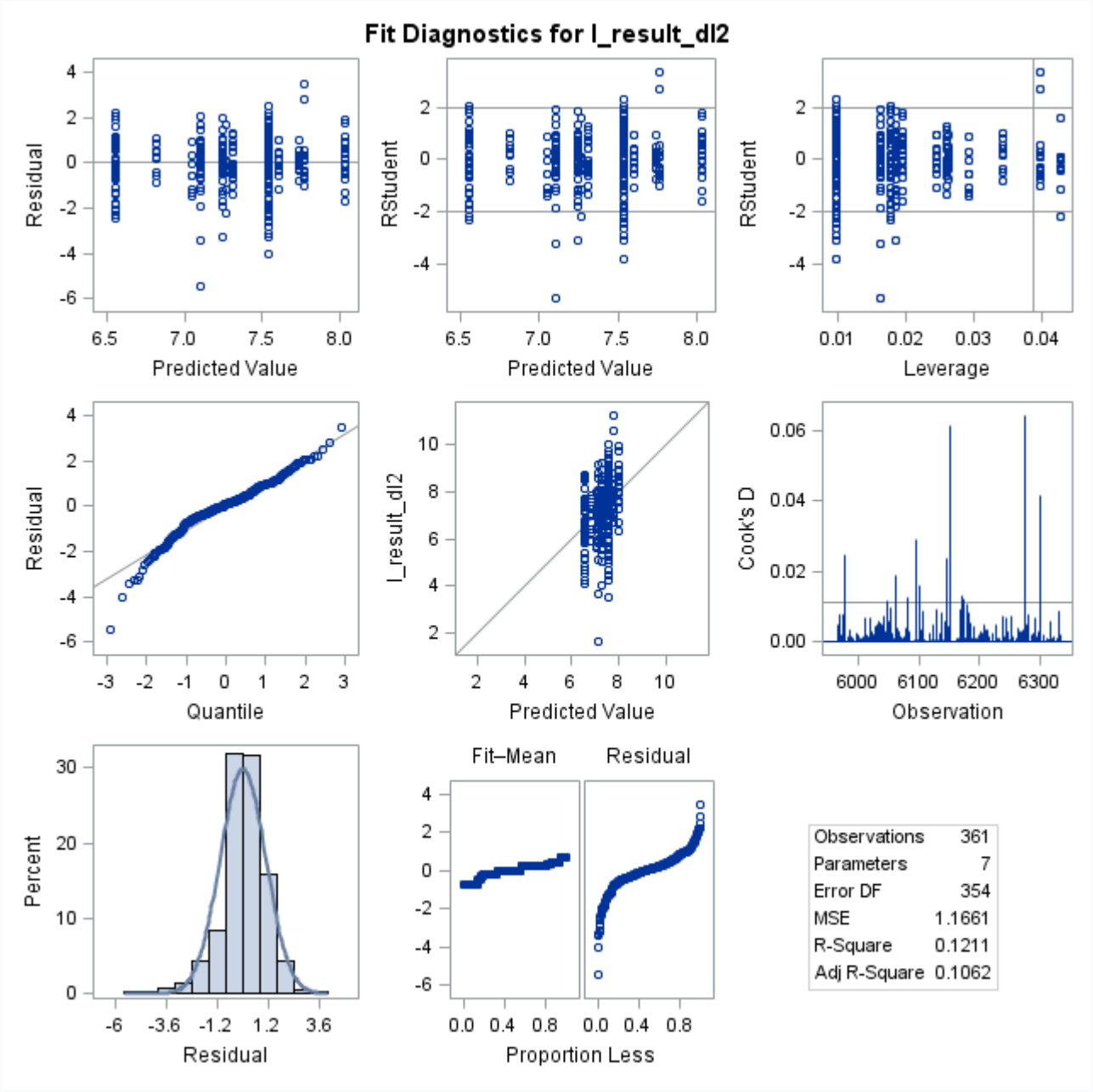
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	56.8518872	9.4753145	8.13	<.0001
Error	354	412.8000298	1.1661018		
Corrected Total	360	469.6519170			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.121051	14.79062	1.079862	7.300991

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	41.83753113	8.36750623	7.18	<.0001
time	1	15.01435606	15.01435606	12.88	0.0004

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.28913531	8.45782706	7.25	<.0001
time	1	15.01435606	15.01435606	12.88	0.0004


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 1.1661
R-Square 0.1211
Adj R-Square 0.1062

Metals Mercury
Temporal Two-way ANOVA: No interaction

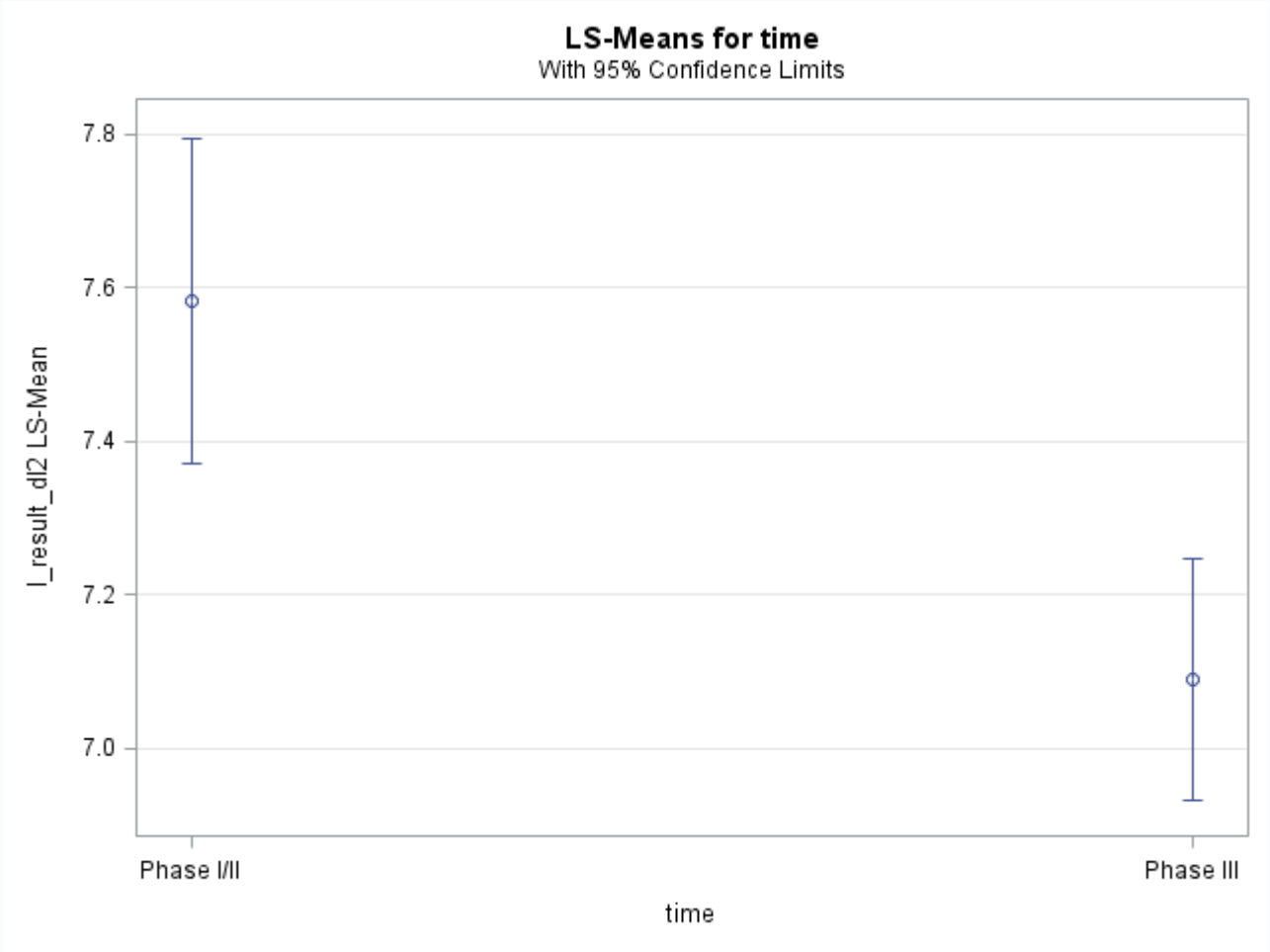
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	7.58248937	0.0004
Phase III	7.08973071	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	7.582489	7.371050	7.793929
Phase III	7.089731	6.932502	7.246959

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.492759	0.222684	0.762834


LS-Means for time
With 95% Confidence Limits
7.8
7.6
7.4
7.2
7.0
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

Metals Nickel
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Nickel
Temporal Two-way ANOVA: No interaction

The GLM Procedure

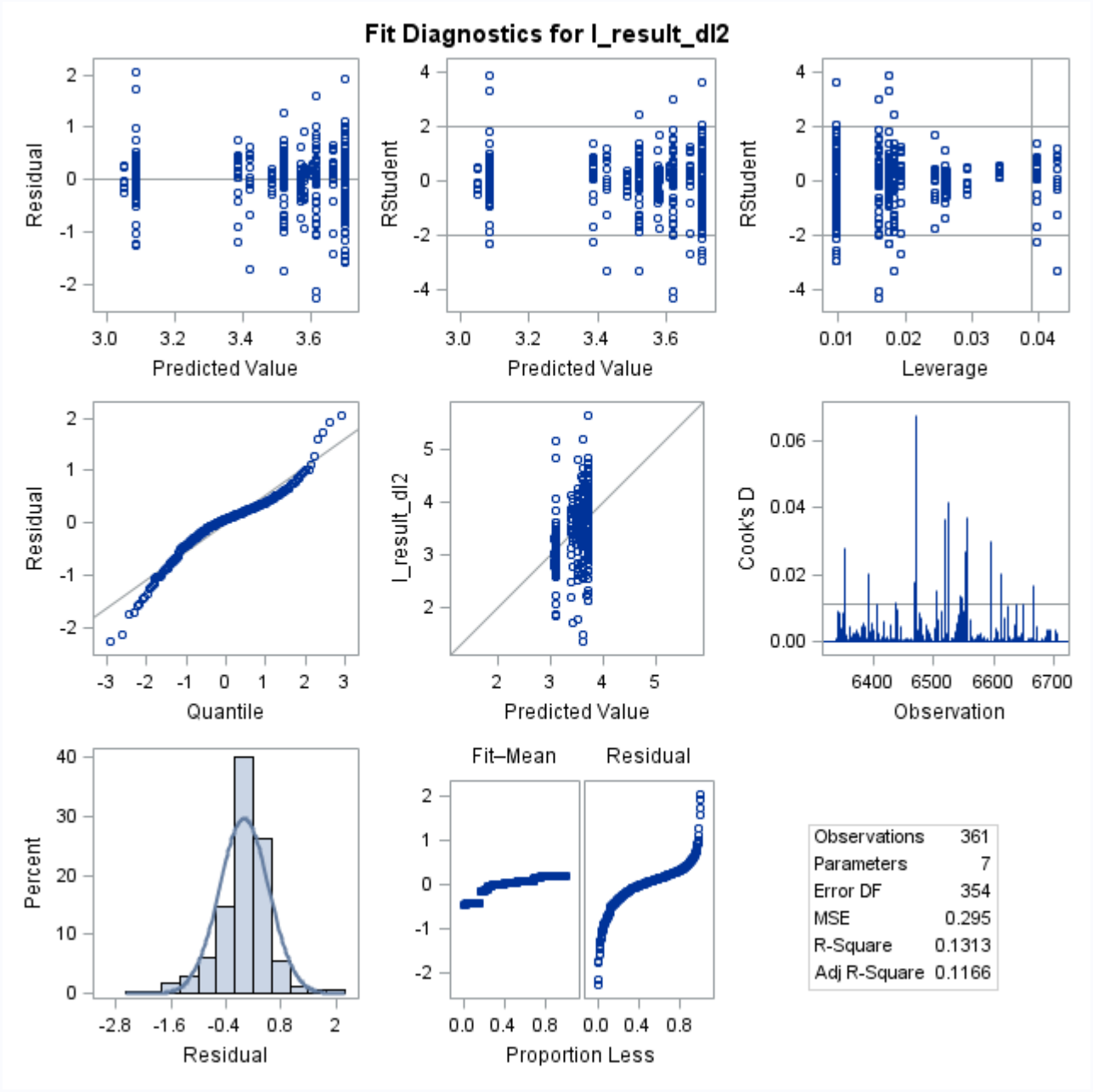
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	15.7806410	2.6301068	8.92	<.0001
Error	354	104.4253626	0.2949869		
Corrected Total	360	120.2060035			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.131280	15.44441	0.543127	3.516657

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	15.69938850	3.13987770	10.64	<.0001
time	1	0.08125246	0.08125246	0.28	0.6000

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	15.77953041	3.15590608	10.70	<.0001
time	1	0.08125246	0.08125246	0.28	0.6000


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 0.295
R-Square 0.1313
Adj R-Square 0.1166

Metals Nickel
Temporal Two-way ANOVA: No interaction

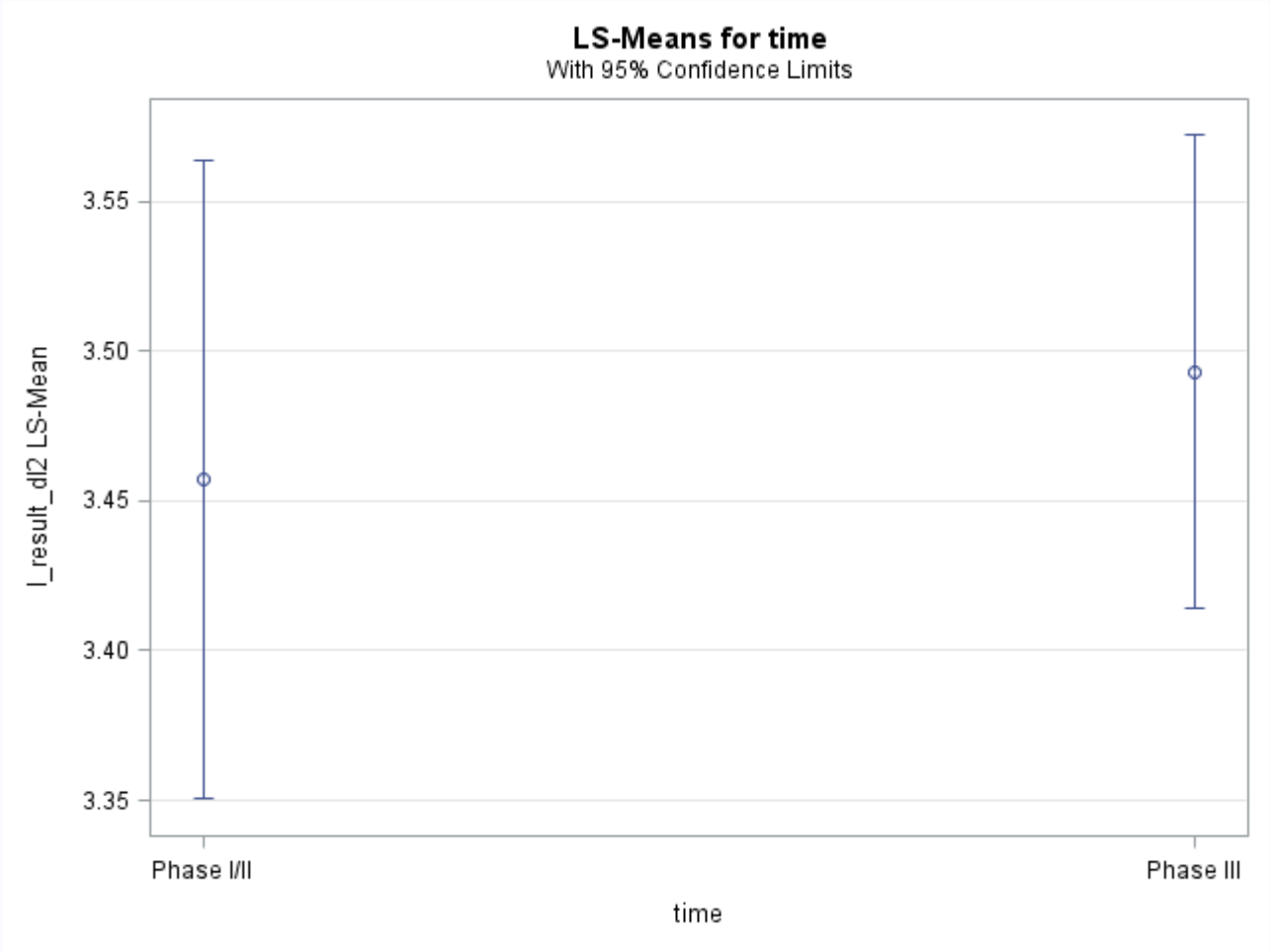
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	3.45690155	0.6000
Phase III	3.49315081	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	3.456902	3.350556	3.563247
Phase III	3.493151	3.414071	3.572230

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	-0.036249	-0.172086	0.099588


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
3.55
3.50
3.45
3.40
3.35
Phase I/II
Phase III
time

Metals Silver
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	362
Number of Observations Used	352

Metals Silver
Temporal Two-way ANOVA: No interaction

The GLM Procedure

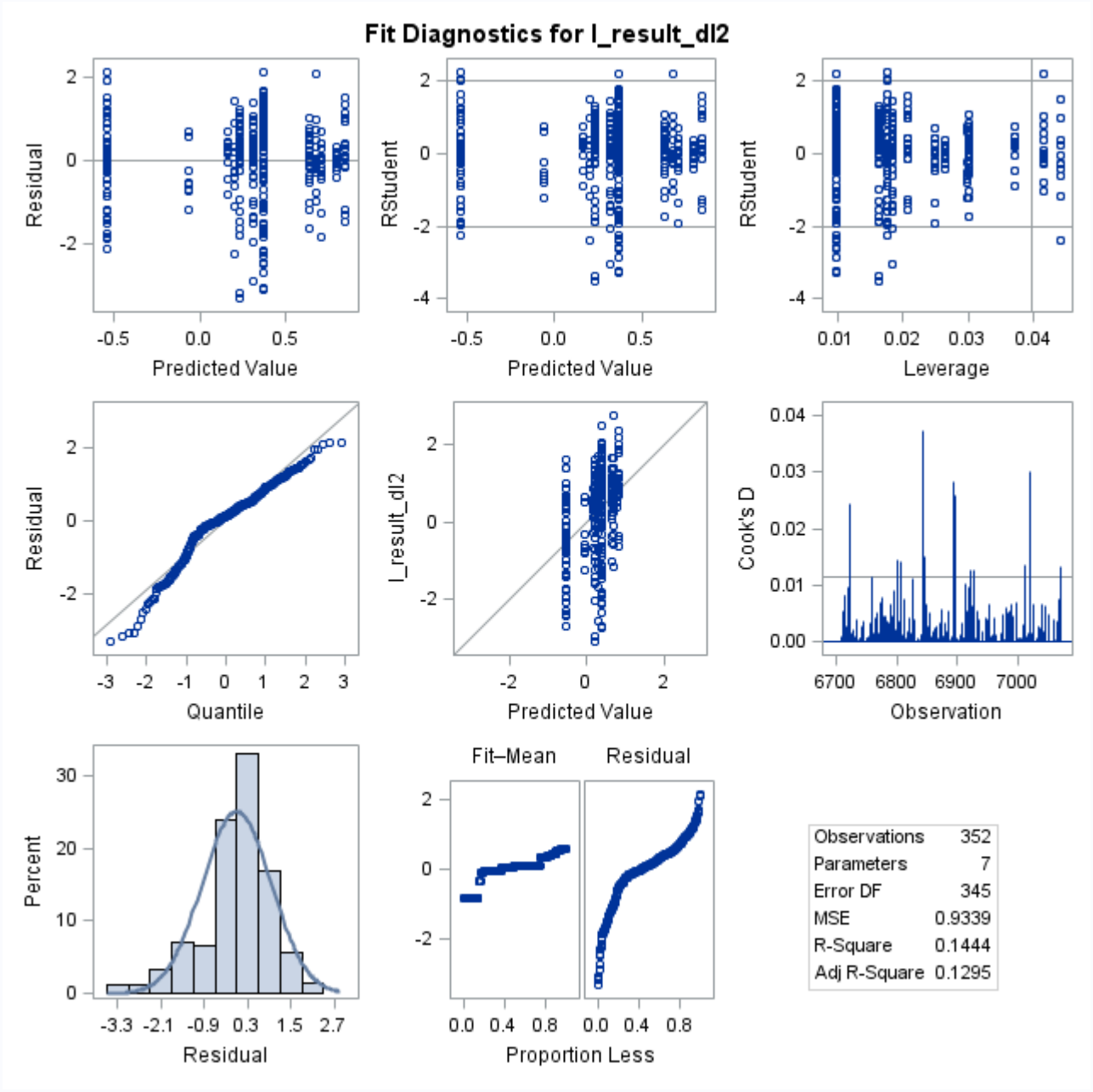
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	54.3752915	9.0625486	9.70	<.0001
Error	345	322.1941554	0.9338961		
Corrected Total	351	376.5694469			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.144396	342.8603	0.966383	0.281859

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	40.85150729	8.17030146	8.75	<.0001
time	1	13.52378421	13.52378421	14.48	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.92626044	6.98525209	7.48	<.0001
time	1	13.52378421	13.52378421	14.48	0.0002


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 352
Parameters 7
Error DF 345
MSE 0.9339
R-Square 0.1444
Adj R-Square 0.1295

Metals Silver
Temporal Two-way ANOVA: No interaction

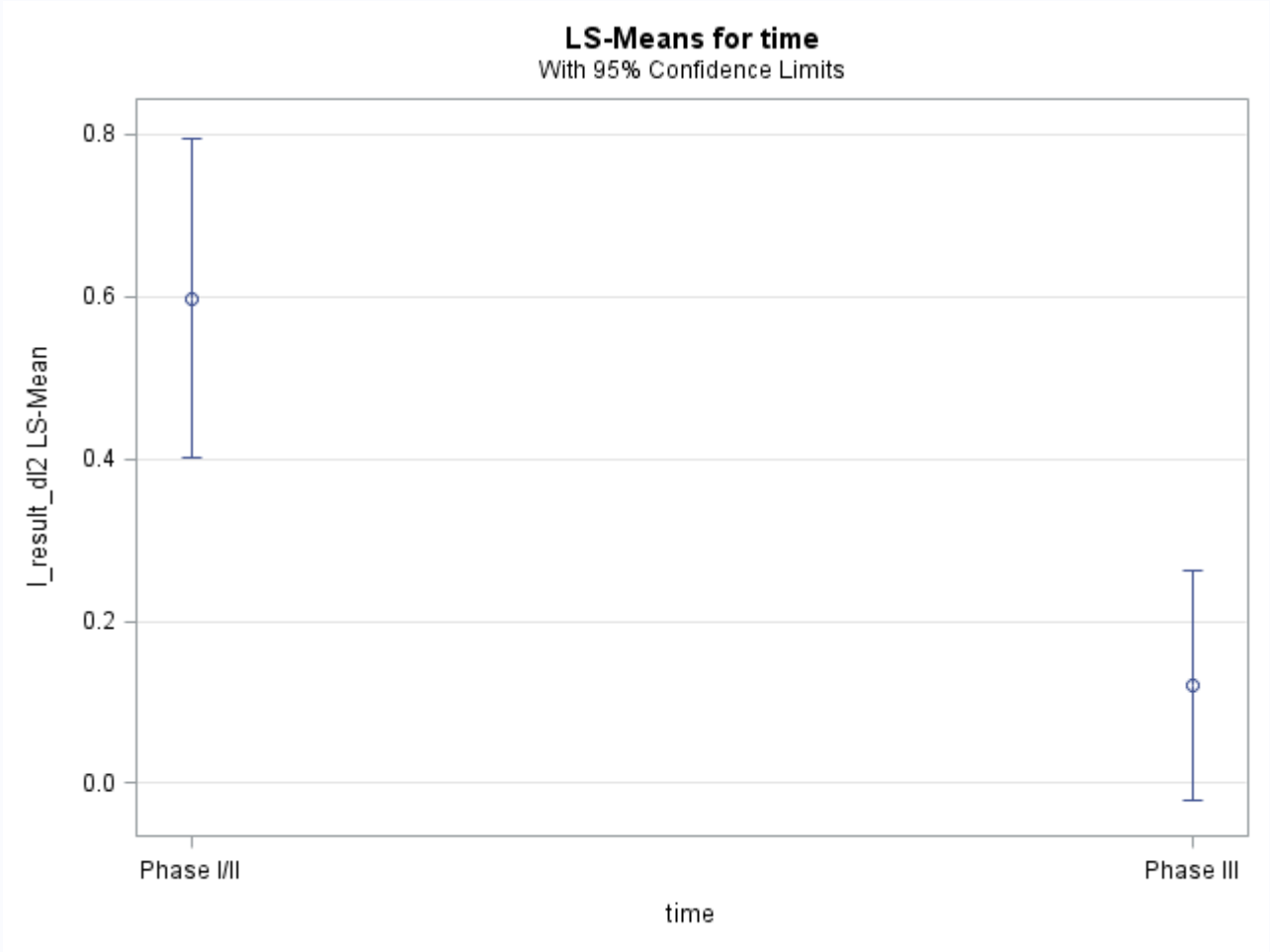
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	0.59797701	0.0002
Phase III	0.12048635	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	0.597977	0.402264	0.793690
Phase III	0.120486	-0.021367	0.262339

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.477491	0.230694	0.724287


LS-Means for time
With 95% Confidence Limits
0.8
0.6
0.4
0.2
0.0
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

Metals Zinc
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Zinc
Temporal Two-way ANOVA: No interaction

The GLM Procedure

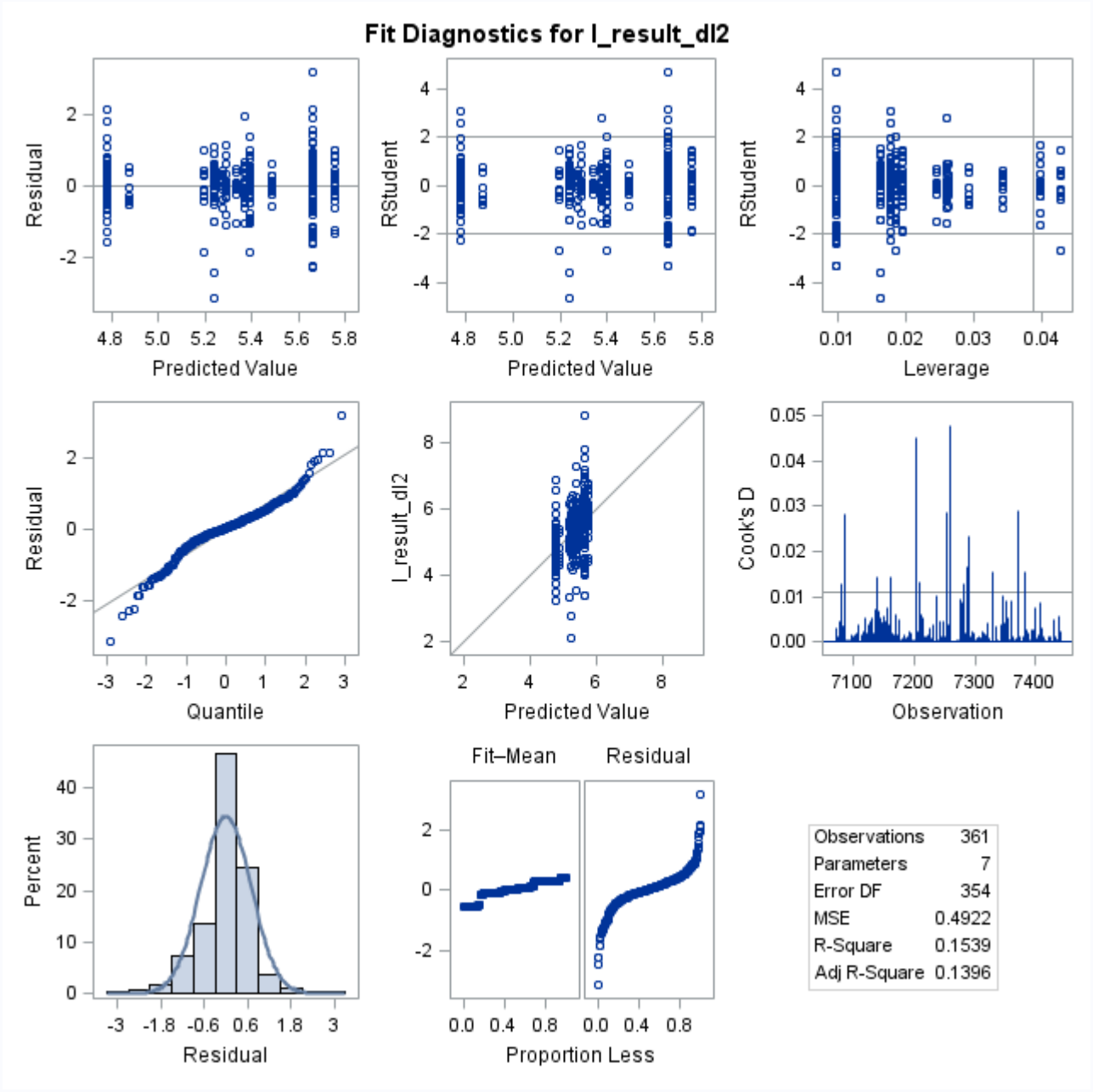
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	31.6951018	5.2825170	10.73	<.0001
Error	354	174.2317366	0.4921800		
Corrected Total	360	205.9268384			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.153914	13.11558	0.701555	5.349022

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	31.13143629	6.22628726	12.65	<.0001
time	1	0.56366554	0.56366554	1.15	0.2853

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	31.09398612	6.21879722	12.64	<.0001
time	1	0.56366554	0.56366554	1.15	0.2853


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 0.4922
R-Square 0.1539
Adj R-Square 0.1396

Metals Zinc
Temporal Two-way ANOVA: No interaction

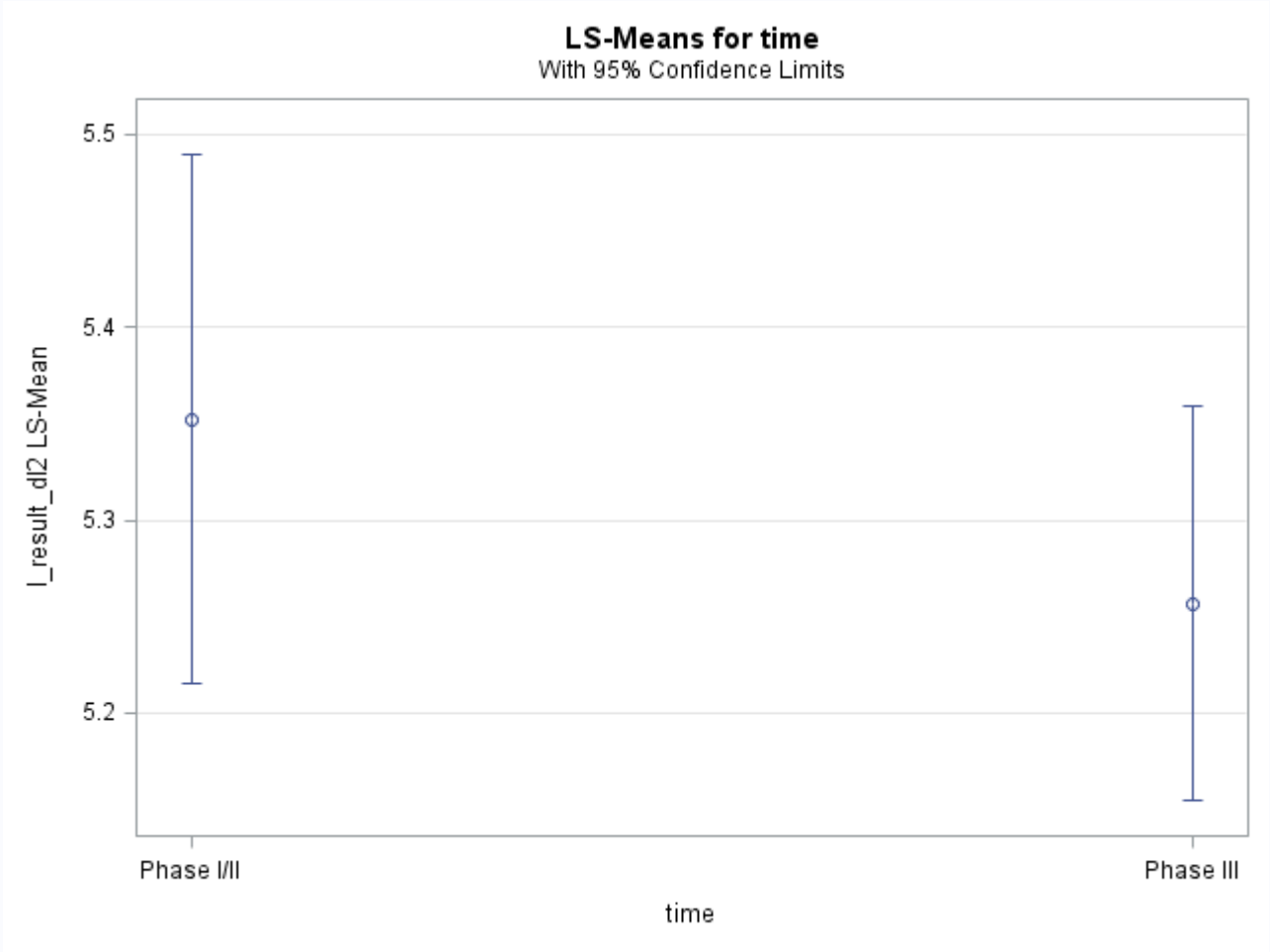
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	5.35215987	0.2853
Phase III	5.25668443	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	5.352160	5.214794	5.489526
Phase III	5.256684	5.154537	5.358831

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.095475	-0.079985	0.270936


LS-Means for time
With 95% Confidence Limits
5.5
5.4
5.3
5.2
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

Wet Total organic carbon (TOC)
Temporal Two-way ANOVA: No interaction

The GLM Procedure
sort=8 Parameter_group=Wet chemical_name=Total organic carbon (TOC)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Wet Total organic carbon (TOC)
Temporal Two-way ANOVA: No interaction

The GLM Procedure

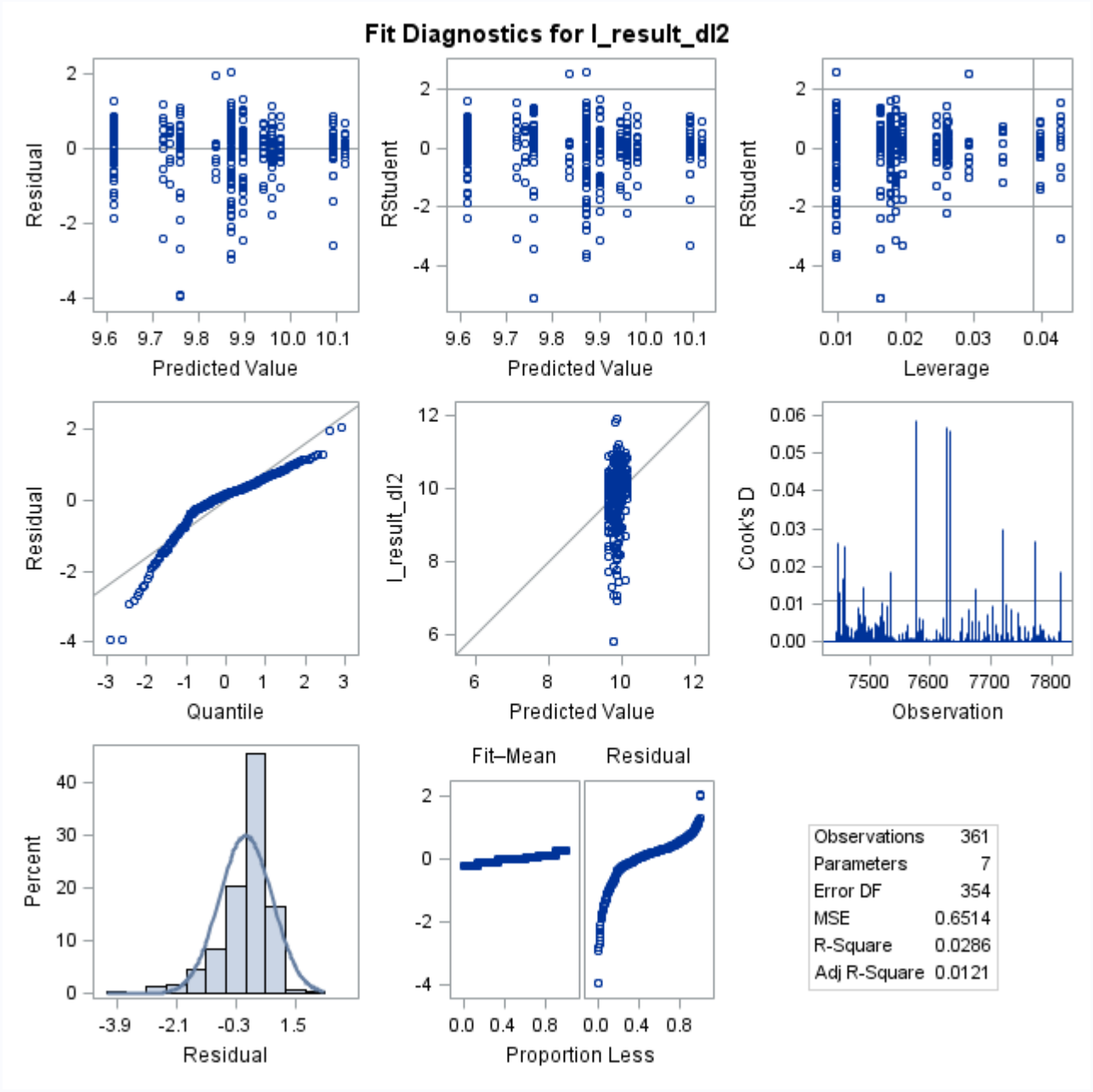
Dependent Variable: l_result_dl2
sort=8 Parameter_group=Wet chemical_name=Total organic carbon (TOC)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	6.7859442	1.1309907	1.74	0.1116
Error	354	230.5843421	0.6513682		
Corrected Total	360	237.3702863			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.028588	8.190282	0.807074	9.854042

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	3.76538209	0.75307642	1.16	0.3305
time	1	3.02056210	3.02056210	4.64	0.0320

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	3.49964848	0.69992970	1.07	0.3741
time	1	3.02056210	3.02056210	4.64	0.0320


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 361
Parameters 7
Error DF 354
MSE 0.6514
R-Square 0.0286
Adj R-Square 0.0121

Wet Total organic carbon (TOC)
Temporal Two-way ANOVA: No interaction

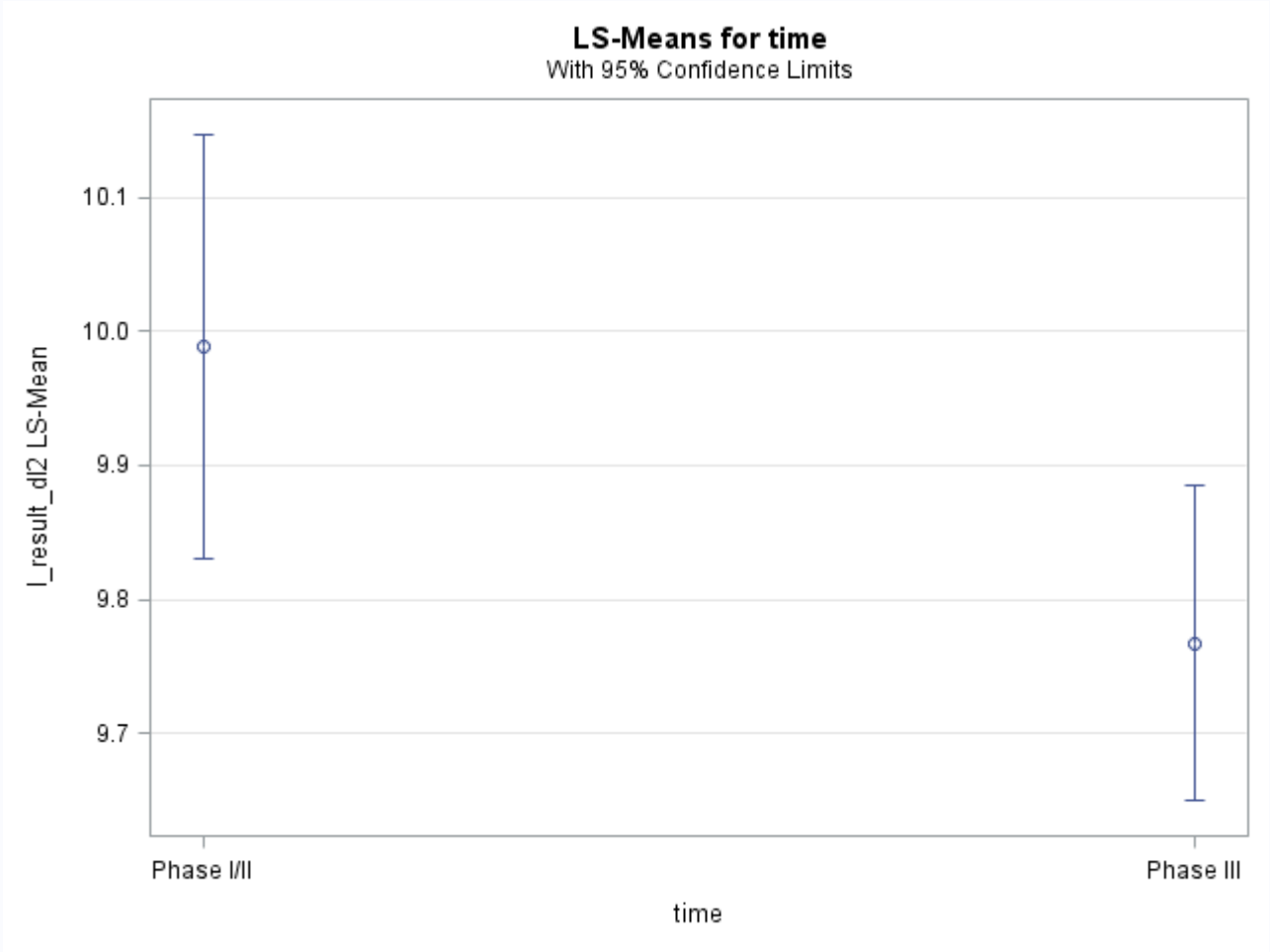
The GLM Procedure
Least Squares Means
sort=8 Parameter_group=Wet chemical_name=Total organic carbon (TOC)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	9.98871013	0.0320
Phase III	9.76769358	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	9.988710	9.830683	10.146737
Phase III	9.767694	9.650183	9.885204

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.221017	0.019166	0.422867


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
10.1
10.0
9.9
9.8
9.7
Phase I/II
Phase III
time

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	75.7553080	6.8868462	3.38	0.0002
Error	349	711.1874247	2.0377863		
Corrected Total	360	786.9427327			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.096265	40.62504	1.427511	3.513868

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	54.84570117	10.96914023	5.38	<.0001
time	1	12.57529679	12.57529679	6.17	0.0135
time*EPA_Subunit	5	8.33431006	1.66686201	0.82	0.5375

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	50.76552770	10.15310554	4.98	0.0002
time	1	6.60868060	6.60868060	3.24	0.0726
time*EPA_Subunit	5	8.33431006	1.66686201	0.82	0.5375

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	65.9425506	5.9947773	3.76	<.0001
Error	349	556.9951203	1.5959746		
Corrected Total	360	622.9376710			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.105857	31.62982	1.263319	3.994075

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.05577842	9.81115568	6.15	<.0001
time	1	11.14509190	11.14509190	6.98	0.0086
time*EPA_Subunit	5	5.74168031	1.14833606	0.72	0.6091

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	43.83958006	8.76791601	5.49	<.0001
time	1	6.25800129	6.25800129	3.92	0.0485
time*EPA_Subunit	5	5.74168031	1.14833606	0.72	0.6091

PCBs Total PCBs (9)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PCBs Total PCBs (9)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	181.9691454	16.5426496	14.15	<.0001
Error	349	408.0166585	1.1691022		
Corrected Total	360	589.9858039			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.308430	20.69705	1.081250	5.224177

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	74.8554158	14.9710832	12.81	<.0001
time	1	103.4404948	103.4404948	88.48	<.0001
time*EPA_Subunit	5	3.6732349	0.7346470	0.63	0.6782

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	40.95345077	8.19069015	7.01	<.0001
time	1	82.02919070	82.02919070	70.16	<.0001
time*EPA_Subunit	5	3.67323486	0.73464697	0.63	0.6782

PCBs Total PCBs congener (209 specified)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PCBs Total PCBs congener (209 specified)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	91.6752124	8.3341102	5.05	<.0001
Error	349	576.4906719	1.6518357		
Corrected Total	360	668.1658843			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.137204	10.28260	1.285238	12.49915

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	48.07315291	9.61463058	5.82	<.0001
time	1	31.39036748	31.39036748	19.00	<.0001
time*EPA_Subunit	5	12.21169201	2.44233840	1.48	0.1961

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.58075225	9.91615045	6.00	<.0001
time	1	20.14911826	20.14911826	12.20	0.0005
time*EPA_Subunit	5	12.21169201	2.44233840	1.48	0.1961

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	443.255985	40.295999	9.84	<.0001
Error	349	1429.524472	4.096059		
Corrected Total	360	1872.780457			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.236683	296.2933	2.023872	0.683064

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	179.0066472	35.8013294	8.74	<.0001
time	1	252.7154023	252.7154023	61.70	<.0001
time*EPA_Subunit	5	11.5339358	2.3067872	0.56	0.7282

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	73.9880168	14.7976034	3.61	0.0034
time	1	206.7918677	206.7918677	50.49	<.0001
time*EPA_Subunit	5	11.5339358	2.3067872	0.56	0.7282

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	142.1030032	12.9184548	6.53	<.0001
Error	349	690.8514702	1.9795171		
Corrected Total	360	832.9544734			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.170601	13.71077	1.406953	10.26167

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	133.0966387	26.6193277	13.45	<.0001
time	1	6.7304515	6.7304515	3.40	0.0660
time*EPA_Subunit	5	2.2759130	0.4551826	0.23	0.9493

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	88.97010577	17.79402115	8.99	<.0001
time	1	5.45049447	5.45049447	2.75	0.0979
time*EPA_Subunit	5	2.27591298	0.45518260	0.23	0.9493

PAHs Total HMW PAHs
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

PAHs Total HMW PAHs
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	50.9167247	4.6287932	3.01	0.0008
Error	348	535.5840931	1.5390348		
Corrected Total	359	586.5008178			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.086814	14.06643	1.240578	8.819425

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.11077907	7.02215581	4.56	0.0005
time	1	14.26319387	14.26319387	9.27	0.0025
time*EPA_Subunit	5	1.54275175	0.30855035	0.20	0.9621

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.95056448	5.19011290	3.37	0.0055
time	1	9.95071991	9.95071991	6.47	0.0114
time*EPA_Subunit	5	1.54275175	0.30855035	0.20	0.9621

PAHs Total LMW PAHs
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PAHs Total LMW PAHs
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	60.2650102	5.4786373	3.63	<.0001
Error	349	526.5238480	1.5086643		
Corrected Total	360	586.7888582			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.102703	18.36350	1.228277	6.688686

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.79531449	7.15906290	4.75	0.0003
time	1	22.57759539	22.57759539	14.97	0.0001
time*EPA_Subunit	5	1.89210029	0.37842006	0.25	0.9393

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	22.33120406	4.46624081	2.96	0.0124
time	1	17.58770365	17.58770365	11.66	0.0007
time*EPA_Subunit	5	1.89210029	0.37842006	0.25	0.9393

PAHs Total PAH
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

PAHs Total PAH
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	51.9777616	4.7252511	2.96	0.0009
Error	349	557.4813991	1.5973679		
Corrected Total	360	609.4591607			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.085285	14.16623	1.263870	8.921713

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	36.13775674	7.22755135	4.52	0.0005
time	1	14.17449248	14.17449248	8.87	0.0031
time*EPA_Subunit	5	1.66551242	0.33310248	0.21	0.9588

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	27.05428594	5.41085719	3.39	0.0053
time	1	9.66704252	9.66704252	6.05	0.0144
time*EPA_Subunit	5	1.66551242	0.33310248	0.21	0.9588

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	371
Number of Observations Used	359

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	331.6416291	30.1492390	23.96	<.0001
Error	347	436.6105529	1.2582437		
Corrected Total	358	768.2521820			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.431683	16.81750	1.121715	6.669925

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	69.4690120	13.8938024	11.04	<.0001
time	1	254.1561415	254.1561415	201.99	<.0001
time*EPA_Subunit	5	8.0164756	1.6032951	1.27	0.2745

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.8062830	6.9612566	5.53	<.0001
time	1	213.4851969	213.4851969	169.67	<.0001
time*EPA_Subunit	5	8.0164756	1.6032951	1.27	0.2745

Metals Aluminum
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Aluminum

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Aluminum
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Aluminum

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	5.87541690	0.53412881	2.42	0.0066
Error	348	76.92367512	0.22104504		
Corrected Total	359	82.79909202			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.070960	4.980606	0.470154	9.439700

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	5.09053411	1.01810682	4.61	0.0004
time	1	0.05334714	0.05334714	0.24	0.6235
time*EPA_Subunit	5	0.73153566	0.14630713	0.66	0.6526

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	3.18751986	0.63750397	2.88	0.0144
time	1	0.02844693	0.02844693	0.13	0.7200
time*EPA_Subunit	5	0.73153566	0.14630713	0.66	0.6526

Metals Arsenic
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Arsenic
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	20.7624526	1.8874957	4.77	<.0001
Error	349	138.1150279	0.3957451		
Corrected Total	360	158.8774805			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.130682	24.17926	0.629083	2.601745

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.00121256	4.00024251	10.11	<.0001
time	1	0.06397520	0.06397520	0.16	0.6879
time*EPA_Subunit	5	0.69726480	0.13945296	0.35	0.8806

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	14.53546728	2.90709346	7.35	<.0001
time	1	0.08190026	0.08190026	0.21	0.6494
time*EPA_Subunit	5	0.69726480	0.13945296	0.35	0.8806

Metals Cadmium
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Cadmium
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	77.4360407	7.0396401	6.19	<.0001
Error	349	396.9706514	1.1374517		
Corrected Total	360	474.4066921			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.163227	1416.485	1.066514	0.075293

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	67.10024673	13.42004935	11.80	<.0001
time	1	5.67710762	5.67710762	4.99	0.0261
time*EPA_Subunit	5	4.65868634	0.93173727	0.82	0.5366

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	55.26295280	11.05259056	9.72	<.0001
time	1	2.97681417	2.97681417	2.62	0.1066
time*EPA_Subunit	5	4.65868634	0.93173727	0.82	0.5366

Metals Chromium
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Chromium
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	15.8664742	1.4424067	2.53	0.0043
Error	349	198.6247090	0.5691252		
Corrected Total	360	214.4911832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.073973	16.68893	0.754404	4.520386

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	11.92358037	2.38471607	4.19	0.0010
time	1	3.02777487	3.02777487	5.32	0.0217
time*EPA_Subunit	5	0.91511895	0.18302379	0.32	0.8999

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	9.49028647	1.89805729	3.34	0.0059
time	1	1.80750109	1.80750109	3.18	0.0756
time*EPA_Subunit	5	0.91511895	0.18302379	0.32	0.8999

Metals Copper
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	371
Number of Observations Used	359

Metals Copper
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	54.8051358	4.9822851	6.46	<.0001
Error	347	267.6773288	0.7714044		
Corrected Total	358	322.4824647			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.169948	19.03332	0.878296	4.614519

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.48800820	9.89760164	12.83	<.0001
time	1	4.11728604	4.11728604	5.34	0.0215
time*EPA_Subunit	5	1.19984157	0.23996831	0.31	0.9062

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.73524877	6.94704975	9.01	<.0001
time	1	2.87139783	2.87139783	3.72	0.0545
time*EPA_Subunit	5	1.19984157	0.23996831	0.31	0.9062

Metals Lead
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Lead
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	45.0883581	4.0989416	5.65	<.0001
Error	349	252.9719430	0.7248480		
Corrected Total	360	298.0603011			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.151273	18.16575	0.851380	4.686733

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.42158302	8.48431660	11.70	<.0001
time	1	2.17368133	2.17368133	3.00	0.0842
time*EPA_Subunit	5	0.49309375	0.09861875	0.14	0.9839

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	26.15148691	5.23029738	7.22	<.0001
time	1	1.38709231	1.38709231	1.91	0.1674
time*EPA_Subunit	5	0.49309375	0.09861875	0.14	0.9839

Metals Mercury
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Mercury
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	61.3939888	5.5812717	4.77	<.0001
Error	349	408.2579282	1.1697935		
Corrected Total	360	469.6519170			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.130722	14.81402	1.081570	7.300991

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	41.83753113	8.36750623	7.15	<.0001
time	1	15.01435606	15.01435606	12.84	0.0004
time*EPA_Subunit	5	4.54210159	0.90842032	0.78	0.5671

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	33.34462344	6.66892469	5.70	<.0001
time	1	11.59157015	11.59157015	9.91	0.0018
time*EPA_Subunit	5	4.54210159	0.90842032	0.78	0.5671

Metals Nickel
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Nickel
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	16.4300903	1.4936446	5.02	<.0001
Error	349	103.7759132	0.2973522		
Corrected Total	360	120.2060035			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.136683	15.50621	0.545300	3.516657

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	15.69938850	3.13987770	10.56	<.0001
time	1	0.08125246	0.08125246	0.27	0.6015
time*EPA_Subunit	5	0.64944936	0.12988987	0.44	0.8228

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	9.40774878	1.88154976	6.33	<.0001
time	1	0.16027630	0.16027630	0.54	0.4633
time*EPA_Subunit	5	0.64944936	0.12988987	0.44	0.8228

Metals Silver
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	362
Number of Observations Used	352

Metals Silver
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	57.7851582	5.2531962	5.60	<.0001
Error	340	318.7842887	0.9376008		
Corrected Total	351	376.5694469			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.153452	343.5397	0.968298	0.281859

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	40.85150729	8.17030146	8.71	<.0001
time	1	13.52378421	13.52378421	14.42	0.0002
time*EPA_Subunit	5	3.40986670	0.68197334	0.73	0.6033

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	26.01050802	5.20210160	5.55	<.0001
time	1	10.78631763	10.78631763	11.50	0.0008
time*EPA_Subunit	5	3.40986670	0.68197334	0.73	0.6033

Metals Zinc
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Metals Zinc
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	32.1832101	2.9257464	5.88	<.0001
Error	349	173.7436283	0.4978327		
Corrected Total	360	205.9268384			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.156285	13.19069	0.705573	5.349022

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	31.13143629	6.22628726	12.51	<.0001
time	1	0.56366554	0.56366554	1.13	0.2880
time*EPA_Subunit	5	0.48810830	0.09762166	0.20	0.9639

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.90208411	4.18041682	8.40	<.0001
time	1	0.36669899	0.36669899	0.74	0.3913
time*EPA_Subunit	5	0.48810830	0.09762166	0.20	0.9639

Wet Total organic carbon (TOC)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure
sort=8 Parameter_group=Wet chemical_name=Total organic carbon (TOC)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	361

Wet Total organic carbon (TOC)
Temporal Two-way ANOVA: Includes interaction term

The GLM Procedure

Dependent Variable: l_result_dl2
sort=8 Parameter_group=Wet chemical_name=Total organic carbon (TOC)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	7.3039834	0.6639985	1.01	0.4393
Error	349	230.0663029	0.6592158		
Corrected Total	360	237.3702863			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.030770	8.239472	0.811921	9.854042

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	3.76538209	0.75307642	1.14	0.3376
time	1	3.02056210	3.02056210	4.58	0.0330
time*EPA_Subunit	5	0.51803918	0.10360784	0.16	0.9778

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	2.00187813	0.40037563	0.61	0.6943
time	1	2.44838476	2.44838476	3.71	0.0548
time*EPA_Subunit	5	0.51803918	0.10360784	0.16	0.9778

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	358

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

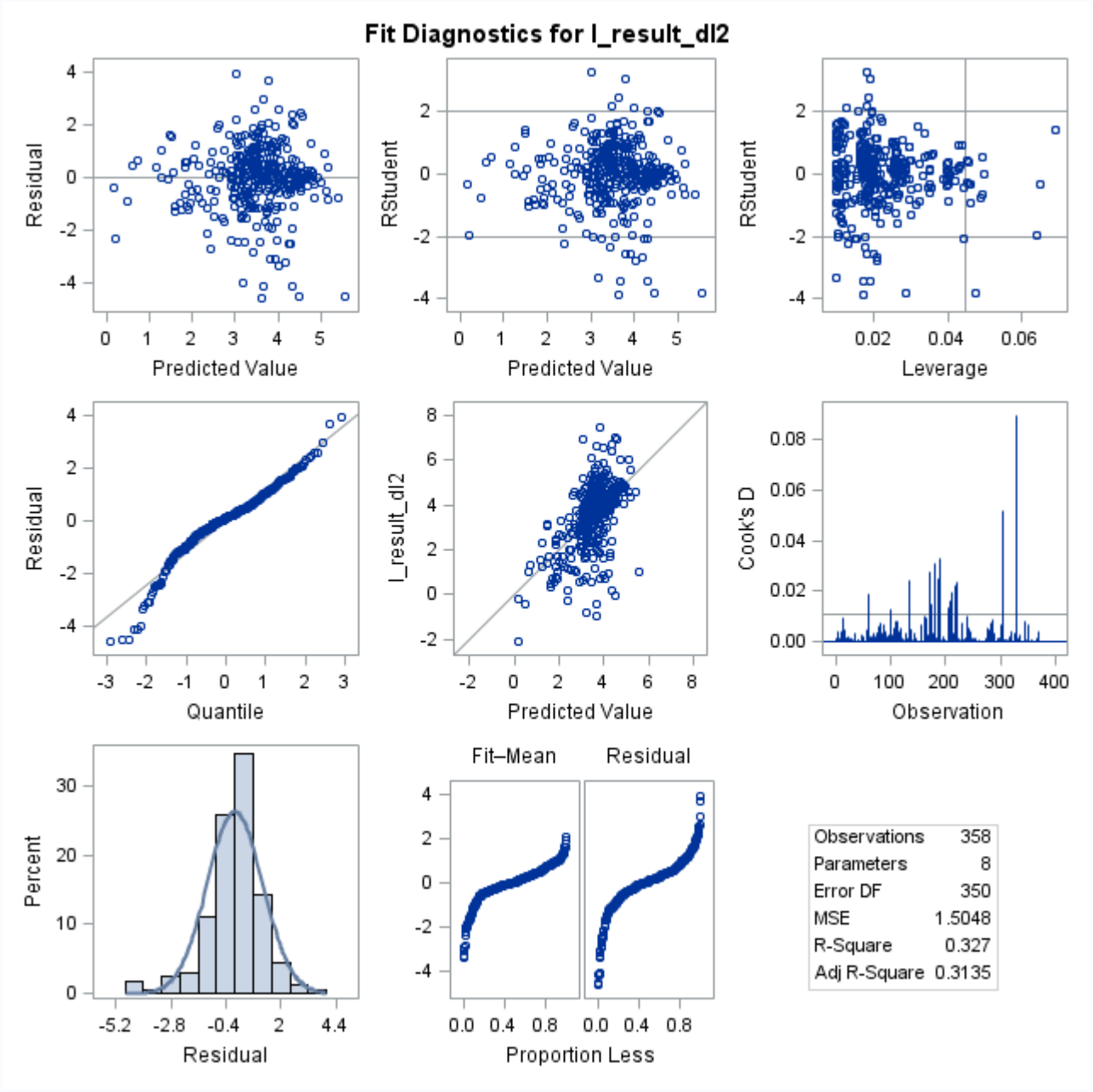
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	255.9005058	36.5572151	24.29	<.0001
Error	350	526.6665237	1.5047615		
Corrected Total	357	782.5670295			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.327001	35.00883	1.226687	3.503936

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	52.2568406	10.4513681	6.95	<.0001
l_toc_frac	1	199.8932458	199.8932458	132.84	<.0001
time	1	3.7504194	3.7504194	2.49	0.1153

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	50.0684467	10.0136893	6.65	<.0001
l_toc_frac	1	192.2057570	192.2057570	127.73	<.0001
time	1	3.7504194	3.7504194	2.49	0.1153


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 1.5048
R-Square 0.327
Adj R-Square 0.3135

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Temporal Two-way: Organics with TOC as Covariate

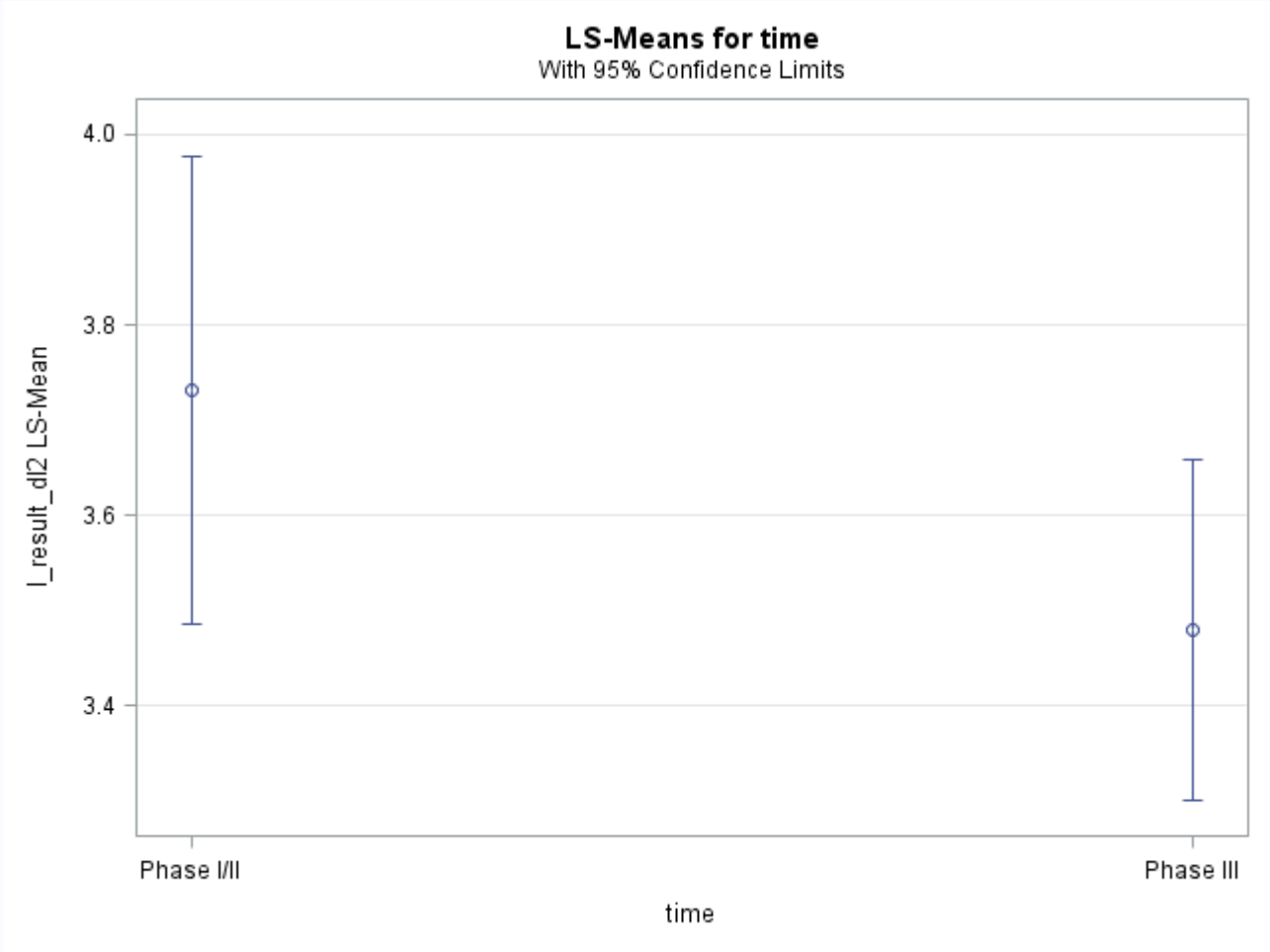
The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	3.73108226	0.1153
Phase III	3.47997143	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	3.731082	3.485924	3.976241
Phase III	3.479971	3.300784	3.659159

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.251111	-0.061722	0.563943


LS-Means for time
With 95% Confidence Limits
4.0
3.8
3.6
3.4
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	358

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

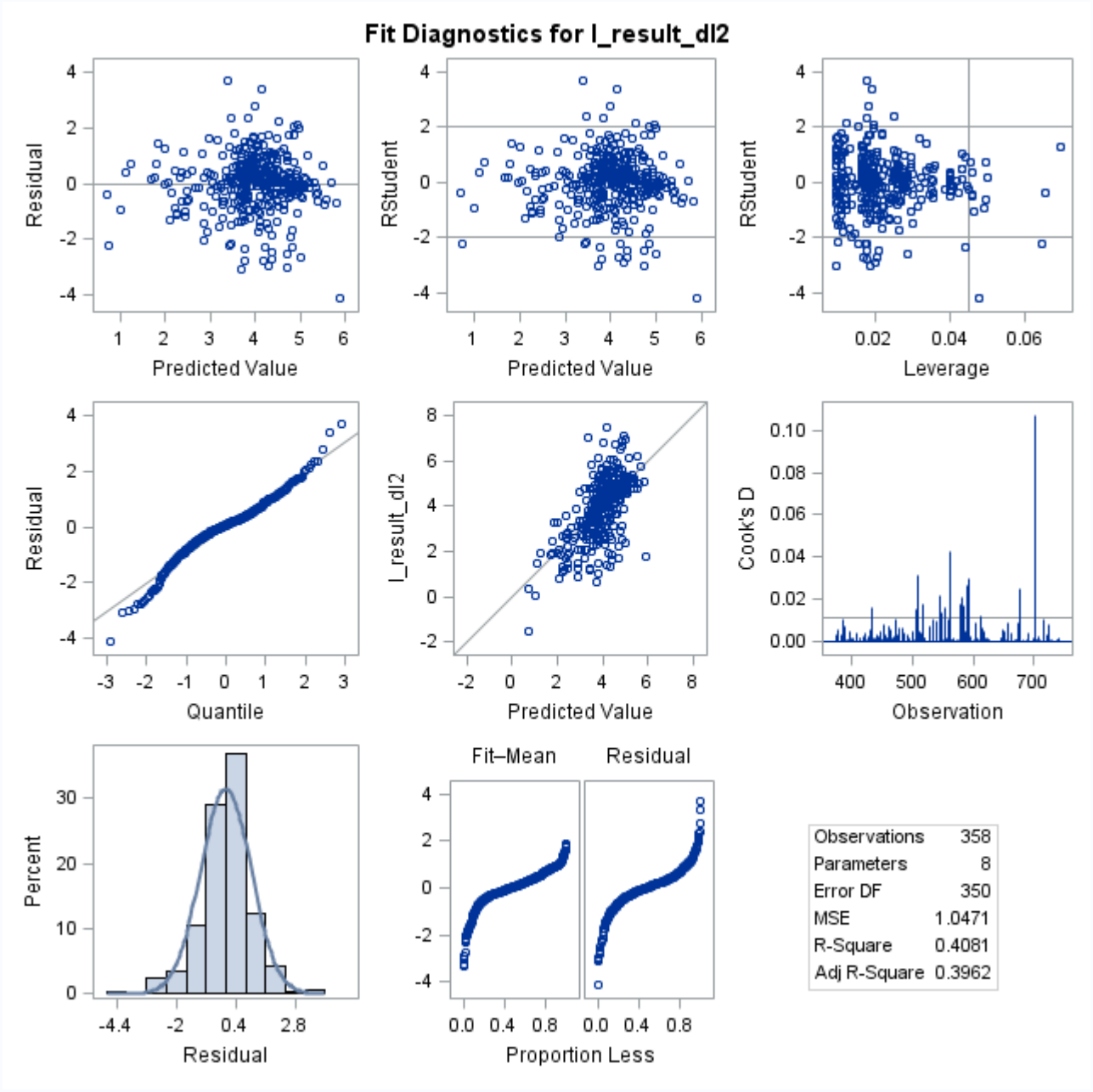
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	252.6334542	36.0904935	34.47	<.0001
Error	350	366.4785261	1.0470815		
Corrected Total	357	619.1119803			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.408058	25.67815	1.023270	3.984984

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	46.5756285	9.3151257	8.90	<.0001
l_toc_frac	1	203.0525572	203.0525572	193.92	<.0001
time	1	3.0052685	3.0052685	2.87	0.0911

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	39.9383298	7.9876660	7.63	<.0001
l_toc_frac	1	195.8721138	195.8721138	187.06	<.0001
time	1	3.0052685	3.0052685	2.87	0.0911


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 1.0471
R-Square 0.4081
Adj R-Square 0.3962

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
Temporal Two-way: Organics with TOC as Covariate

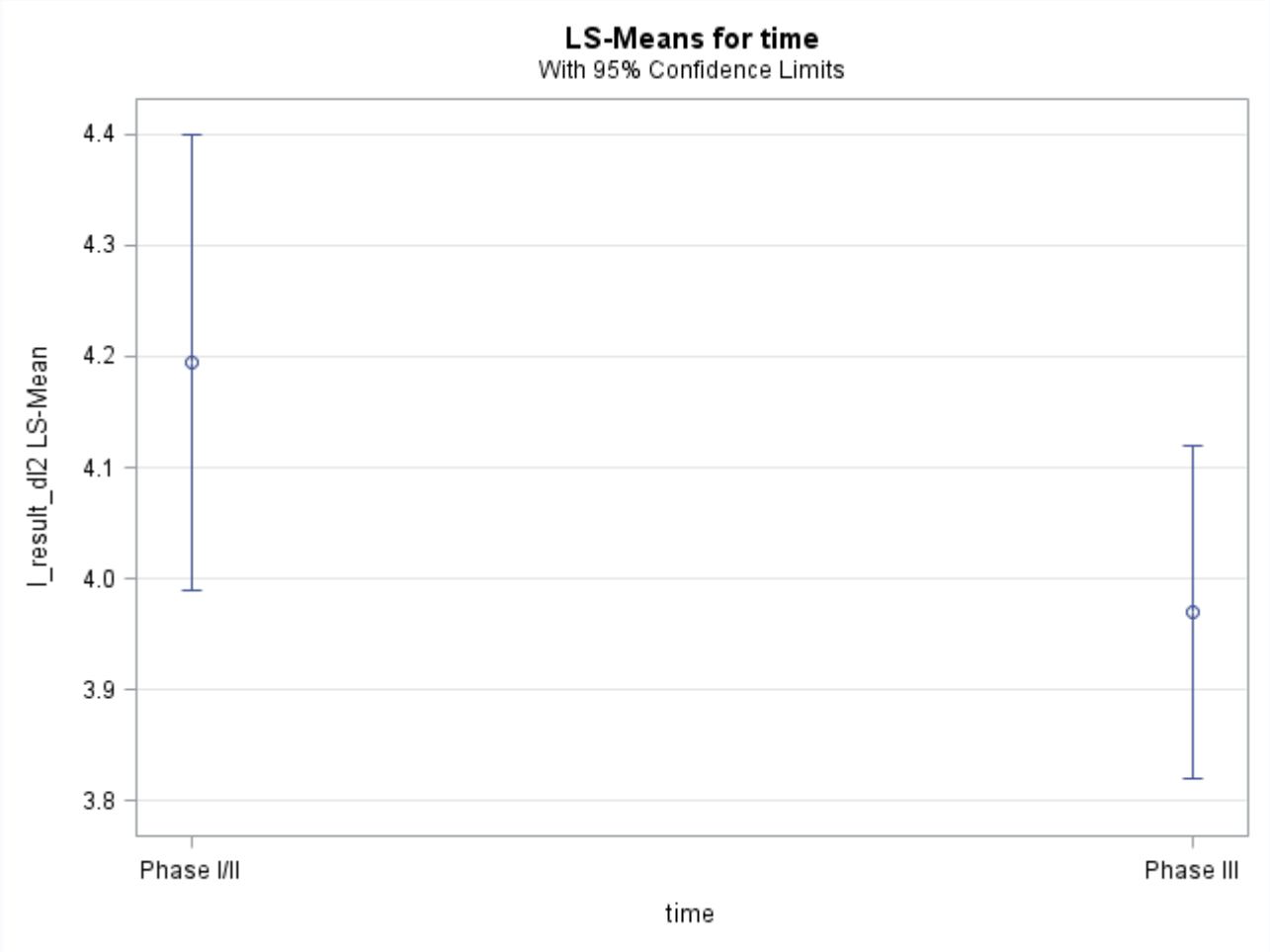
The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	4.19467773	0.0911
Phase III	3.96989282	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.194678	3.990173	4.399182
Phase III	3.969893	3.820419	4.119367

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.224785	-0.036172	0.485741


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
4.4
4.3
4.2
4.1
4.0
3.9
3.8
Phase I/II
Phase III
time

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	358

PCBs Total PCBs (9)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

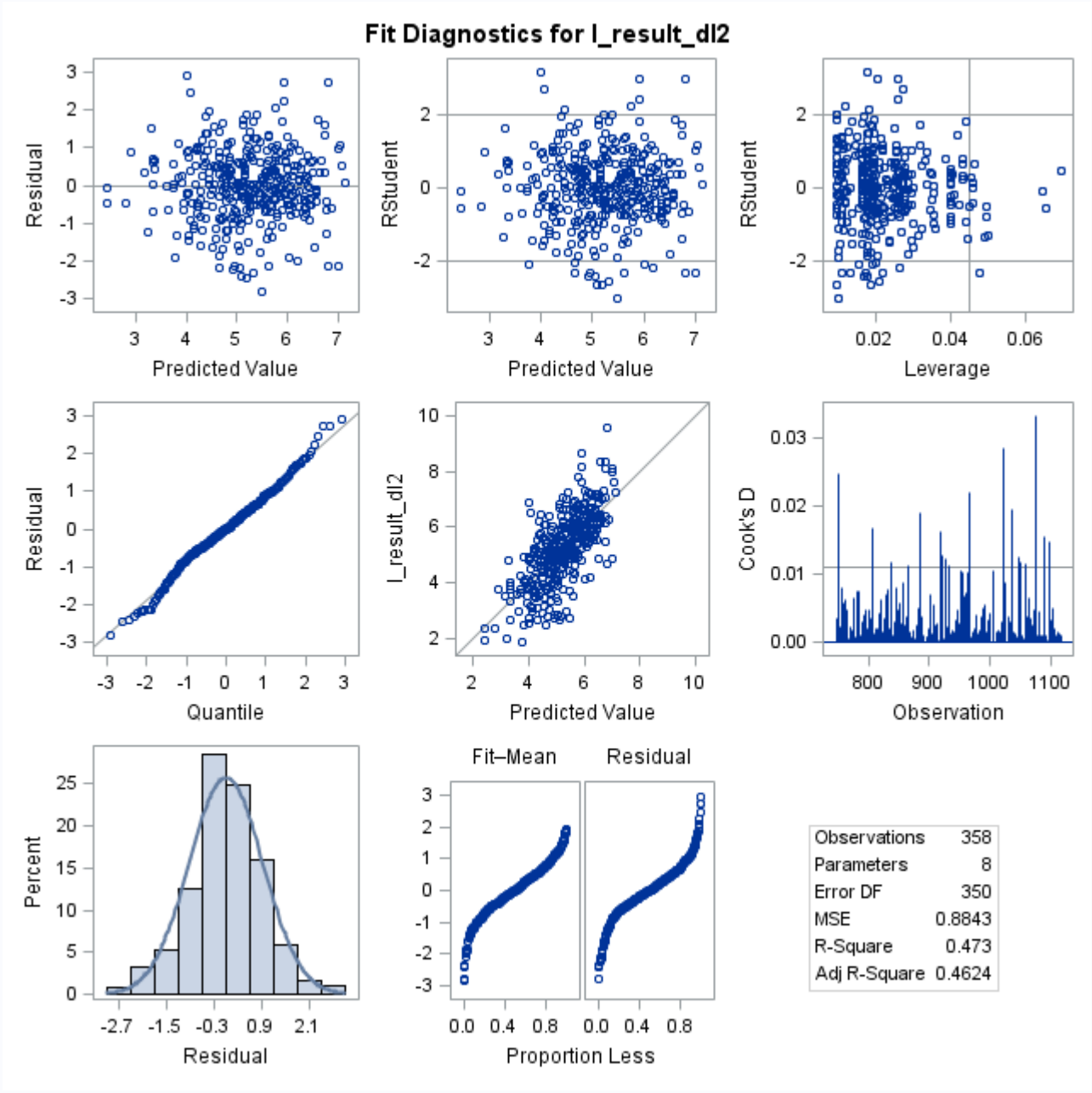
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	277.7712486	39.6816069	44.87	<.0001
Error	350	309.5211420	0.8843461		
Corrected Total	357	587.2923906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.472969	18.02737	0.940397	5.216494

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	74.9637699	14.9927540	16.95	<.0001
l_toc_frac	1	122.8487621	122.8487621	138.91	<.0001
time	1	79.9587165	79.9587165	90.42	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.7546329	7.1509266	8.09	<.0001
l_toc_frac	1	102.0937270	102.0937270	115.45	<.0001
time	1	79.9587165	79.9587165	90.42	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 0.8843
R-Square 0.473
Adj R-Square 0.4624

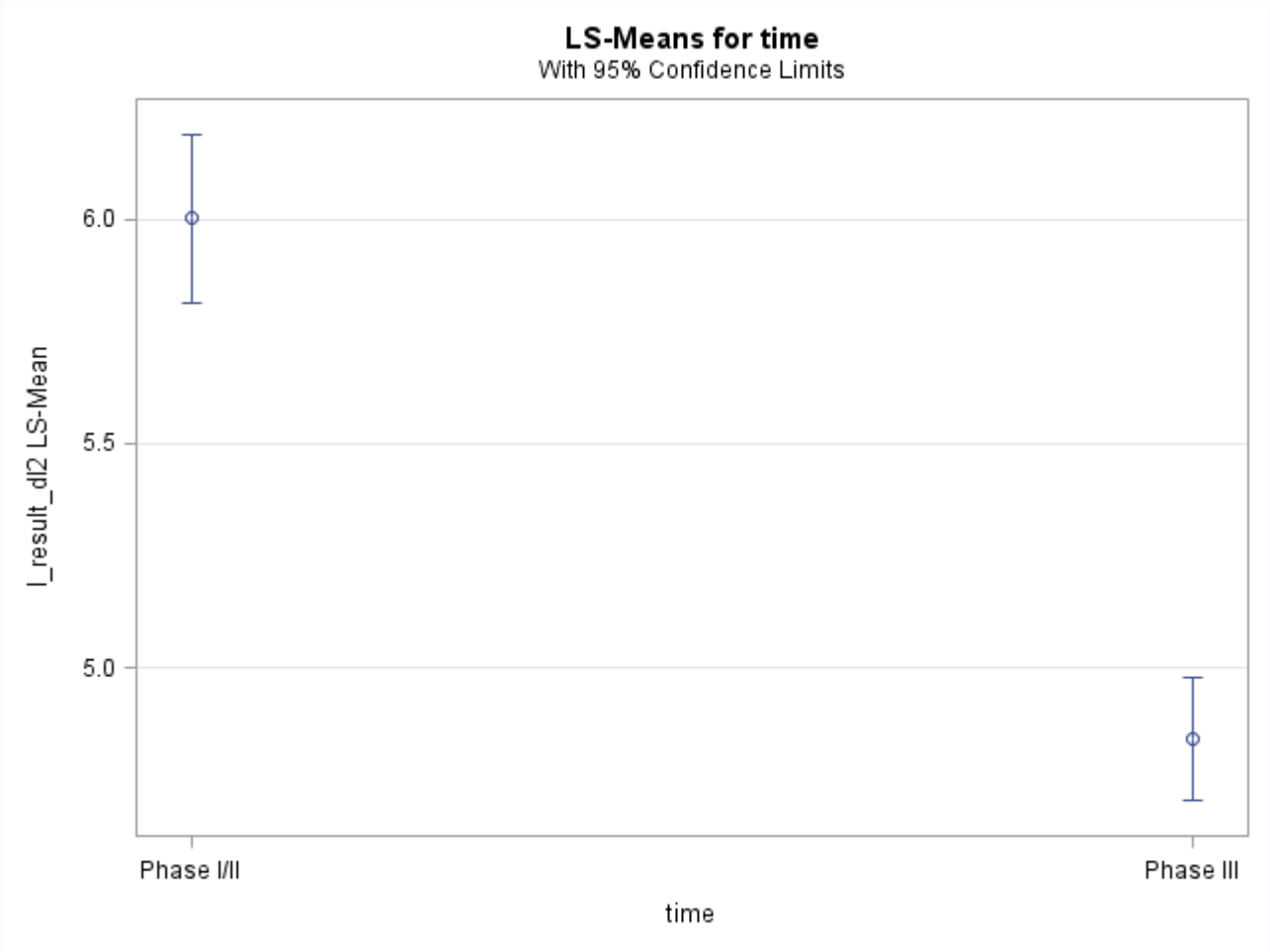
The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	6.00126084	<.0001
Phase III	4.84179374	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	6.001261	5.813319	6.189203
Phase III	4.841794	4.704426	4.979162

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	1.159467	0.919645	1.399289


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
6.0
5.5
5.0
Phase I/II
Phase III
time

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	358

PCBs Total PCBs congener (209 specified)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

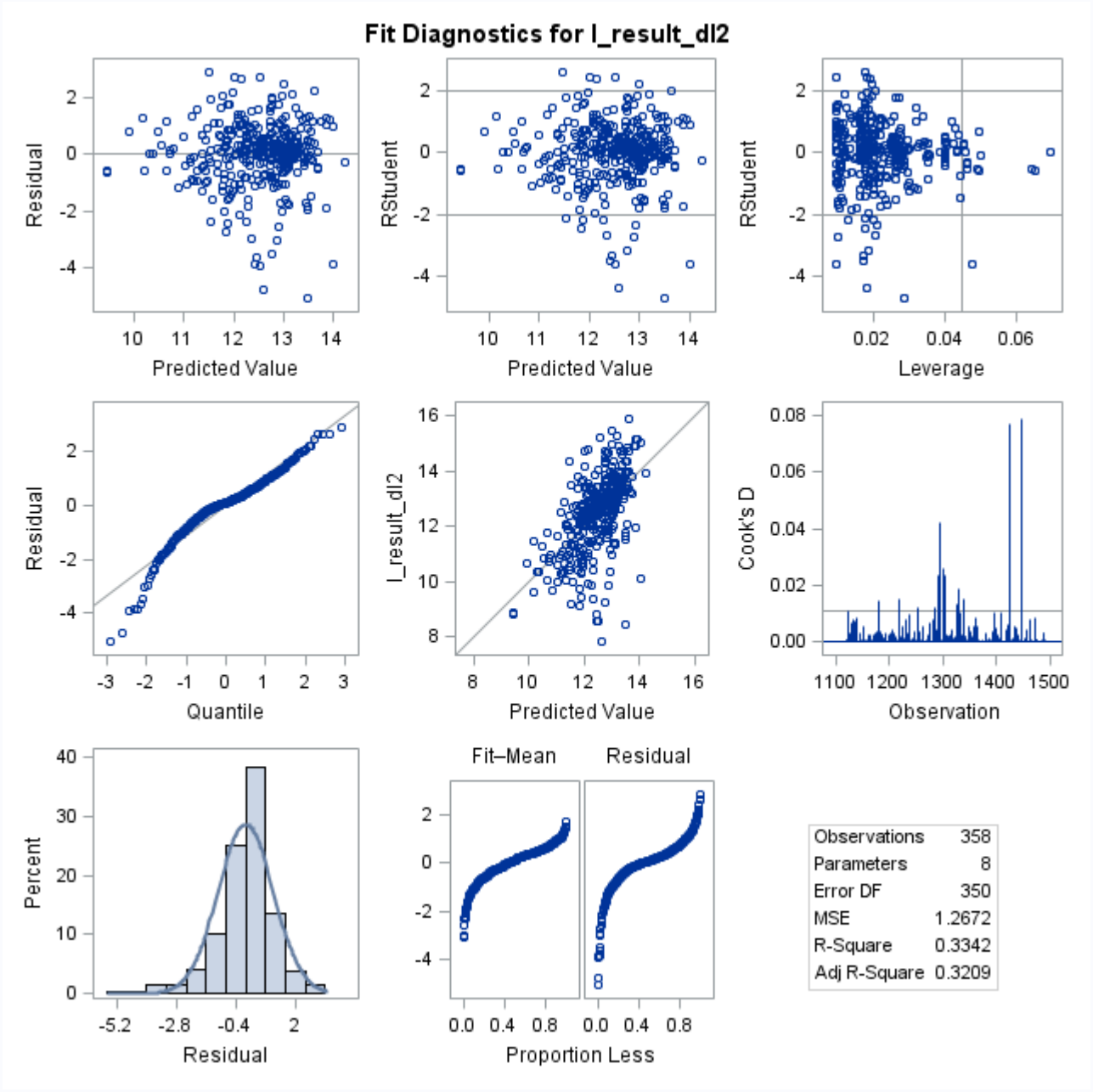
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	222.6530685	31.8075812	25.10	<.0001
Error	350	443.5288032	1.2672252		
Corrected Total	357	666.1818717			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.334223	9.011061	1.125711	12.49255

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	47.4866346	9.4973269	7.49	<.0001
l_toc_frac	1	157.3552476	157.3552476	124.17	<.0001
time	1	17.8111863	17.8111863	14.06	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.2741091	5.0548218	3.99	0.0016
l_toc_frac	1	145.0323881	145.0323881	114.45	<.0001
time	1	17.8111863	17.8111863	14.06	0.0002


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 1.2672
R-Square 0.3342
Adj R-Square 0.3209

PCBs Total PCBs congener (209 specified)
Temporal Two-way: Organics with TOC as Covariate

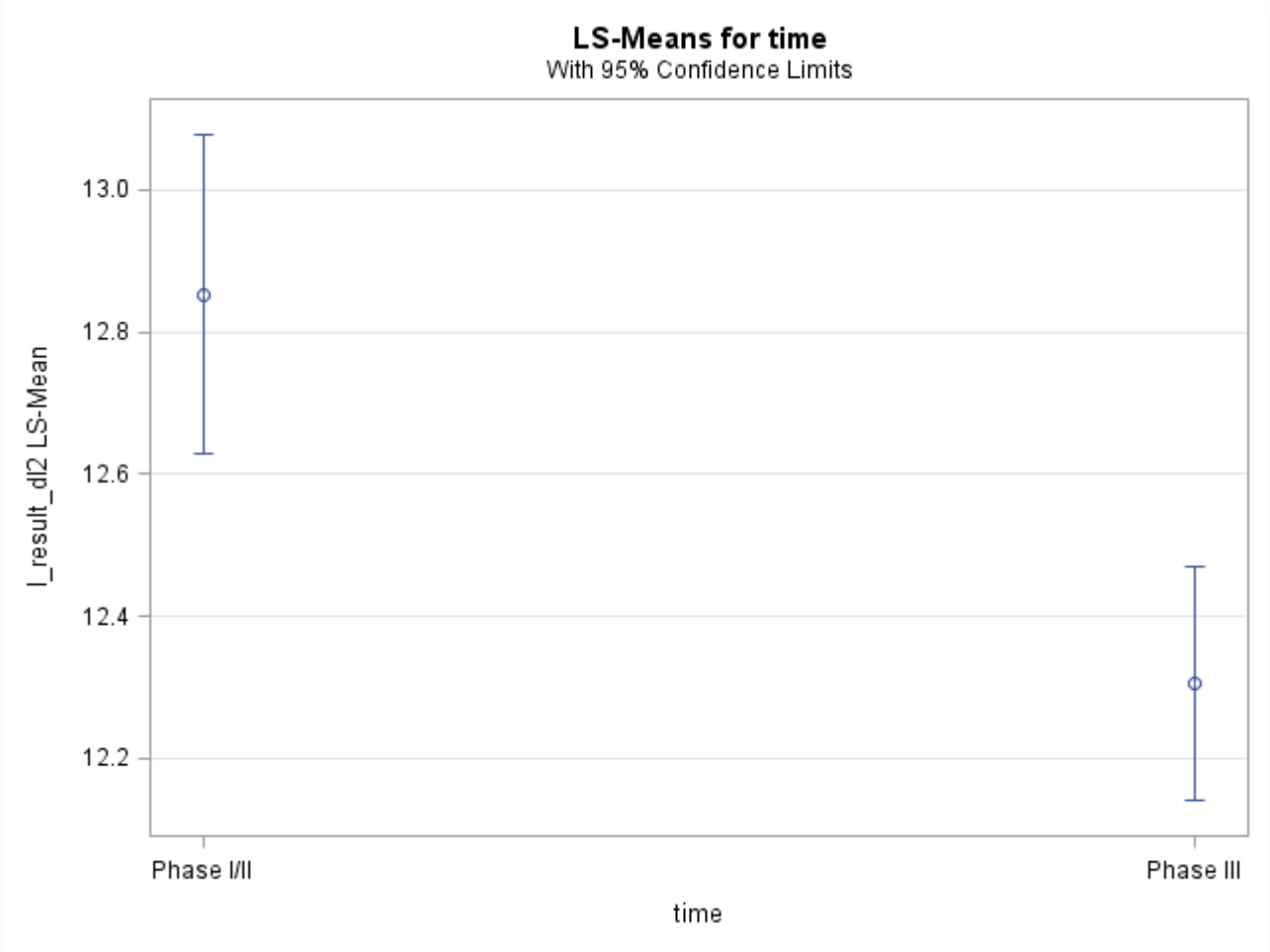
The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	12.8526172	0.0002
Phase III	12.3053846	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	12.852617	12.627639	13.077595
Phase III	12.305385	12.140947	12.469822

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.547233	0.260151	0.834314


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
13.0
12.8
12.6
12.4
12.2
Phase I/II
Phase III
time

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	358

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

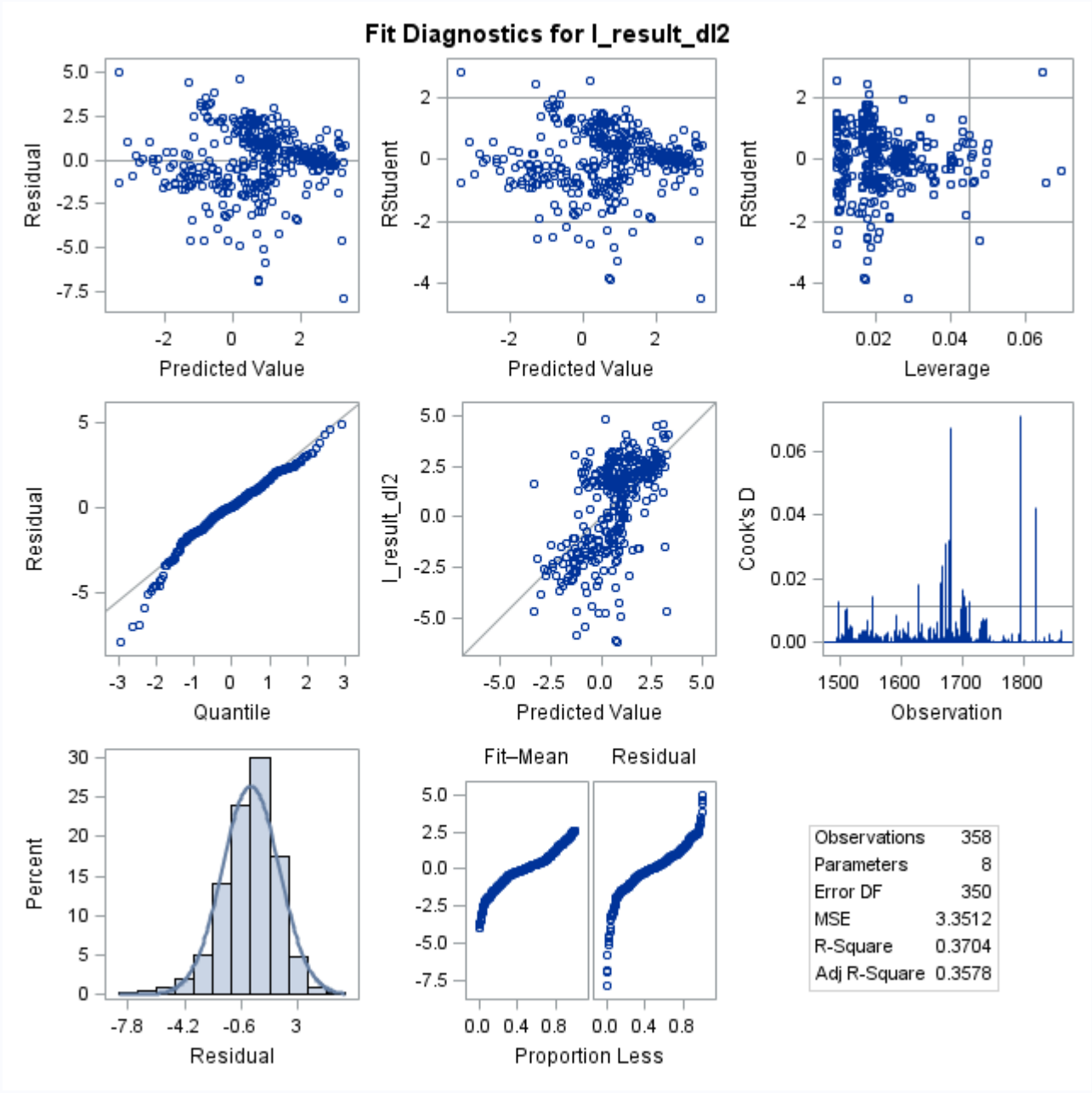
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	690.075547	98.582221	29.42	<.0001
Error	350	1172.913413	3.351181		
Corrected Total	357	1862.988959			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.370413	274.0391	1.830623	0.668015

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	175.5329026	35.1065805	10.48	<.0001
l_toc_frac	1	320.4813163	320.4813163	95.63	<.0001
time	1	194.0613276	194.0613276	57.91	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	73.4723399	14.6944680	4.38	0.0007
l_toc_frac	1	268.0605109	268.0605109	79.99	<.0001
time	1	194.0613276	194.0613276	57.91	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 3.3512
R-Square 0.3704
Adj R-Square 0.3578

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
Temporal Two-way: Organics with TOC as Covariate

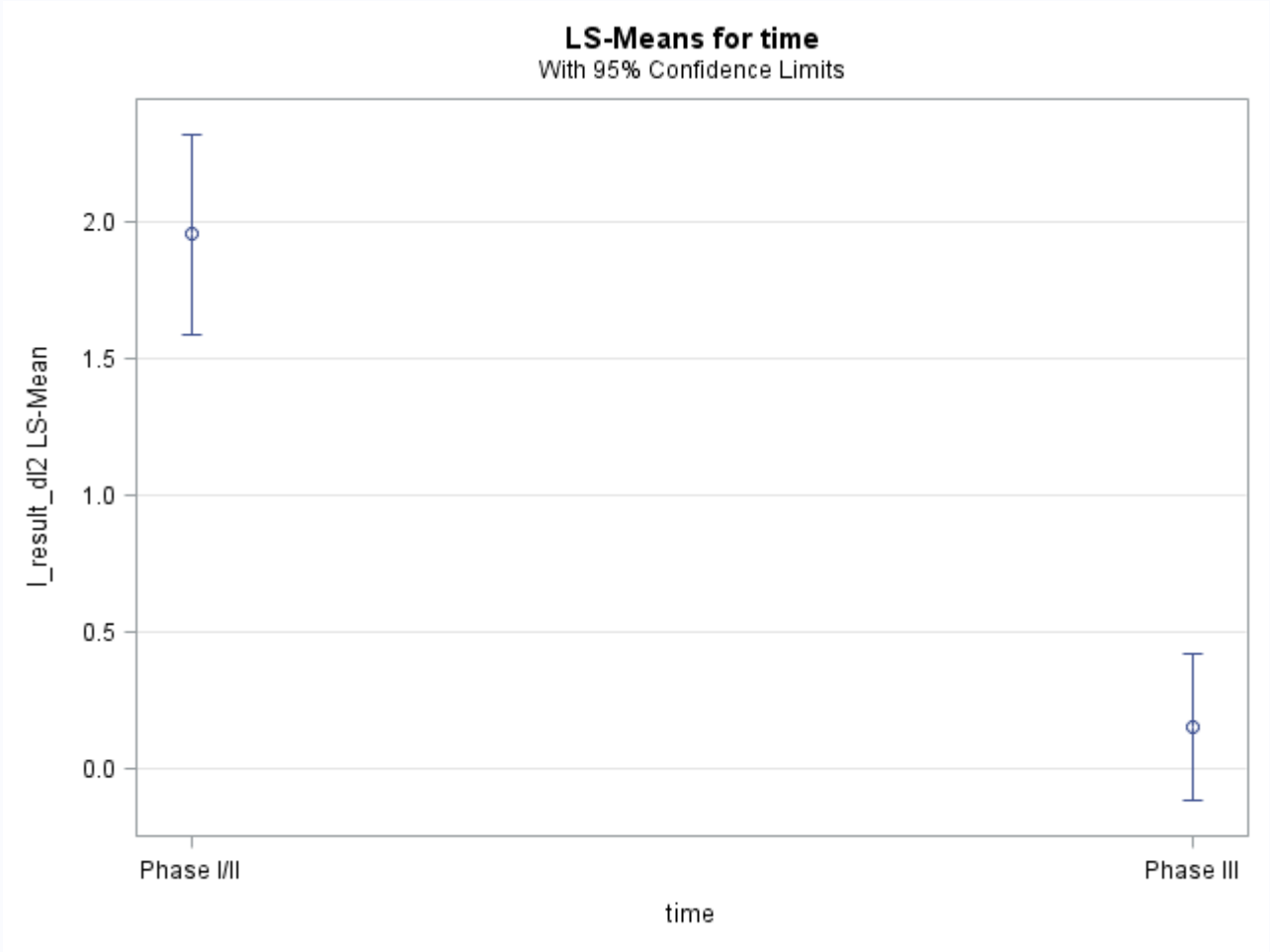
The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	1.95670502	<.0001
Phase III	0.15038363	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	1.956705	1.590848	2.322562
Phase III	0.150384	-0.117024	0.417791

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	1.806321	1.339472	2.273171


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
2.0
1.5
1.0
0.5
0.0
Phase I/II
Phase III
time

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	358

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

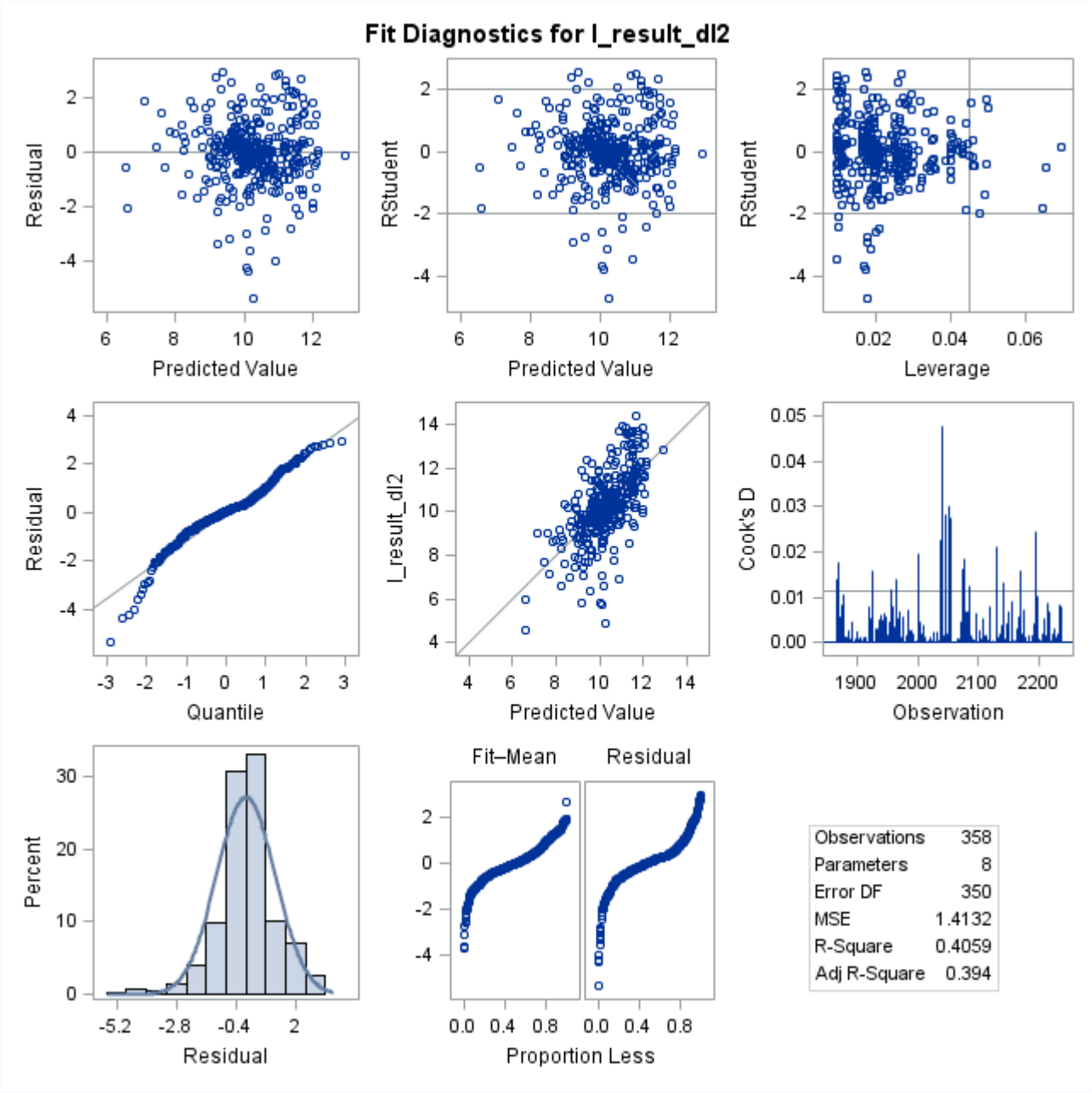
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	337.9483424	48.2783346	34.16	<.0001
Error	350	494.6373708	1.4132496		
Corrected Total	357	832.5857132			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.405902	11.58751	1.188802	10.25934

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	133.7606991	26.7521398	18.93	<.0001
l_toc_frac	1	203.1722372	203.1722372	143.76	<.0001
time	1	1.0154061	1.0154061	0.72	0.3972

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	105.0709136	21.0141827	14.87	<.0001
l_toc_frac	1	198.0872427	198.0872427	140.16	<.0001
time	1	1.0154061	1.0154061	0.72	0.3972


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 1.4132
R-Square 0.4059
Adj R-Square 0.394

Pesticides Total DDx (4,4) Total Fraction
Temporal Two-way: Organics with TOC as Covariate

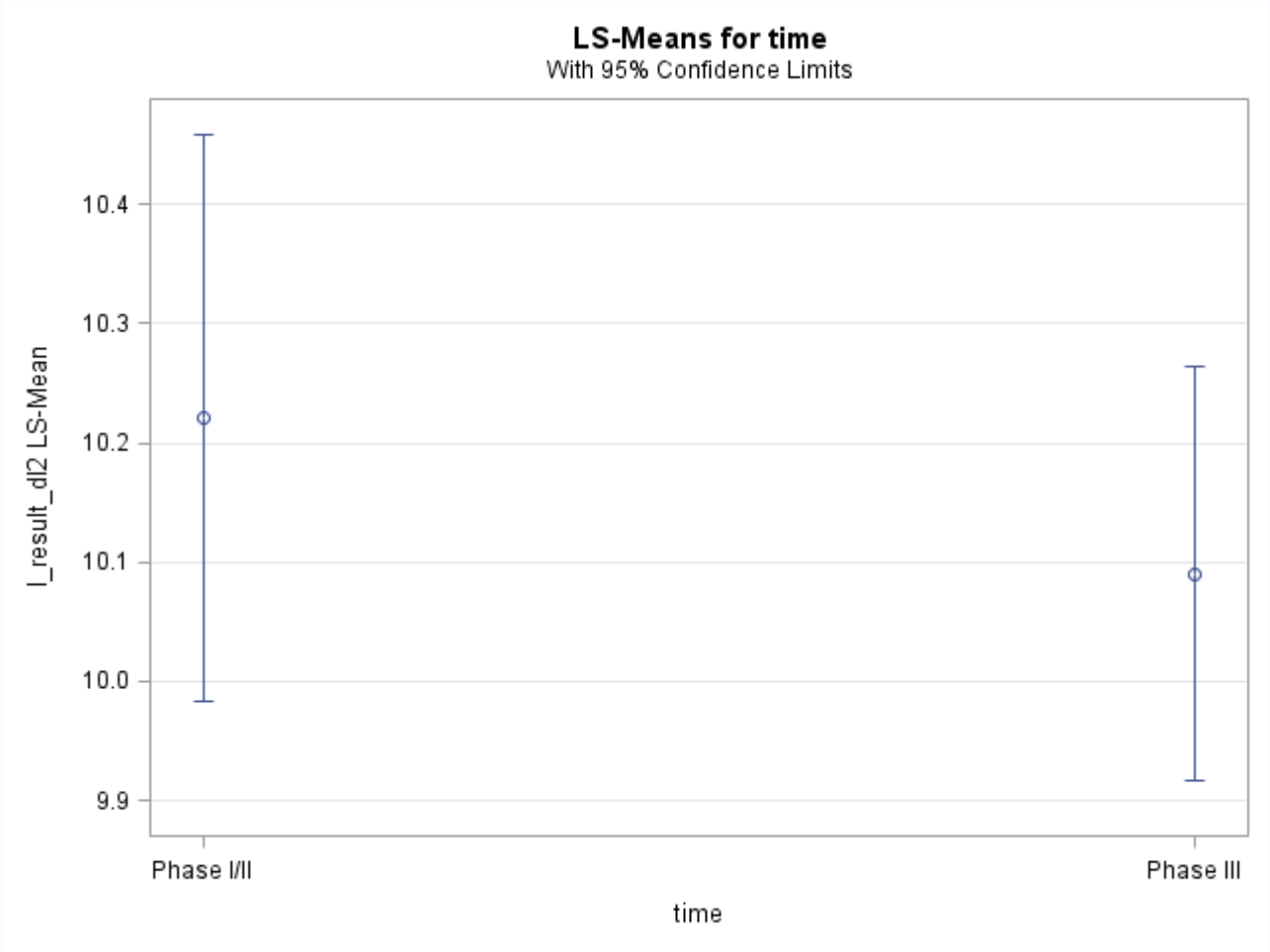
The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	10.2209818	0.3972
Phase III	10.0903210	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	10.220982	9.983395	10.458569
Phase III	10.090321	9.916667	10.263975

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.130661	-0.172510	0.433832


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
10.4
10.3
10.2
10.1
10.0
9.9
Phase I/II
Phase III
time

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	358

PAHs Total HMW PAHs
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

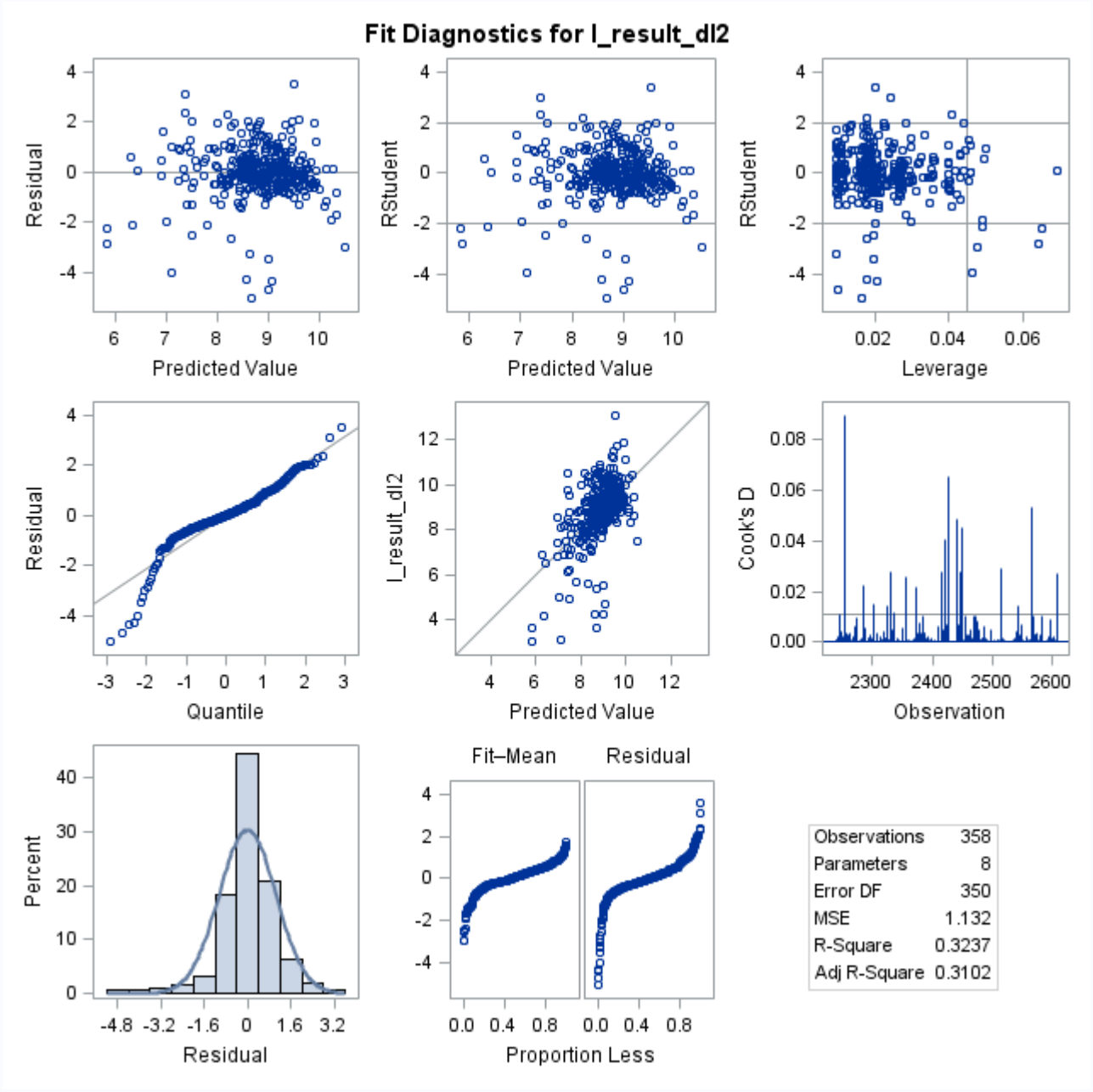
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	189.6732118	27.0961731	23.94	<.0001
Error	350	396.1915633	1.1319759		
Corrected Total	357	585.8647750			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.323749	12.06665	1.063944	8.817227

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.6964326	6.9392865	6.13	<.0001
l_toc_frac	1	148.9625535	148.9625535	131.60	<.0001
time	1	6.0142257	6.0142257	5.31	0.0218

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.9634622	5.1926924	4.59	0.0005
l_toc_frac	1	140.9170499	140.9170499	124.49	<.0001
time	1	6.0142257	6.0142257	5.31	0.0218


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 1.132
R-Square 0.3237
Adj R-Square 0.3102

PAHs Total HMW PAHs
Temporal Two-way: Organics with TOC as Covariate

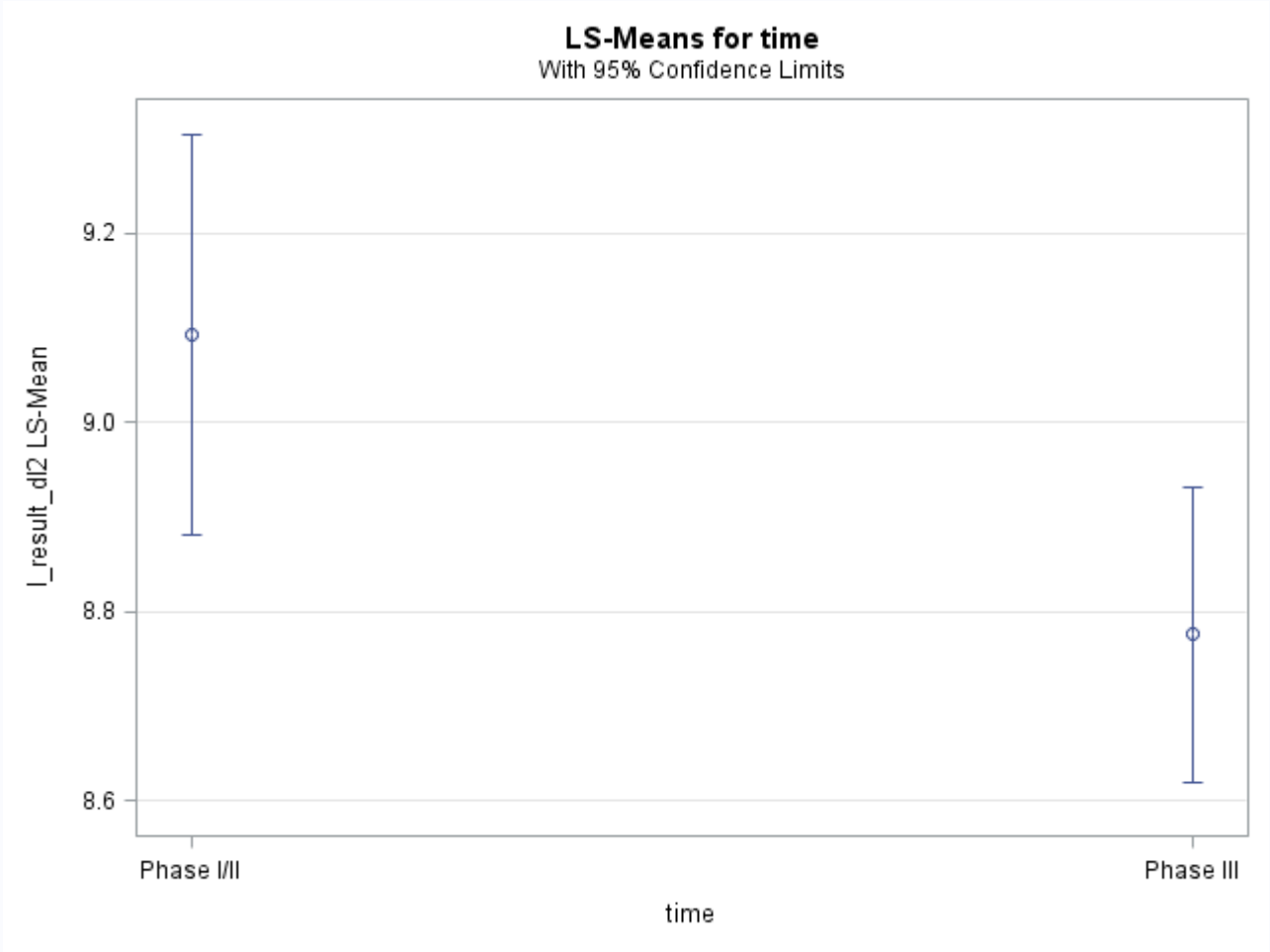
The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	9.09210275	0.0218
Phase III	8.77531390	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	9.092103	8.880186	9.304020
Phase III	8.775314	8.619793	8.930834

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.316789	0.046486	0.587092


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
9.2
9.0
8.8
8.6
Phase I/II
Phase III
time

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	359

PAHs Total LMW PAHs
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

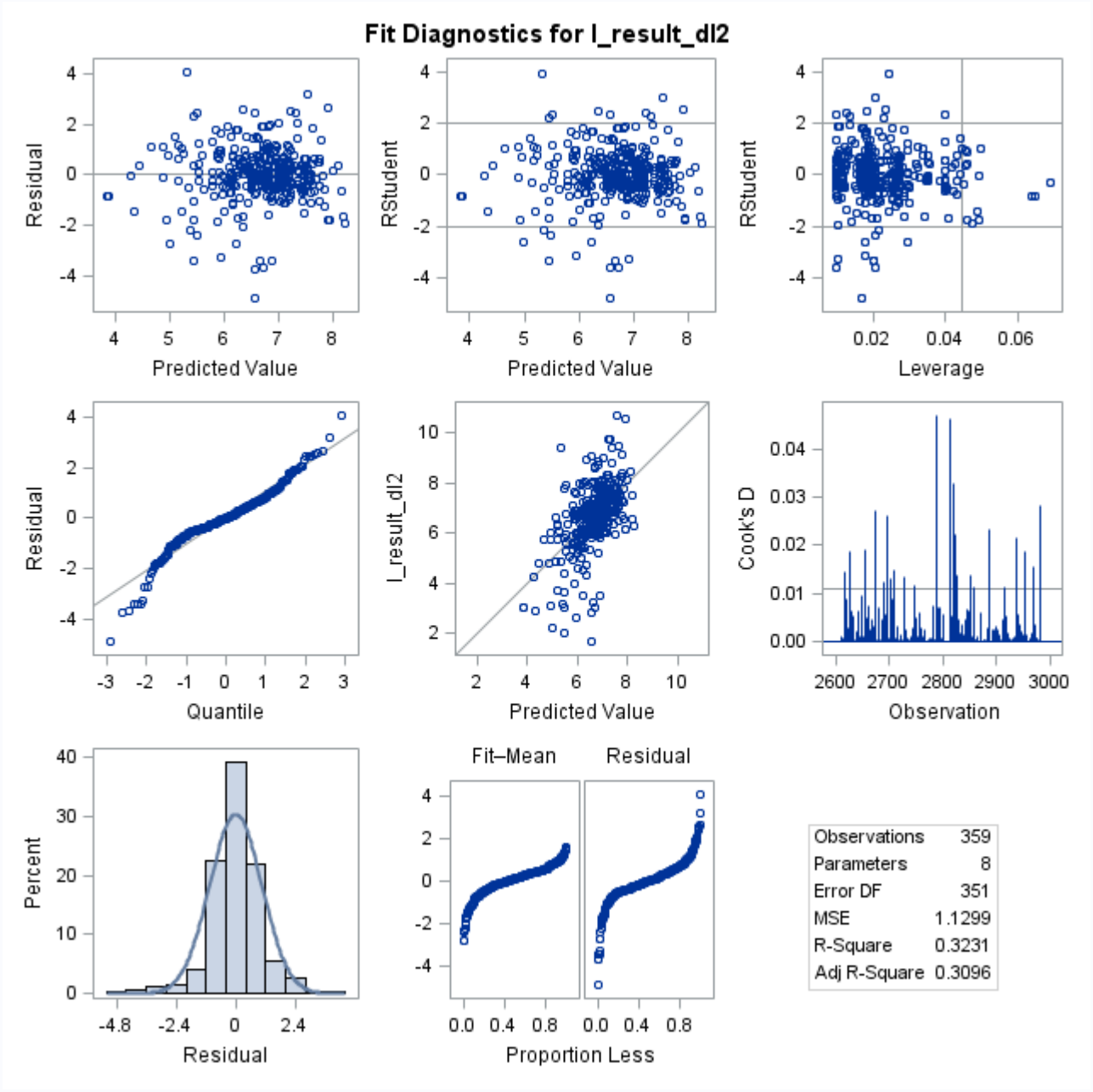
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	189.3339495	27.0477071	23.94	<.0001
Error	351	396.5980580	1.1299090		
Corrected Total	358	585.9320075			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.323133	15.89712	1.062972	6.686569

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.3091396	7.0618279	6.25	<.0001
l_toc_frac	1	142.0103078	142.0103078	125.68	<.0001
time	1	12.0145020	12.0145020	10.63	0.0012

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	19.2923125	3.8584625	3.41	0.0050
l_toc_frac	1	131.6111757	131.6111757	116.48	<.0001
time	1	12.0145020	12.0145020	10.63	0.0012


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 359
Parameters 8
Error DF 351
MSE 1.1299
R-Square 0.3231
Adj R-Square 0.3096

PAHs Total LMW PAHs
Temporal Two-way: Organics with TOC as Covariate

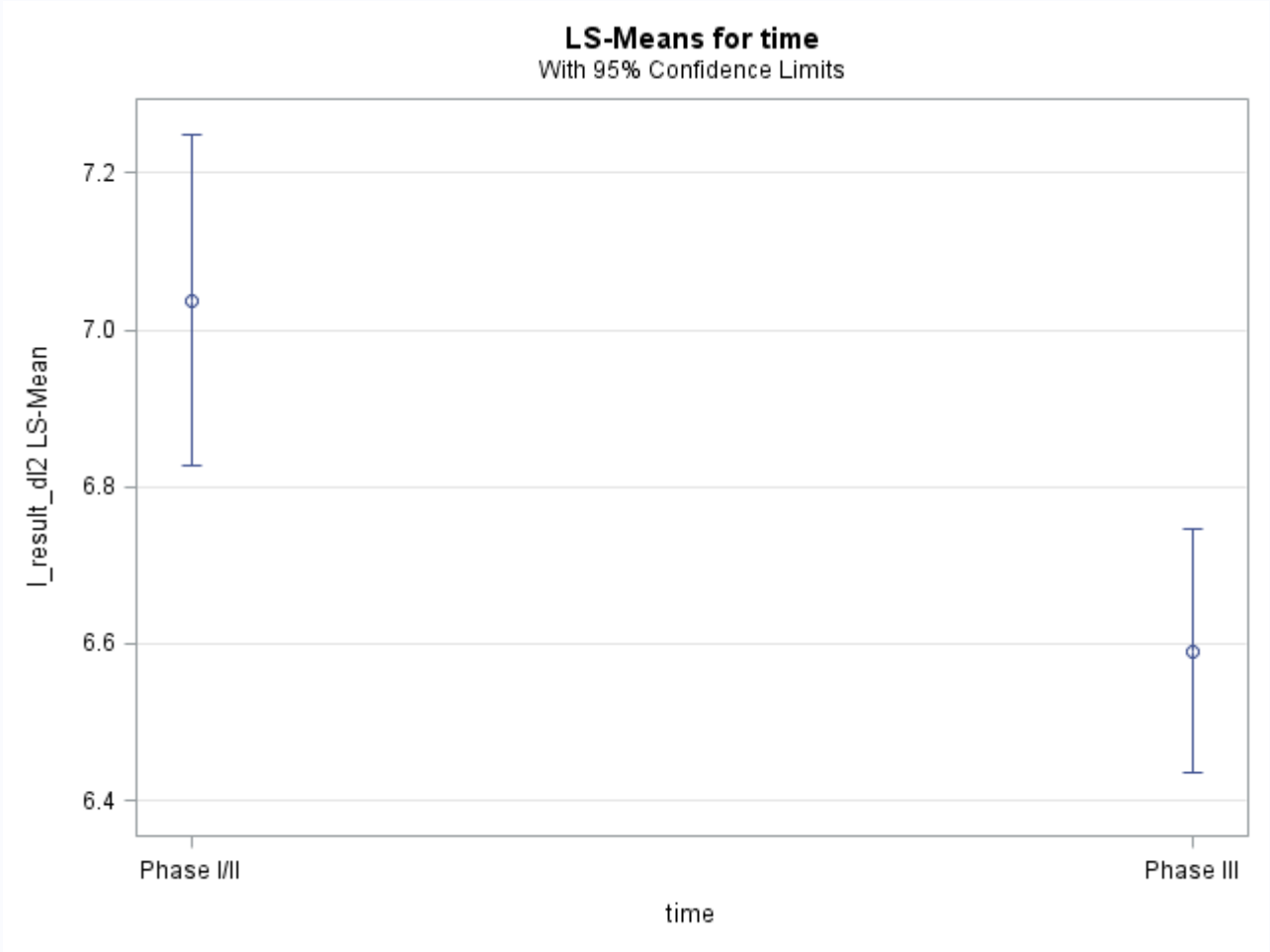
The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	7.03786169	0.0012
Phase III	6.59031835	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	7.037862	6.826621	7.249102
Phase III	6.590318	6.435043	6.745594

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.447543	0.177613	0.717474


LS-Means for time
With 95% Confidence Limits
7.2
7.0
6.8
6.6
6.4
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	373
Number of Observations Used	359

PAHs Total PAH
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

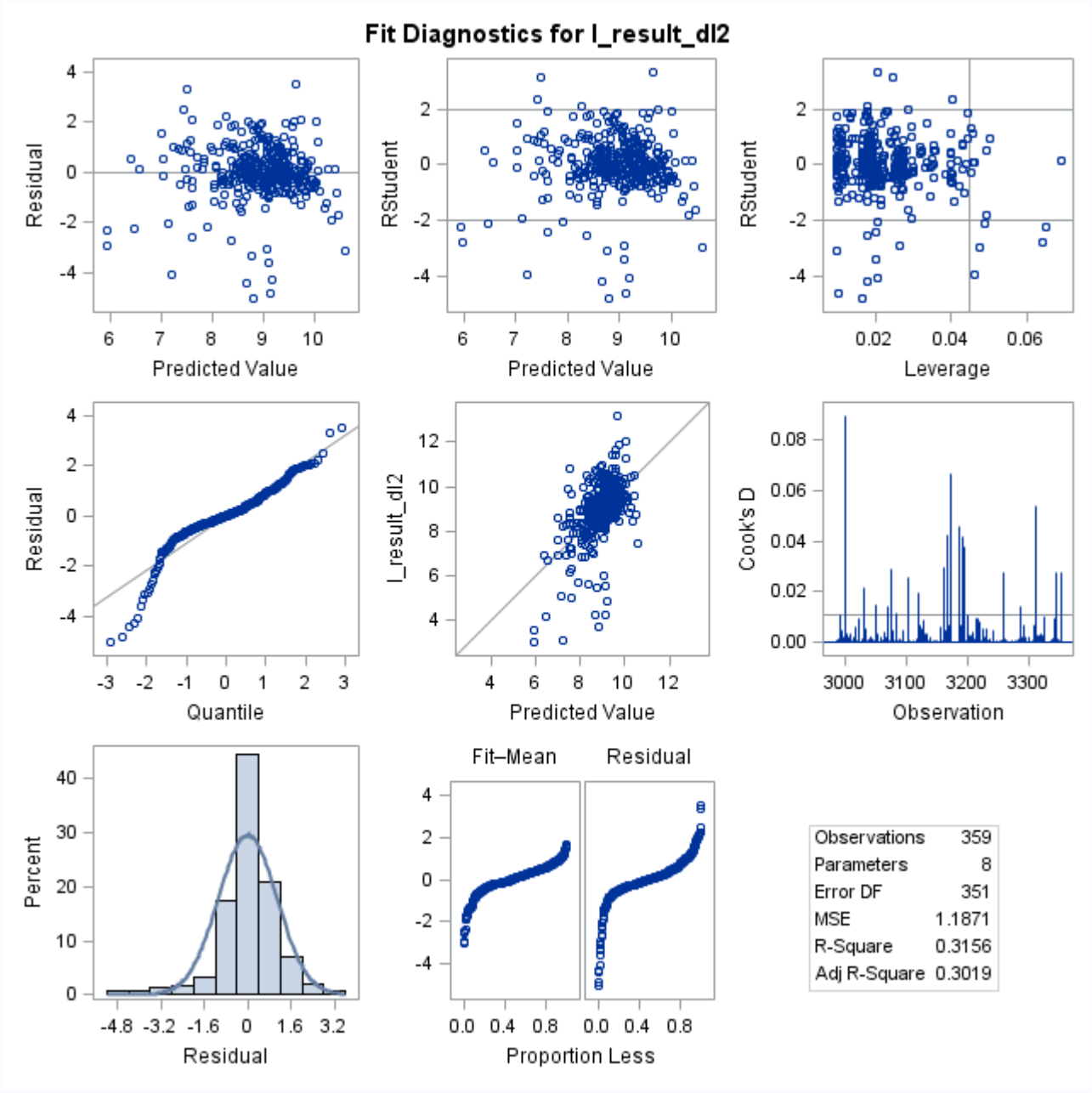
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	192.1109400	27.4444200	23.12	<.0001
Error	351	416.6750714	1.1871085		
Corrected Total	358	608.7860114			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.315564	12.21536	1.089545	8.919465

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.7006932	7.1401386	6.01	<.0001
l_toc_frac	1	150.5332925	150.5332925	126.81	<.0001
time	1	5.8769543	5.8769543	4.95	0.0267

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	27.1861854	5.4372371	4.58	0.0005
l_toc_frac	1	142.4483585	142.4483585	120.00	<.0001
time	1	5.8769543	5.8769543	4.95	0.0267


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 359
Parameters 8
Error DF 351
MSE 1.1871
R-Square 0.3156
Adj R-Square 0.3019

PAHs Total PAH
Temporal Two-way: Organics with TOC as Covariate

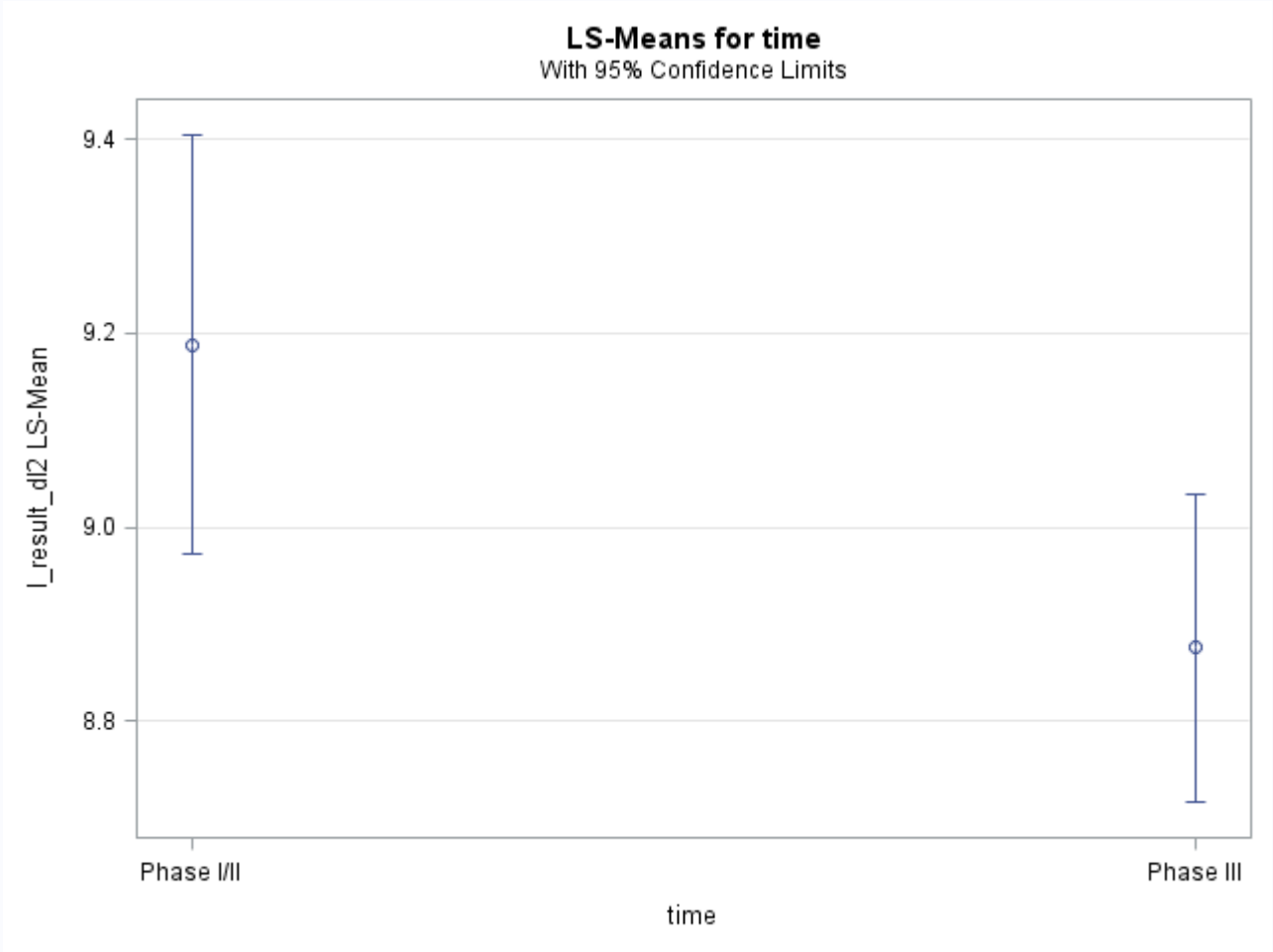
The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	9.18821912	0.0267
Phase III	8.87520901	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	9.188219	8.971698	9.404740
Phase III	8.875209	8.716052	9.034366

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.313010	0.036331	0.589689


LS-Means for time
With 95% Confidence Limits
9.4
9.2
9.0
8.8
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	371
Number of Observations Used	357

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way: Organics with TOC as Covariate

The GLM Procedure

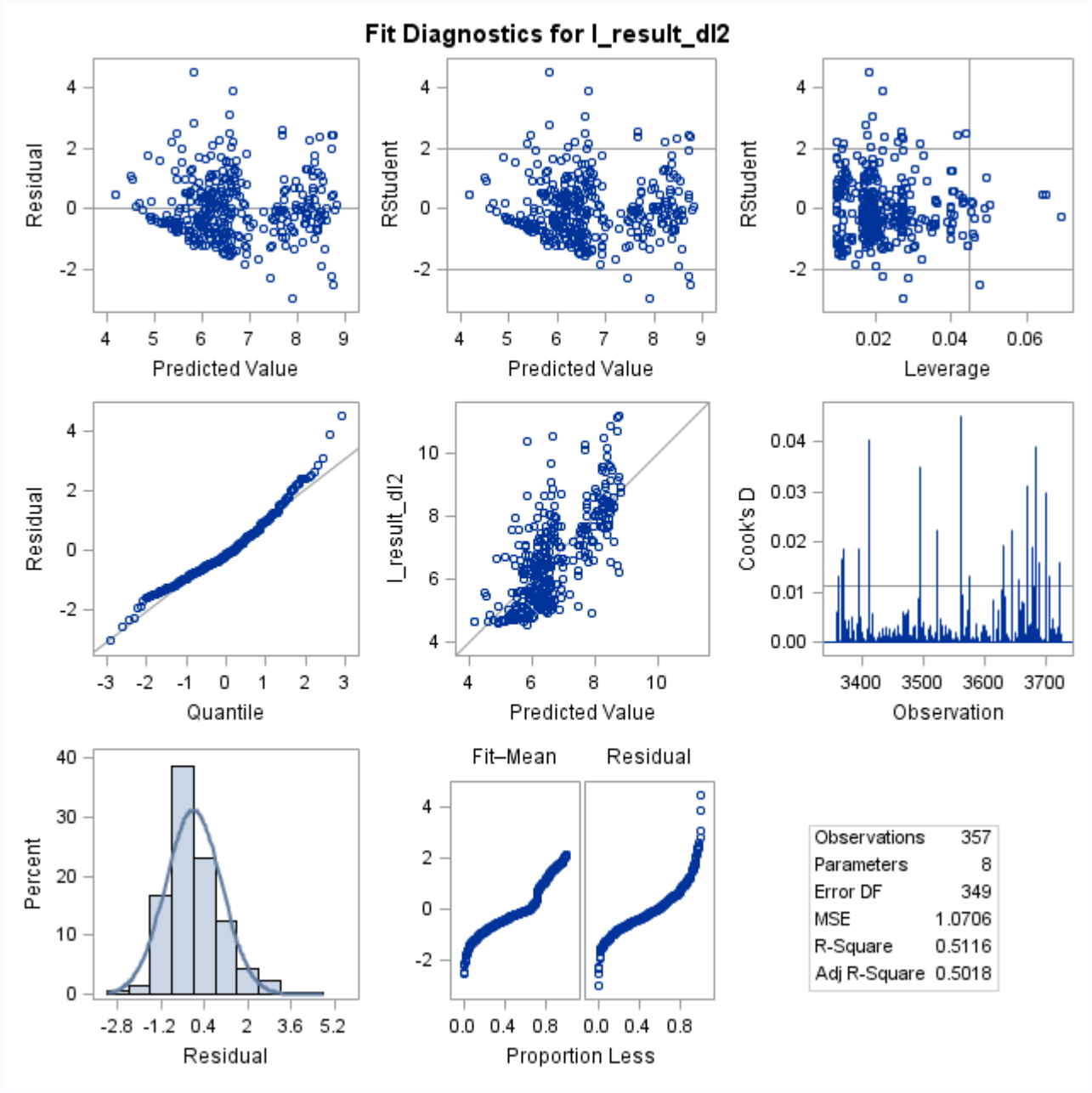
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	391.3325625	55.9046518	52.22	<.0001
Error	349	373.6267414	1.0705637		
Corrected Total	356	764.9593039			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.511573	15.52904	1.034680	6.662875

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	69.2640601	13.8528120	12.94	<.0001
l_toc_frac	1	101.6219726	101.6219726	94.92	<.0001
time	1	220.4465299	220.4465299	205.92	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.1505513	4.0301103	3.76	0.0025
l_toc_frac	1	70.8177401	70.8177401	66.15	<.0001
time	1	220.4465299	220.4465299	205.92	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 357
Parameters 8
Error DF 349
MSE 1.0706
R-Square 0.5116
Adj R-Square 0.5018

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
Temporal Two-way: Organics with TOC as Covariate

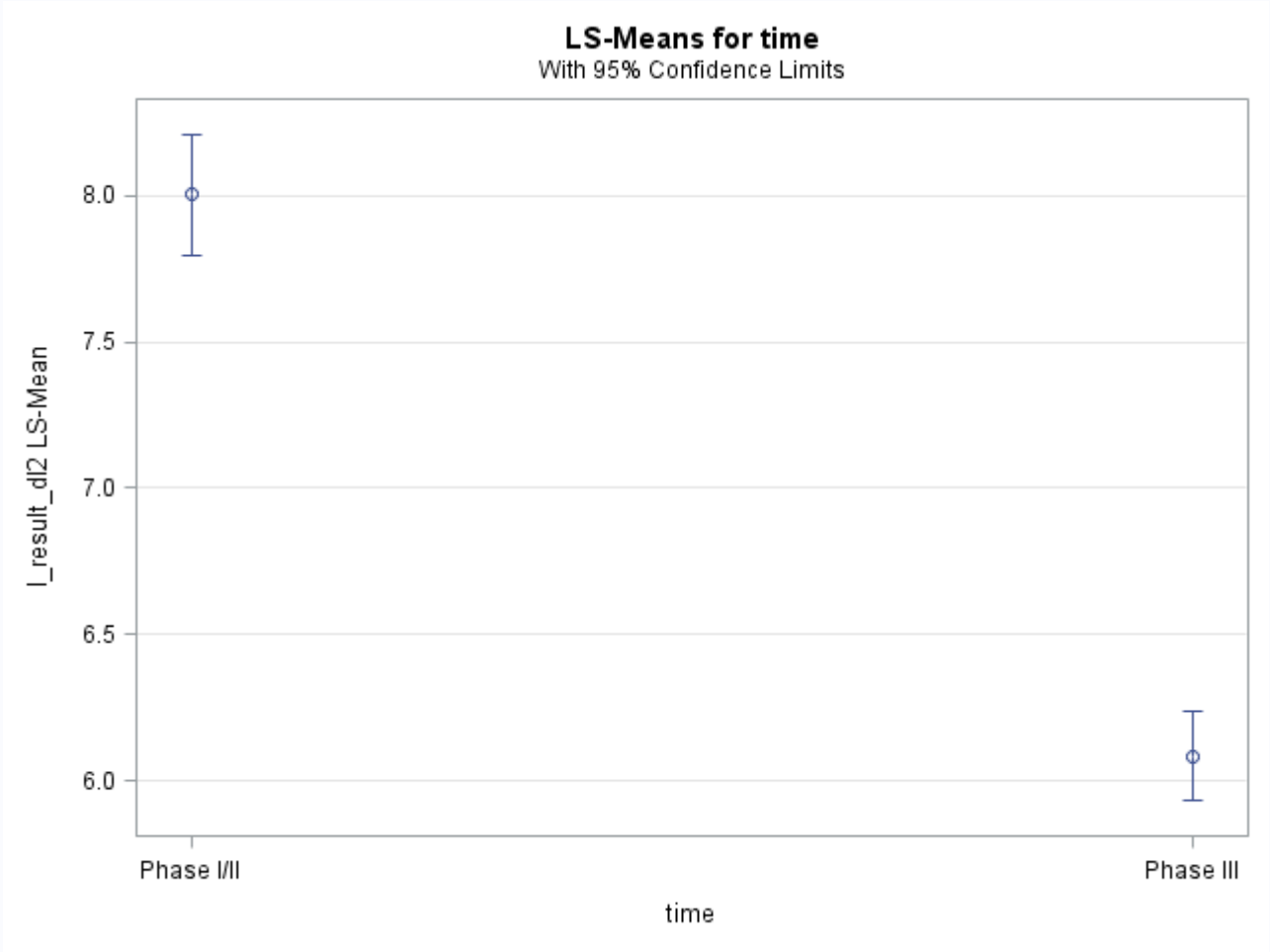
The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	8.00281024	<.0001
Phase III	6.08387514	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	8.002810	7.796710	8.208910
Phase III	6.083875	5.932409	6.235341

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	1.918935	1.655925	2.181945


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
8.0
7.5
7.0
6.5
6.0
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Arsenic
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

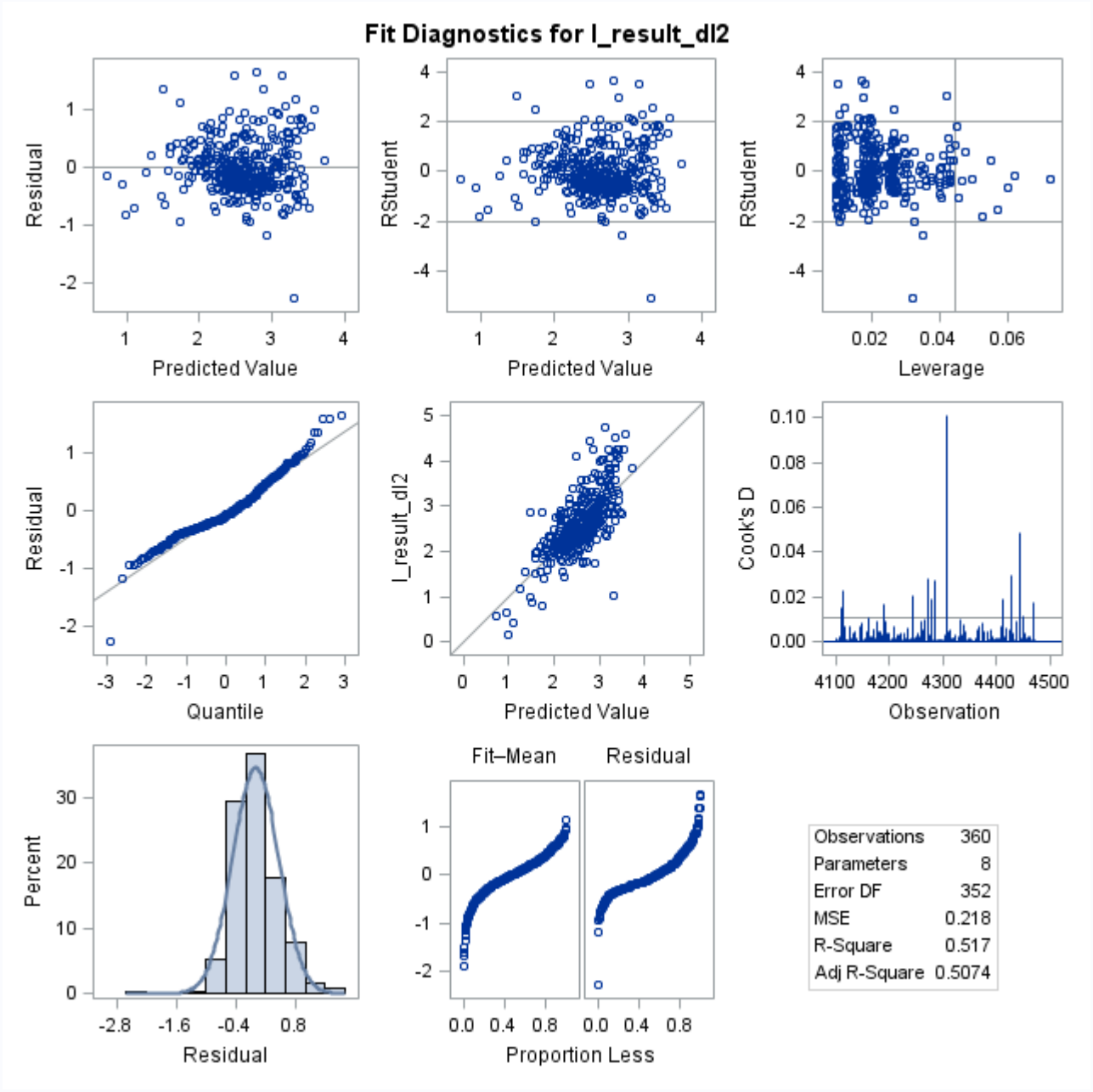
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	82.1368785	11.7338398	53.84	<.0001
Error	352	76.7203375	0.2179555		
Corrected Total	359	158.8572160			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.517048	17.94127	0.466857	2.602140

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	19.99533779	3.99906756	18.35	<.0001
l_al_frac	1	61.94012295	61.94012295	284.19	<.0001
time	1	0.20141774	0.20141774	0.92	0.3371

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	18.57477275	3.71495455	17.04	<.0001
l_al_frac	1	62.08276692	62.08276692	284.84	<.0001
time	1	0.20141774	0.20141774	0.92	0.3371


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.218
R-Square 0.517
Adj R-Square 0.5074

Metals Arsenic
Temporal Two-way: Metals with Aluminum as Covariate

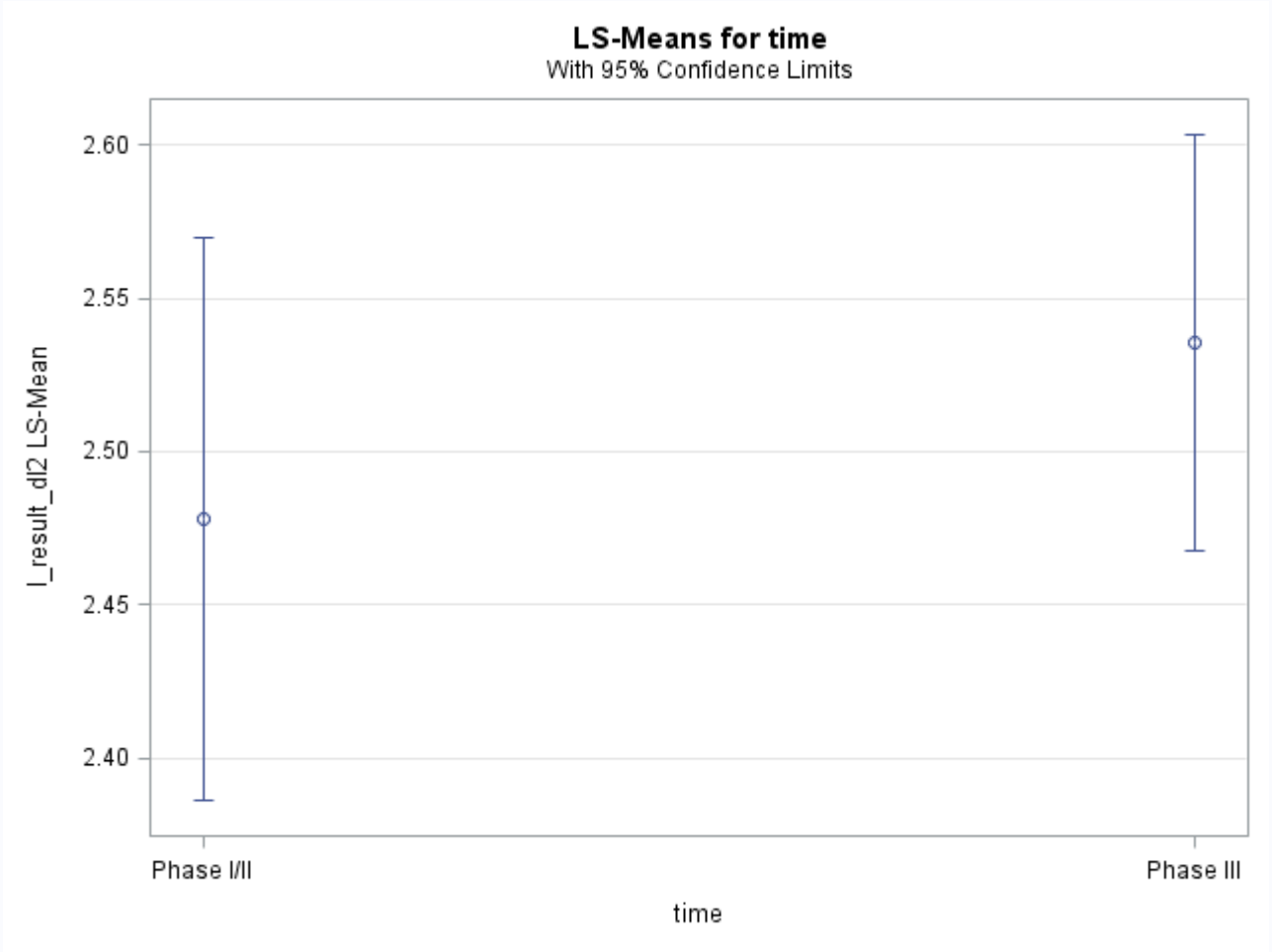
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	2.47805716	0.3371
Phase III	2.53542058	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	2.478057	2.386101	2.570014
Phase III	2.535421	2.467420	2.603421

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	-0.057363	-0.174722	0.059995


LS-Means for time
With 95% Confidence Limits
2.60
2.55
2.50
2.45
2.40
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Cadmium
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

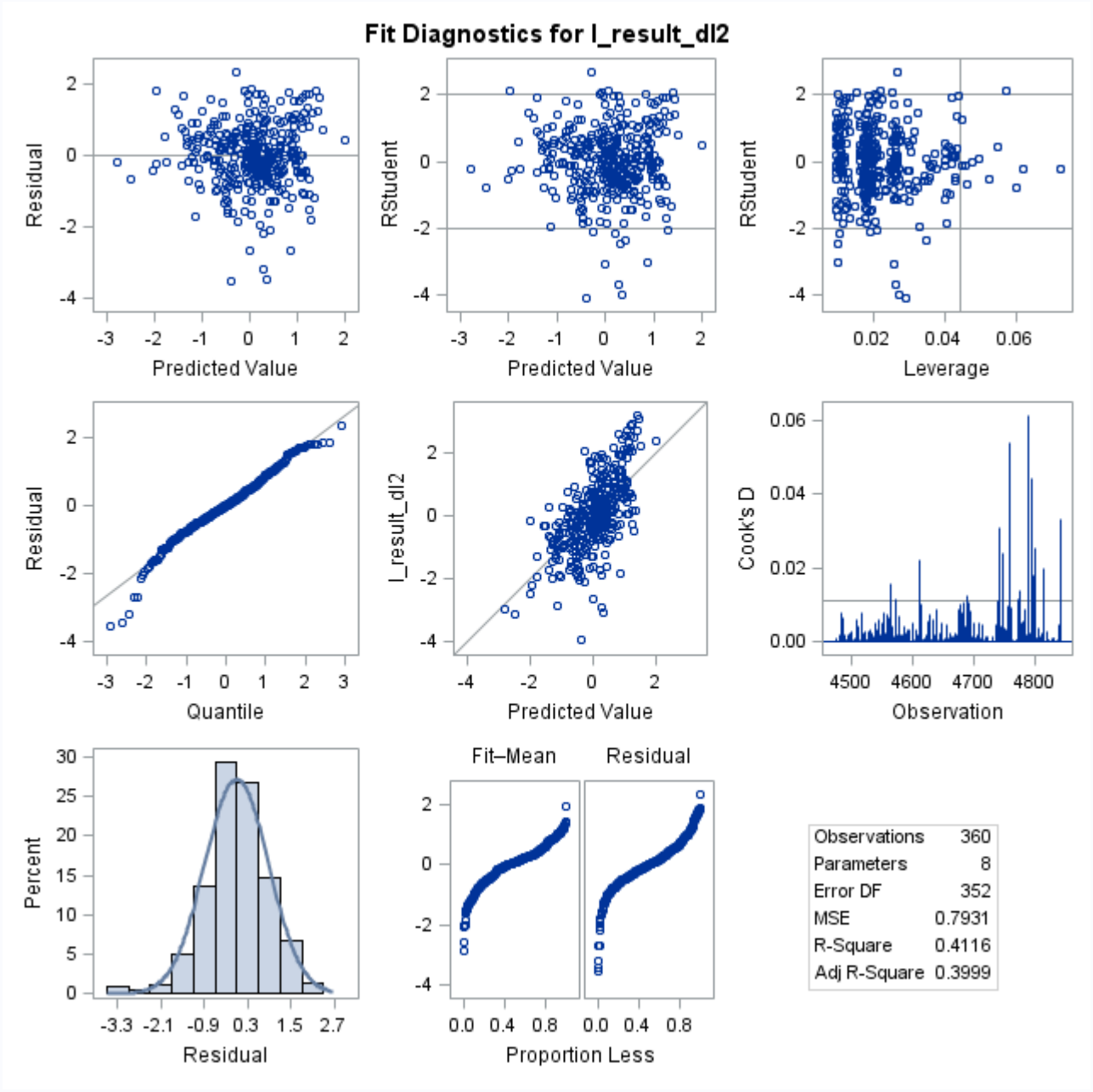
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	195.2496943	27.8928135	35.17	<.0001
Error	352	279.1565960	0.7930585		
Corrected Total	359	474.4062903			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.411566	1183.638	0.890538	0.075237

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	67.1337644	13.4267529	16.93	<.0001
l_al_frac	1	123.7677180	123.7677180	156.06	<.0001
time	1	4.3482119	4.3482119	5.48	0.0198

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	58.1428920	11.6285784	14.66	<.0001
l_al_frac	1	122.4704990	122.4704990	154.43	<.0001
time	1	4.3482119	4.3482119	5.48	0.0198


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.7931
R-Square 0.4116
Adj R-Square 0.3999

Metals Cadmium
Temporal Two-way: Metals with Aluminum as Covariate

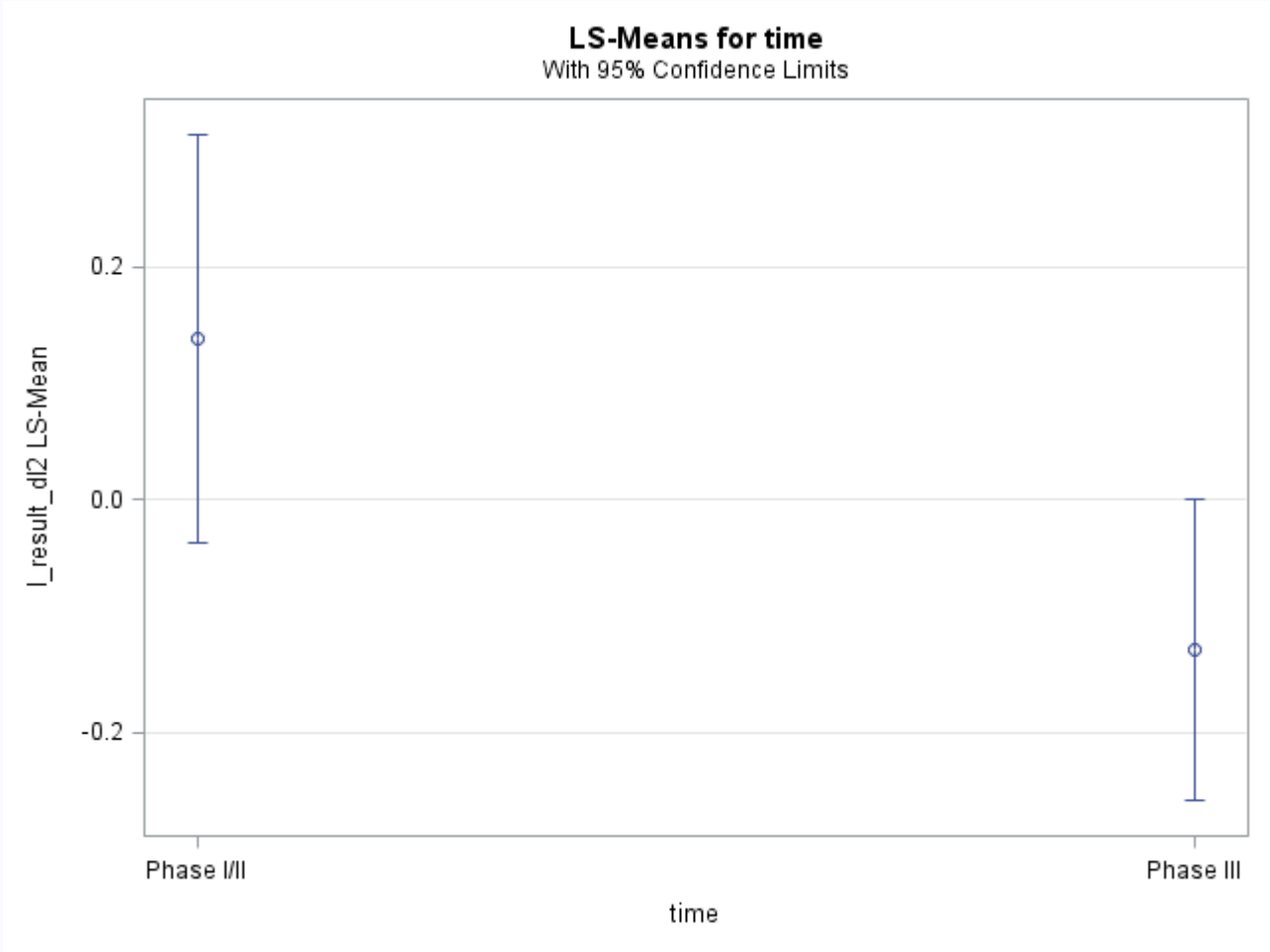
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	0.13811655	0.0198
Phase III	-0.12841064	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	0.138117	-0.037292	0.313525
Phase III	-0.128411	-0.258123	0.001301

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.266527	0.042664	0.490390


LS-Means for time
With 95% Confidence Limits
0.2
0.0
-0.2
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Chromium
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

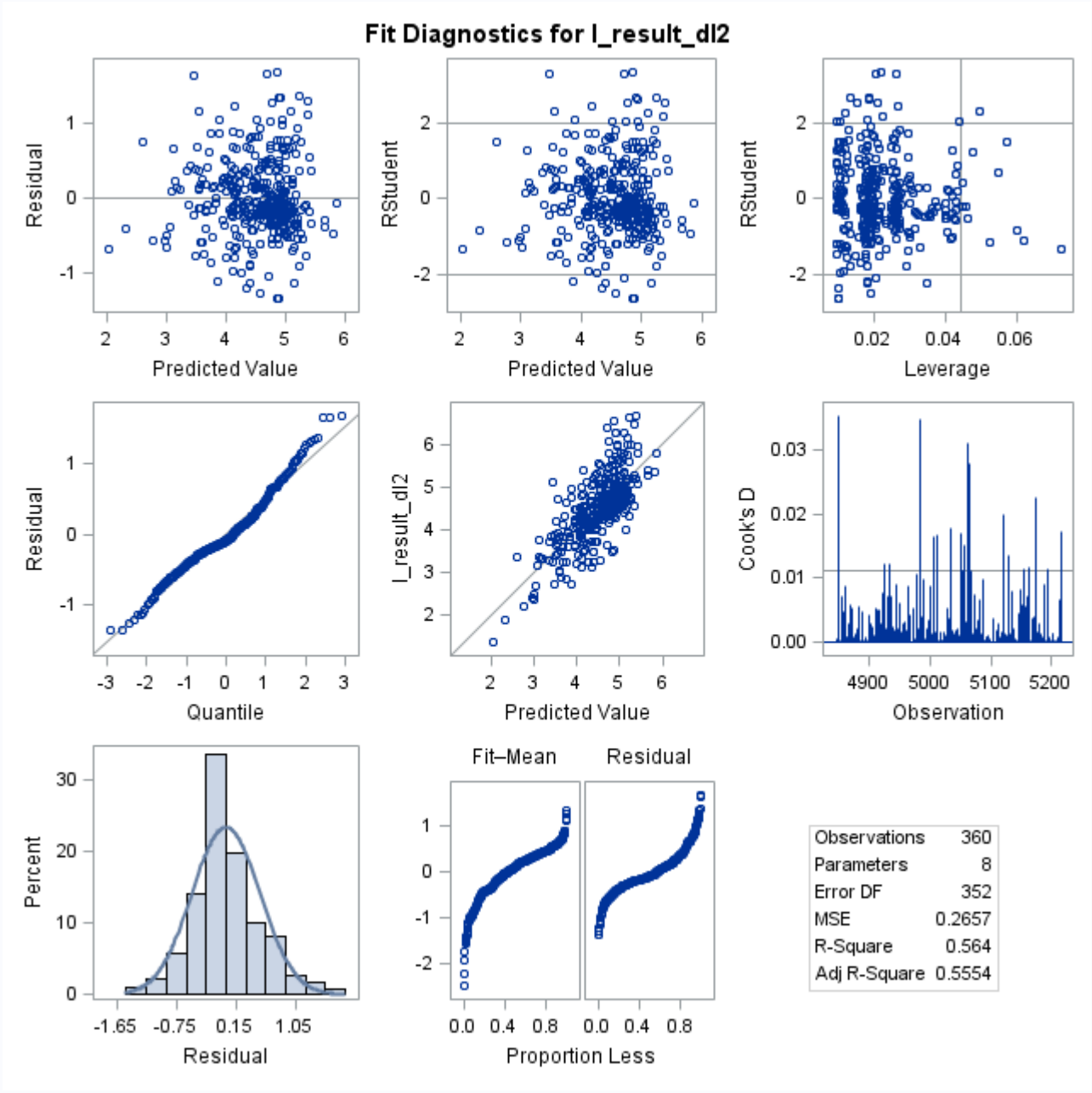
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	120.9788613	17.2826945	65.06	<.0001
Error	352	93.5123091	0.2656600		
Corrected Total	359	214.4911704			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.564027	11.40220	0.515422	4.520376

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	11.9236941	2.3847388	8.98	<.0001
l_al_frac	1	106.8675685	106.8675685	402.27	<.0001
time	1	2.1875988	2.1875988	8.23	0.0044

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	10.6862291	2.1372458	8.05	<.0001
l_al_frac	1	105.9947491	105.9947491	398.99	<.0001
time	1	2.1875988	2.1875988	8.23	0.0044


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.2657
R-Square 0.564
Adj R-Square 0.5554

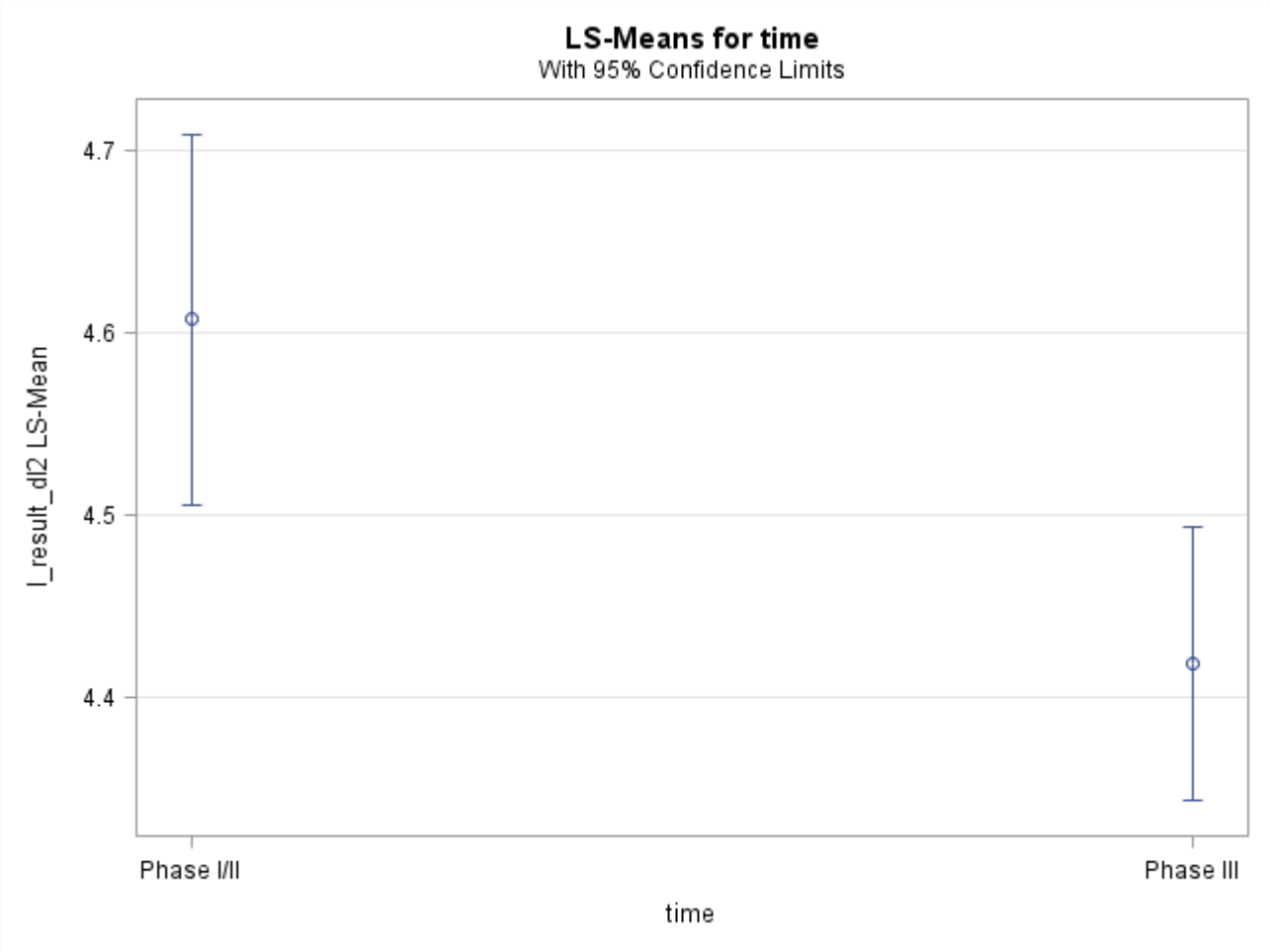
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Chromium

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	4.60755432	0.0044
Phase III	4.41850723	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.607554	4.506032	4.709077
Phase III	4.418507	4.343433	4.493581

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.189047	0.059480	0.318614


LS-Means for time
With 95% Confidence Limits
4.7
4.6
4.5
4.4
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	370
Number of Observations Used	358

Metals Copper
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

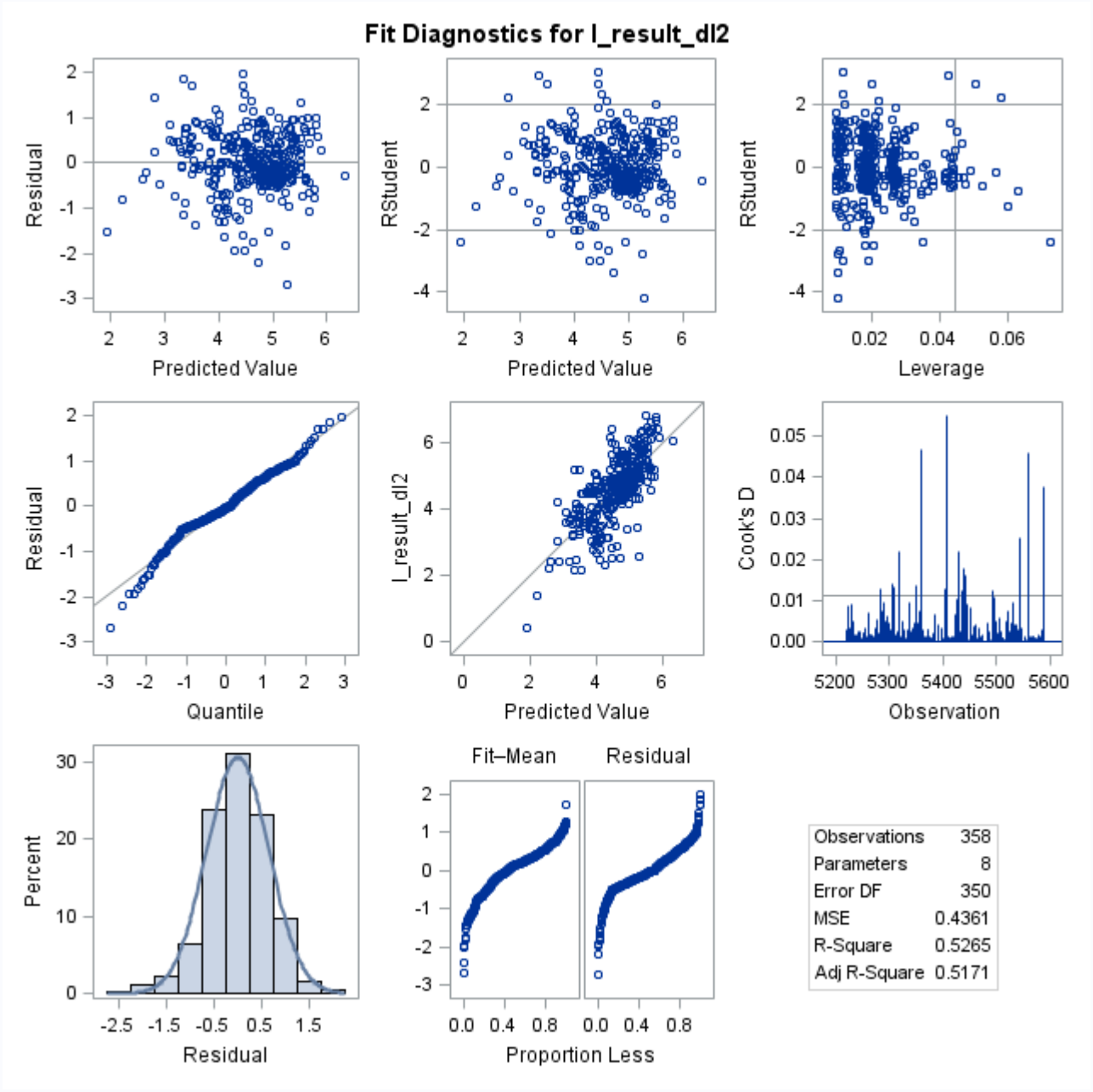
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	169.7391752	24.2484536	55.60	<.0001
Error	350	152.6359806	0.4361028		
Corrected Total	357	322.3751558			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.526527	14.31377	0.660381	4.613605

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	49.5475861	9.9095172	22.72	<.0001
l_al_frac	1	117.1900426	117.1900426	268.72	<.0001
time	1	3.0015465	3.0015465	6.88	0.0091

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.9507371	6.9901474	16.03	<.0001
l_al_frac	1	116.1961765	116.1961765	266.44	<.0001
time	1	3.0015465	3.0015465	6.88	0.0091


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 358
Parameters 8
Error DF 350
MSE 0.4361
R-Square 0.5265
Adj R-Square 0.5171

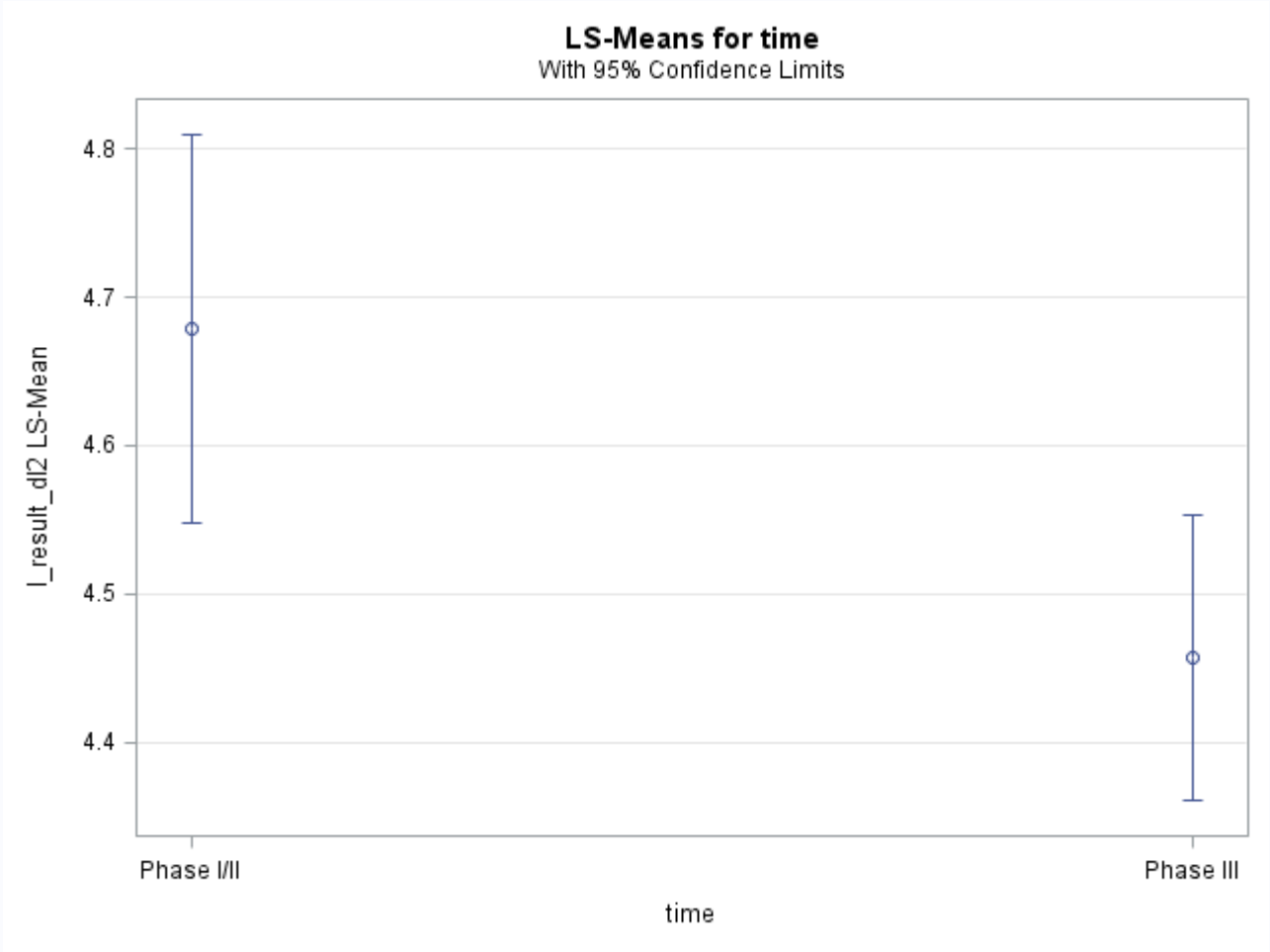
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	4.67864771	0.0091
Phase III	4.45678642	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.678648	4.547540	4.809756
Phase III	4.456786	4.360401	4.553172

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.221861	0.055537	0.388186


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
4.8
4.7
4.6
4.5
4.4
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Lead
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

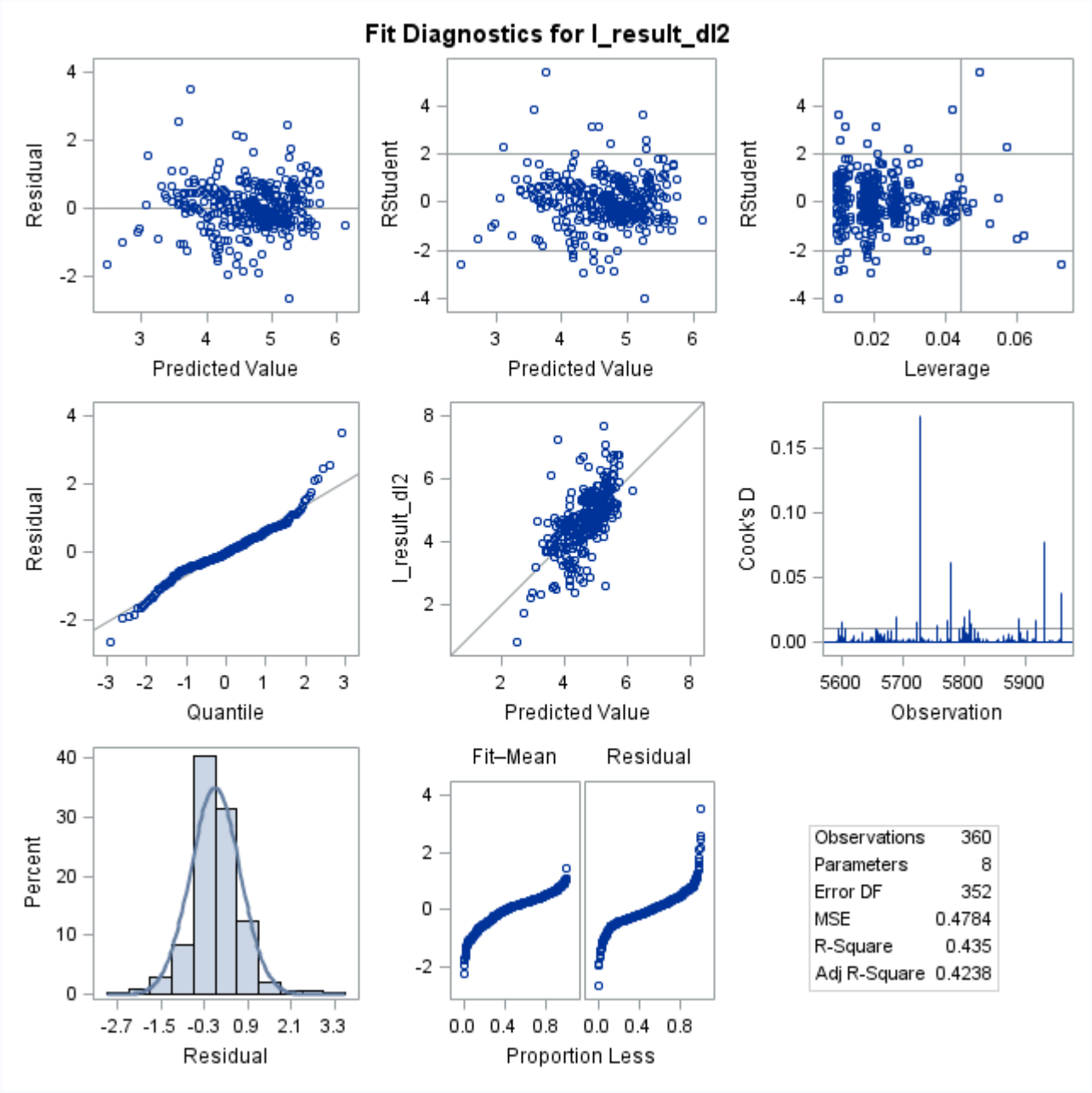
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	129.6540924	18.5220132	38.71	<.0001
Error	352	168.4051968	0.4784239		
Corrected Total	359	298.0592892			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.434994	14.75857	0.691682	4.686644

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.42158291	8.48431658	17.73	<.0001
l_al_frac	1	85.70457296	85.70457296	179.14	<.0001
time	1	1.52793653	1.52793653	3.19	0.0748

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	28.84613104	5.76922621	12.06	<.0001
l_al_frac	1	85.04733038	85.04733038	177.77	<.0001
time	1	1.52793653	1.52793653	3.19	0.0748


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.4784
R-Square 0.435
Adj R-Square 0.4238

Metals Lead
Temporal Two-way: Metals with Aluminum as Covariate

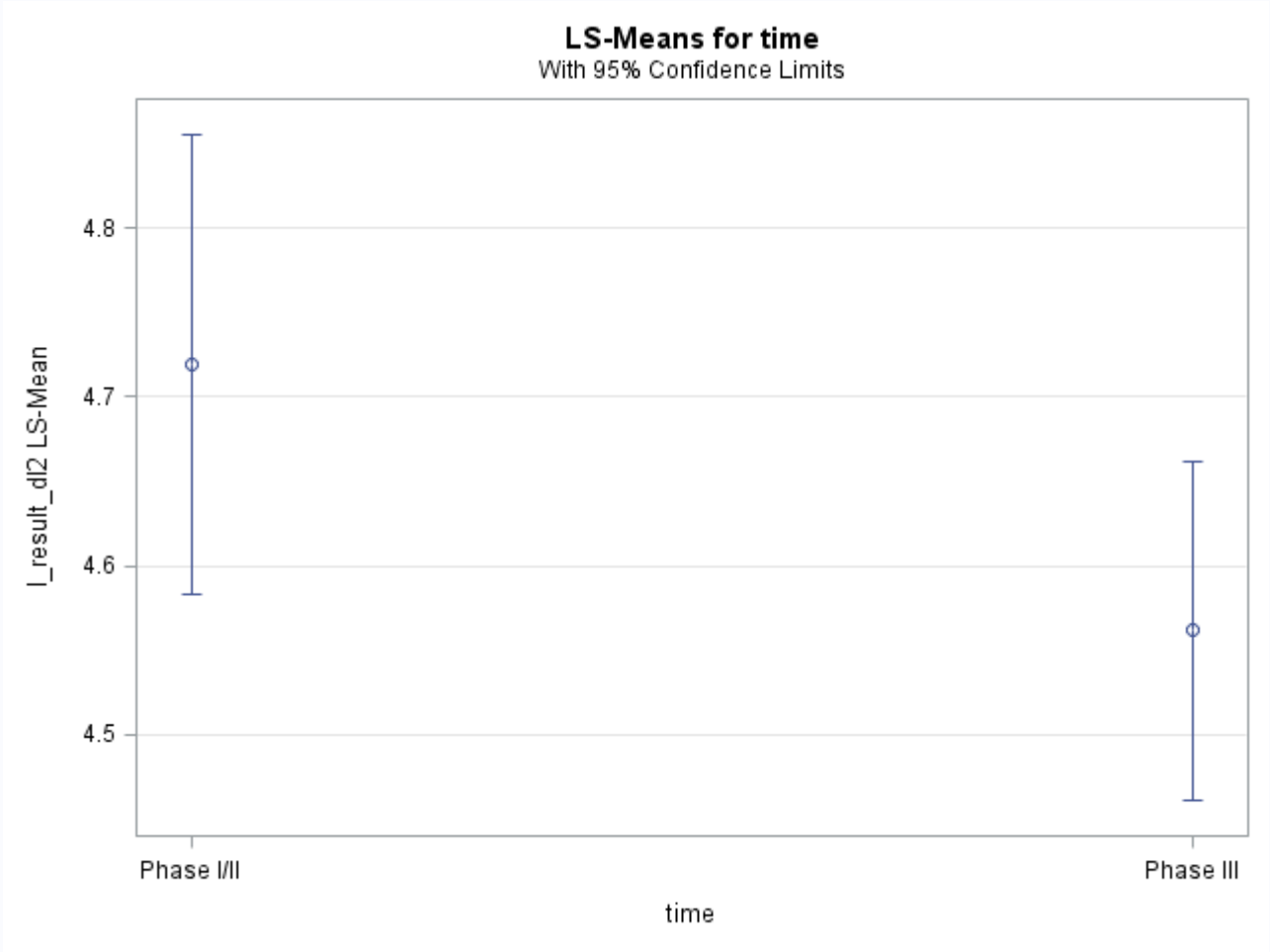
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
Phase I/II	4.71946885	0.0748
Phase III	4.56147549	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	4.719469	4.583229	4.855709
Phase III	4.561475	4.460728	4.662223

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.157993	-0.015881	0.331868


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
4.8
4.7
4.6
4.5
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Mercury
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

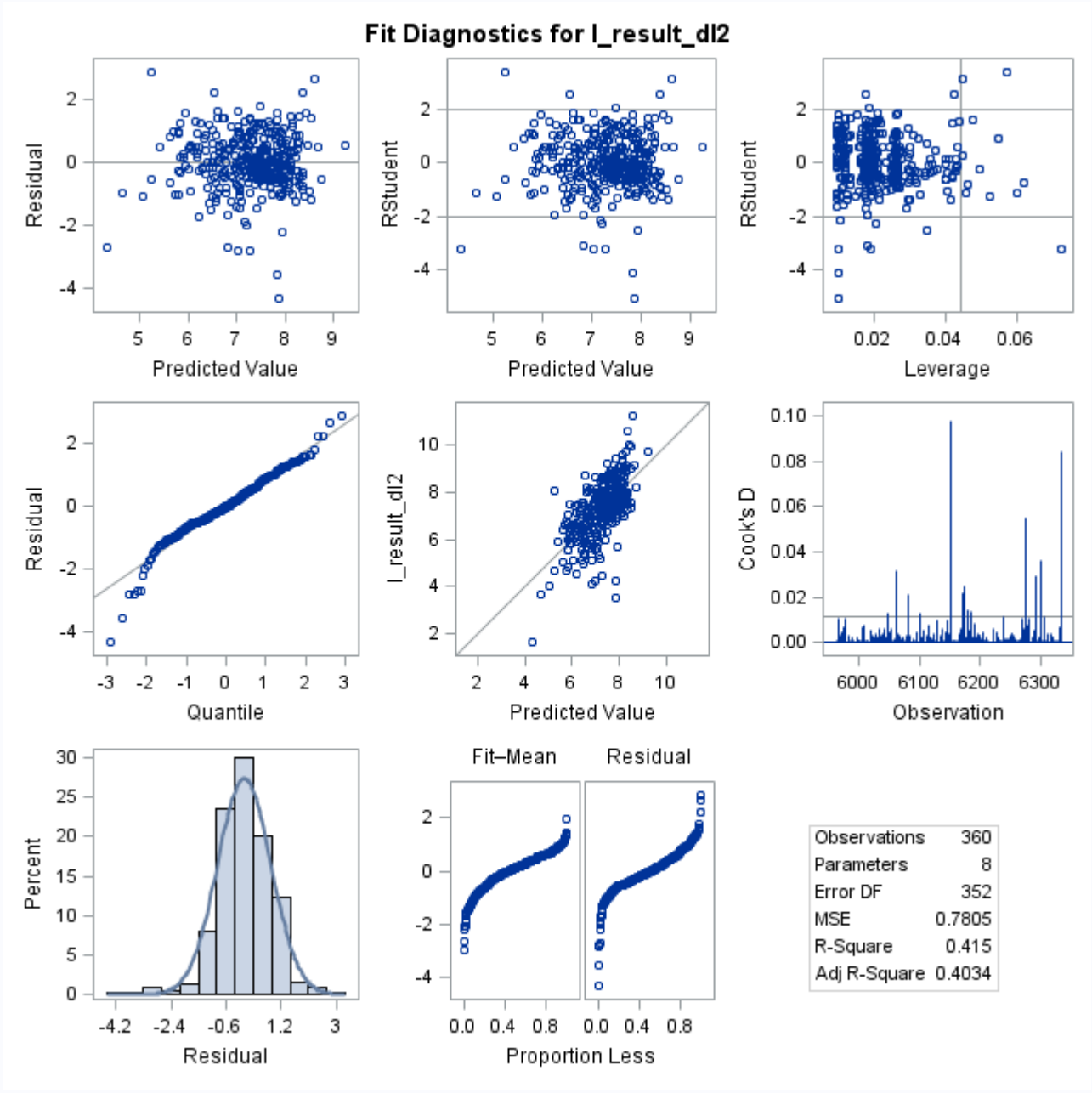
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	194.9168209	27.8452601	35.68	<.0001
Error	352	274.7318651	0.7804883		
Corrected Total	359	469.6486860			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.415027	12.10018	0.883452	7.301149

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	41.8346142	8.3669228	10.72	<.0001
l_al_frac	1	140.2483697	140.2483697	179.69	<.0001
time	1	12.8338370	12.8338370	16.44	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.1778891	6.8355778	8.76	<.0001
l_al_frac	1	137.9384637	137.9384637	176.73	<.0001
time	1	12.8338370	12.8338370	16.44	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.7805
R-Square 0.415
Adj R-Square 0.4034

Metals Mercury
Temporal Two-way: Metals with Aluminum as Covariate

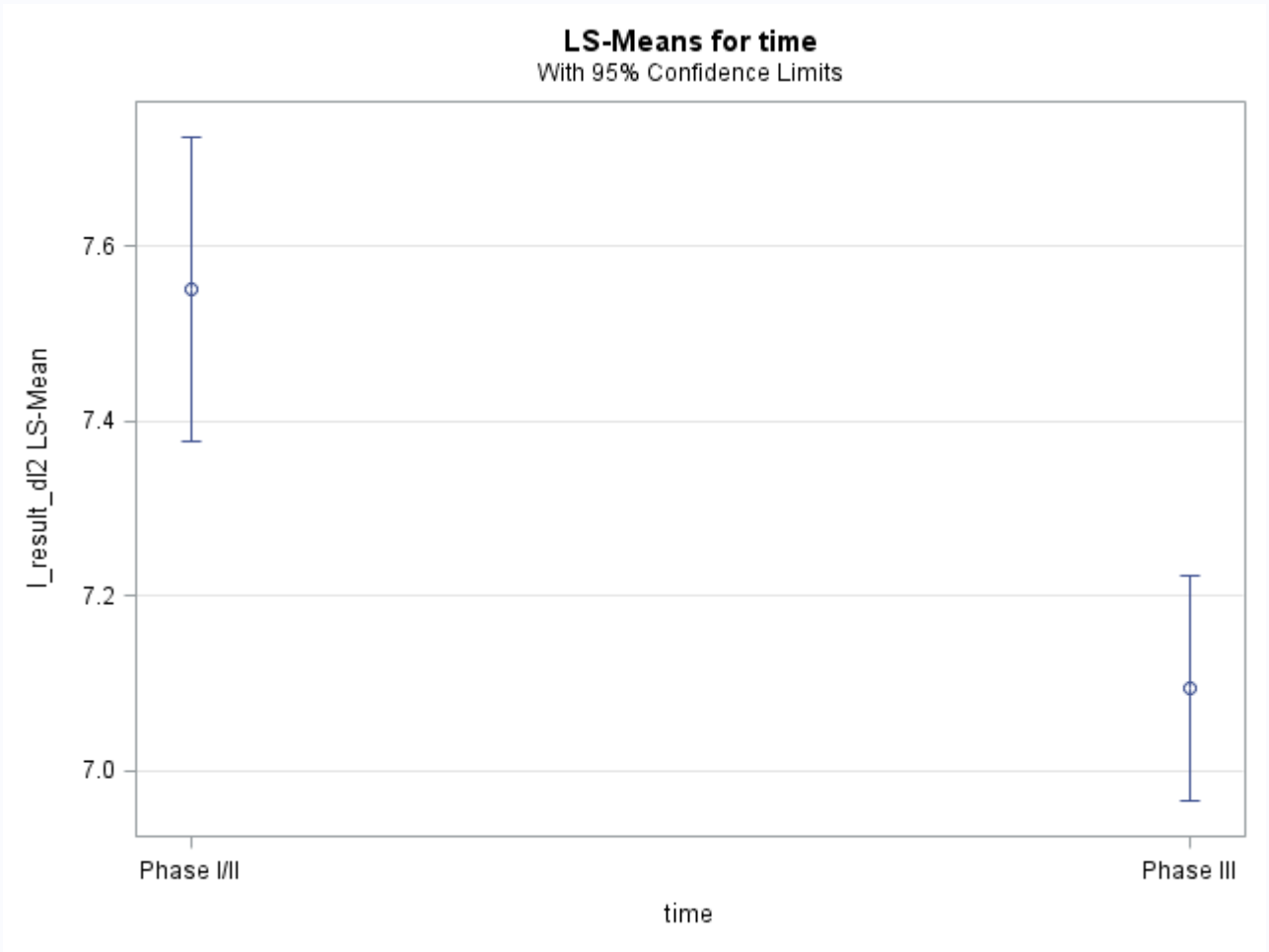
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	7.55148791	<.0001
Phase III	7.09359445	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	7.551488	7.377475	7.725501
Phase III	7.093594	6.964914	7.222274

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.457893	0.235811	0.679975


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
7.6
7.4
7.2
7.0
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Nickel
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

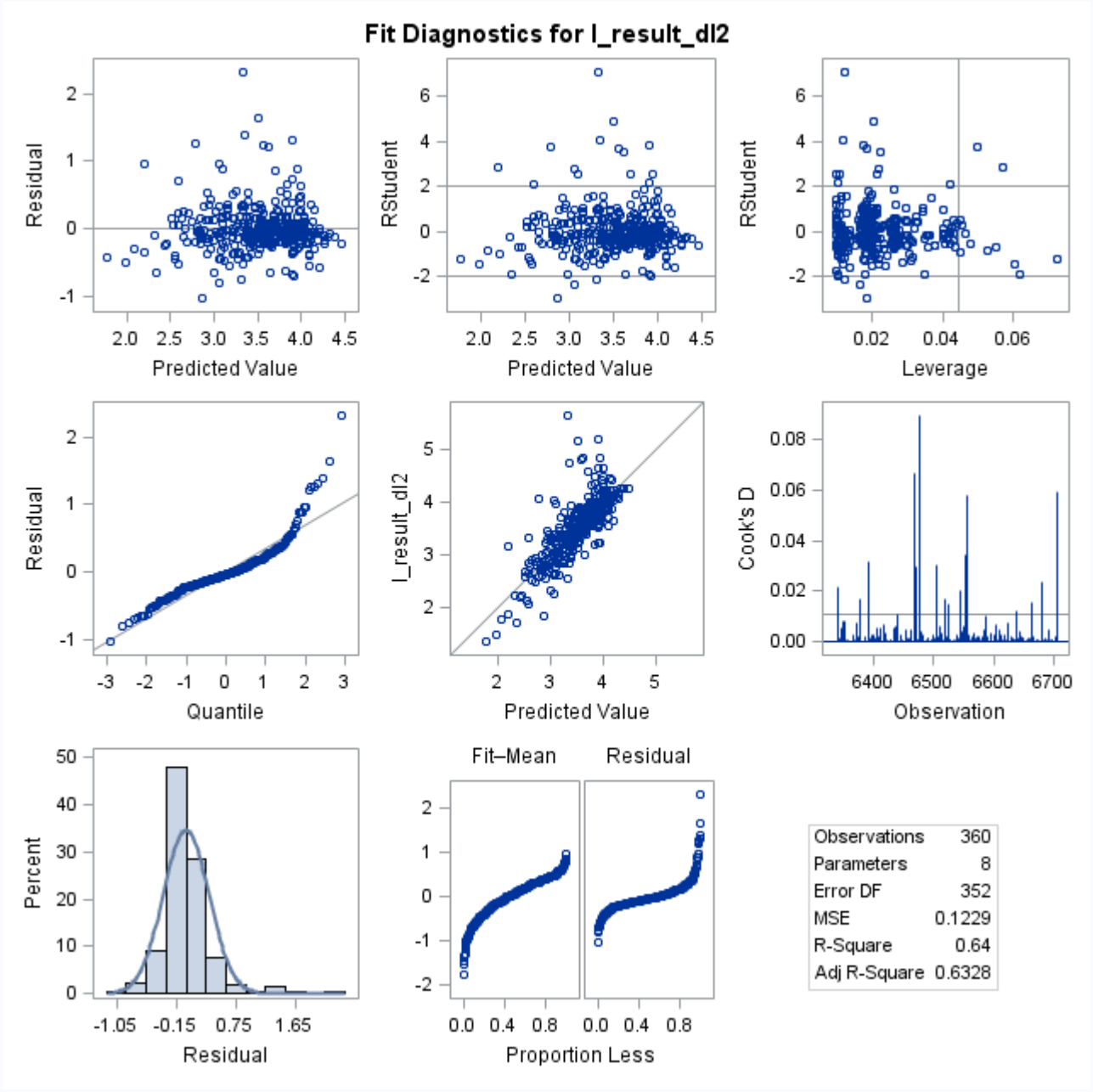
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	76.9270572	10.9895796	89.39	<.0001
Error	352	43.2761427	0.1229436		
Corrected Total	359	120.2031999			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.639975	9.971054	0.350633	3.516510

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	15.69808399	3.13961680	25.54	<.0001
l_al_frac	1	60.99139963	60.99139963	496.09	<.0001
time	1	0.23757358	0.23757358	1.93	0.1654

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	7.28416915	1.45683383	11.85	<.0001
l_al_frac	1	61.14909665	61.14909665	497.38	<.0001
time	1	0.23757358	0.23757358	1.93	0.1654


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.1229
R-Square 0.64
Adj R-Square 0.6328

Metals Nickel
Temporal Two-way: Metals with Aluminum as Covariate

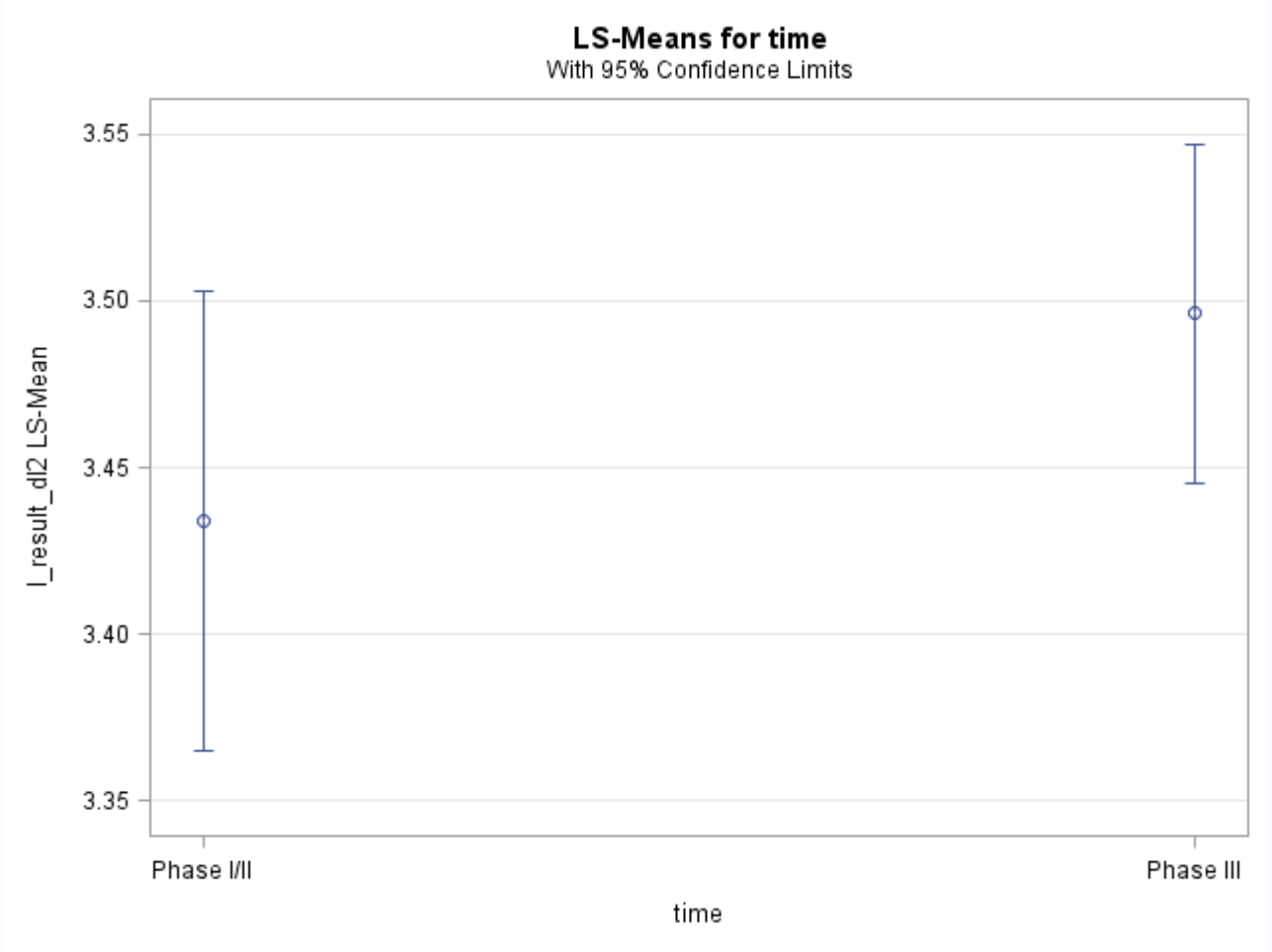
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	3.43386876	0.1654
Phase III	3.49616836	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	3.433869	3.364805	3.502933
Phase III	3.496168	3.445097	3.547240

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	-0.062300	-0.150442	0.025842


LS-Means for time
With 95% Confidence Limits
3.55
3.50
3.45
3.40
3.35
l_result_dl2 LS-Mean
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	361
Number of Observations Used	351

Metals Silver
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

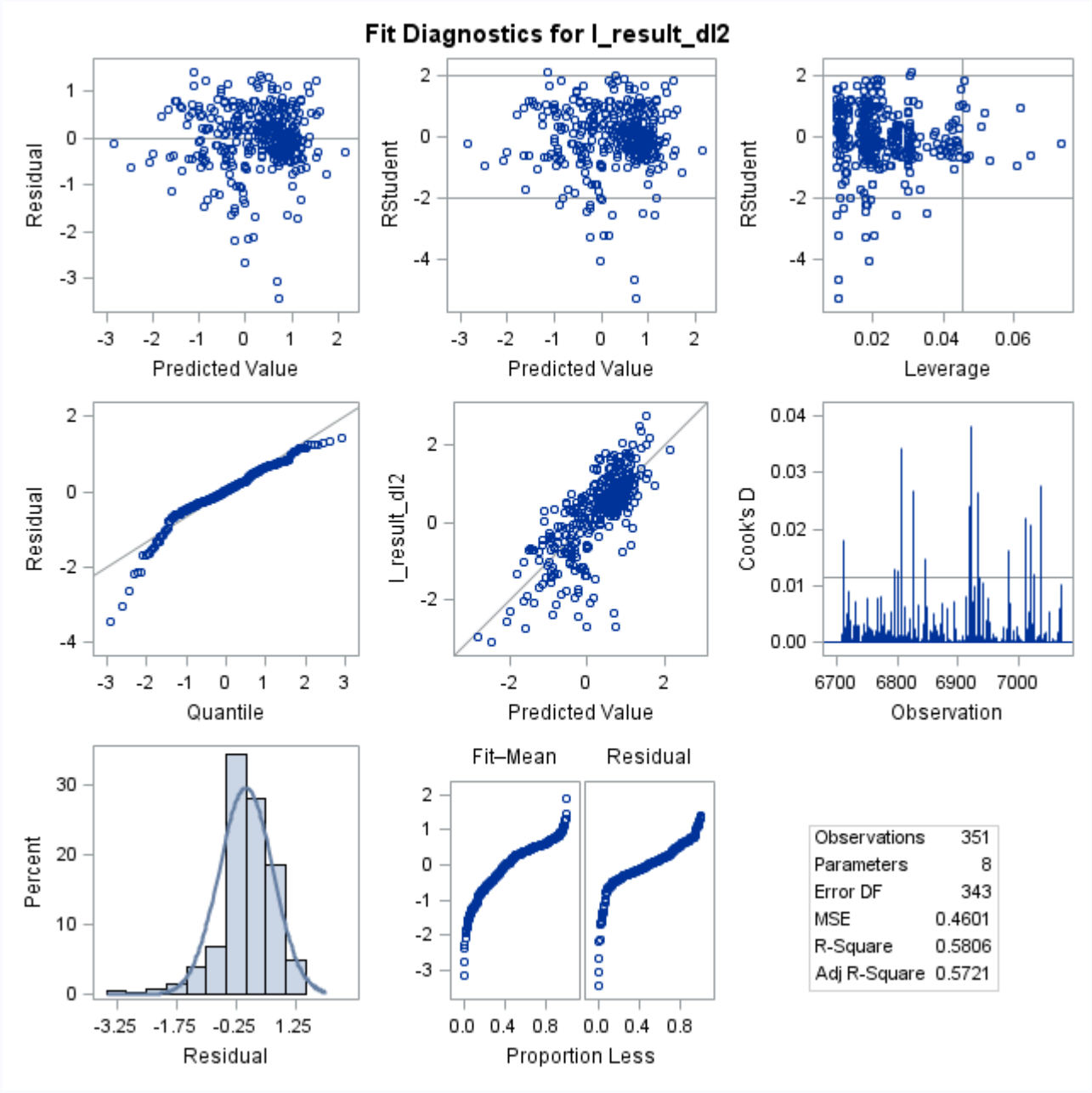
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	218.5000094	31.2142871	67.84	<.0001
Error	343	157.8120645	0.4600935		
Corrected Total	350	376.3120739			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.580635	241.8915	0.678302	0.280416

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	40.7963677	8.1592735	17.73	<.0001
l_al_frac	1	167.3703161	167.3703161	363.77	<.0001
time	1	10.3333255	10.3333255	22.46	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	14.3124870	2.8624974	6.22	<.0001
l_al_frac	1	164.3747604	164.3747604	357.26	<.0001
time	1	10.3333255	10.3333255	22.46	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 351
Parameters 8
Error DF 343
MSE 0.4601
R-Square 0.5806
Adj R-Square 0.5721

Metals Silver
Temporal Two-way: Metals with Aluminum as Covariate

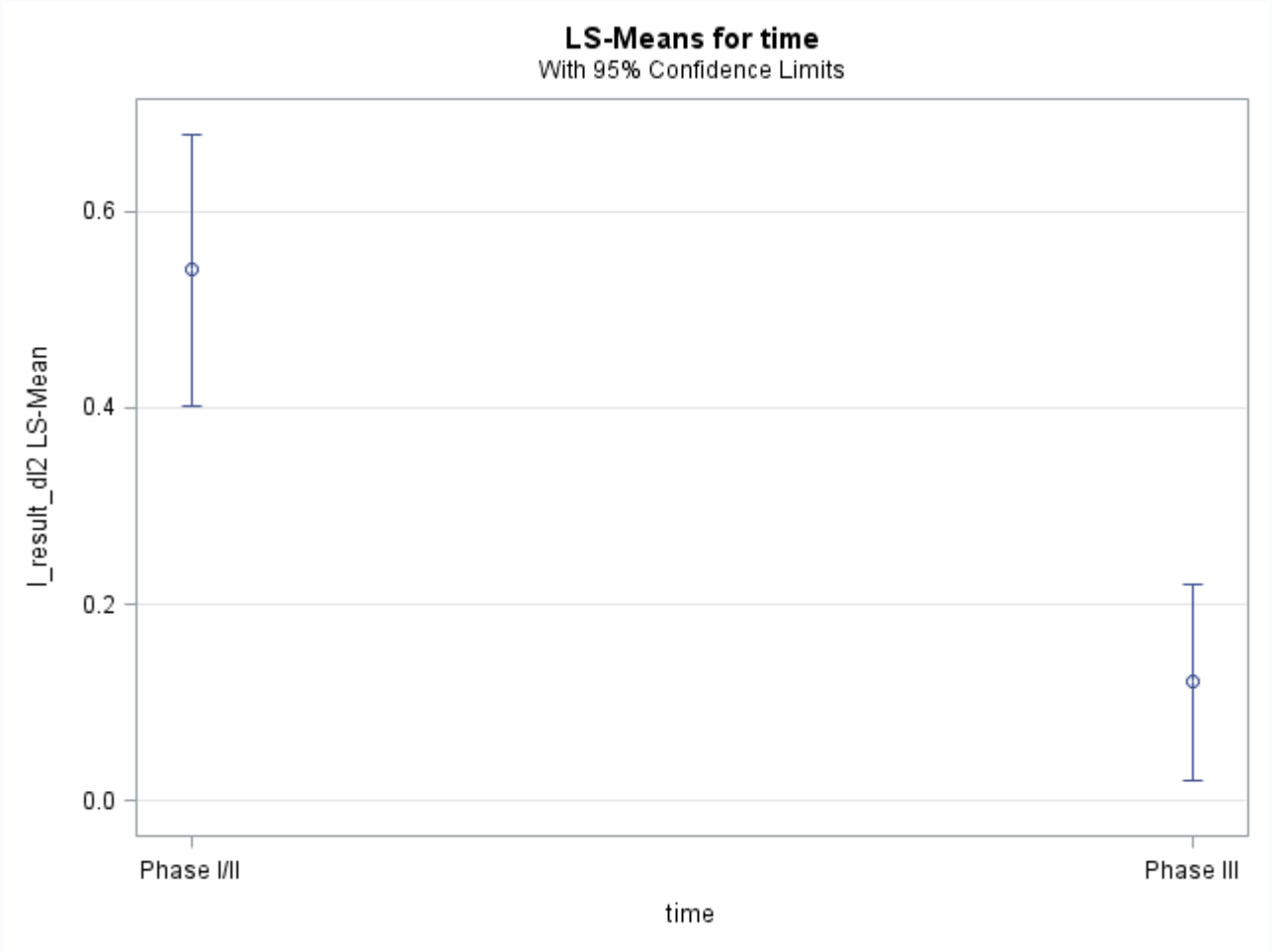
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	0.54038492	<.0001
Phase III	0.12069457	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	0.540385	0.402111	0.678659
Phase III	0.120695	0.021091	0.220298

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.419690	0.245504	0.593877


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
0.6
0.4
0.2
0.0
Phase I/II
Phase III
time

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
time	2	Phase I/II Phase III
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	372
Number of Observations Used	360

Metals Zinc
Temporal Two-way: Metals with Aluminum as Covariate

The GLM Procedure

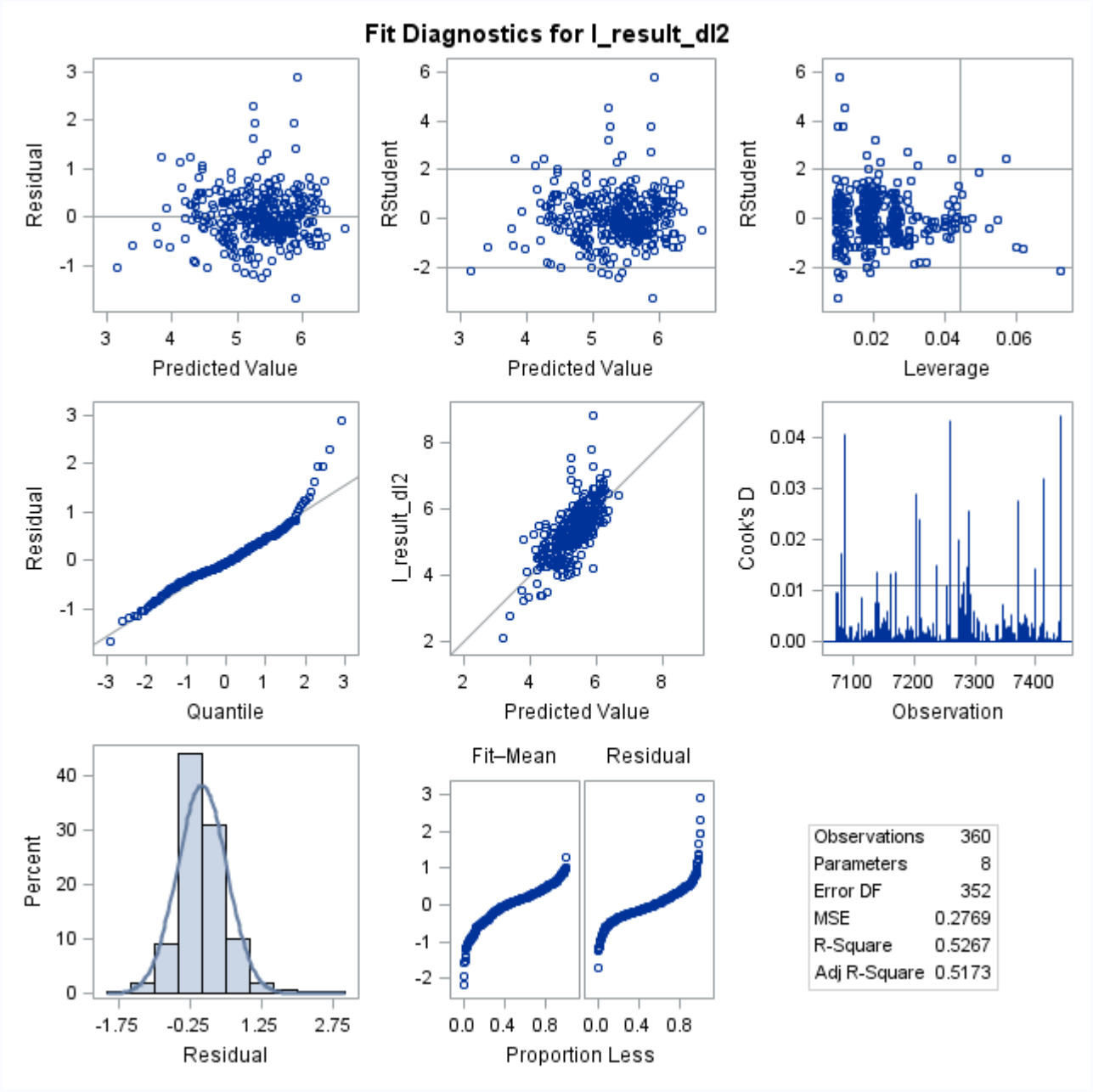
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	108.4552817	15.4936117	55.96	<.0001
Error	352	97.4657613	0.2768914		
Corrected Total	359	205.9210430			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.526684	9.837012	0.526205	5.349233

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	31.12571882	6.22514376	22.48	<.0001
l_al_frac	1	77.05534204	77.05534204	278.29	<.0001
time	1	0.27422085	0.27422085	0.99	0.3203

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	21.50494393	4.30098879	15.53	<.0001
l_al_frac	1	76.76183318	76.76183318	277.23	<.0001
time	1	0.27422085	0.27422085	0.99	0.3203


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 360
Parameters 8
Error DF 352
MSE 0.2769
R-Square 0.5267
Adj R-Square 0.5173

Metals Zinc
Temporal Two-way: Metals with Aluminum as Covariate

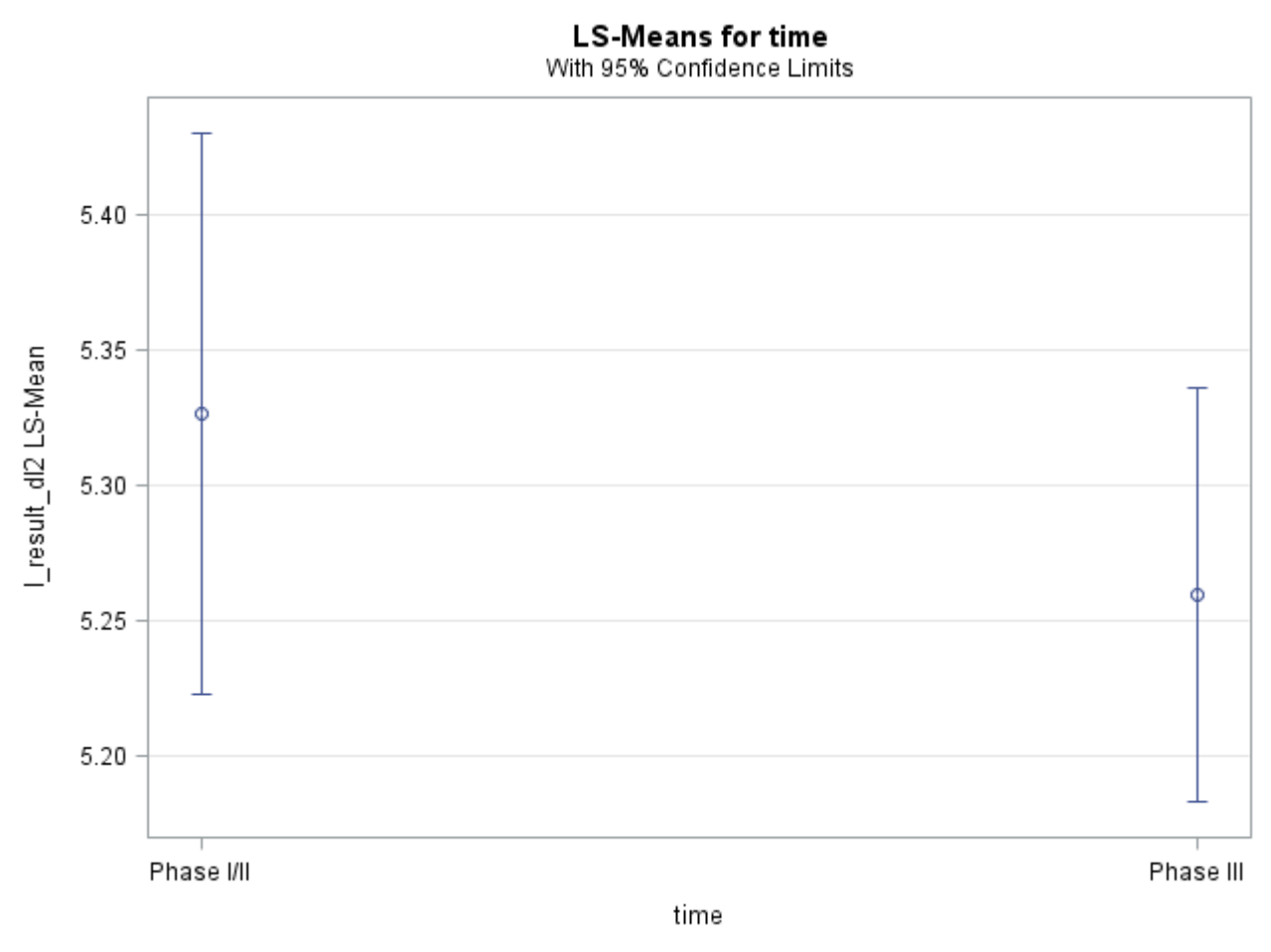
The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

time	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Phase I/II	5.32689668	0.3203
Phase III	5.25996428	

time	l_result_dl2 LSMEAN	95% Confidence Limits	
Phase I/II	5.326897	5.223250	5.430543
Phase III	5.259964	5.183320	5.336609

Least Squares Means for Effect time

i	j	Difference Between Means	95% Confidence Limits for LSMean(i)-LSMean(j)	
1	**2**	0.066932	-0.065345	0.199210


LS-Means for time
With 95% Confidence Limits
l_result_dl2 LS-Mean
5.40
5.35
5.30
5.25
5.20
Phase I/II
Phase III
time

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

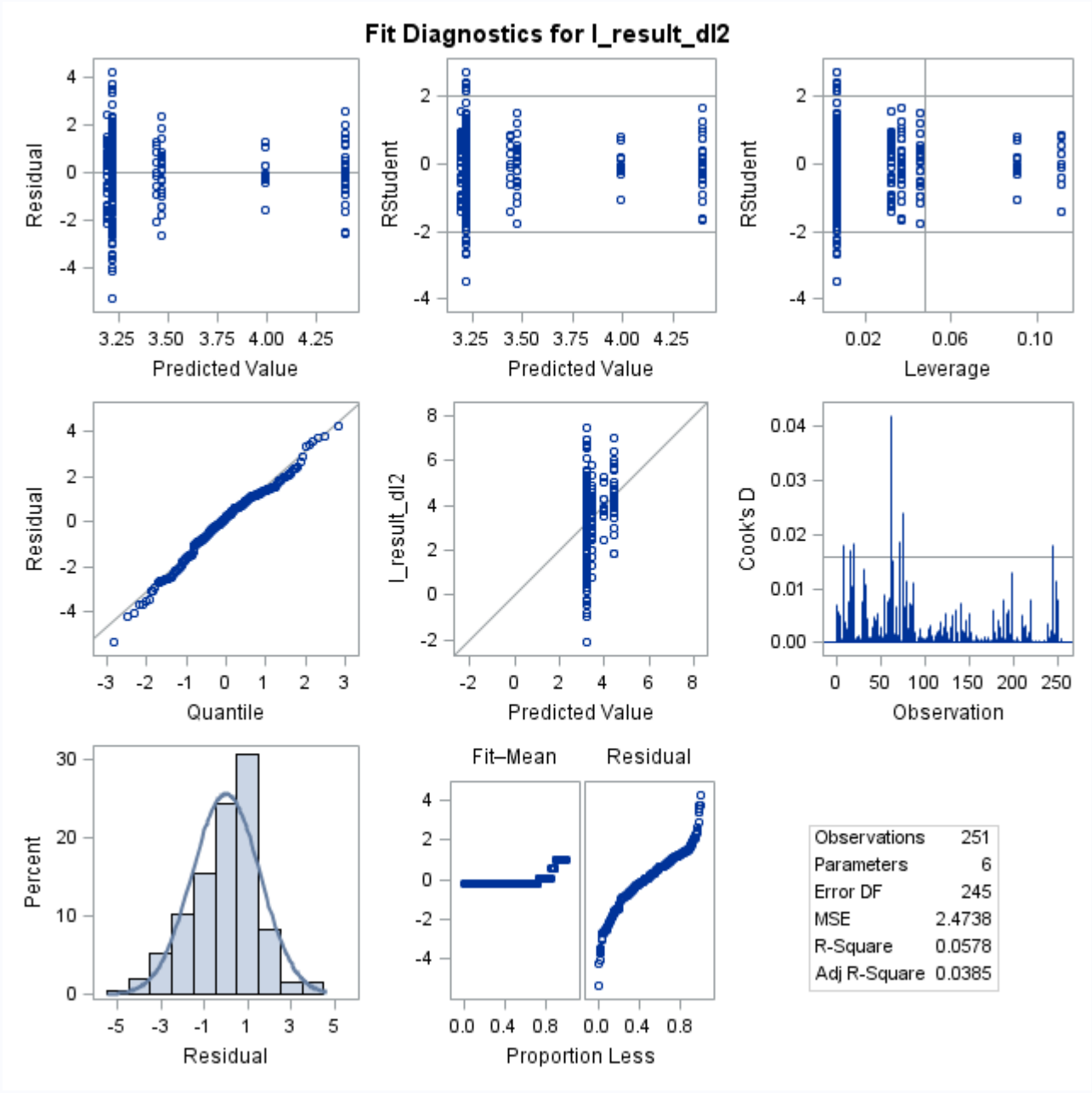
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	37.1553261	7.4310652	3.00	0.0119
Error	245	606.0872755	2.4738256		
Corrected Total	250	643.2426016			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.057763	46.21436	1.572840	3.403358

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	37.15532609	7.43106522	3.00	0.0119

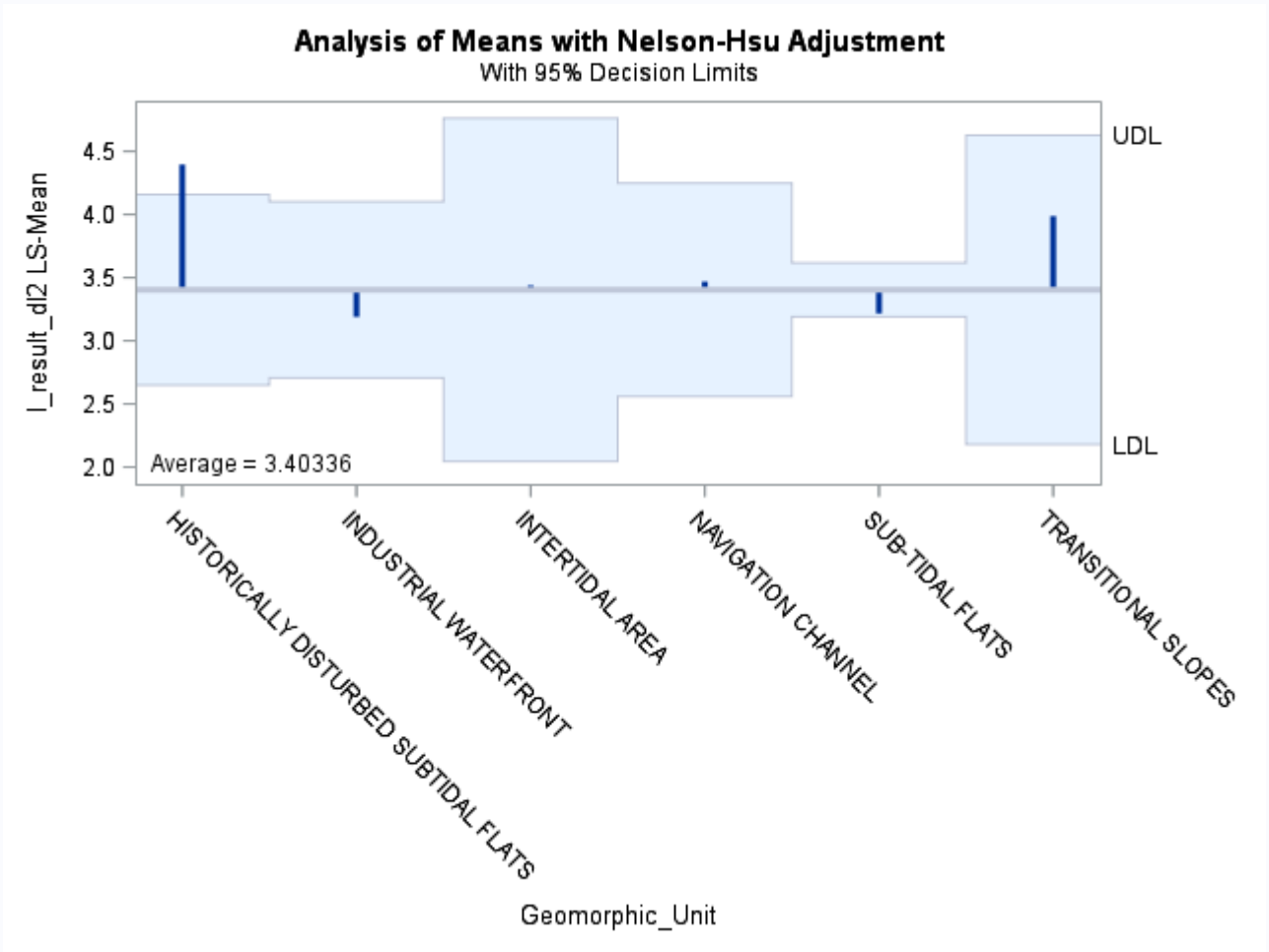
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	37.15532609	7.43106522	3.00	0.0119


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 2.4738
R-Square 0.0578
Adj R-Square 0.0385

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.39535439	0.0036
INDUSTRIAL WATERFRONT	3.18863461	0.9389
INTERTIDAL AREA	3.43779201	1.0000
NAVIGATION CHANNEL	3.46844656	0.9999
SUB-TIDAL FLATS	3.21598655	0.1140
TRANSITIONAL SLOPES	3.98733412	0.7105


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
4.5
4.0
3.5
3.0
2.5
2.0
UDL
LDL
Average = 3.40336
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.39535439	1
INDUSTRIAL WATERFRONT	3.18863461	2
INTERTIDAL AREA	3.43779201	3
NAVIGATION CHANNEL	3.46844656	4
SUB-TIDAL FLATS	3.21598655	5
TRANSITIONAL SLOPES	3.98733412	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0445	0.6114	0.3164	0.0053	0.9787
2	0.0445		0.9983	0.9880	1.0000	0.6982
3	0.6114	0.9983		1.0000	0.9985	0.9711
4	0.3164	0.9880	1.0000		0.9814	0.9478
5	0.0053	1.0000	0.9985	0.9814		0.6189
6	0.9787	0.6982	0.9711	0.9478	0.6189	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	210.0	41.9996	3.24	0.0076
Error	245	3180.4	12.9812		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	4.64	0.0018
Error	42.5510		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	4.39535439	1.23149753
INDUSTRIAL WATERFRONT	**31**	3.18863461	1.23391080
INTERTIDAL AREA	**9**	3.43779201	1.08776923
NAVIGATION CHANNEL	**22**	3.46844656	1.22358224
SUB-TIDAL FLATS	**151**	3.21598655	1.77852353
TRANSITIONAL SLOPES	**11**	3.98733412	0.74845899

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

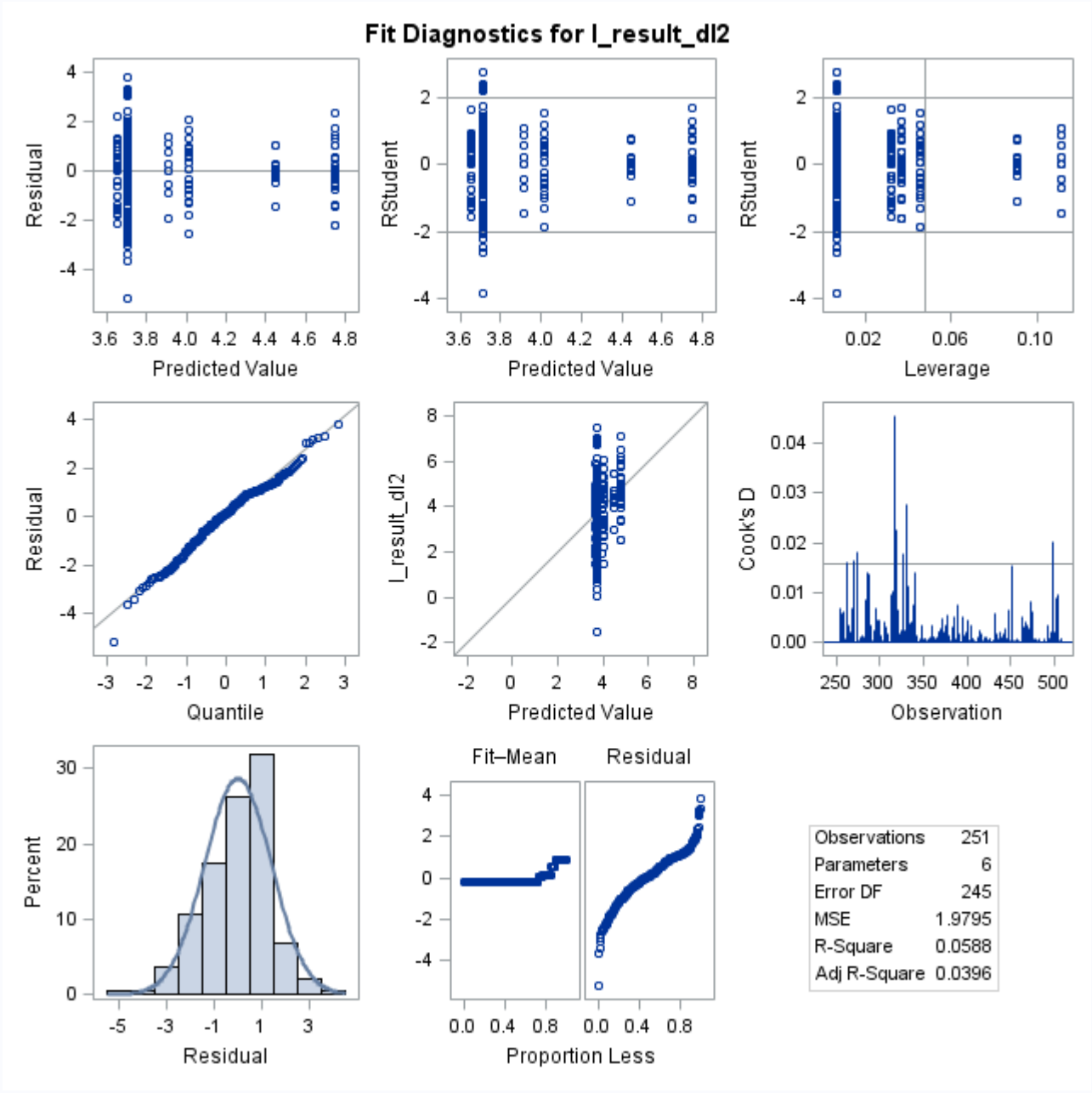
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	30.3089168	6.0617834	3.06	0.0106
Error	245	484.9735273	1.9794838		
Corrected Total	250	515.2824442			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.058820	36.26622	1.406941	3.879482

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	30.30891683	6.06178337	3.06	0.0106

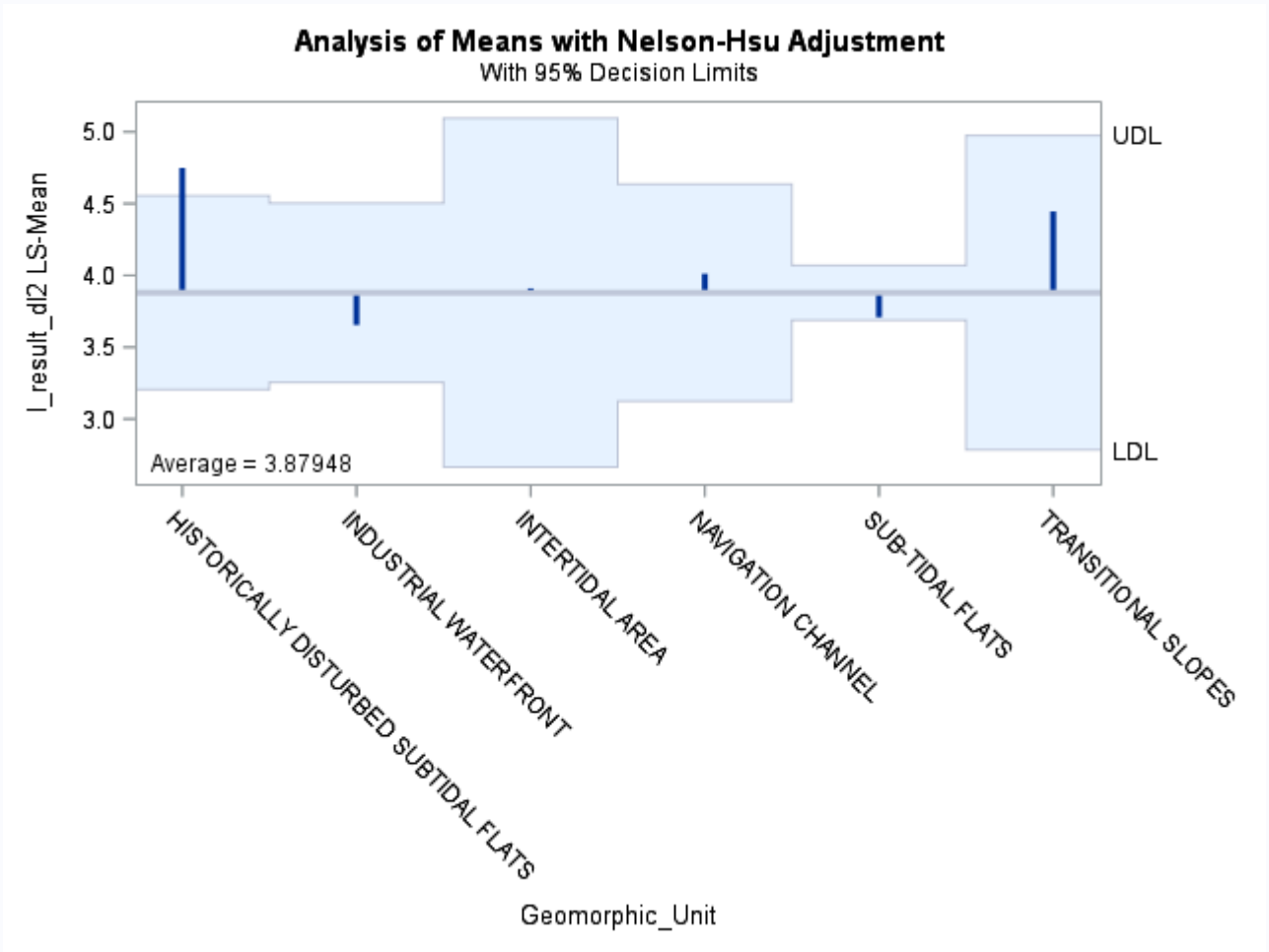
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	30.30891683	6.06178337	3.06	0.0106


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.9795
R-Square 0.0588
Adj R-Square 0.0396

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.74840229	0.0047
INDUSTRIAL WATERFRONT	3.65436905	0.8869
INTERTIDAL AREA	3.91040590	1.0000
NAVIGATION CHANNEL	4.01149517	0.9950
SUB-TIDAL FLATS	3.70803165	0.1001
TRANSITIONAL SLOPES	4.44530156	0.6376


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.0
4.5
4.0
3.5
3.0
UDL
LDL
Average = 3.87948
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.74840229	1
INDUSTRIAL WATERFRONT	3.65436905	2
INTERTIDAL AREA	3.91040590	3
NAVIGATION CHANNEL	4.01149517	4
SUB-TIDAL FLATS	3.70803165	5
TRANSITIONAL SLOPES	4.44530156	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0398	0.6339	0.4525	0.0063	0.9908
2	0.0398		0.9968	0.9436	1.0000	0.5981
3	0.6339	0.9968		1.0000	0.9983	0.9585
4	0.4525	0.9436	1.0000		0.9343	0.9607
5	0.0063	1.0000	0.9983	0.9343		0.5477
6	0.9908	0.5981	0.9585	0.9607	0.5477	

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	121.6	24.3175	2.86	0.0157
Error	245	2082.2	8.4989		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	4.86	0.0013
Error	42.1608		

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	4.74840229	1.07778762
INDUSTRIAL WATERFRONT	**31**	3.65436905	1.12482127
INTERTIDAL AREA	**9**	3.91040590	1.05418811
NAVIGATION CHANNEL	**22**	4.01149517	1.15948447
SUB-TIDAL FLATS	**151**	3.70803165	1.58117592
TRANSITIONAL SLOPES	**11**	4.44530156	0.68366508

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

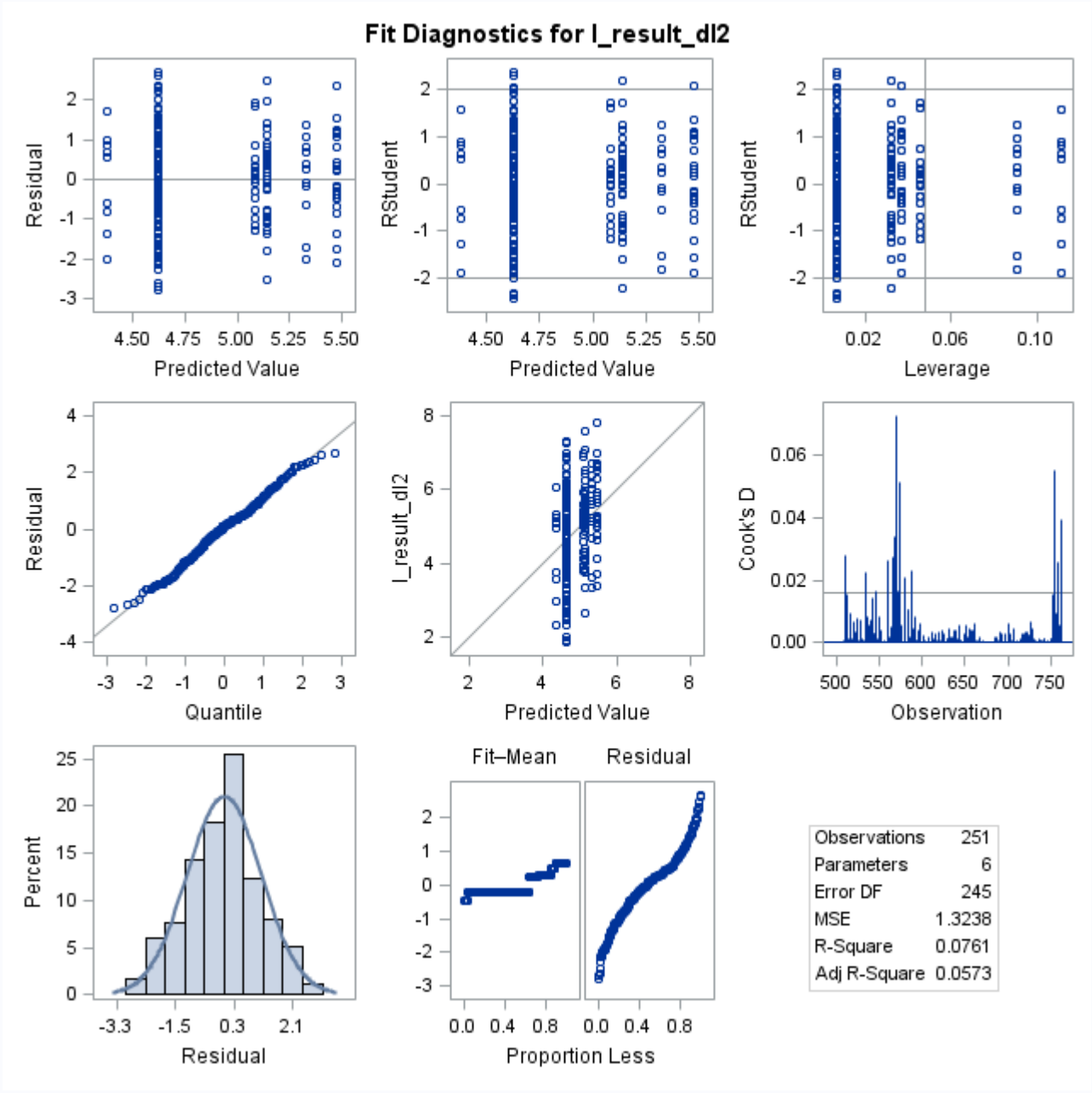
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	26.7239284	5.3447857	4.04	0.0015
Error	245	324.3407624	1.3238398		
Corrected Total	250	351.0646908			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.076123	23.76489	1.150582	4.841522

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	26.72392844	5.34478569	4.04	0.0015

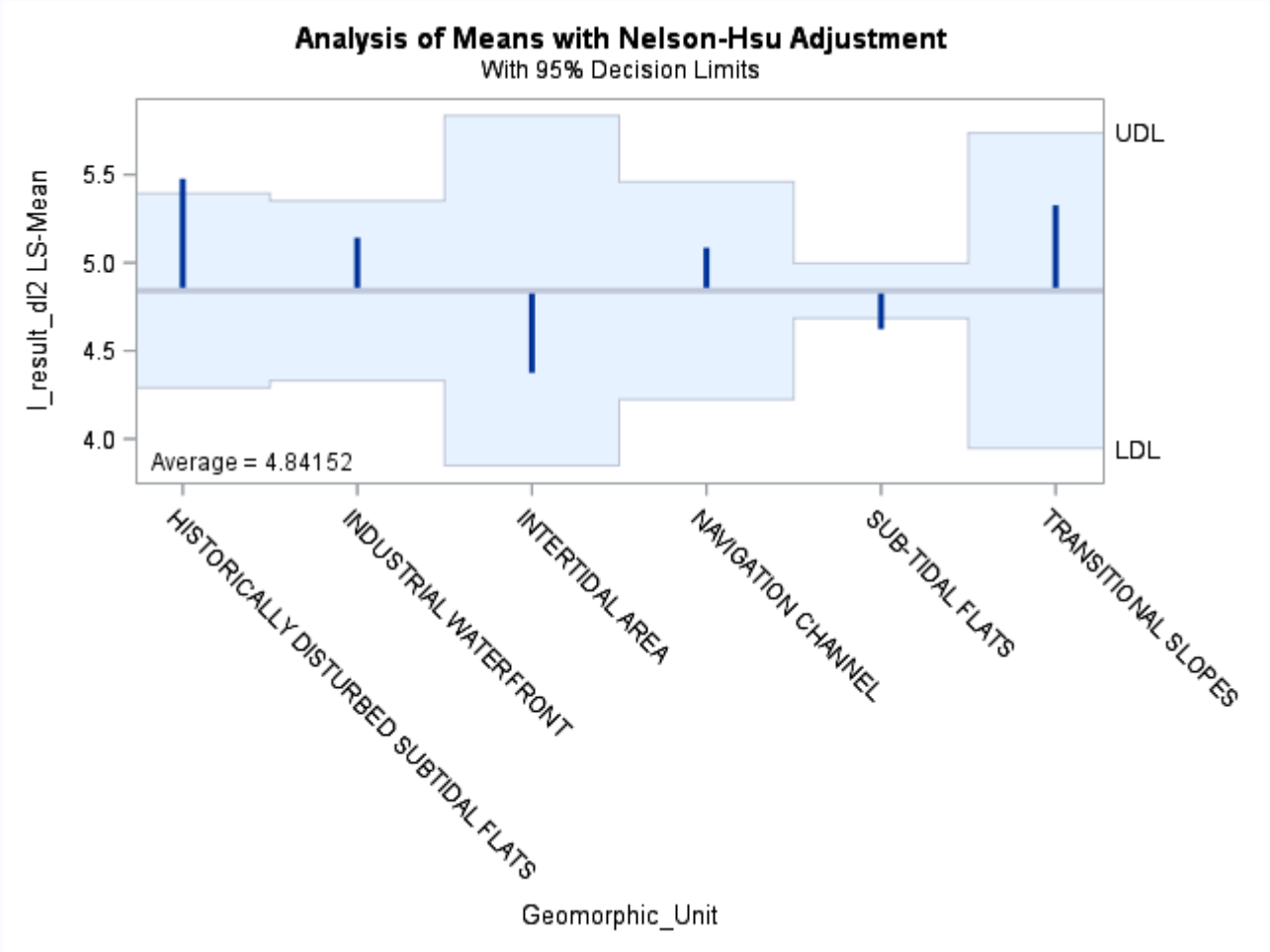
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	26.72392844	5.34478569	4.04	0.0015


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.3238
R-Square 0.0761
Adj R-Square 0.0573

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.47650303	0.0154
INDUSTRIAL WATERFRONT	5.14202286	0.5022
INTERTIDAL AREA	4.37534672	0.7250
NAVIGATION CHANNEL	5.08509484	0.8444
SUB-TIDAL FLATS	4.62327560	0.0016
TRANSITIONAL SLOPES	5.32626565	0.5911


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.5
5.0
4.5
4.0
UDL
LDL
Average = 4.84152
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.47650303	1
INDUSTRIAL WATERFRONT	5.14202286	2
INTERTIDAL AREA	4.37534672	3
NAVIGATION CHANNEL	5.08509484	4
SUB-TIDAL FLATS	4.62327560	5
TRANSITIONAL SLOPES	5.32626565	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.8793	0.1321	0.8440	0.0061	0.9991
2	0.8793		0.4938	1.0000	0.2035	0.9975
3	0.1321	0.4938		0.6263	0.9889	0.4428
4	0.8440	1.0000	0.6263		0.4944	0.9930
5	0.0061	0.2035	0.9889	0.4944		0.3706
6	0.9991	0.9975	0.4428	0.9930	0.3706	

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	16.8213	3.3643	1.22	0.3024
Error	245	678.1	2.7679		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	4.22	0.0037
Error	39.0717		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	5.47650303	1.00579697
INDUSTRIAL WATERFRONT	**31**	5.14202286	1.10519851
INTERTIDAL AREA	**9**	4.37534672	1.24541914
NAVIGATION CHANNEL	**22**	5.08509484	0.84692055
SUB-TIDAL FLATS	**151**	4.62327560	1.21745591
TRANSITIONAL SLOPES	**11**	5.32626565	1.07672591

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

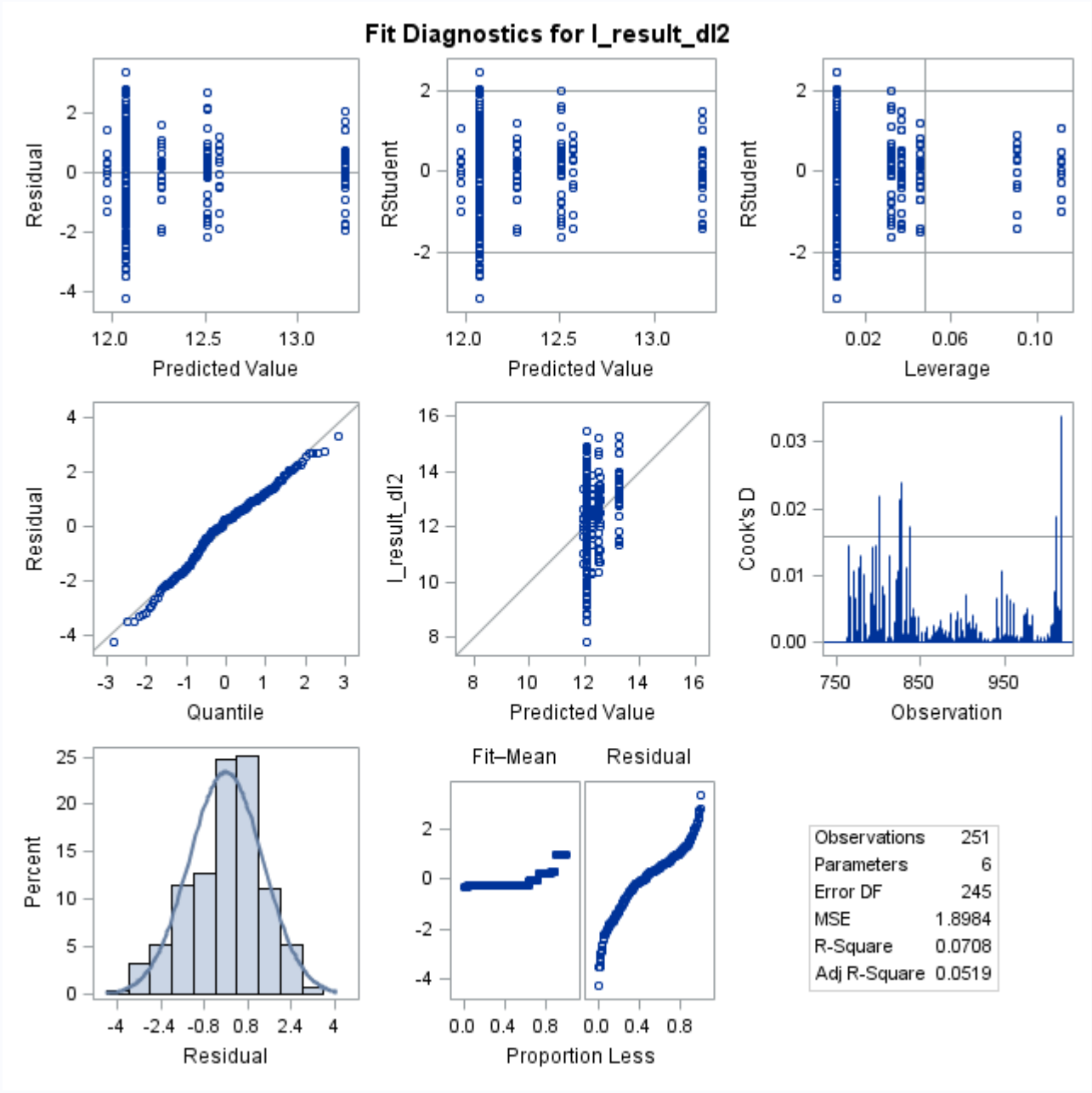
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	35.4476668	7.0895334	3.73	0.0028
Error	245	465.1113738	1.8984138		
Corrected Total	250	500.5590406			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.070816	11.21027	1.377829	12.29077

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	35.44766676	7.08953335	3.73	0.0028

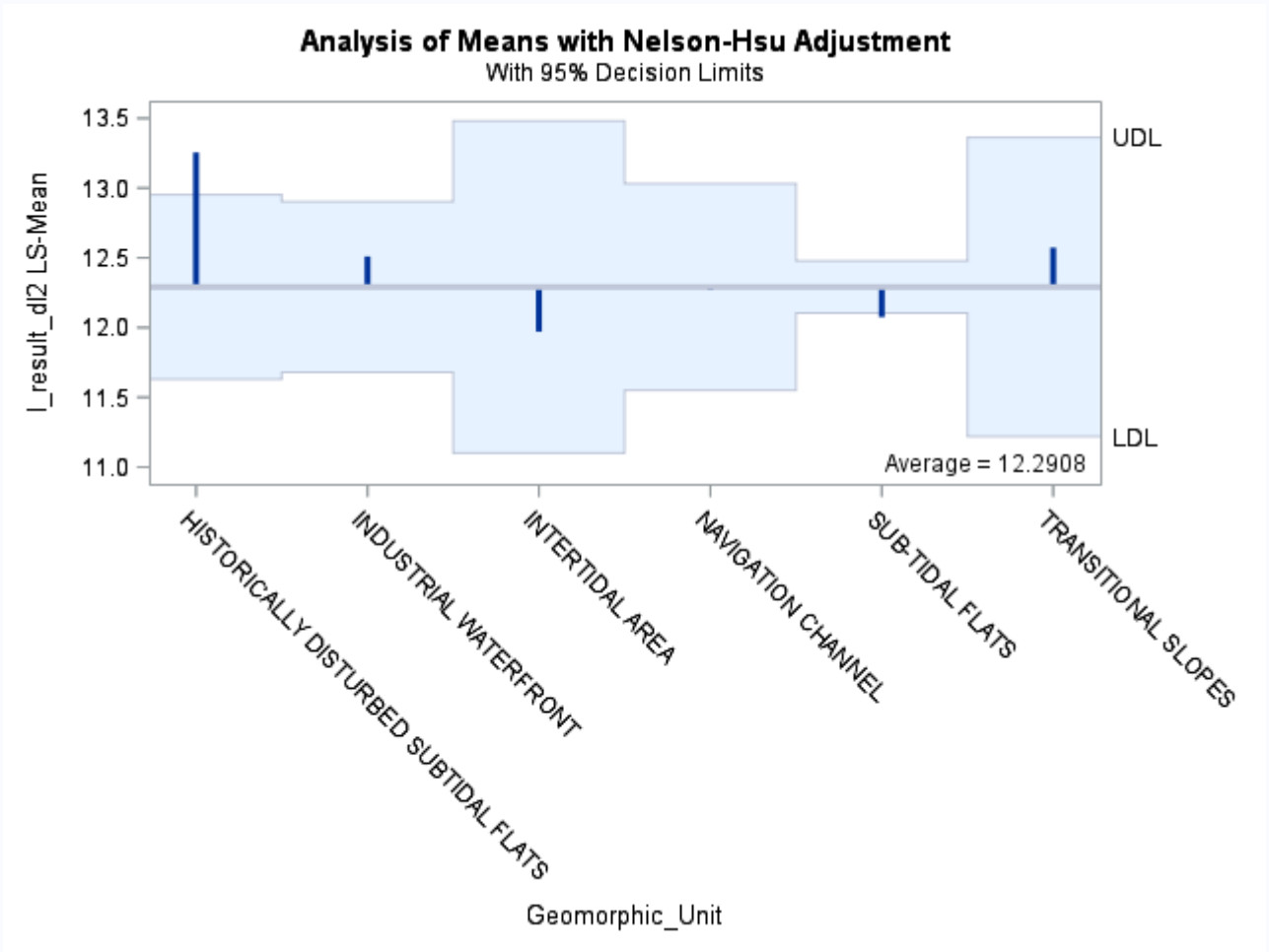
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	35.44766676	7.08953335	3.73	0.0028


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.8984
R-Square 0.0708
Adj R-Square 0.0519

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	13.2551821	0.0009
INDUSTRIAL WATERFRONT	12.5099075	0.8894
INTERTIDAL AREA	11.9709310	0.9651
NAVIGATION CHANNEL	12.2699502	1.0000
SUB-TIDAL FLATS	12.0748641	0.0147
TRANSITIONAL SLOPES	12.5732001	0.9680


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
13.5
13.0
12.5
12.0
11.5
11.0
UDL
LDL
Average = 12.2908
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	13.2551821	1
INDUSTRIAL WATERFRONT	12.5099075	2
INTERTIDAL AREA	11.9709310	3
NAVIGATION CHANNEL	12.2699502	4
SUB-TIDAL FLATS	12.0748641	5
TRANSITIONAL SLOPES	12.5732001	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3148	0.1529	0.1312	0.0008	0.7368
2	0.3148		0.9064	0.9891	0.5985	1.0000
3	0.1529	0.9064		0.9940	0.9999	0.9263
4	0.1312	0.9891	0.9940		0.9895	0.9912
5	0.0008	0.5985	0.9999	0.9895		0.8561
6	0.7368	1.0000	0.9263	0.9912	0.8561	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	120.4	24.0829	3.71	0.0030
Error	245	1592.4	6.4996		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	5.52	0.0005
Error	41.8429		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	13.2551821	1.01328995
INDUSTRIAL WATERFRONT	**31**	12.5099075	1.23736164
INTERTIDAL AREA	**9**	11.9709310	0.81053562
NAVIGATION CHANNEL	**22**	12.2699502	0.88475717
SUB-TIDAL FLATS	**151**	12.0748641	1.55185010
TRANSITIONAL SLOPES	**11**	12.5732001	0.97742197

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

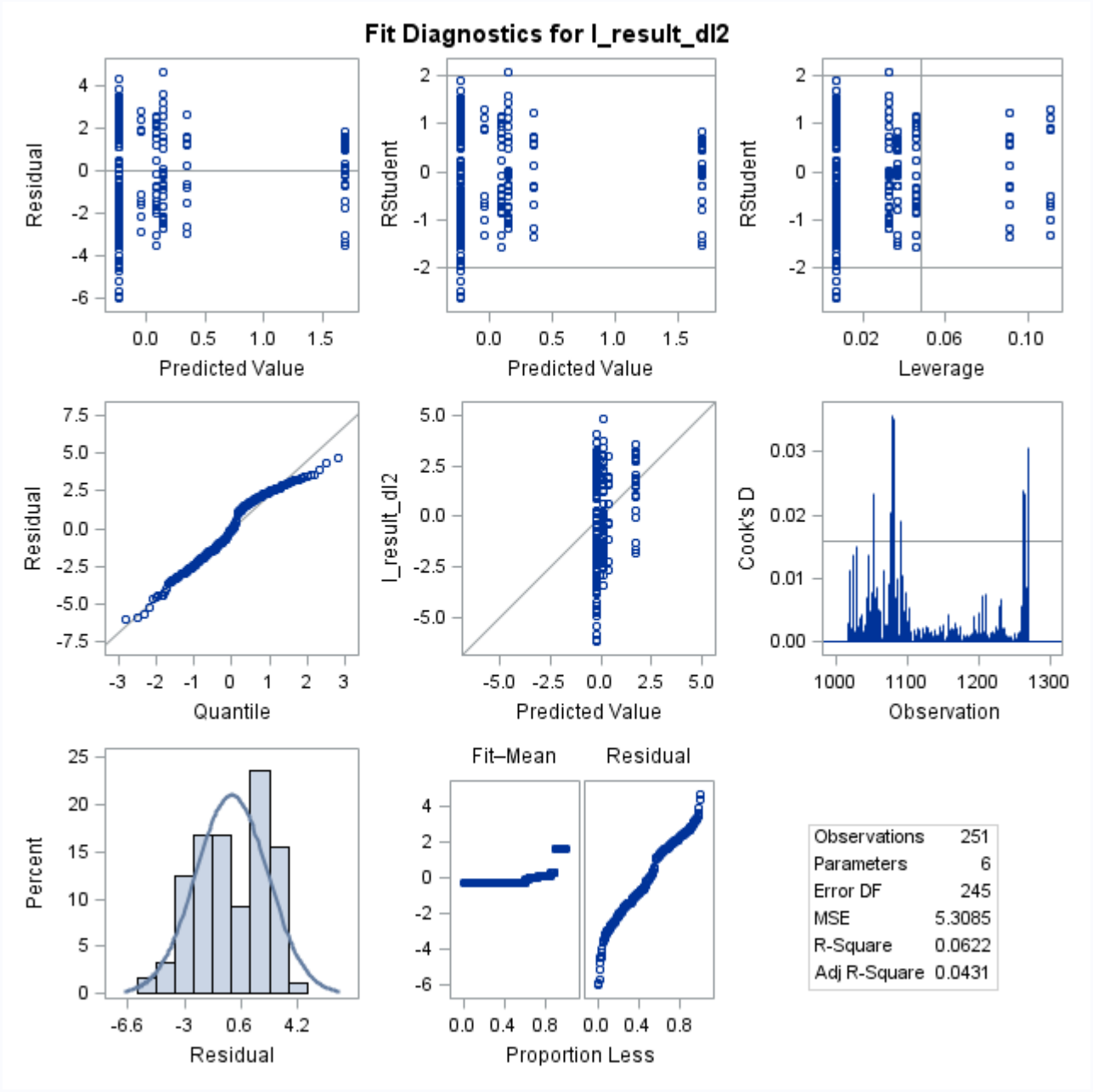
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	86.250668	17.250134	3.25	0.0074
Error	245	1300.577604	5.308480		
Corrected Total	250	1386.828272			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.062193	2859.872	2.304014	0.080564

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	86.25066813	17.25013363	3.25	0.0074

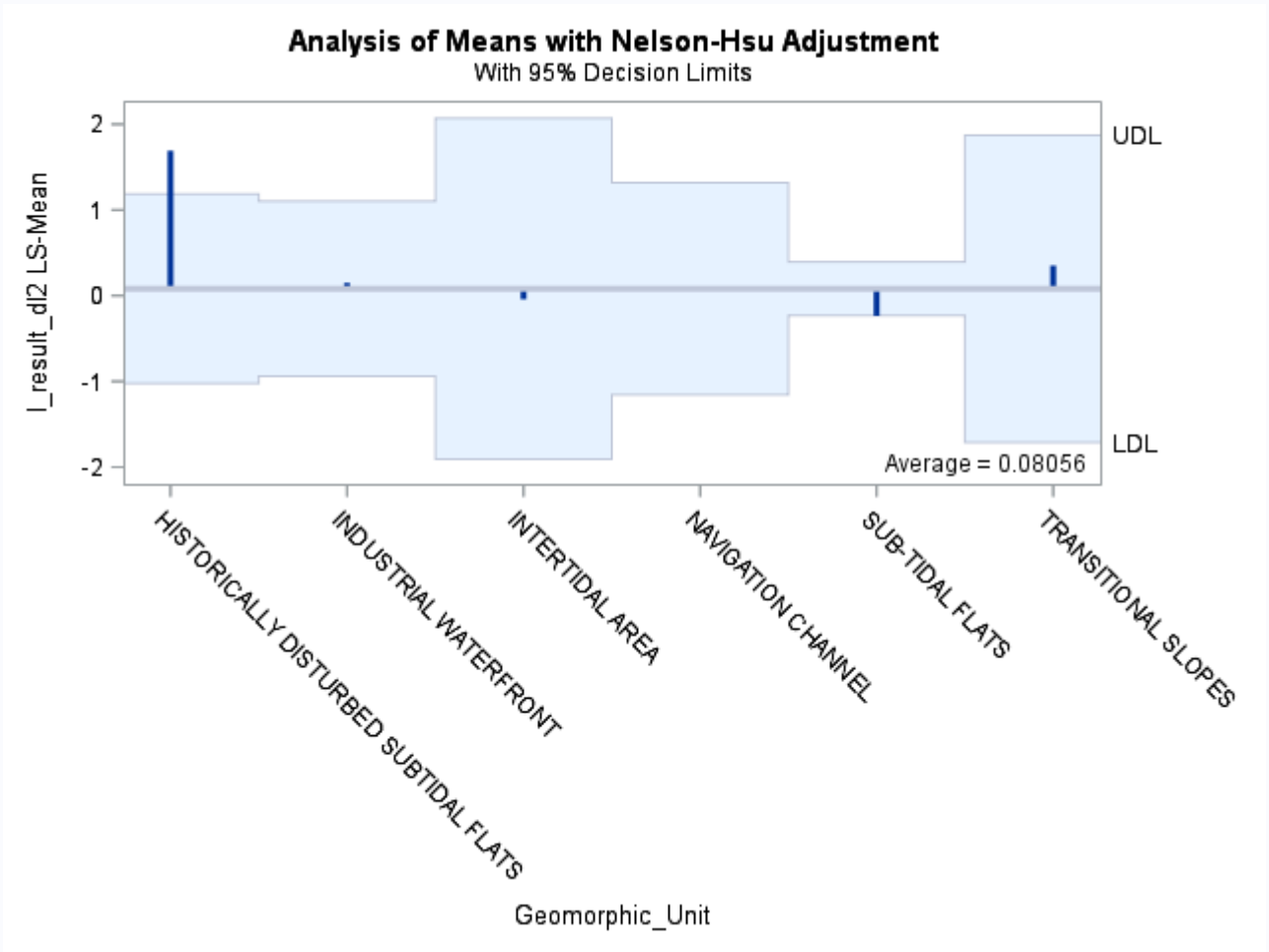
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	86.25066813	17.25013363	3.25	0.0074


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 5.3085
R-Square 0.0622
Adj R-Square 0.0431

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	1.69153068	0.0009
INDUSTRIAL WATERFRONT	0.14884894	1.0000
INTERTIDAL AREA	-0.04190250	1.0000
NAVIGATION CHANNEL	0.09186485	1.0000
SUB-TIDAL FLATS	-0.23557541	0.0455
TRANSITIONAL SLOPES	0.35125287	0.9975


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
2
1
0
-1
-2
UDL
LDL
Average = 0.08056
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	1.69153068	1
INDUSTRIAL WATERFRONT	0.14884894	2
INTERTIDAL AREA	-0.04190250	3
NAVIGATION CHANNEL	0.09186485	4
SUB-TIDAL FLATS	-0.23557541	5
TRANSITIONAL SLOPES	0.35125287	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.1157	0.3717	0.1543	0.0012	0.5820
2	0.1157		0.9999	1.0000	0.9584	0.9999
3	0.3717	0.9999		1.0000	0.9999	0.9990
4	0.1543	1.0000	1.0000		0.9893	0.9996
5	0.0012	0.9584	0.9999	0.9893		0.9645
6	0.5820	0.9999	0.9990	0.9996	0.9645	

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	617.9	123.6	4.14	0.0012
Error	245	7304.2	29.8132		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	5.70	0.0005
Error	39.8357		

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	1.69153068	1.50568449
INDUSTRIAL WATERFRONT	**31**	0.14884894	2.04647473
INTERTIDAL AREA	**9**	-0.04190250	2.22336173
NAVIGATION CHANNEL	**22**	0.09186485	1.92088237
SUB-TIDAL FLATS	**151**	-0.23557541	2.53648988
TRANSITIONAL SLOPES	**11**	0.35125287	1.84098344

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

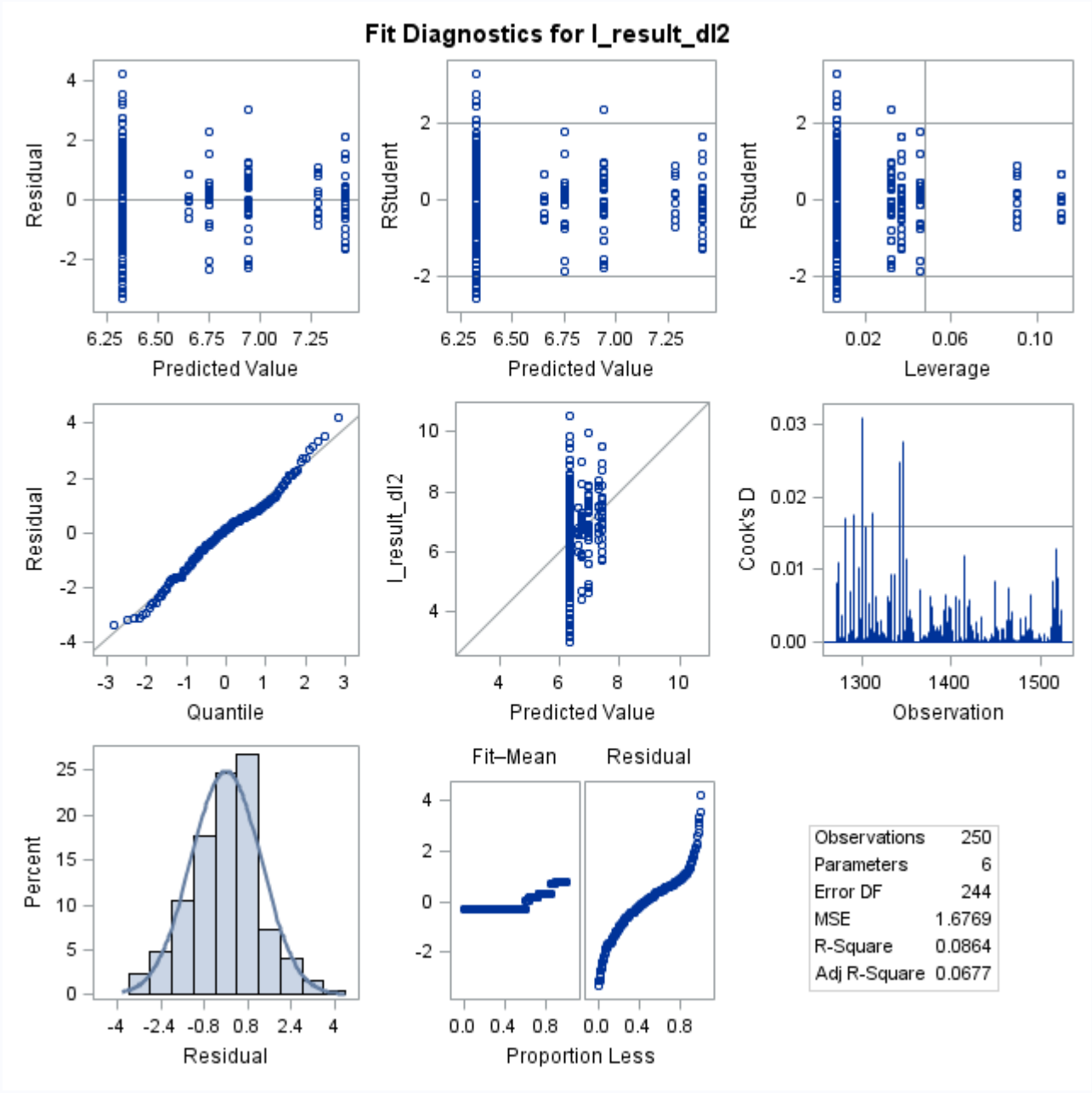
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	38.6962470	7.7392494	4.62	0.0005
Error	244	409.1548882	1.6768643		
Corrected Total	249	447.8511352			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.086404	19.59297	1.294938	6.609198

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	38.69624697	7.73924939	4.62	0.0005

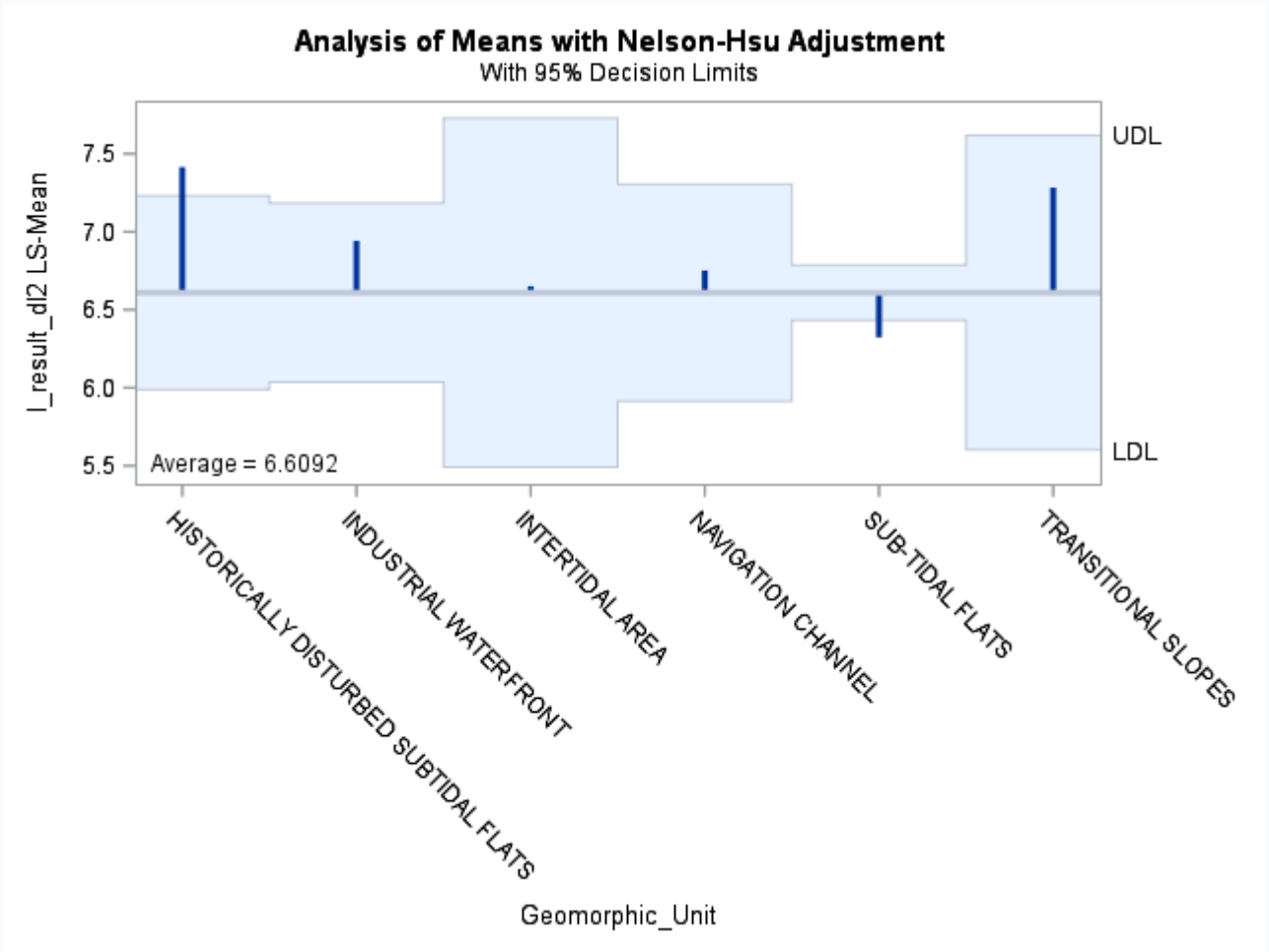
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	38.69624697	7.73924939	4.62	0.0005


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 6
Error DF 244
MSE 1.6769
R-Square 0.0864
Adj R-Square 0.0677

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.41438480	0.0043
INDUSTRIAL WATERFRONT	6.94201537	0.5194
INTERTIDAL AREA	6.65065768	1.0000
NAVIGATION CHANNEL	6.75151792	0.9895
SUB-TIDAL FLATS	6.32273931	0.0002
TRANSITIONAL SLOPES	7.28257449	0.3614


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.5
7.0
6.5
6.0
5.5
UDL
LDL
Average = 6.6092
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.41438480	1
INDUSTRIAL WATERFRONT	6.94201537	2
INTERTIDAL AREA	6.65065768	3
NAVIGATION CHANNEL	6.75151792	4
SUB-TIDAL FLATS	6.32273931	5
TRANSITIONAL SLOPES	7.28257449	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7356	0.6438	0.4791	0.0010	0.9997
2	0.7356		0.9914	0.9950	0.1521	0.9754
3	0.6438	0.9914		1.0000	0.9770	0.8868
4	0.4791	0.9950	1.0000		0.6961	0.8767
5	0.0010	0.1521	0.9770	0.6961		0.1700
6	0.9997	0.9754	0.8868	0.8767	0.1700	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	97.8087	19.5617	3.06	0.0107
Error	244	1561.2	6.3982		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	6.15	0.0002
Error	44.5558		

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	7.41438480	0.99540599
INDUSTRIAL WATERFRONT	**31**	6.94201537	1.10898788
INTERTIDAL AREA	**9**	6.65065768	0.54128856
NAVIGATION CHANNEL	**22**	6.75151792	0.99581641
SUB-TIDAL FLATS	**150**	6.32273931	1.46219937
TRANSITIONAL SLOPES	**11**	7.28257449	0.69014334

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

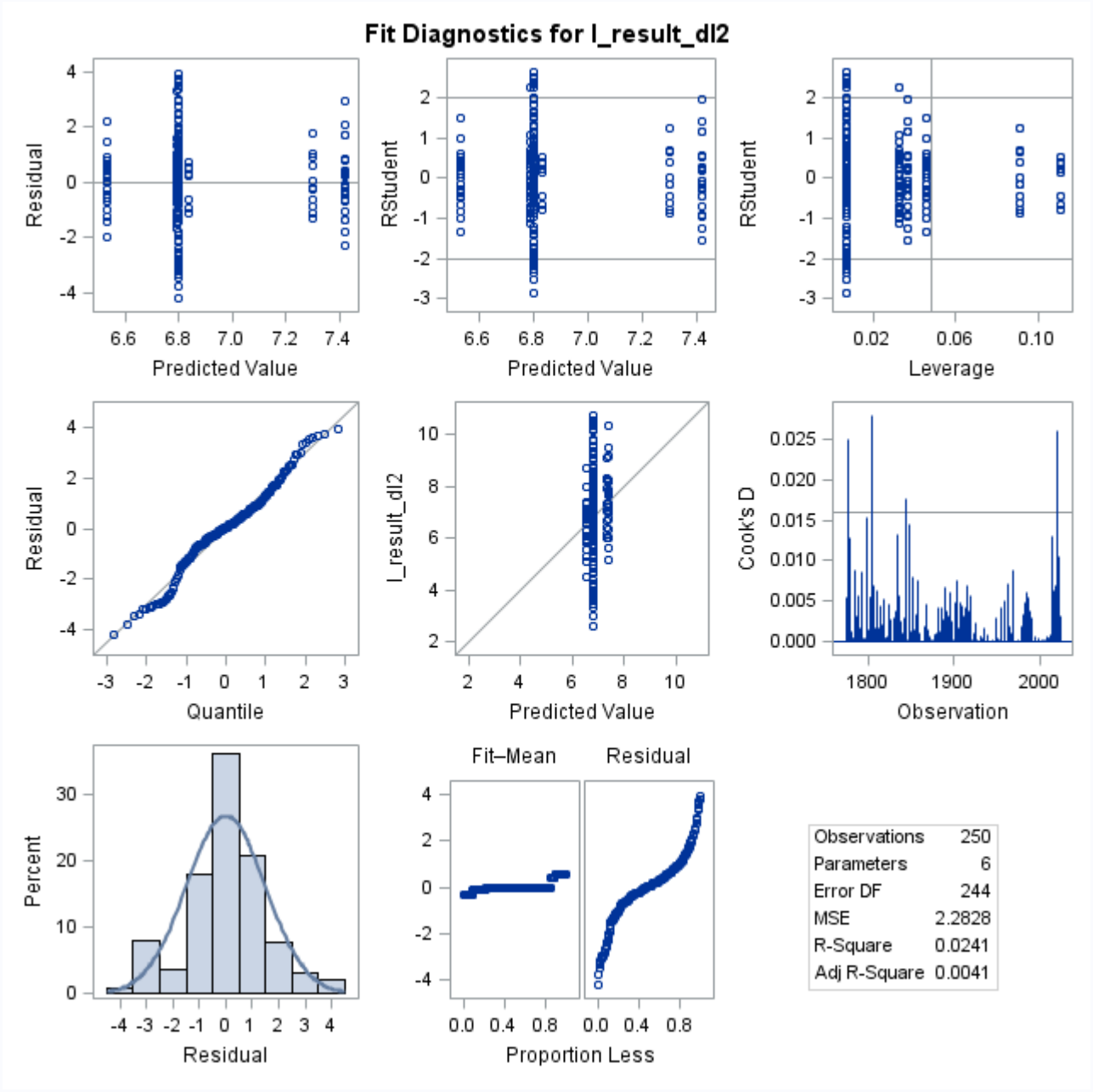
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	13.7395111	2.7479022	1.20	0.3080
Error	244	557.0129661	2.2828400		
Corrected Total	249	570.7524773			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.024073	22.01092	1.510907	6.864352

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	13.73951115	2.74790223	1.20	0.3080

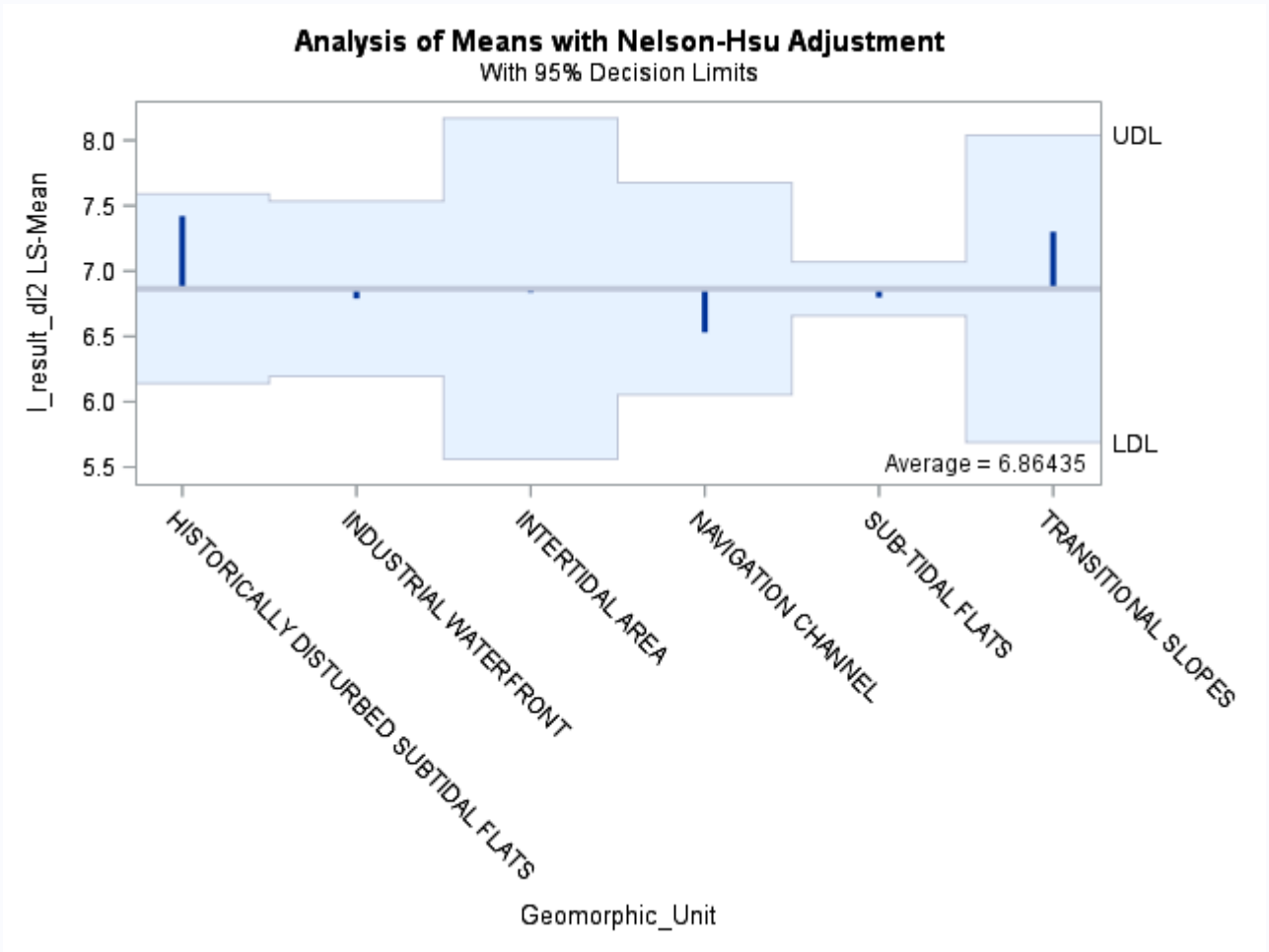
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	13.73951115	2.74790223	1.20	0.3080


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 6
Error DF 244
MSE 2.2828
R-Square 0.0241
Adj R-Square 0.0041

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.42086313	0.2199
INDUSTRIAL WATERFRONT	6.78981884	0.9994
INTERTIDAL AREA	6.83491296	1.0000
NAVIGATION CHANNEL	6.53071788	0.8199
SUB-TIDAL FLATS	6.79828750	0.9278
TRANSITIONAL SLOPES	7.30065250	0.8742


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
8.0
7.5
7.0
6.5
6.0
5.5
UDL
LDL
Average = 6.86435
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.42086313	1
INDUSTRIAL WATERFRONT	6.78981884	2
INTERTIDAL AREA	6.83491296	3
NAVIGATION CHANNEL	6.53071788	4
SUB-TIDAL FLATS	6.79828750	5
TRANSITIONAL SLOPES	7.30065250	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.6082	0.9151	0.3167	0.3620	0.9999
2	0.6082		1.0000	0.9899	1.0000	0.9290
3	0.9151	1.0000		0.9958	1.0000	0.9834
4	0.3167	0.9899	0.9958		0.9714	0.7390
5	0.3620	1.0000	1.0000	0.9714		0.8950
6	0.9999	0.9290	0.9834	0.7390	0.8950	

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	232.1	46.4251	4.02	0.0016
Error	244	2816.6	11.5433		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	2.09	0.0845
Error	43.3266		

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	7.42086313	1.17853388
INDUSTRIAL WATERFRONT	**31**	6.78981884	1.11315943
INTERTIDAL AREA	**9**	6.83491296	0.69479845
NAVIGATION CHANNEL	**22**	6.53071788	0.96944660
SUB-TIDAL FLATS	**150**	6.79828750	1.73859560
TRANSITIONAL SLOPES	**11**	7.30065250	0.98711440

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

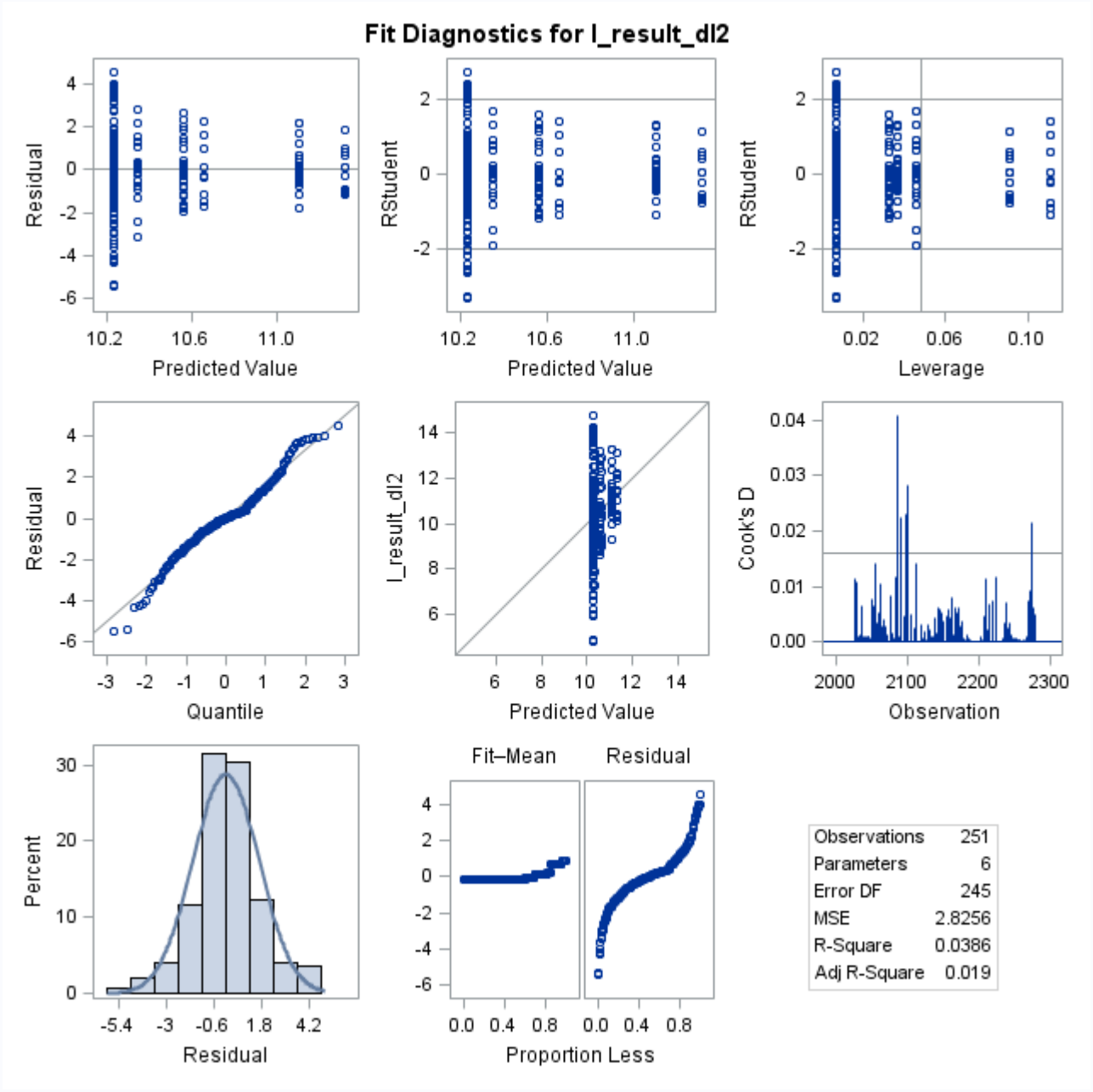
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	27.7890313	5.5578063	1.97	0.0842
Error	245	692.2613883	2.8255567		
Corrected Total	250	720.0504195			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.038593	16.09751	1.680939	10.44223

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	27.78903126	5.55780625	1.97	0.0842

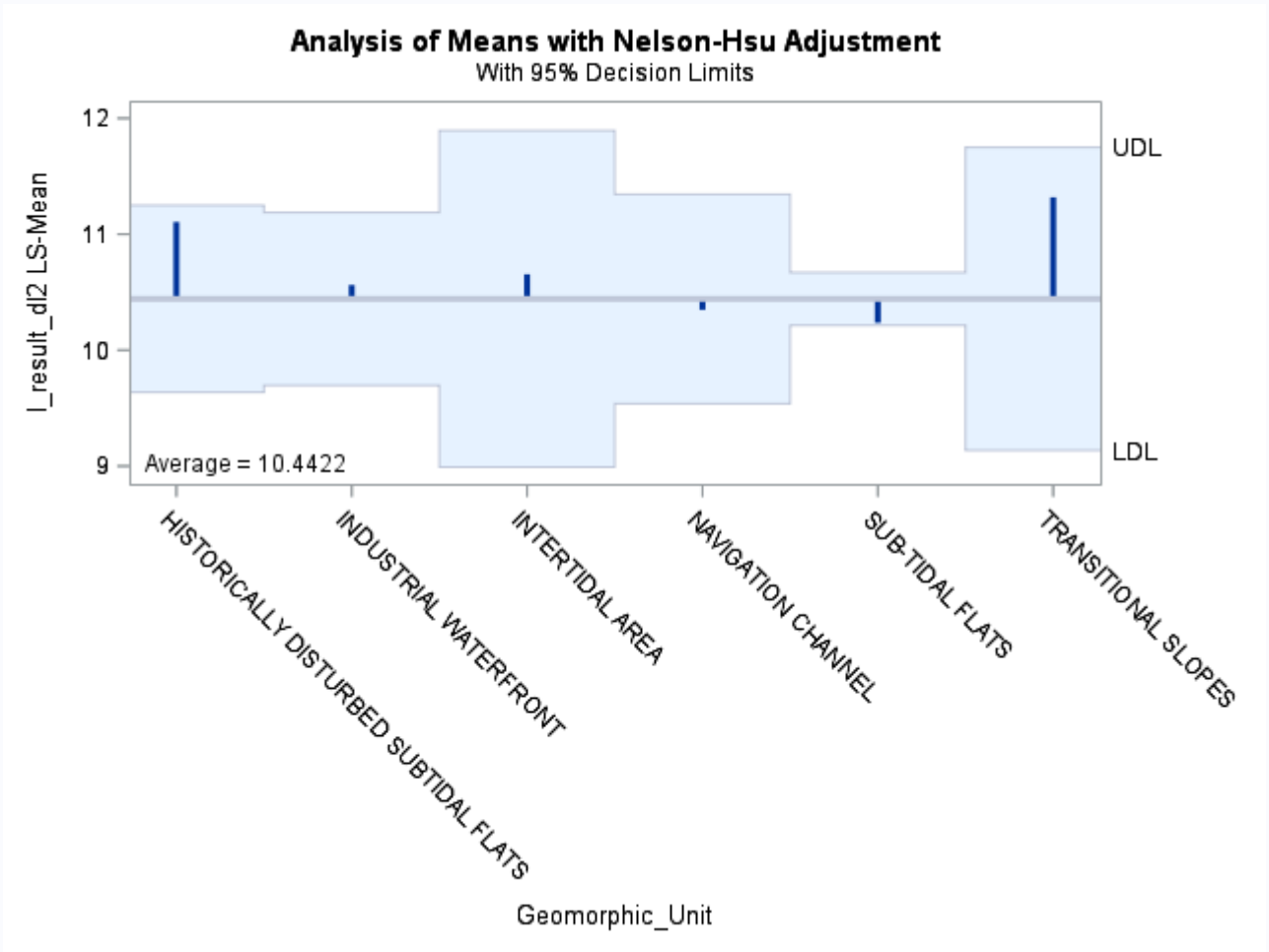
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	27.78903126	5.55780625	1.97	0.0842


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 2.8256
R-Square 0.0386
Adj R-Square 0.019

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	11.1057784	0.1609
INDUSTRIAL WATERFRONT	10.5619539	0.9966
INTERTIDAL AREA	10.6545329	0.9978
NAVIGATION CHANNEL	10.3480205	0.9996
SUB-TIDAL FLATS	10.2362392	0.0968
TRANSITIONAL SLOPES	11.3186121	0.3586


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
12
11
10
9
UDL
LDL
Average = 10.4422
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	11.1057784	1
INDUSTRIAL WATERFRONT	10.5619539	2
INTERTIDAL AREA	10.6545329	3
NAVIGATION CHANNEL	10.3480205	4
SUB-TIDAL FLATS	10.2362392	5
TRANSITIONAL SLOPES	11.3186121	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.8223	0.9821	0.6194	0.1354	0.9993
2	0.8223		1.0000	0.9975	0.9231	0.7943
3	0.9821	1.0000		0.9974	0.9787	0.9512
4	0.6194	0.9975	0.9974		0.9997	0.6233
5	0.1354	0.9231	0.9787	0.9997		0.3109
6	0.9993	0.7943	0.9512	0.6233	0.3109	

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	359.9	71.9750	3.29	0.0068
Error	245	5366.0	21.9020		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.65	0.0080
Error	41.2621		

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	11.1057784	0.95156149
INDUSTRIAL WATERFRONT	**31**	10.5619539	1.23456856
INTERTIDAL AREA	**9**	10.6545329	1.37115596
NAVIGATION CHANNEL	**22**	10.3480205	1.32917196
SUB-TIDAL FLATS	**151**	10.2362392	1.93402938
TRANSITIONAL SLOPES	**11**	11.3186121	0.98907762

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

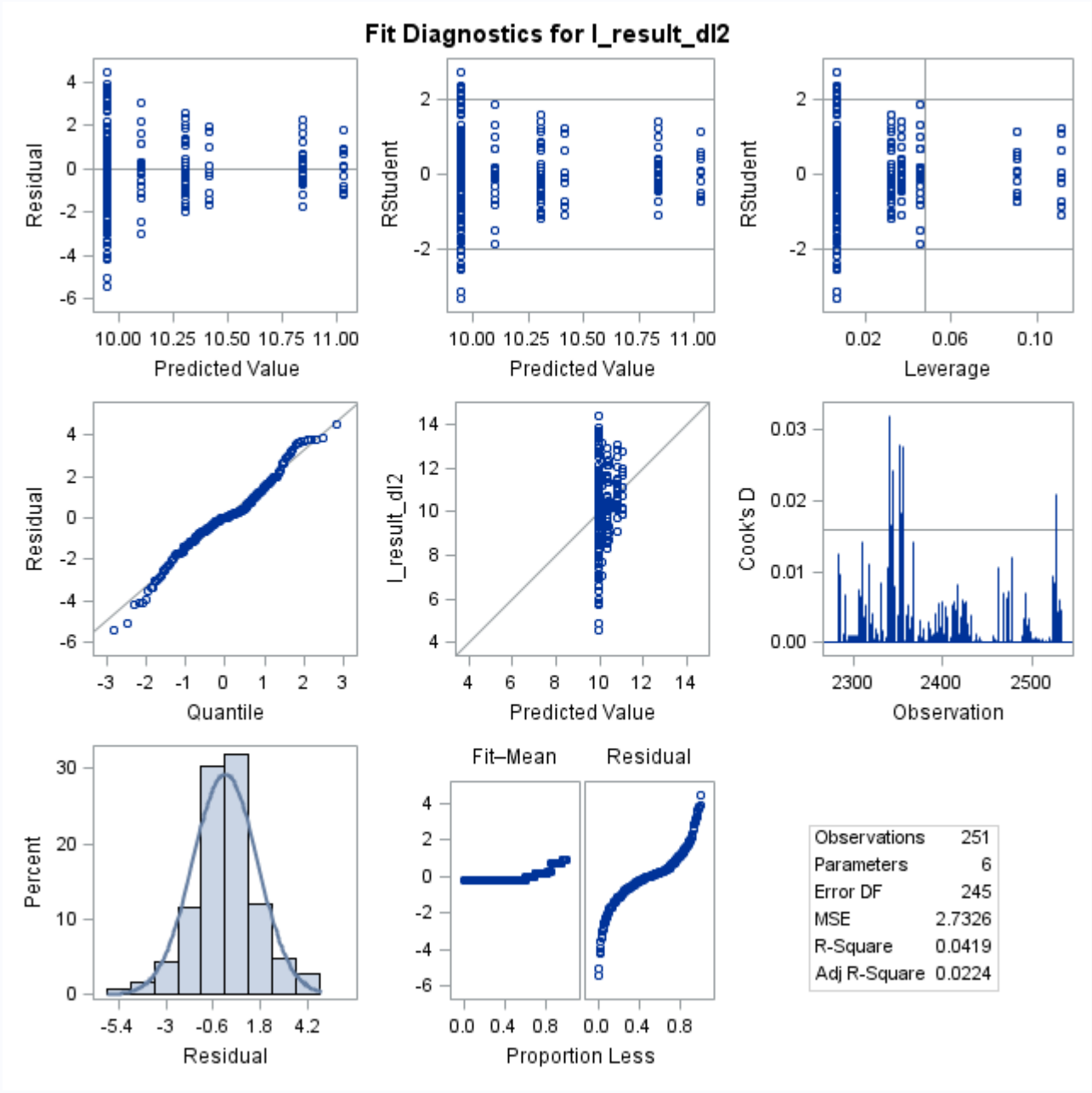
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	29.3134605	5.8626921	2.15	0.0608
Error	245	669.4748446	2.7325504		
Corrected Total	250	698.7883051			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.041949	16.26719	1.653043	10.16182

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	29.31346054	5.86269211	2.15	0.0608

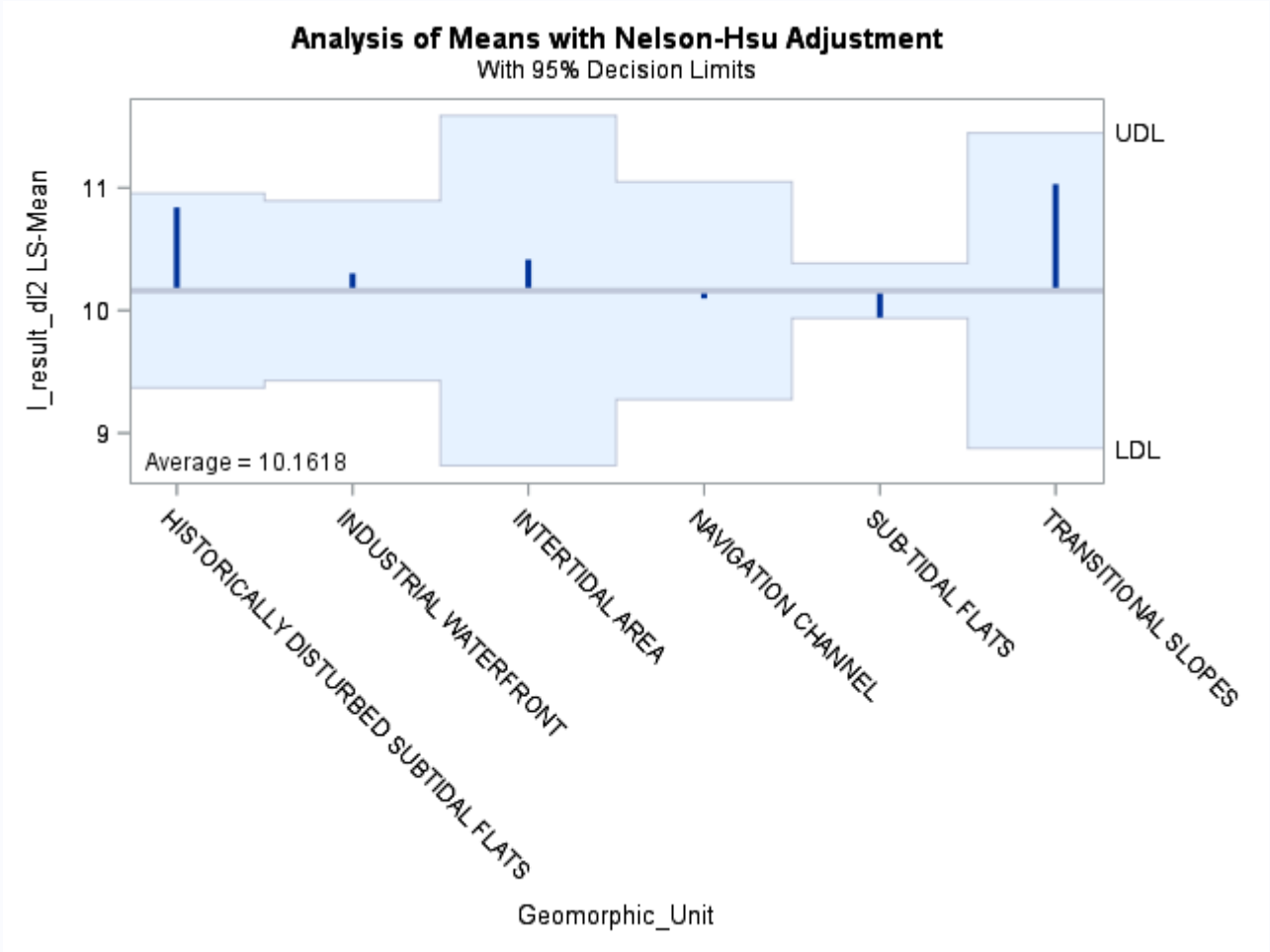
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	29.31346054	5.86269211	2.15	0.0608


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 2.7326
R-Square 0.0419
Adj R-Square 0.0224

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	10.8406519	0.1316
INDUSTRIAL WATERFRONT	10.3028139	0.9921
INTERTIDAL AREA	10.4153385	0.9945
NAVIGATION CHANNEL	10.0983478	0.9999
SUB-TIDAL FLATS	9.9423096	0.0577
TRANSITIONAL SLOPES	11.0311077	0.3492


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
11
10
9
UDL
LDL
Average = 10.1618
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	10.8406519	1
INDUSTRIAL WATERFRONT	10.3028139	2
INTERTIDAL AREA	10.4153385	3
NAVIGATION CHANNEL	10.0983478	4
SUB-TIDAL FLATS	9.9423096	5
TRANSITIONAL SLOPES	11.0311077	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.8188	0.9852	0.6234	0.1009	0.9995
2	0.8188		1.0000	0.9978	0.8786	0.8088
3	0.9852	1.0000		0.9967	0.9609	0.9620
4	0.6234	0.9978	0.9967		0.9984	0.6465
5	0.1009	0.8786	0.9609	0.9984		0.2860
6	0.9995	0.8088	0.9620	0.6465	0.2860	

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	326.8	65.3632	3.30	0.0067
Error	245	4852.5	19.8063		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.86	0.0058
Error	41.2988		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	10.8406519	0.93703540
INDUSTRIAL WATERFRONT	**31**	10.3028139	1.22643155
INTERTIDAL AREA	**9**	10.4153385	1.30659625
NAVIGATION CHANNEL	**22**	10.0983478	1.34998824
SUB-TIDAL FLATS	**151**	9.9423096	1.89758675
TRANSITIONAL SLOPES	**11**	11.0311077	0.97299483

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

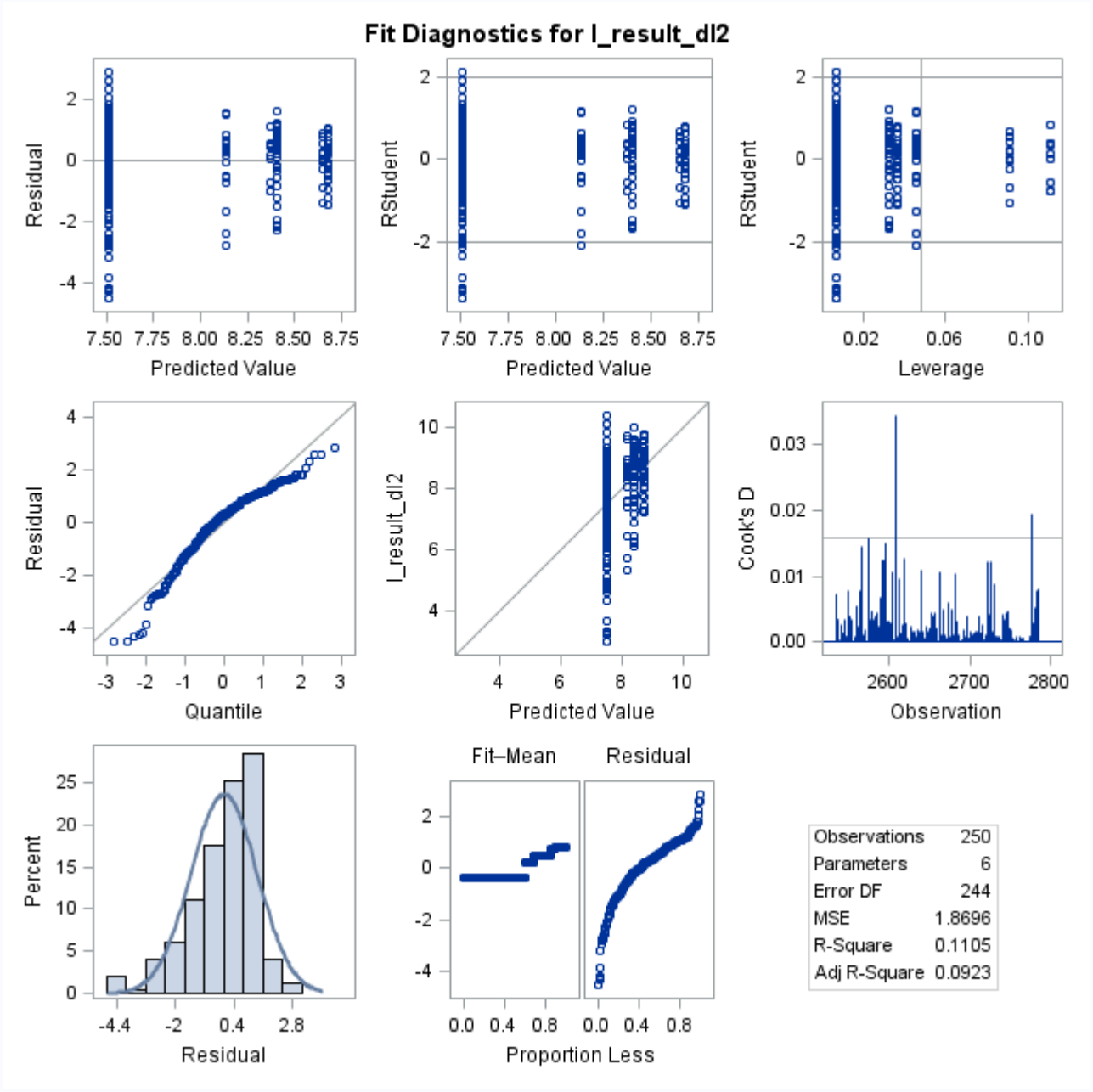
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	56.6918332	11.3383666	6.06	<.0001
Error	244	456.1806009	1.8695926		
Corrected Total	249	512.8724341			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.110538	17.34618	1.367330	7.882603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	56.69183323	11.33836665	6.06	<.0001

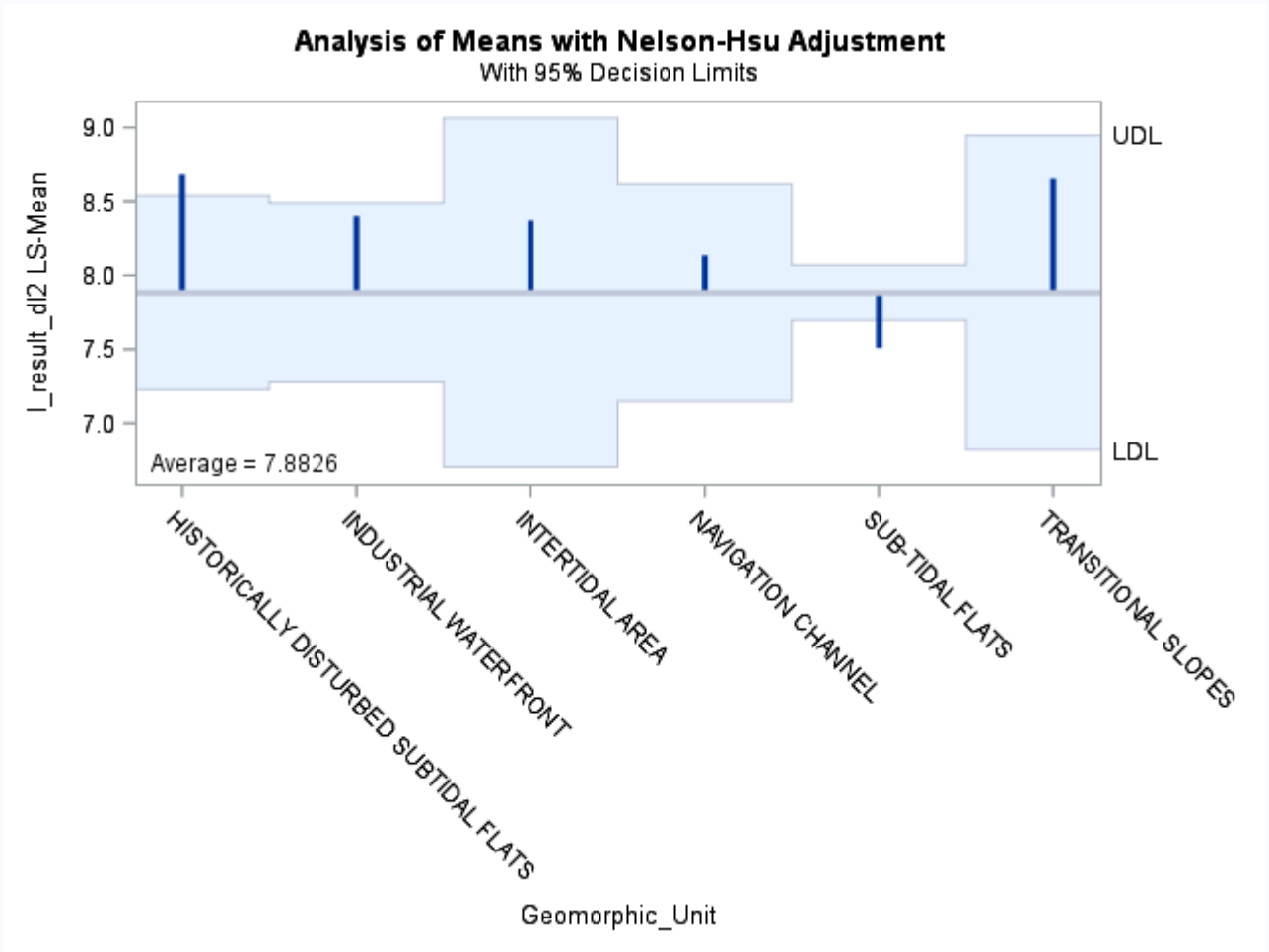
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	56.69183323	11.33836665	6.06	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 6
Error DF 244
MSE 1.8696
R-Square 0.1105
Adj R-Square 0.0923

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.68169225	0.0087
INDUSTRIAL WATERFRONT	8.40236140	0.1309
INTERTIDAL AREA	8.37334240	0.8130
NAVIGATION CHANNEL	8.13391351	0.9073
SUB-TIDAL FLATS	7.50853981	<.0001
TRANSITIONAL SLOPES	8.65315015	0.2764


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
9.0
8.5
8.0
7.5
7.0
UDL
LDL
Average = 7.8826
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.68169225	1
INDUSTRIAL WATERFRONT	8.40236140	2
INTERTIDAL AREA	8.37334240	3
NAVIGATION CHANNEL	8.13391351	4
SUB-TIDAL FLATS	7.50853981	5
TRANSITIONAL SLOPES	8.65315015	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9713	0.9919	0.7301	0.0008	1.0000
2	0.9713		1.0000	0.9813	0.0134	0.9952
3	0.9919	1.0000		0.9978	0.4402	0.9975
4	0.7301	0.9813	0.9978		0.3434	0.9081
5	0.0008	0.0134	0.4402	0.3434		0.0830
6	1.0000	0.9952	0.9975	0.9081	0.0830	

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	169.1	33.8294	3.48	0.0046
Error	244	2369.5	9.7111		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	8.78	<.0001
Error	43.1051		

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	8.68169225	0.74181021
INDUSTRIAL WATERFRONT	**31**	8.40236140	1.10085823
INTERTIDAL AREA	**9**	8.37334240	0.74354887
NAVIGATION CHANNEL	**22**	8.13391351	1.09748465
SUB-TIDAL FLATS	**150**	7.50853981	1.57814678
TRANSITIONAL SLOPES	**11**	8.65315015	0.68616398

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	245
Number of Observations Used	245

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

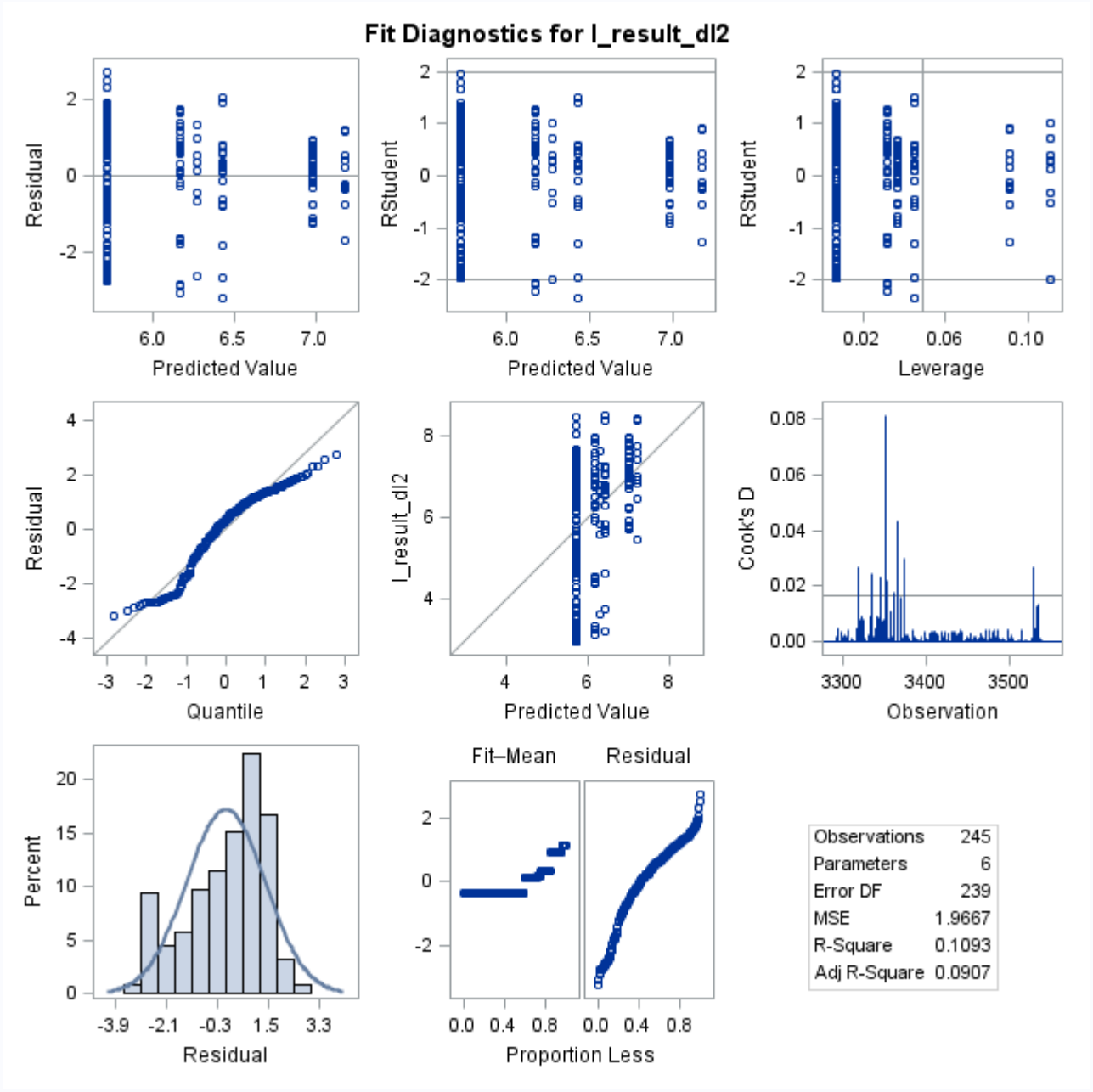
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	57.6834585	11.5366917	5.87	<.0001
Error	239	470.0425077	1.9667051		
Corrected Total	244	527.7259662			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.109306	23.13118	1.402393	6.062780

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	57.68345846	11.53669169	5.87	<.0001

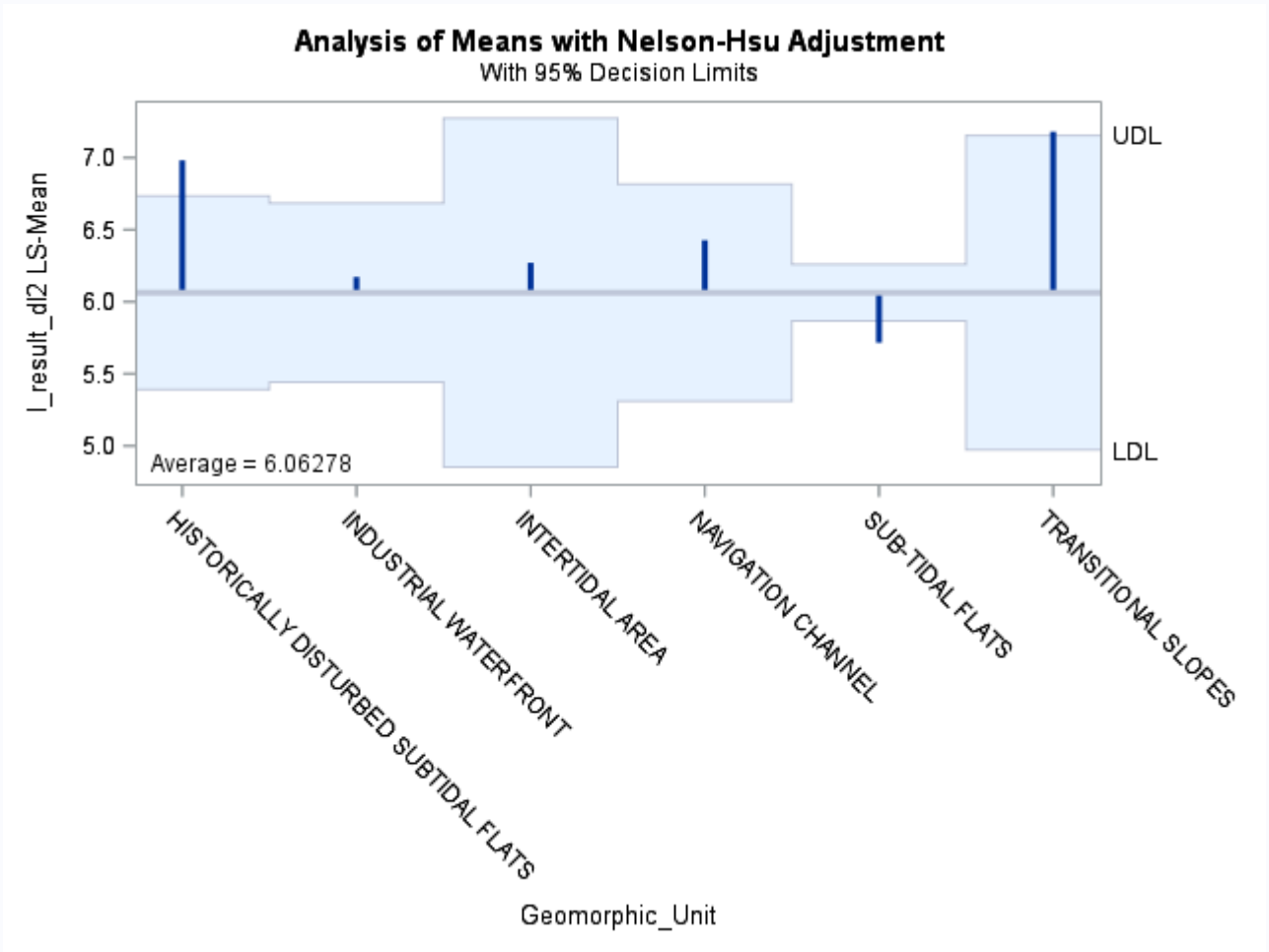
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	57.68345846	11.53669169	5.87	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 245
Parameters 6
Error DF 239
MSE 1.9667
R-Square 0.1093
Adj R-Square 0.0907

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.98145305	0.0022
INDUSTRIAL WATERFRONT	6.17195575	0.9948
INTERTIDAL AREA	6.27019621	0.9954
NAVIGATION CHANNEL	6.42694215	0.6989
SUB-TIDAL FLATS	5.71548400	<.0001
TRANSITIONAL SLOPES	7.18013184	0.0416


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.0
6.5
6.0
5.5
5.0
UDL
LDL
Average = 6.06278
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.98145305	1
INDUSTRIAL WATERFRONT	6.17195575	2
INTERTIDAL AREA	6.27019621	3
NAVIGATION CHANNEL	6.42694215	4
SUB-TIDAL FLATS	5.71548400	5
TRANSITIONAL SLOPES	7.18013184	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.2450	0.7750	0.7410	0.0003	0.9987
2	0.2450		1.0000	0.9868	0.5696	0.3183
3	0.7750	1.0000		0.9998	0.8591	0.7003
4	0.7410	0.9868	0.9998		0.2337	0.6935
5	0.0003	0.5696	0.8591	0.2337		0.0124
6	0.9987	0.3183	0.7003	0.6935	0.0124	

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	116.9	23.3730	5.00	0.0002
Error	239	1116.5	4.6715		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	11.04	<.0001
Error	40.8788		

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	6.98145305	0.67178765
INDUSTRIAL WATERFRONT	**31**	6.17195575	1.42215369
INTERTIDAL AREA	**9**	6.27019621	1.16270234
NAVIGATION CHANNEL	**22**	6.42694215	1.26722890
SUB-TIDAL FLATS	**145**	5.71548400	1.55003111
TRANSITIONAL SLOPES	**11**	7.18013184	0.84385764

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

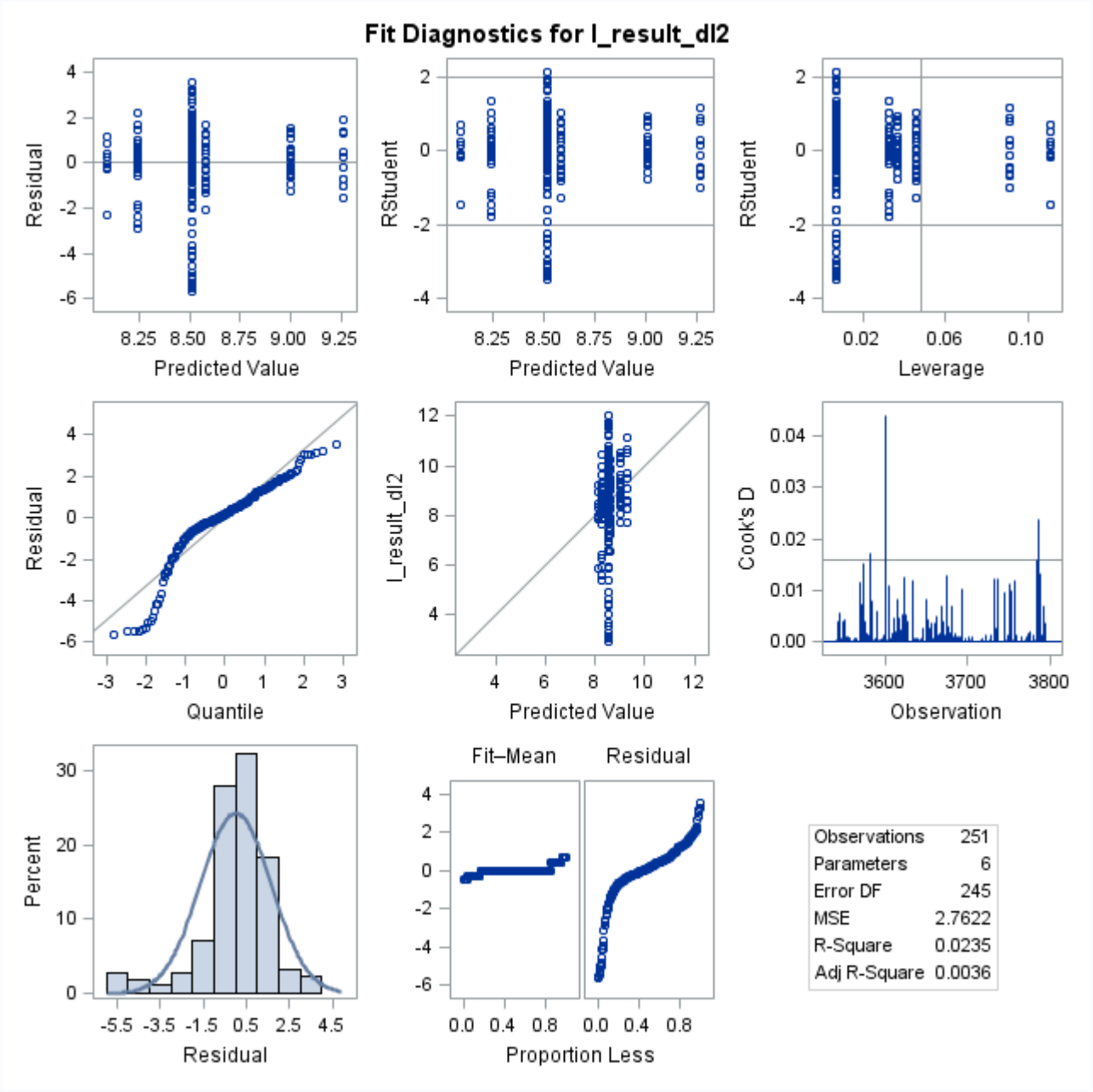
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	16.2856471	3.2571294	1.18	0.3199
Error	245	676.7393325	2.7622014		
Corrected Total	250	693.0249796			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.023499	19.42872	1.661987	8.554279

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	16.28564706	3.25712941	1.18	0.3199

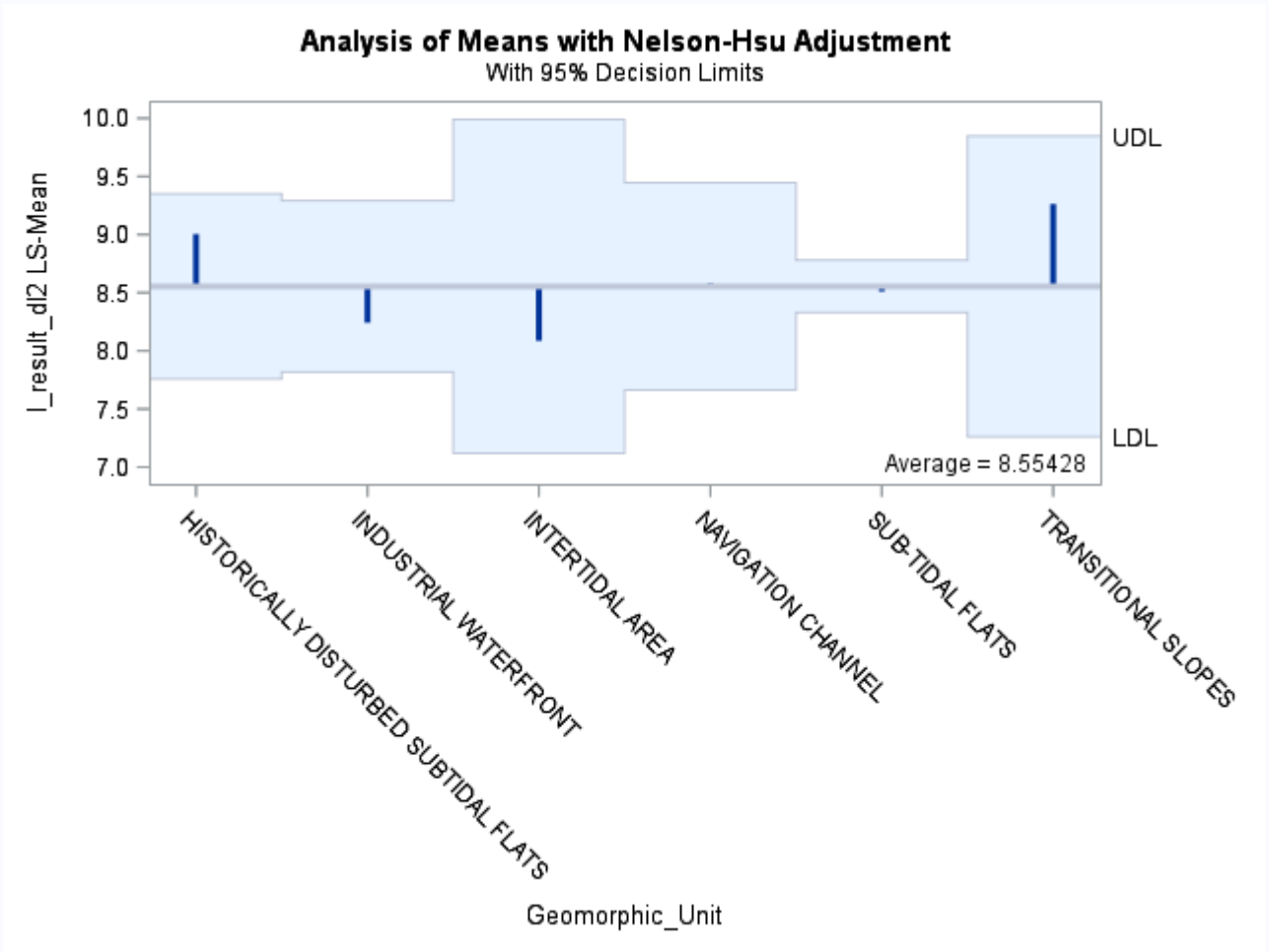
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	16.28564706	3.25712941	1.18	0.3199


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 2.7622
R-Square 0.0235
Adj R-Square 0.0036

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	9.00435357	0.5475
INDUSTRIAL WATERFRONT	8.24205607	0.8011
INTERTIDAL AREA	8.08625316	0.9231
NAVIGATION CHANNEL	8.57736364	1.0000
SUB-TIDAL FLATS	8.51080084	0.9920
TRANSITIONAL SLOPES	9.26303955	0.5785


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
10.0
9.5
9.0
8.5
8.0
7.5
7.0
UDL
LDL
Average = 8.55428
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	9.00435357	1
INDUSTRIAL WATERFRONT	8.24205607	2
INTERTIDAL AREA	8.08625316	3
NAVIGATION CHANNEL	8.57736364	4
SUB-TIDAL FLATS	8.51080084	5
TRANSITIONAL SLOPES	9.26303955	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5052	0.7055	0.9476	0.7141	0.9980
2	0.5052		0.9999	0.9789	0.9636	0.4999
3	0.7055	0.9999		0.9758	0.9761	0.6156
4	0.9476	0.9789	0.9758		1.0000	0.8739
5	0.7141	0.9636	0.9761	1.0000		0.6967
6	0.9980	0.4999	0.6156	0.8739	0.6967	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	499.3	99.8529	3.07	0.0104
Error	245	7961.6	32.4964		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.22	0.0150
Error	41.8235		

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	9.00435357	0.71655436
INDUSTRIAL WATERFRONT	**31**	8.24205607	1.21540998
INTERTIDAL AREA	**9**	8.08625316	0.97020442
NAVIGATION CHANNEL	**22**	8.57736364	0.98557411
SUB-TIDAL FLATS	**151**	8.51080084	1.96315804
TRANSITIONAL SLOPES	**11**	9.26303955	1.14217793

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

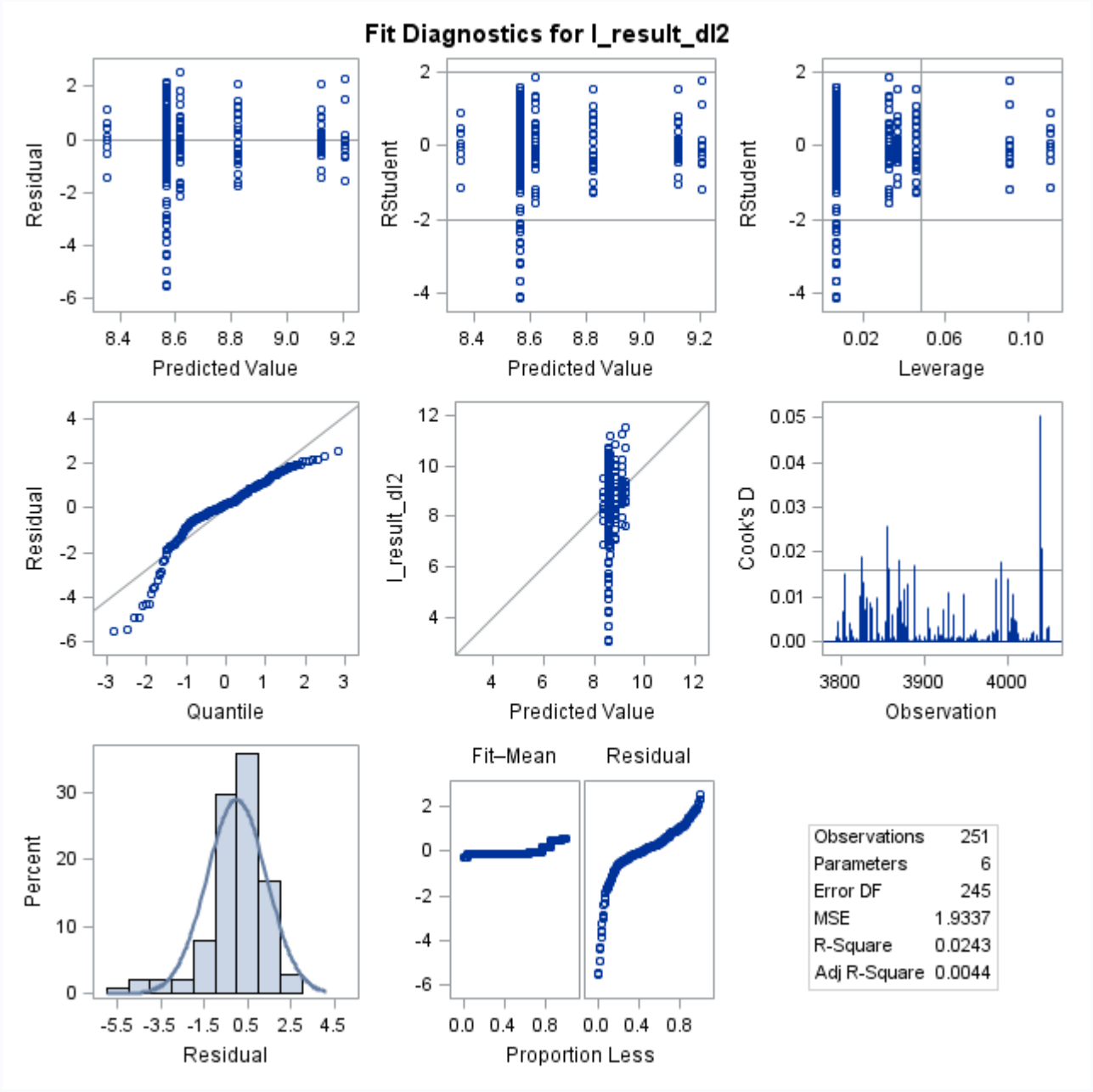
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	11.8069958	2.3613992	1.22	0.2997
Error	245	473.7671462	1.9337435		
Corrected Total	250	485.5741420			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.024316	16.03162	1.390591	8.674050

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	11.80699585	2.36139917	1.22	0.2997

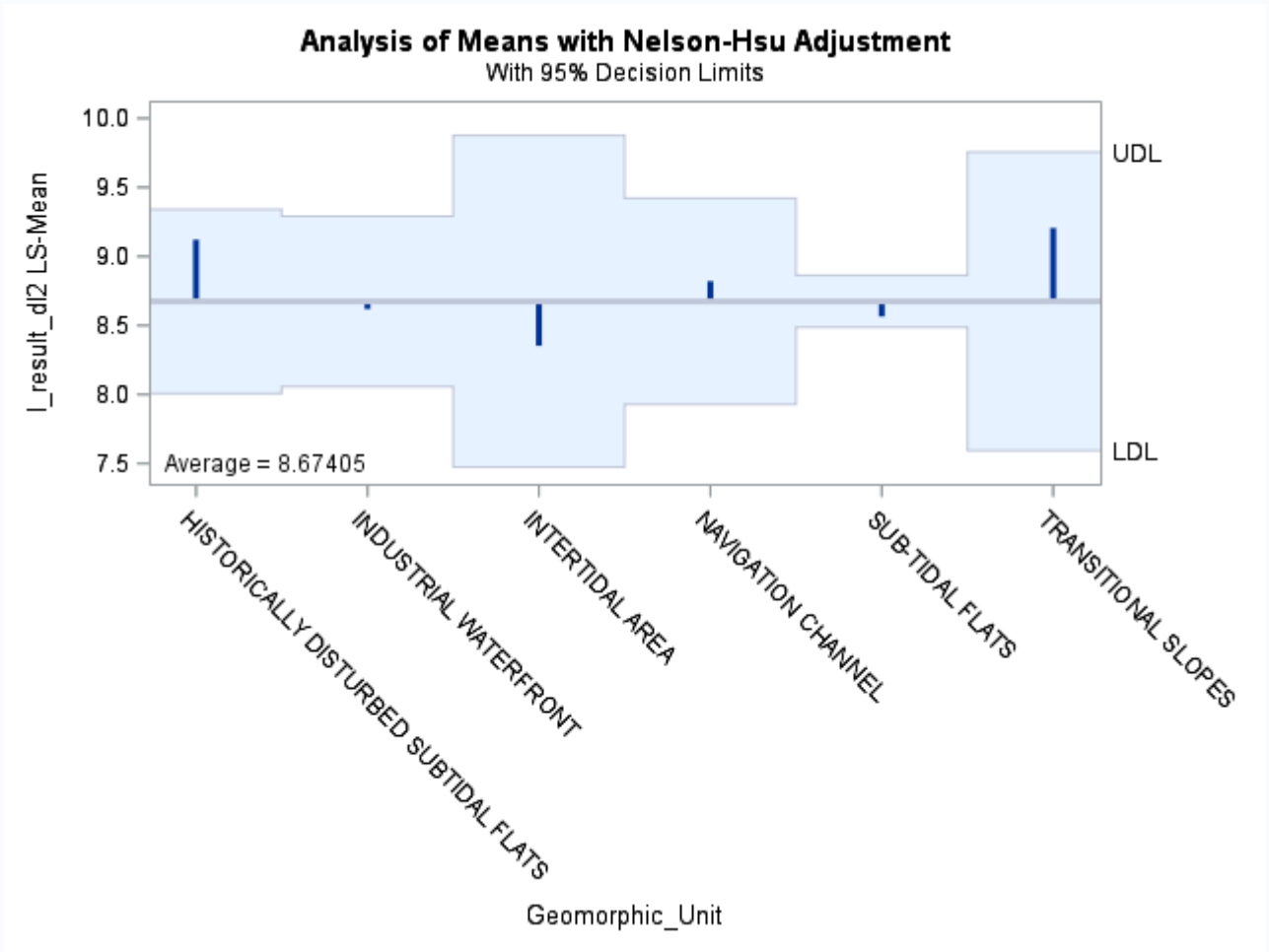
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	11.80699585	2.36139917	1.22	0.2997


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.9337
R-Square 0.0243
Adj R-Square 0.0044

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	9.12103258	0.3588
INDUSTRIAL WATERFRONT	8.61815079	0.9998
INTERTIDAL AREA	8.35258084	0.9657
NAVIGATION CHANNEL	8.82020418	0.9915
SUB-TIDAL FLATS	8.56472692	0.5183
TRANSITIONAL SLOPES	9.20585653	0.6846


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
10.0
9.5
9.0
8.5
8.0
7.5
Average = 8.67405
UDL
LDL
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	9.12103258	1
INDUSTRIAL WATERFRONT	8.61815079	2
INTERTIDAL AREA	8.35258084	3
NAVIGATION CHANNEL	8.82020418	4
SUB-TIDAL FLATS	8.56472692	5
TRANSITIONAL SLOPES	9.20585653	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7427	0.7052	0.9748	0.3957	1.0000
2	0.7427		0.9960	0.9953	1.0000	0.8345
3	0.7052	0.9960		0.9577	0.9978	0.7478
4	0.9748	0.9953	0.9577		0.9664	0.9752
5	0.3957	1.0000	0.9978	0.9664		0.6797
6	1.0000	0.8345	0.7478	0.9752	0.6797	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	172.5	34.5042	1.87	0.1006
Error	245	4525.9	18.4729		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	2.74	0.0314
Error	41.8886		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	9.12103258	0.69868939
INDUSTRIAL WATERFRONT	**31**	8.61815079	1.14343382
INTERTIDAL AREA	**9**	8.35258084	0.74237185
NAVIGATION CHANNEL	**22**	8.82020418	1.03747842
SUB-TIDAL FLATS	**151**	8.56472692	1.59903430
TRANSITIONAL SLOPES	**11**	9.20585653	1.06313029

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

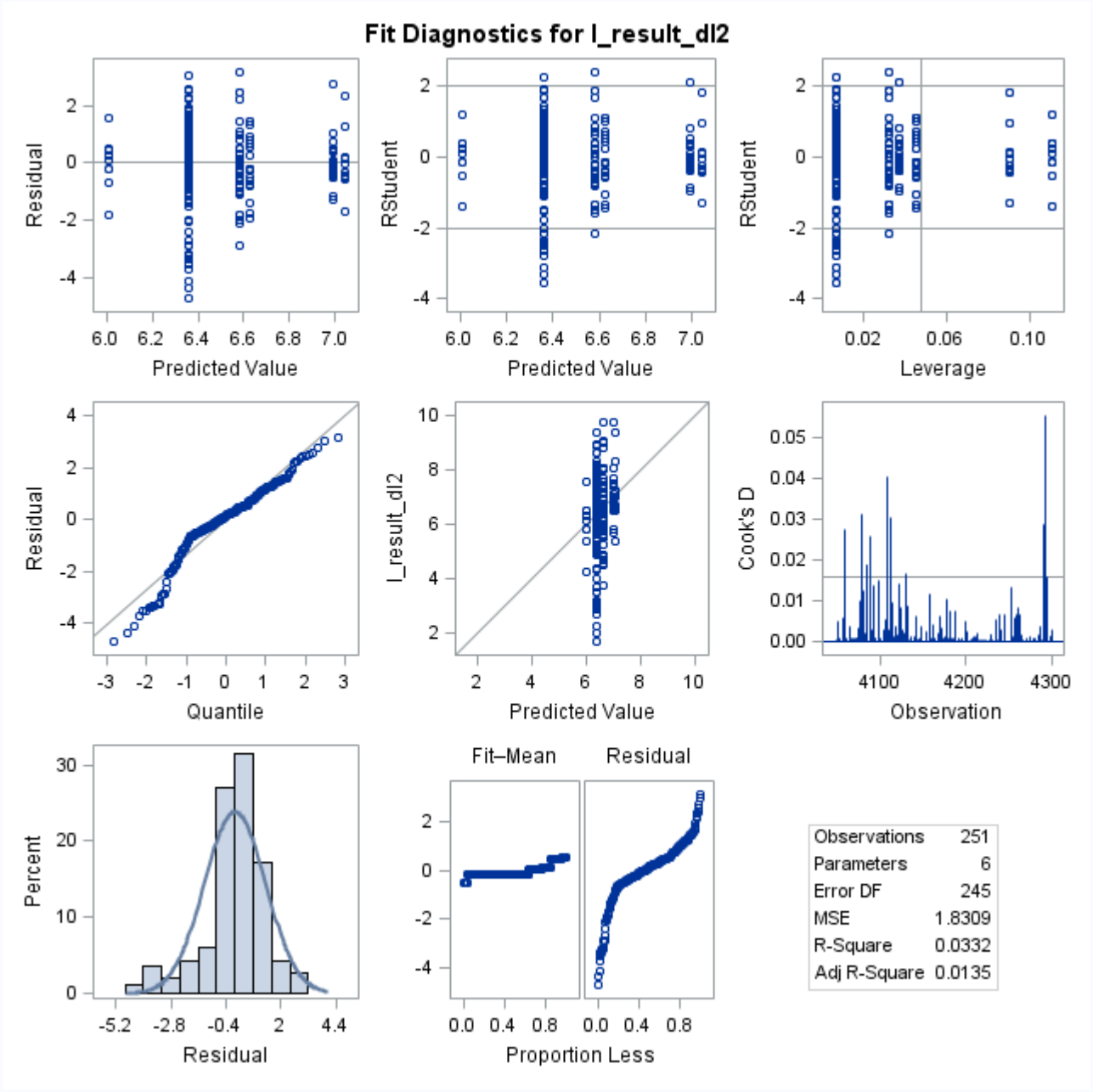
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	15.4089995	3.0817999	1.68	0.1392
Error	245	448.5740845	1.8309146		
Corrected Total	250	463.9830840			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.033210	20.83178	1.353113	6.495426

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	15.40899949	3.08179990	1.68	0.1392

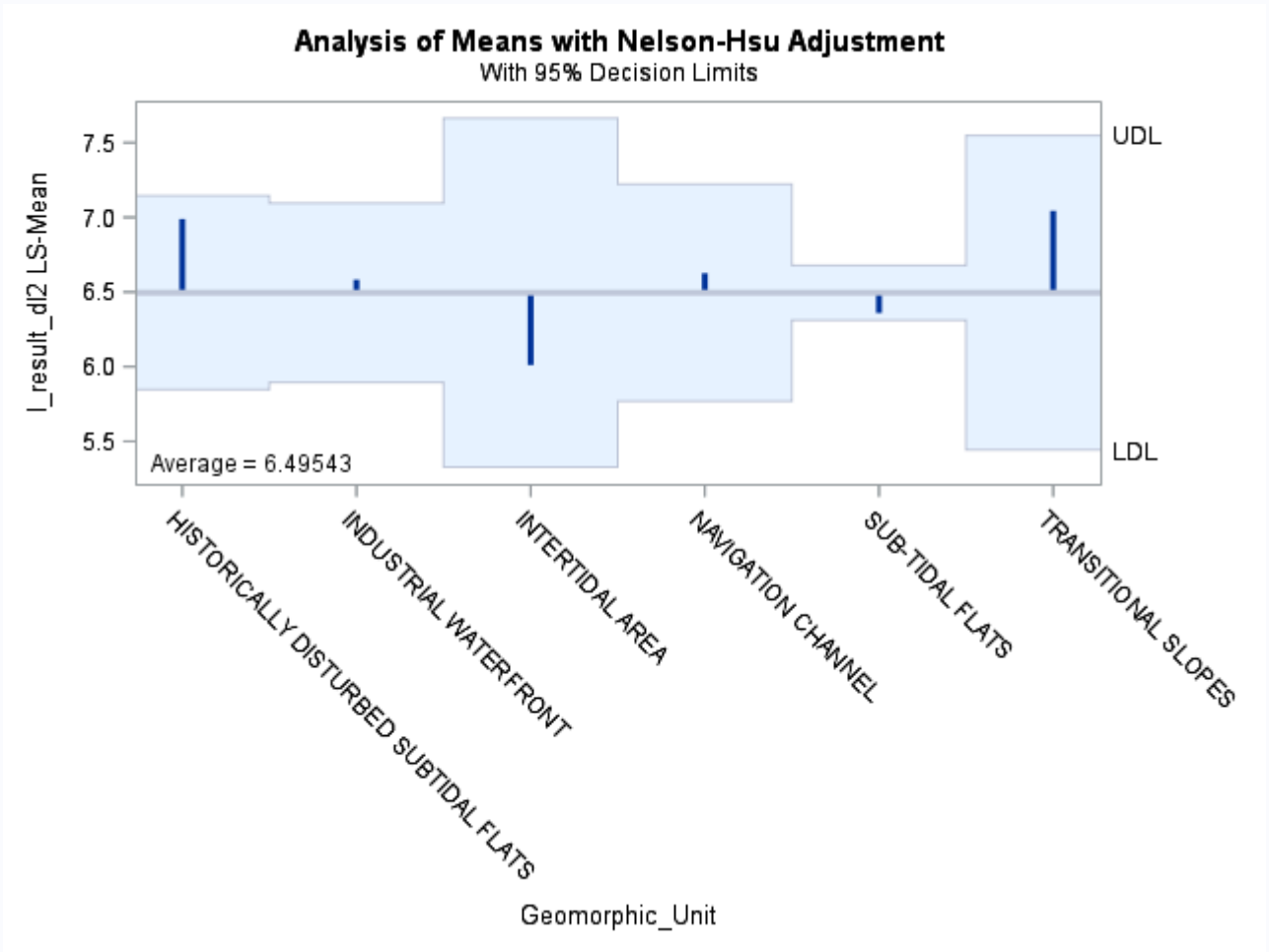
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	15.40899949	3.08179990	1.68	0.1392


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.8309
R-Square 0.0332
Adj R-Square 0.0135

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.98896166	0.2292
INDUSTRIAL WATERFRONT	6.58264507	0.9979
INTERTIDAL AREA	6.01100416	0.8146
NAVIGATION CHANNEL	6.62600356	0.9943
SUB-TIDAL FLATS	6.35918080	0.2513
TRANSITIONAL SLOPES	7.04368927	0.6303


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.5
7.0
6.5
6.0
5.5
UDL
LDL
Average = 6.49543
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.98896166	1
INDUSTRIAL WATERFRONT	6.58264507	2
INTERTIDAL AREA	6.01100416	3
NAVIGATION CHANNEL	6.62600356	4
SUB-TIDAL FLATS	6.35918080	5
TRANSITIONAL SLOPES	7.04368927	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.8639	0.4184	0.9374	0.2290	1.0000
2	0.8639		0.8746	1.0000	0.9602	0.9268
3	0.4184	0.8746		0.8604	0.9753	0.5344
4	0.9374	1.0000	0.8604		0.9546	0.9605
5	0.2290	0.9602	0.9753	0.9546		0.5862
6	1.0000	0.9268	0.5344	0.9605	0.5862	

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	105.3	21.0660	1.93	0.0907
Error	245	2680.6	10.9414		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.19	0.0160
Error	40.9145		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	6.98896166	0.74794953
INDUSTRIAL WATERFRONT	**31**	6.58264507	1.42350060
INTERTIDAL AREA	**9**	6.01100416	0.90776683
NAVIGATION CHANNEL	**22**	6.62600356	0.97694424
SUB-TIDAL FLATS	**151**	6.35918080	1.49575485
TRANSITIONAL SLOPES	**11**	7.04368927	1.04932319

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

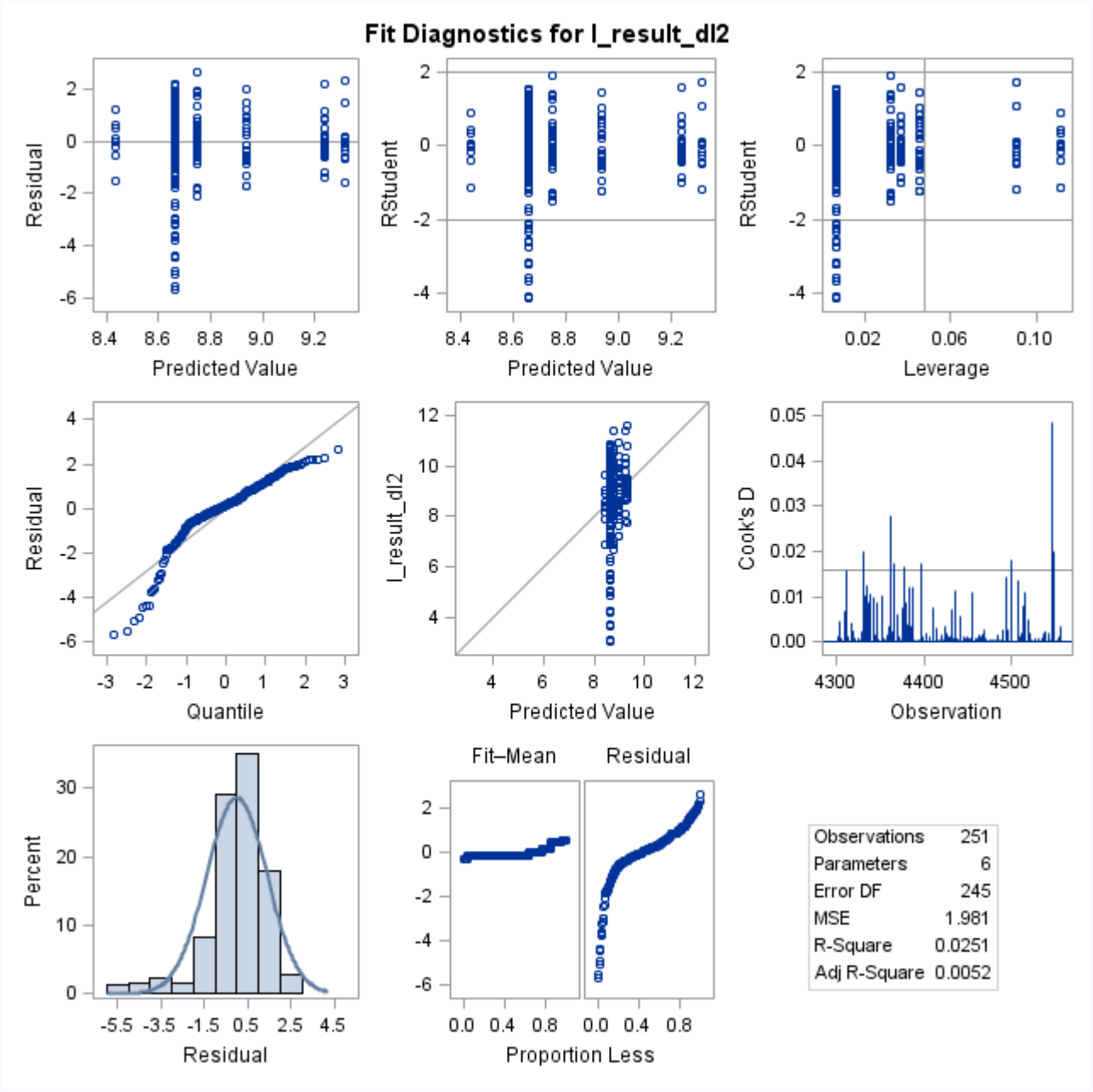
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	12.4819219	2.4963844	1.26	0.2818
Error	245	485.3398609	1.9809790		
Corrected Total	250	497.8217828			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.025073	16.03268	1.407473	8.778775

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	12.48192192	2.49638438	1.26	0.2818

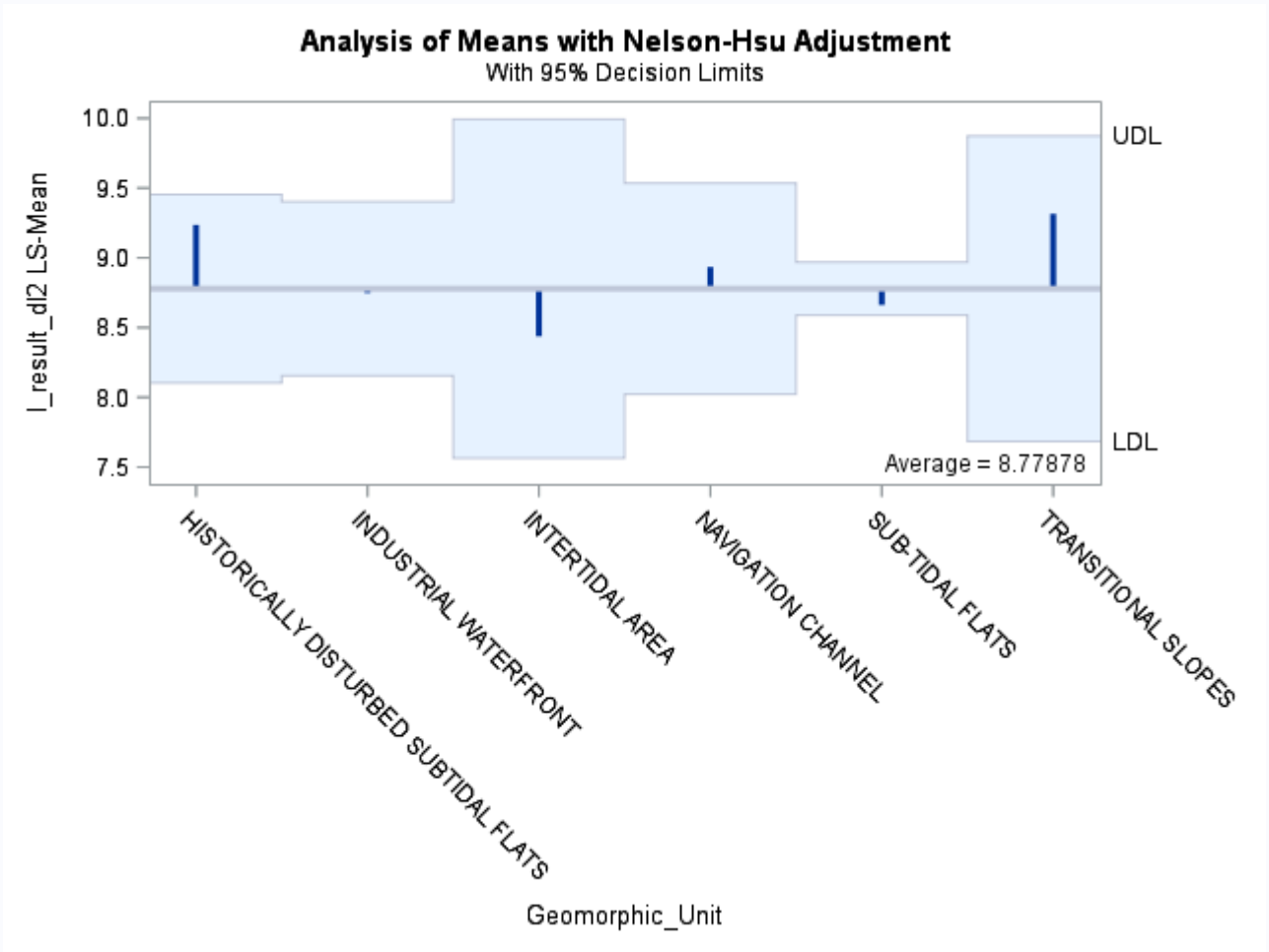
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	12.48192192	2.49638438	1.26	0.2818


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.981
R-Square 0.0251
Adj R-Square 0.0052

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	9.23599853	0.3473
INDUSTRIAL WATERFRONT	8.74781966	1.0000
INTERTIDAL AREA	8.43753673	0.9581
NAVIGATION CHANNEL	8.93420720	0.9893
SUB-TIDAL FLATS	8.66197295	0.4586
TRANSITIONAL SLOPES	9.31545094	0.6873


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
10.0
9.5
9.0
8.5
8.0
7.5
UDL
LDL
Average = 8.77878
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	9.23599853	1
INDUSTRIAL WATERFRONT	8.74781966	2
INTERTIDAL AREA	8.43753673	3
NAVIGATION CHANNEL	8.93420720	4
SUB-TIDAL FLATS	8.66197295	5
TRANSITIONAL SLOPES	9.31545094	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7751	0.6813	0.9758	0.3733	1.0000
2	0.7751		0.9921	0.9970	0.9996	0.8601
3	0.6813	0.9921		0.9482	0.9973	0.7344
4	0.9758	0.9970	0.9482		0.9582	0.9776
5	0.3733	0.9996	0.9973	0.9582		0.6731
6	1.0000	0.8601	0.7344	0.9776	0.6731	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	181.9	36.3838	1.86	0.1021
Error	245	4794.9	19.5710		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	2.81	0.0281
Error	41.8323		

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	9.23599853	0.70101626
INDUSTRIAL WATERFRONT	**31**	8.74781966	1.17867592
INTERTIDAL AREA	**9**	8.43753673	0.76948864
NAVIGATION CHANNEL	**22**	8.93420720	1.02467408
SUB-TIDAL FLATS	**151**	8.66197295	1.61842932
TRANSITIONAL SLOPES	**11**	9.31545094	1.05837214

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

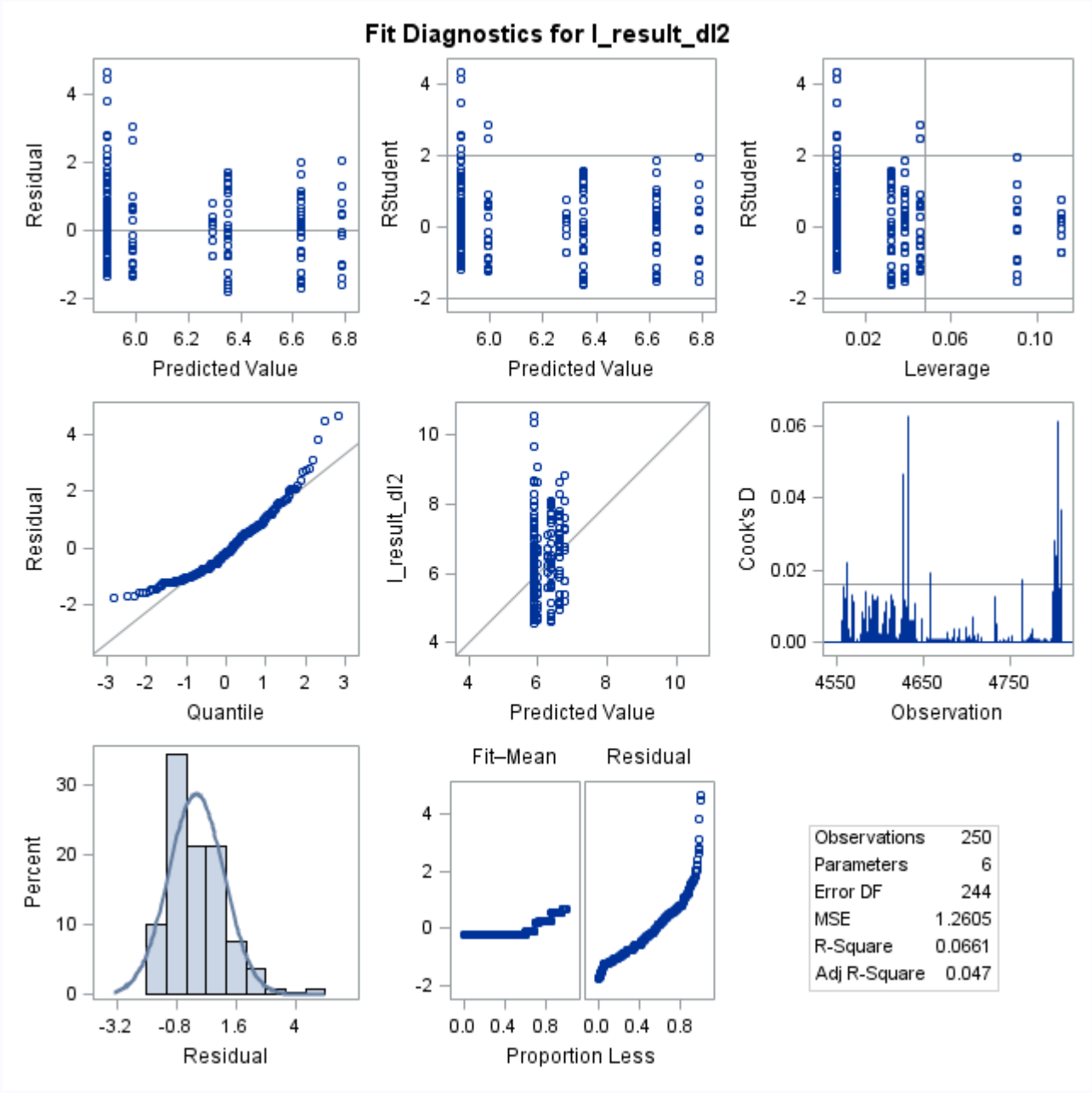
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	21.7760614	4.3552123	3.46	0.0049
Error	244	307.5727535	1.2605441		
Corrected Total	249	329.3488148			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.066119	18.45017	1.122740	6.085252

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	21.77606138	4.35521228	3.46	0.0049

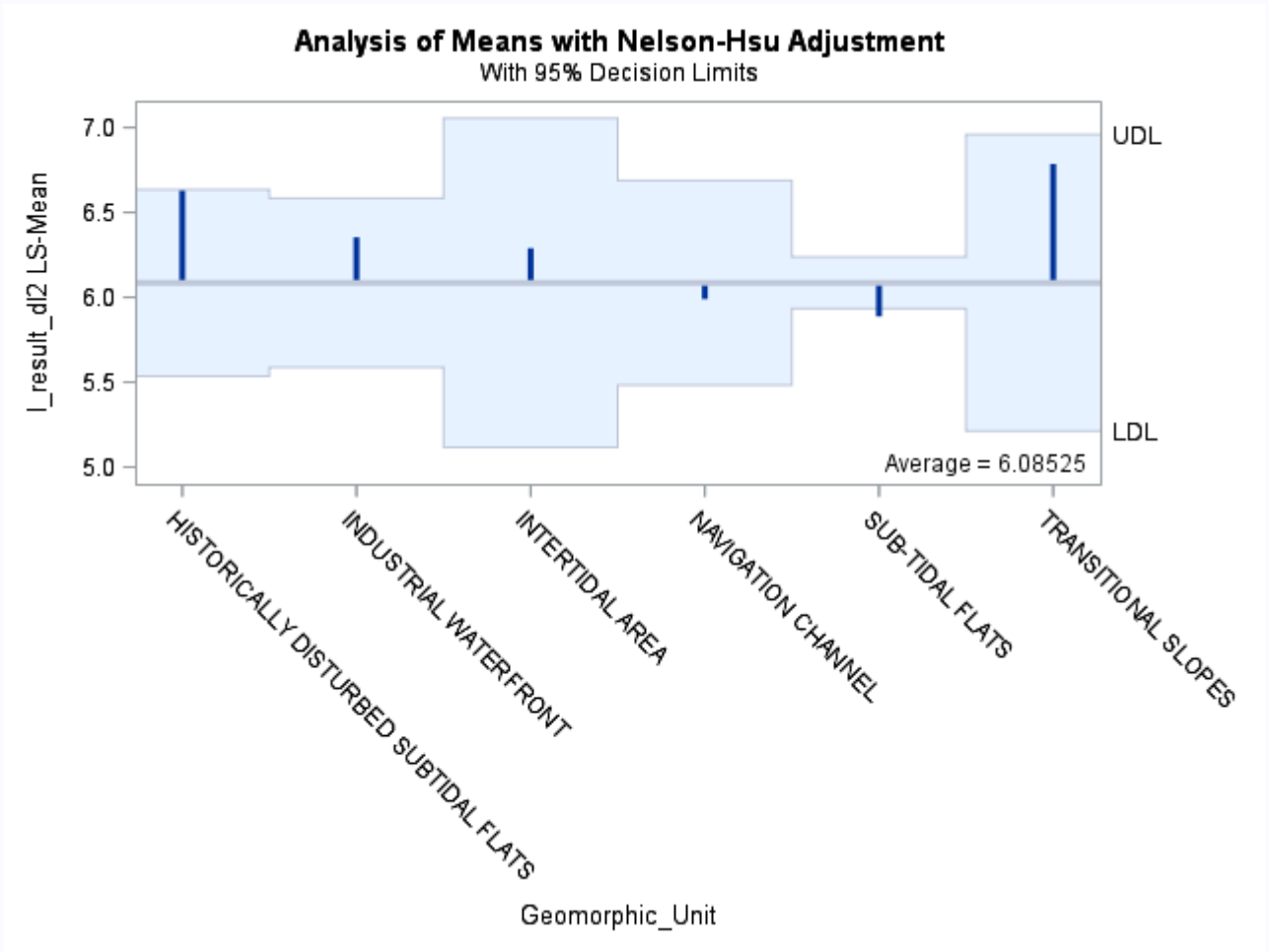
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	21.77606138	4.35521228	3.46	0.0049


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 6
Error DF 244
MSE 1.2605
R-Square 0.0661
Adj R-Square 0.047

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.62843451	0.0545
INDUSTRIAL WATERFRONT	6.35341276	0.5969
INTERTIDAL AREA	6.28921354	0.9881
NAVIGATION CHANNEL	5.98973885	0.9968
SUB-TIDAL FLATS	5.88743052	0.0040
TRANSITIONAL SLOPES	6.78534159	0.1821


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.0
6.5
6.0
5.5
5.0
UDL
LDL
Average = 6.08525
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.62843451	1
INDUSTRIAL WATERFRONT	6.35341276	2
INTERTIDAL AREA	6.28921354	3
NAVIGATION CHANNEL	5.98973885	4
SUB-TIDAL FLATS	5.88743052	5
TRANSITIONAL SLOPES	6.78534159	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9408	0.9705	0.3663	0.0254	0.9988
2	0.9408		1.0000	0.8544	0.2882	0.8826
3	0.9705	1.0000		0.9846	0.9029	0.9230
4	0.3663	0.8544	0.9846		0.9987	0.3931
5	0.0254	0.2882	0.9029	0.9987		0.1111
6	0.9988	0.8826	0.9230	0.3931	0.1111	

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	11.4620	2.2924	0.41	0.8444
Error	244	1377.5	5.6457		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.52	0.0096
Error	41.2986		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**26**	6.62843451	1.02689366
INDUSTRIAL WATERFRONT	**31**	6.35341276	1.13441116
INTERTIDAL AREA	**9**	6.28921354	0.50771444
NAVIGATION CHANNEL	**22**	5.98973885	1.19320035
SUB-TIDAL FLATS	**151**	5.88743052	1.14635917
TRANSITIONAL SLOPES	**11**	6.78534159	1.16283995

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

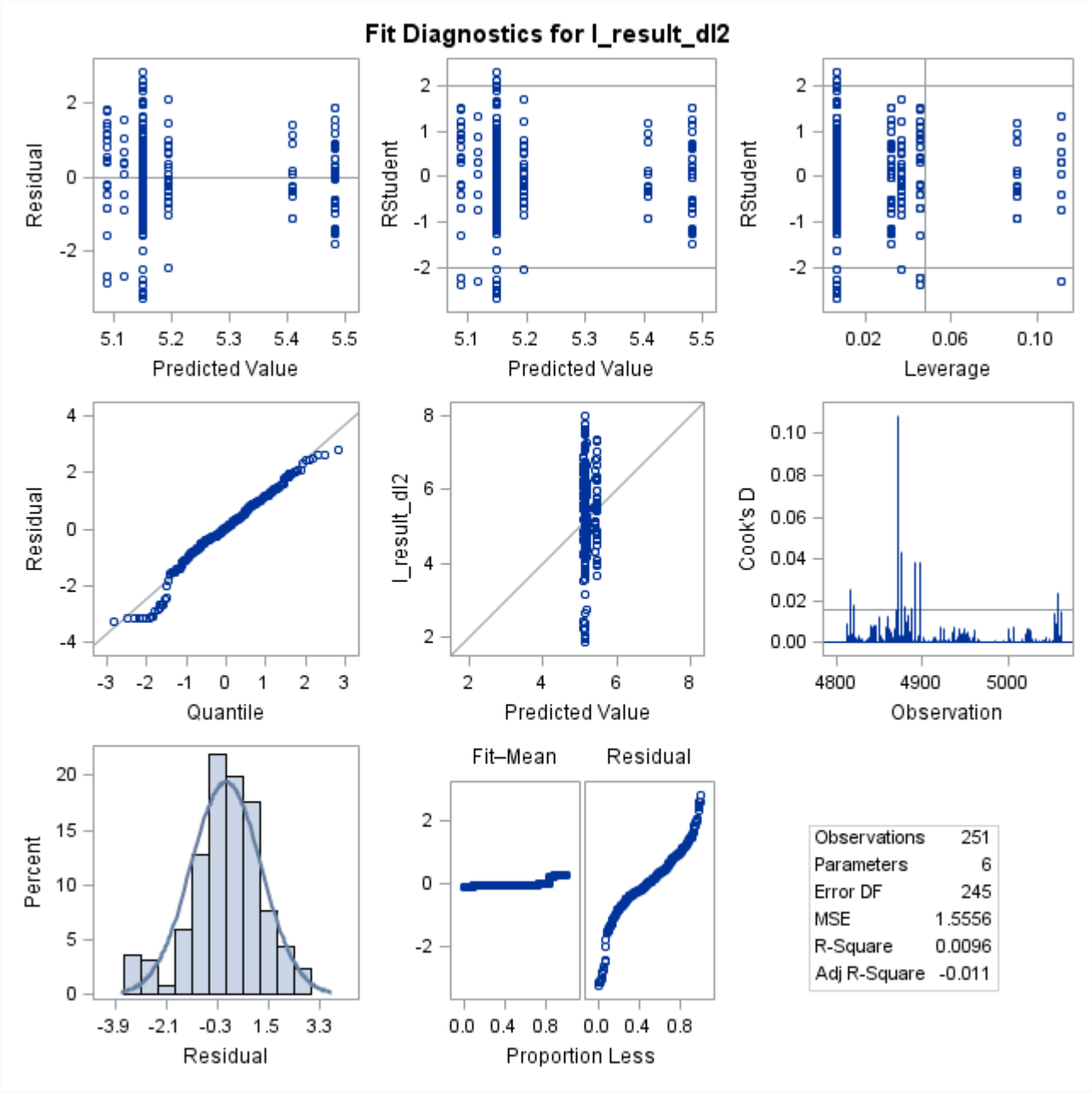
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	3.6815416	0.7363083	0.47	0.7960
Error	245	381.1209915	1.5555959		
Corrected Total	250	384.8025332			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.009567	23.98132	1.247235	5.200861

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	3.68154164	0.73630833	0.47	0.7960

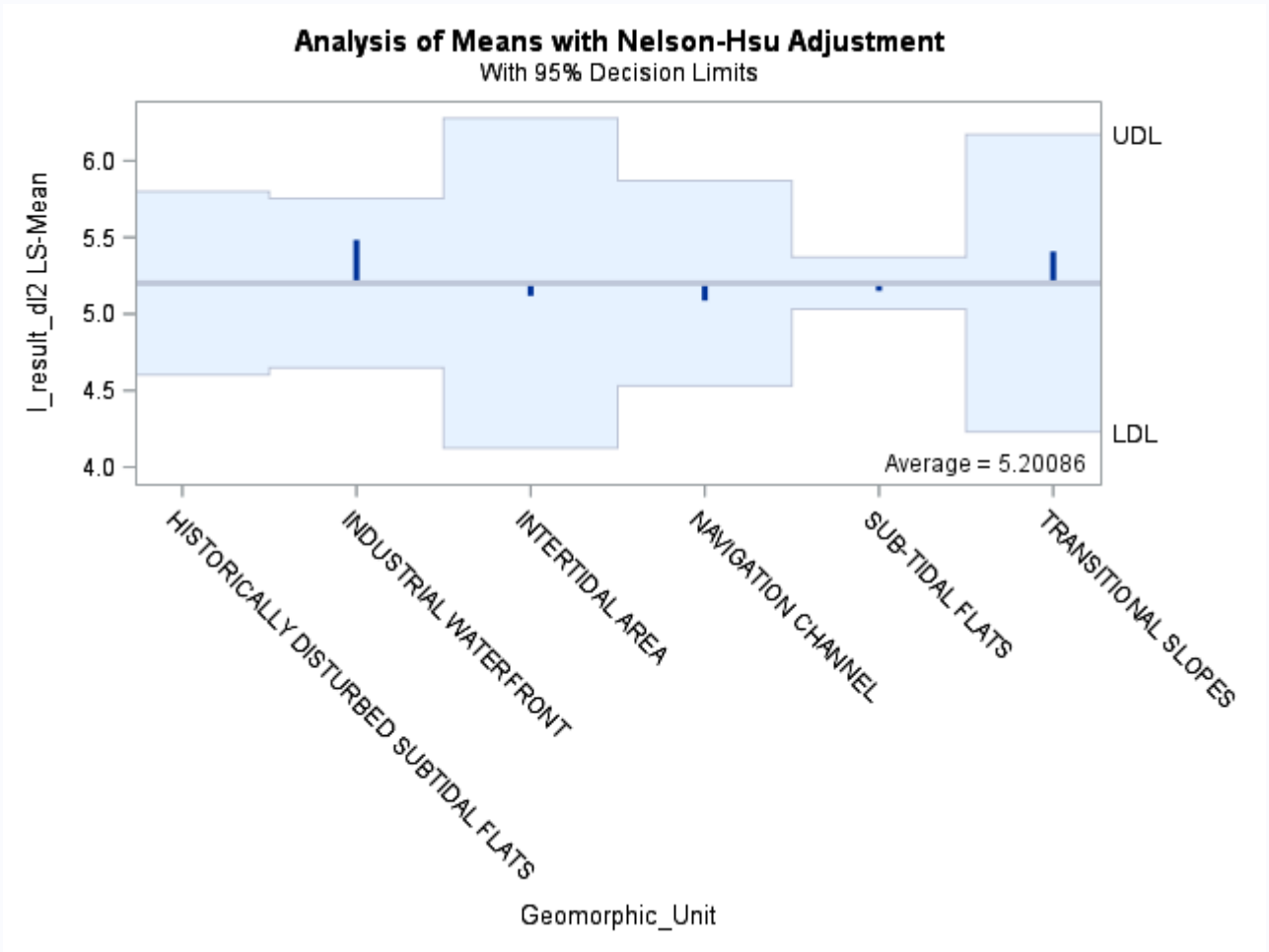
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	3.68154164	0.73630833	0.47	0.7960


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.5556
R-Square 0.0096
Adj R-Square -0.011

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.19533730	1.0000
INDUSTRIAL WATERFRONT	5.48349834	0.6492
INTERTIDAL AREA	5.11820060	0.9999
NAVIGATION CHANNEL	5.08724298	0.9956
SUB-TIDAL FLATS	5.15022126	0.9452
TRANSITIONAL SLOPES	5.40791881	0.9873


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
6.0
5.5
5.0
4.5
4.0
UDL
LDL
Average = 5.20086
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.19533730	1
INDUSTRIAL WATERFRONT	5.48349834	2
INTERTIDAL AREA	5.11820060	3
NAVIGATION CHANNEL	5.08724298	4
SUB-TIDAL FLATS	5.15022126	5
TRANSITIONAL SLOPES	5.40791881	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9515	1.0000	0.9997	1.0000	0.9969
2	0.9515		0.9717	0.8643	0.7536	1.0000
3	1.0000	0.9717		1.0000	1.0000	0.9955
4	0.9997	0.8643	1.0000		0.9999	0.9822
5	1.0000	0.7536	1.0000	0.9999		0.9859
6	0.9969	1.0000	0.9955	0.9822	0.9859	

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	43.9544	8.7909	1.58	0.1673
Error	245	1366.1	5.5759		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	0.58	0.7122
Error	39.7653		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	5.19533730	0.86329207
INDUSTRIAL WATERFRONT	**31**	5.48349834	1.06726129
INTERTIDAL AREA	**9**	5.11820060	1.24244333
NAVIGATION CHANNEL	**22**	5.08724298	1.43323291
SUB-TIDAL FLATS	**151**	5.15022126	1.32906973
TRANSITIONAL SLOPES	**11**	5.40791881	0.84391496

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

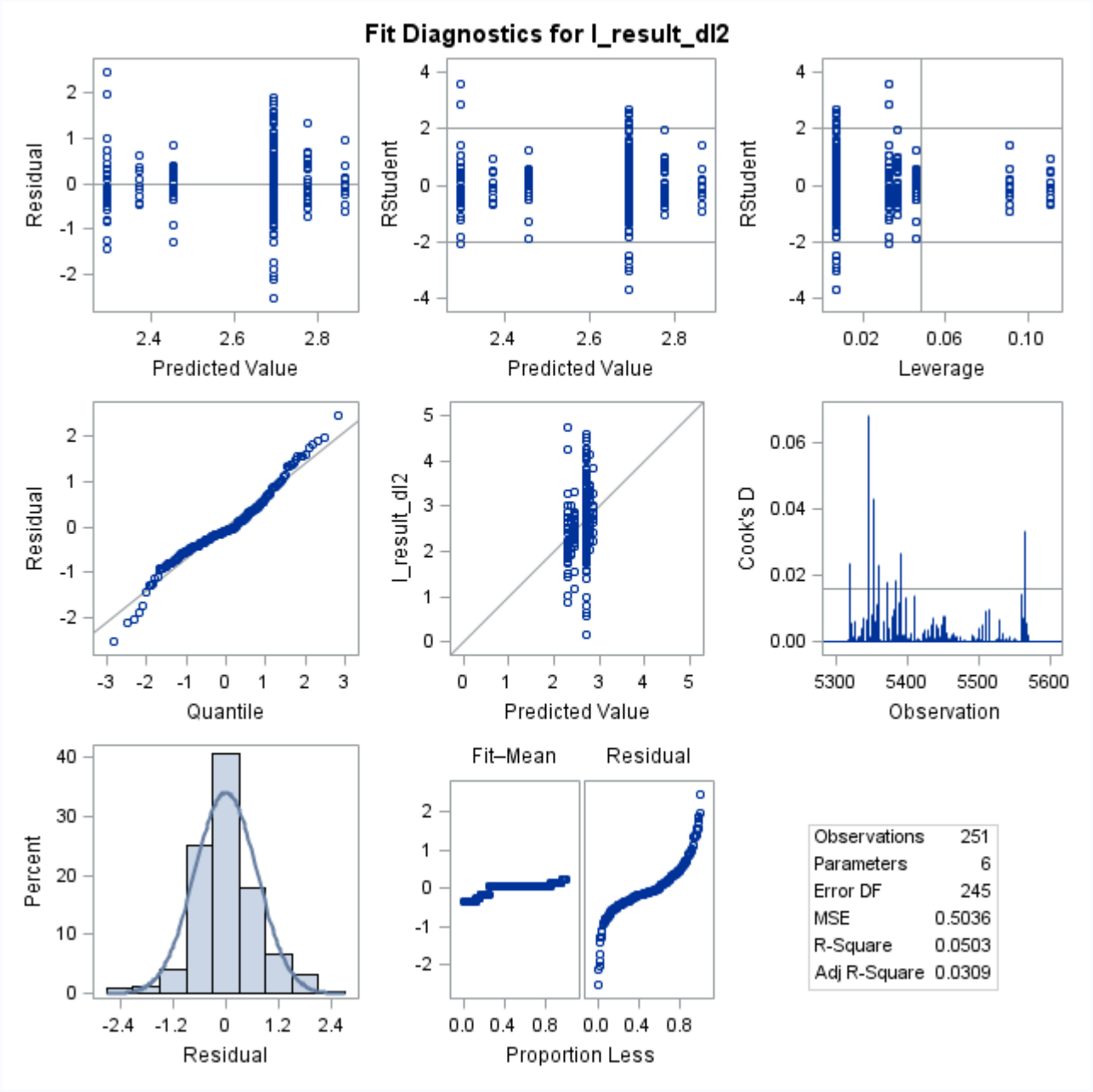
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	6.5288787	1.3057757	2.59	0.0262
Error	245	123.3726703	0.5035619		
Corrected Total	250	129.9015490			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.050260	27.00209	0.709621	2.628022

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	6.52887872	1.30577574	2.59	0.0262

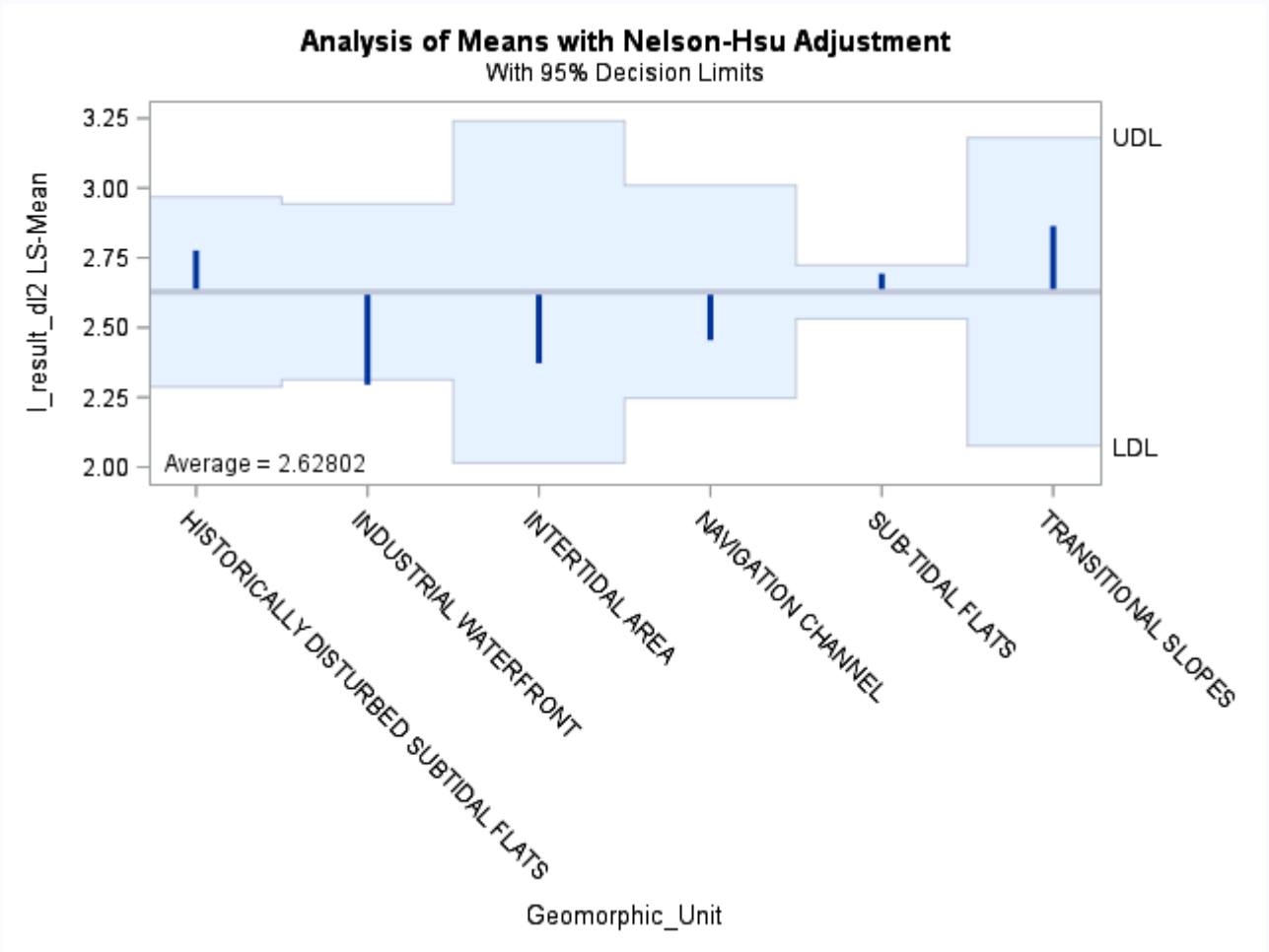
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	6.52887872	1.30577574	2.59	0.0262


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 0.5036
R-Square 0.0503
Adj R-Square 0.0309

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	2.77647314	0.7809
INDUSTRIAL WATERFRONT	2.29514120	0.0325
INTERTIDAL AREA	2.37226679	0.8104
NAVIGATION CHANNEL	2.45499796	0.7516
SUB-TIDAL FLATS	2.69308375	0.3484
TRANSITIONAL SLOPES	2.86394498	0.7949


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
3.25
3.00
2.75
2.50
2.25
2.00
UDL
LDL
Average = 2.62802
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	2.77647314	1
INDUSTRIAL WATERFRONT	2.29514120	2
INTERTIDAL AREA	2.37226679	3
NAVIGATION CHANNEL	2.45499796	4
SUB-TIDAL FLATS	2.69308375	5
TRANSITIONAL SLOPES	2.86394498	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.1070	0.6775	0.6143	0.9933	0.9994
2	0.1070		0.9997	0.9659	0.0540	0.2046
3	0.6775	0.9997		0.9997	0.7751	0.6377
4	0.6143	0.9659	0.9997		0.6836	0.6253
5	0.9933	0.0540	0.7751	0.6836		0.9721
6	0.9994	0.2046	0.6377	0.6253	0.9721	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	8.8626	1.7725	2.12	0.0638
Error	245	205.0	0.8366		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.75	0.0066
Error	42.6644		

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	2.77647314	0.46037771
INDUSTRIAL WATERFRONT	**31**	2.29514120	0.79794580
INTERTIDAL AREA	**9**	2.37226679	0.37399868
NAVIGATION CHANNEL	**22**	2.45499796	0.46336252
SUB-TIDAL FLATS	**151**	2.69308375	0.78034971
TRANSITIONAL SLOPES	**11**	2.86394498	0.42318508

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

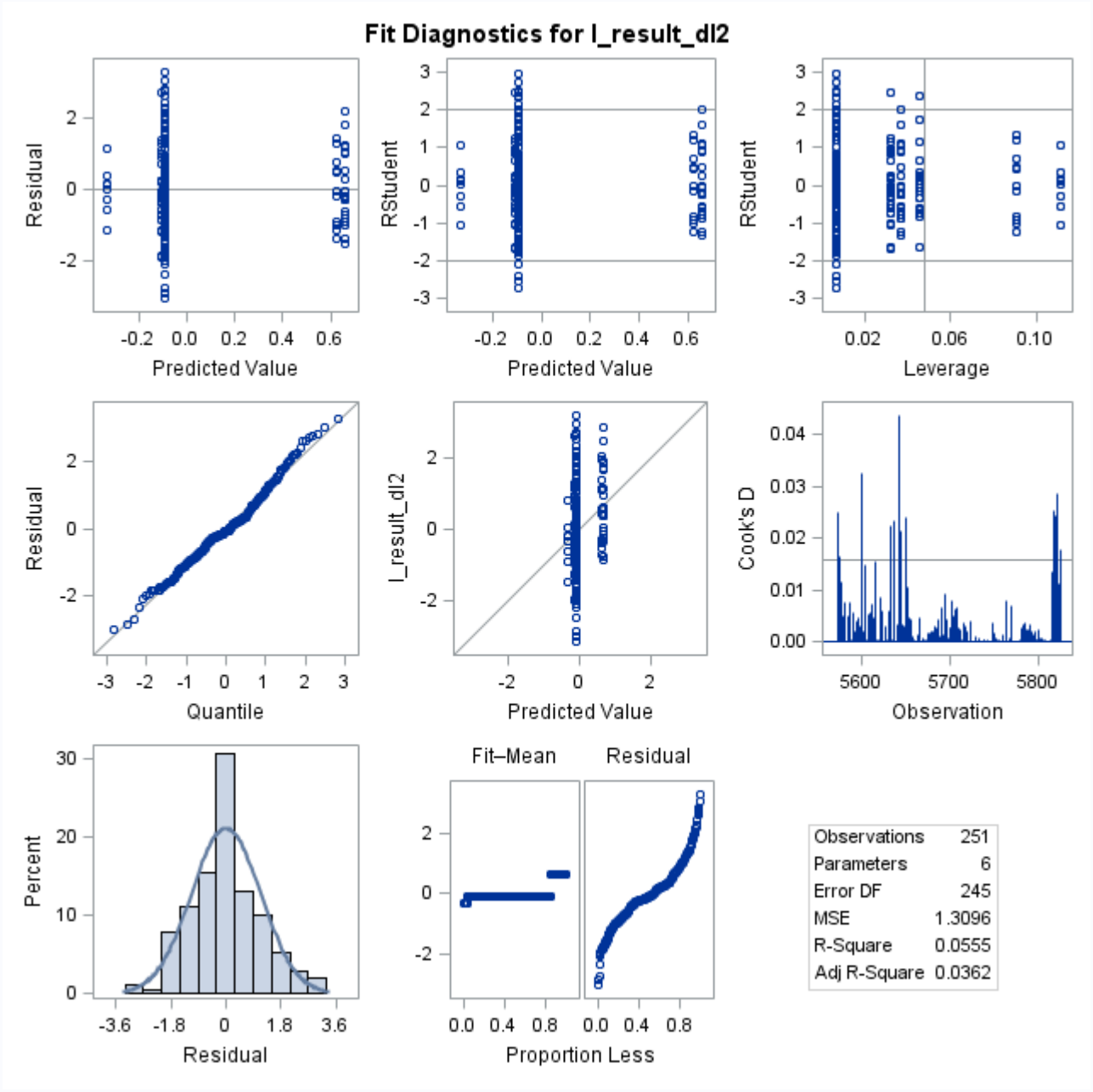
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	18.8513665	3.7702733	2.88	0.0152
Error	245	320.8611278	1.3096373		
Corrected Total	250	339.7124944			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.055492	12136.78	1.144394	0.009429

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	18.85136653	3.77027331	2.88	0.0152

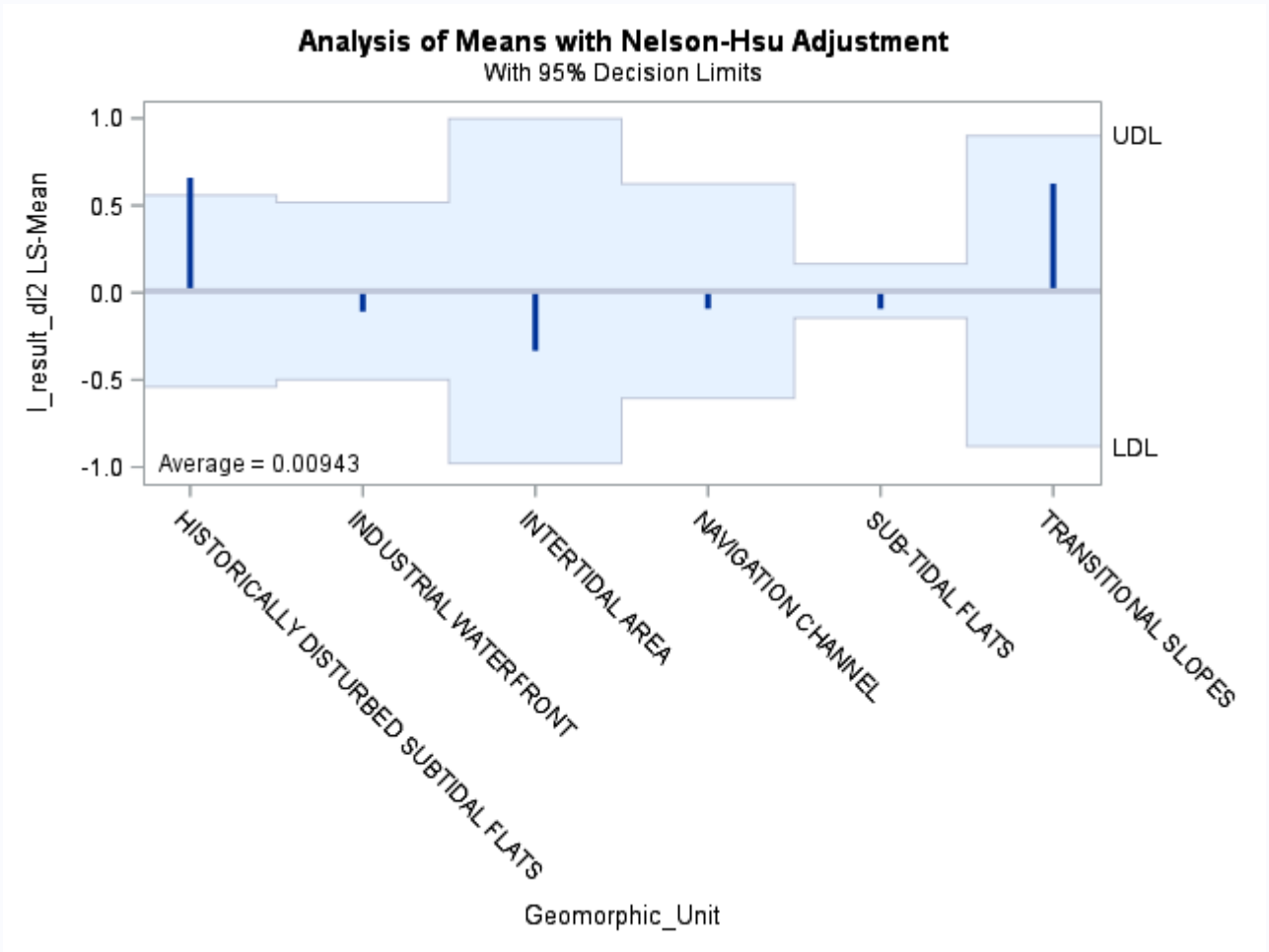
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	18.85136653	3.77027331	2.88	0.0152


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.3096
R-Square 0.0555
Adj R-Square 0.0362

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.65922676	0.0117
INDUSTRIAL WATERFRONT	-0.10837023	0.9816
INTERTIDAL AREA	-0.33301996	0.9027
NAVIGATION CHANNEL	-0.09180358	0.9962
SUB-TIDAL FLATS	-0.09230622	0.3822
TRANSITIONAL SLOPES	0.62565143	0.3238


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
1.0
0.5
0.0
-0.5
-1.0
UDL
LDL
Average = 0.00943
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.65922676	1
INDUSTRIAL WATERFRONT	-0.10837023	2
INTERTIDAL AREA	-0.33301996	3
NAVIGATION CHANNEL	-0.09180358	4
SUB-TIDAL FLATS	-0.09230622	5
TRANSITIONAL SLOPES	0.62565143	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.1145	0.2179	0.2042	0.0229	1.0000
2	0.1145		0.9954	1.0000	1.0000	0.4499
3	0.2179	0.9954		0.9948	0.9900	0.4271
4	0.2042	1.0000	0.9948		1.0000	0.5346
5	0.0229	1.0000	0.9900	1.0000		0.3403
6	1.0000	0.4499	0.4271	0.5346	0.3403	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	30.5096	6.1019	1.70	0.1342
Error	245	877.1	3.5800		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.87	0.0058
Error	41.2504		

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	0.65922676	0.97483006
INDUSTRIAL WATERFRONT	**31**	-0.10837023	0.97501800
INTERTIDAL AREA	**9**	-0.33301996	0.63075899
NAVIGATION CHANNEL	**22**	-0.09180358	0.99253956
SUB-TIDAL FLATS	**151**	-0.09230622	1.24892132
TRANSITIONAL SLOPES	**11**	0.62565143	0.98956229

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

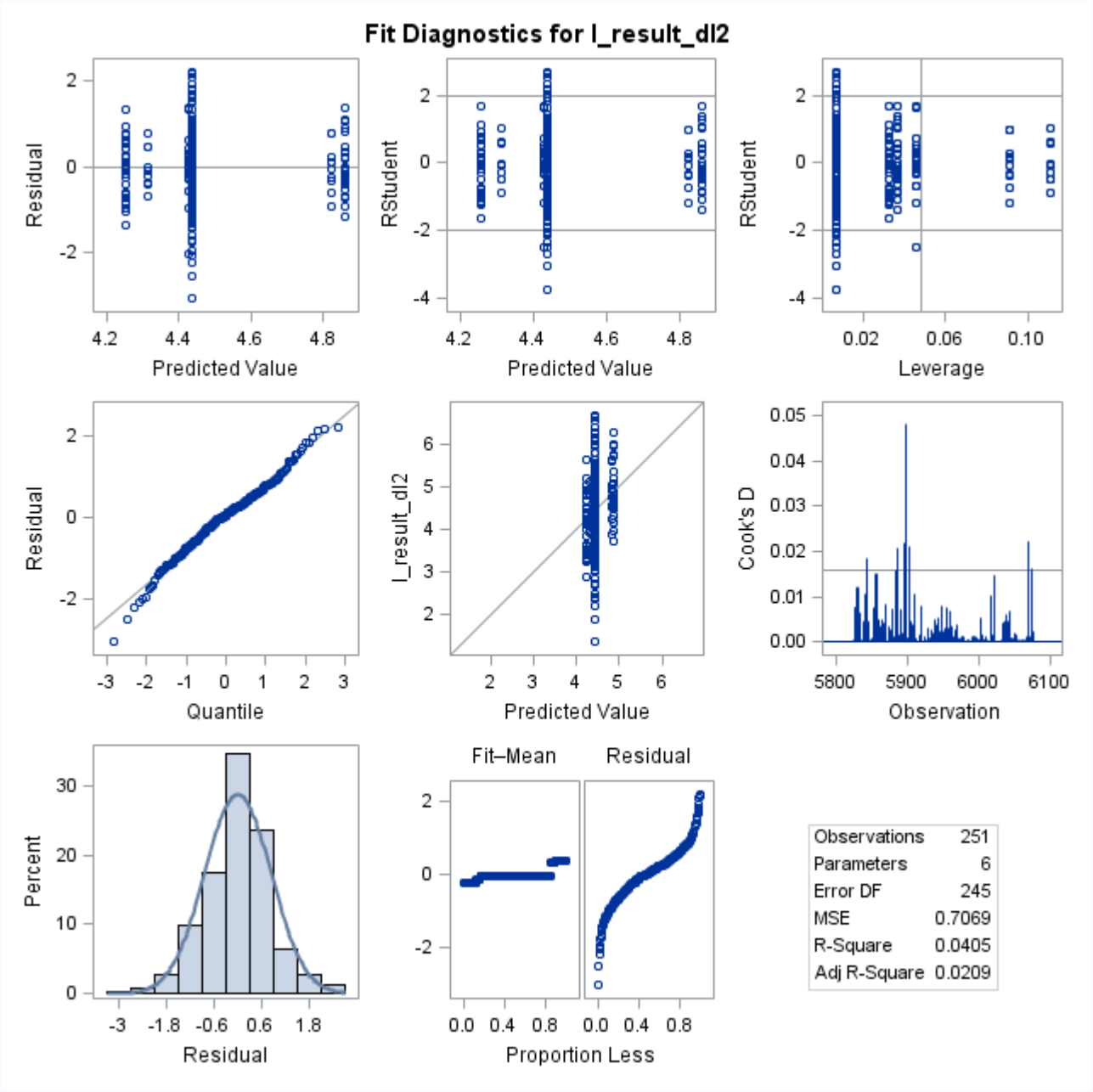
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	7.3048534	1.4609707	2.07	0.0702
Error	245	173.1890596	0.7068941		
Corrected Total	250	180.4939130			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.040471	18.80421	0.840770	4.471179

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	7.30485344	1.46097069	2.07	0.0702

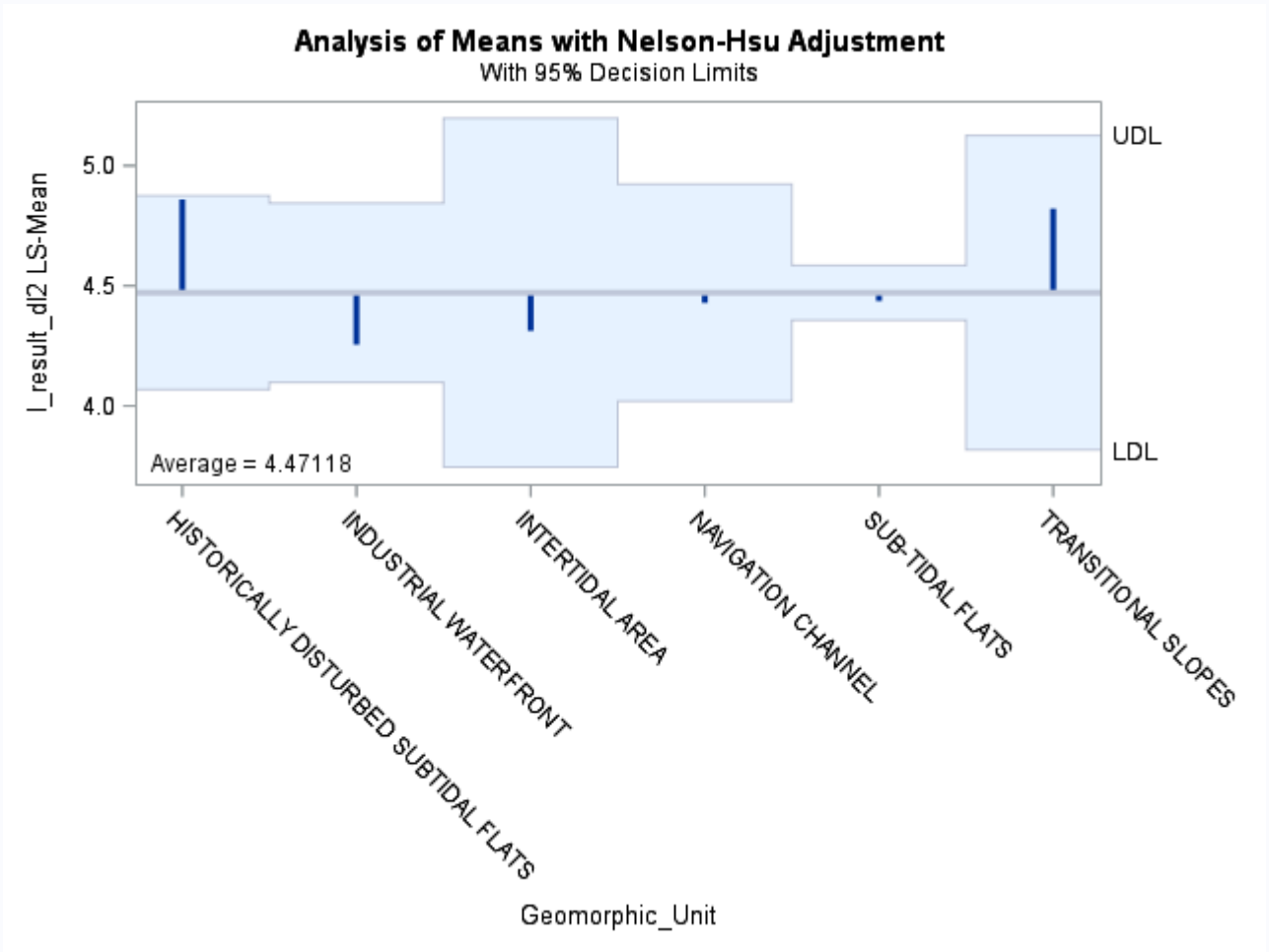
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	7.30485344	1.46097069	2.07	0.0702


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 0.7069
R-Square 0.0405
Adj R-Square 0.0209

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.85907288	0.0655
INDUSTRIAL WATERFRONT	4.25515838	0.5200
INTERTIDAL AREA	4.31228215	0.9858
NAVIGATION CHANNEL	4.42879933	0.9997
SUB-TIDAL FLATS	4.43633523	0.9404
TRANSITIONAL SLOPES	4.82094548	0.6040


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.0
4.5
4.0
UDL
LDL
Average = 4.47118
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.85907288	1
INDUSTRIAL WATERFRONT	4.25515838	2
INTERTIDAL AREA	4.31228215	3
NAVIGATION CHANNEL	4.42879933	4
SUB-TIDAL FLATS	4.43633523	5
TRANSITIONAL SLOPES	4.82094548	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0733	0.5400	0.4794	0.1581	1.0000
2	0.0733		1.0000	0.9766	0.8839	0.3940
3	0.5400	1.0000		0.9993	0.9981	0.7589
4	0.4794	0.9766	0.9993		1.0000	0.8048
5	0.1581	0.8839	0.9981	1.0000		0.6870
6	1.0000	0.3940	0.7589	0.8048	0.6870	

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	16.3277	3.2655	2.49	0.0320
Error	245	321.4	1.3119		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.67	0.0076
Error	42.1045		

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	4.85907288	0.63155458
INDUSTRIAL WATERFRONT	**31**	4.25515838	0.65593752
INTERTIDAL AREA	**9**	4.31228215	0.48670439
NAVIGATION CHANNEL	**22**	4.42879933	0.70678941
SUB-TIDAL FLATS	**151**	4.43633523	0.94813038
TRANSITIONAL SLOPES	**11**	4.82094548	0.51795170

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Copper
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

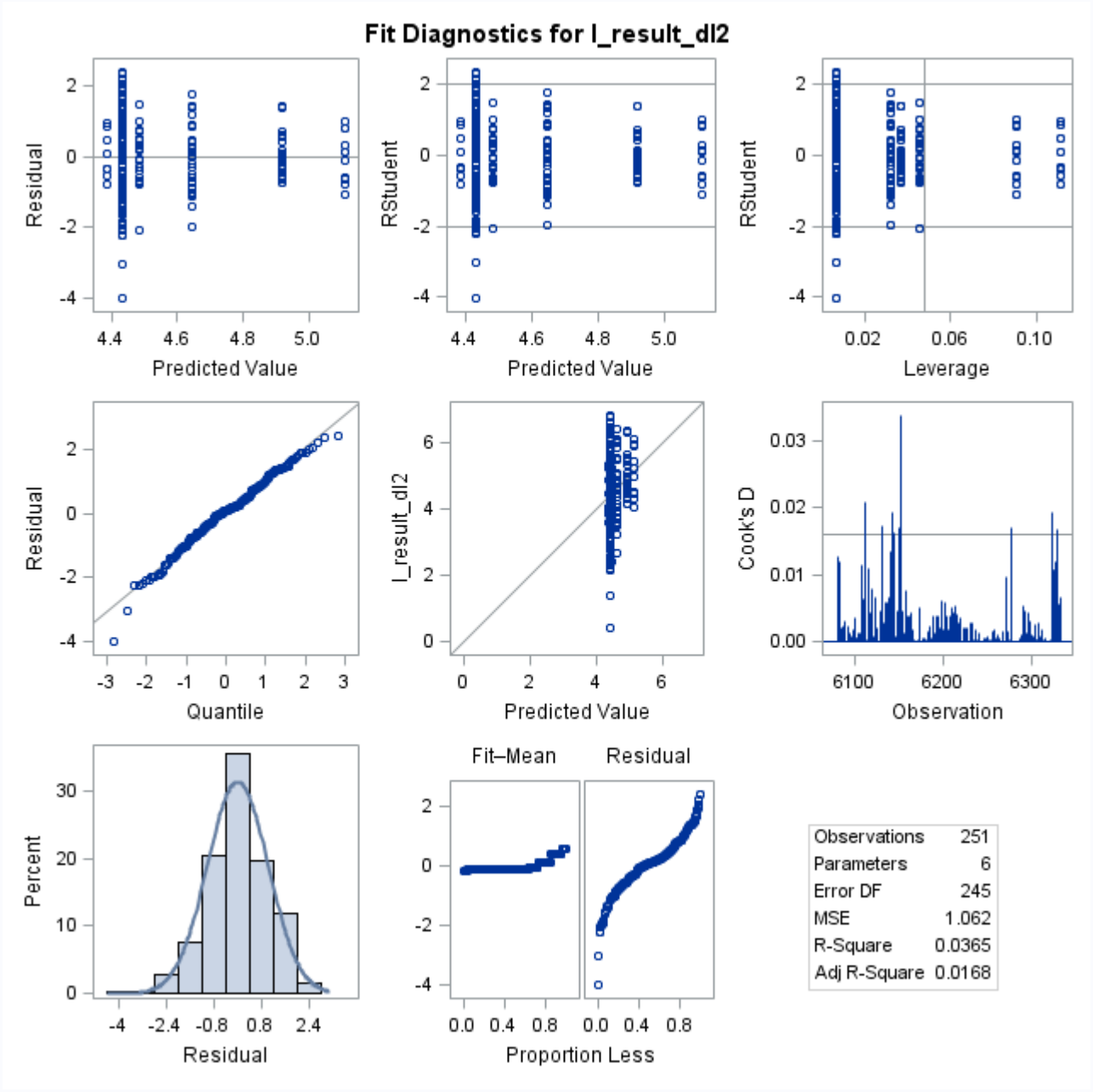
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	9.8469395	1.9693879	1.85	0.1030
Error	245	260.1840607	1.0619758		
Corrected Total	250	270.0310002			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.036466	22.69042	1.030522	4.541661

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	9.84693954	1.96938791	1.85	0.1030

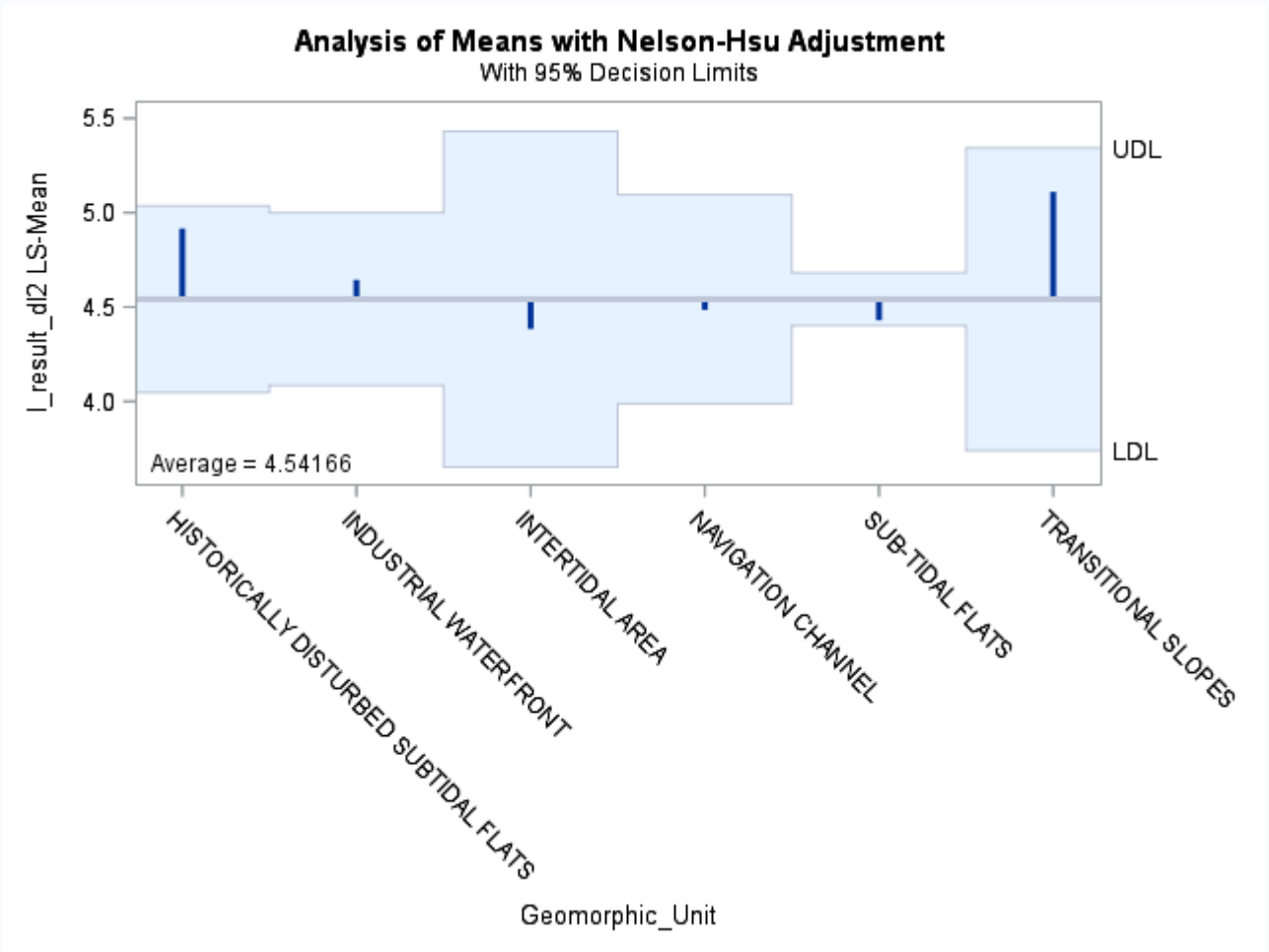
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	9.84693954	1.96938791	1.85	0.1030


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.062
R-Square 0.0365
Adj R-Square 0.0168

Metals Copper
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.91611537	0.2327
INDUSTRIAL WATERFRONT	4.64396211	0.9843
INTERTIDAL AREA	4.38428292	0.9947
NAVIGATION CHANNEL	4.48496144	0.9996
SUB-TIDAL FLATS	4.42991668	0.1838
TRANSITIONAL SLOPES	5.11035419	0.2980


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.5
5.0
4.5
4.0
UDL
LDL
Average = 4.54166
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Copper
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.91611537	1
INDUSTRIAL WATERFRONT	4.64396211	2
INTERTIDAL AREA	4.38428292	3
NAVIGATION CHANNEL	4.48496144	4
SUB-TIDAL FLATS	4.42991668	5
TRANSITIONAL SLOPES	5.11035419	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9166	0.7619	0.6921	0.2156	0.9951
2	0.9166		0.9855	0.9938	0.8991	0.7906
3	0.7619	0.9855		0.9999	1.0000	0.6207
4	0.6921	0.9938	0.9999		0.9999	0.5706
5	0.2156	0.8991	1.0000	0.9999		0.2834
6	0.9951	0.7906	0.6207	0.5706	0.2834	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	42.7337	8.5467	3.25	0.0073
Error	245	644.0	2.6286		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.46	0.0105
Error	41.6929		

Metals Copper
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	4.91611537	0.58126360
INDUSTRIAL WATERFRONT	**31**	4.64396211	0.95638299
INTERTIDAL AREA	**9**	4.38428292	0.62665390
NAVIGATION CHANNEL	**22**	4.48496144	0.75516333
SUB-TIDAL FLATS	**151**	4.42991668	1.16609781
TRANSITIONAL SLOPES	**11**	5.11035419	0.69818166

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

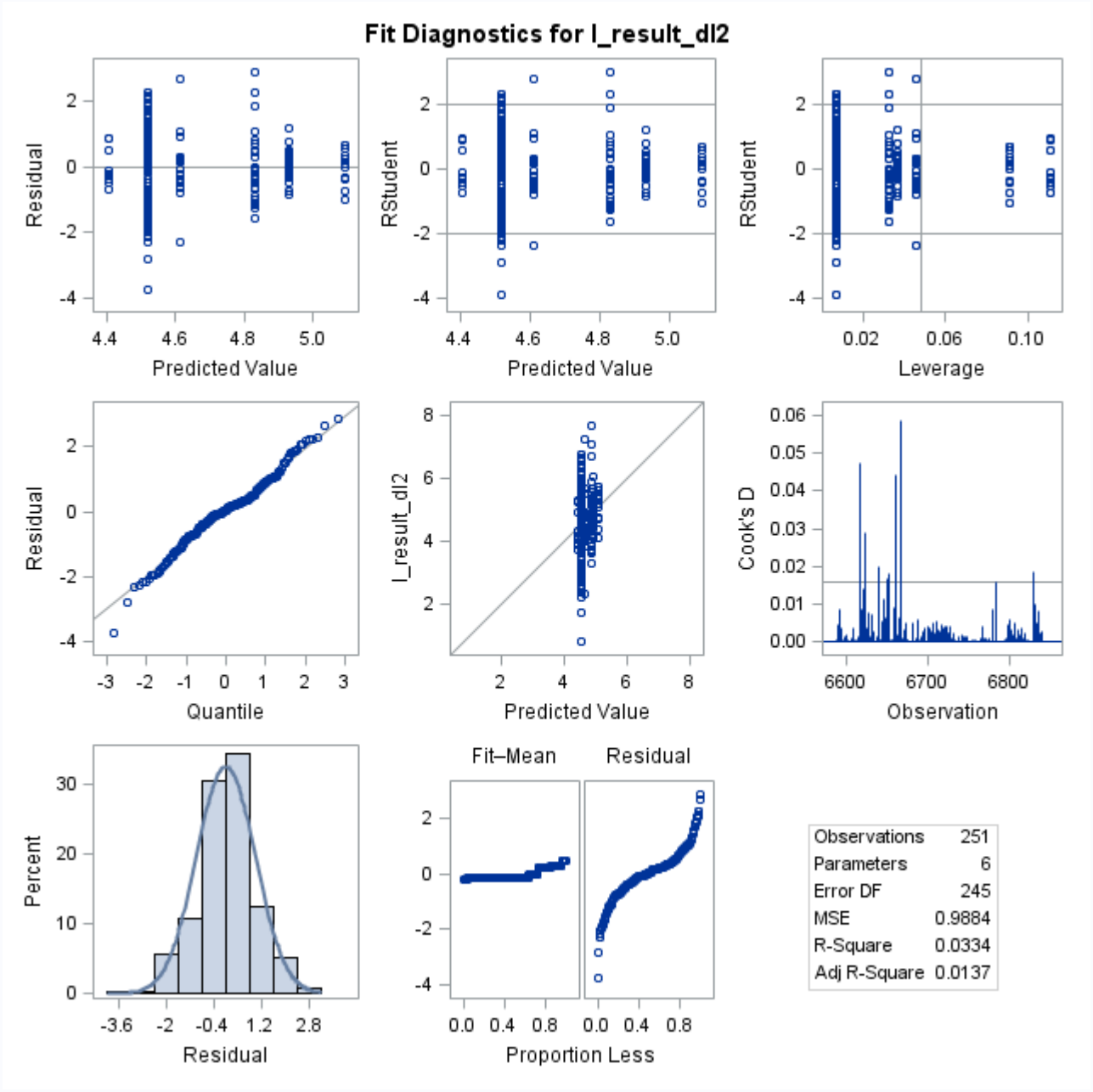
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	8.3715784	1.6743157	1.69	0.1366
Error	245	242.1559080	0.9883915		
Corrected Total	250	250.5274864			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.033416	21.46745	0.994179	4.631098

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	8.37157841	1.67431568	1.69	0.1366

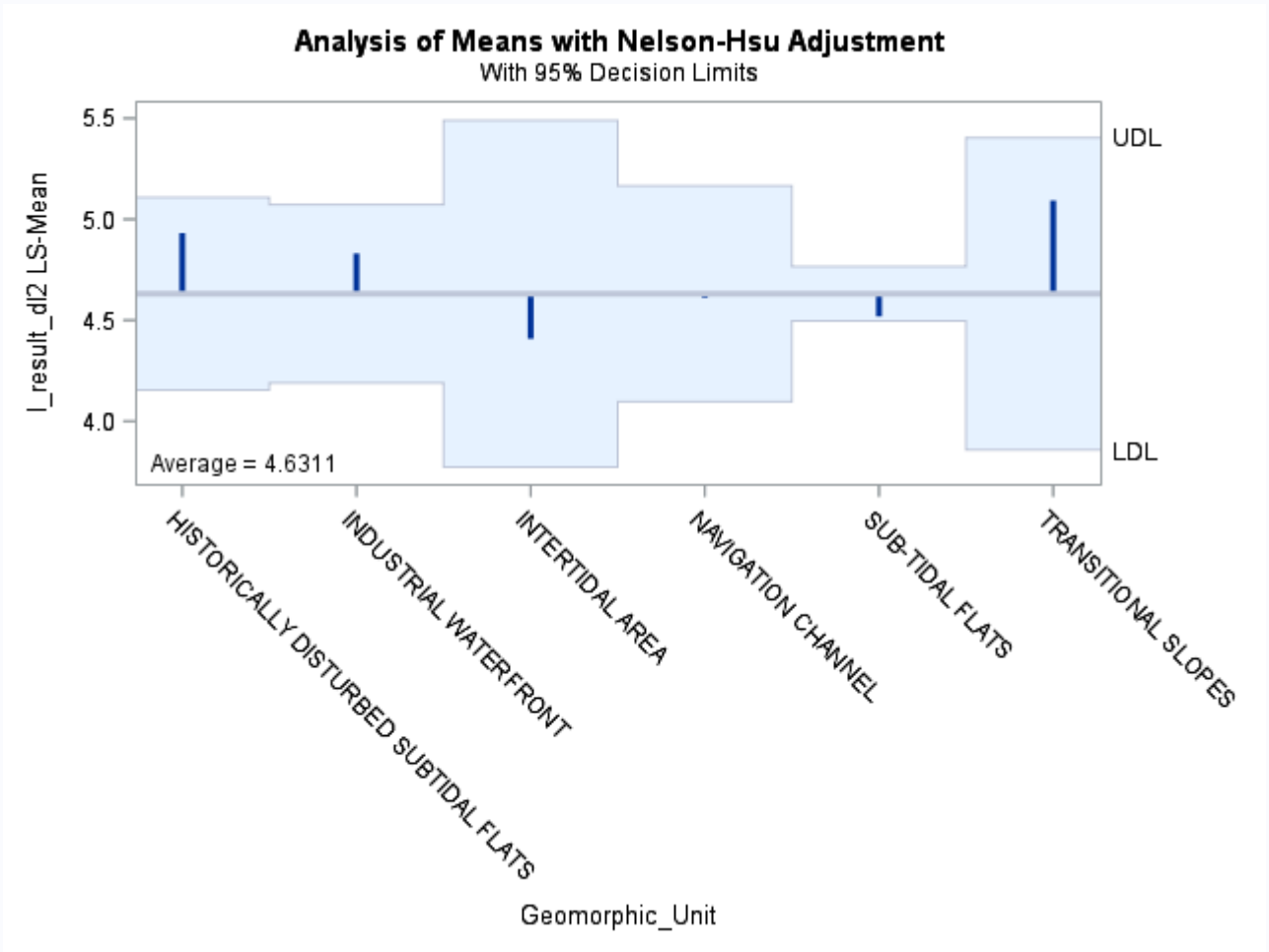
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	8.37157841	1.67431568	1.69	0.1366


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 0.9884
R-Square 0.0334
Adj R-Square 0.0137

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.93139683	0.4275
INDUSTRIAL WATERFRONT	4.83077688	0.7534
INTERTIDAL AREA	4.40821747	0.9699
NAVIGATION CHANNEL	4.61141258	1.0000
SUB-TIDAL FLATS	4.51892500	0.1519
TRANSITIONAL SLOPES	5.09282467	0.4867


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.5
5.0
4.5
4.0
UDL
LDL
Average = 4.6311
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.93139683	1
INDUSTRIAL WATERFRONT	4.83077688	2
INTERTIDAL AREA	4.40821747	3
NAVIGATION CHANNEL	4.61141258	4
SUB-TIDAL FLATS	4.51892500	5
TRANSITIONAL SLOPES	5.09282467	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9989	0.7466	0.8725	0.3536	0.9976
2	0.9989		0.8717	0.9688	0.6054	0.9752
3	0.7466	0.8717		0.9955	0.9995	0.6439
4	0.8725	0.9688	0.9955		0.9985	0.7786
5	0.3536	0.6054	0.9995	0.9985		0.4367
6	0.9976	0.9752	0.6439	0.7786	0.4367	

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	35.4950	7.0990	2.67	0.0226
Error	245	651.0	2.6573		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.56	0.0090
Error	41.8981		

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	**27**	4.93139683	0.44900474
INDUSTRIAL WATERFRONT	**31**	4.83077688	1.01801508
INTERTIDAL AREA	**9**	4.40821747	0.58799191
NAVIGATION CHANNEL	**22**	4.61141258	0.88834456
SUB-TIDAL FLATS	**151**	4.51892500	1.10569111
TRANSITIONAL SLOPES	**11**	5.09282467	0.55699649

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

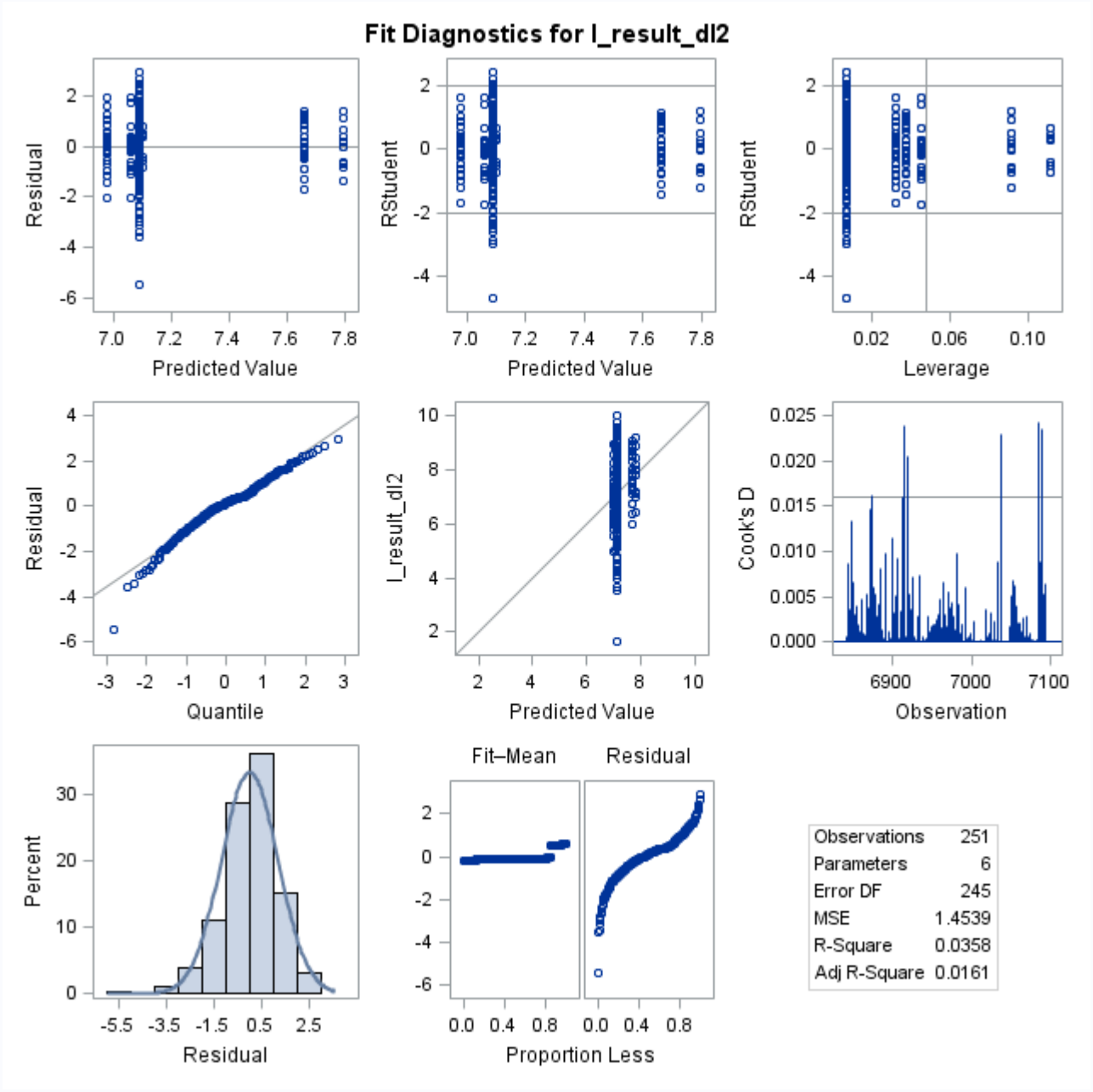
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	13.2278048	2.6455610	1.82	0.1096
Error	245	356.2150791	1.4539391		
Corrected Total	250	369.4428840			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.035805	16.82807	1.205794	7.165373

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	13.22780483	2.64556097	1.82	0.1096

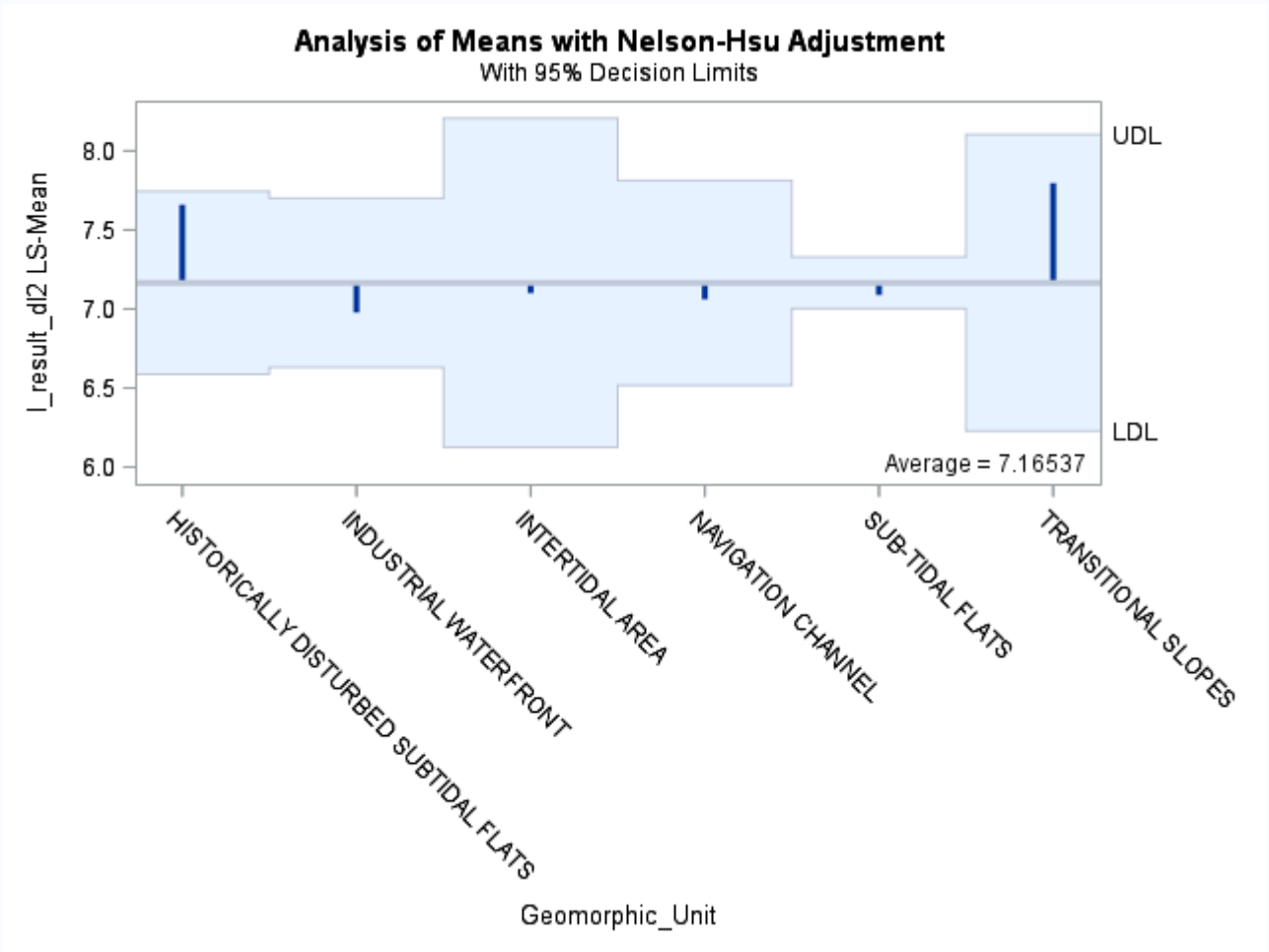
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	13.22780483	2.64556097	1.82	0.1096


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.4539
R-Square 0.0358
Adj R-Square 0.0161

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.65952473	0.1330
INDUSTRIAL WATERFRONT	6.97750255	0.8976
INTERTIDAL AREA	7.10064216	1.0000
NAVIGATION CHANNEL	7.06128116	0.9966
SUB-TIDAL FLATS	7.08866045	0.7245
TRANSITIONAL SLOPES	7.79609696	0.3550


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
8.0
7.5
7.0
6.5
6.0
UDL
LDL
Average = 7.16537
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.65952473	1
INDUSTRIAL WATERFRONT	6.97750255	2
INTERTIDAL AREA	7.10064216	3
NAVIGATION CHANNEL	7.06128116	4
SUB-TIDAL FLATS	7.08866045	5
TRANSITIONAL SLOPES	7.79609696	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.2661	0.8345	0.5150	0.2122	0.9996
2	0.2661		0.9998	0.9999	0.9972	0.3837
3	0.8345	0.9998		1.0000	1.0000	0.7940
4	0.5150	0.9999	1.0000		1.0000	0.5660
5	0.2122	0.9972	1.0000	1.0000		0.4178
6	0.9996	0.3837	0.7940	0.5660	0.4178	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	100.4	20.0754	2.81	0.0172
Error	245	1748.1	7.1351		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.49	0.0099
Error	42.6420		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	27	7.65952473	0.77593199
INDUSTRIAL WATERFRONT	31	6.97750255	0.89763237
INTERTIDAL AREA	9	7.10064216	0.59780267
NAVIGATION CHANNEL	22	7.06128116	0.84695564
SUB-TIDAL FLATS	151	7.08866045	1.39368576
TRANSITIONAL SLOPES	11	7.79609696	0.84332538

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

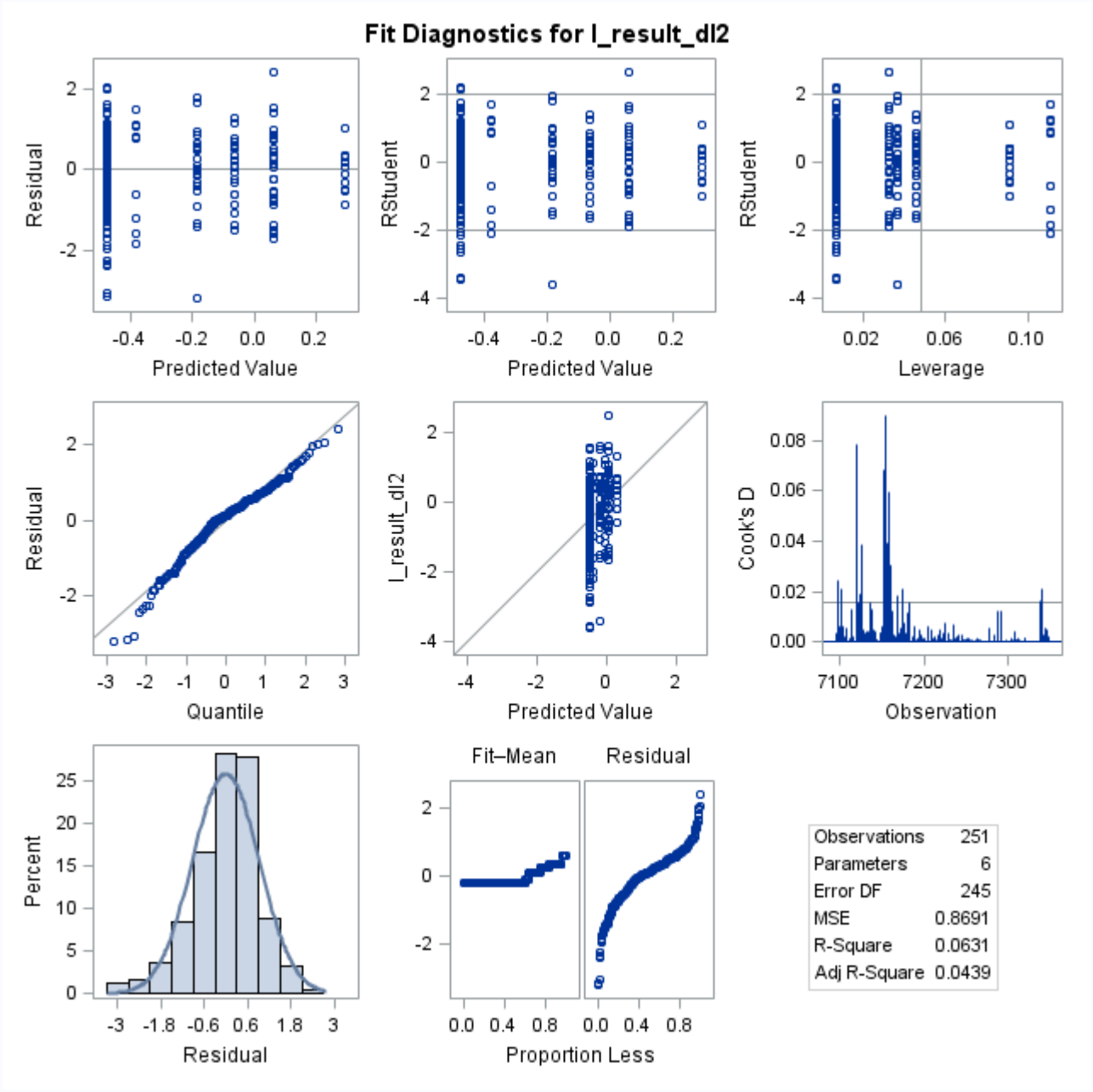
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	14.3290402	2.8658080	3.30	0.0067
Error	245	212.9275135	0.8690919		
Corrected Total	250	227.2565538			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.063052	-303.9457	0.932251	-0.306716

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	14.32904023	2.86580805	3.30	0.0067

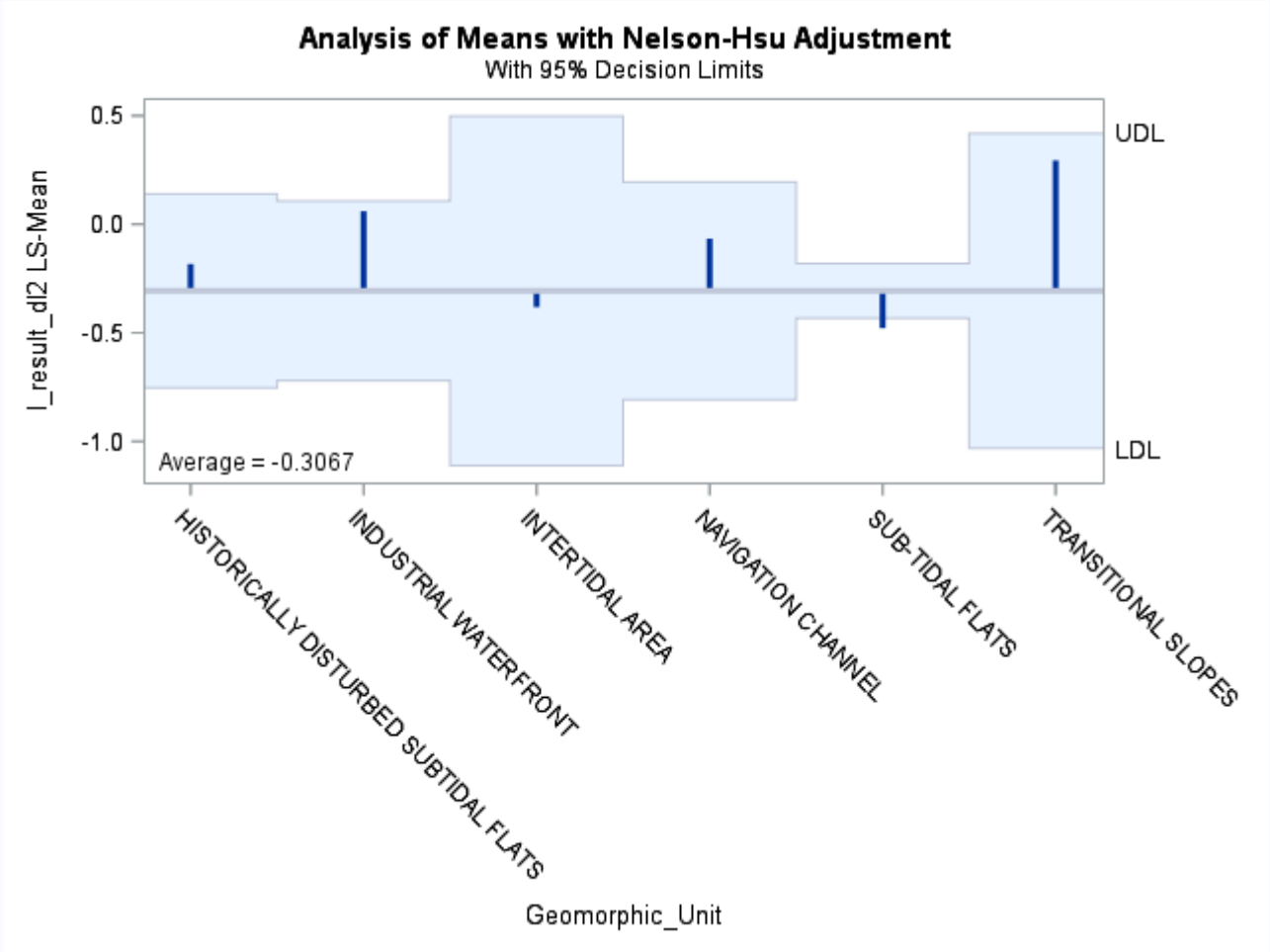
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	14.32904023	2.86580805	3.30	0.0067


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 0.8691
R-Square 0.0631
Adj R-Square 0.0439

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.18322432	0.9609
INDUSTRIAL WATERFRONT	0.06002275	0.1085
INTERTIDAL AREA	-0.38155803	0.9998
NAVIGATION CHANNEL	-0.06609008	0.7050
SUB-TIDAL FLATS	-0.47845080	0.0024
TRANSITIONAL SLOPES	0.29405765	0.1557


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
0.5
0.0
-0.5
-1.0
UDL
LDL
Average = -0.3067
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.18322432	1
INDUSTRIAL WATERFRONT	0.06002275	2
INTERTIDAL AREA	-0.38155803	3
NAVIGATION CHANNEL	-0.06609008	4
SUB-TIDAL FLATS	-0.47845080	5
TRANSITIONAL SLOPES	0.29405765	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9204	0.9938	0.9980	0.6546	0.7079
2	0.9204		0.8111	0.9966	0.0427	0.9800
3	0.9938	0.8111		0.9565	0.9997	0.5912
4	0.9980	0.9966	0.9565		0.3814	0.9017
5	0.6546	0.0427	0.9997	0.3814		0.0887
6	0.7079	0.9800	0.5912	0.9017	0.0887	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	9.8026	1.9605	0.91	0.4749
Error	245	527.6	2.1537		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	4.76	0.0017
Error	39.6440		

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	27	-0.18322432	0.97505960
INDUSTRIAL WATERFRONT	31	0.06002275	0.96397862
INTERTIDAL AREA	9	-0.38155803	1.29987526
NAVIGATION CHANNEL	22	-0.06609008	0.76944021
SUB-TIDAL FLATS	151	-0.47845080	0.93668368
TRANSITIONAL SLOPES	11	0.29405765	0.52668237

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

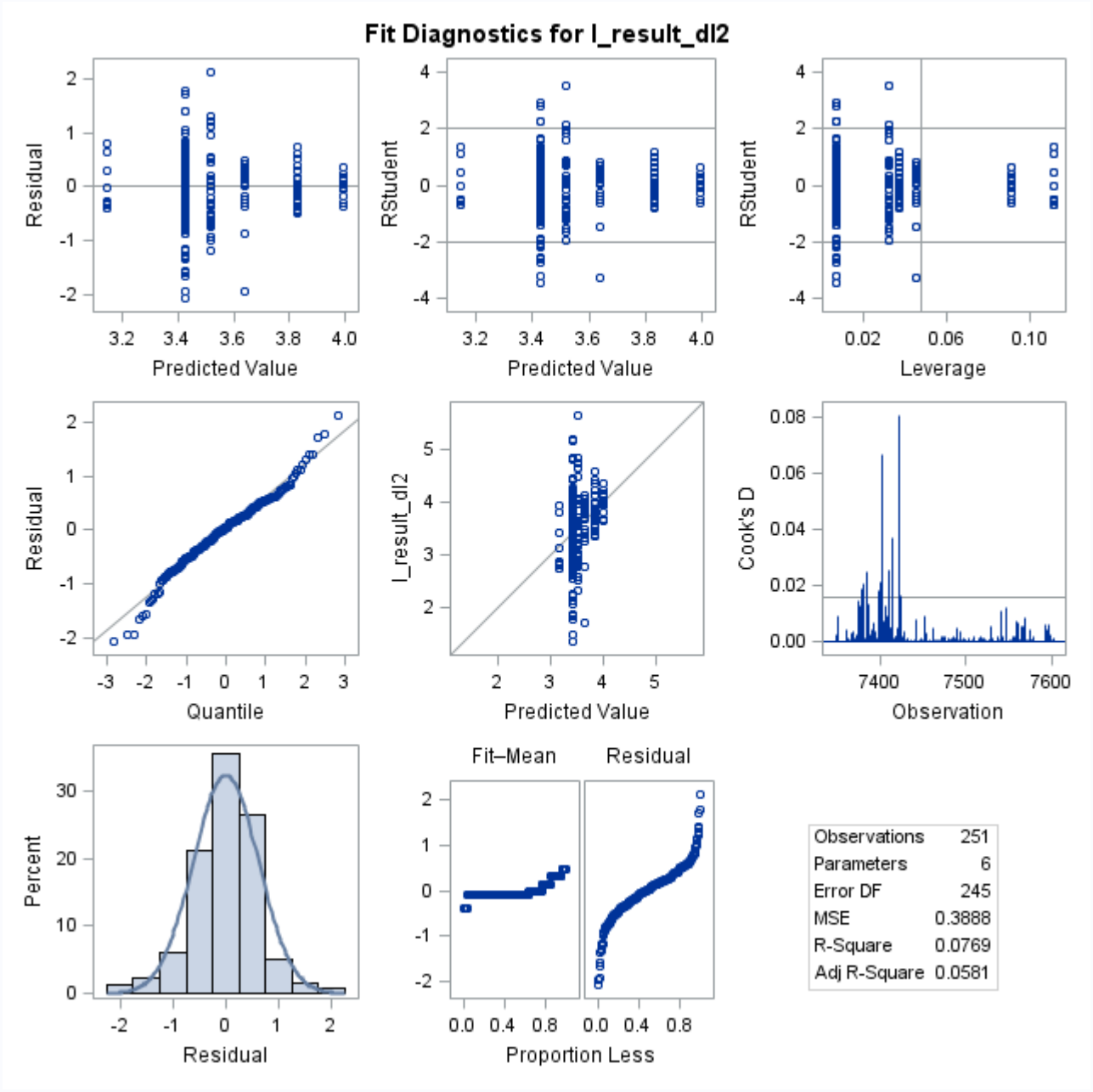
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	7.9363582	1.5872716	4.08	0.0014
Error	245	95.2640885	0.3888330		
Corrected Total	250	103.2004466			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.076902	17.74312	0.623565	3.514403

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	7.93635816	1.58727163	4.08	0.0014

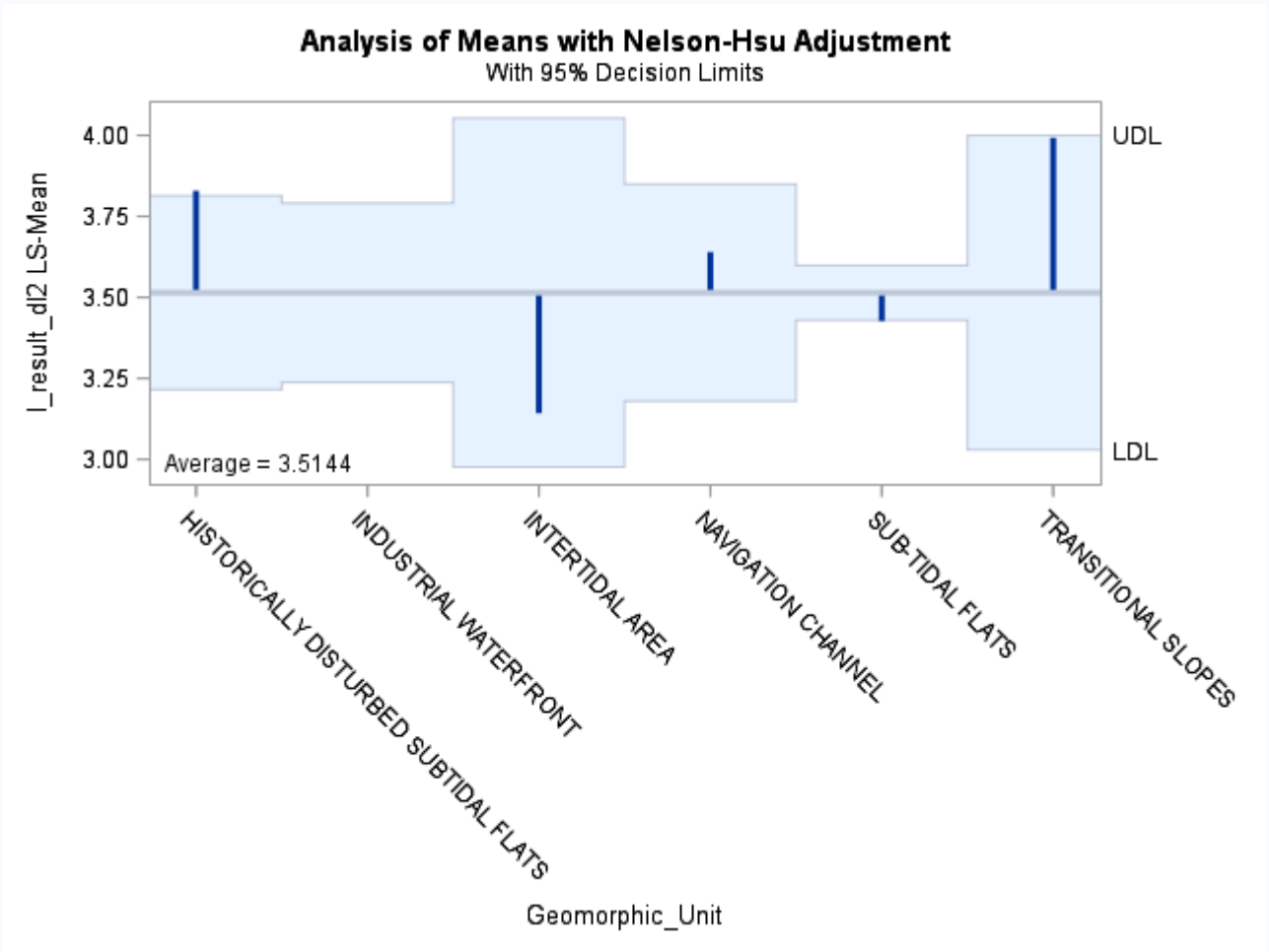
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	7.93635816	1.58727163	4.08	0.0014


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 0.3888
R-Square 0.0769
Adj R-Square 0.0581

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	3.82921101	0.0337
INDUSTRIAL WATERFRONT	3.51590696	1.0000
INTERTIDAL AREA	3.14253735	0.3263
NAVIGATION CHANNEL	3.63977098	0.8705
SUB-TIDAL FLATS	3.42688040	0.0383
TRANSITIONAL SLOPES	3.99241530	0.0554


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
4.00
3.75
3.50
3.25
3.00
UDL
LDL
Average = 3.5144
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	3.82921101	1
INDUSTRIAL WATERFRONT	3.51590696	2
INTERTIDAL AREA	3.14253735	3
NAVIGATION CHANNEL	3.63977098	4
SUB-TIDAL FLATS	3.42688040	5
TRANSITIONAL SLOPES	3.99241530	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3993	0.0516	0.8975	0.0270	0.9779
2	0.3993		0.6116	0.9803	0.9789	0.2521
3	0.0516	0.6116		0.3366	0.7687	0.0318
4	0.8975	0.9803	0.3366		0.6671	0.6443
5	0.0270	0.9789	0.7687	0.6671		0.0458
6	0.9779	0.2521	0.0318	0.6443	0.0458	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	6.3788	1.2758	2.69	0.0217
Error	245	116.1	0.4738		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	12.07	<.0001
Error	43.2419		

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	27	3.82921101	0.31308569
INDUSTRIAL WATERFRONT	31	3.51590696	0.81120004
INTERTIDAL AREA	9	3.14253735	0.46379446
NAVIGATION CHANNEL	22	3.63977098	0.54091214
SUB-TIDAL FLATS	151	3.42688040	0.65636802
TRANSITIONAL SLOPES	11	3.99241530	0.22048613

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

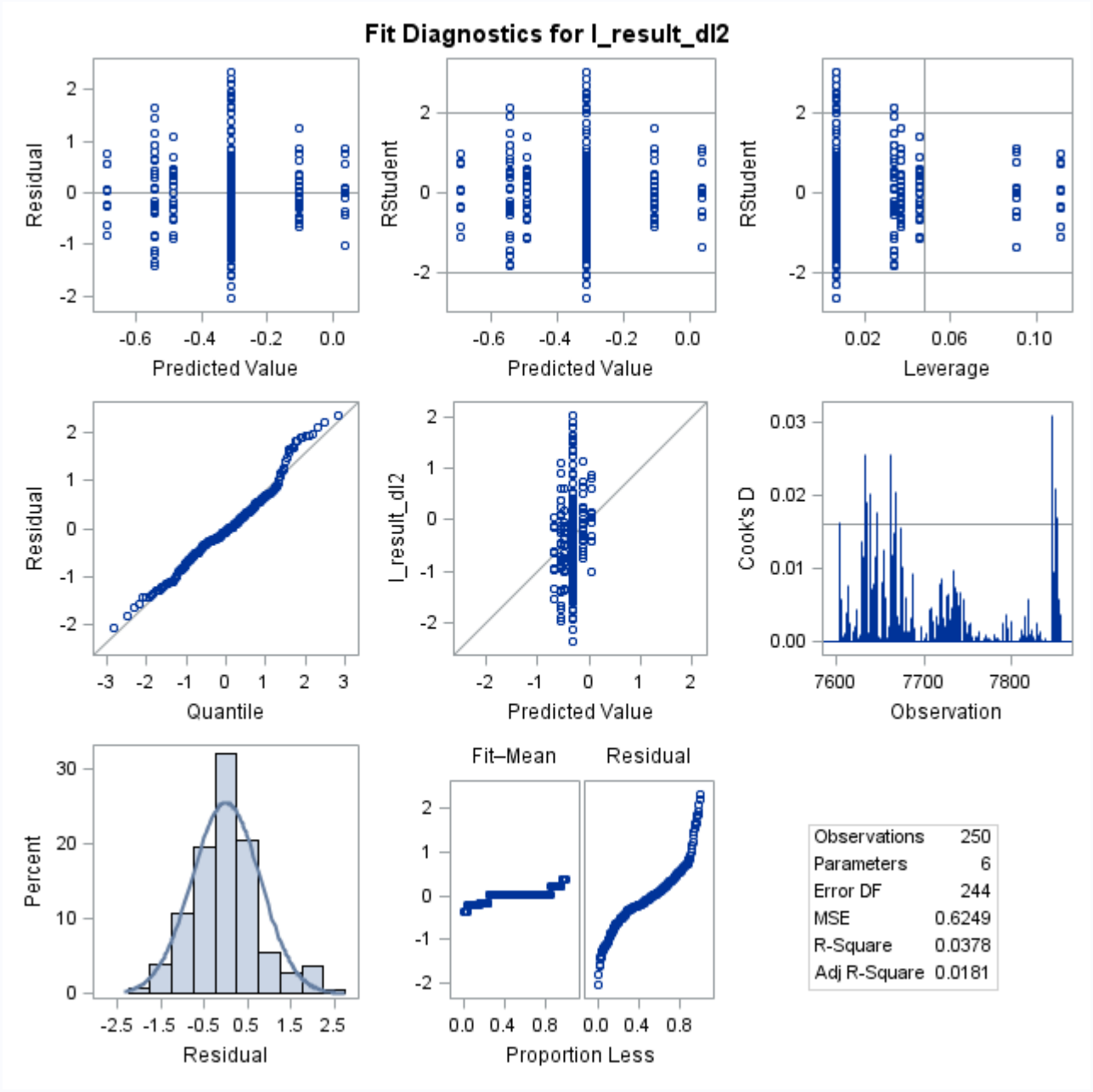
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	5.9864766	1.1972953	1.92	0.0923
Error	244	152.4715704	0.6248835		
Corrected Total	249	158.4580470			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.037780	-238.1829	0.790496	-0.331886

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	5.98647665	1.19729533	1.92	0.0923

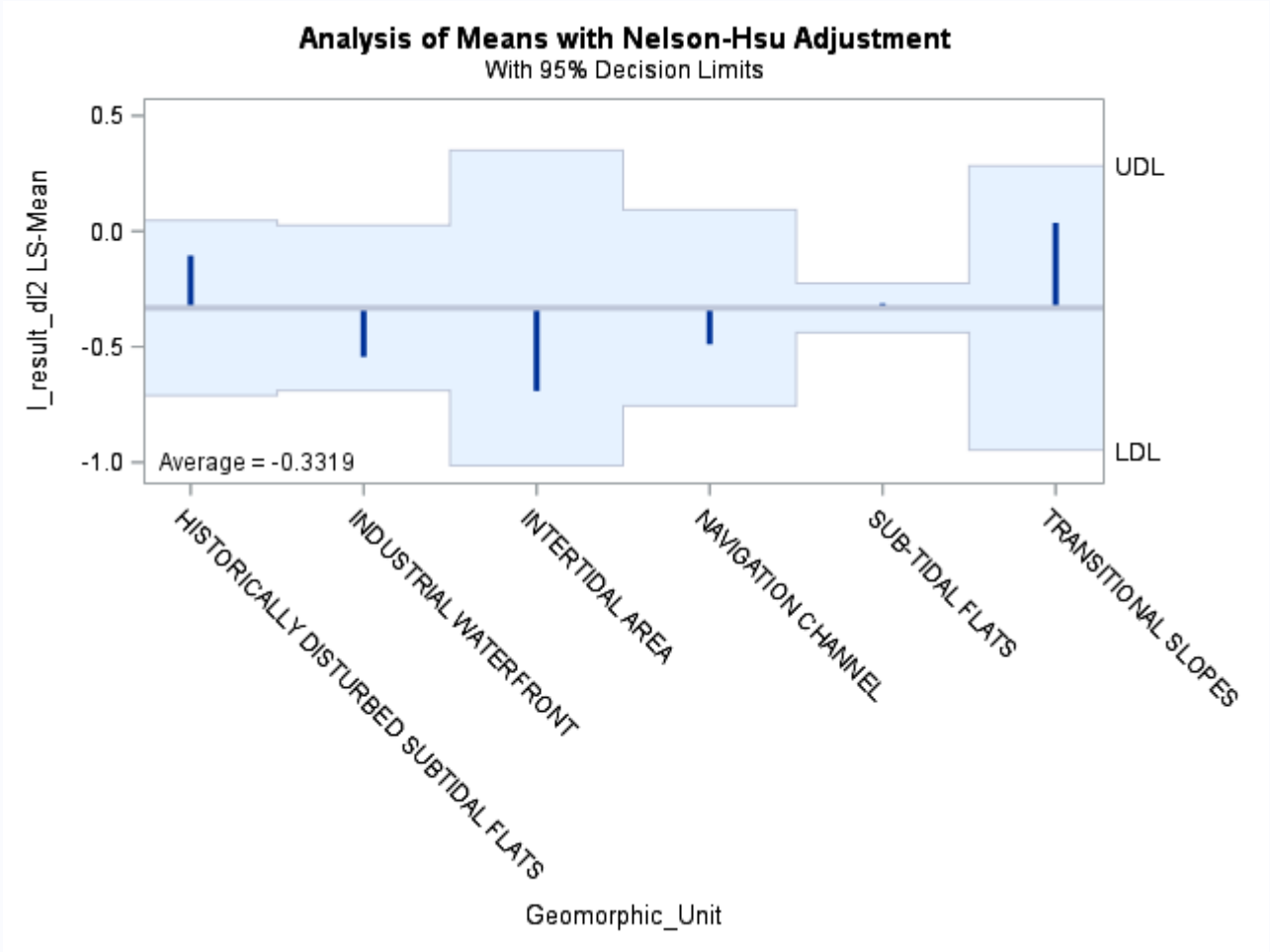
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	5.98647665	1.19729533	1.92	0.0923


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 6
Error DF 244
MSE 0.6249
R-Square 0.0378
Adj R-Square 0.0181

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Selenium

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.10529512	0.4854
INDUSTRIAL WATERFRONT	-0.54358509	0.4948
INTERTIDAL AREA	-0.69147936	0.6191
NAVIGATION CHANNEL	-0.48919429	0.8752
SUB-TIDAL FLATS	-0.31282606	0.9944
TRANSITIONAL SLOPES	0.03648602	0.4828


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
0.5
0.0
-0.5
-1.0
UDL
LDL
Average = -0.3319
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Selenium

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.10529512	1
INDUSTRIAL WATERFRONT	-0.54358509	2
INTERTIDAL AREA	-0.69147936	3
NAVIGATION CHANNEL	-0.48919429	4
SUB-TIDAL FLATS	-0.31282606	5
TRANSITIONAL SLOPES	0.03648602	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.2959	0.3884	0.5391	0.8082	0.9961
2	0.2959		0.9964	0.9999	0.6898	0.3003
3	0.3884	0.9964		0.9873	0.7294	0.3180
4	0.5391	0.9999	0.9873		0.9247	0.4671
5	0.8082	0.6898	0.7294	0.9247		0.7180
6	0.9961	0.3003	0.3180	0.4671	0.7180	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	13.5667	2.7133	2.99	0.0123
Error	244	221.7	0.9087		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	3.55	0.0092
Error	41.0480		

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	27	-0.10529512	0.47001445
INDUSTRIAL WATERFRONT	30	-0.54358509	0.82784305
INTERTIDAL AREA	9	-0.69147936	0.54686117
NAVIGATION CHANNEL	22	-0.48919429	0.48879554
SUB-TIDAL FLATS	151	-0.31282606	0.88019880
TRANSITIONAL SLOPES	11	0.03648602	0.56843023

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

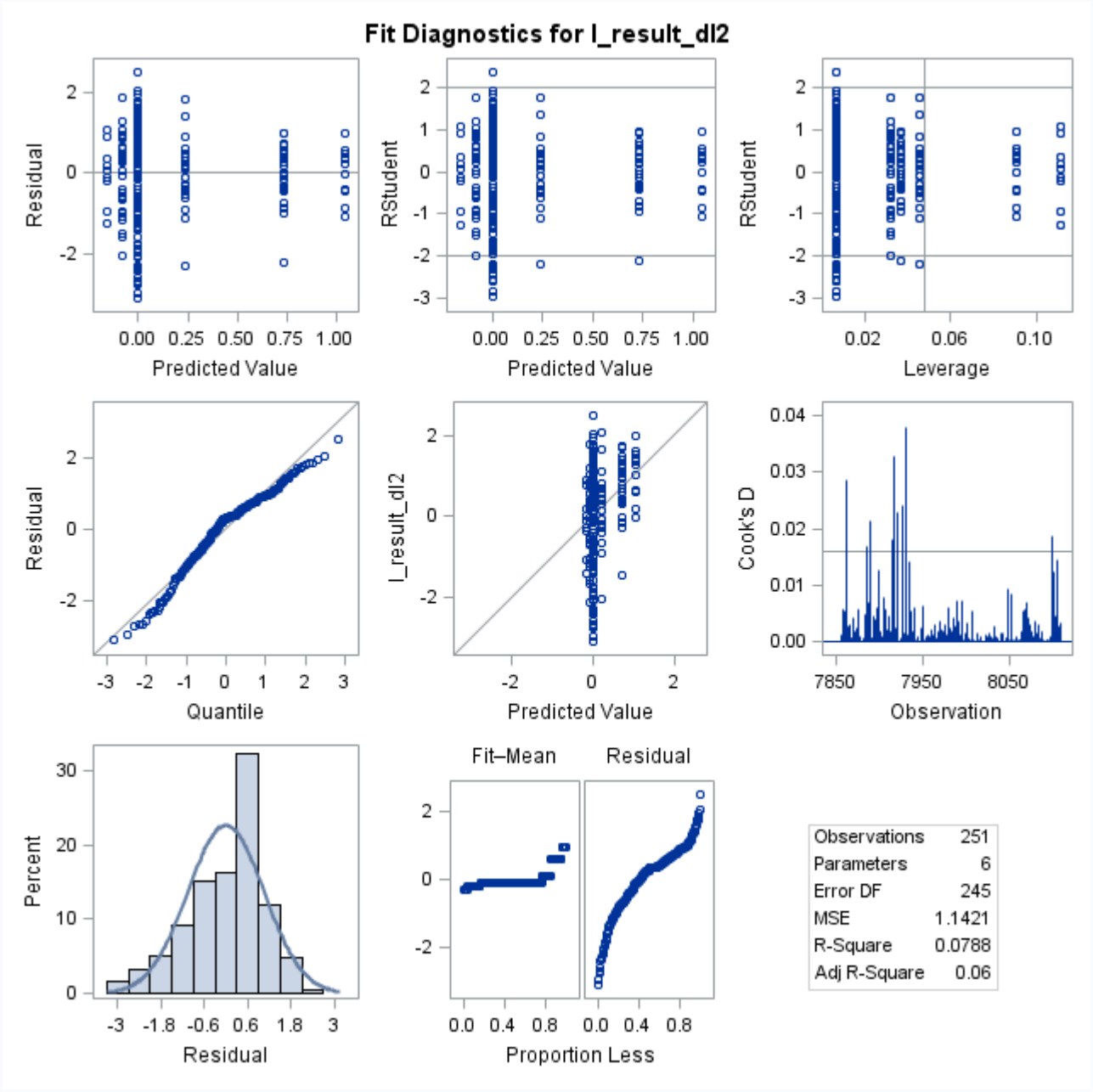
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	23.9198135	4.7839627	4.19	0.0011
Error	245	279.8055537	1.1420635		
Corrected Total	250	303.7253673			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.078755	823.3112	1.068674	0.129802

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	23.91981351	4.78396270	4.19	0.0011

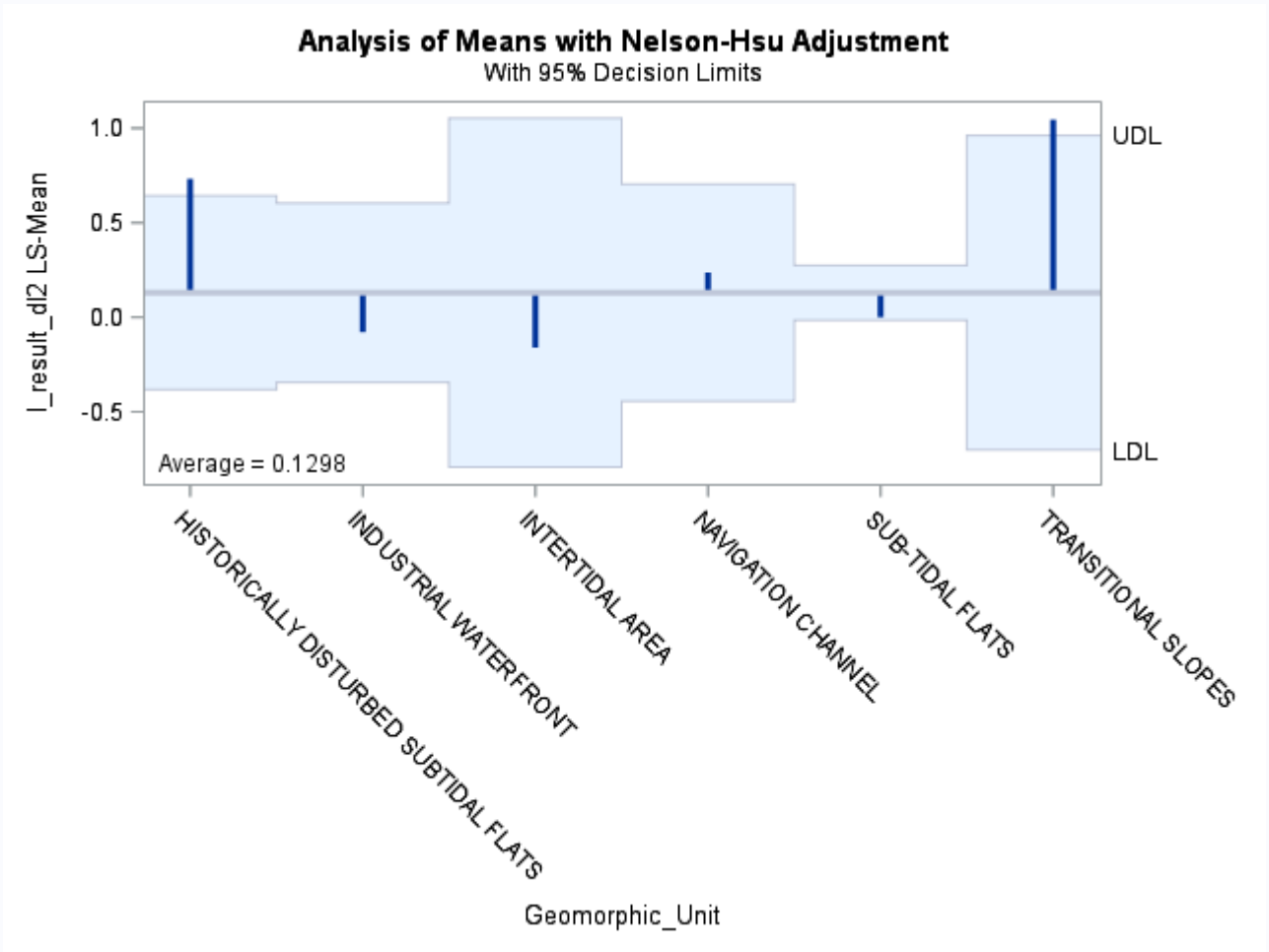
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	23.91981351	4.78396270	4.19	0.0011


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 1.1421
R-Square 0.0788
Adj R-Square 0.06

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.73233566	0.0125
INDUSTRIAL WATERFRONT	-0.07868420	0.7750
INTERTIDAL AREA	-0.16055581	0.9332
NAVIGATION CHANNEL	0.23645390	0.9933
SUB-TIDAL FLATS	-0.00004326	0.1018
TRANSITIONAL SLOPES	1.04508880	0.0231


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
1.0
0.5
0.0
-0.5
UDL
LDL
Average = 0.1298
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.73233566	1
INDUSTRIAL WATERFRONT	-0.07868420	2
INTERTIDAL AREA	-0.16055581	3
NAVIGATION CHANNEL	0.23645390	4
SUB-TIDAL FLATS	-0.00004326	5
TRANSITIONAL SLOPES	1.04508880	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0486	0.2553	0.5890	0.0149	0.9640
2	0.0486		1.0000	0.8974	0.9990	0.0353
3	0.2553	1.0000		0.9360	0.9979	0.1252
4	0.5890	0.8974	0.9360		0.9271	0.3179
5	0.0149	0.9990	0.9979	0.9271		0.0237
6	0.9640	0.0353	0.1252	0.3179	0.0237	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	42.2807	8.4561	3.30	0.0066
Error	245	627.4	2.5607		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	8.12	<.0001
Error	41.5265		

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	27	0.73233566	0.69476094
INDUSTRIAL WATERFRONT	31	-0.07868420	0.93784076
INTERTIDAL AREA	9	-0.16055581	0.76009815
NAVIGATION CHANNEL	22	0.23645390	0.85738325
SUB-TIDAL FLATS	151	-0.00004326	1.20217361
TRANSITIONAL SLOPES	11	1.04508880	0.63456710

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure

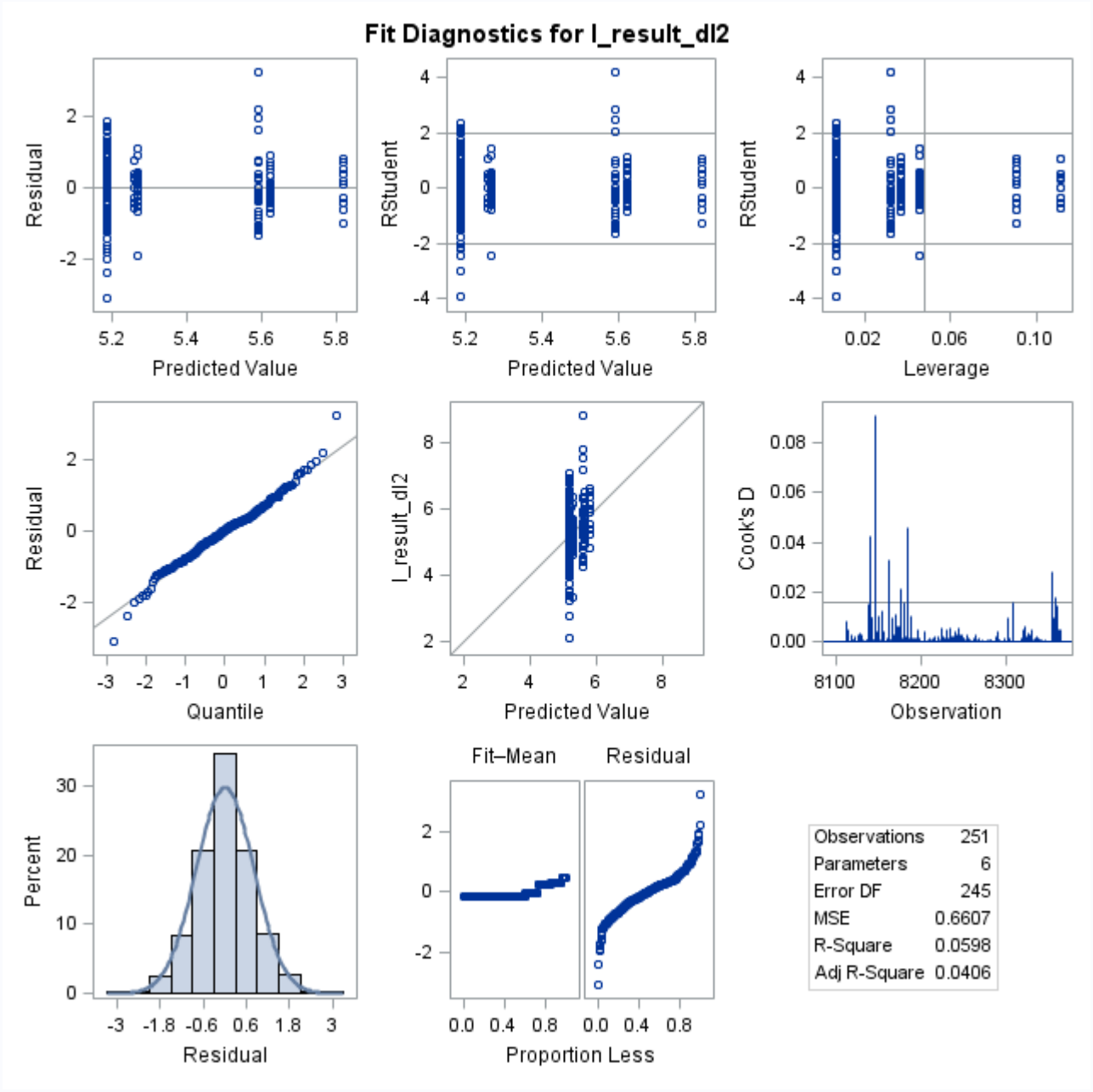
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	10.3009978	2.0601996	3.12	0.0095
Error	245	161.8678486	0.6606851		
Corrected Total	250	172.1688464			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.059831	15.28040	0.812825	5.319397

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	10.30099778	2.06019956	3.12	0.0095

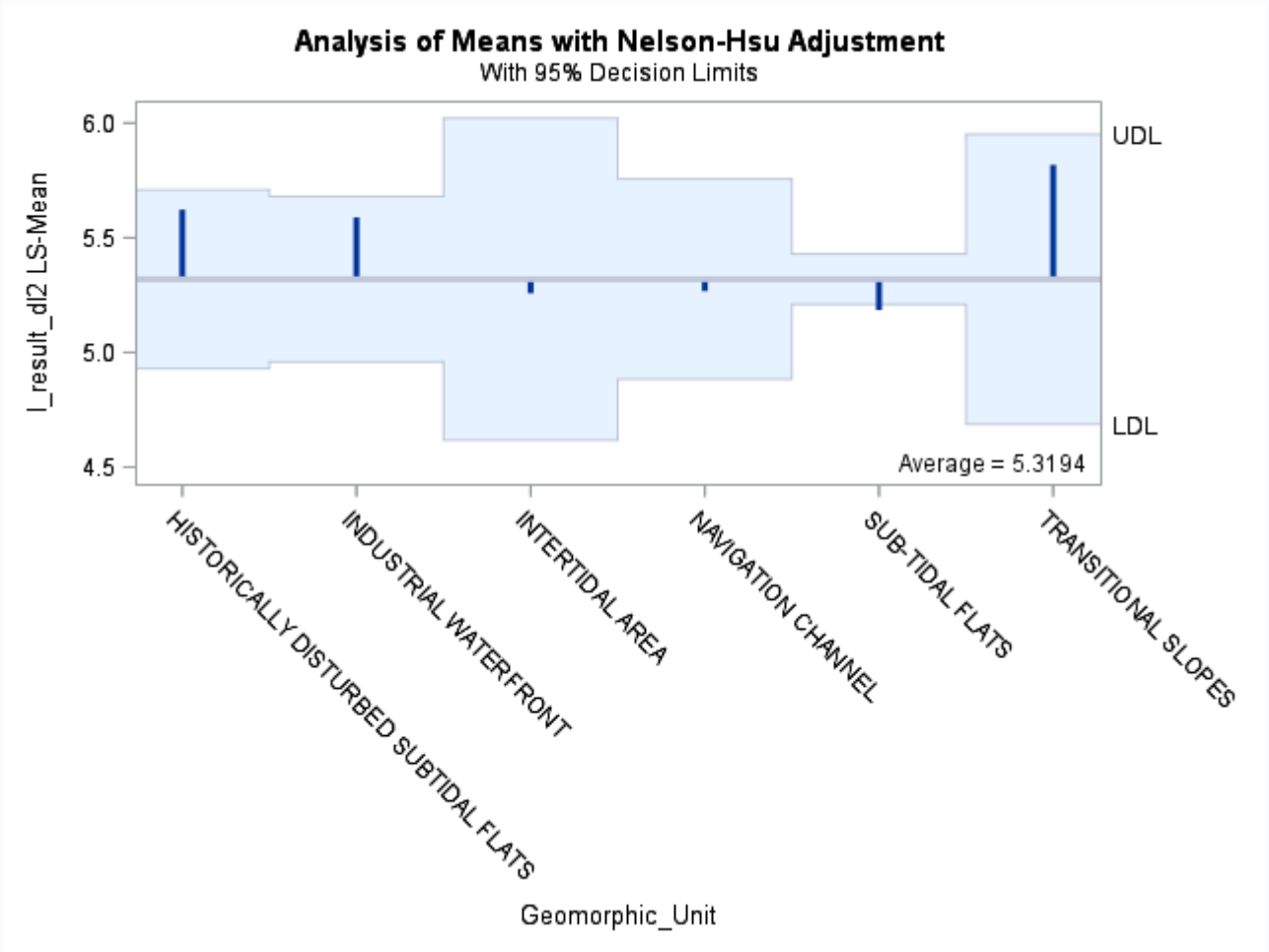
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	10.30099778	2.06019956	3.12	0.0095


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 6
Error DF 245
MSE 0.6607
R-Square 0.0598
Adj R-Square 0.0406

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.62281730	0.2079
INDUSTRIAL WATERFRONT	5.58876729	0.2461
INTERTIDAL AREA	5.25818896	0.9998
NAVIGATION CHANNEL	5.26771980	0.9992
SUB-TIDAL FLATS	5.18470219	0.0084
TRANSITIONAL SLOPES	5.81792996	0.1963


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
6.0
5.5
5.0
4.5
UDL
LDL
Average = 5.3194
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.62281730	1
INDUSTRIAL WATERFRONT	5.58876729	2
INTERTIDAL AREA	5.25818896	3
NAVIGATION CHANNEL	5.26771980	4
SUB-TIDAL FLATS	5.18470219	5
TRANSITIONAL SLOPES	5.81792996	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.8528	0.6510	0.1062	0.9849
2	1.0000		0.8913	0.7168	0.1220	0.9667
3	0.8528	0.8913		1.0000	0.9998	0.6439
4	0.6510	0.7168	1.0000		0.9977	0.4465
5	0.1062	0.1220	0.9998	0.9977		0.1297
6	0.9849	0.9667	0.6439	0.4465	0.1297	

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Geomorphic_Unit	5	18.7032	3.7406	2.66	0.0233
Error	245	345.2	1.4089		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
Geomorphic_Unit	5.0000	4.97	0.0012
Error	41.3326		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geomorphic_unit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Level of Geomorphic_Unit	N	l_result_dl2	
		Mean	Std Dev
HISTORICALLY DISTURBED SUBTIDAL FLATS	27	5.62281730	0.39551641
INDUSTRIAL WATERFRONT	31	5.58876729	1.05549952
INTERTIDAL AREA	9	5.25818896	0.45732644
NAVIGATION CHANNEL	22	5.26771980	0.60876956
SUB-TIDAL FLATS	151	5.18470219	0.86208572
TRANSITIONAL SLOPES	11	5.81792996	0.58682641

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

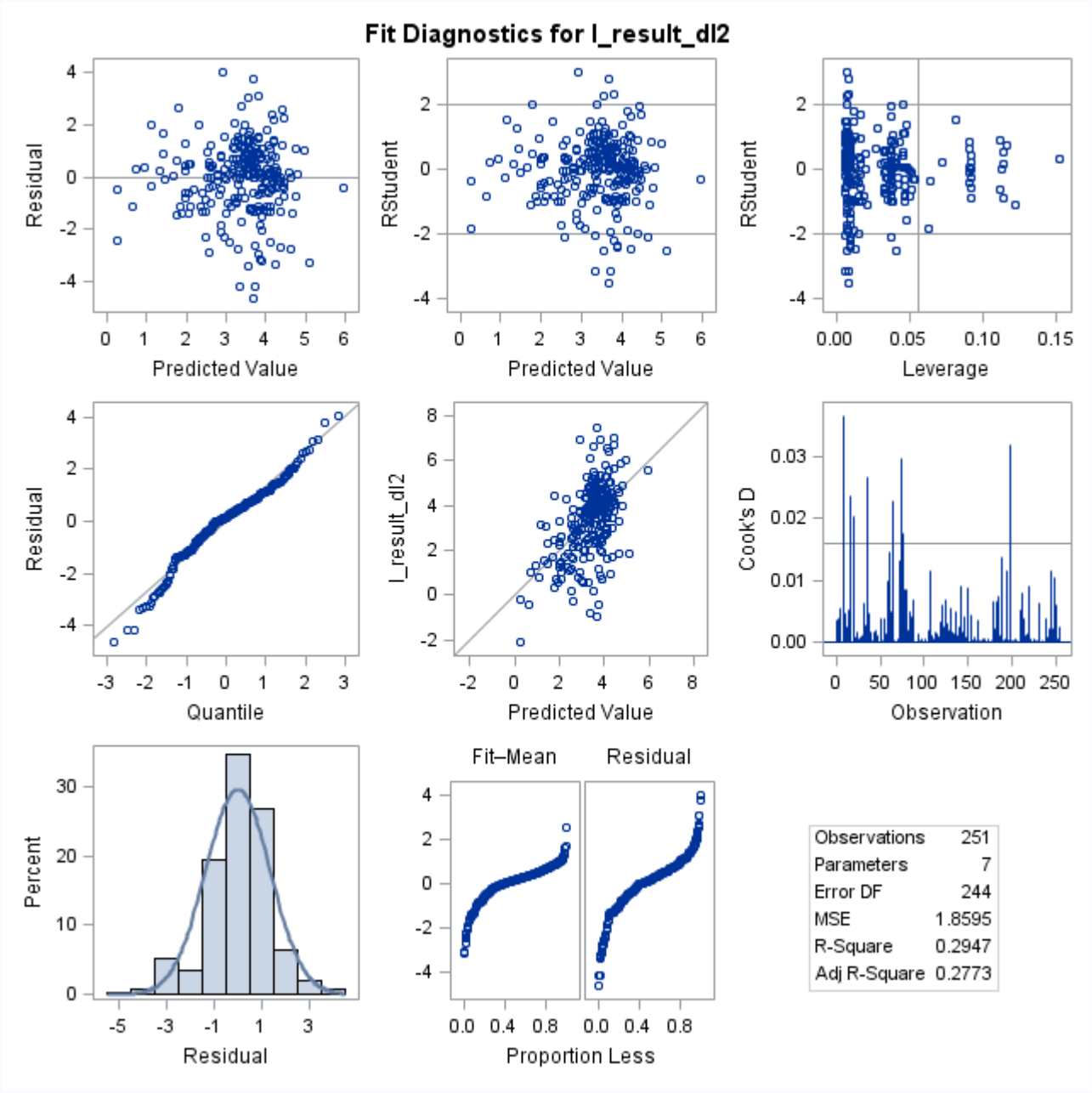
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

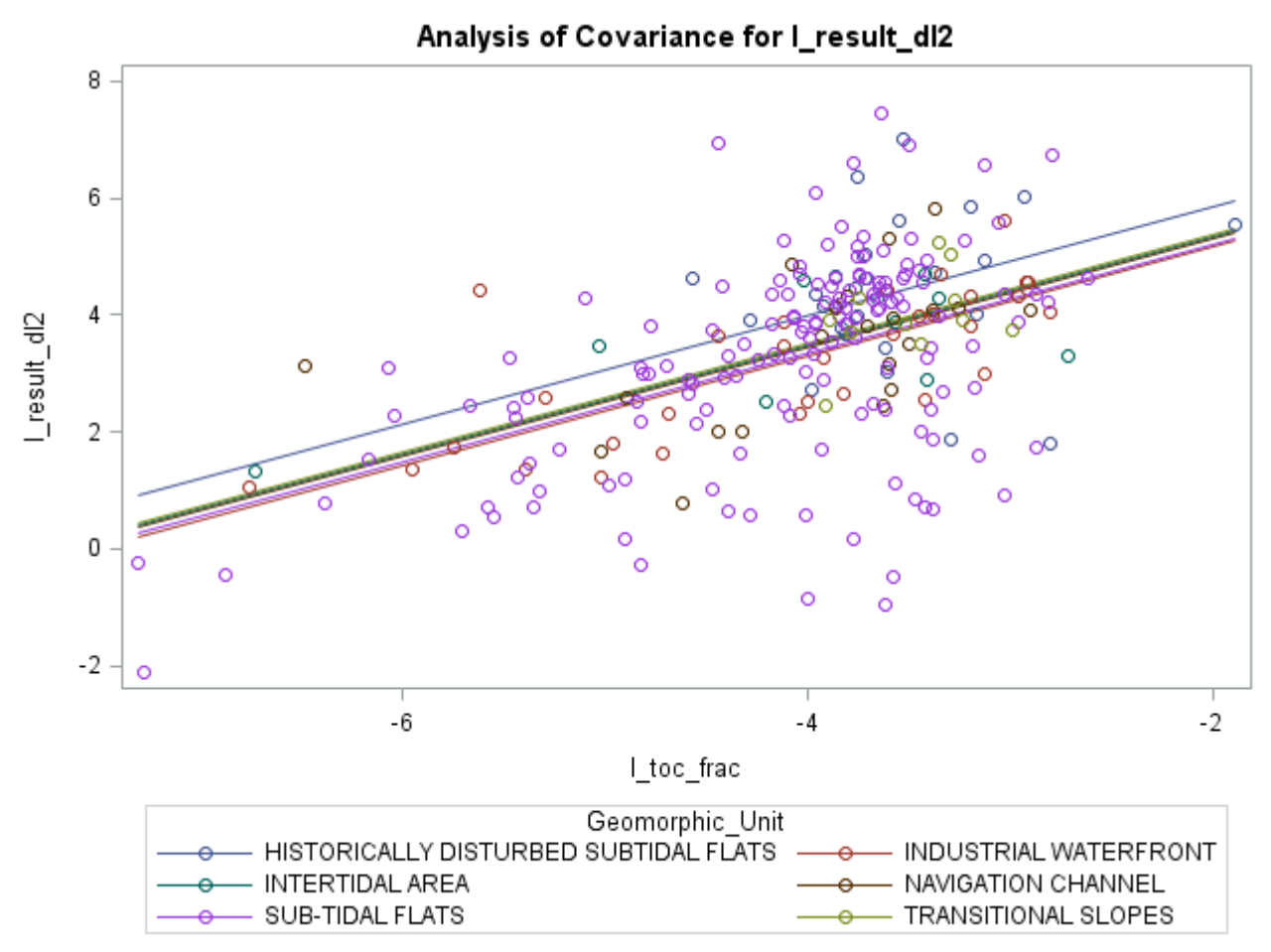
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	189.5330874	31.5888479	16.99	<.0001
Error	244	453.7095142	1.8594652		
Corrected Total	250	643.2426016			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.294653	40.06696	1.363622	3.403358

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	179.4714514	179.4714514	96.52	<.0001
Geomorphic_Unit	5	10.0616360	2.0123272	1.08	0.3708

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	152.3777613	152.3777613	81.95	<.0001
Geomorphic_Unit	5	10.0616360	2.0123272	1.08	0.3708

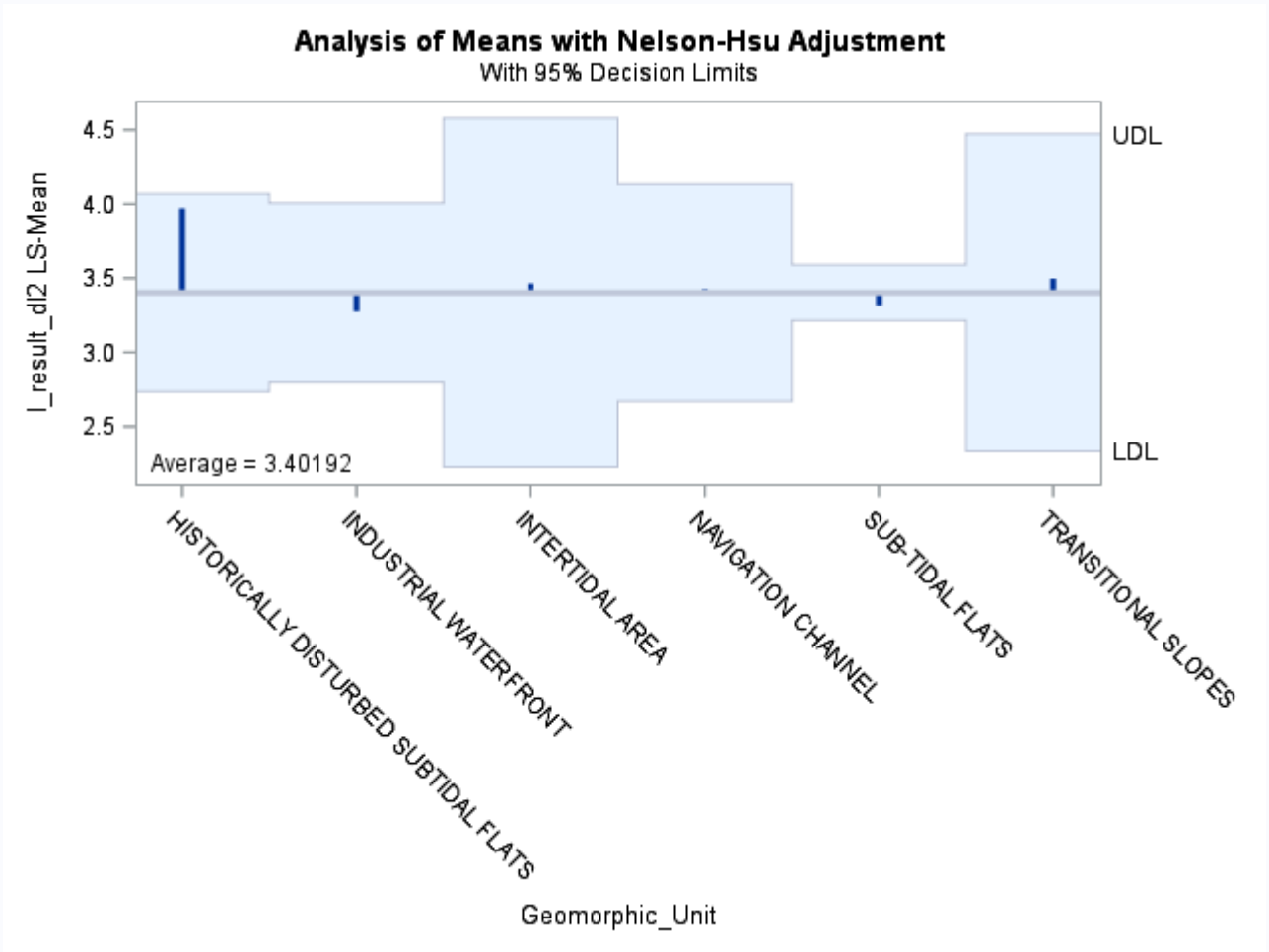

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.8595
R-Square 0.2947
Adj R-Square 0.2773


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
0
-2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	3.97075333	0.1347
INDUSTRIAL WATERFRONT	3.27513925	0.9883
INTERTIDAL AREA	3.46400455	1.0000
NAVIGATION CHANNEL	3.42440212	1.0000
SUB-TIDAL FLATS	3.31471637	0.7293
TRANSITIONAL SLOPES	3.49710203	0.9998


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
4.5
4.0
3.5
3.0
2.5
UDL
LDL
Average = 3.40192
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	3.97075333	1
INDUSTRIAL WATERFRONT	3.27513925	2
INTERTIDAL AREA	3.46400455	3
NAVIGATION CHANNEL	3.42440212	4
SUB-TIDAL FLATS	3.31471637	5
TRANSITIONAL SLOPES	3.49710203	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3959	0.9296	0.7348	0.2162	0.9267
2	0.3959		0.9991	0.9988	1.0000	0.9974
3	0.9296	0.9991		1.0000	0.9996	1.0000
4	0.7348	0.9988	1.0000		0.9993	1.0000
5	0.2162	1.0000	0.9996	0.9993		0.9983
6	0.9267	0.9974	1.0000	1.0000	0.9983	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

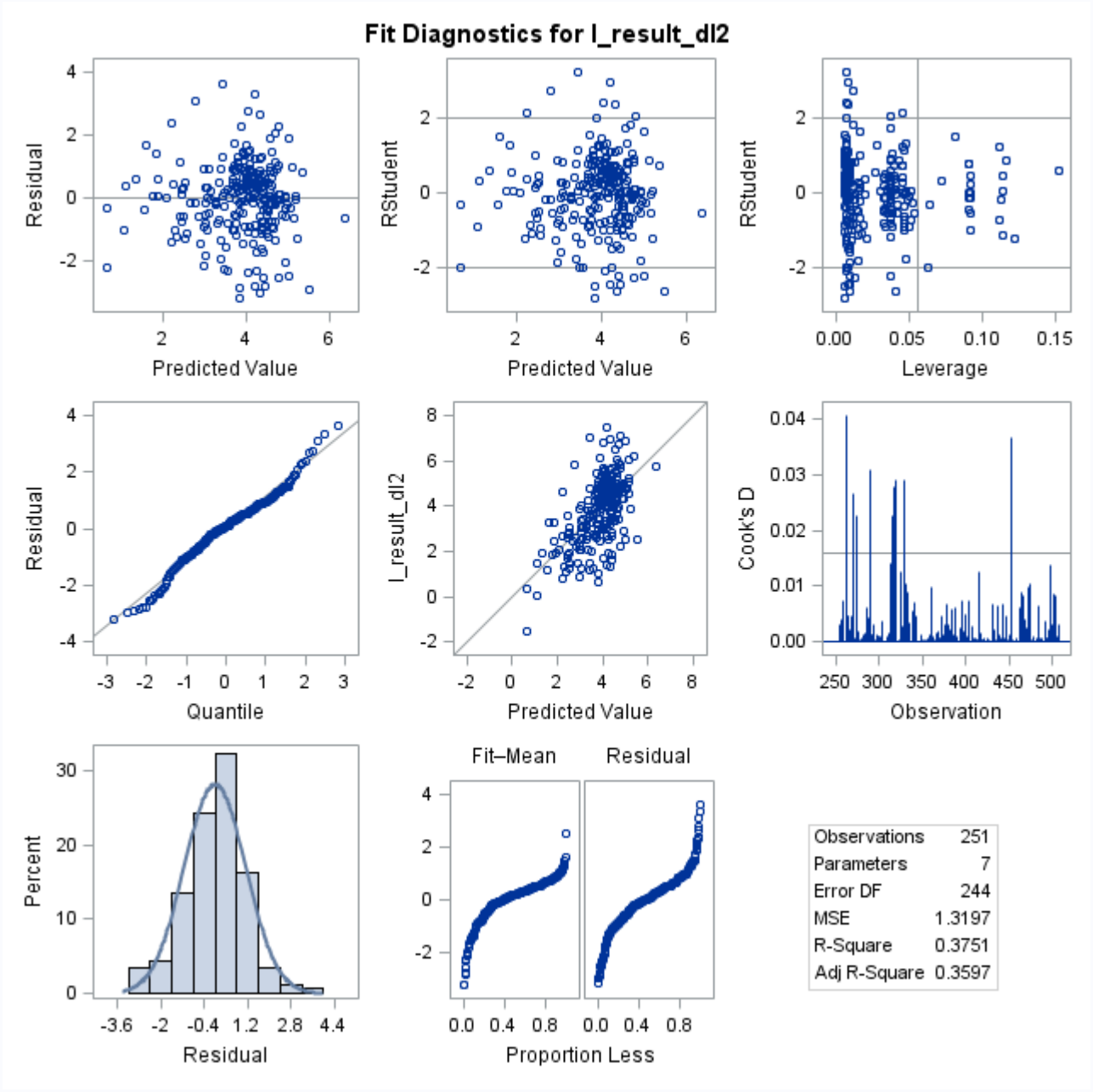
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

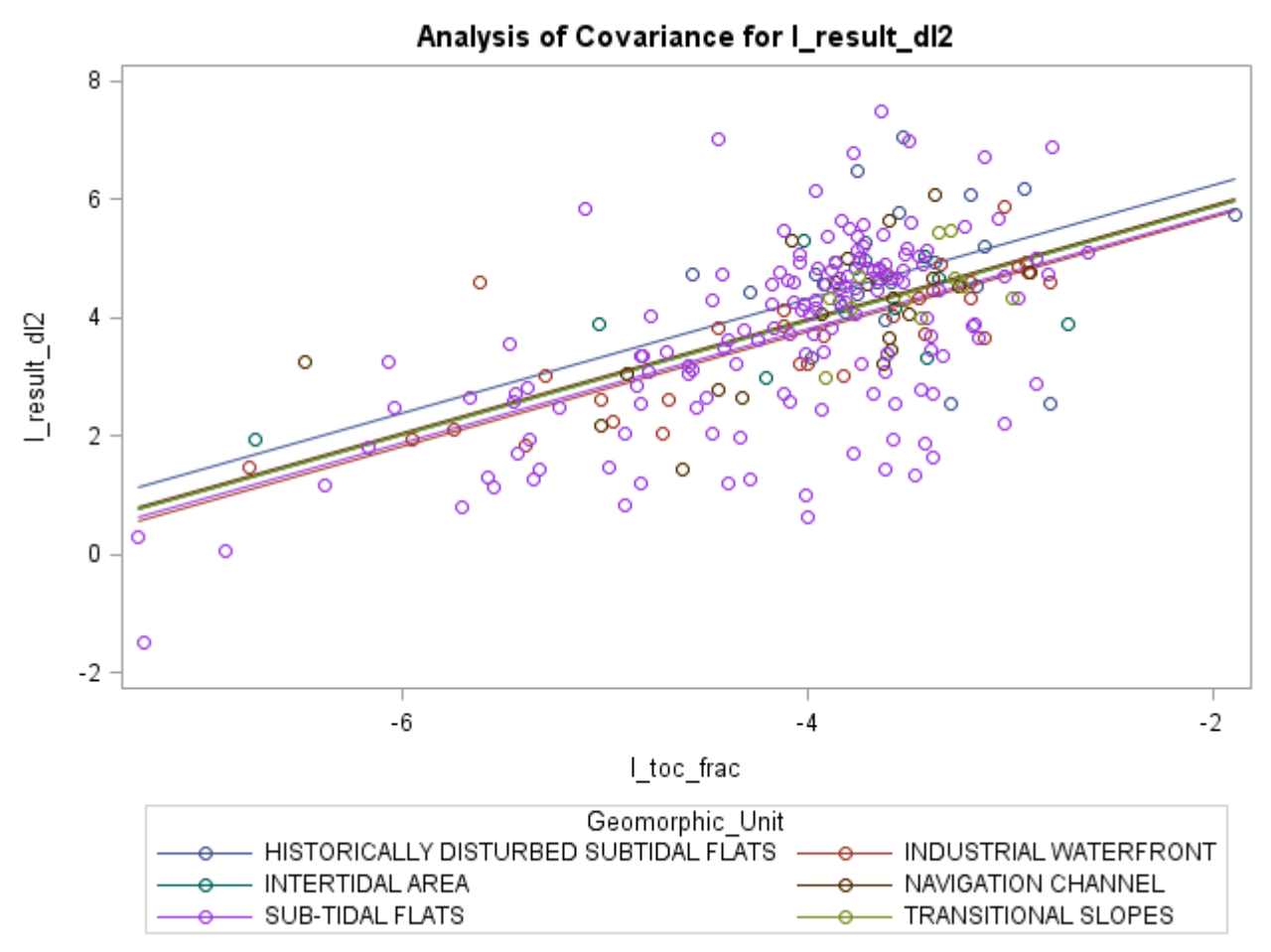
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	193.2637219	32.2106203	24.41	<.0001
Error	244	322.0187223	1.3197489		
Corrected Total	250	515.2824442			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.375064	29.61229	1.148803	3.879482

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	187.0245180	187.0245180	141.71	<.0001
Geomorphic_Unit	5	6.2392039	1.2478408	0.95	0.4522

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	162.9548050	162.9548050	123.47	<.0001
Geomorphic_Unit	5	6.2392039	1.2478408	0.95	0.4522

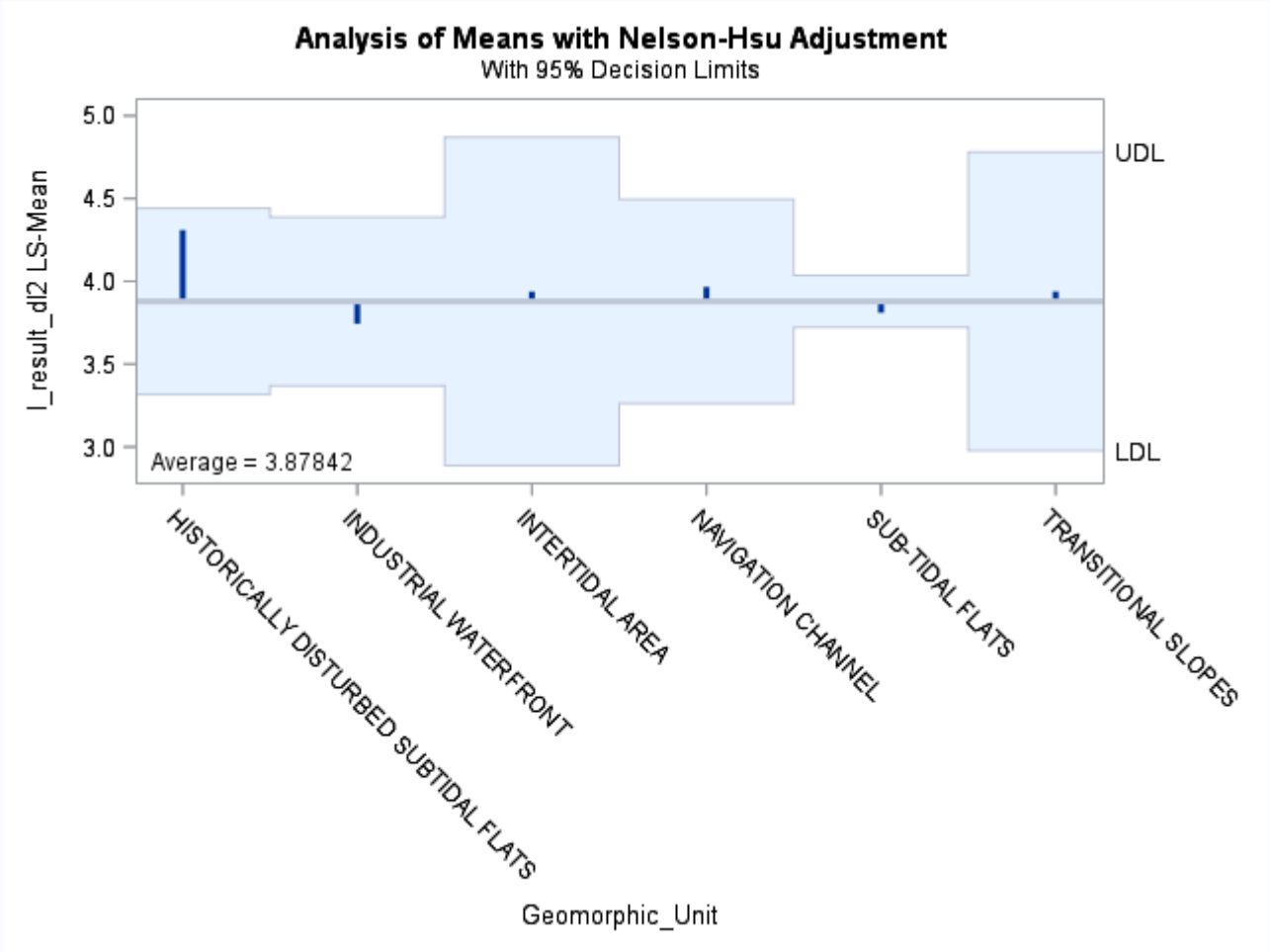

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.3197
R-Square 0.3751
Adj R-Square 0.3597


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
0
-2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.30931196	0.2219
INDUSTRIAL WATERFRONT	3.74382561	0.9676
INTERTIDAL AREA	3.93751293	1.0000
NAVIGATION CHANNEL	3.96594774	0.9981
SUB-TIDAL FLATS	3.81013057	0.7846
TRANSITIONAL SLOPES	3.93834058	1.0000


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.0
4.5
4.0
3.5
3.0
UDL
LDL
Average = 3.87842
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.30931196	1
INDUSTRIAL WATERFRONT	3.74382561	2
INTERTIDAL AREA	3.93751293	3
NAVIGATION CHANNEL	3.96594774	4
SUB-TIDAL FLATS	3.81013057	5
TRANSITIONAL SLOPES	3.93834058	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.4375	0.9603	0.9058	0.3239	0.9455
2	0.4375		0.9978	0.9826	0.9997	0.9969
3	0.9603	0.9978		1.0000	0.9995	1.0000
4	0.9058	0.9826	1.0000		0.9914	1.0000
5	0.3239	0.9997	0.9995	0.9914		0.9993
6	0.9455	0.9969	1.0000	1.0000	0.9993	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

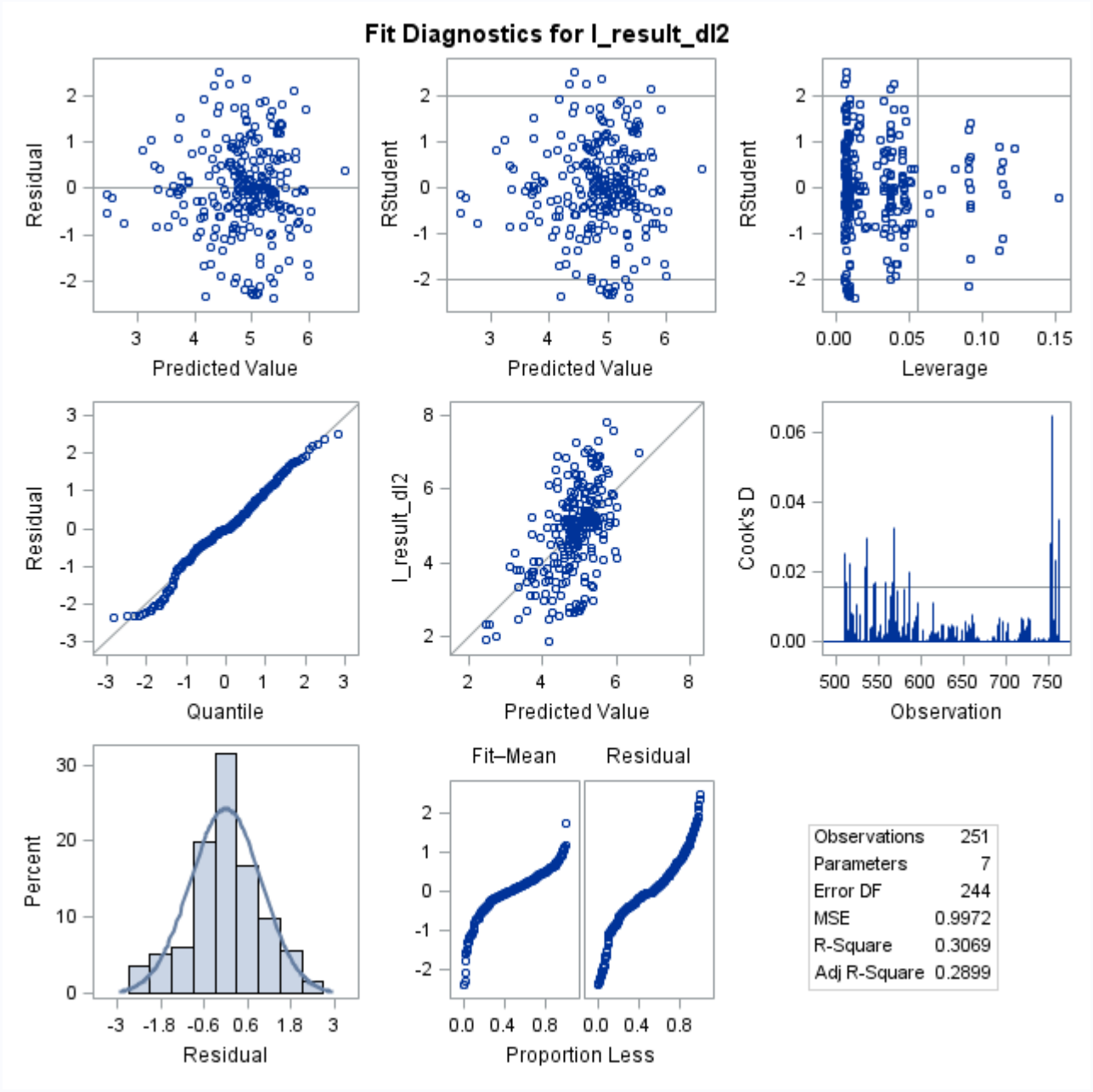
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

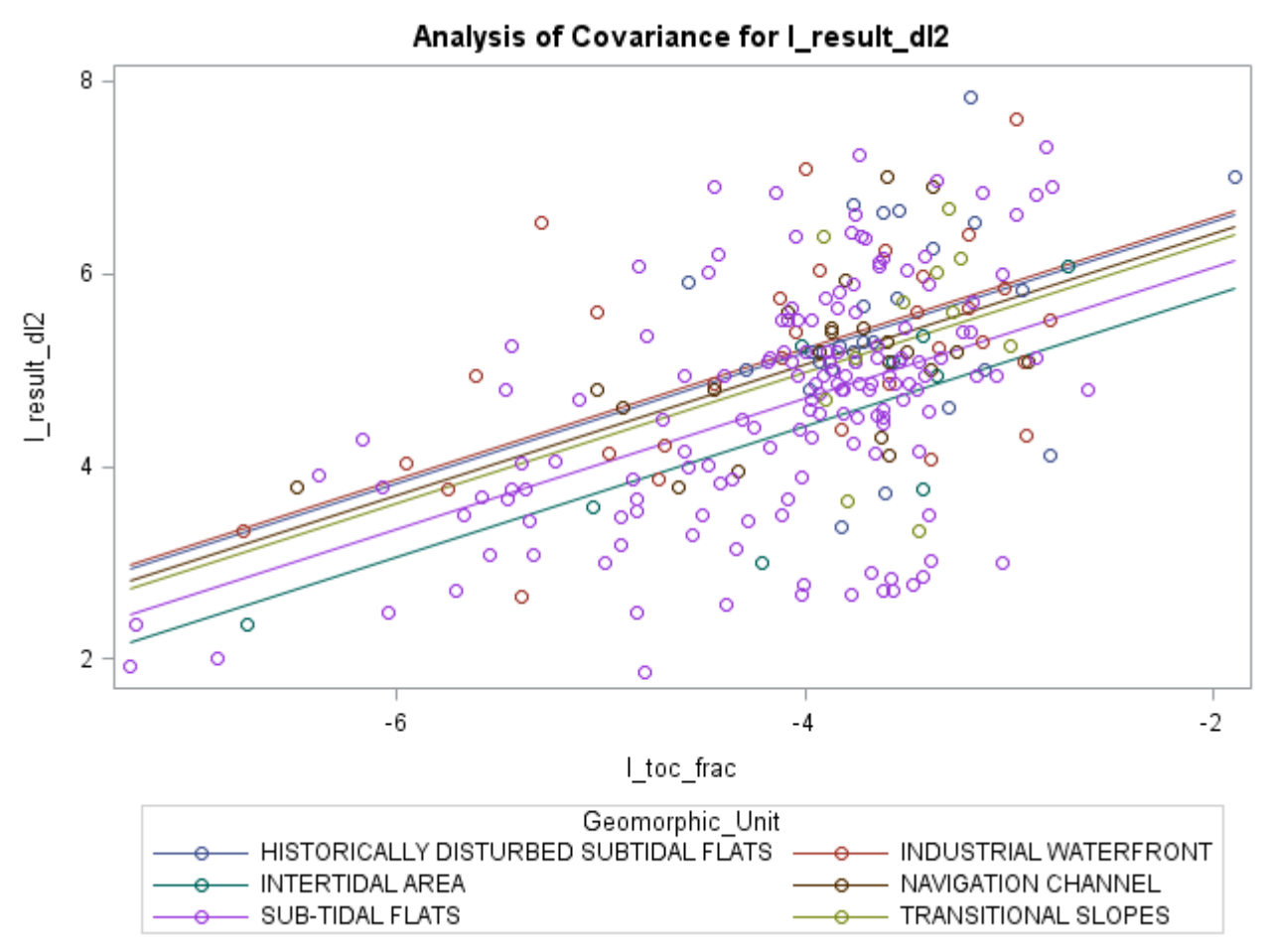
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	107.7488828	17.9581471	18.01	<.0001
Error	244	243.3158080	0.9971959		
Corrected Total	250	351.0646908			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.306920	20.62568	0.998597	4.841522

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	94.81998621	94.81998621	95.09	<.0001
Geomorphic_Unit	5	12.92889661	2.58577932	2.59	0.0263

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	81.02495438	81.02495438	81.25	<.0001
Geomorphic_Unit	5	12.92889661	2.58577932	2.59	0.0263

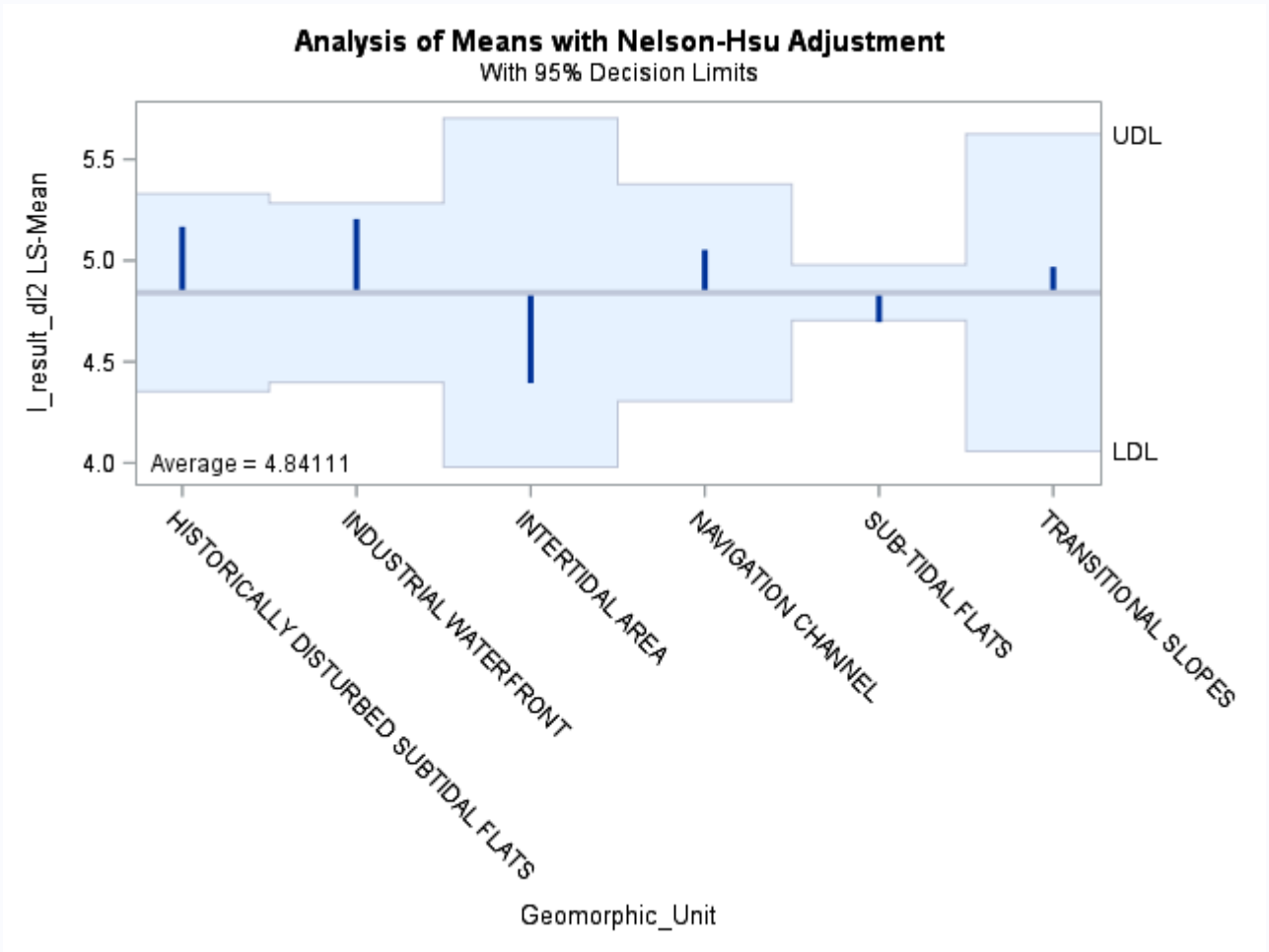

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.9972
R-Square 0.3069
Adj R-Square 0.2899


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.16688255	0.3646
INDUSTRIAL WATERFRONT	5.20510233	0.1619
INTERTIDAL AREA	4.39446099	0.6354
NAVIGATION CHANNEL	5.05297749	0.8427
SUB-TIDAL FLATS	4.69526971	0.0304
TRANSITIONAL SLOPES	4.96878681	0.9964


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.5
5.0
4.5
4.0
UDL
LDL
Average = 4.84111
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.16688255	1
INDUSTRIAL WATERFRONT	5.20510233	2
INTERTIDAL AREA	4.39446099	3
NAVIGATION CHANNEL	5.05297749	4
SUB-TIDAL FLATS	4.69526971	5
TRANSITIONAL SLOPES	4.96878681	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.3449	0.9987	0.2346	0.9937
2	1.0000		0.2685	0.9942	0.1038	0.9852
3	0.3449	0.2685		0.5553	0.9515	0.7989
4	0.9987	0.9942	0.5553		0.6206	0.9999
5	0.2346	0.1038	0.9515	0.6206		0.9540
6	0.9937	0.9852	0.7989	0.9999	0.9540	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

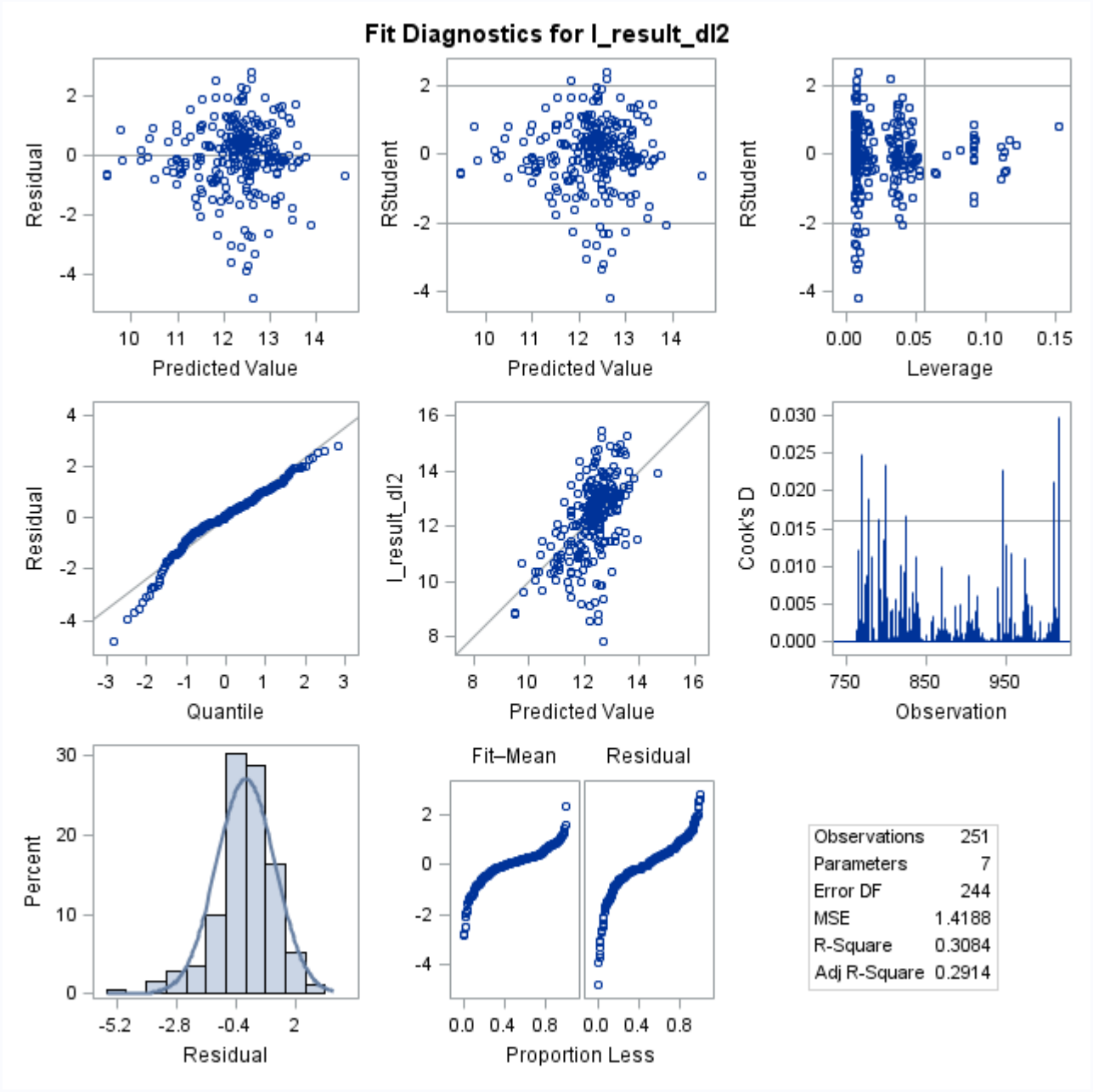
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

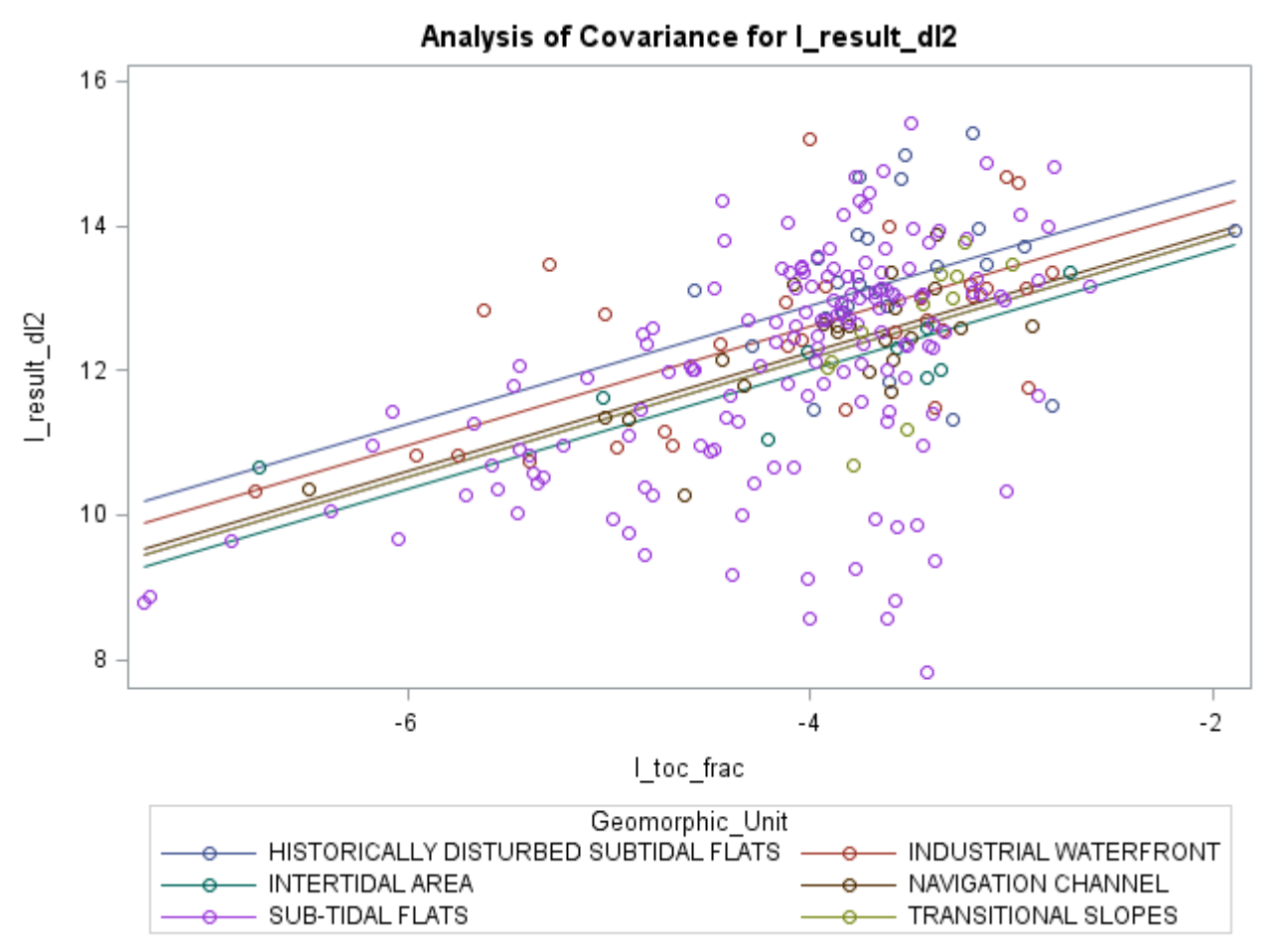
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	154.3820990	25.7303498	18.14	<.0001
Error	244	346.1769416	1.4187580		
Corrected Total	250	500.5590406			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.308419	9.691142	1.191116	12.29077

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	138.9874121	138.9874121	97.96	<.0001
Geomorphic_Unit	5	15.3946869	3.0789374	2.17	0.0581

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	118.9344323	118.9344323	83.83	<.0001
Geomorphic_Unit	5	15.3946869	3.0789374	2.17	0.0581

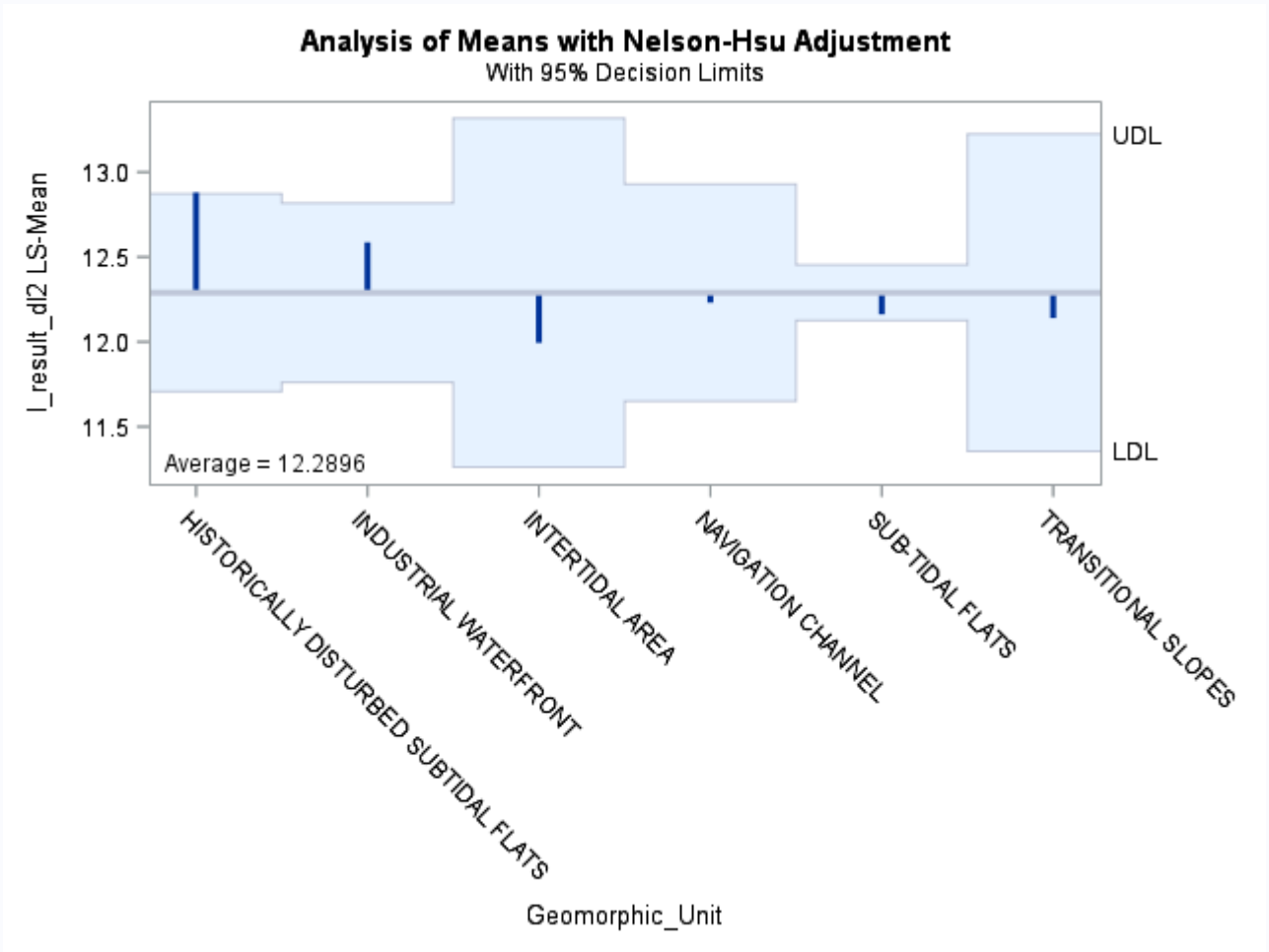

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.4188
R-Square 0.3084
Adj R-Square 0.2914


Analysis of Covariance for l_result_dl2
16
14
12
10
8
l_result_dl2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	12.8800588	0.0454
INDUSTRIAL WATERFRONT	12.5863320	0.5528
INTERTIDAL AREA	11.9940891	0.9538
NAVIGATION CHANNEL	12.2310381	0.9998
SUB-TIDAL FLATS	12.1620892	0.2044
TRANSITIONAL SLOPES	12.1400936	0.9967


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
13.0
12.5
12.0
11.5
UDL
LDL
Average = 12.2896
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	12.8800588	1
INDUSTRIAL WATERFRONT	12.5863320	2
INTERTIDAL AREA	11.9940891	3
NAVIGATION CHANNEL	12.2310381	4
SUB-TIDAL FLATS	12.1620892	5
TRANSITIONAL SLOPES	12.1400936	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9397	0.3901	0.4131	0.0566	0.5090
2	0.9397		0.7776	0.8931	0.4636	0.8973
3	0.3901	0.7776		0.9960	0.9985	0.9998
4	0.4131	0.8931	0.9960		0.9999	0.9999
5	0.0566	0.4636	0.9985	0.9999		1.0000
6	0.5090	0.8973	0.9998	0.9999	1.0000	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

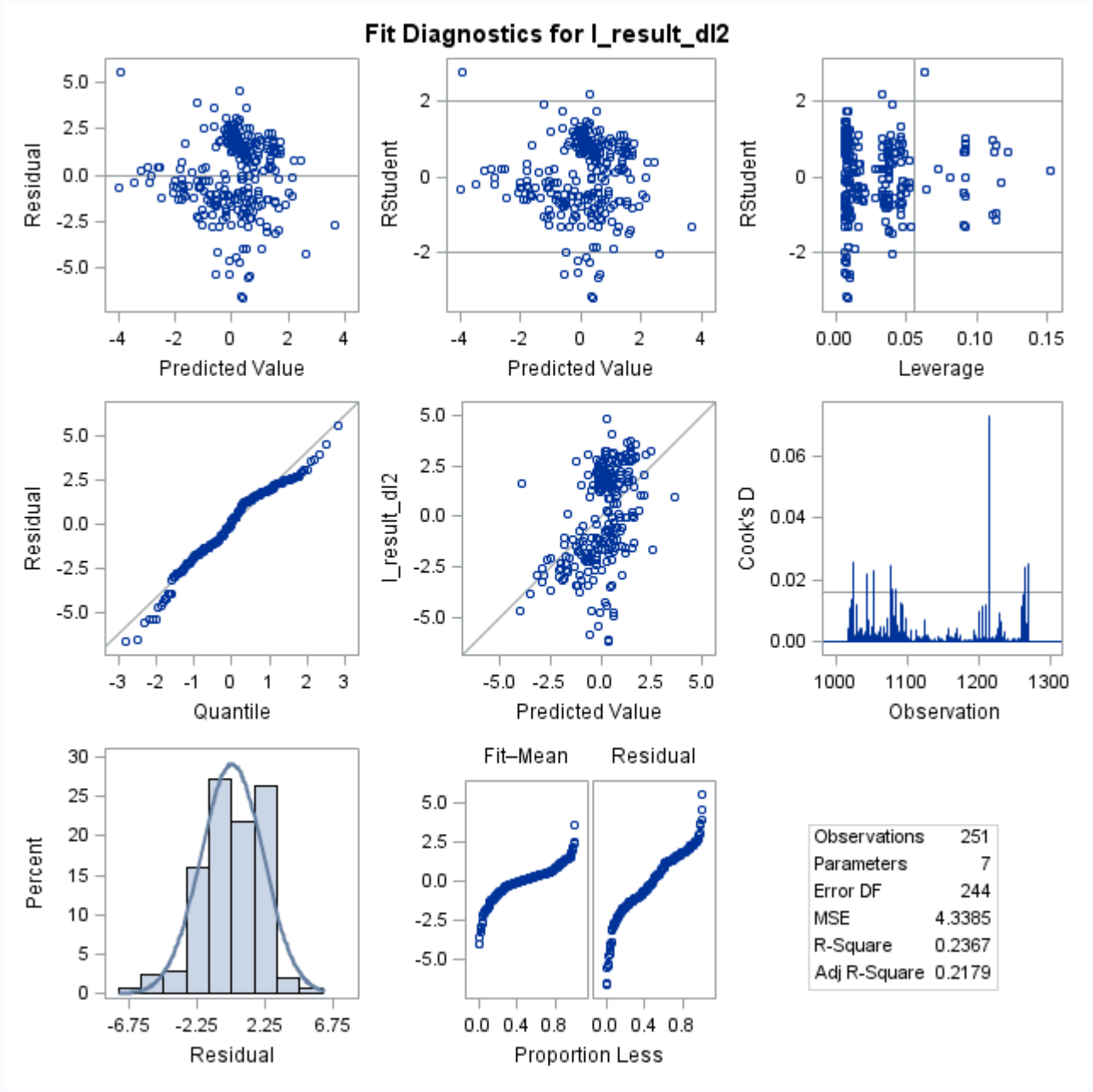
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

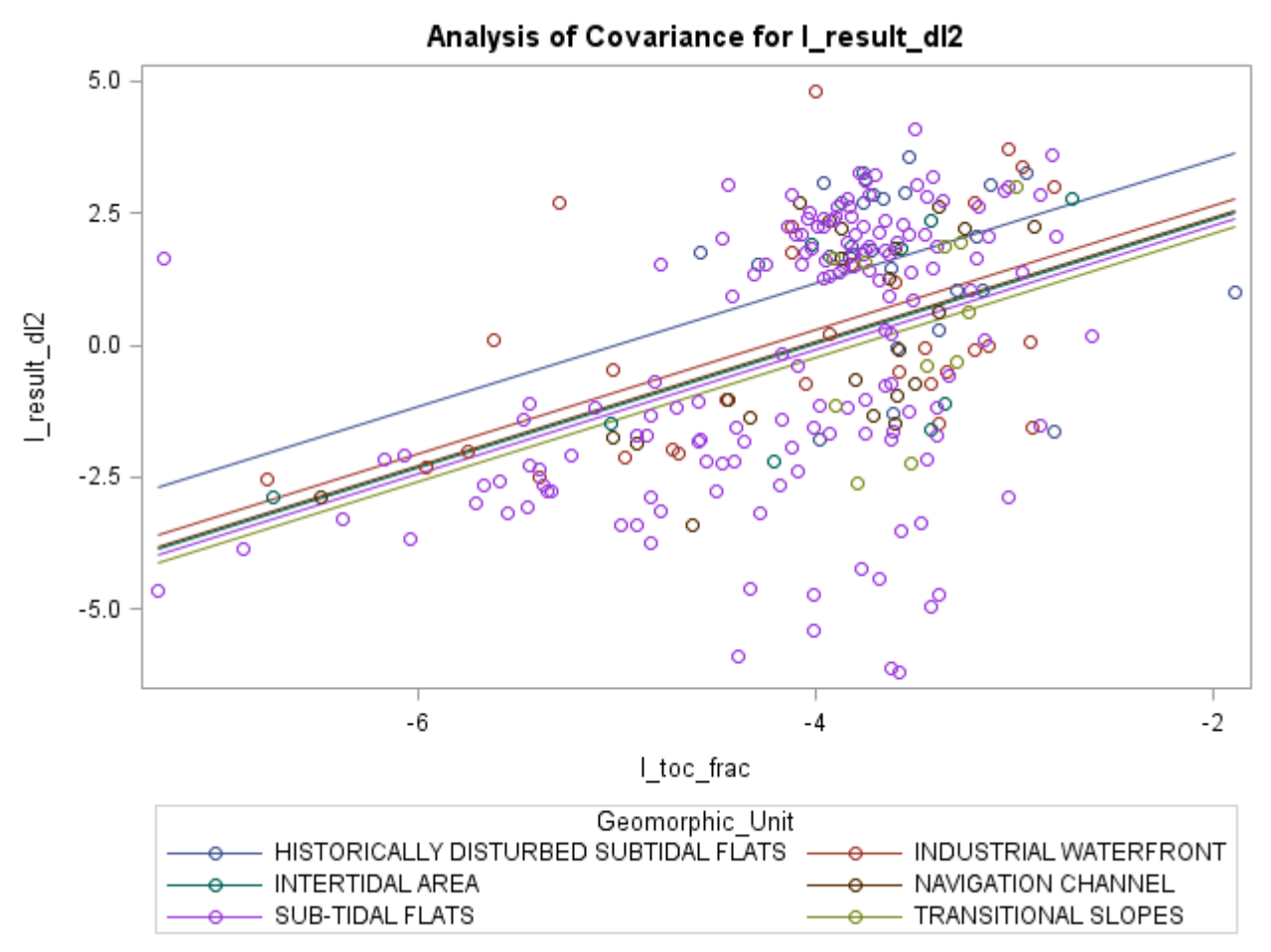
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	328.230174	54.705029	12.61	<.0001
Error	244	1058.598098	4.338517		
Corrected Total	250	1386.828272			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.236677	2585.426	2.082911	0.080564

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	290.0285160	290.0285160	66.85	<.0001
Geomorphic_Unit	5	38.2016582	7.6403316	1.76	0.1215

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	241.9795061	241.9795061	55.77	<.0001
Geomorphic_Unit	5	38.2016582	7.6403316	1.76	0.1215

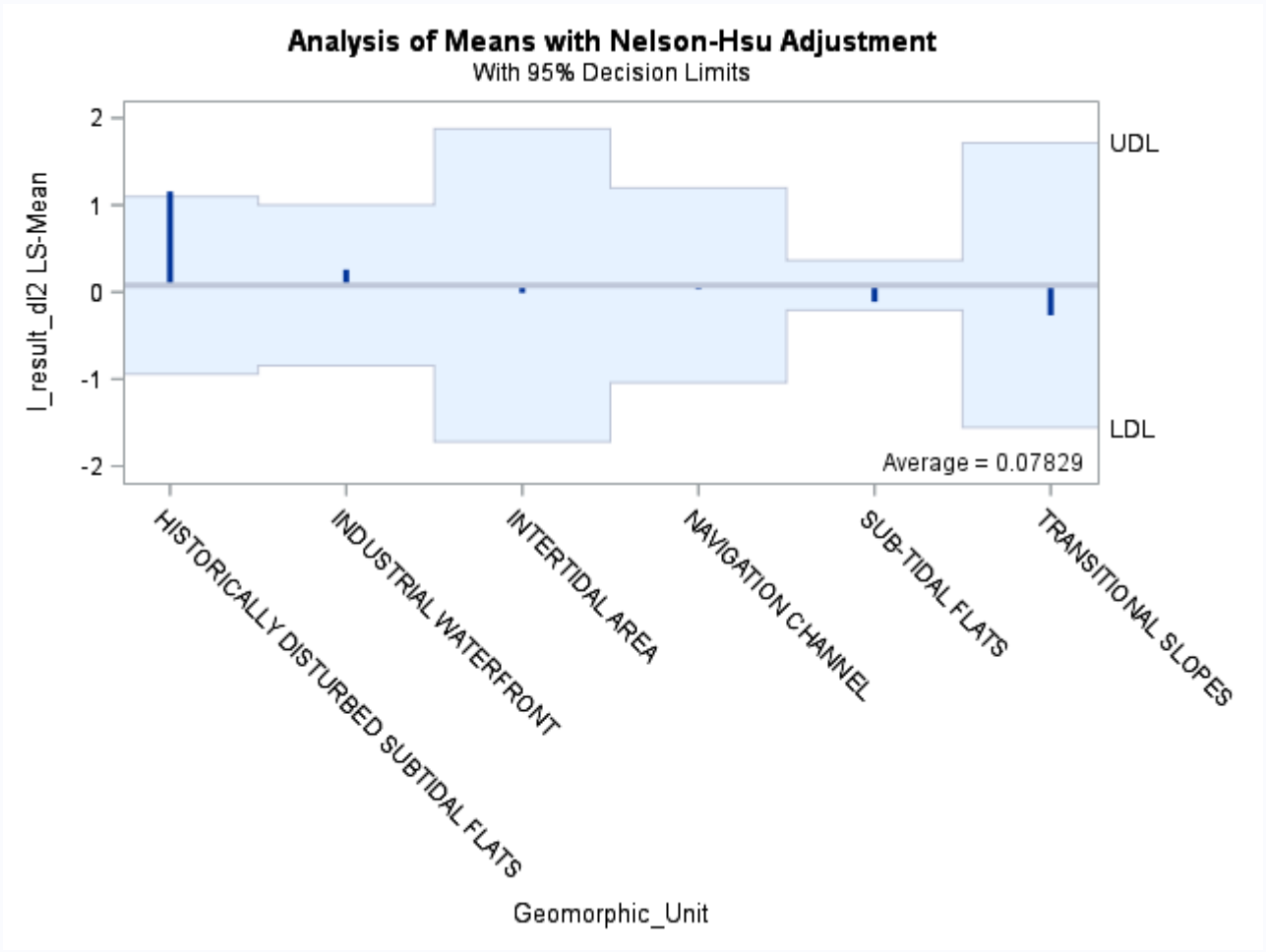

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 4.3385
R-Square 0.2367
Adj R-Square 0.2179


Analysis of Covariance for l_result_dl2
5.0
2.5
0.0
-2.5
-5.0
l_result_dl2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	1.15646195	0.0324
INDUSTRIAL WATERFRONT	0.25785933	0.9917
INTERTIDAL AREA	-0.00887029	1.0000
NAVIGATION CHANNEL	0.03636145	1.0000
SUB-TIDAL FLATS	-0.11115923	0.3692
TRANSITIONAL SLOPES	-0.26652200	0.9880


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
2
1
0
-1
-2
UDL
LDL
Average = 0.07829
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	1.15646195	1
INDUSTRIAL WATERFRONT	0.25785933	2
INTERTIDAL AREA	-0.00887029	3
NAVIGATION CHANNEL	0.03636145	4
SUB-TIDAL FLATS	-0.11115923	5
TRANSITIONAL SLOPES	-0.26652200	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5868	0.6981	0.4284	0.0525	0.3987
2	0.5868		0.9994	0.9989	0.9466	0.9805
3	0.6981	0.9994		1.0000	1.0000	0.9998
4	0.4284	0.9989	1.0000		0.9996	0.9988
5	0.0525	0.9466	1.0000	0.9996		0.9999
6	0.3987	0.9805	0.9998	0.9988	0.9999	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

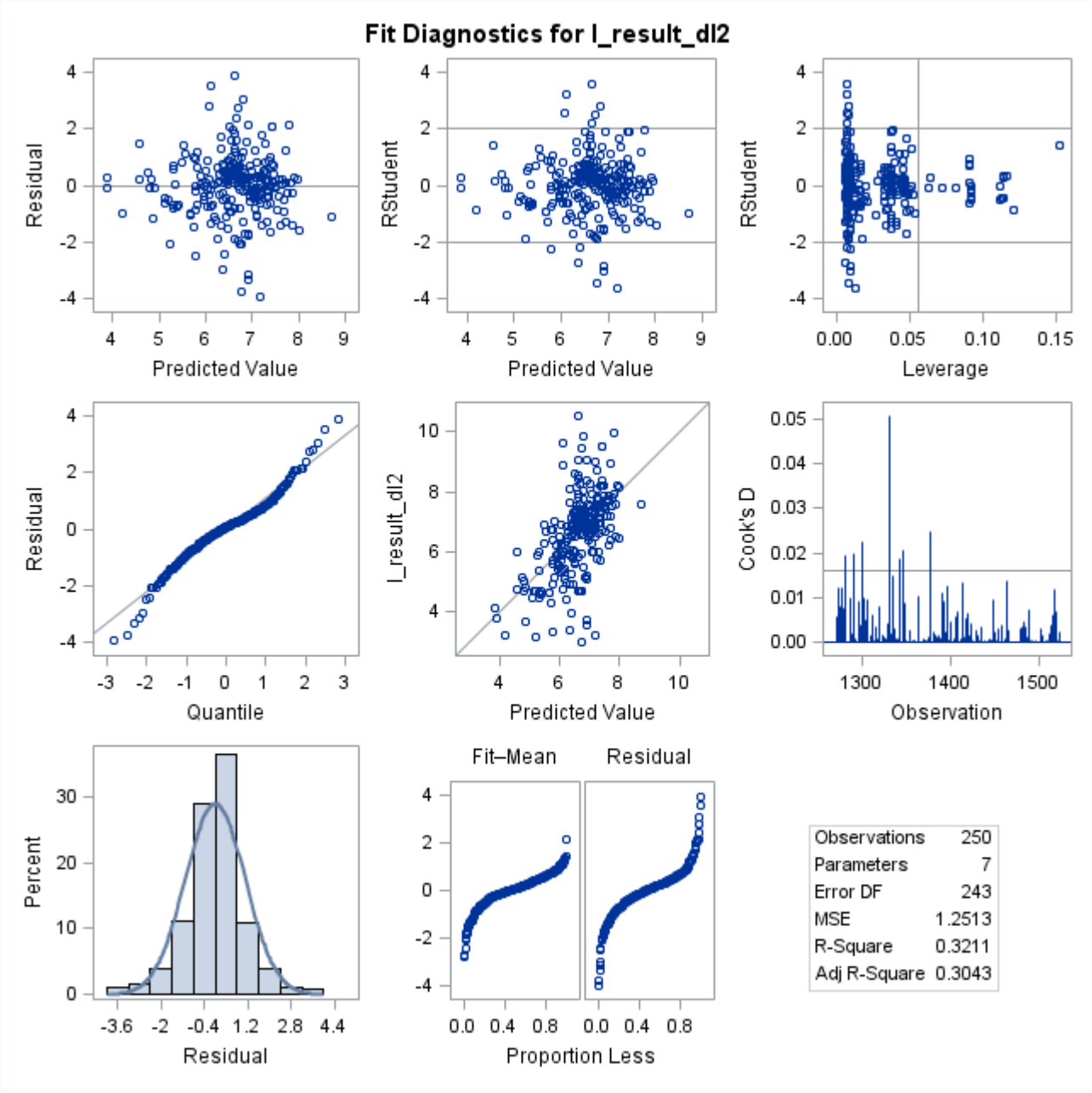
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

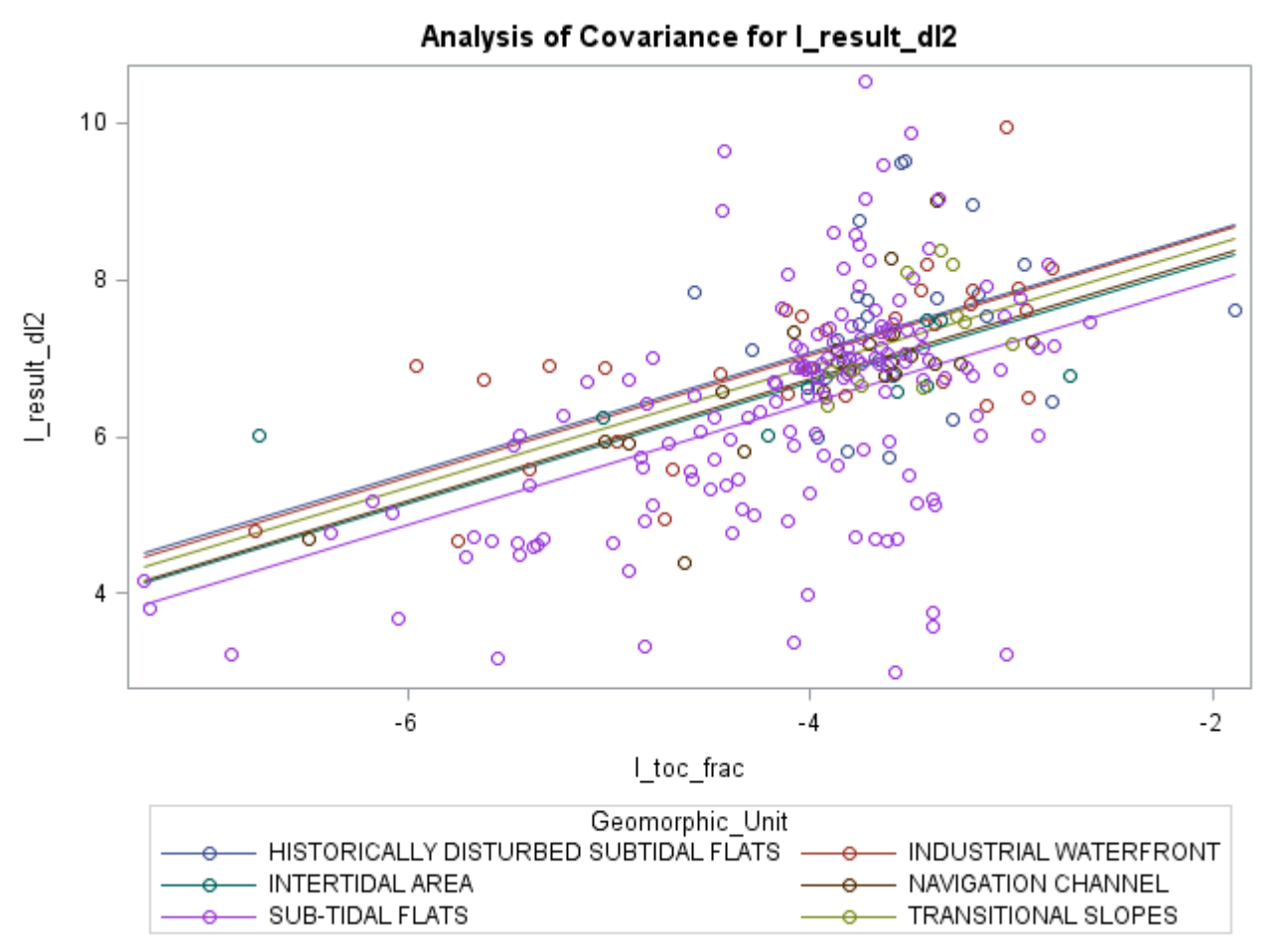
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	143.7884459	23.9647410	19.15	<.0001
Error	243	304.0626893	1.2512868		
Corrected Total	249	447.8511352			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.321063	16.92504	1.118609	6.609198

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	126.5648041	126.5648041	101.15	<.0001
Geomorphic_Unit	5	17.2236418	3.4447284	2.75	0.0193

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	105.0921989	105.0921989	83.99	<.0001
Geomorphic_Unit	5	17.2236418	3.4447284	2.75	0.0193

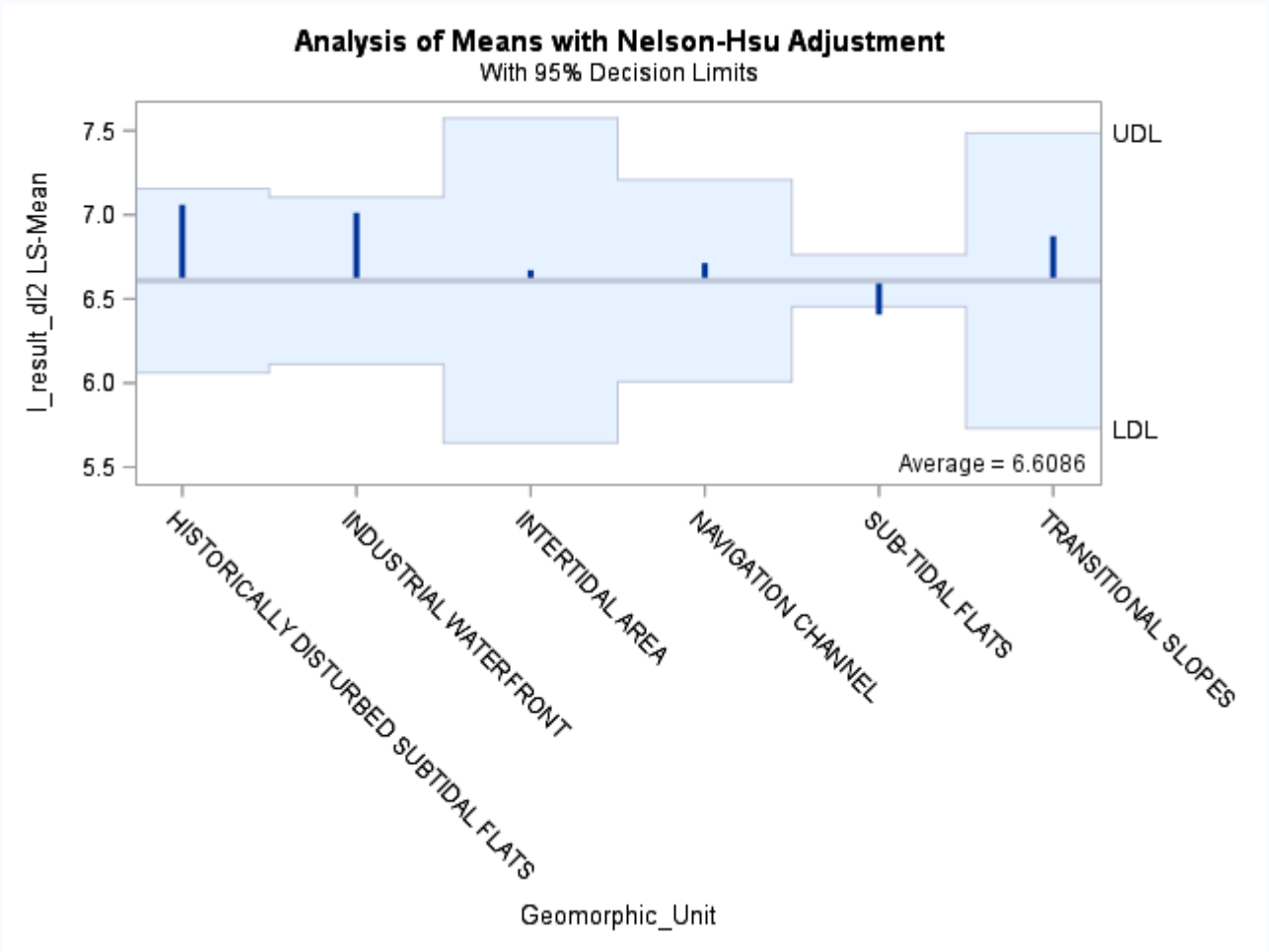

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 7
Error DF 243
MSE 1.2513
R-Square 0.3211
Adj R-Square 0.3043


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.05939265	0.1605
INDUSTRIAL WATERFRONT	7.01209284	0.1699
INTERTIDAL AREA	6.67059221	1.0000
NAVIGATION CHANNEL	6.71302206	0.9951
SUB-TIDAL FLATS	6.40664073	0.0038
TRANSITIONAL SLOPES	6.87299921	0.9441


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.5
7.0
6.5
6.0
5.5
UDL
LDL
Average = 6.6086
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.05939265	1
INDUSTRIAL WATERFRONT	7.01209284	2
INTERTIDAL AREA	6.67059221	3
NAVIGATION CHANNEL	6.71302206	4
SUB-TIDAL FLATS	6.40664073	5
TRANSITIONAL SLOPES	6.87299921	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9465	0.8921	0.0722	0.9972
2	1.0000		0.9662	0.9305	0.0706	0.9993
3	0.9465	0.9662		1.0000	0.9832	0.9987
4	0.8921	0.9305	1.0000		0.8375	0.9989
5	0.0722	0.0706	0.9832	0.8375		0.7743
6	0.9972	0.9993	0.9987	0.9989	0.7743	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

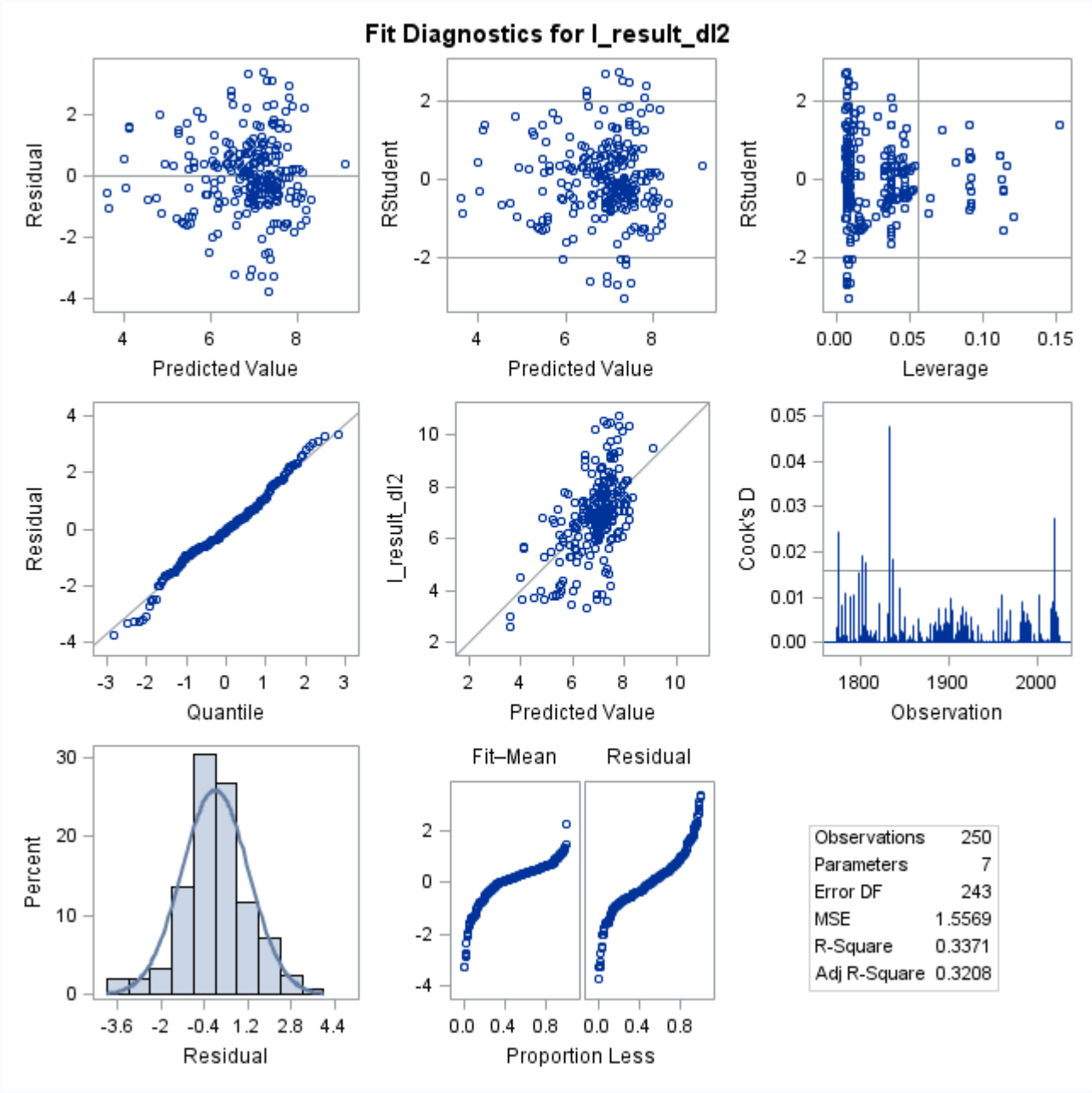
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

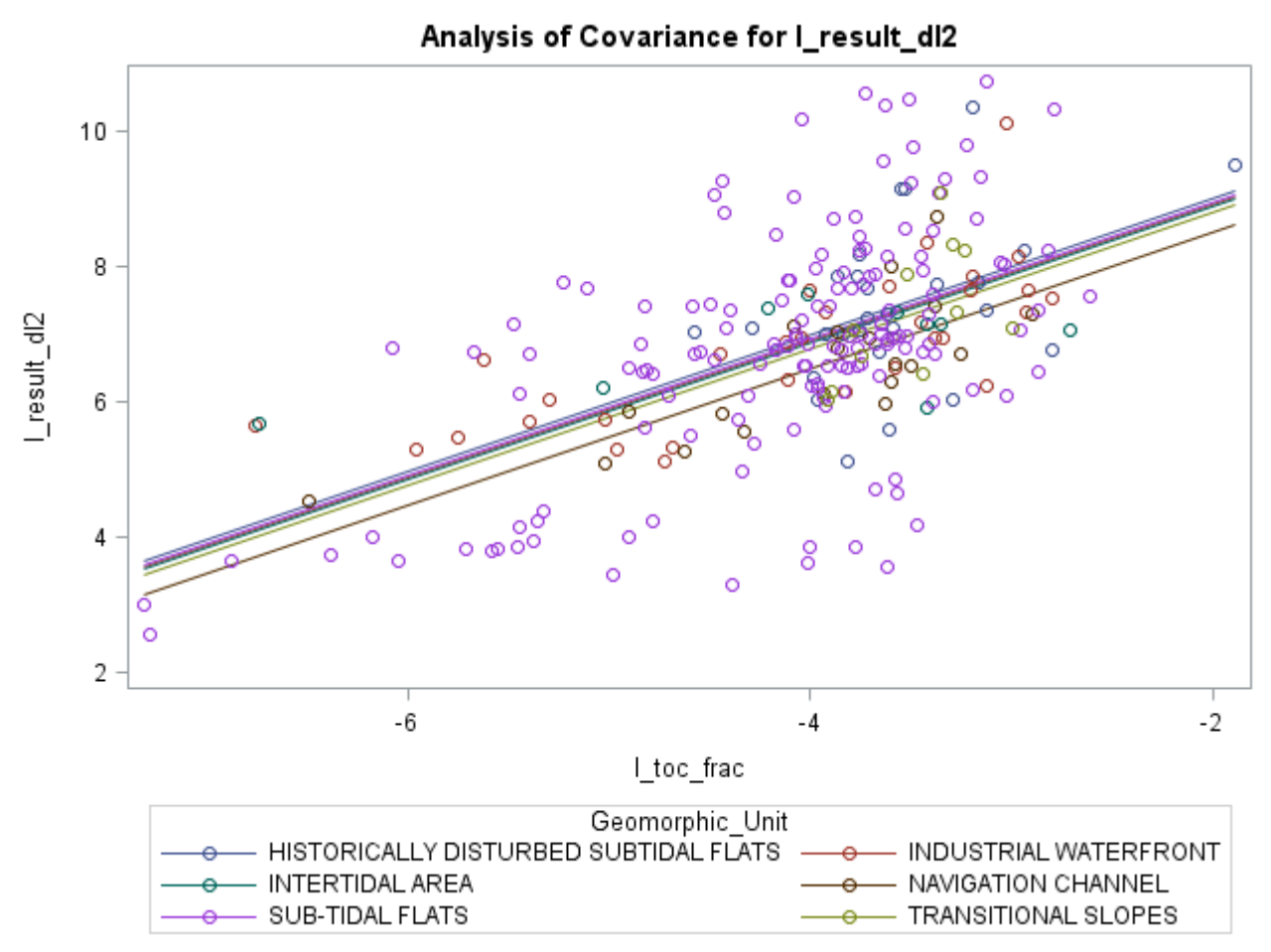
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	192.4150907	32.0691818	20.60	<.0001
Error	243	378.3373865	1.5569440		
Corrected Total	249	570.7524773			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.337125	18.17762	1.247776	6.864352

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	188.5433425	188.5433425	121.10	<.0001
Geomorphic_Unit	5	3.8717482	0.7743496	0.50	0.7781

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	178.6755796	178.6755796	114.76	<.0001
Geomorphic_Unit	5	3.8717482	0.7743496	0.50	0.7781

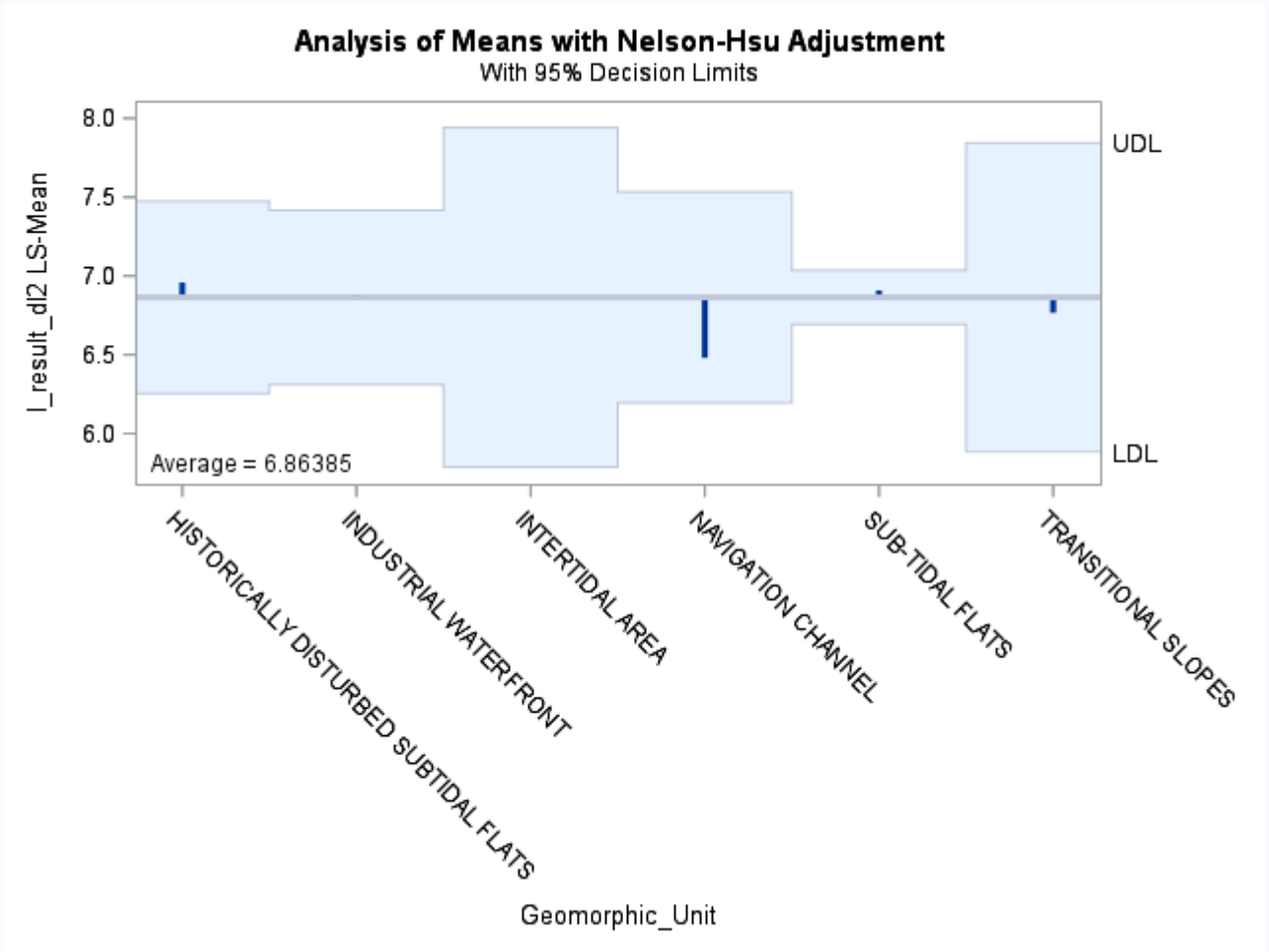

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 7
Error DF 243
MSE 1.5569
R-Square 0.3371
Adj R-Square 0.3208


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.95798560	0.9972
INDUSTRIAL WATERFRONT	6.88119349	1.0000
INTERTIDAL AREA	6.86090579	1.0000
NAVIGATION CHANNEL	6.48052277	0.5328
SUB-TIDAL FLATS	6.90768733	0.9722
TRANSITIONAL SLOPES	6.76660351	0.9997


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
8.0
7.5
7.0
6.5
6.0
UDL
LDL
Average = 6.86385
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.95798560	1
INDUSTRIAL WATERFRONT	6.88119349	2
INTERTIDAL AREA	6.86090579	3
NAVIGATION CHANNEL	6.48052277	4
SUB-TIDAL FLATS	6.90768733	5
TRANSITIONAL SLOPES	6.76660351	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9999	1.0000	0.7711	1.0000	0.9981
2	0.9999		1.0000	0.8593	1.0000	0.9998
3	1.0000	1.0000		0.9722	1.0000	1.0000
4	0.7711	0.8593	0.9722		0.6662	0.9897
5	1.0000	1.0000	1.0000	0.6662		0.9992
6	0.9981	0.9998	1.0000	0.9897	0.9992	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

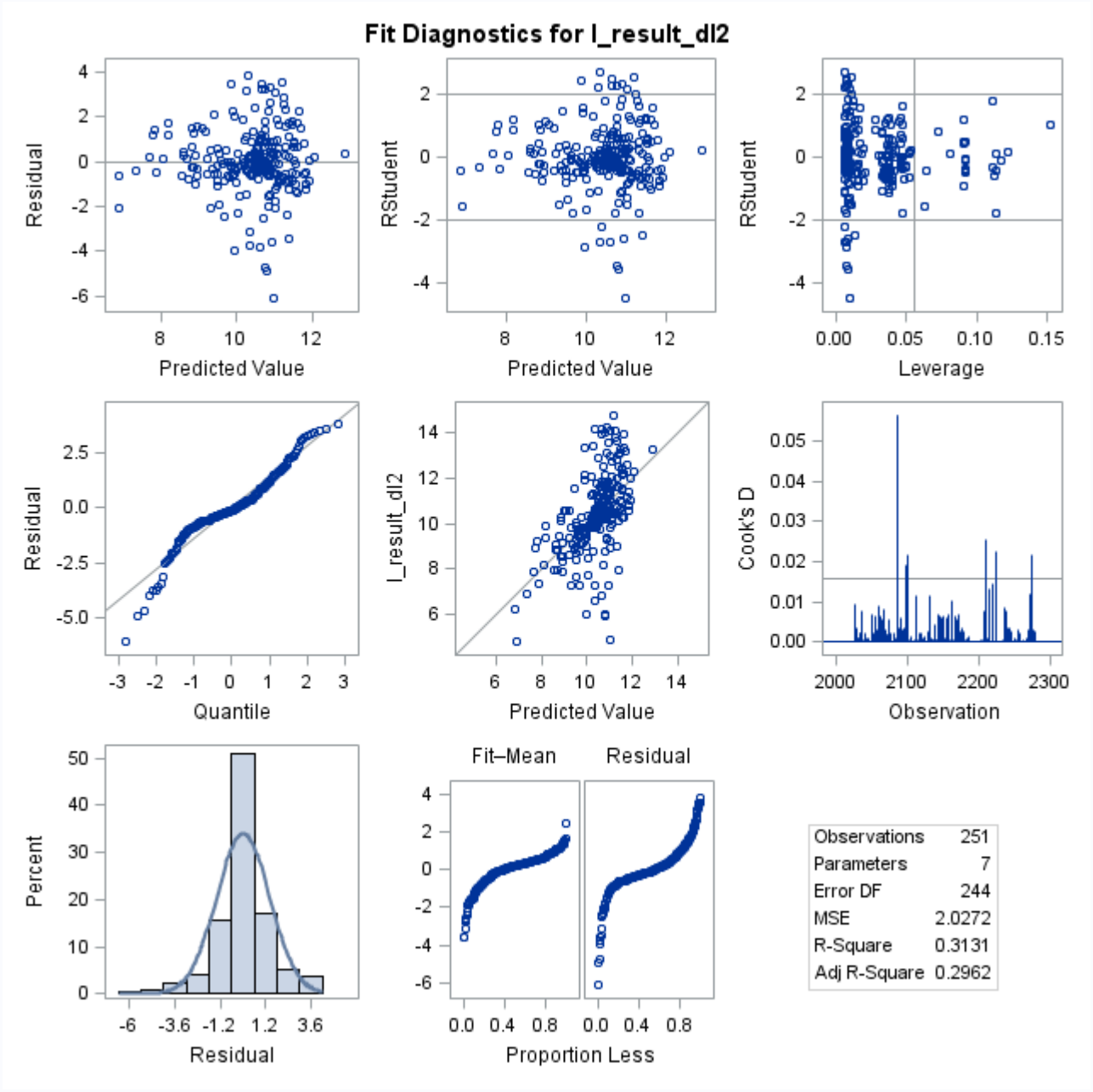
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

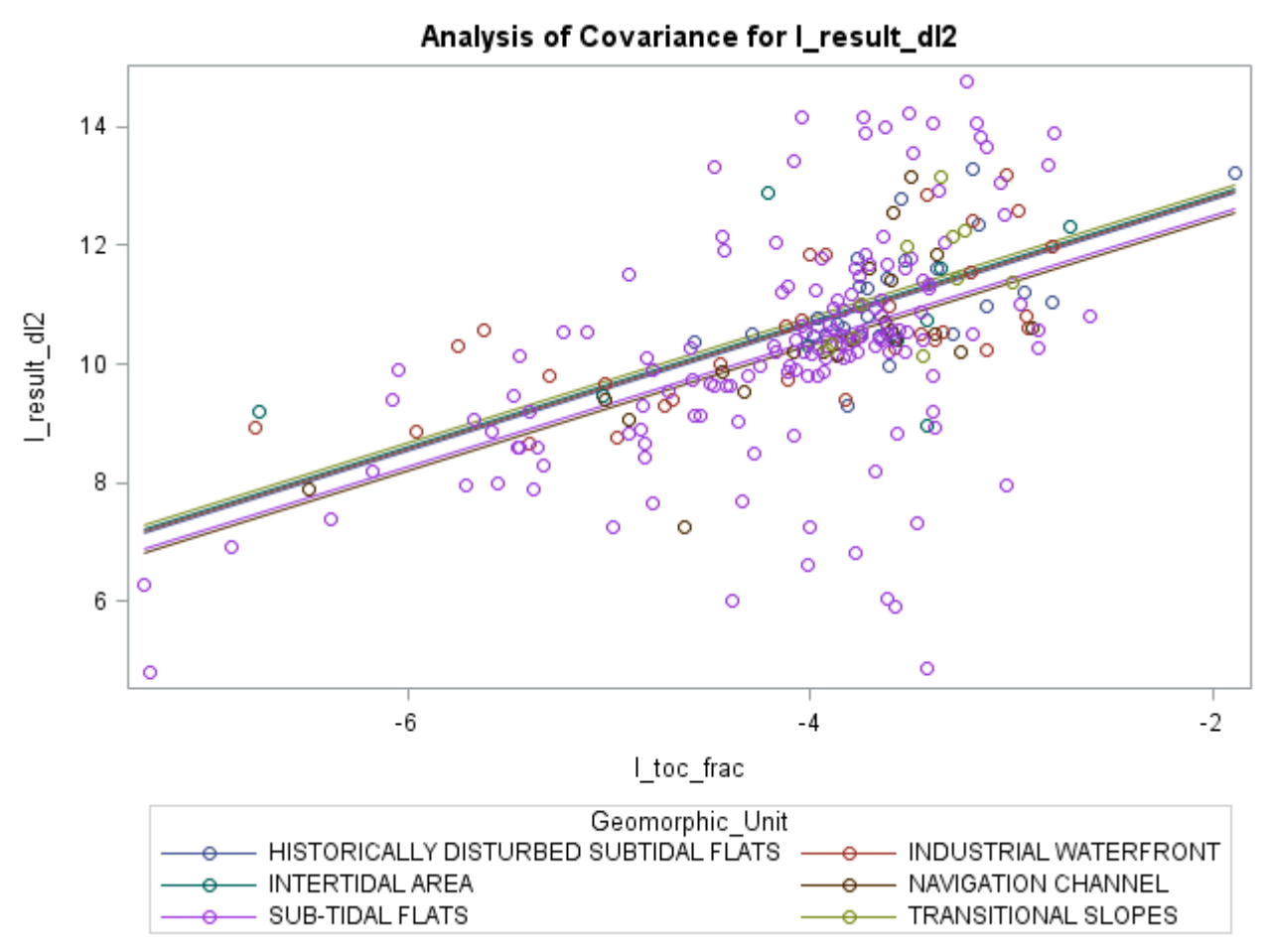
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	225.4212373	37.5702062	18.53	<.0001
Error	244	494.6291822	2.0271688		
Corrected Total	250	720.0504195			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.313063	13.63489	1.423787	10.44223

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	219.7685798	219.7685798	108.41	<.0001
Geomorphic_Unit	5	5.6526575	1.1305315	0.56	0.7324

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	197.6322061	197.6322061	97.49	<.0001
Geomorphic_Unit	5	5.6526575	1.1305315	0.56	0.7324

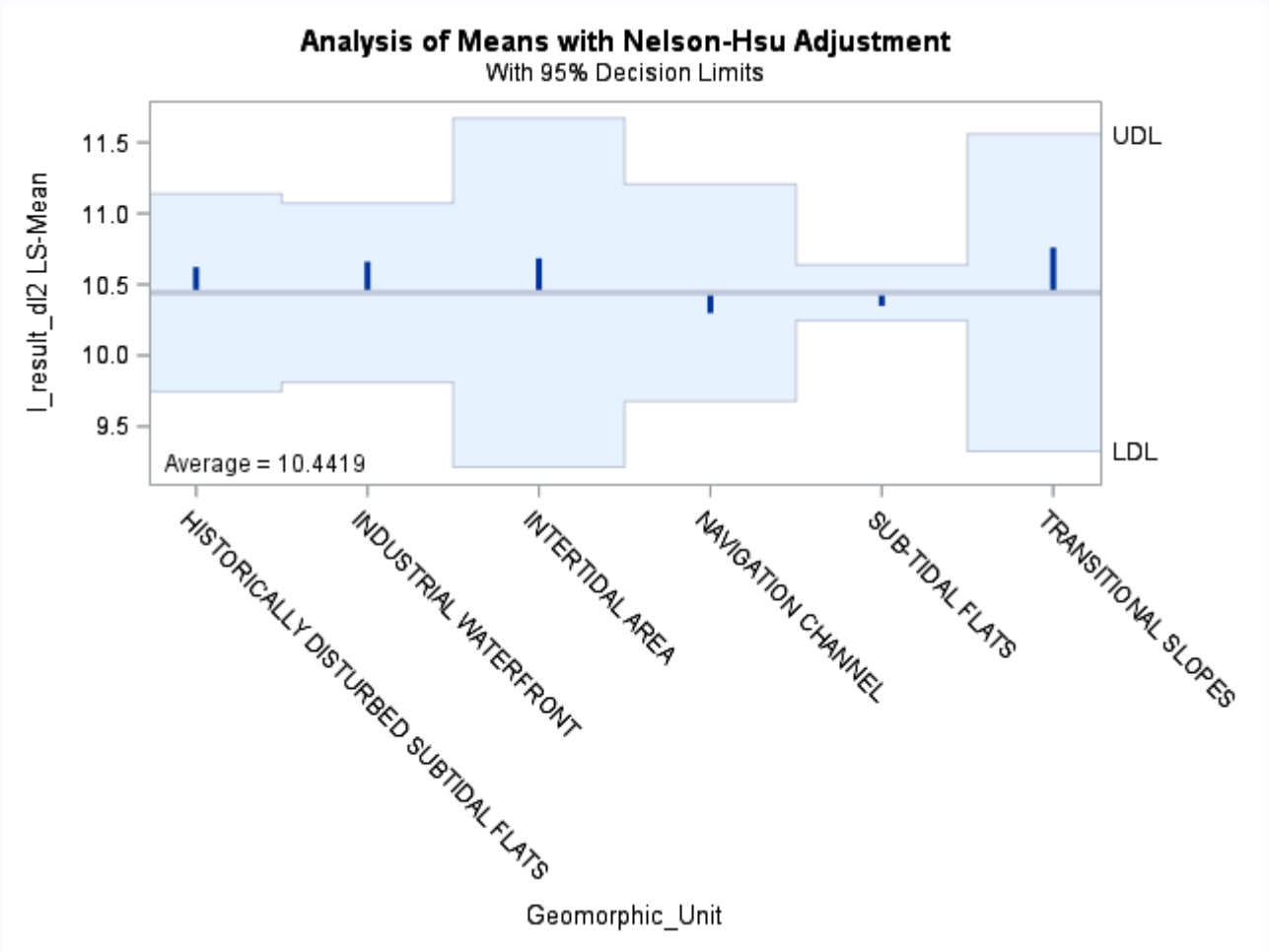

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 2.0272
R-Square 0.3131
Adj R-Square 0.2962


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	10.6222198	0.9703
INDUSTRIAL WATERFRONT	10.6604701	0.9030
INTERTIDAL AREA	10.6843851	0.9911
NAVIGATION CHANNEL	10.2978603	0.9928
SUB-TIDAL FLATS	10.3486781	0.7096
TRANSITIONAL SLOPES	10.7603093	0.9555


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
11.5
11.0
10.5
10.0
9.5
UDL
LDL
Average = 10.4419
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	10.6222198	1
INDUSTRIAL WATERFRONT	10.6604701	2
INTERTIDAL AREA	10.6843851	3
NAVIGATION CHANNEL	10.2978603	4
SUB-TIDAL FLATS	10.3486781	5
TRANSITIONAL SLOPES	10.7603093	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	1.0000	0.9693	0.9459	0.9998
2	1.0000		1.0000	0.9429	0.8767	1.0000
3	1.0000	1.0000		0.9834	0.9833	1.0000
4	0.9693	0.9429	0.9834		1.0000	0.9521
5	0.9459	0.8767	0.9833	1.0000		0.9424
6	0.9998	1.0000	1.0000	0.9521	0.9424	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

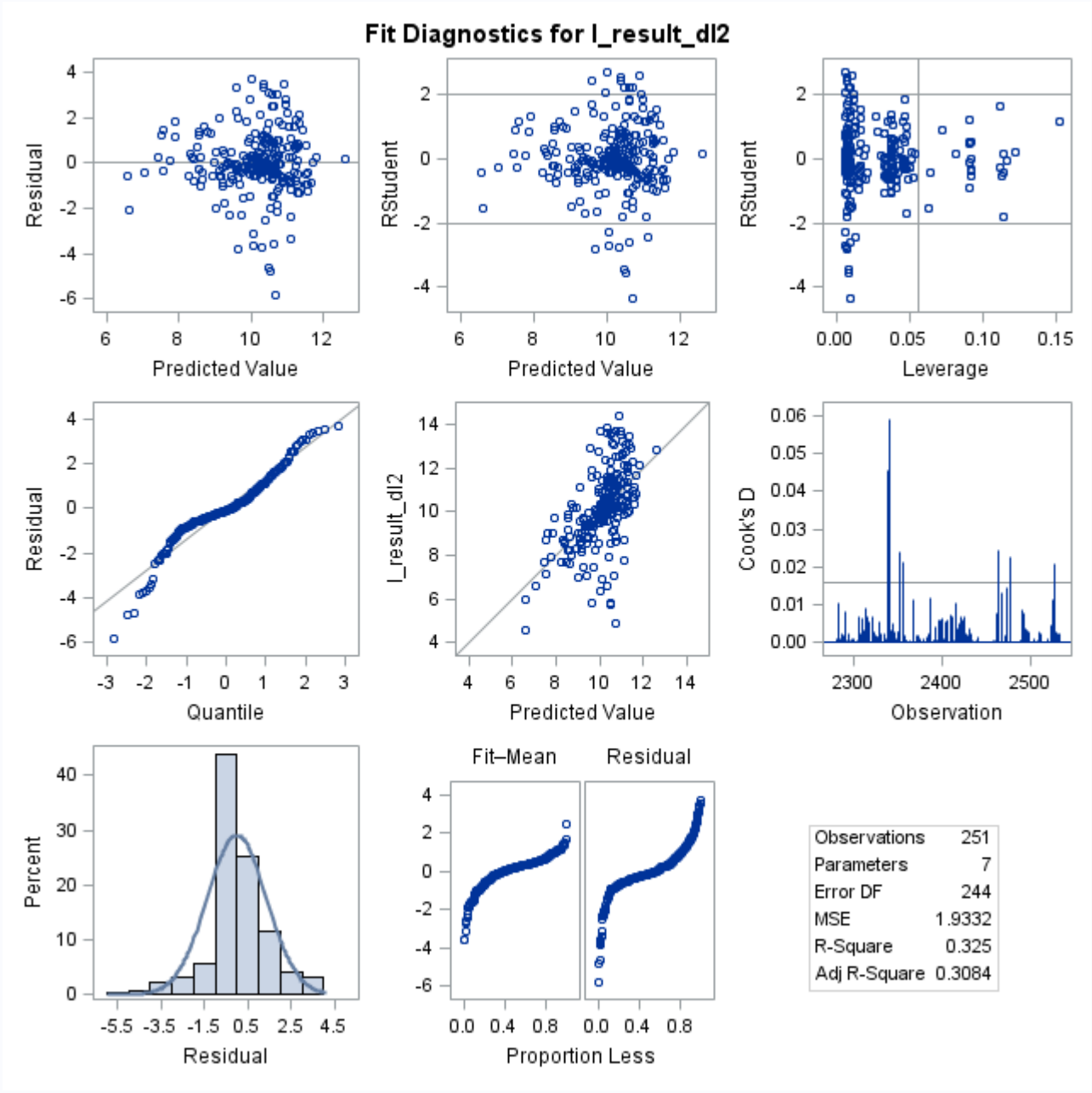
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

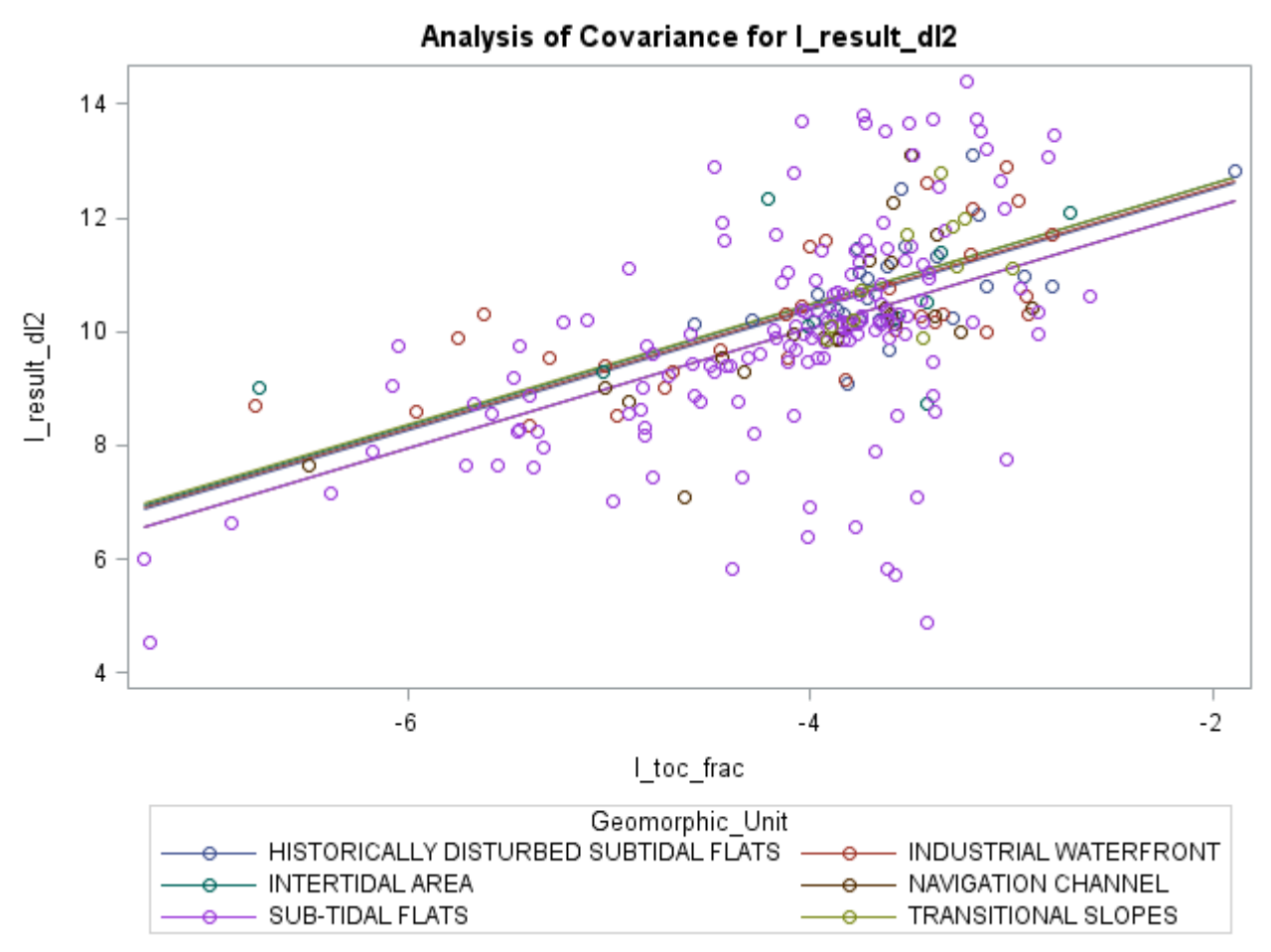
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	227.0901534	37.8483589	19.58	<.0001
Error	244	471.6981517	1.9331891		
Corrected Total	250	698.7883051			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.324977	13.68250	1.390392	10.16182

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	220.6204940	220.6204940	114.12	<.0001
Geomorphic_Unit	5	6.4696594	1.2939319	0.67	0.6471

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	197.7766929	197.7766929	102.31	<.0001
Geomorphic_Unit	5	6.4696594	1.2939319	0.67	0.6471

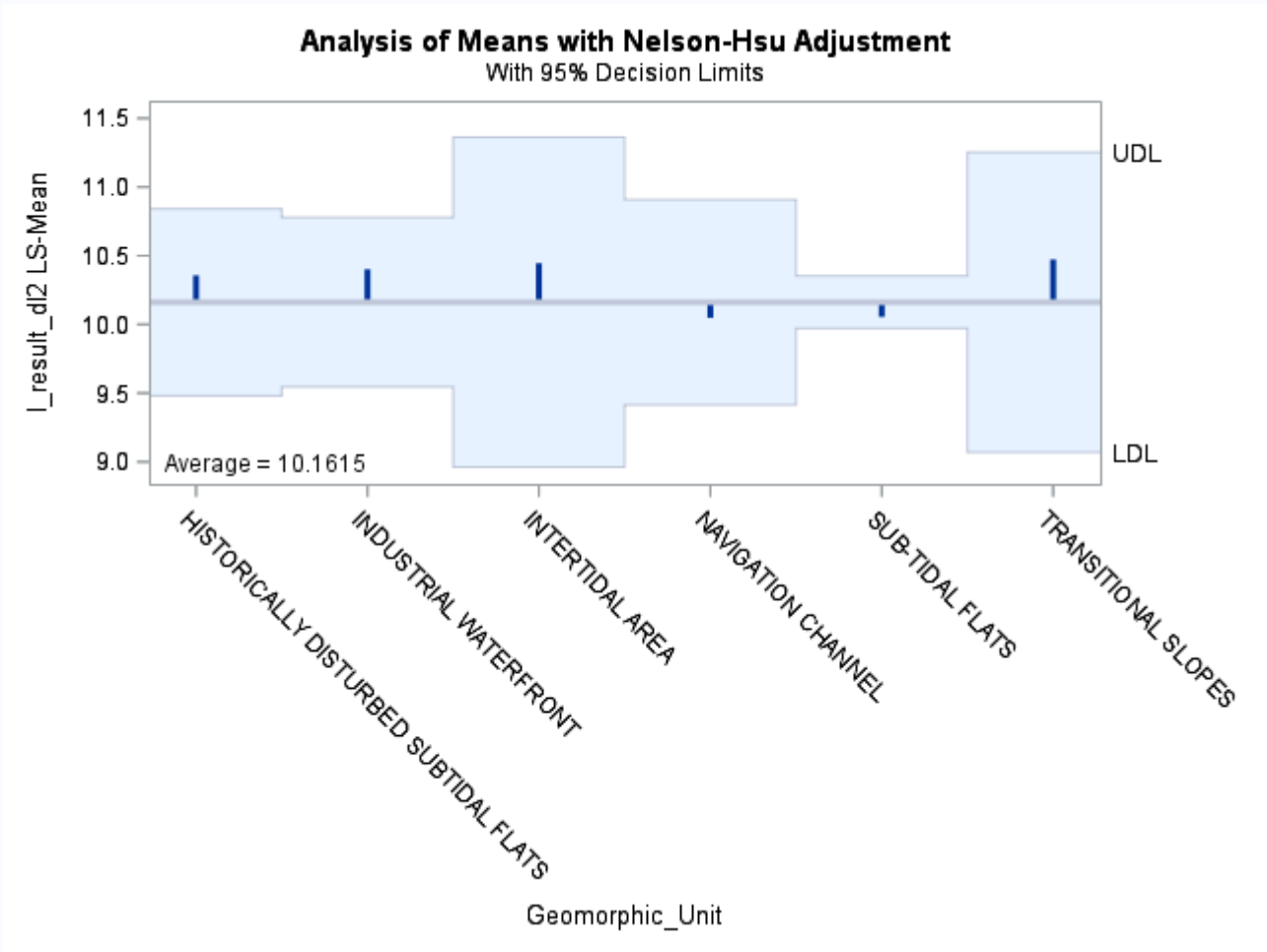

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.9332
R-Square 0.325
Adj R-Square 0.3084


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	10.3569166	0.9540
INDUSTRIAL WATERFRONT	10.4013661	0.8512
INTERTIDAL AREA	10.4452017	0.9800
NAVIGATION CHANNEL	10.0481693	0.9974
SUB-TIDAL FLATS	10.0547895	0.5558
TRANSITIONAL SLOPES	10.4726009	0.9554


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
11.5
11.0
10.5
10.0
9.5
9.0
UDL
LDL
Average = 10.1615
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	10.3569166	1
INDUSTRIAL WATERFRONT	10.4013661	2
INTERTIDAL AREA	10.4452017	3
NAVIGATION CHANNEL	10.0481693	4
SUB-TIDAL FLATS	10.0547895	5
TRANSITIONAL SLOPES	10.4726009	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	1.0000	0.9725	0.9112	0.9999
2	1.0000		1.0000	0.9435	0.8042	1.0000
3	1.0000	1.0000		0.9792	0.9640	1.0000
4	0.9725	0.9435	0.9792		1.0000	0.9631
5	0.9112	0.8042	0.9640	1.0000		0.9326
6	0.9999	1.0000	1.0000	0.9631	0.9326	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

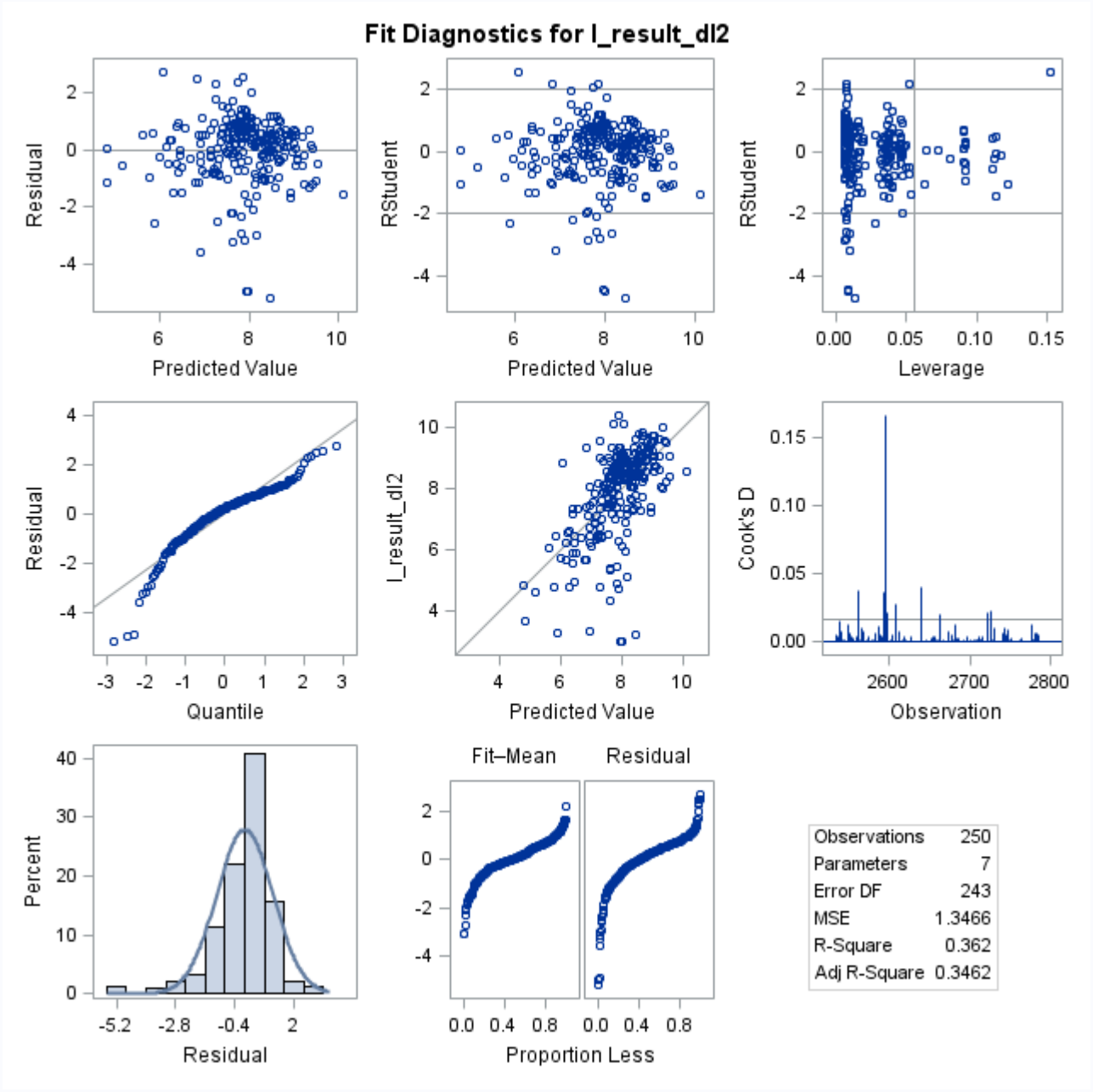
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

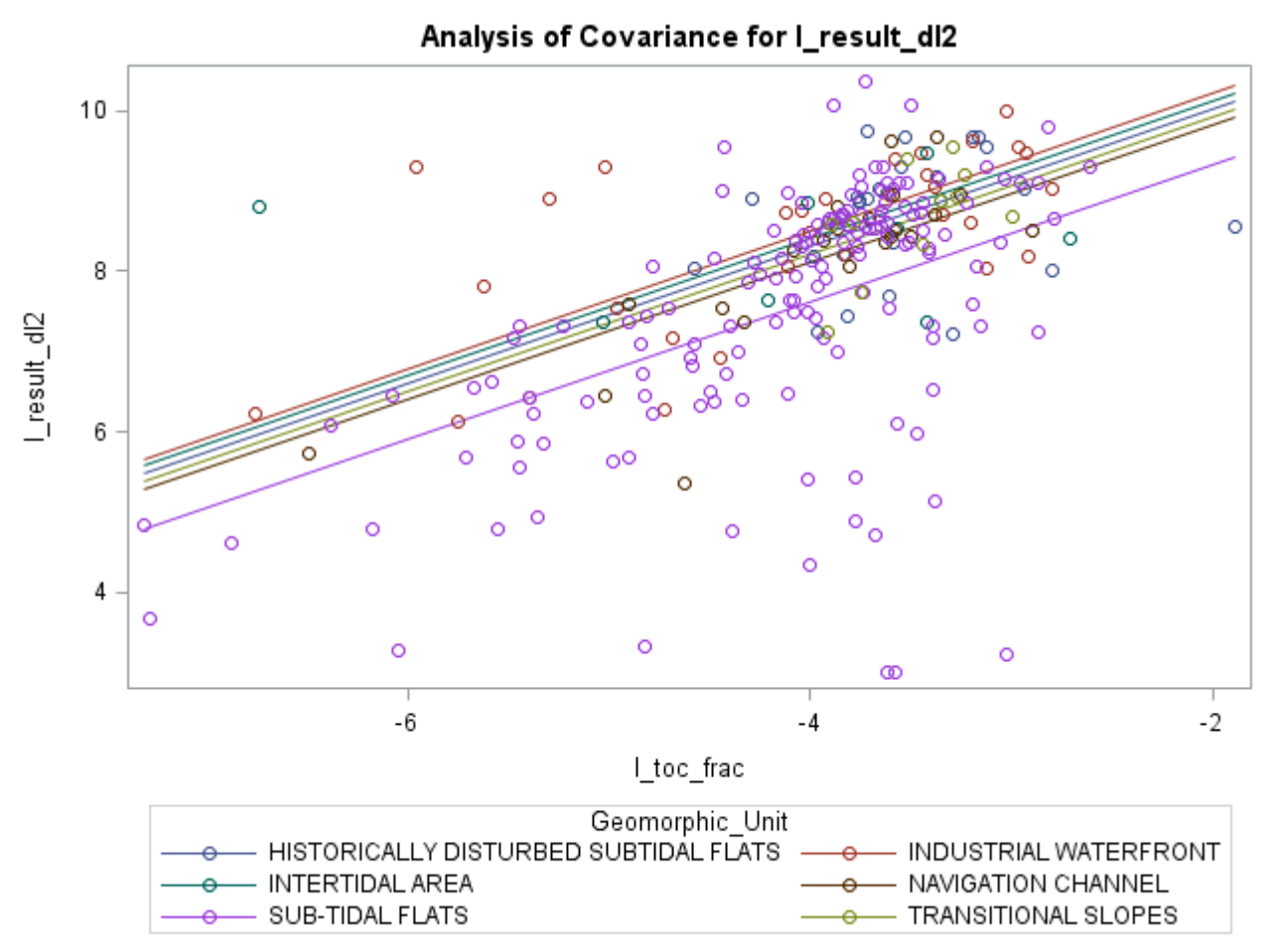
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	185.6480970	30.9413495	22.98	<.0001
Error	243	327.2243372	1.3466022		
Corrected Total	249	512.8724341			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.361977	14.72143	1.160432	7.882603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	154.3776493	154.3776493	114.64	<.0001
Geomorphic_Unit	5	31.2704477	6.2540895	4.64	0.0005

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	128.9562638	128.9562638	95.76	<.0001
Geomorphic_Unit	5	31.2704477	6.2540895	4.64	0.0005

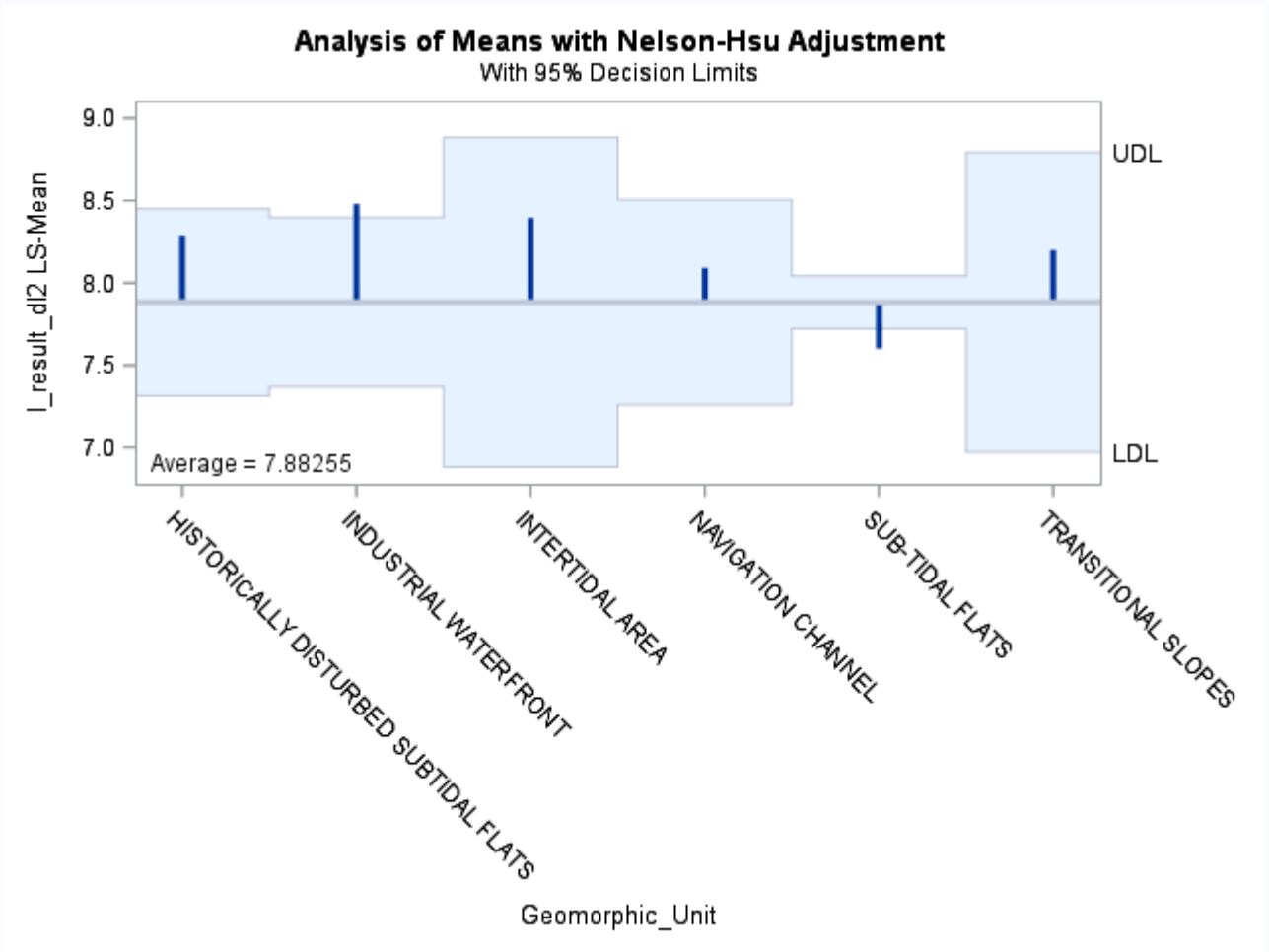

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 7
Error DF 243
MSE 1.3466
R-Square 0.362
Adj R-Square 0.3462


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.28845493	0.2903
INDUSTRIAL WATERFRONT	8.47998868	0.0141
INTERTIDAL AREA	8.39542459	0.6469
NAVIGATION CHANNEL	8.09127028	0.9144
SUB-TIDAL FLATS	7.60148036	<.0001
TRANSITIONAL SLOPES	8.19944917	0.9013


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
9.0
8.5
8.0
7.5
7.0
UDL
LDL
Average = 7.88255
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.28845493	1
INDUSTRIAL WATERFRONT	8.47998868	2
INTERTIDAL AREA	8.39542459	3
NAVIGATION CHANNEL	8.09127028	4
SUB-TIDAL FLATS	7.60148036	5
TRANSITIONAL SLOPES	8.19944917	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9895	0.9999	0.9917	0.0651	0.9999
2	0.9895		1.0000	0.8362	0.0022	0.9837
3	0.9999	1.0000		0.9858	0.3492	0.9990
4	0.9917	0.8362	0.9858		0.4381	0.9999
5	0.0651	0.0022	0.3492	0.4381		0.5792
6	0.9999	0.9837	0.9990	0.9999	0.5792	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	245
Number of Observations Used	245

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

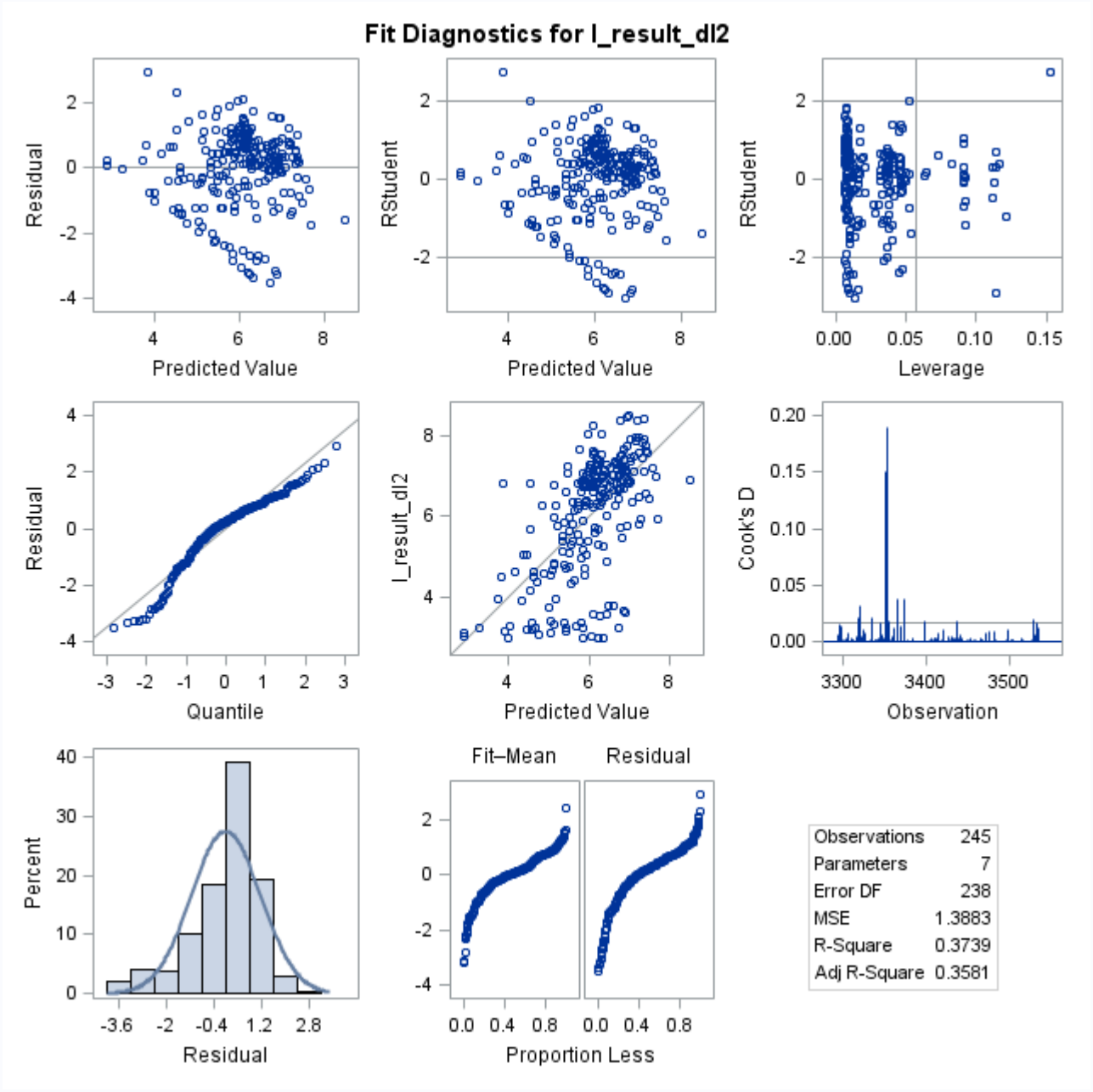
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

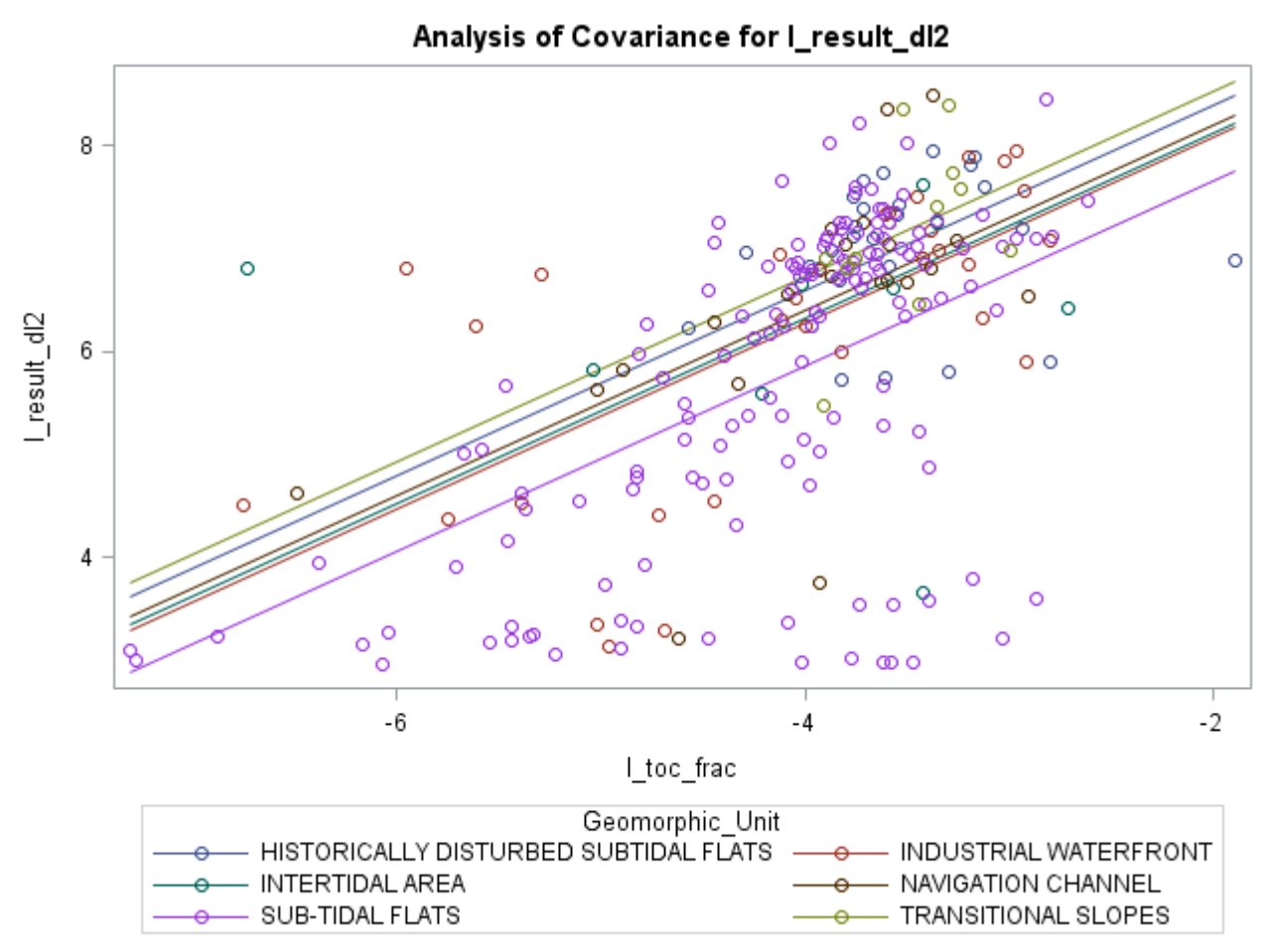
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	197.3109359	32.8851560	23.69	<.0001
Error	238	330.4150303	1.3882984		
Corrected Total	244	527.7259662			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.373889	19.43433	1.178261	6.062780

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	175.4729367	175.4729367	126.39	<.0001
Geomorphic_Unit	5	21.8379991	4.3675998	3.15	0.0091

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	139.6274774	139.6274774	100.57	<.0001
Geomorphic_Unit	5	21.8379991	4.3675998	3.15	0.0091

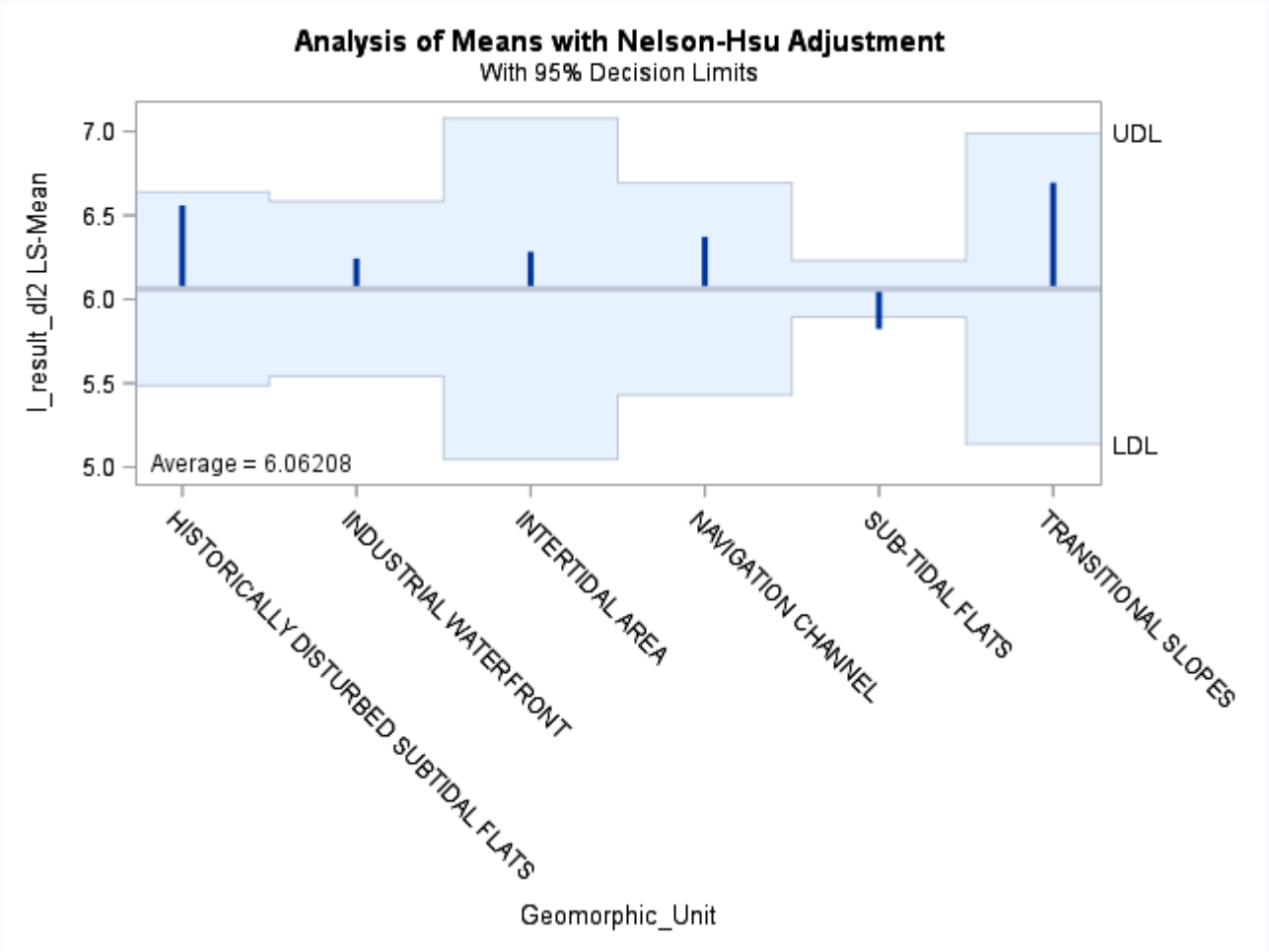

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 245
Parameters 7
Error DF 238
MSE 1.3883
R-Square 0.3739
Adj R-Square 0.3581


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.55928678	0.1269
INDUSTRIAL WATERFRONT	6.24325156	0.9017
INTERTIDAL AREA	6.28328124	0.9862
NAVIGATION CHANNEL	6.37219550	0.6862
SUB-TIDAL FLATS	5.82317937	0.0012
TRANSITIONAL SLOPES	6.69460015	0.3373


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.0
6.5
6.0
5.5
5.0
UDL
LDL
Average = 6.06208
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.55928678	1
INDUSTRIAL WATERFRONT	6.24325156	2
INTERTIDAL AREA	6.28328124	3
NAVIGATION CHANNEL	6.37219550	4
SUB-TIDAL FLATS	5.82317937	5
TRANSITIONAL SLOPES	6.69460015	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9155	0.9905	0.9940	0.0446	0.9995
2	0.9155		1.0000	0.9988	0.4667	0.8883
3	0.9905	1.0000		1.0000	0.8657	0.9718
4	0.9940	0.9988	1.0000		0.3269	0.9771
5	0.0446	0.4667	0.8657	0.3269		0.1843
6	0.9995	0.8883	0.9718	0.9771	0.1843	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

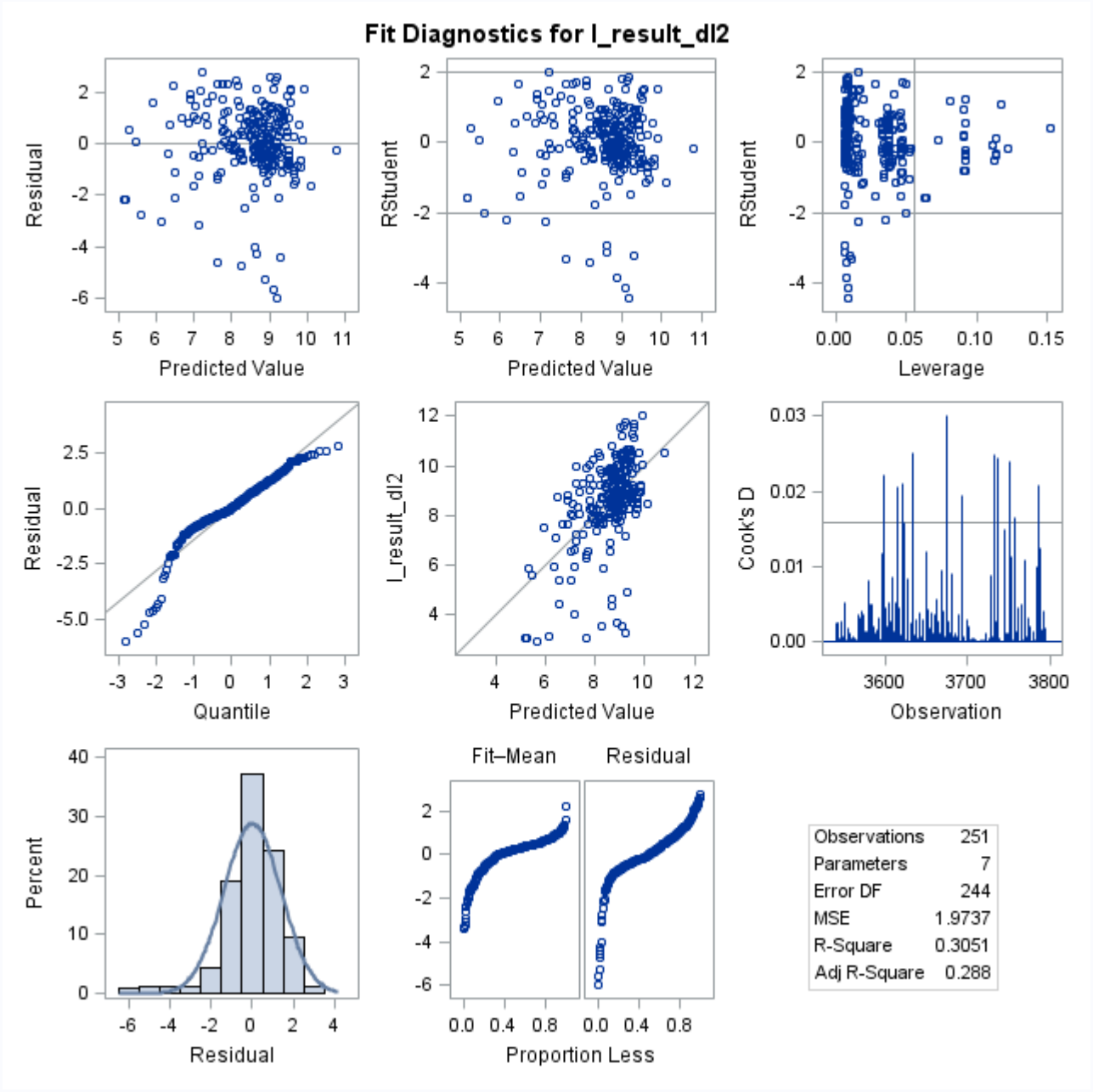
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

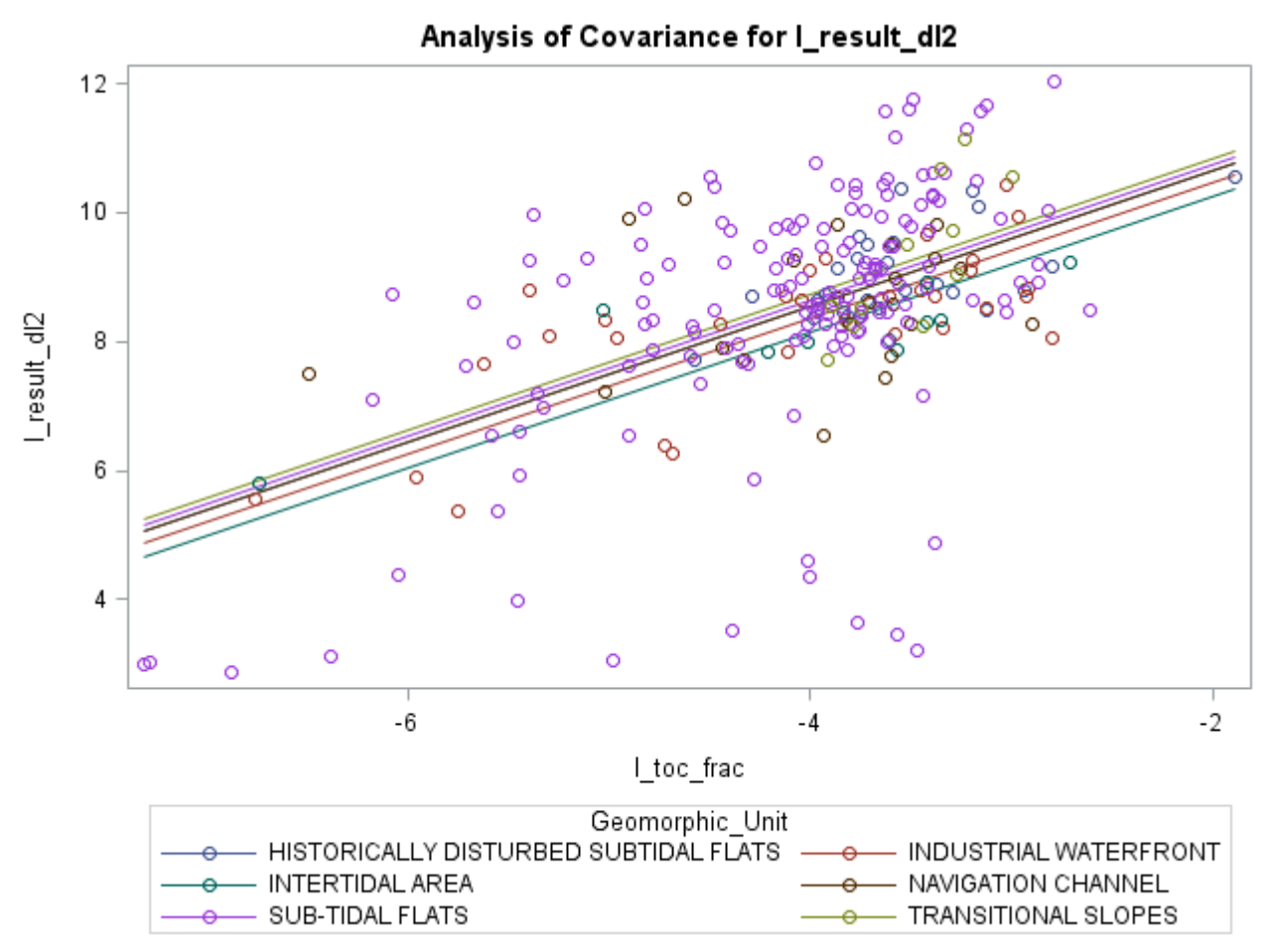
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	211.4327102	35.2387850	17.85	<.0001
Error	244	481.5922694	1.9737388		
Corrected Total	250	693.0249796			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.305087	16.42334	1.404898	8.554279

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	207.2743452	207.2743452	105.02	<.0001
Geomorphic_Unit	5	4.1583650	0.8316730	0.42	0.8336

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	195.1470631	195.1470631	98.87	<.0001
Geomorphic_Unit	5	4.1583650	0.8316730	0.42	0.8336

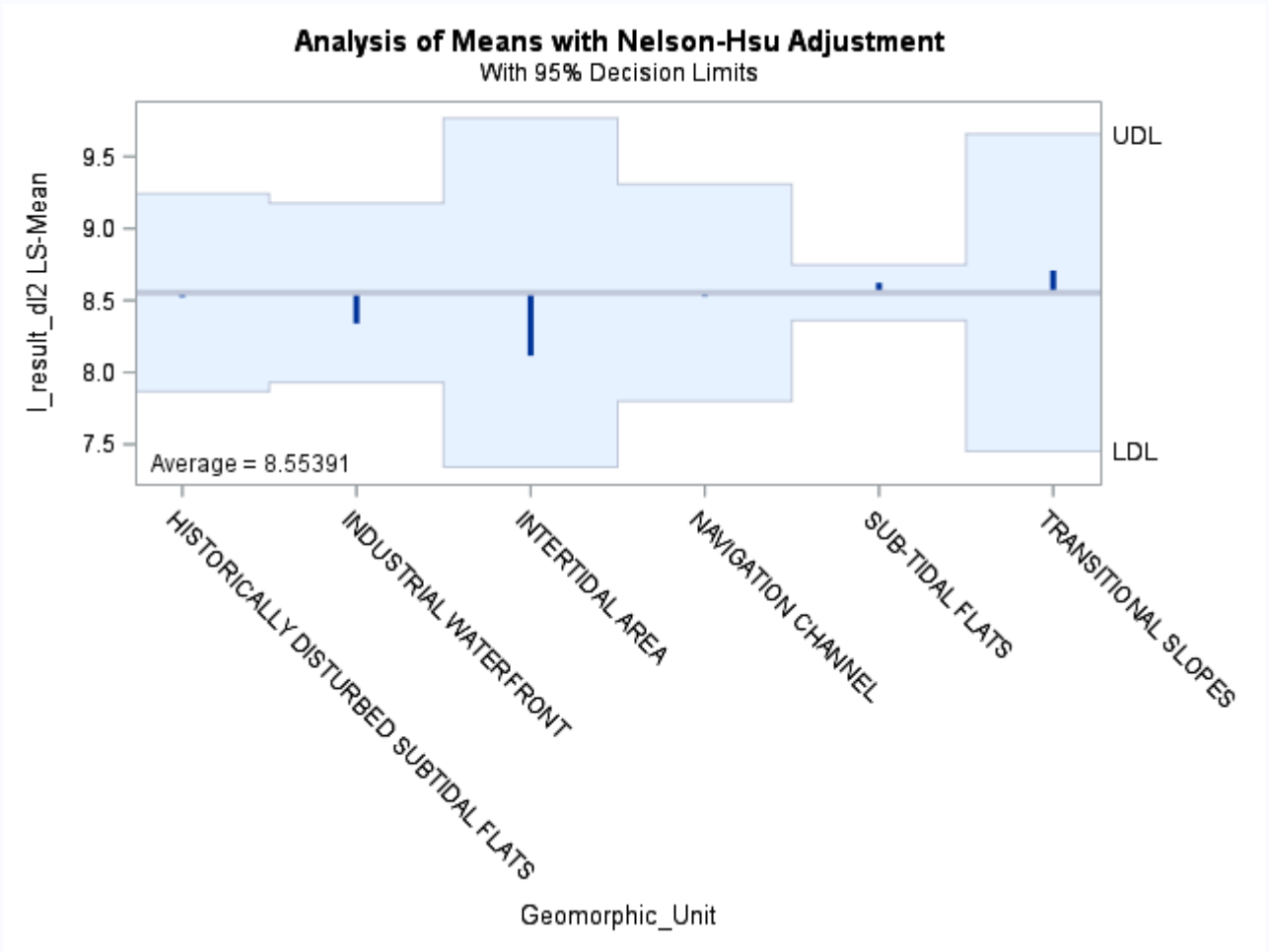

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.9737
R-Square 0.3051
Adj R-Square 0.288


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.52384482	1.0000
INDUSTRIAL WATERFRONT	8.33995087	0.9060
INTERTIDAL AREA	8.11591714	0.8863
NAVIGATION CHANNEL	8.52751982	1.0000
SUB-TIDAL FLATS	8.62253052	0.8917
TRANSITIONAL SLOPES	8.70825807	0.9982


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
9.5
9.0
8.5
8.0
7.5
UDL
LDL
Average = 8.55391
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.52384482	1
INDUSTRIAL WATERFRONT	8.33995087	2
INTERTIDAL AREA	8.11591714	3
NAVIGATION CHANNEL	8.52751982	4
SUB-TIDAL FLATS	8.62253052	5
TRANSITIONAL SLOPES	8.70825807	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9964	0.9752	1.0000	0.9995	0.9991
2	0.9964		0.9983	0.9969	0.9109	0.9767
3	0.9752	0.9983		0.9767	0.9000	0.9374
4	1.0000	0.9969	0.9767		0.9997	0.9993
5	0.9995	0.9109	0.9000	0.9997		1.0000
6	0.9991	0.9767	0.9374	0.9993	1.0000	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

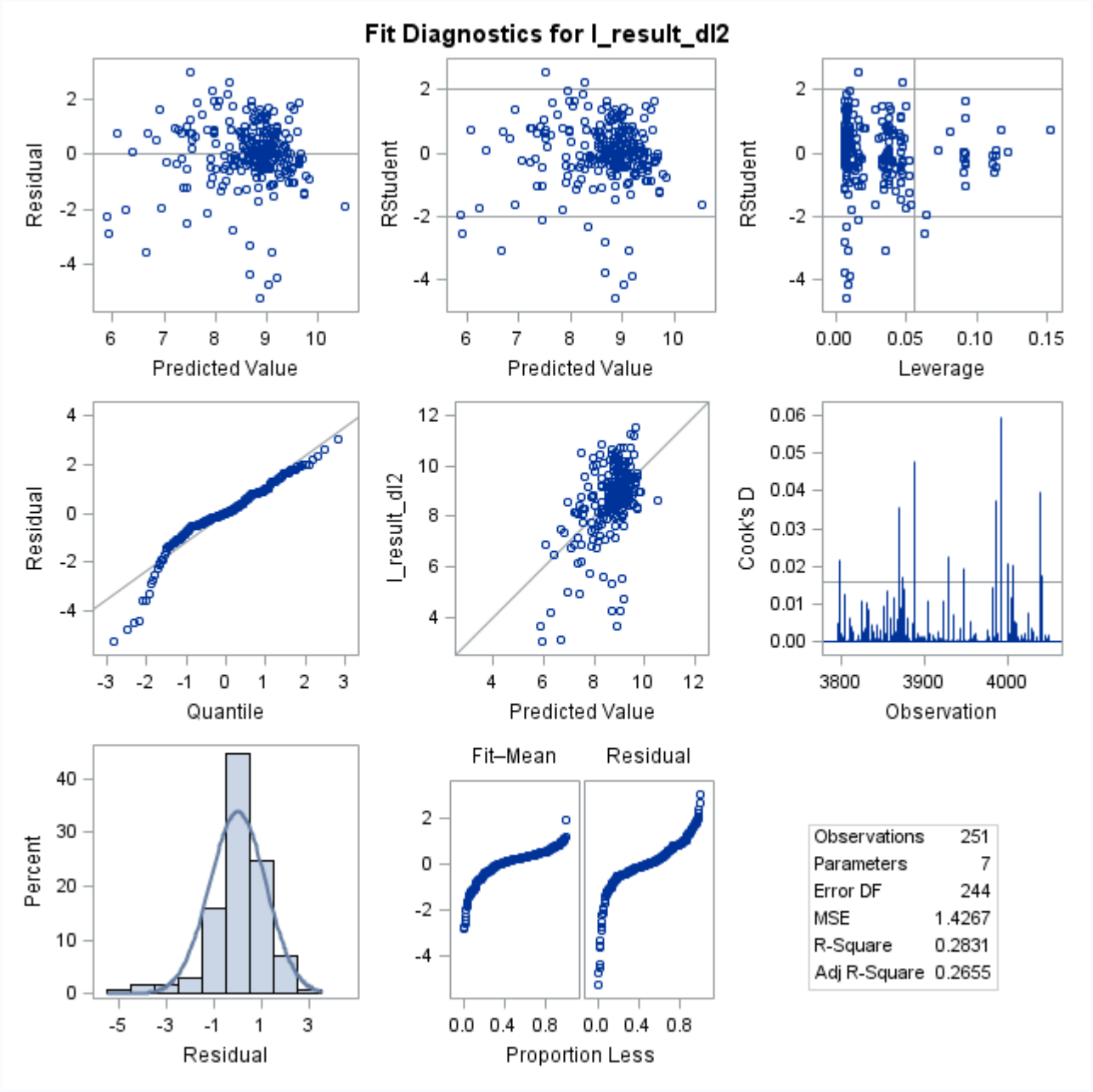
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

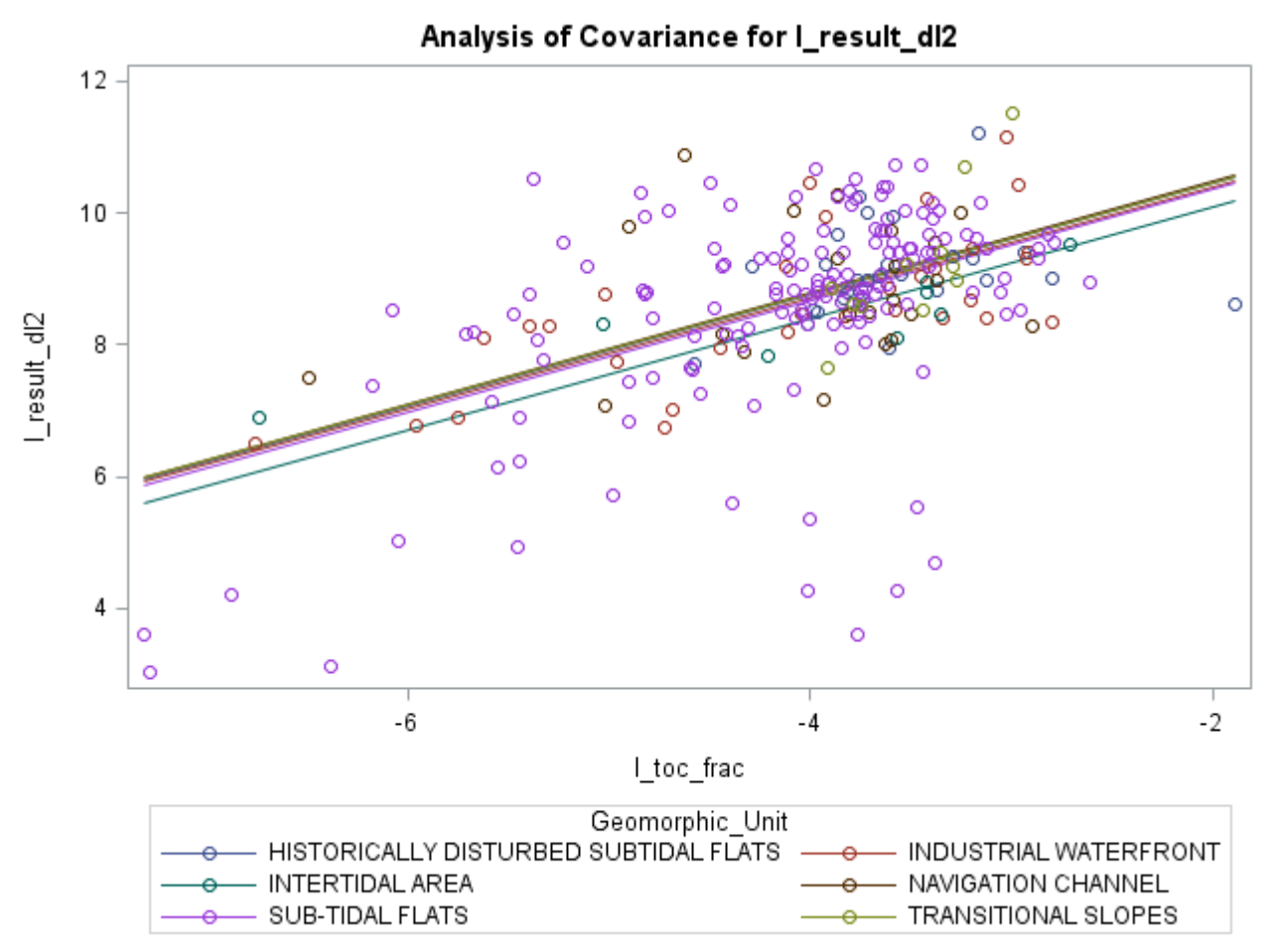
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	137.4603889	22.9100648	16.06	<.0001
Error	244	348.1137532	1.4266957		
Corrected Total	250	485.5741420			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.283088	13.77031	1.194444	8.674050

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	136.1716936	136.1716936	95.45	<.0001
Geomorphic_Unit	5	1.2886952	0.2577390	0.18	0.9697

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	125.6533930	125.6533930	88.07	<.0001
Geomorphic_Unit	5	1.2886952	0.2577390	0.18	0.9697

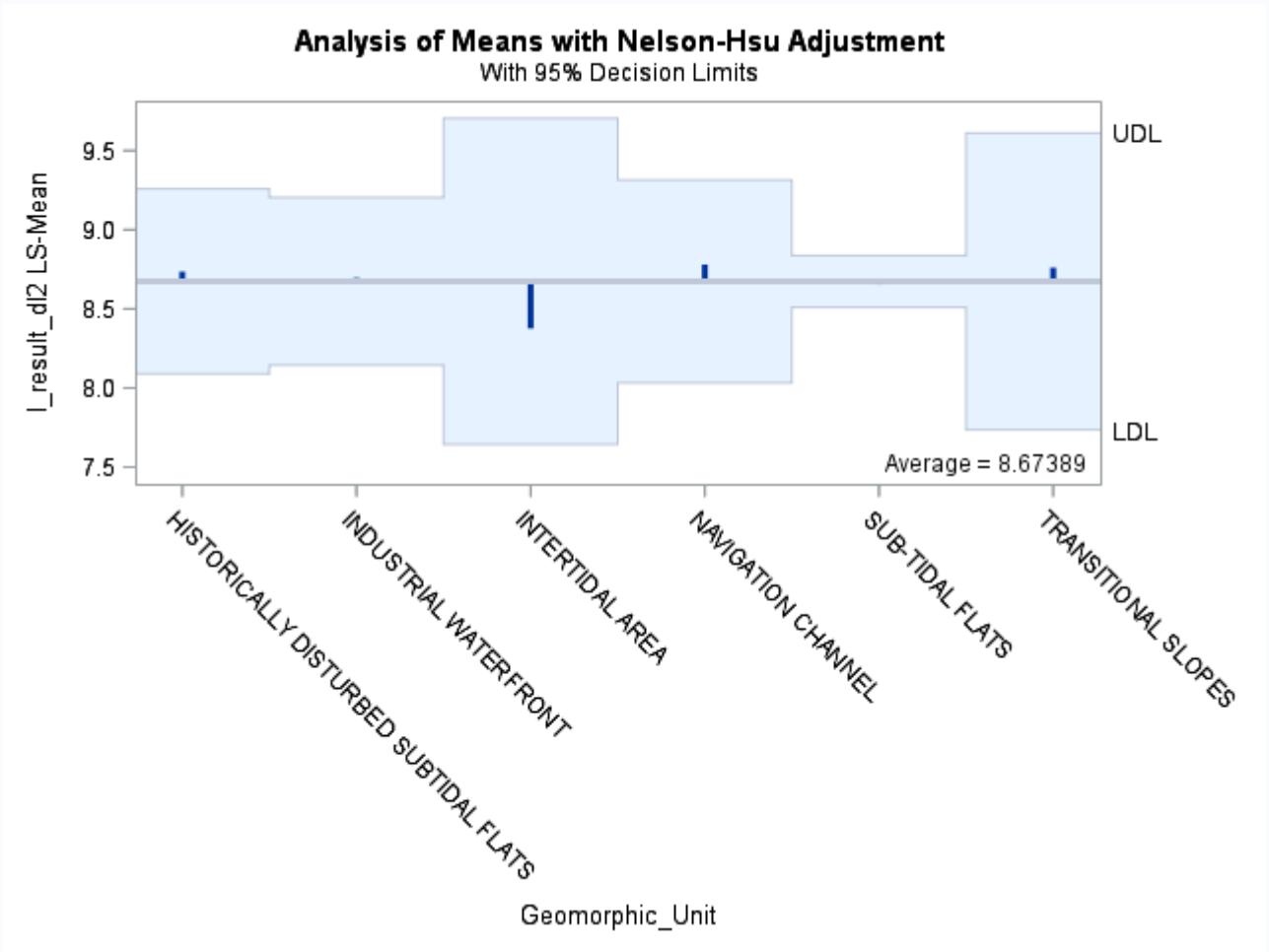

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.4267
R-Square 0.2831
Adj R-Square 0.2655


Analysis of Covariance for l_result_dl2
l_result_dl2
12
10
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.73545889	0.9996
INDUSTRIAL WATERFRONT	8.69670432	1.0000
INTERTIDAL AREA	8.37638404	0.9530
NAVIGATION CHANNEL	8.78020810	0.9960
SUB-TIDAL FLATS	8.65438194	0.9992
TRANSITIONAL SLOPES	8.76068431	0.9998


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
9.5
9.0
8.5
8.0
7.5
UDL
LDL
Average = 8.67389
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.73545889	1
INDUSTRIAL WATERFRONT	8.69670432	2
INTERTIDAL AREA	8.37638404	3
NAVIGATION CHANNEL	8.78020810	4
SUB-TIDAL FLATS	8.65438194	5
TRANSITIONAL SLOPES	8.76068431	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9711	1.0000	0.9996	1.0000
2	1.0000		0.9808	0.9999	1.0000	1.0000
3	0.9711	0.9808		0.9567	0.9842	0.9803
4	1.0000	0.9999	0.9567		0.9974	1.0000
5	0.9996	1.0000	0.9842	0.9974		0.9998
6	1.0000	1.0000	0.9803	1.0000	0.9998	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

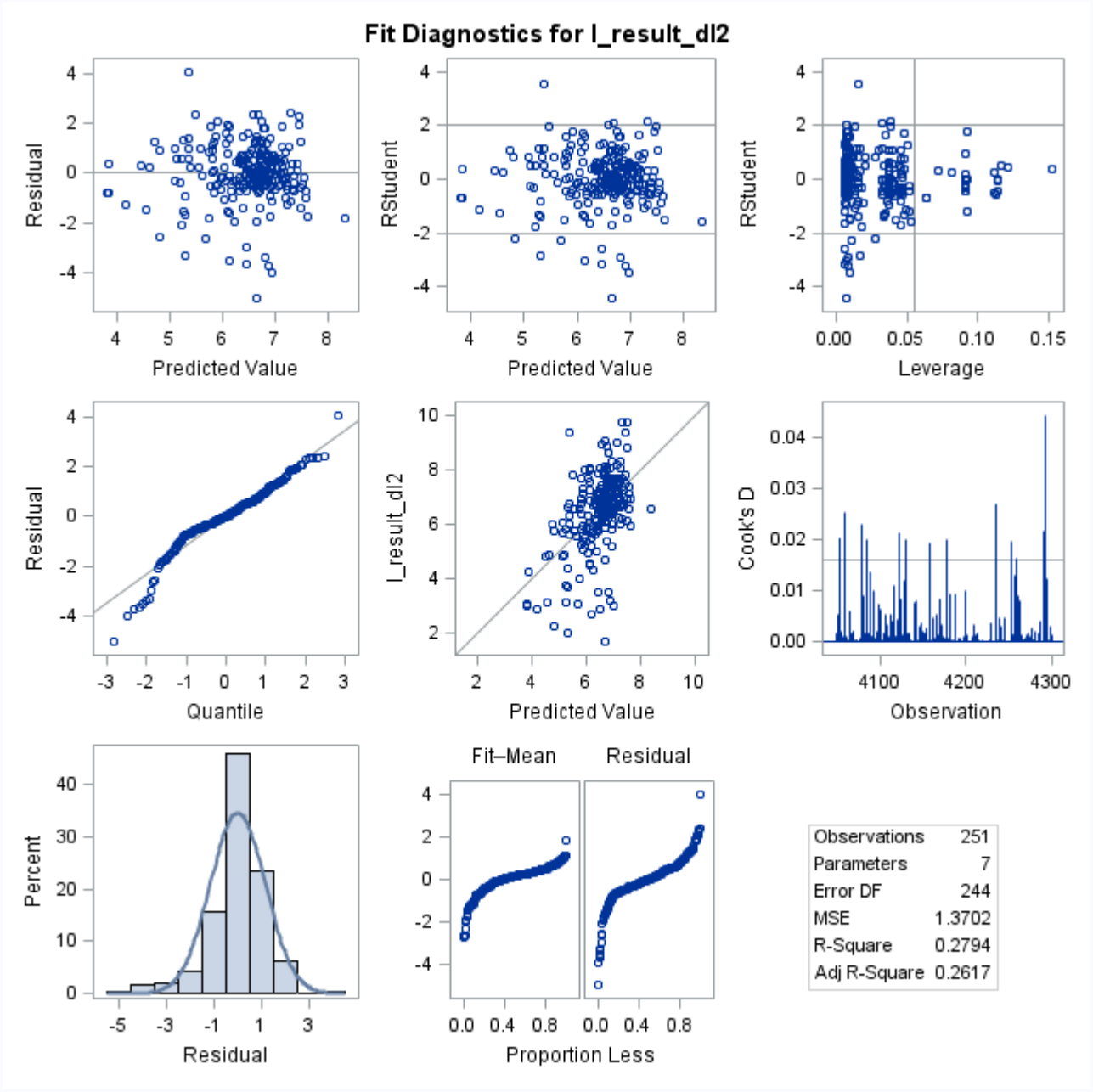
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

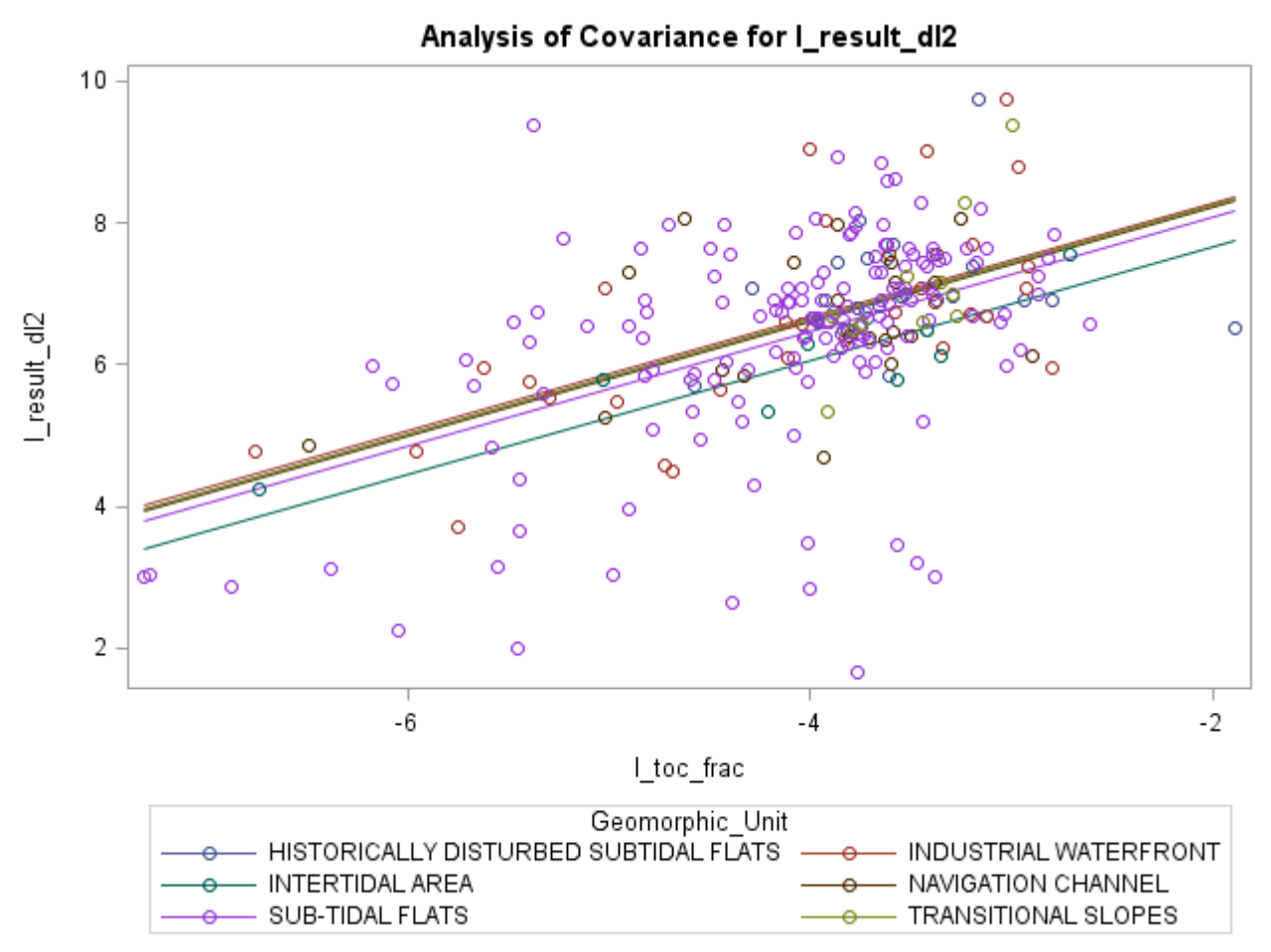
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	129.6492951	21.6082159	15.77	<.0001
Error	244	334.3337889	1.3702204		
Corrected Total	250	463.9830840			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.279427	18.02136	1.170564	6.495426

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	125.7851364	125.7851364	91.80	<.0001
Geomorphic_Unit	5	3.8641588	0.7728318	0.56	0.7275

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	114.2402956	114.2402956	83.37	<.0001
Geomorphic_Unit	5	3.8641588	0.7728318	0.56	0.7275

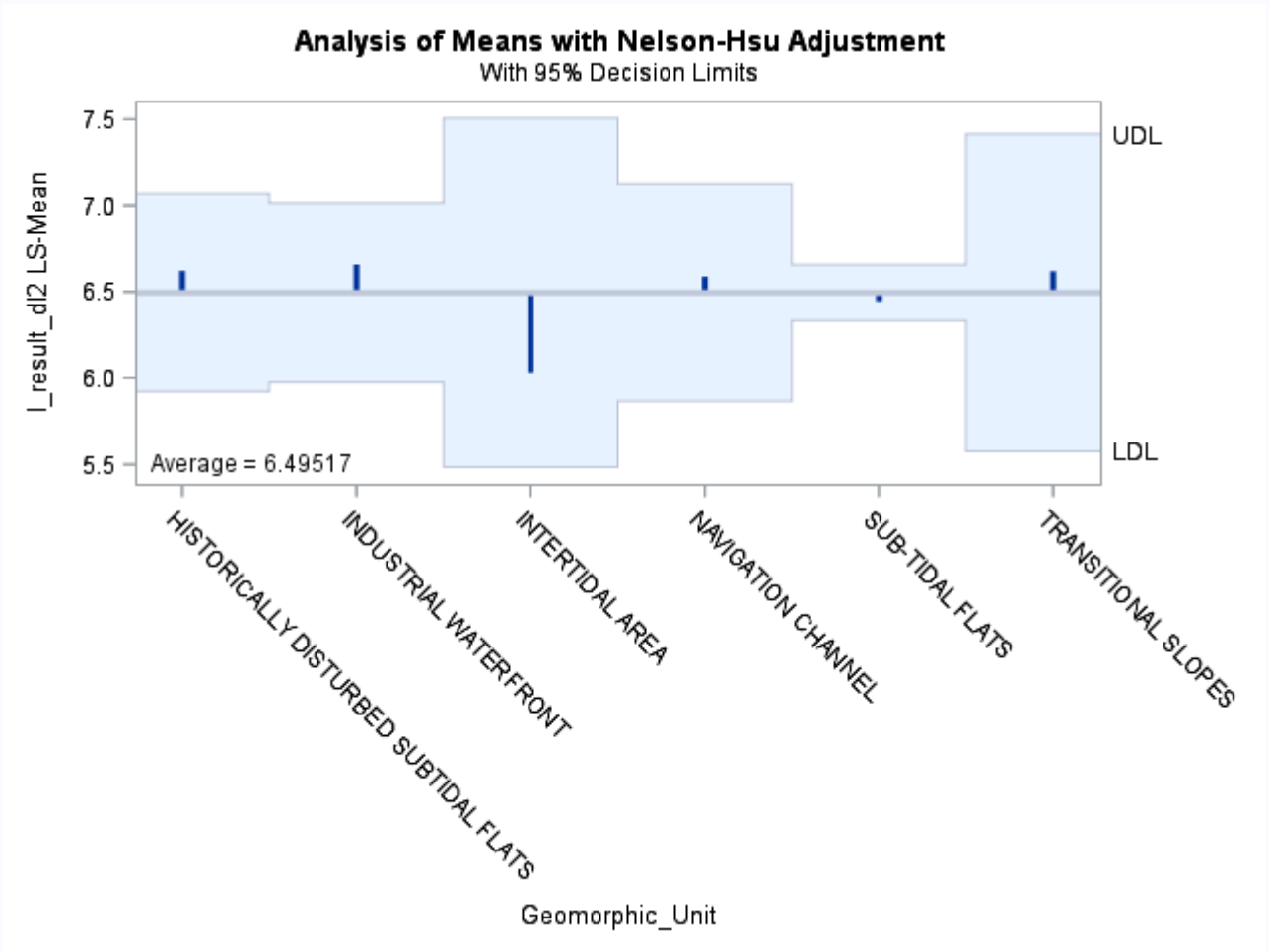

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.3702
R-Square 0.2794
Adj R-Square 0.2617


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.62131557	0.9854
INDUSTRIAL WATERFRONT	6.65754618	0.9348
INTERTIDAL AREA	6.03370061	0.7466
NAVIGATION CHANNEL	6.58786714	0.9977
SUB-TIDAL FLATS	6.44466723	0.9330
TRANSITIONAL SLOPES	6.61921575	0.9985


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.5
7.0
6.5
6.0
5.5
UDL
LDL
Average = 6.49517
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.62131557	1
INDUSTRIAL WATERFRONT	6.65754618	2
INTERTIDAL AREA	6.03370061	3
NAVIGATION CHANNEL	6.58786714	4
SUB-TIDAL FLATS	6.44466723	5
TRANSITIONAL SLOPES	6.61921575	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.7858	1.0000	0.9809	1.0000
2	1.0000		0.7226	0.9999	0.9405	1.0000
3	0.7858	0.7226		0.8383	0.9099	0.8777
4	1.0000	0.9999	0.8383		0.9947	1.0000
5	0.9809	0.9405	0.9099	0.9947		0.9971
6	1.0000	1.0000	0.8777	1.0000	0.9971	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

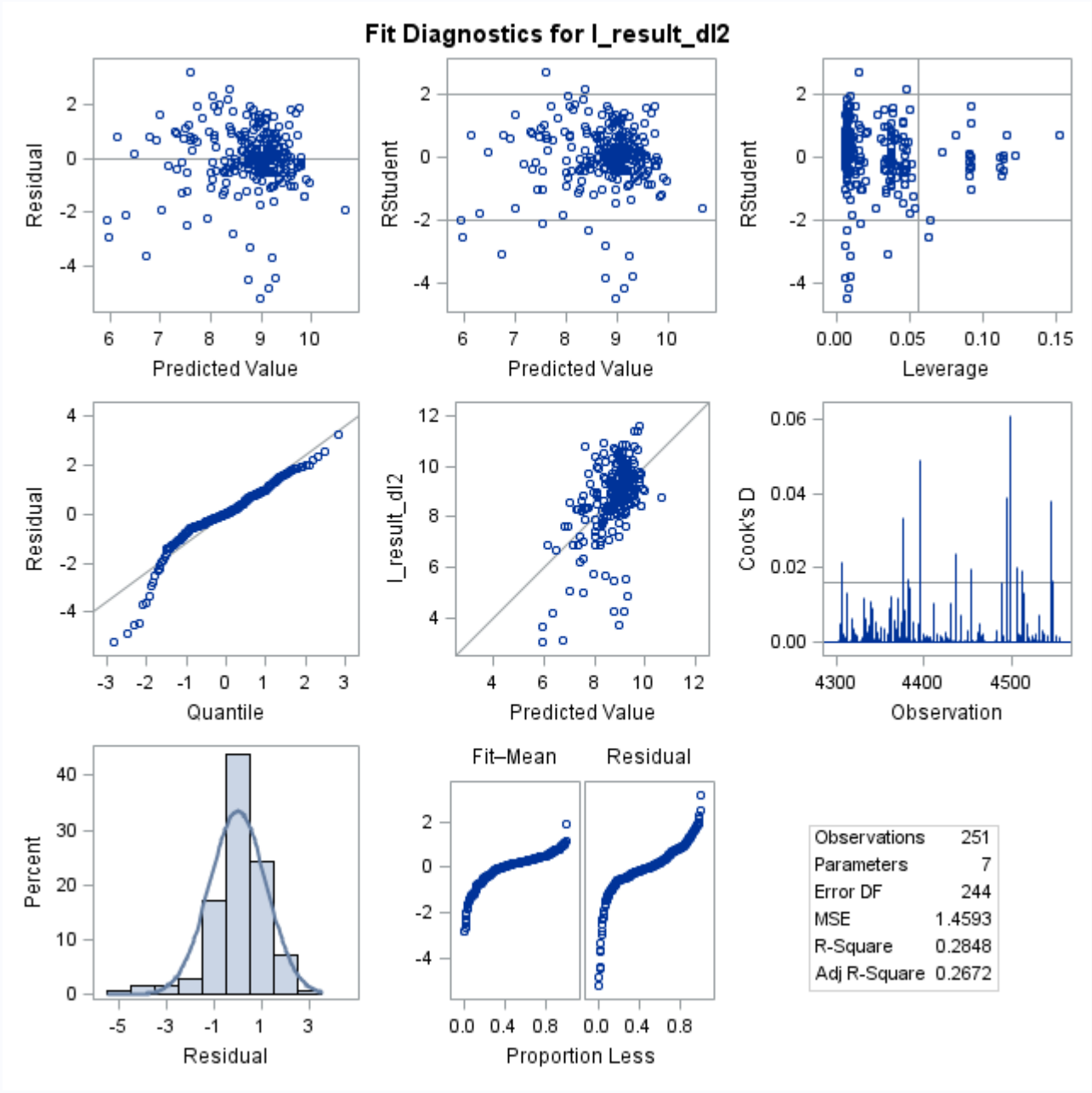
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

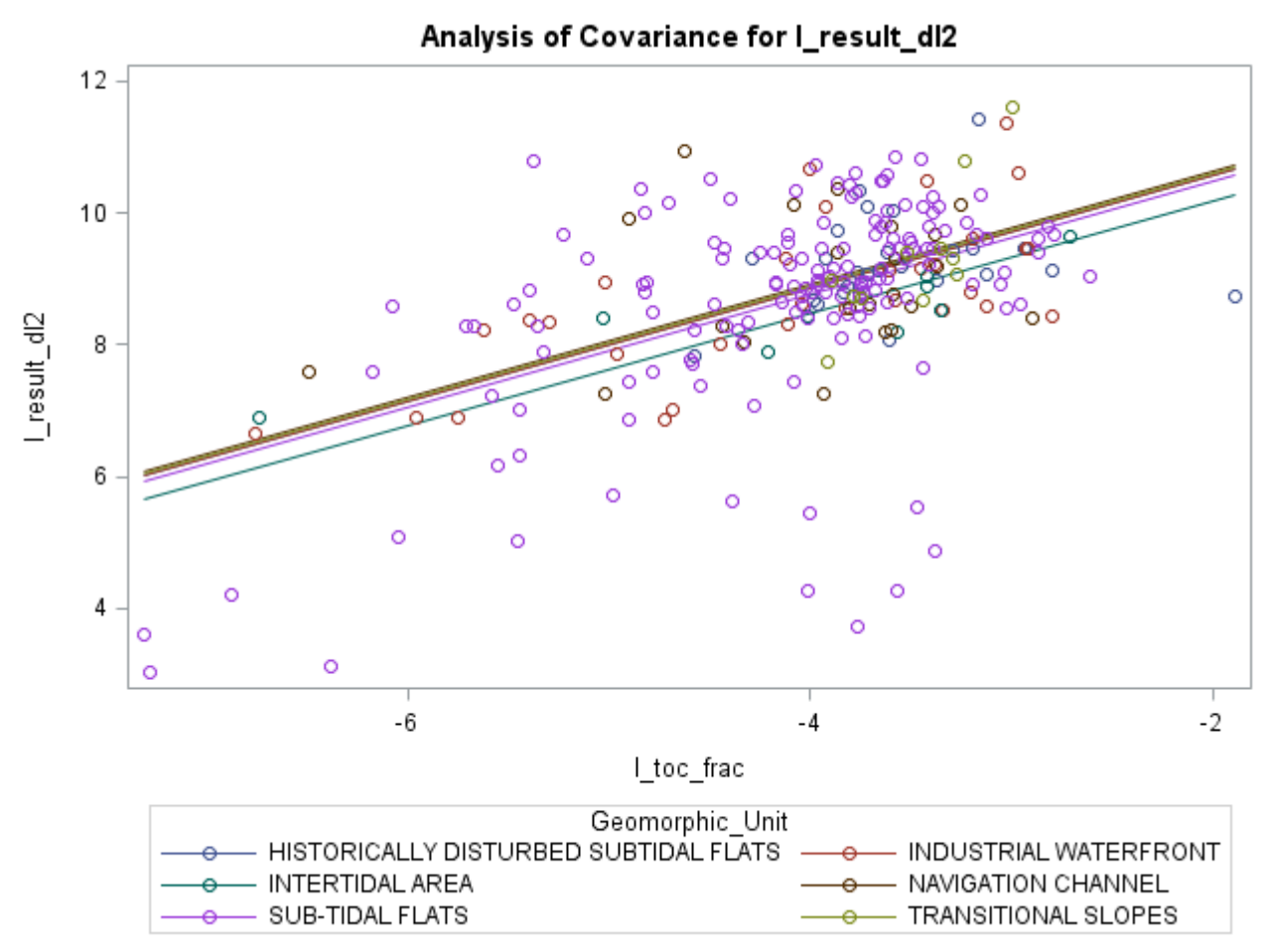
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	141.7619964	23.6269994	16.19	<.0001
Error	244	356.0597864	1.4592614		
Corrected Total	250	497.8217828			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.284765	13.76045	1.207999	8.778775

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	140.2114510	140.2114510	96.08	<.0001
Geomorphic_Unit	5	1.5505454	0.3101091	0.21	0.9570

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	129.2800745	129.2800745	88.59	<.0001
Geomorphic_Unit	5	1.5505454	0.3101091	0.21	0.9570

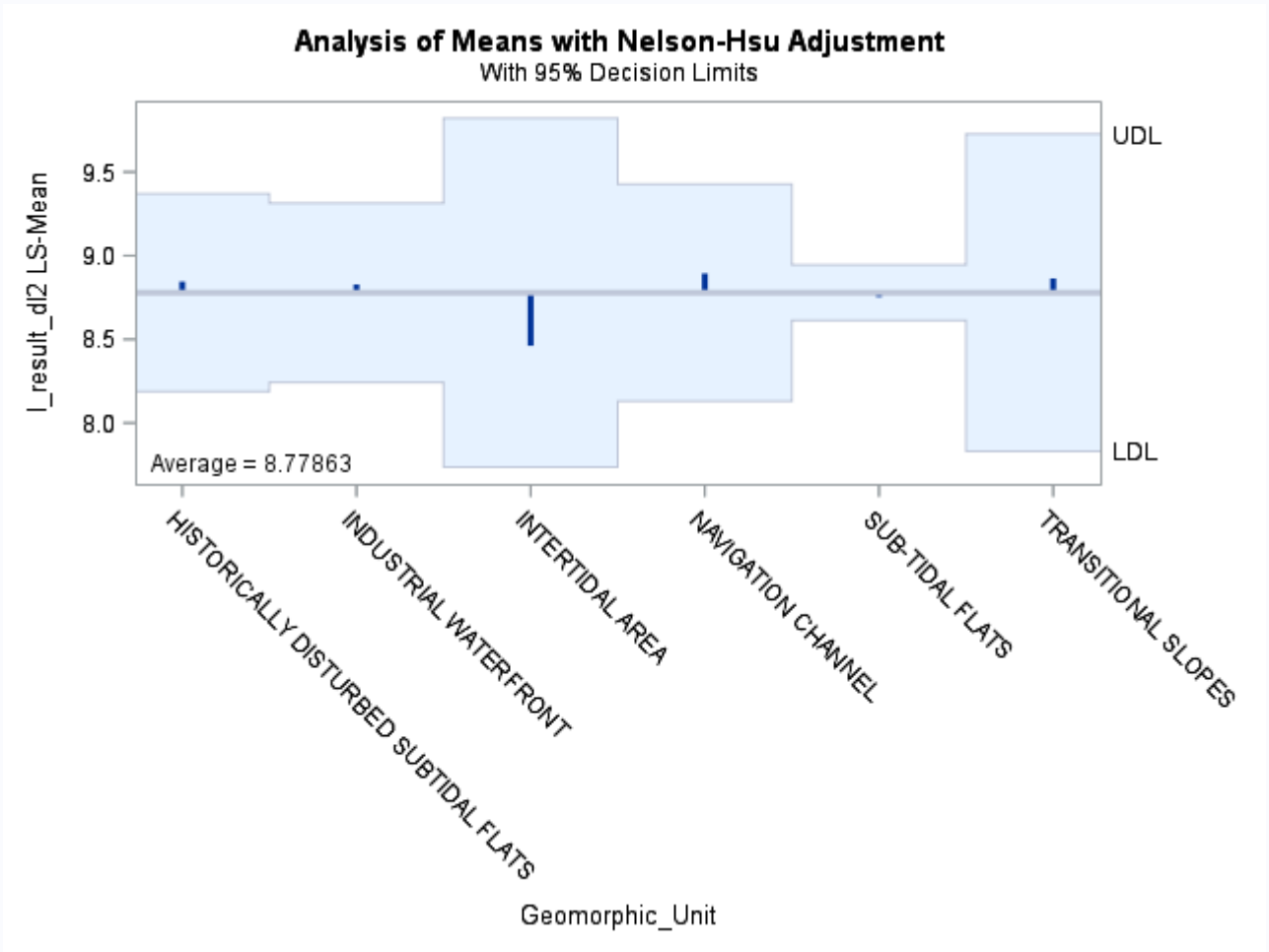

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.4593
R-Square 0.2848
Adj R-Square 0.2672


Analysis of Covariance for l_result_dl2
l_result_dl2
12
10
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.84490010	0.9994
INDUSTRIAL WATERFRONT	8.82749876	0.9998
INTERTIDAL AREA	8.46168101	0.9419
NAVIGATION CHANNEL	8.89363803	0.9946
SUB-TIDAL FLATS	8.75291261	0.9971
TRANSITIONAL SLOPES	8.86390001	0.9998


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
9.5
9.0
8.5
8.0
UDL
LDL
Average = 8.77863
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	8.84490010	1
INDUSTRIAL WATERFRONT	8.82749876	2
INTERTIDAL AREA	8.46168101	3
NAVIGATION CHANNEL	8.89363803	4
SUB-TIDAL FLATS	8.75291261	5
TRANSITIONAL SLOPES	8.86390001	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9635	1.0000	0.9992	1.0000
2	1.0000		0.9674	1.0000	0.9996	1.0000
3	0.9635	0.9674		0.9453	0.9815	0.9771
4	1.0000	1.0000	0.9453		0.9958	1.0000
5	0.9992	0.9996	0.9815	0.9958		0.9997
6	1.0000	1.0000	0.9771	1.0000	0.9997	

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

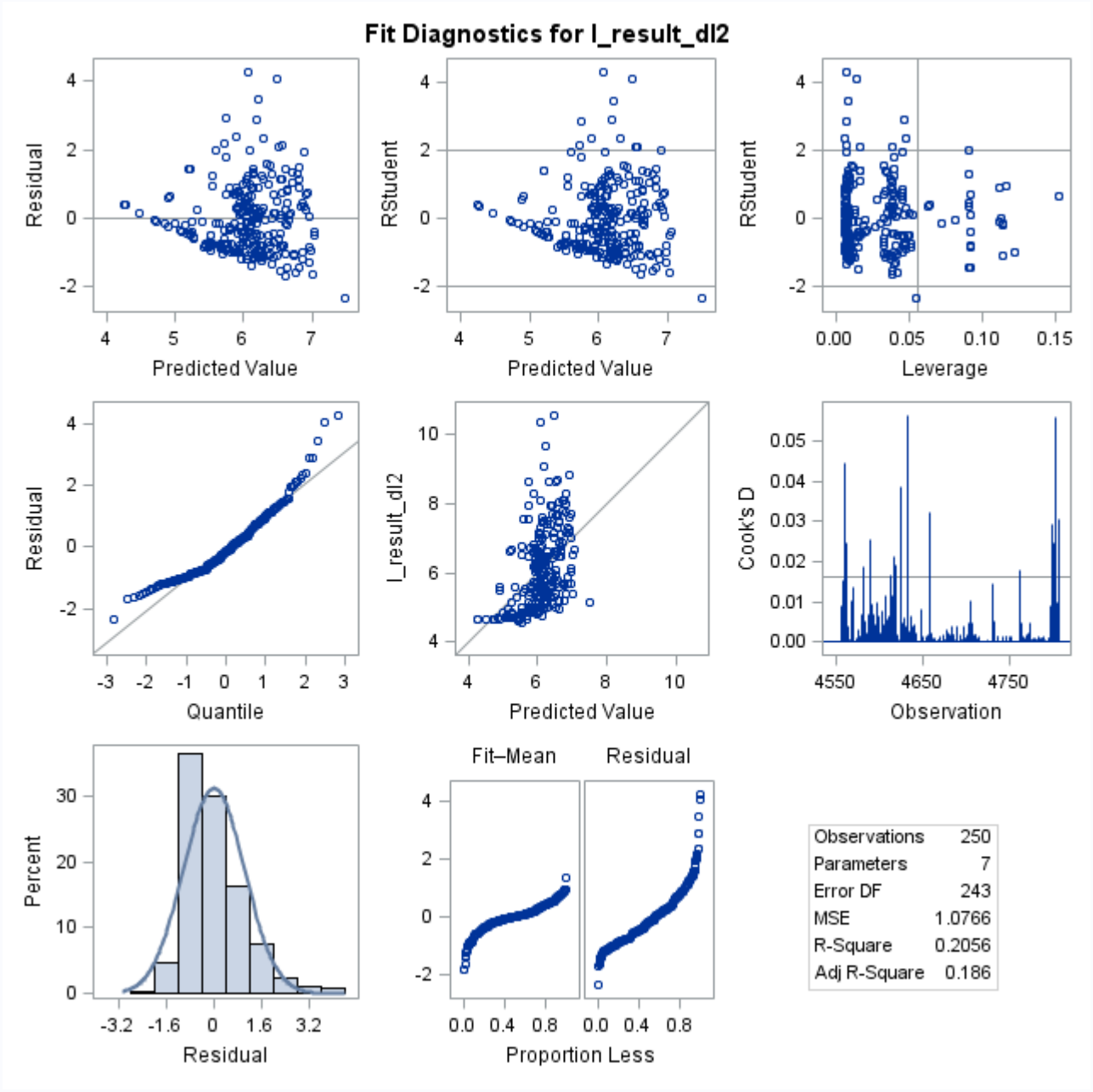
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

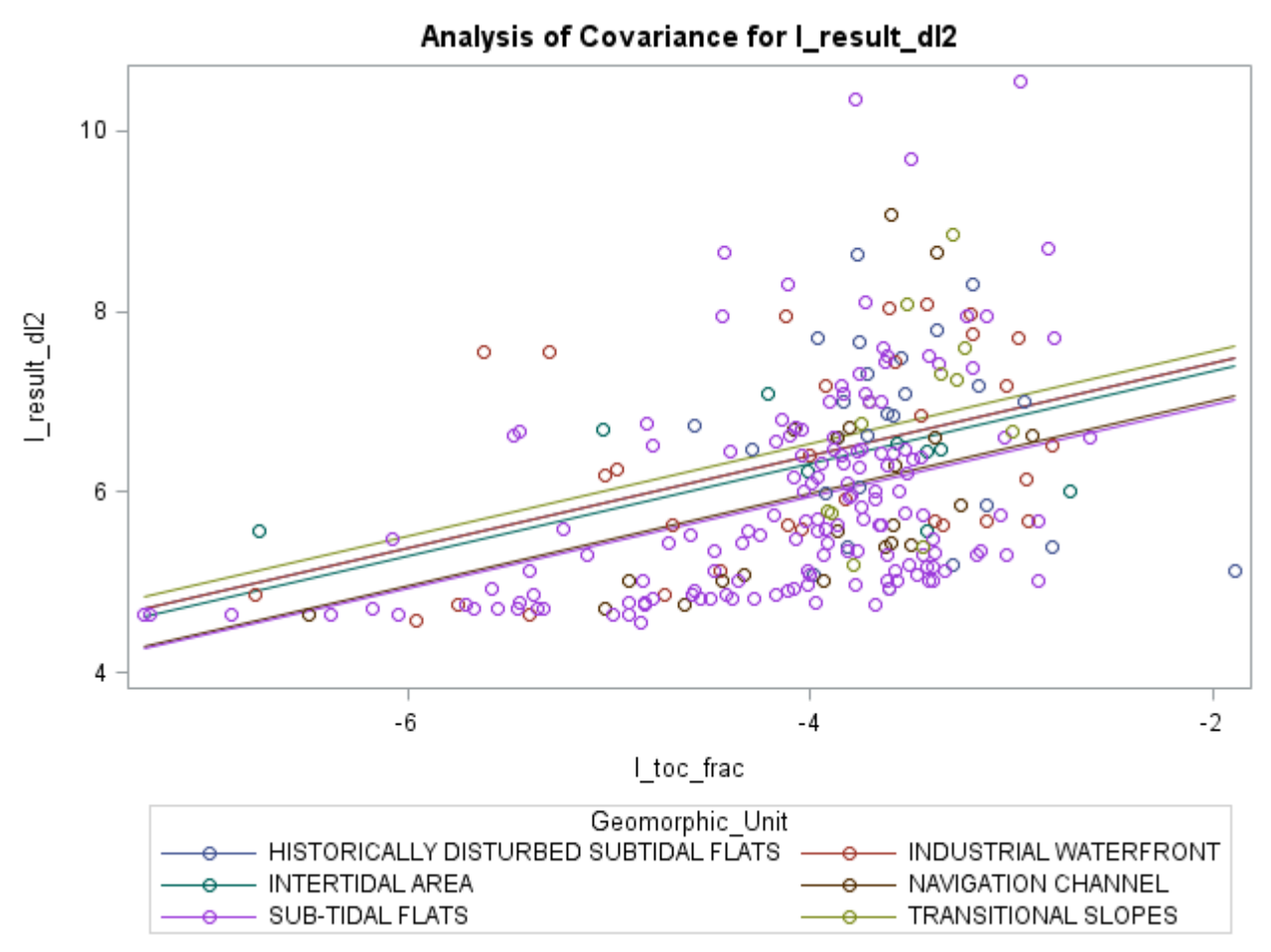
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	67.7280343	11.2880057	10.48	<.0001
Error	243	261.6207805	1.0766287		
Corrected Total	249	329.3488148			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.205642	17.05118	1.037607	6.085252

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	56.56296088	56.56296088	52.54	<.0001
Geomorphic_Unit	5	11.16507343	2.23301469	2.07	0.0693

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	45.95197294	45.95197294	42.68	<.0001
Geomorphic_Unit	5	11.16507343	2.23301469	2.07	0.0693

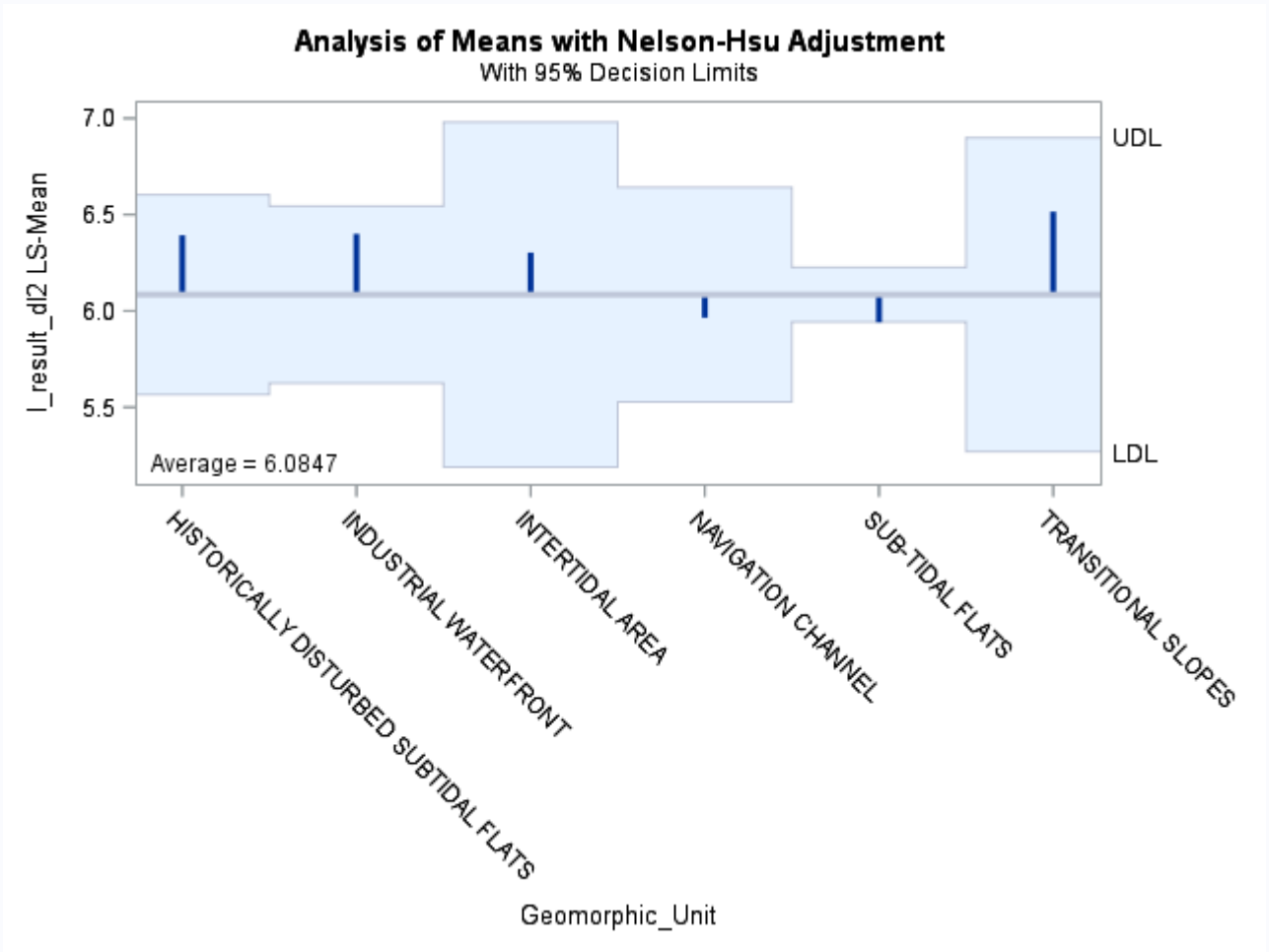

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 7
Error DF 243
MSE 1.0766
R-Square 0.2056
Adj R-Square 0.186


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.39266151	0.4920
INDUSTRIAL WATERFRONT	6.40017854	0.3338
INTERTIDAL AREA	6.30286902	0.9772
NAVIGATION CHANNEL	5.96481167	0.9868
SUB-TIDAL FLATS	5.94090995	0.0448
TRANSITIONAL SLOPES	6.51538383	0.6156


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
7.0
6.5
6.0
5.5
UDL
LDL
Average = 6.0847
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	6.39266151	1
INDUSTRIAL WATERFRONT	6.40017854	2
INTERTIDAL AREA	6.30286902	3
NAVIGATION CHANNEL	5.96481167	4
SUB-TIDAL FLATS	5.94090995	5
TRANSITIONAL SLOPES	6.51538383	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9999	0.7177	0.3395	0.9995
2	1.0000		0.9999	0.6620	0.2214	0.9996
3	0.9999	0.9999		0.9630	0.9121	0.9976
4	0.7177	0.6620	0.9630		1.0000	0.7087
5	0.3395	0.2214	0.9121	1.0000		0.4986
6	0.9995	0.9996	0.9976	0.7087	0.4986	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure

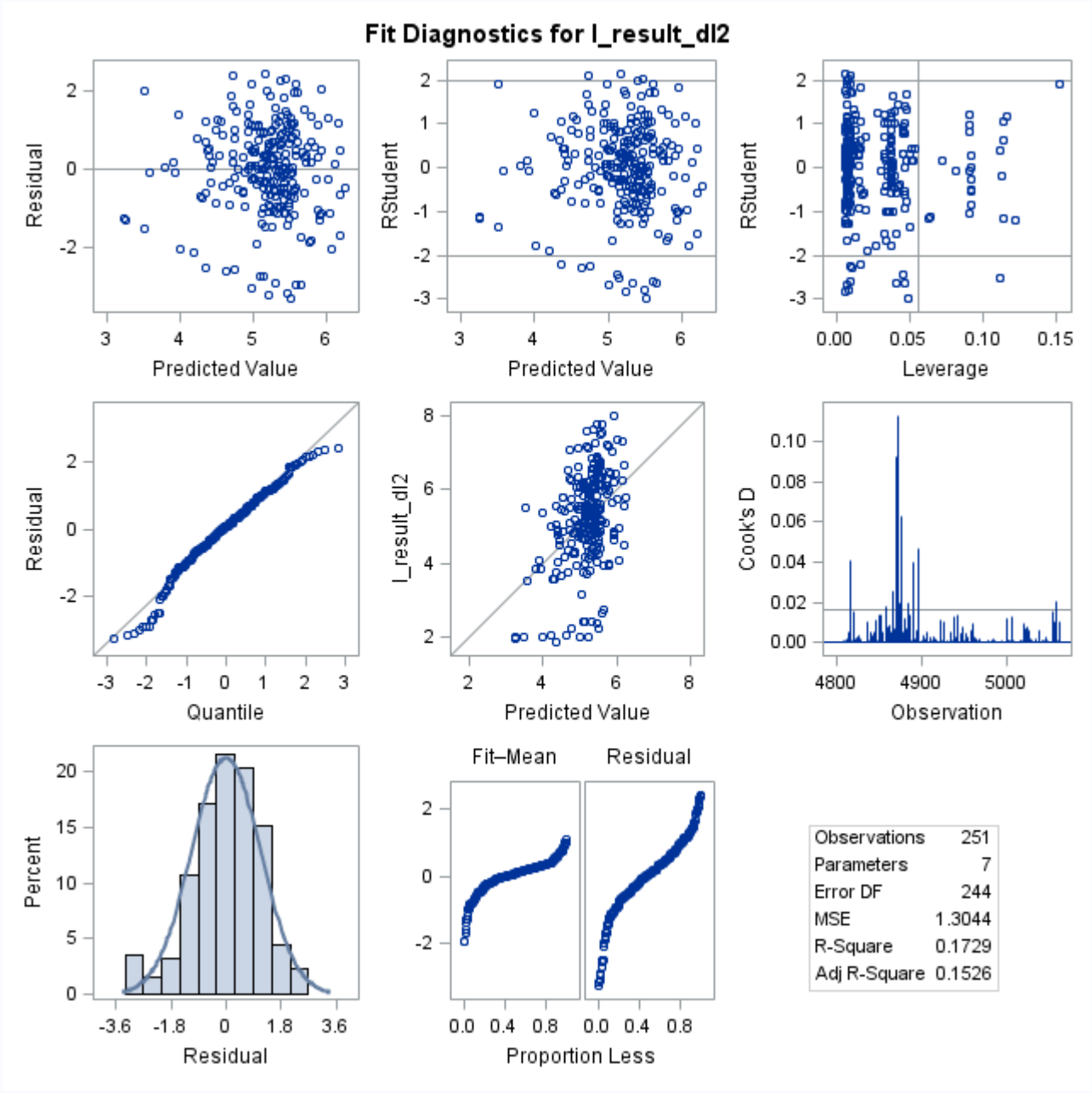
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

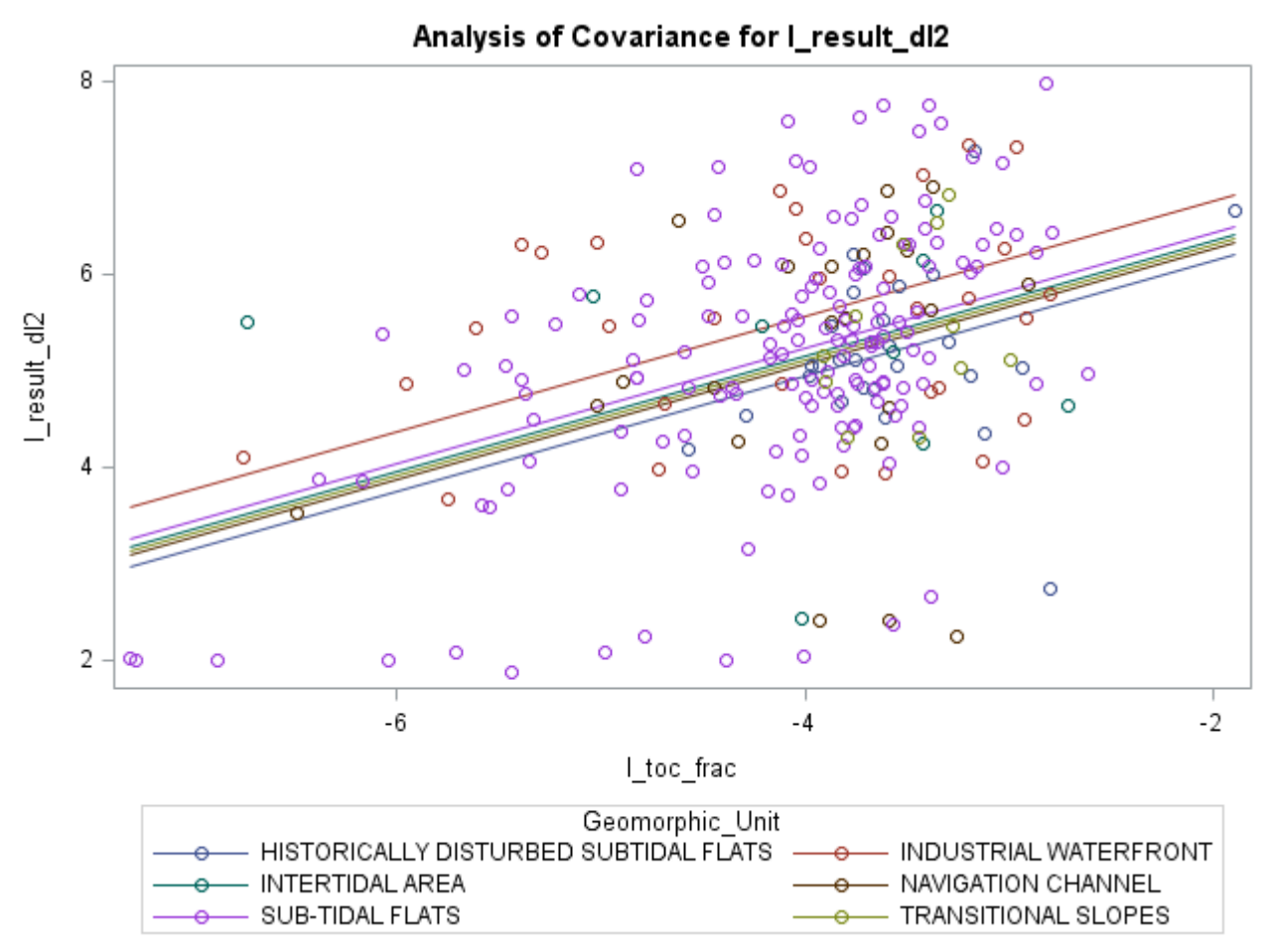
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	66.5389415	11.0898236	8.50	<.0001
Error	244	318.2635917	1.3043590		
Corrected Total	250	384.8025332			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.172917	21.95954	1.142085	5.200861

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	60.42268187	60.42268187	46.32	<.0001
Geomorphic_Unit	5	6.11625962	1.22325192	0.94	0.4571

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	62.85739984	62.85739984	48.19	<.0001
Geomorphic_Unit	5	6.11625962	1.22325192	0.94	0.4571

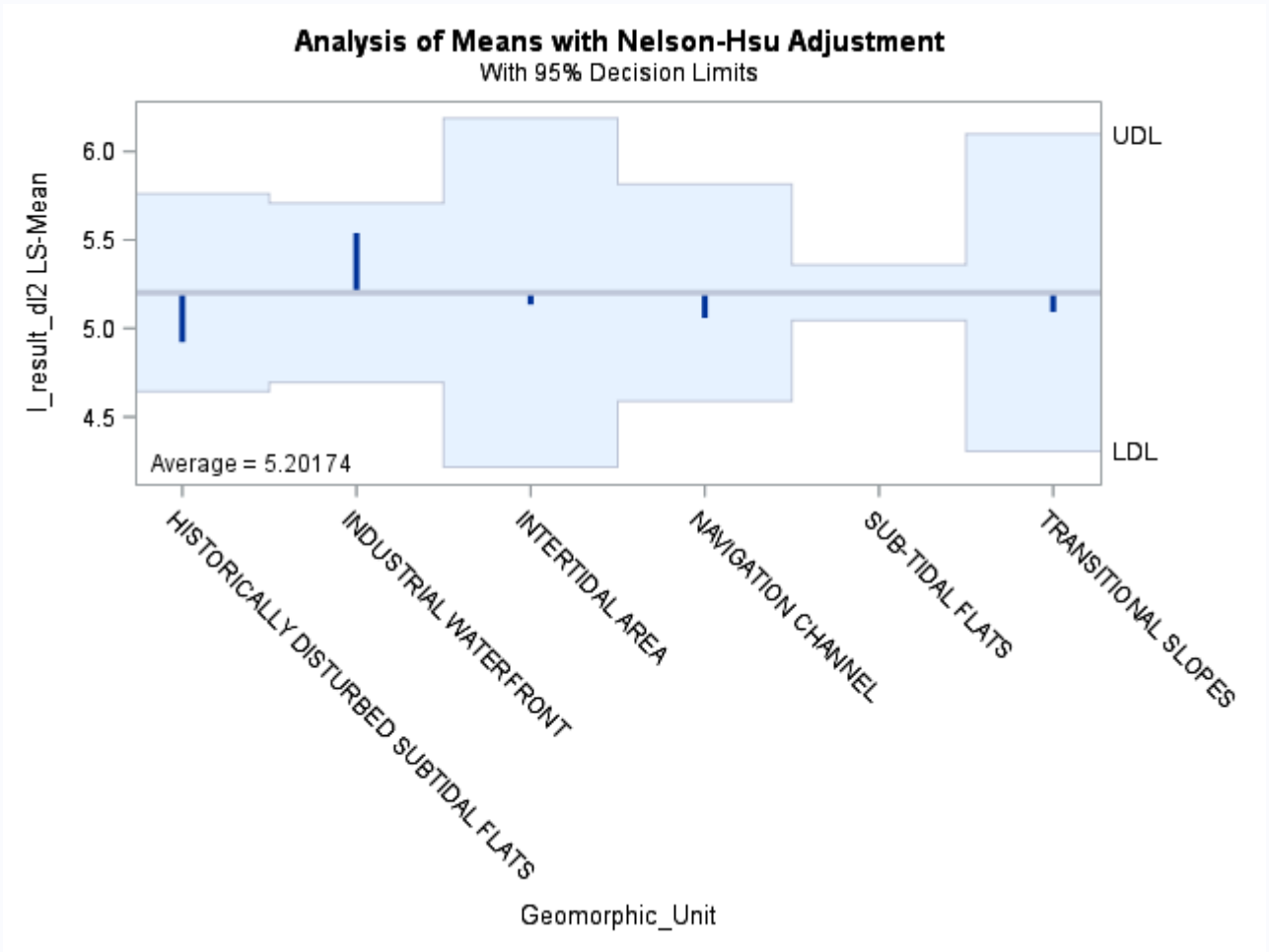

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 1.3044
R-Square 0.1729
Adj R-Square 0.1526


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.92262892	0.6704
INDUSTRIAL WATERFRONT	5.53905764	0.3655
INTERTIDAL AREA	5.13503612	0.9999
NAVIGATION CHANNEL	5.05895457	0.9813
SUB-TIDAL FLATS	5.21363243	0.9999
TRANSITIONAL SLOPES	5.09305760	0.9991


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
6.0
5.5
5.0
4.5
UDL
LDL
Average = 5.20174
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.92262892	1
INDUSTRIAL WATERFRONT	5.53905764	2
INTERTIDAL AREA	5.13503612	3
NAVIGATION CHANNEL	5.05895457	4
SUB-TIDAL FLATS	5.21363243	5
TRANSITIONAL SLOPES	5.09305760	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3309	0.9968	0.9984	0.8389	0.9984
2	0.3309		0.9373	0.6602	0.6994	0.8798
3	0.9968	0.9373		1.0000	1.0000	1.0000
4	0.9984	0.6602	1.0000		0.9915	1.0000
5	0.8389	0.6994	1.0000	0.9915		0.9994
6	0.9984	0.8798	1.0000	1.0000	0.9994	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

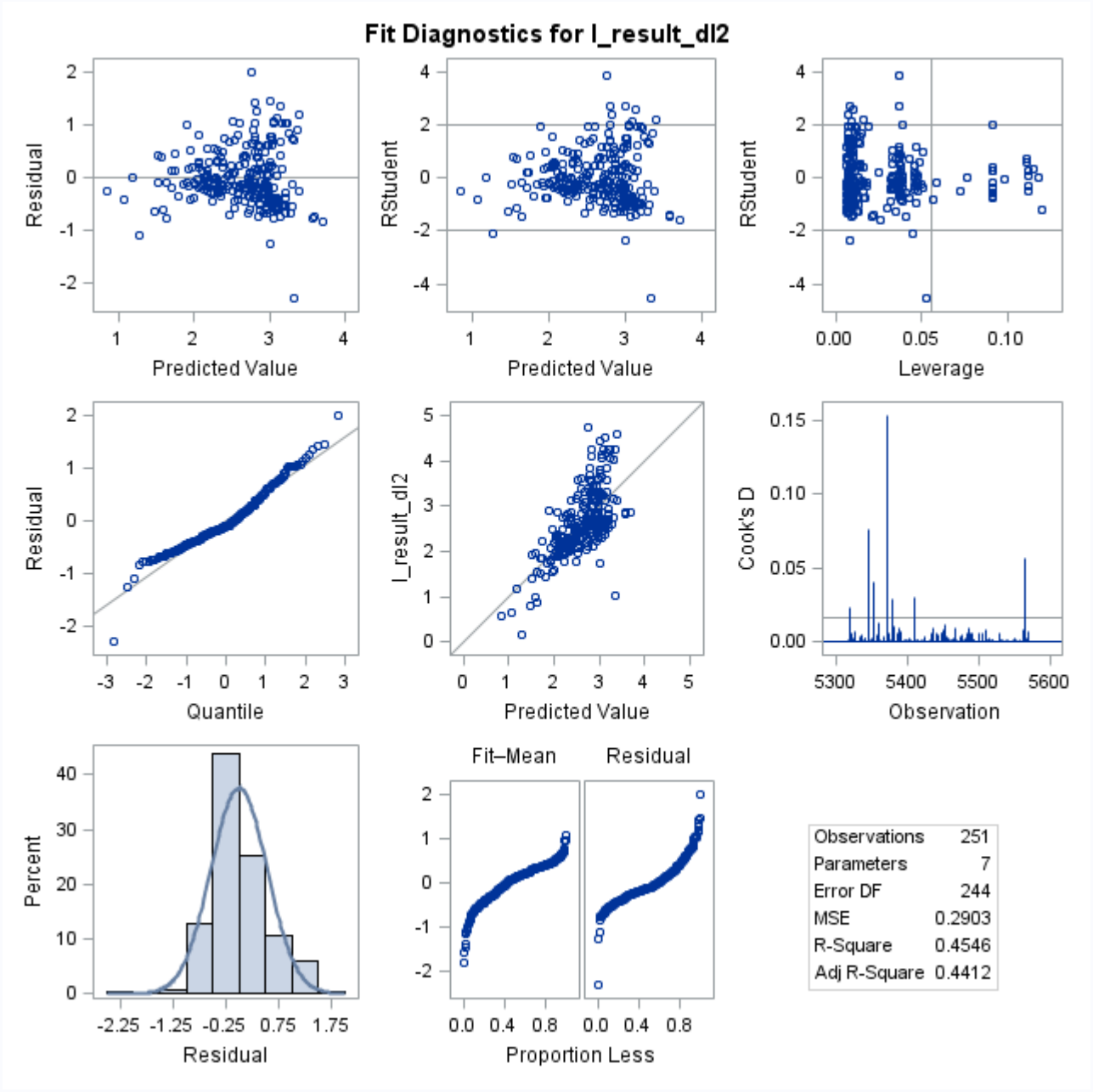
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

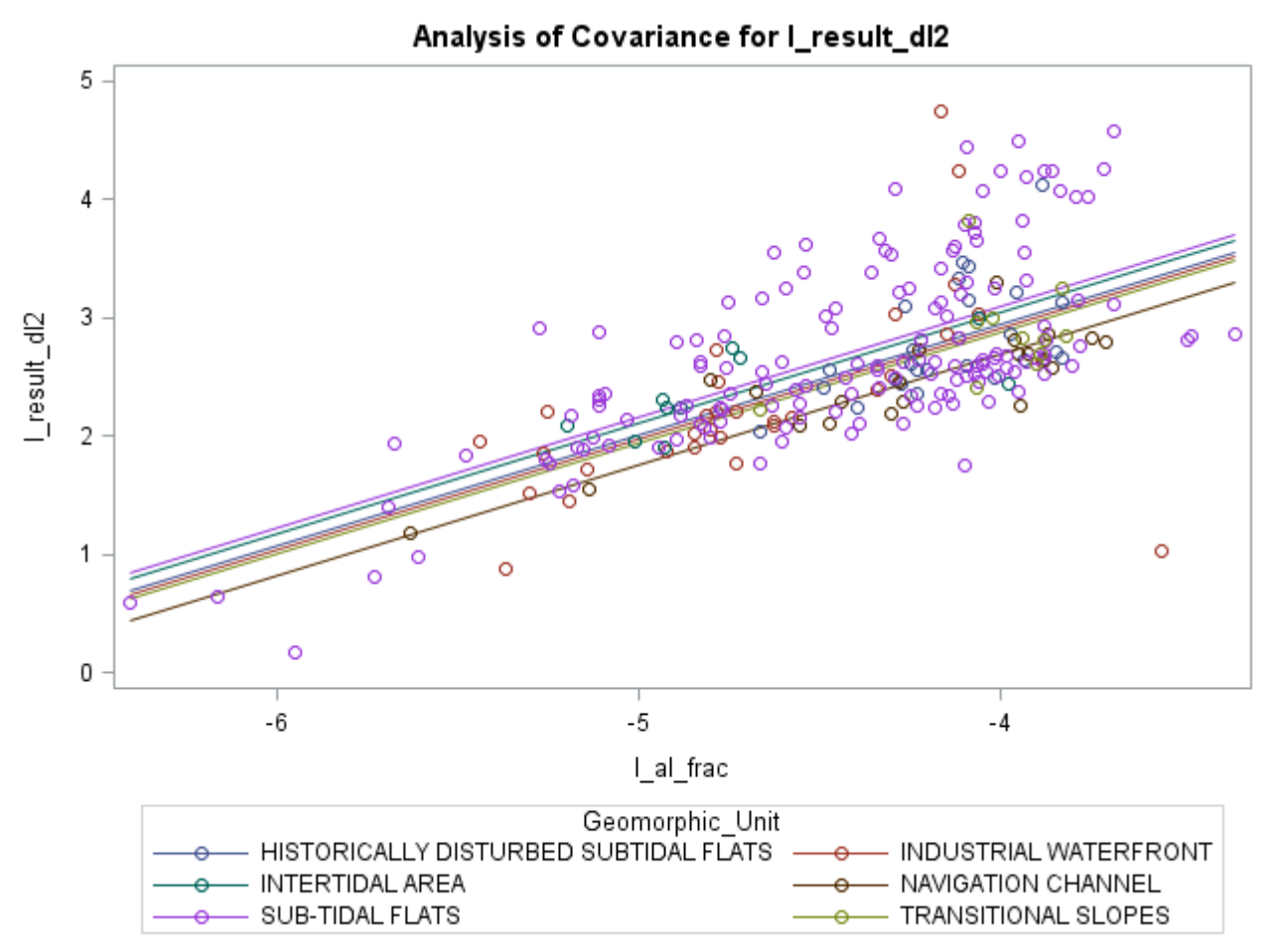
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	59.0579198	9.8429866	33.90	<.0001
Error	244	70.8436293	0.2903427		
Corrected Total	250	129.9015490			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.454636	20.50343	0.538835	2.628022

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	55.34615894	55.34615894	190.62	<.0001
Geomorphic_Unit	5	3.71176082	0.74235216	2.56	0.0281

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	52.52904104	52.52904104	180.92	<.0001
Geomorphic_Unit	5	3.71176082	0.74235216	2.56	0.0281

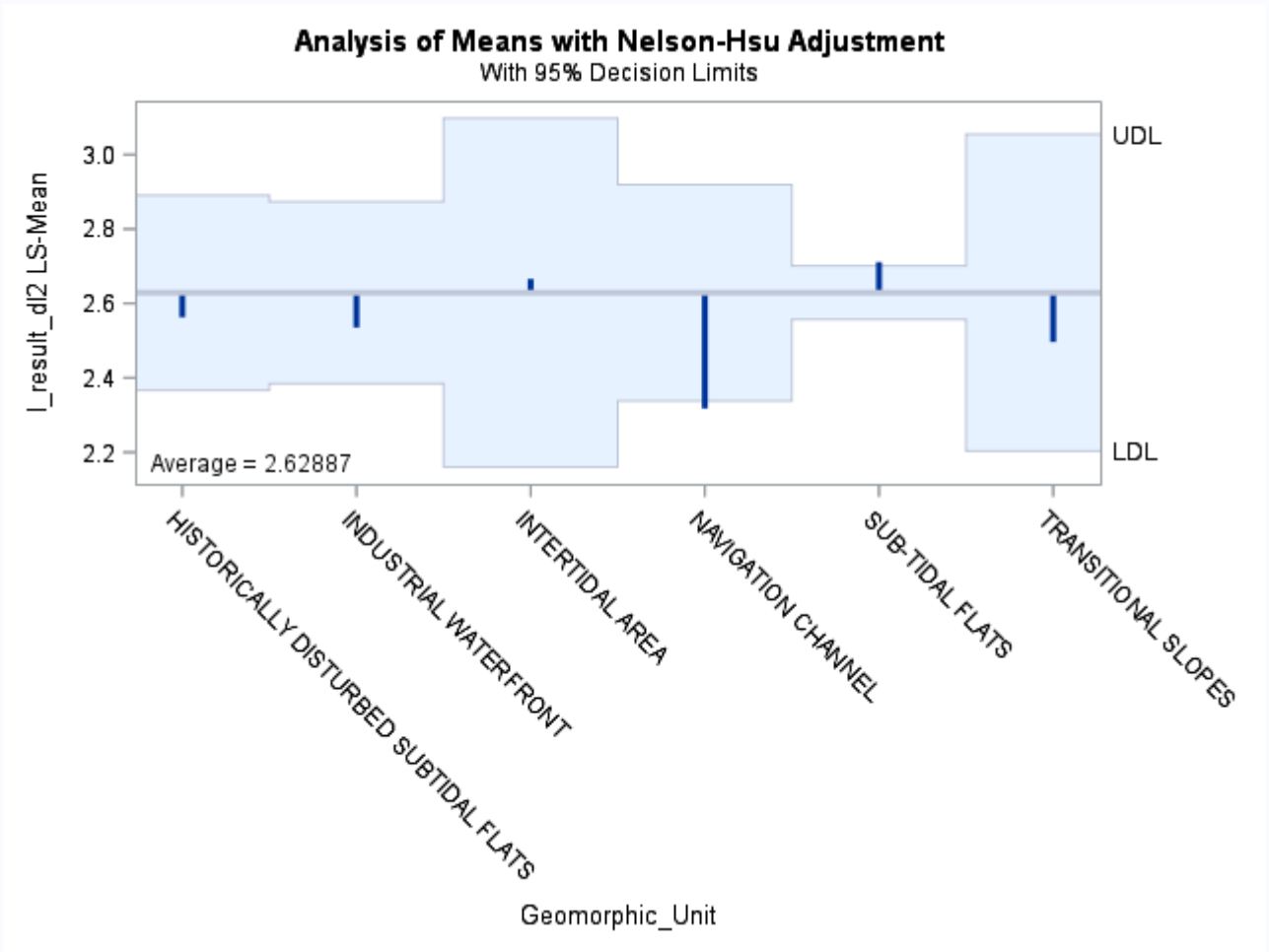

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.2903
R-Square 0.4546
Adj R-Square 0.4412


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
1
0
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INTERTIDAL AREA
SUB-TIDAL FLATS
INDUSTRIAL WATERFRONT
NAVIGATION CHANNEL
TRANSITIONAL SLOPES

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	2.56283148	0.9736
INDUSTRIAL WATERFRONT	2.53531821	0.8593
INTERTIDAL AREA	2.66586321	0.9999
NAVIGATION CHANNEL	2.31768404	0.0293
SUB-TIDAL FLATS	2.71125749	0.0166
TRANSITIONAL SLOPES	2.49641224	0.9360


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
3.0
2.8
2.6
2.4
2.2
UDL
LDL
Average = 2.62887
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	2.56283148	1
INDUSTRIAL WATERFRONT	2.53531821	2
INTERTIDAL AREA	2.66586321	3
NAVIGATION CHANNEL	2.31768404	4
SUB-TIDAL FLATS	2.71125749	5
TRANSITIONAL SLOPES	2.49641224	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9965	0.6106	0.7831	0.9994
2	1.0000		0.9879	0.7123	0.5753	1.0000
3	0.9965	0.9879		0.5895	0.9999	0.9834
4	0.6106	0.7123	0.5895		0.0200	0.9475
5	0.7831	0.5753	0.9999	0.0200		0.8071
6	0.9994	1.0000	0.9834	0.9475	0.8071	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

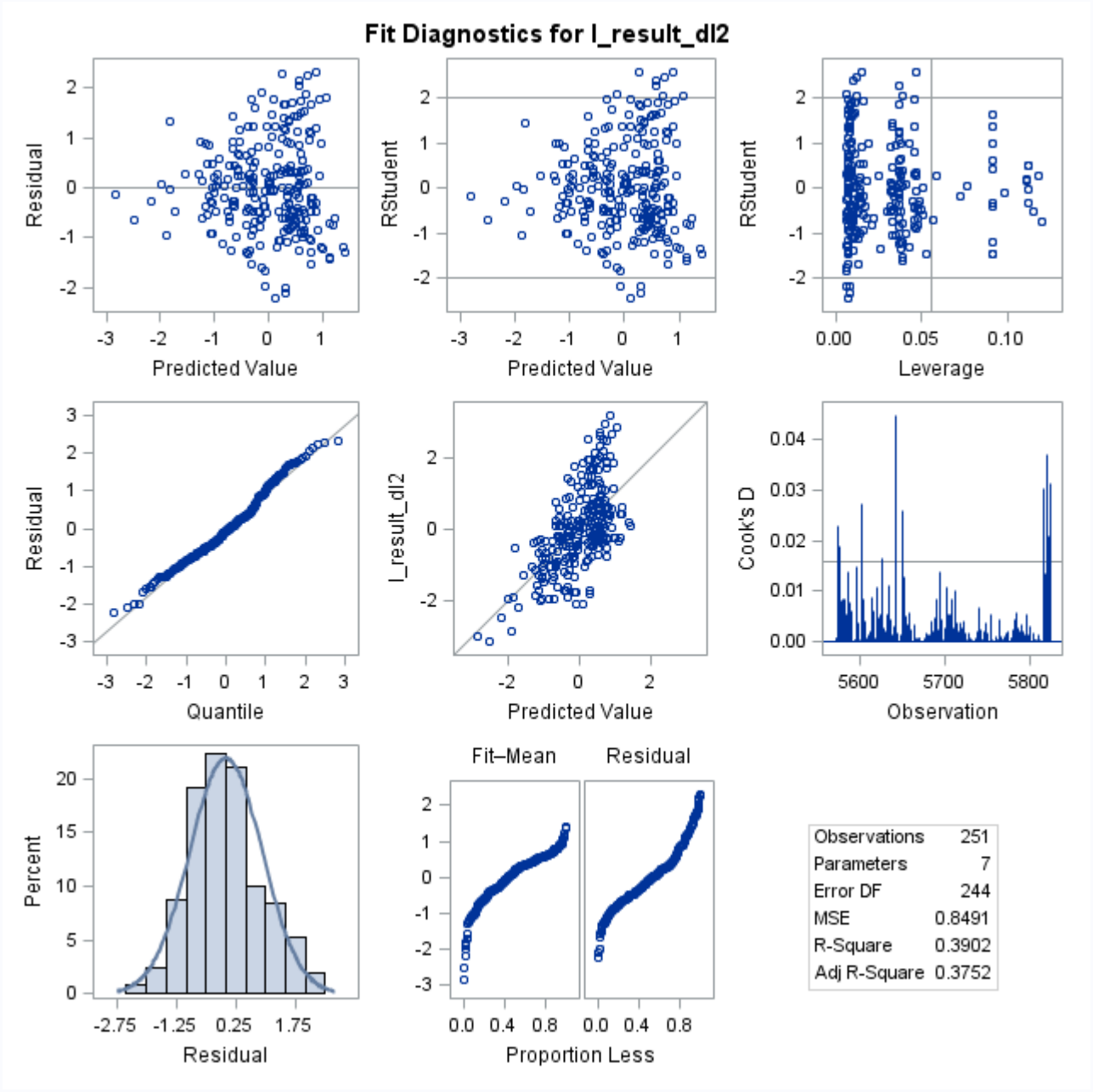
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

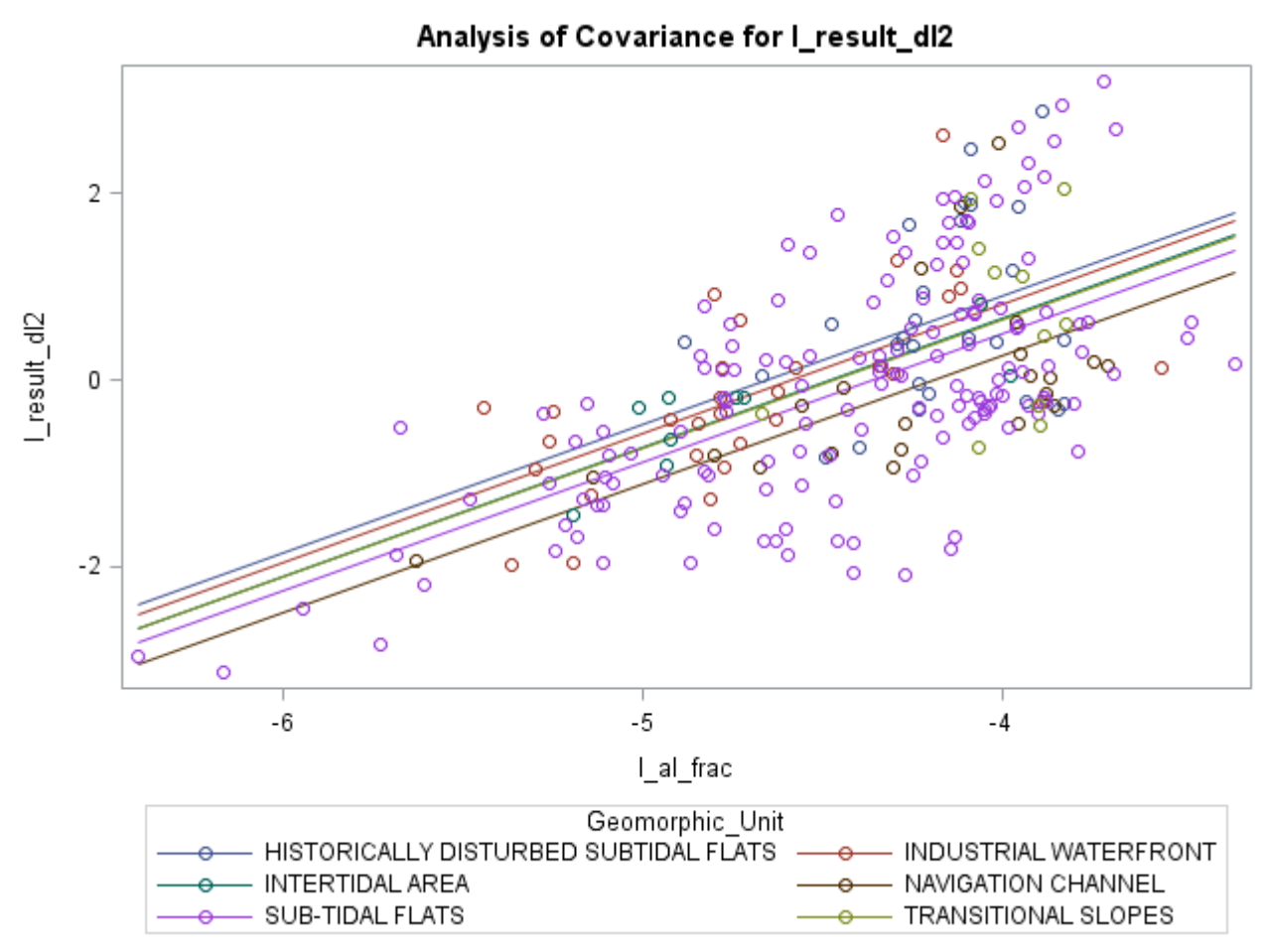
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	132.5418175	22.0903029	26.02	<.0001
Error	244	207.1706769	0.8490602		
Corrected Total	250	339.7124944			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.390159	9772.307	0.921445	0.009429

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	124.7793385	124.7793385	146.96	<.0001
Geomorphic_Unit	5	7.7624790	1.5524958	1.83	0.1079

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	113.6904509	113.6904509	133.90	<.0001
Geomorphic_Unit	5	7.7624790	1.5524958	1.83	0.1079

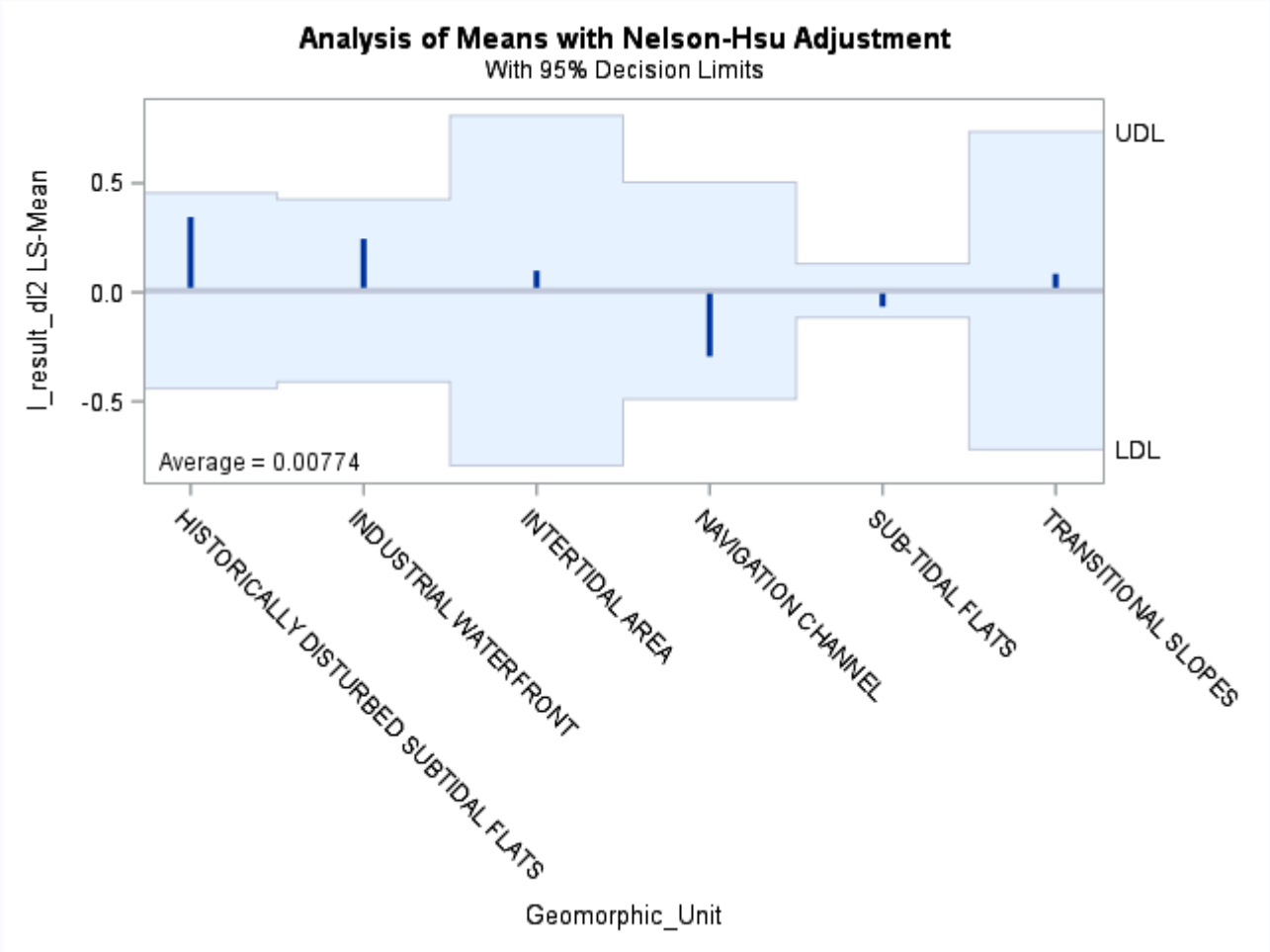

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.8491
R-Square 0.3902
Adj R-Square 0.3752


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.34492401	0.2397
INDUSTRIAL WATERFRONT	0.24497049	0.5416
INTERTIDAL AREA	0.09890969	0.9993
NAVIGATION CHANNEL	-0.29381542	0.4688
SUB-TIDAL FLATS	-0.06556958	0.4918
TRANSITIONAL SLOPES	0.08494904	0.9995


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
0.5
0.0
-0.5
UDL
LDL
Average = 0.00774
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.34492401	1
INDUSTRIAL WATERFRONT	0.24497049	2
INTERTIDAL AREA	0.09890969	3
NAVIGATION CHANNEL	-0.29381542	4
SUB-TIDAL FLATS	-0.06556958	5
TRANSITIONAL SLOPES	0.08494904	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9987	0.9838	0.1562	0.2868	0.9695
2	0.9987		0.9983	0.3110	0.5404	0.9968
3	0.9838	0.9983		0.8947	0.9955	1.0000
4	0.1562	0.3110	0.8947		0.8887	0.8773
5	0.2868	0.5404	0.9955	0.8887		0.9955
6	0.9695	0.9968	1.0000	0.8773	0.9955	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

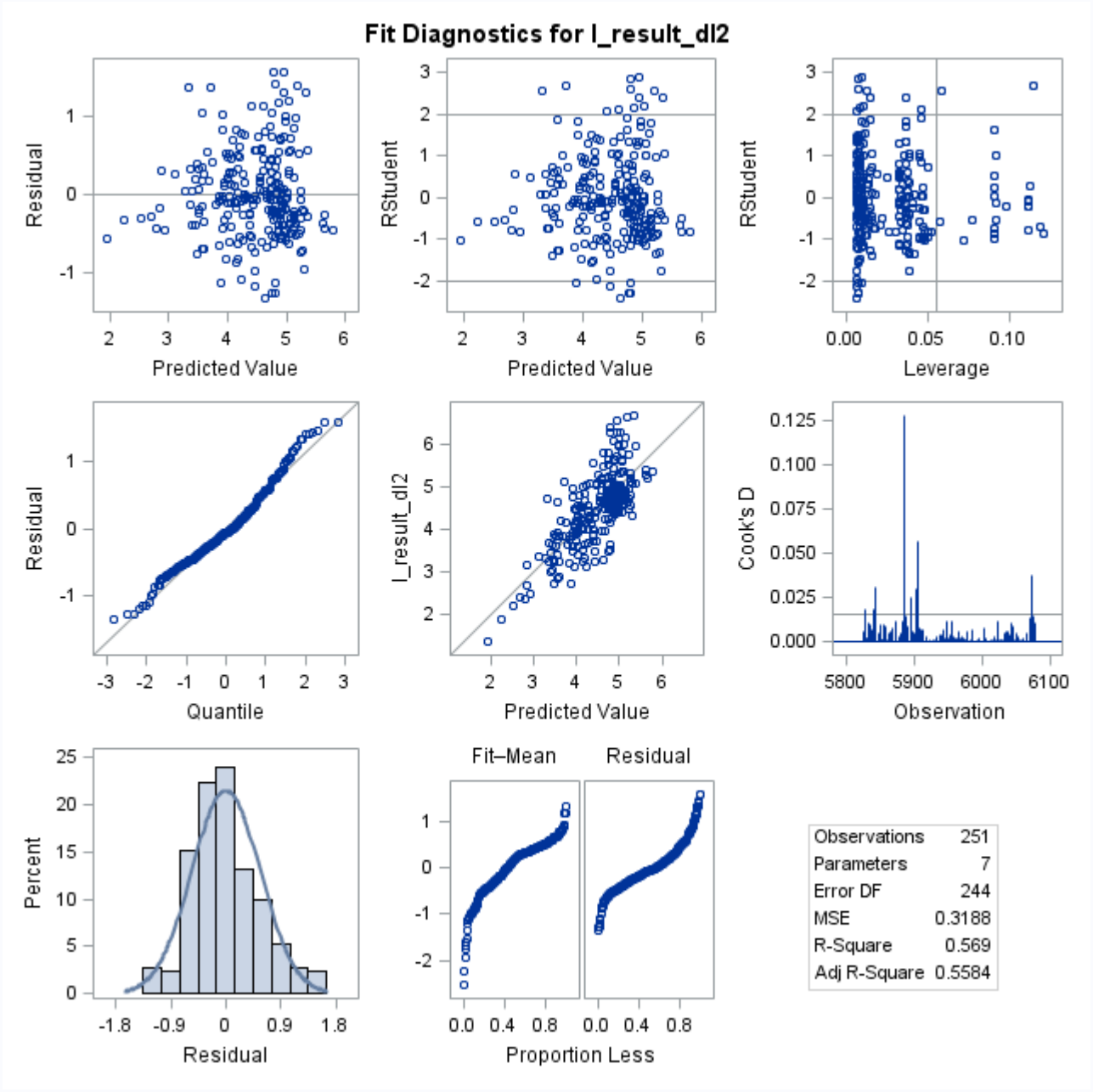
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

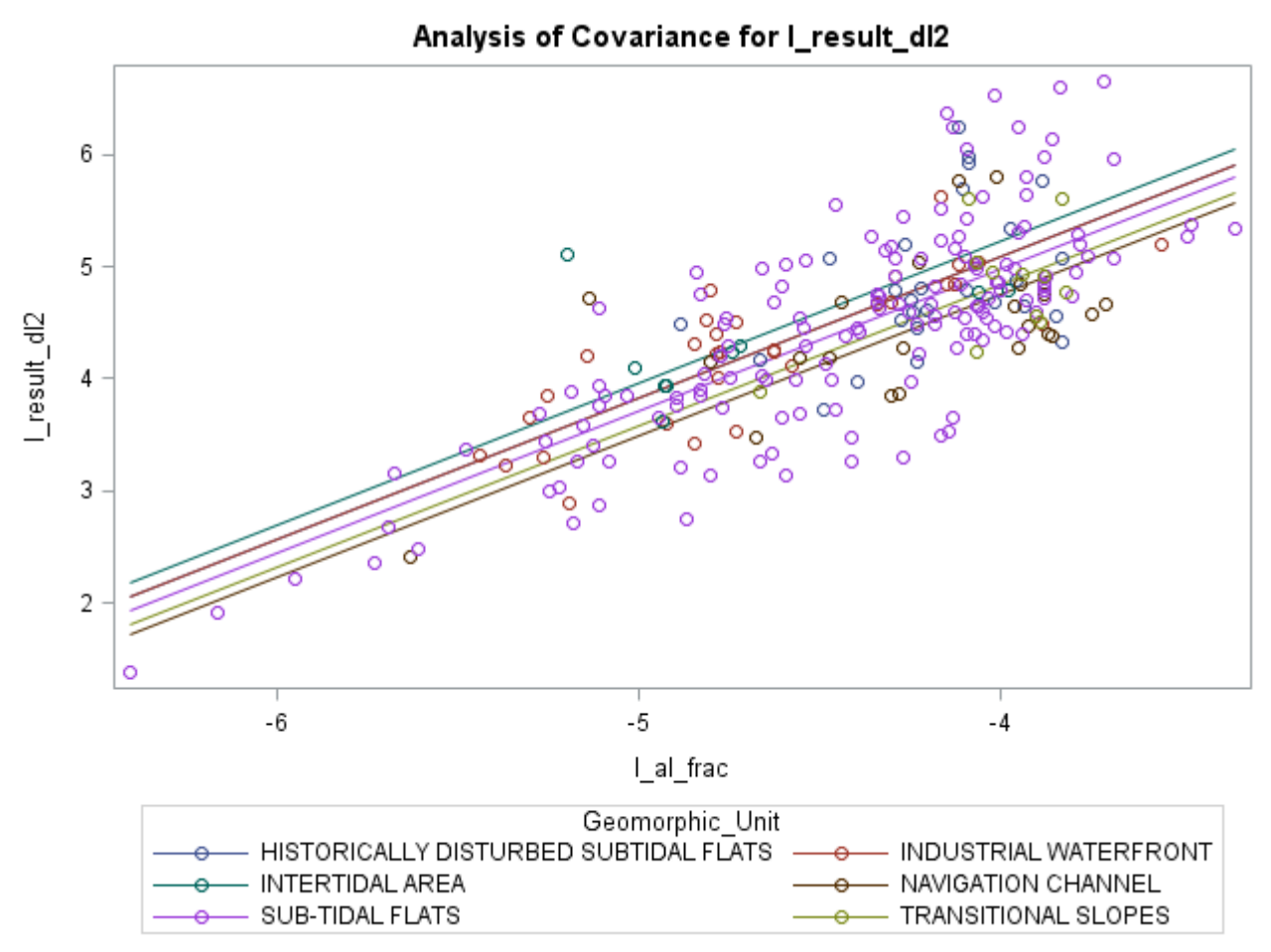
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	102.7055151	17.1175858	53.69	<.0001
Error	244	77.7883980	0.3188049		
Corrected Total	250	180.4939130			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.569025	12.62817	0.564628	4.471179

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	100.2602038	100.2602038	314.49	<.0001
Geomorphic_Unit	5	2.4453113	0.4890623	1.53	0.1798

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	95.40066162	95.40066162	299.24	<.0001
Geomorphic_Unit	5	2.44531129	0.48906226	1.53	0.1798

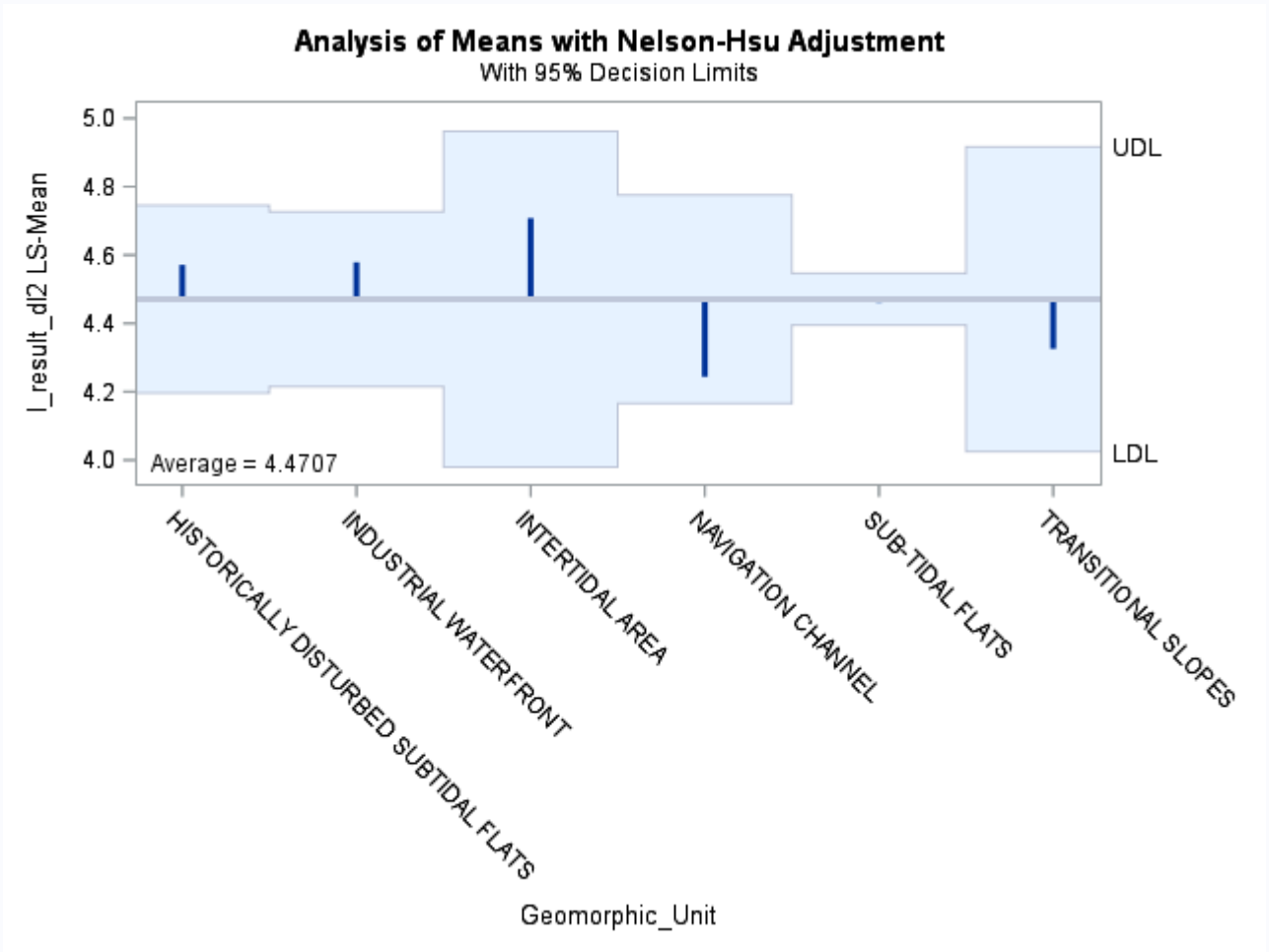

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.3188
R-Square 0.569
Adj R-Square 0.5584


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INTERTIDAL AREA
SUB-TIDAL FLATS
INDUSTRIAL WATERFRONT
NAVIGATION CHANNEL
TRANSITIONAL SLOPES

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.57115947	0.8810
INDUSTRIAL WATERFRONT	4.57883206	0.8028
INTERTIDAL AREA	4.70794632	0.7004
NAVIGATION CHANNEL	4.24374872	0.2484
SUB-TIDAL FLATS	4.46082701	0.9987
TRANSITIONAL SLOPES	4.32564131	0.9237


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.0
4.8
4.6
4.4
4.2
4.0
Average = 4.4707
UDL
LDL
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.57115947	1
INDUSTRIAL WATERFRONT	4.57883206	2
INTERTIDAL AREA	4.70794632	3
NAVIGATION CHANNEL	4.24374872	4
SUB-TIDAL FLATS	4.46082701	5
TRANSITIONAL SLOPES	4.32564131	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9895	0.3353	0.9399	0.8300
2	1.0000		0.9907	0.2946	0.9013	0.8153
3	0.9895	0.9907		0.3148	0.8023	0.6797
4	0.3353	0.2946	0.3148		0.5481	0.9988
5	0.9399	0.9013	0.8023	0.5481		0.9745
6	0.8300	0.8153	0.6797	0.9988	0.9745	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

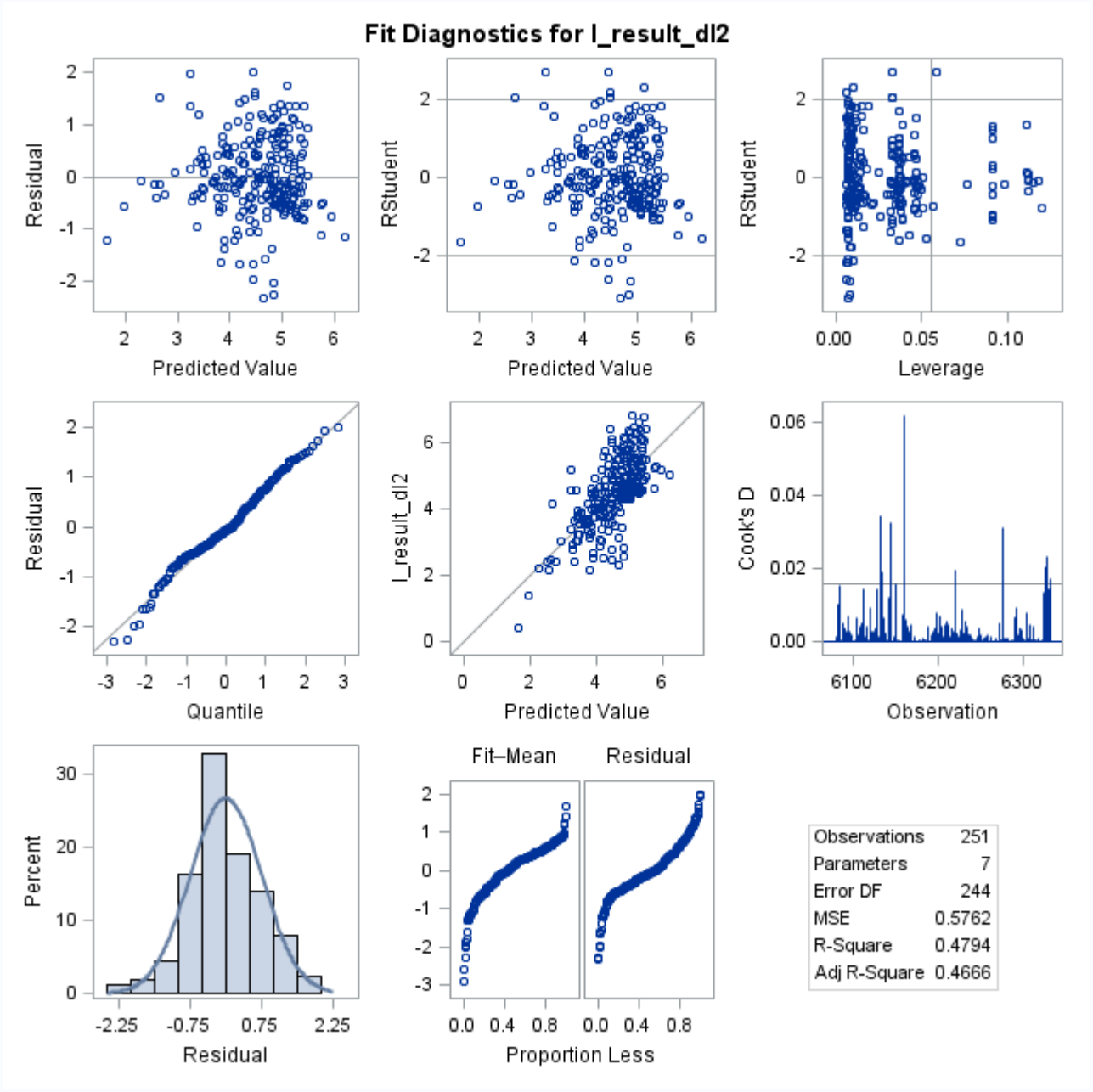
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

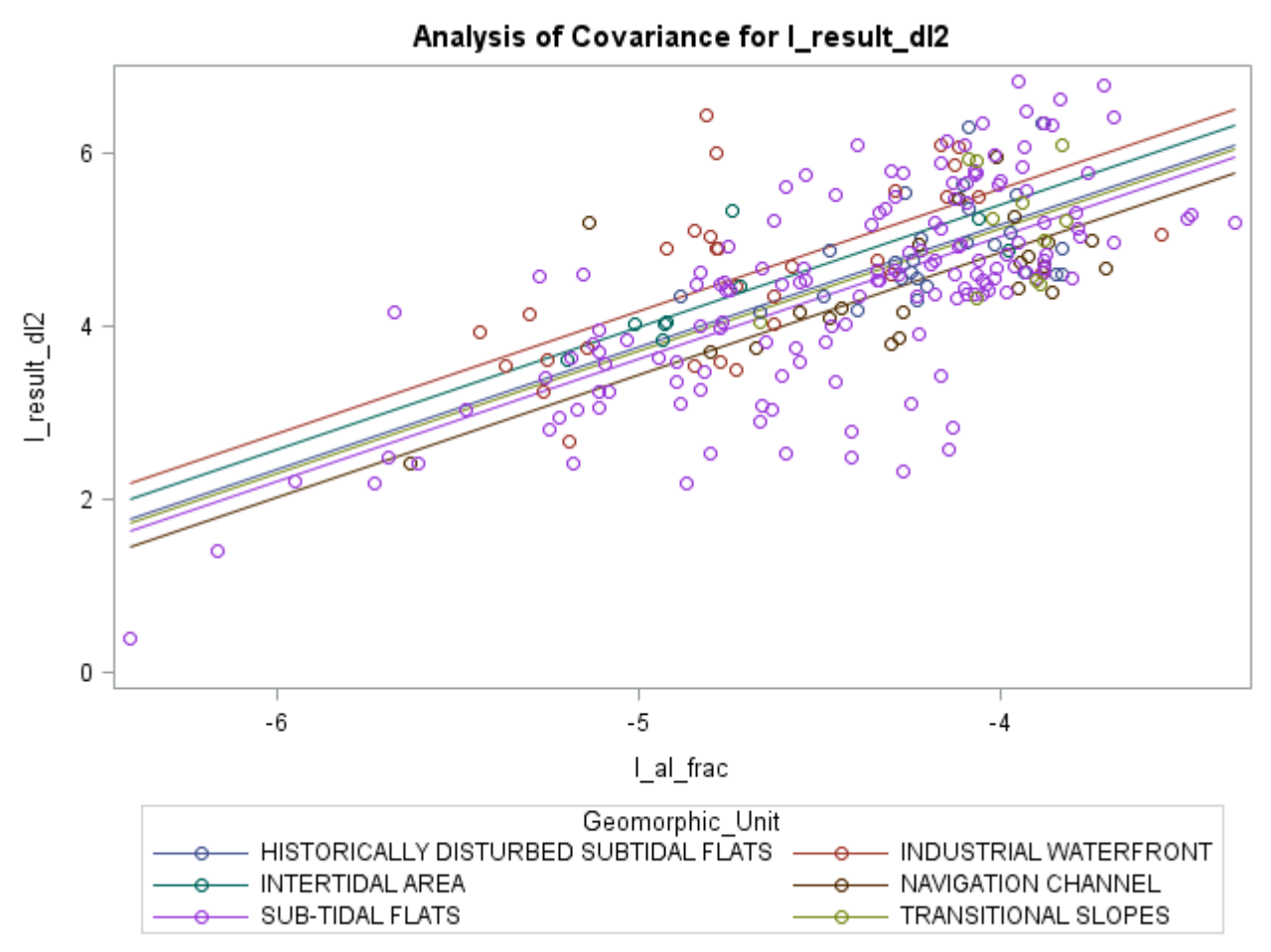
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	129.4444724	21.5740787	37.44	<.0001
Error	244	140.5865278	0.5761743		
Corrected Total	250	270.0310002			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.479369	16.71330	0.759061	4.541661

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	119.6702608	119.6702608	207.70	<.0001
Geomorphic_Unit	5	9.7742116	1.9548423	3.39	0.0056

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	119.5975328	119.5975328	207.57	<.0001
Geomorphic_Unit	5	9.7742116	1.9548423	3.39	0.0056

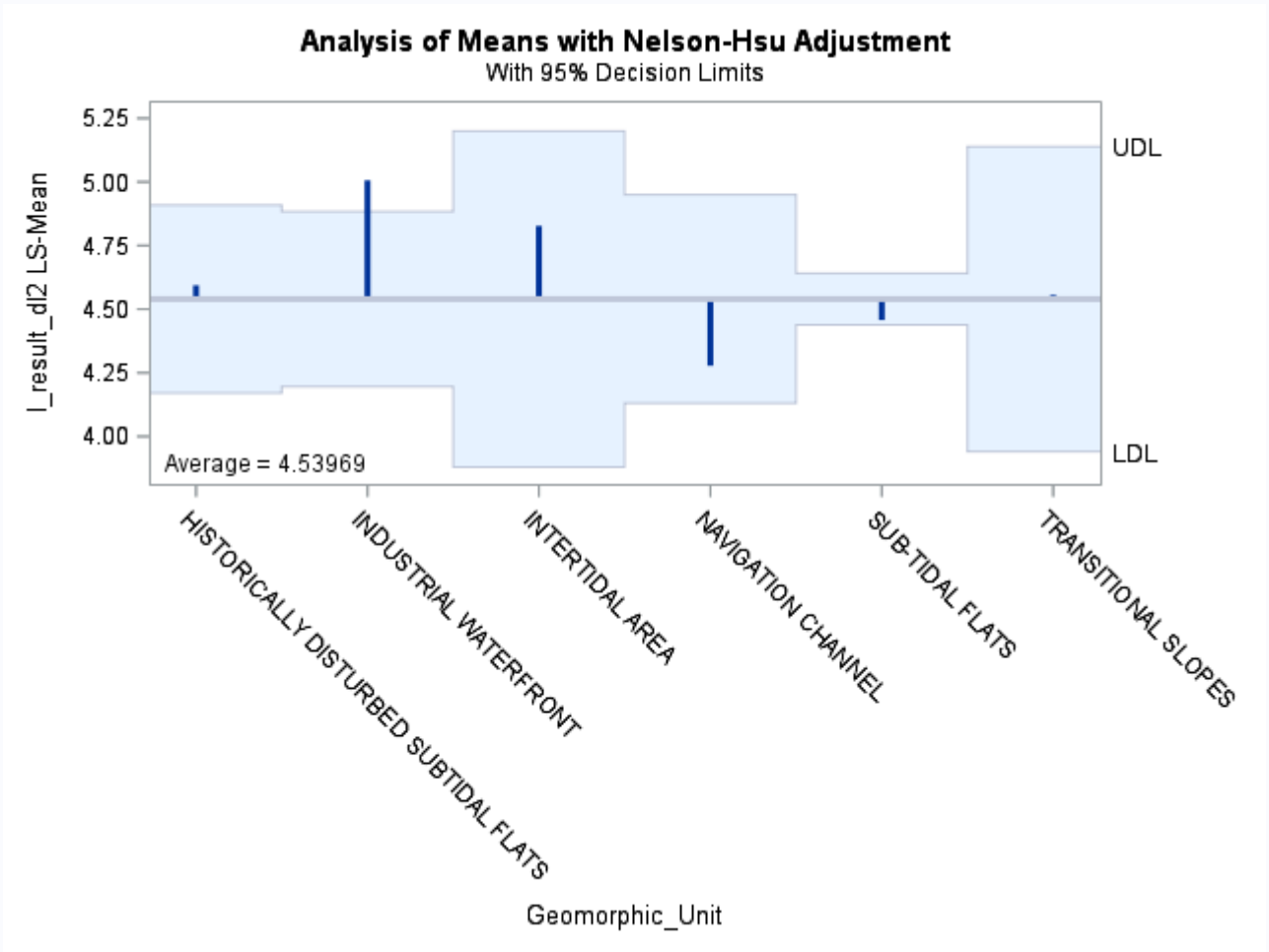

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.5762
R-Square 0.4794
Adj R-Square 0.4666


Analysis of Covariance for l_result_dl2
l_result_dl2
6
4
2
0
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INTERTIDAL AREA
SUB-TIDAL FLATS
INDUSTRIAL WATERFRONT
NAVIGATION CHANNEL
TRANSITIONAL SLOPES

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.59375080	0.9978
INDUSTRIAL WATERFRONT	5.00636596	0.0025
INTERTIDAL AREA	4.82729150	0.7819
NAVIGATION CHANNEL	4.27776803	0.4099
SUB-TIDAL FLATS	4.45733910	0.1733
TRANSITIONAL SLOPES	4.55578288	1.0000


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.25
5.00
4.75
4.50
4.25
4.00
UDL
LDL
Average = 4.53969
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.59375080	1
INDUSTRIAL WATERFRONT	5.00636596	2
INTERTIDAL AREA	4.82729150	3
NAVIGATION CHANNEL	4.27776803	4
SUB-TIDAL FLATS	4.45733910	5
TRANSITIONAL SLOPES	4.55578288	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3402	0.9696	0.6973	0.9576	1.0000
2	0.3402		0.9893	0.0106	0.0047	0.5695
3	0.9696	0.9893		0.4617	0.7199	0.9707
4	0.6973	0.0106	0.4617		0.9067	0.9214
5	0.9576	0.0047	0.7199	0.9067		0.9985
6	1.0000	0.5695	0.9707	0.9214	0.9985	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

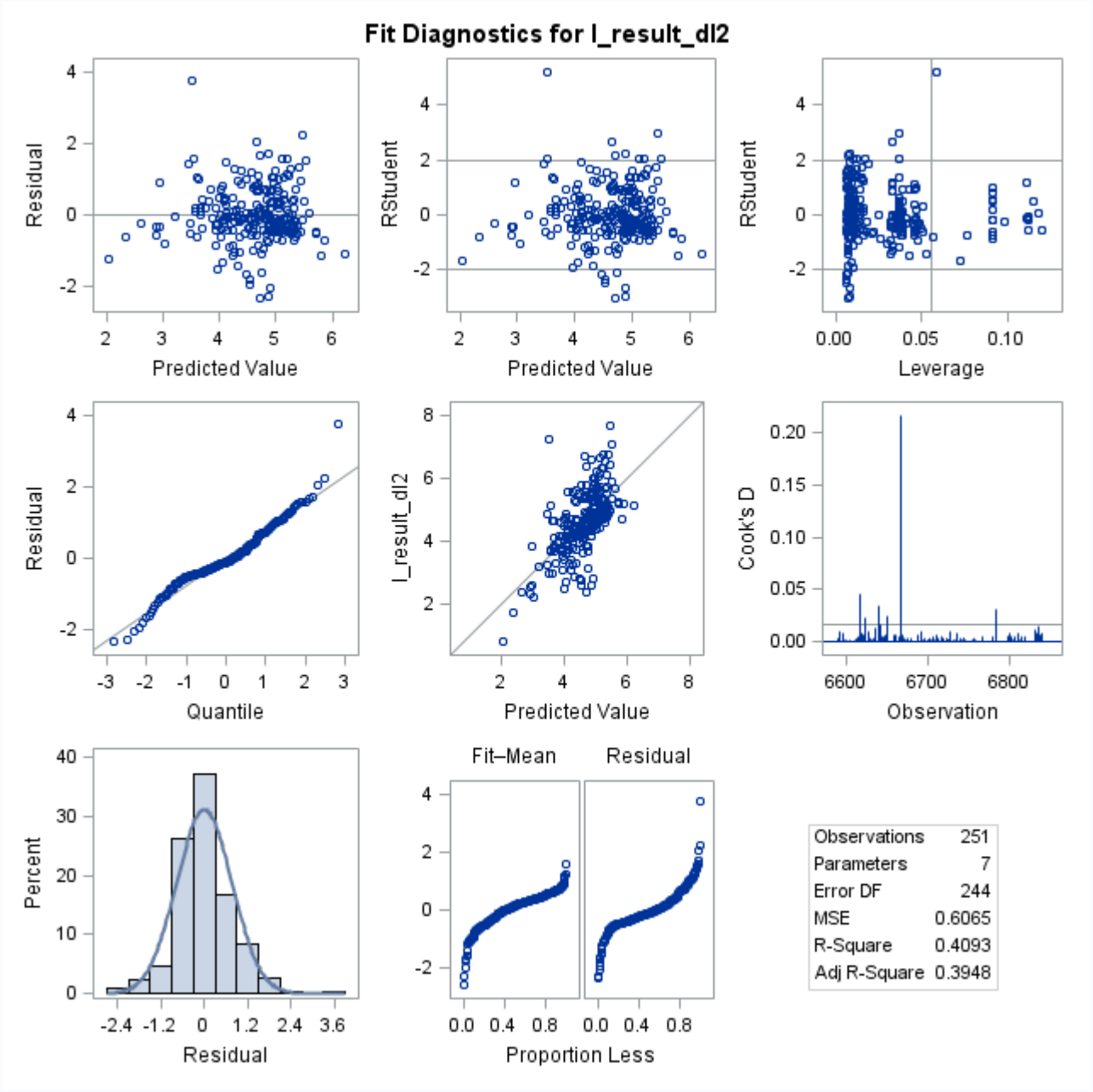
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

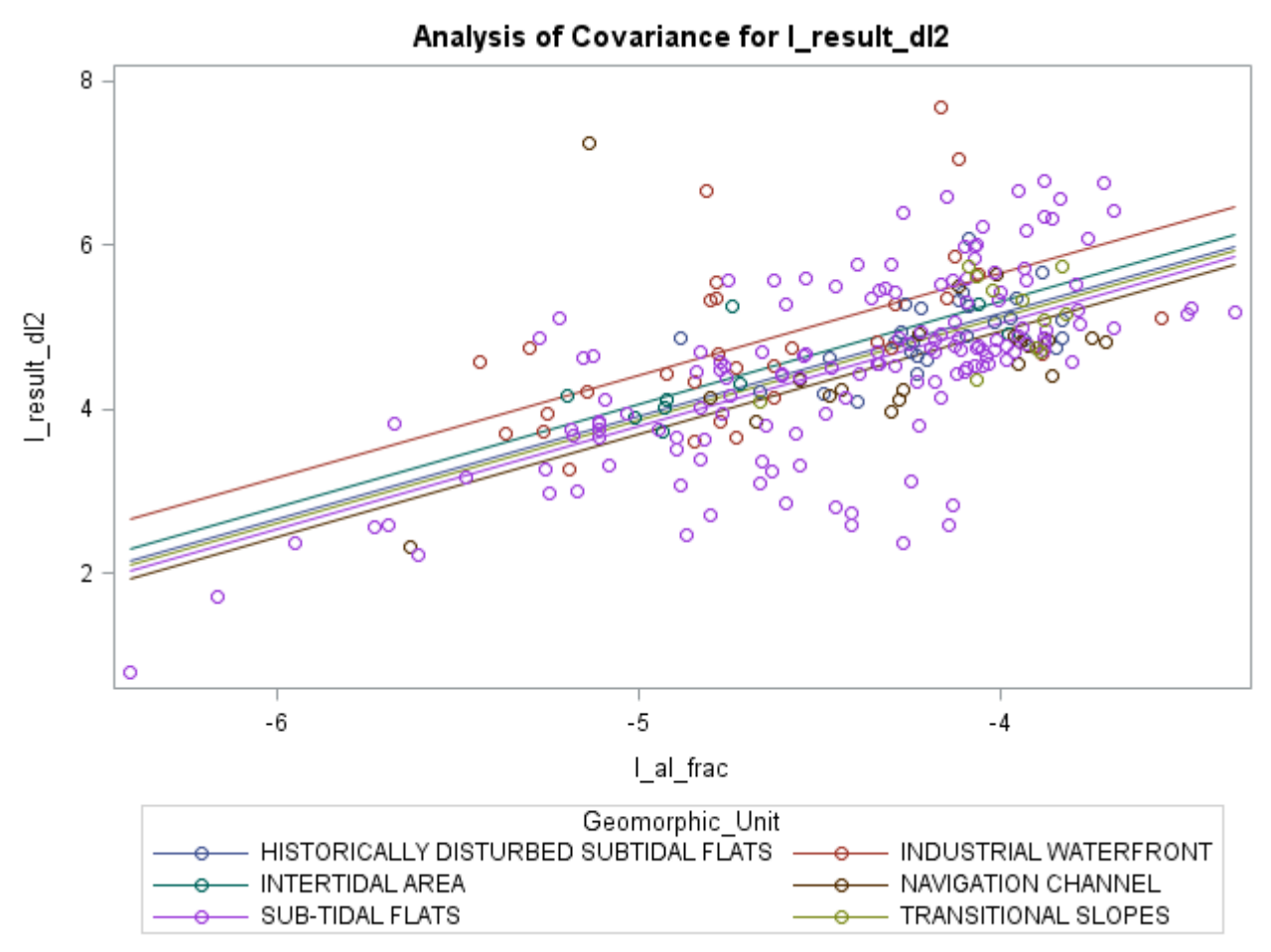
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	102.5531631	17.0921938	28.18	<.0001
Error	244	147.9743233	0.6064521		
Corrected Total	250	250.5274864			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.409349	16.81567	0.778750	4.631098

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	92.16292257	92.16292257	151.97	<.0001
Geomorphic_Unit	5	10.39024048	2.07804810	3.43	0.0052

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	94.18158464	94.18158464	155.30	<.0001
Geomorphic_Unit	5	10.39024048	2.07804810	3.43	0.0052

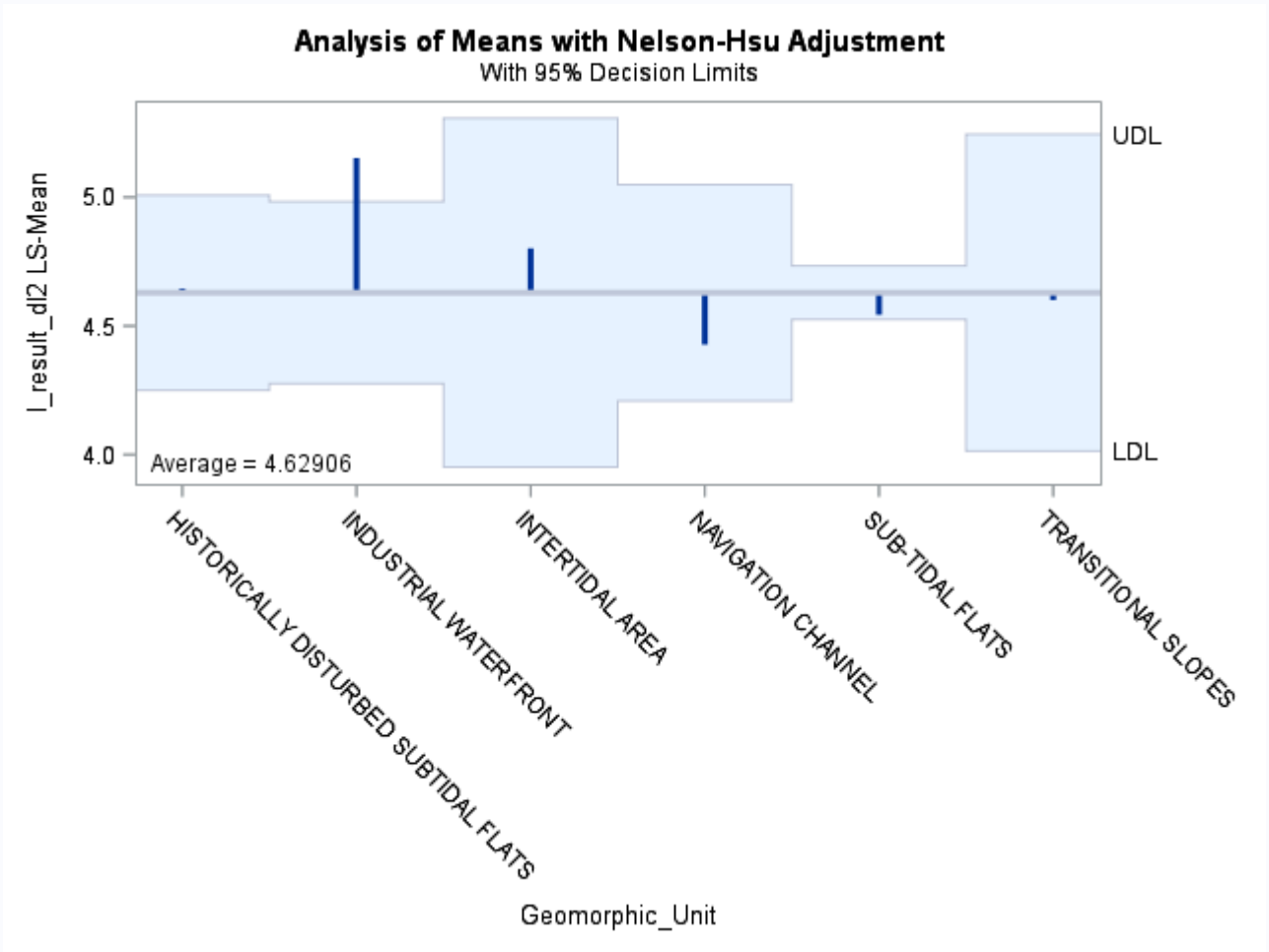

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.6065
R-Square 0.4093
Adj R-Square 0.3948


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.64532889	1.0000
INDUSTRIAL WATERFRONT	5.15237587	0.0007
INTERTIDAL AREA	4.80134550	0.9725
NAVIGATION CHANNEL	4.42754810	0.7061
SUB-TIDAL FLATS	4.54325980	0.1610
TRANSITIONAL SLOPES	4.60069529	1.0000


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.0
4.5
4.0
UDL
LDL
Average = 4.62906
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	4.64532889	1
INDUSTRIAL WATERFRONT	5.15237587	2
INTERTIDAL AREA	4.80134550	3
NAVIGATION CHANNEL	4.42754810	4
SUB-TIDAL FLATS	4.54325980	5
TRANSITIONAL SLOPES	4.60069529	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.1581	0.9957	0.9261	0.9895	1.0000
2	0.1581		0.8413	0.0148	0.0016	0.3666
3	0.9957	0.8413		0.8368	0.9300	0.9933
4	0.9261	0.0148	0.8368		0.9871	0.9910
5	0.9895	0.0016	0.9300	0.9871		0.9999
6	1.0000	0.3666	0.9933	0.9910	0.9999	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

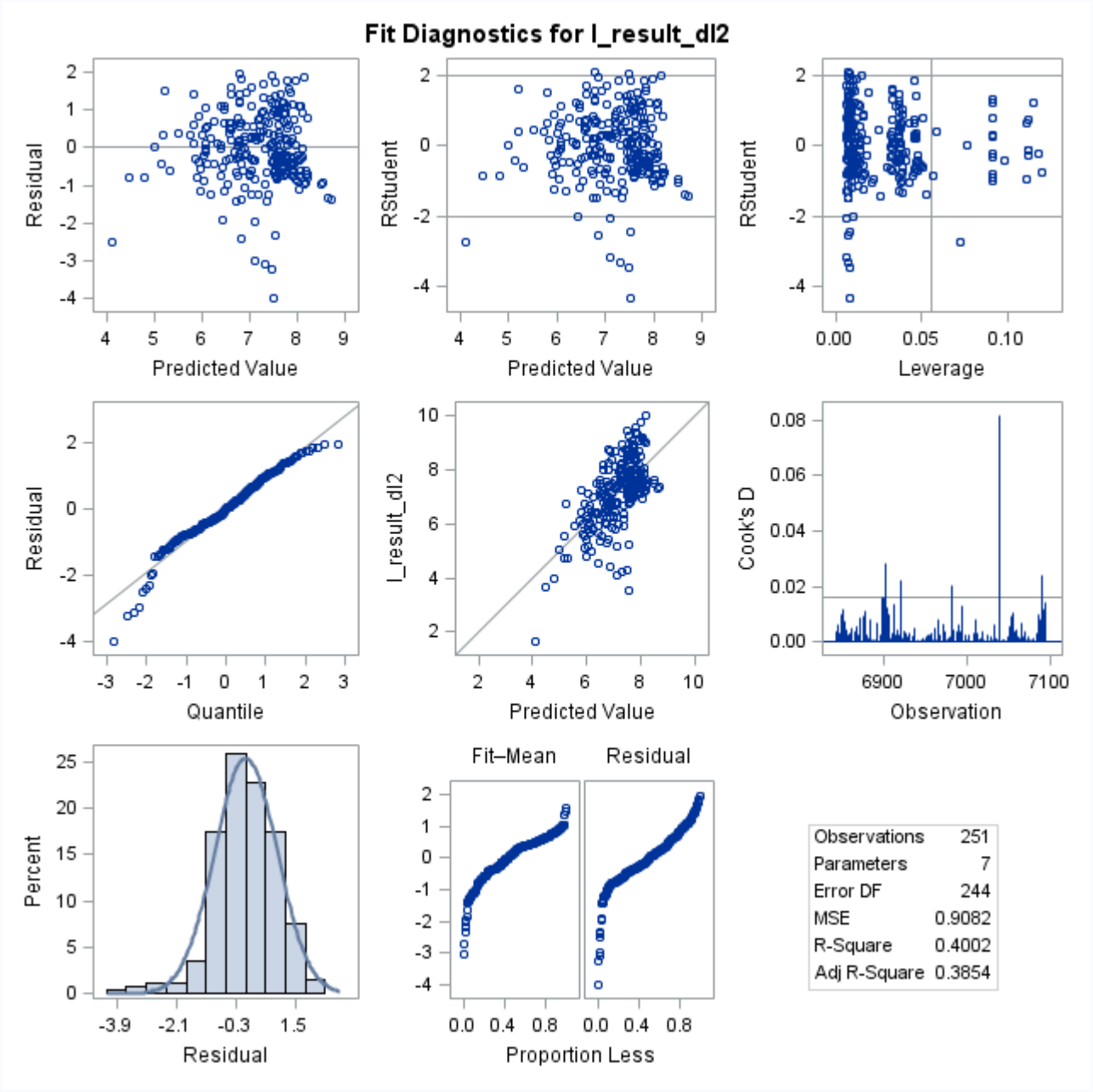
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

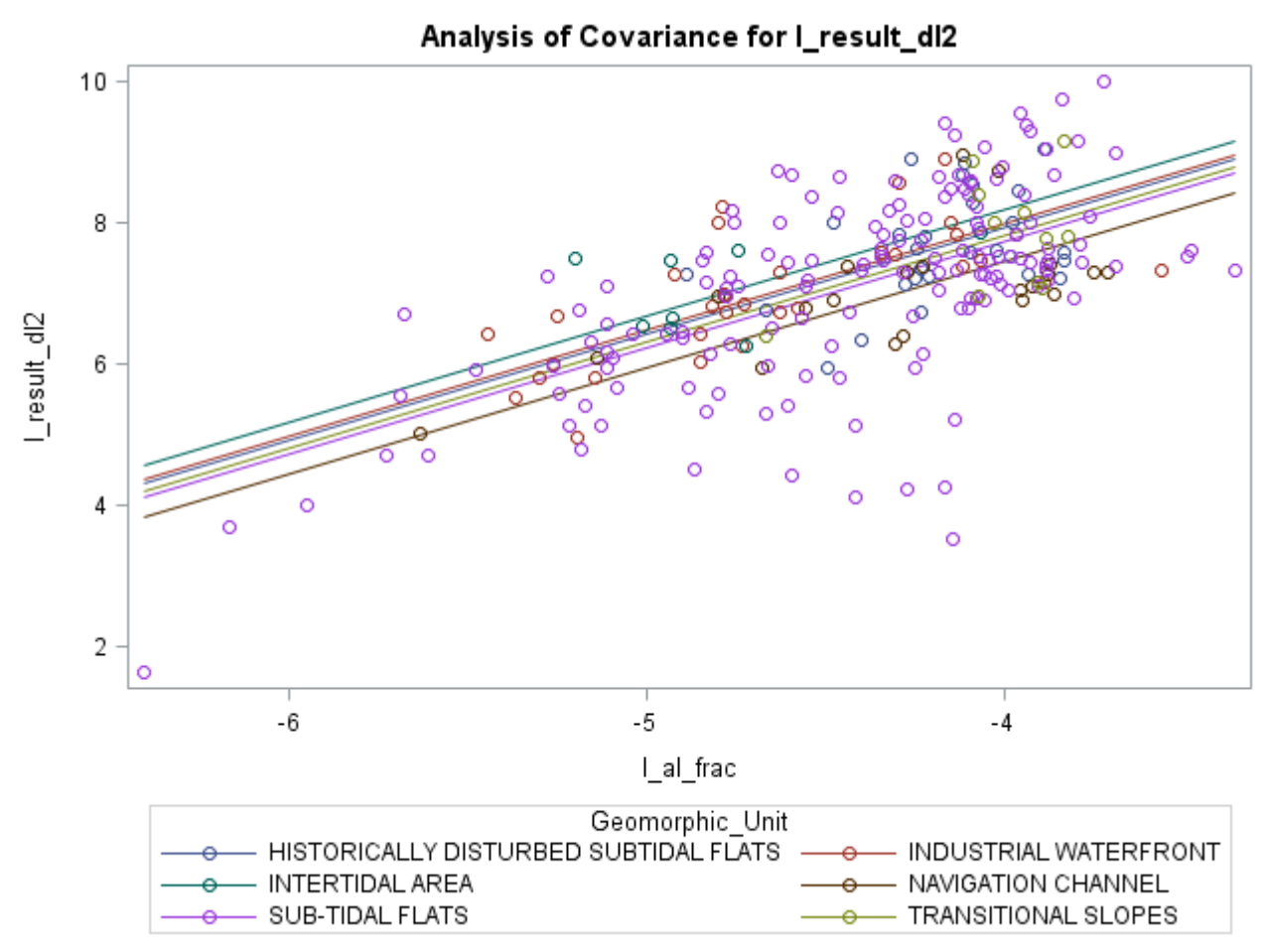
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	147.8330406	24.6388401	27.13	<.0001
Error	244	221.6098433	0.9082371		
Corrected Total	250	369.4428840			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.400151	13.30028	0.953015	7.165373

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	141.9548507	141.9548507	156.30	<.0001
Geomorphic_Unit	5	5.8781899	1.1756380	1.29	0.2669

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	134.6052358	134.6052358	148.20	<.0001
Geomorphic_Unit	5	5.8781899	1.1756380	1.29	0.2669

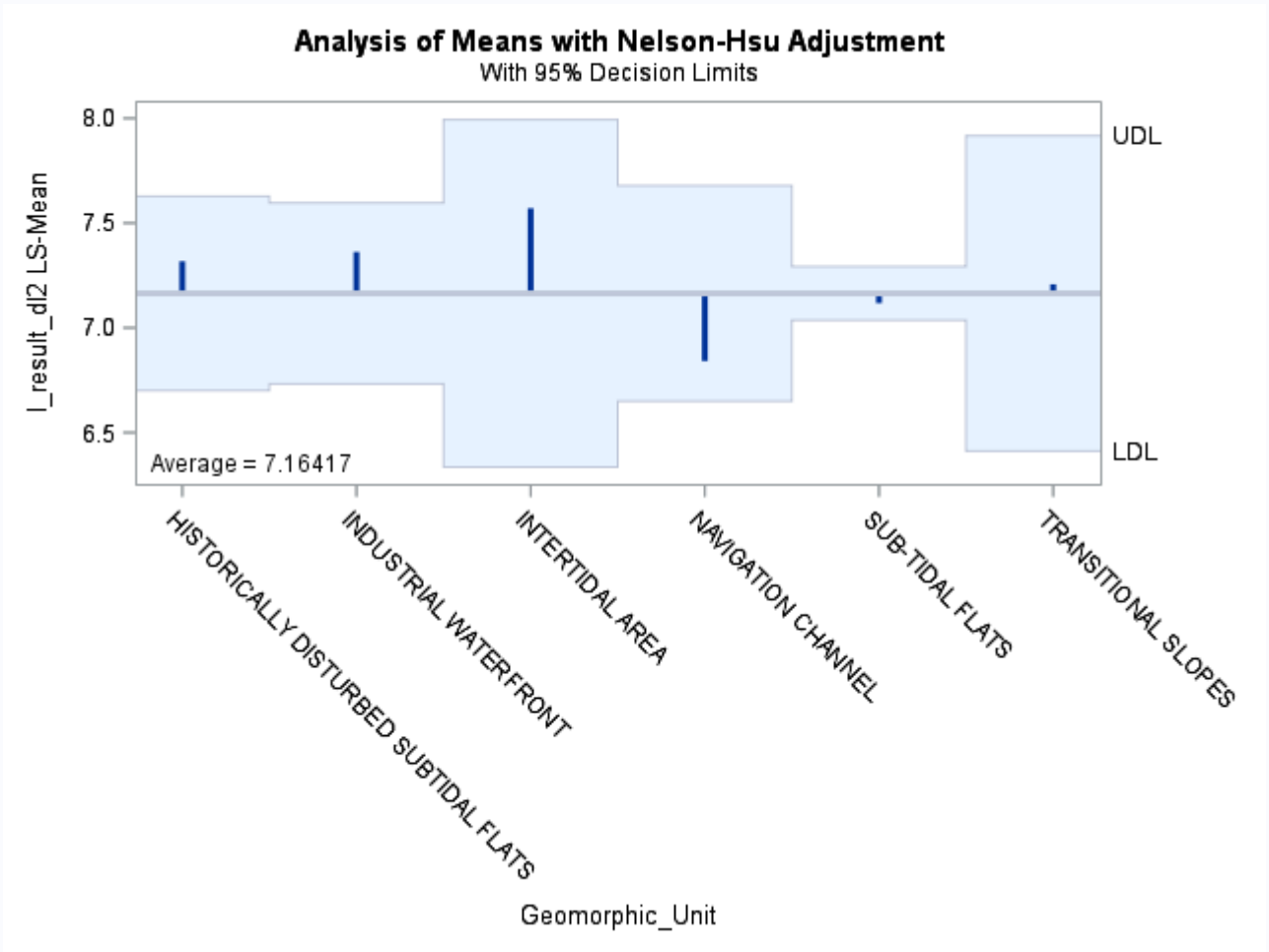

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.9082
R-Square 0.4002
Adj R-Square 0.3854


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.31753177	0.9187
INDUSTRIAL WATERFRONT	7.36197273	0.7449
INTERTIDAL AREA	7.57062499	0.6872
NAVIGATION CHANNEL	6.84147199	0.4309
SUB-TIDAL FLATS	7.11775260	0.8831
TRANSITIONAL SLOPES	7.20775846	1.0000


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
8.0
7.5
7.0
6.5
UDL
LDL
Average = 7.16417
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	7.31753177	1
INDUSTRIAL WATERFRONT	7.36197273	2
INTERTIDAL AREA	7.57062499	3
NAVIGATION CHANNEL	6.84147199	4
SUB-TIDAL FLATS	7.11775260	5
TRANSITIONAL SLOPES	7.20775846	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9841	0.5080	0.9203	0.9995
2	1.0000		0.9924	0.3889	0.7935	0.9977
3	0.9841	0.9924		0.3972	0.7411	0.9617
4	0.5080	0.3889	0.3972		0.8038	0.9050
5	0.9203	0.7935	0.7411	0.8038		0.9997
6	0.9995	0.9977	0.9617	0.9050	0.9997	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

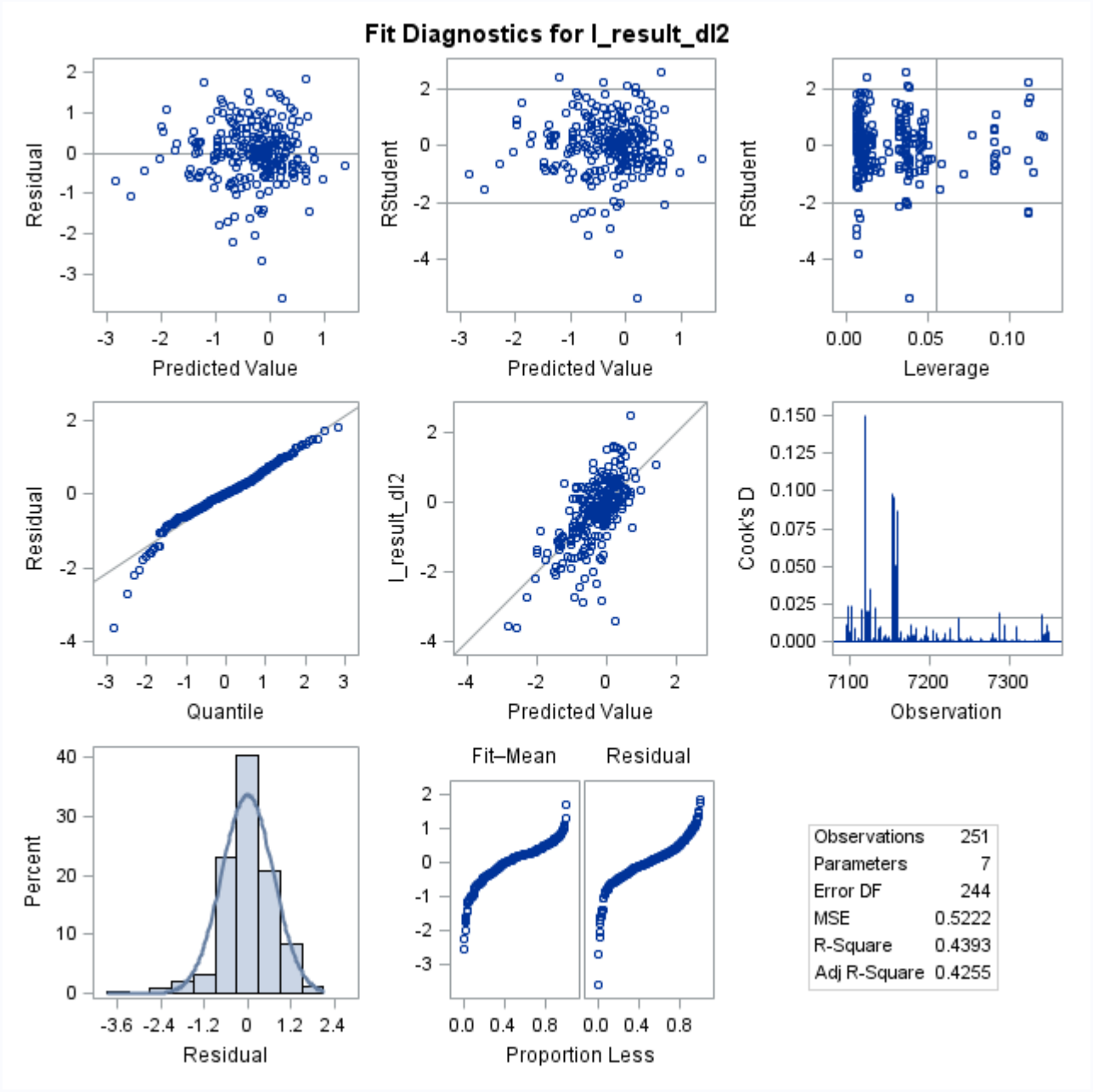
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

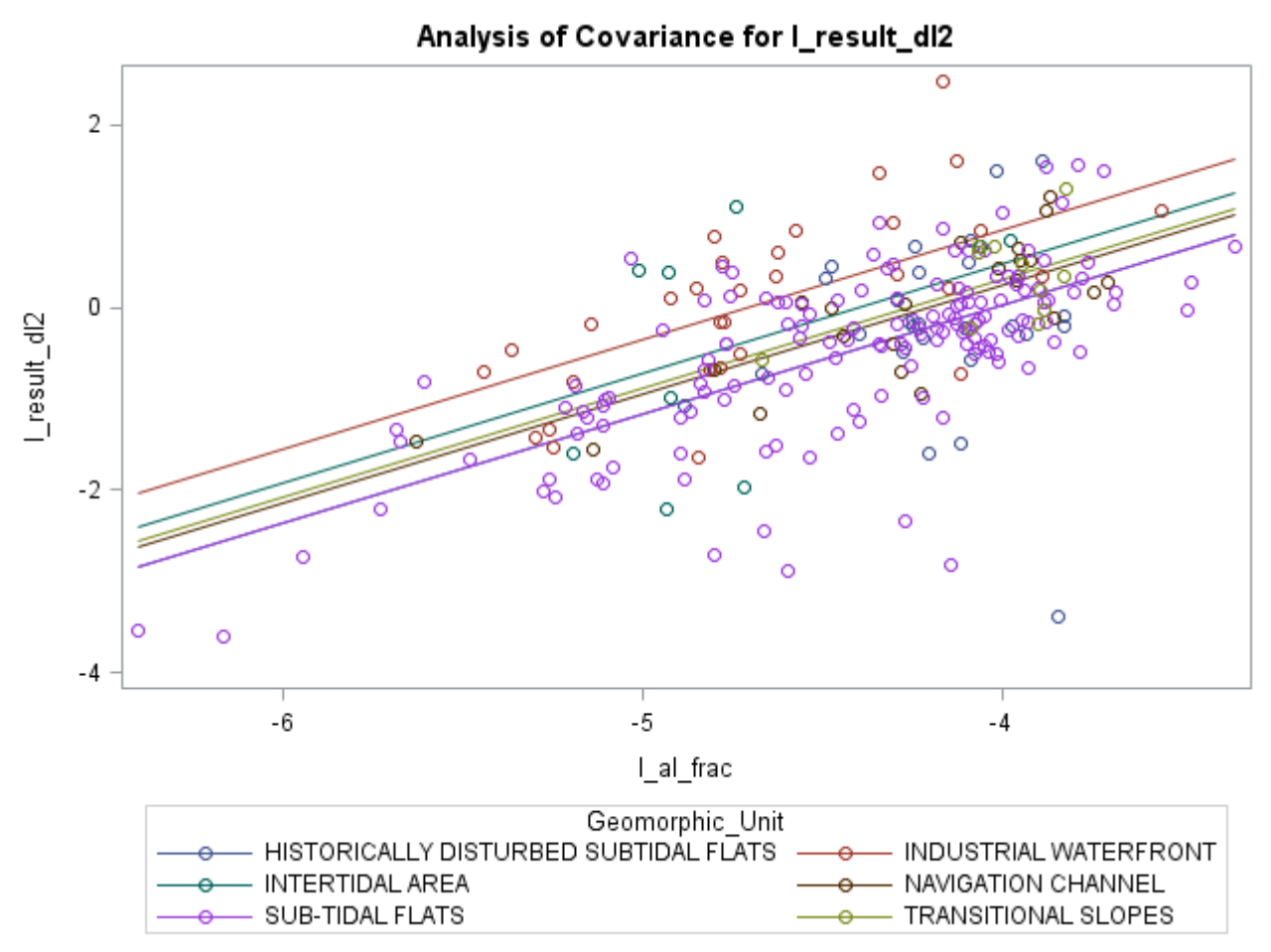
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	99.8376348	16.6396058	31.86	<.0001
Error	244	127.4189190	0.5222087		
Corrected Total	250	227.2565538			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.439317	-235.6054	0.722640	-0.306716

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	81.28738808	81.28738808	155.66	<.0001
Geomorphic_Unit	5	18.55024672	3.71004934	7.10	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	85.50859457	85.50859457	163.74	<.0001
Geomorphic_Unit	5	18.55024672	3.71004934	7.10	<.0001

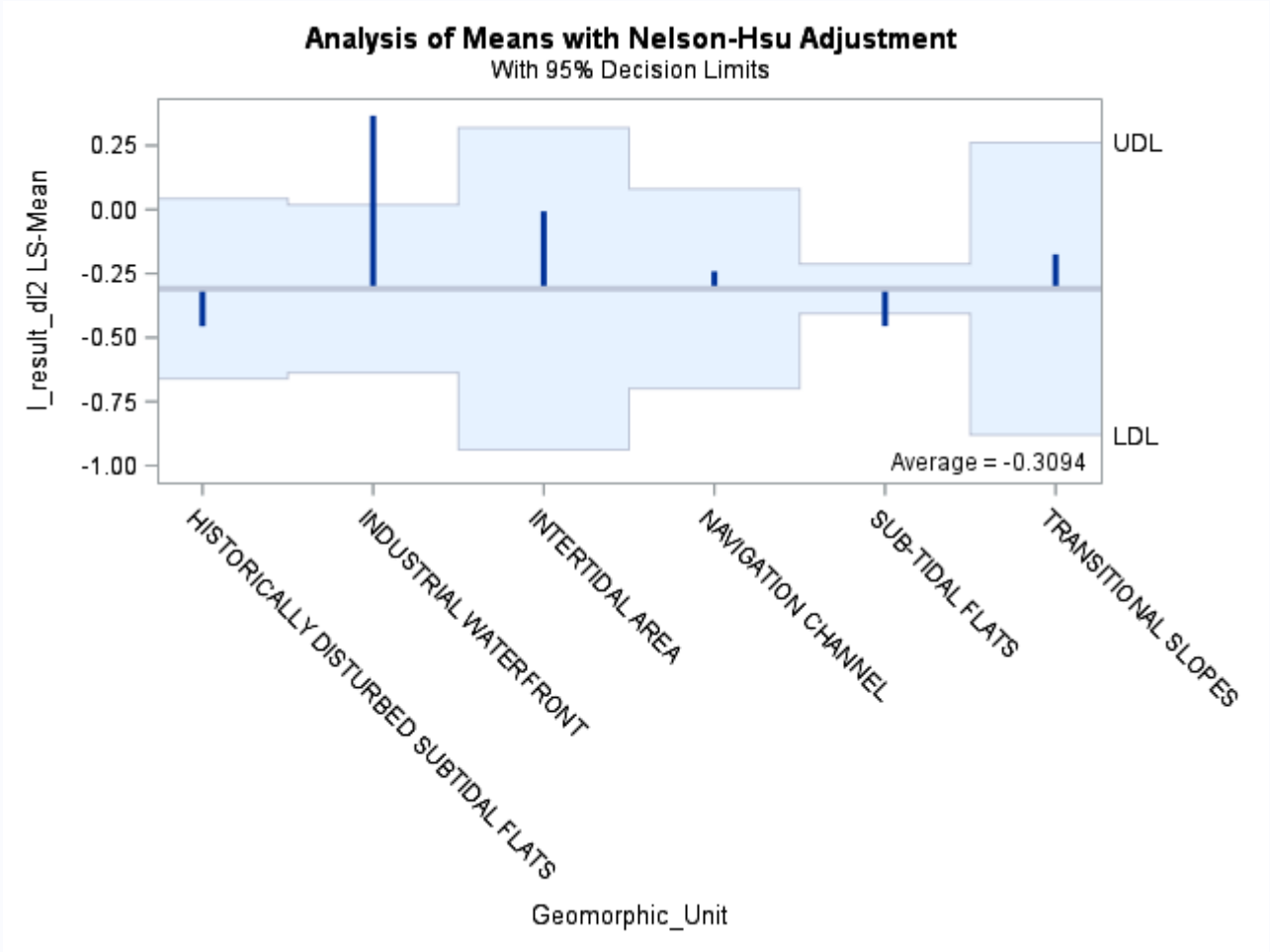

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.5222
R-Square 0.4393
Adj R-Square 0.4255


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-4
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.45580249	0.8118
INDUSTRIAL WATERFRONT	0.36645649	<.0001
INTERTIDAL AREA	-0.00696827	0.7039
NAVIGATION CHANNEL	-0.24128428	0.9949
SUB-TIDAL FLATS	-0.45526353	0.0005
TRANSITIONAL SLOPES	-0.17486497	0.9802


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
0.25
0.00
-0.25
-0.50
-0.75
-1.00
UDL
LDL
Average = -0.3094
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.45580249	1
INDUSTRIAL WATERFRONT	0.36645649	2
INTERTIDAL AREA	-0.00696827	3
NAVIGATION CHANNEL	-0.24128428	4
SUB-TIDAL FLATS	-0.45526353	5
TRANSITIONAL SLOPES	-0.17486497	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0005	0.6075	0.9065	1.0000	0.8871
2	0.0005		0.7482	0.0386	<.0001	0.3033
3	0.6075	0.7482		0.9654	0.4696	0.9959
4	0.9065	0.0386	0.9654		0.7893	0.9999
5	1.0000	<.0001	0.4696	0.7893		0.8244
6	0.8871	0.3033	0.9959	0.9999	0.8244	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

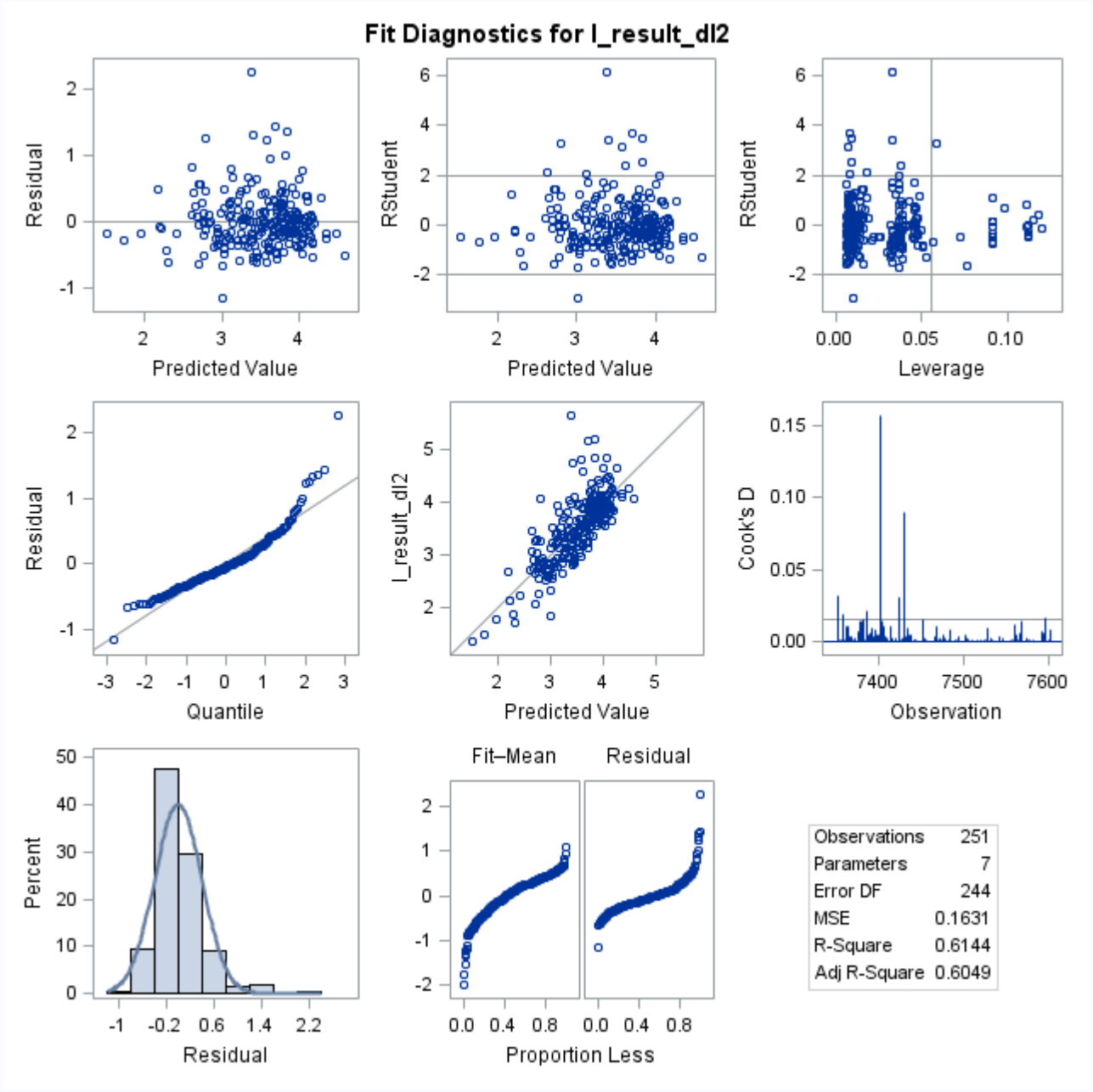
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

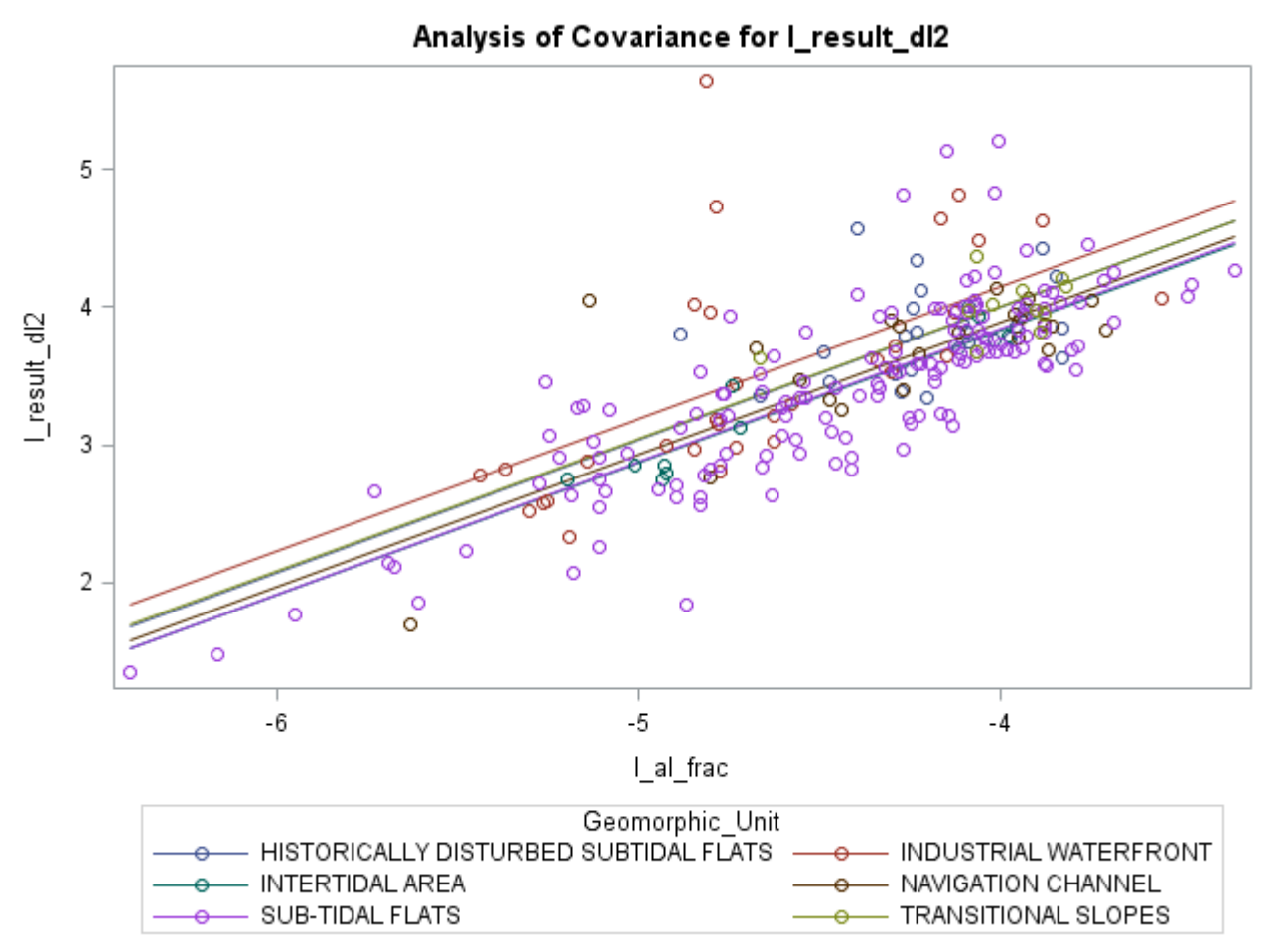
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	63.4028657	10.5671443	64.79	<.0001
Error	244	39.7975810	0.1631048		
Corrected Total	250	103.2004466			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.614366	11.49164	0.403862	3.514403

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	60.37571800	60.37571800	370.17	<.0001
Geomorphic_Unit	5	3.02714766	0.60542953	3.71	0.0030

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	55.46650750	55.46650750	340.07	<.0001
Geomorphic_Unit	5	3.02714766	0.60542953	3.71	0.0030

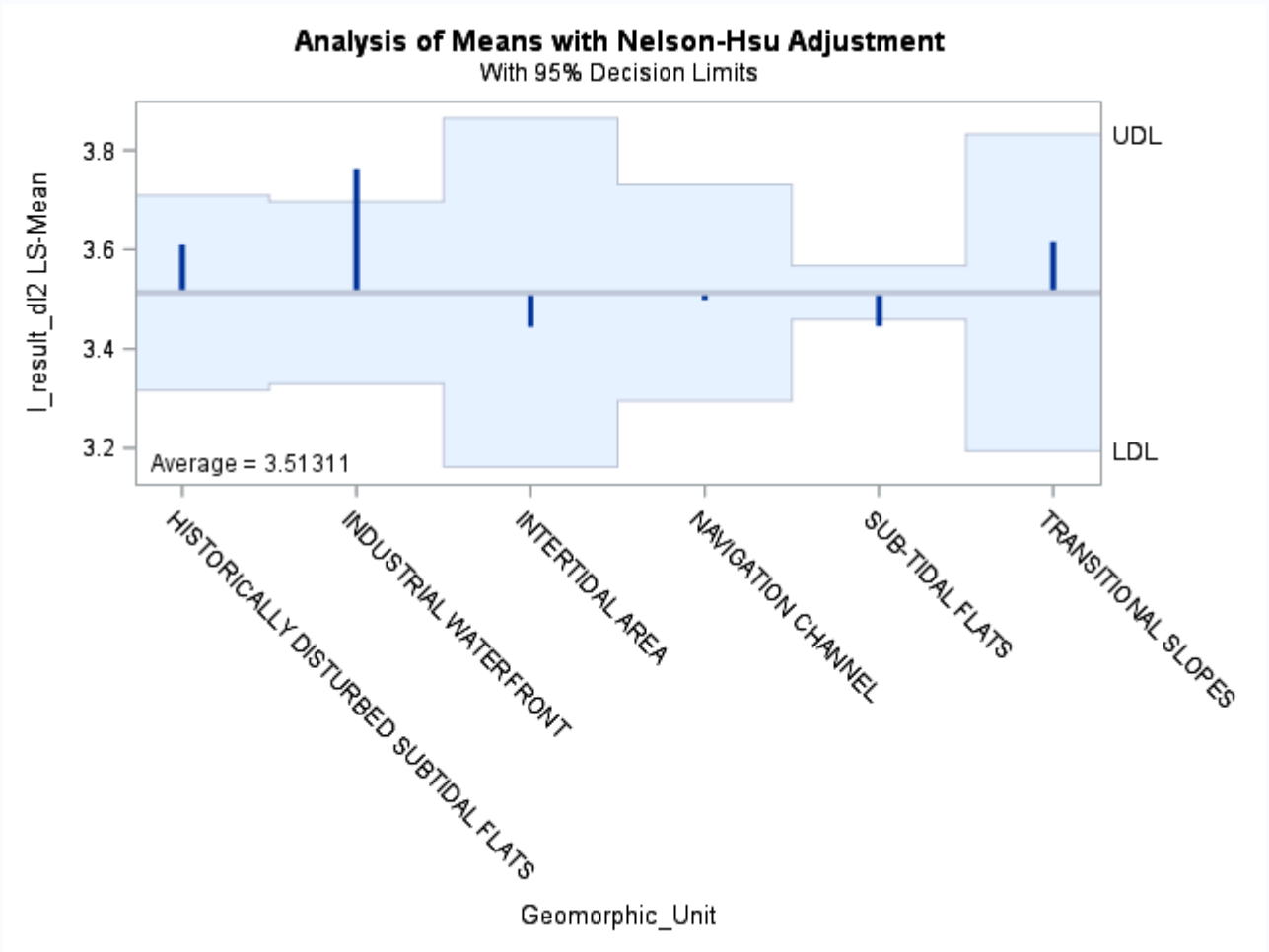

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.1631
R-Square 0.6144
Adj R-Square 0.6049


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	3.60967710	0.6850
INDUSTRIAL WATERFRONT	3.76270806	0.0023
INTERTIDAL AREA	3.44423118	0.9914
NAVIGATION CHANNEL	3.49866993	1.0000
SUB-TIDAL FLATS	3.44555538	0.0066
TRANSITIONAL SLOPES	3.61474598	0.9297


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
3.8
3.6
3.4
3.2
UDL
LDL
Average = 3.51311
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	3.60967710	1
INDUSTRIAL WATERFRONT	3.76270806	2
INTERTIDAL AREA	3.44423118	3
NAVIGATION CHANNEL	3.49866993	4
SUB-TIDAL FLATS	3.44555538	5
TRANSITIONAL SLOPES	3.61474598	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7268	0.9014	0.9311	0.3909	1.0000
2	0.7268		0.3000	0.1959	0.0015	0.9125
3	0.9014	0.3000		0.9994	1.0000	0.9410
4	0.9311	0.1959	0.9994		0.9926	0.9714
5	0.3909	0.0015	1.0000	0.9926		0.7724
6	1.0000	0.9125	0.9410	0.9714	0.7724	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	250
Number of Observations Used	250

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

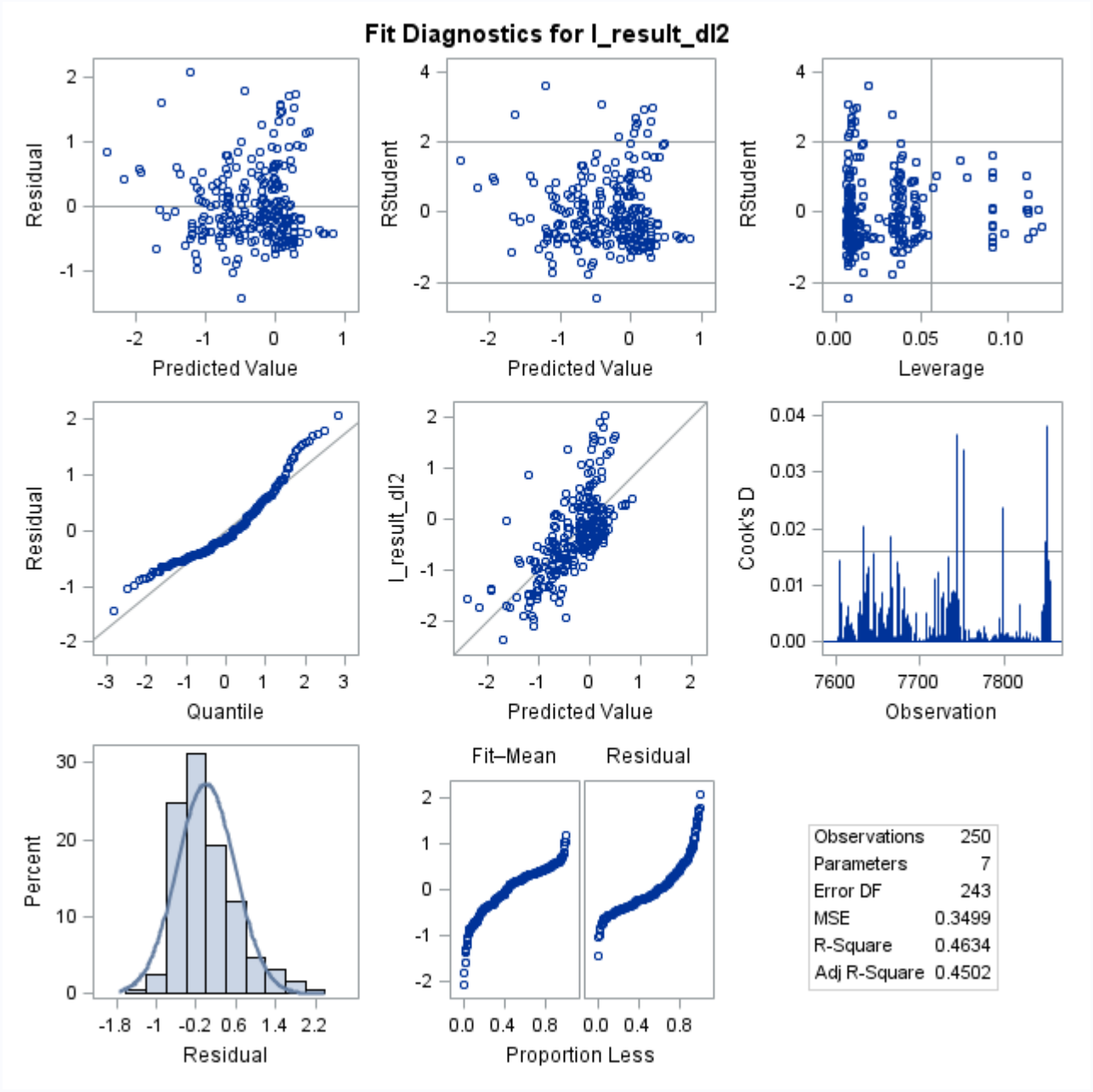
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

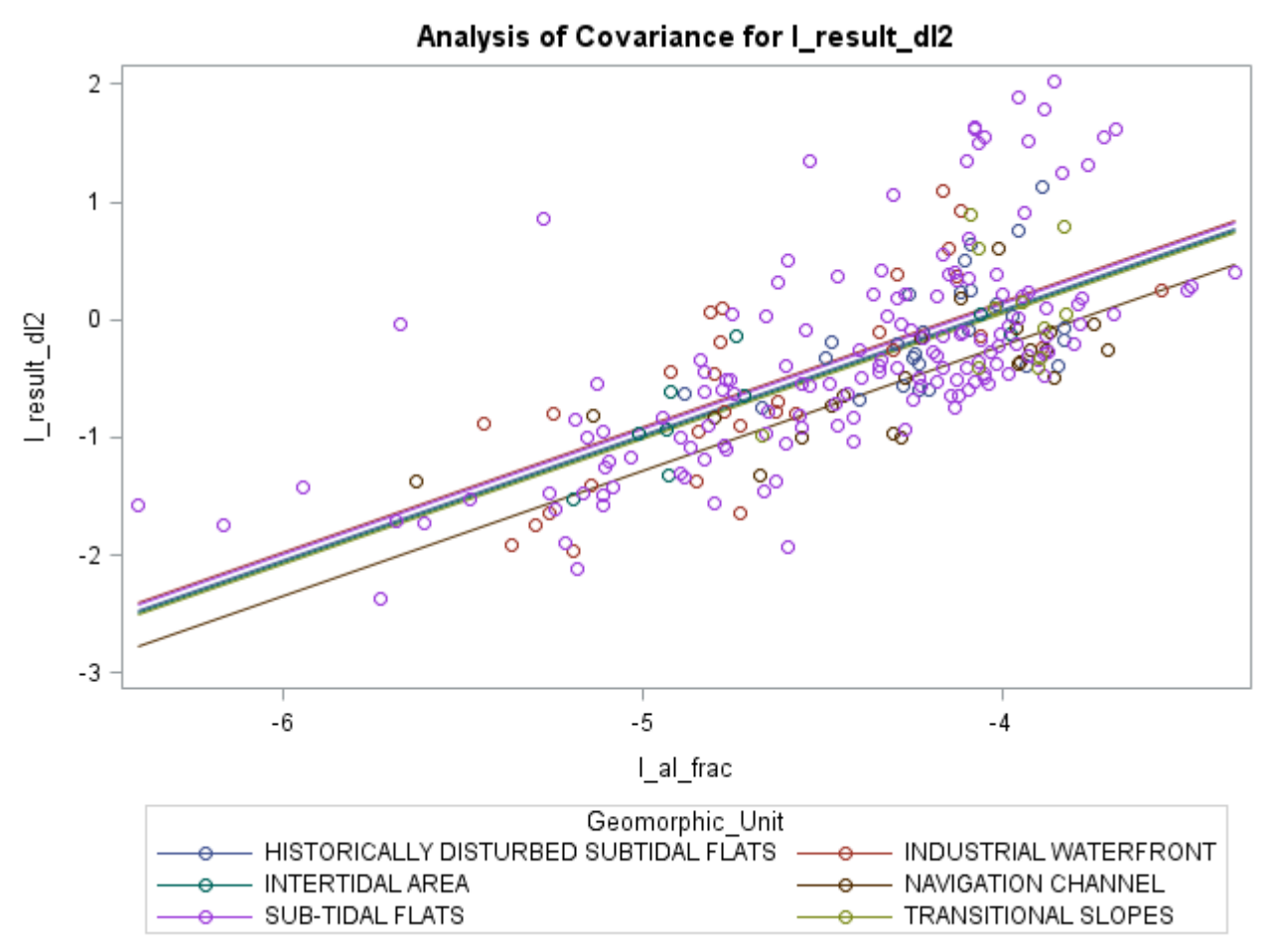
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	73.4300231	12.2383372	34.98	<.0001
Error	243	85.0280240	0.3499096		
Corrected Total	249	158.4580470			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.463404	-178.2334	0.591532	-0.331886

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	70.95328144	70.95328144	202.78	<.0001
Geomorphic_Unit	5	2.47674163	0.49534833	1.42	0.2192

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	67.44354642	67.44354642	192.75	<.0001
Geomorphic_Unit	5	2.47674163	0.49534833	1.42	0.2192

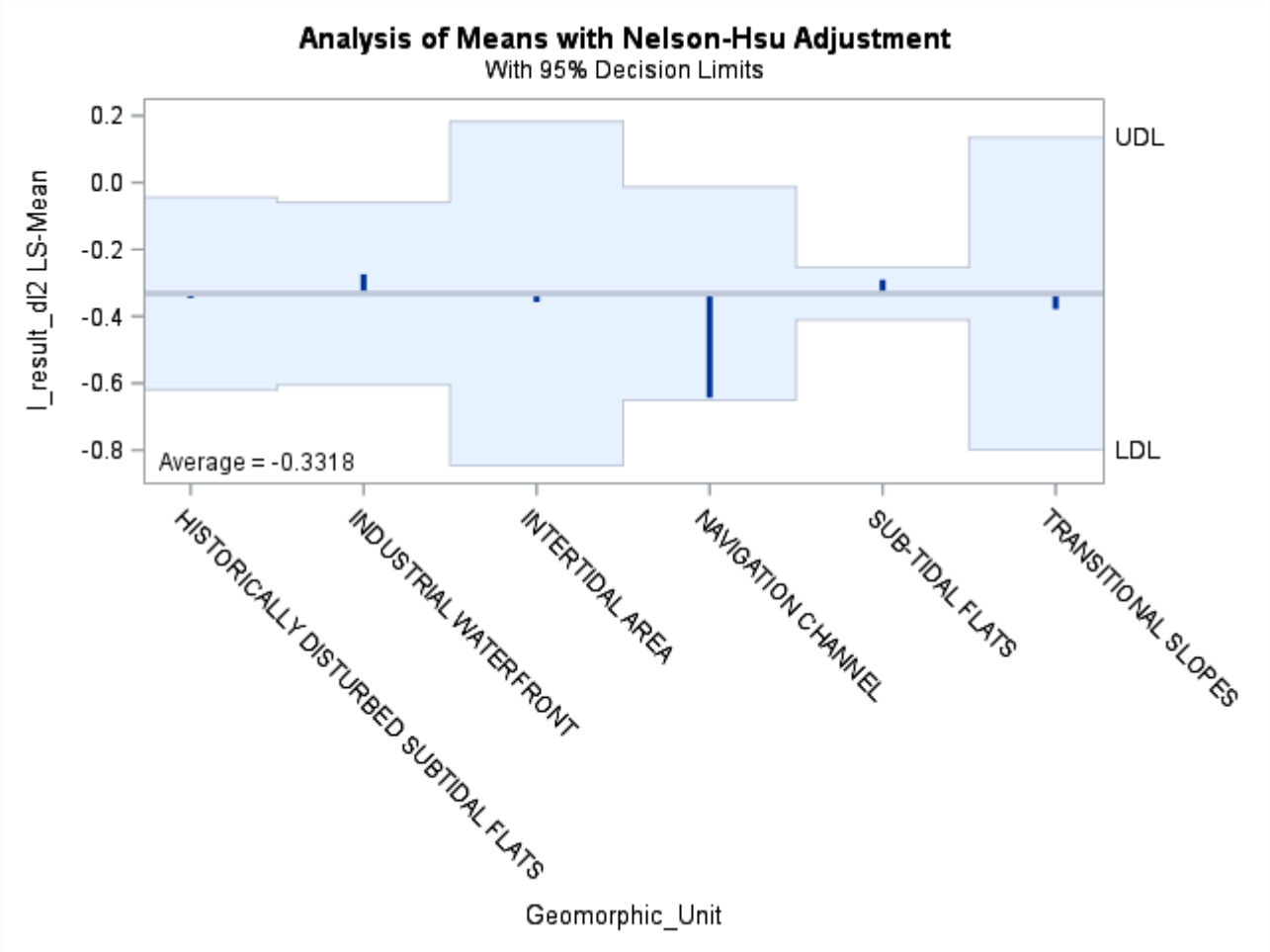

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 250
Parameters 7
Error DF 243
MSE 0.3499
R-Square 0.4634
Adj R-Square 0.4502


Analysis of Covariance for l_result_dl2
l_result_dl2
2
1
0
-1
-2
-3
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INTERTIDAL AREA
SUB-TIDAL FLATS
INDUSTRIAL WATERFRONT
NAVIGATION CHANNEL
TRANSITIONAL SLOPES

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Selenium

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.34580826	1.0000
INDUSTRIAL WATERFRONT	-0.27403114	0.9878
INTERTIDAL AREA	-0.35716751	1.0000
NAVIGATION CHANNEL	-0.64320940	0.0592
SUB-TIDAL FLATS	-0.29063556	0.6296
TRANSITIONAL SLOPES	-0.37842341	0.9997


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
0.2
0.0
-0.2
-0.4
-0.6
-0.8
UDL
LDL
Average = -0.3318
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Selenium

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	-0.34580826	1
INDUSTRIAL WATERFRONT	-0.27403114	2
INTERTIDAL AREA	-0.35716751	3
NAVIGATION CHANNEL	-0.64320940	4
SUB-TIDAL FLATS	-0.29063556	5
TRANSITIONAL SLOPES	-0.37842341	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9978	1.0000	0.5006	0.9979	1.0000
2	0.9978		0.9991	0.2477	1.0000	0.9966
3	1.0000	0.9991		0.8324	0.9995	1.0000
4	0.5006	0.2477	0.8324		0.1011	0.8328
5	0.9979	1.0000	0.9995	0.1011		0.9972
6	1.0000	0.9966	1.0000	0.8328	0.9972	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

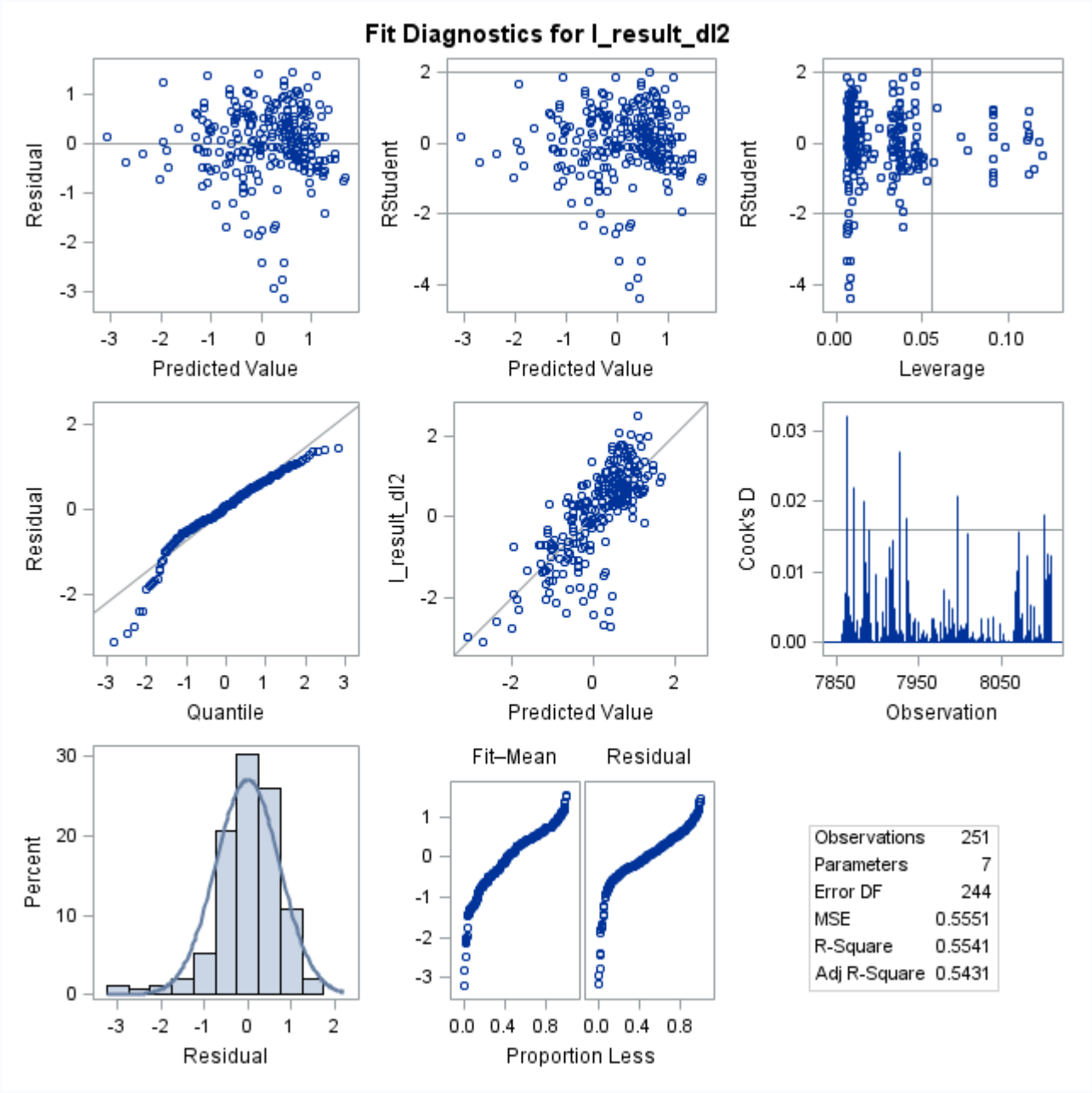
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

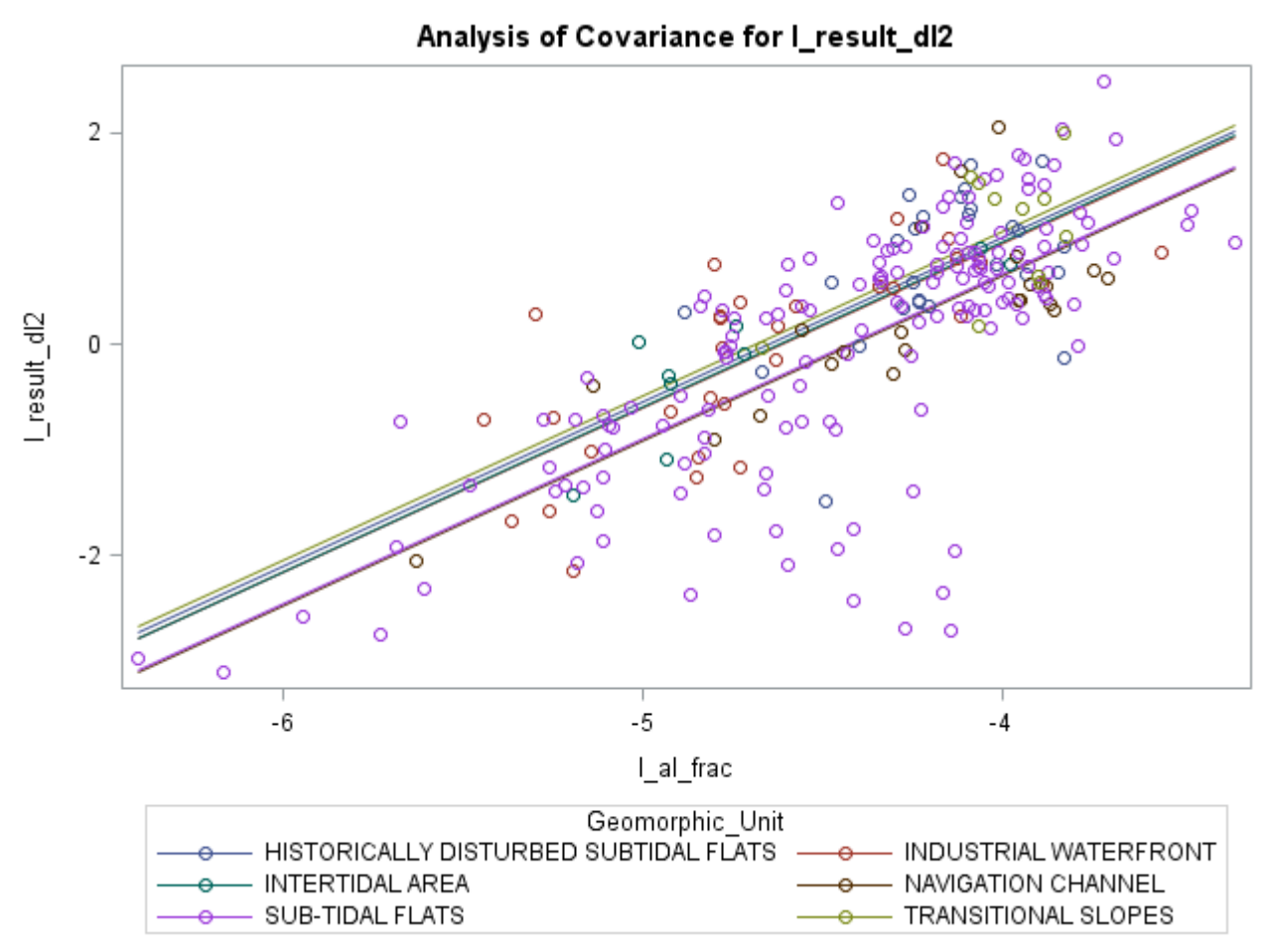
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	168.2814329	28.0469055	50.53	<.0001
Error	244	135.4439344	0.5550981		
Corrected Total	250	303.7253673			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.554058	573.9893	0.745049	0.129802

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	162.3073790	162.3073790	292.39	<.0001
Geomorphic_Unit	5	5.9740538	1.1948108	2.15	0.0600

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	144.3616193	144.3616193	260.07	<.0001
Geomorphic_Unit	5	5.9740538	1.1948108	2.15	0.0600

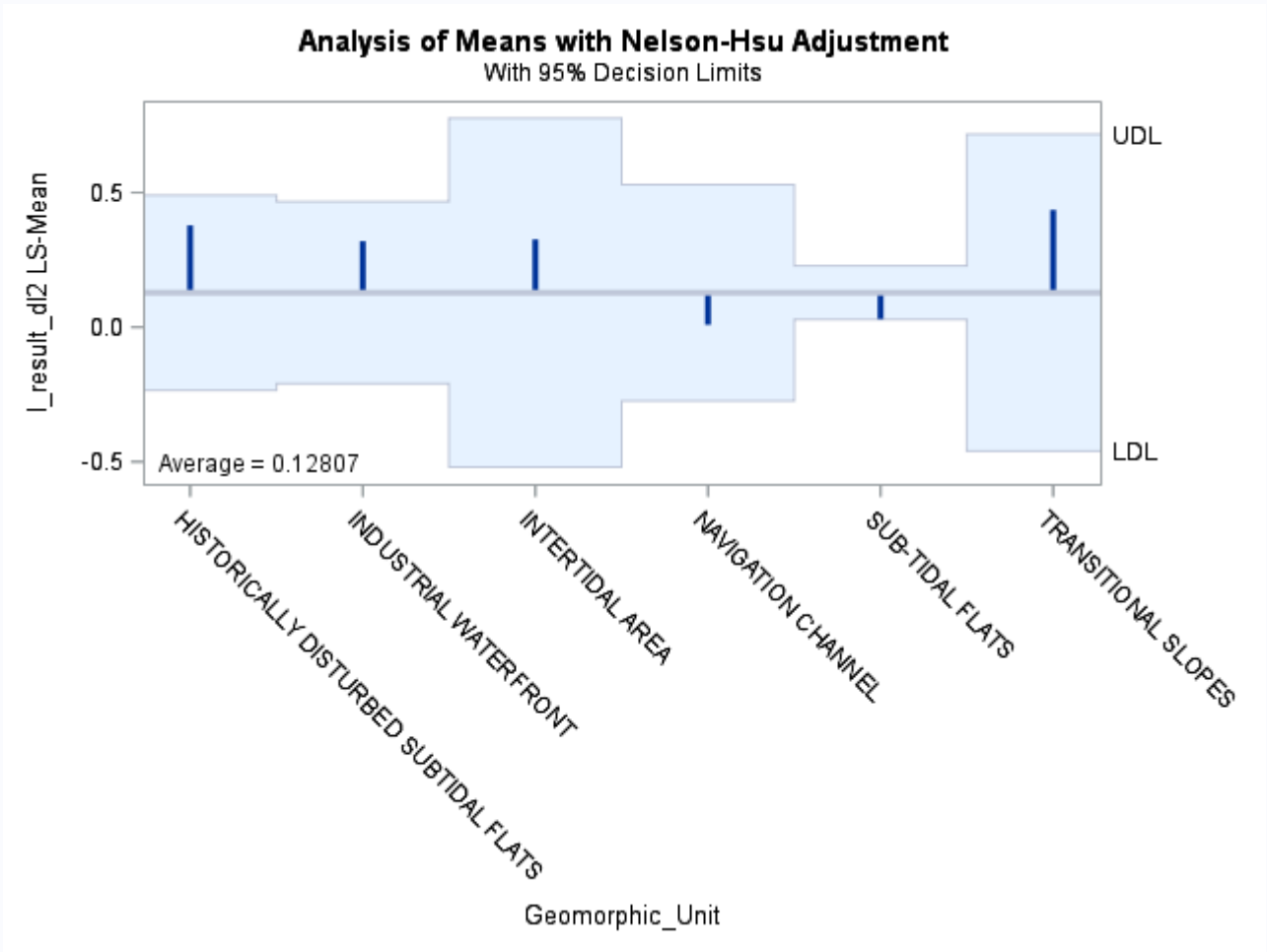

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.5551
R-Square 0.5541
Adj R-Square 0.5431


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INTERTIDAL AREA
SUB-TIDAL FLATS
INDUSTRIAL WATERFRONT
NAVIGATION CHANNEL
TRANSITIONAL SLOPES

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.37816542	0.3274
INDUSTRIAL WATERFRONT	0.31947574	0.5439
INTERTIDAL AREA	0.32616161	0.9406
NAVIGATION CHANNEL	0.00881803	0.9473
SUB-TIDAL FLATS	0.03008477	0.0567
TRANSITIONAL SLOPES	0.43580144	0.6262


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
0.5
0.0
-0.5
UDL
LDL
Average = 0.12807
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	0.37816542	1
INDUSTRIAL WATERFRONT	0.31947574	2
INTERTIDAL AREA	0.32616161	3
NAVIGATION CHANNEL	0.00881803	4
SUB-TIDAL FLATS	0.03008477	5
TRANSITIONAL SLOPES	0.43580144	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9997	1.0000	0.5167	0.2368	0.9999
2	0.9997		1.0000	0.6835	0.3765	0.9981
3	1.0000	1.0000		0.8949	0.8593	0.9995
4	0.5167	0.6835	0.8949		1.0000	0.6347
5	0.2368	0.3765	0.8593	1.0000		0.5206
6	0.9999	0.9981	0.9995	0.6347	0.5206	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
Geomorphic_Unit	6	HISTORICALLY DISTURBED SUBTIDAL FLATS INDUSTRIAL WATERFRONT INTERTIDAL AREA NAVIGATION CHANNEL SUB-TIDAL FLATS TRANSITIONAL SLOPES

Number of Observations Read	251
Number of Observations Used	251

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure

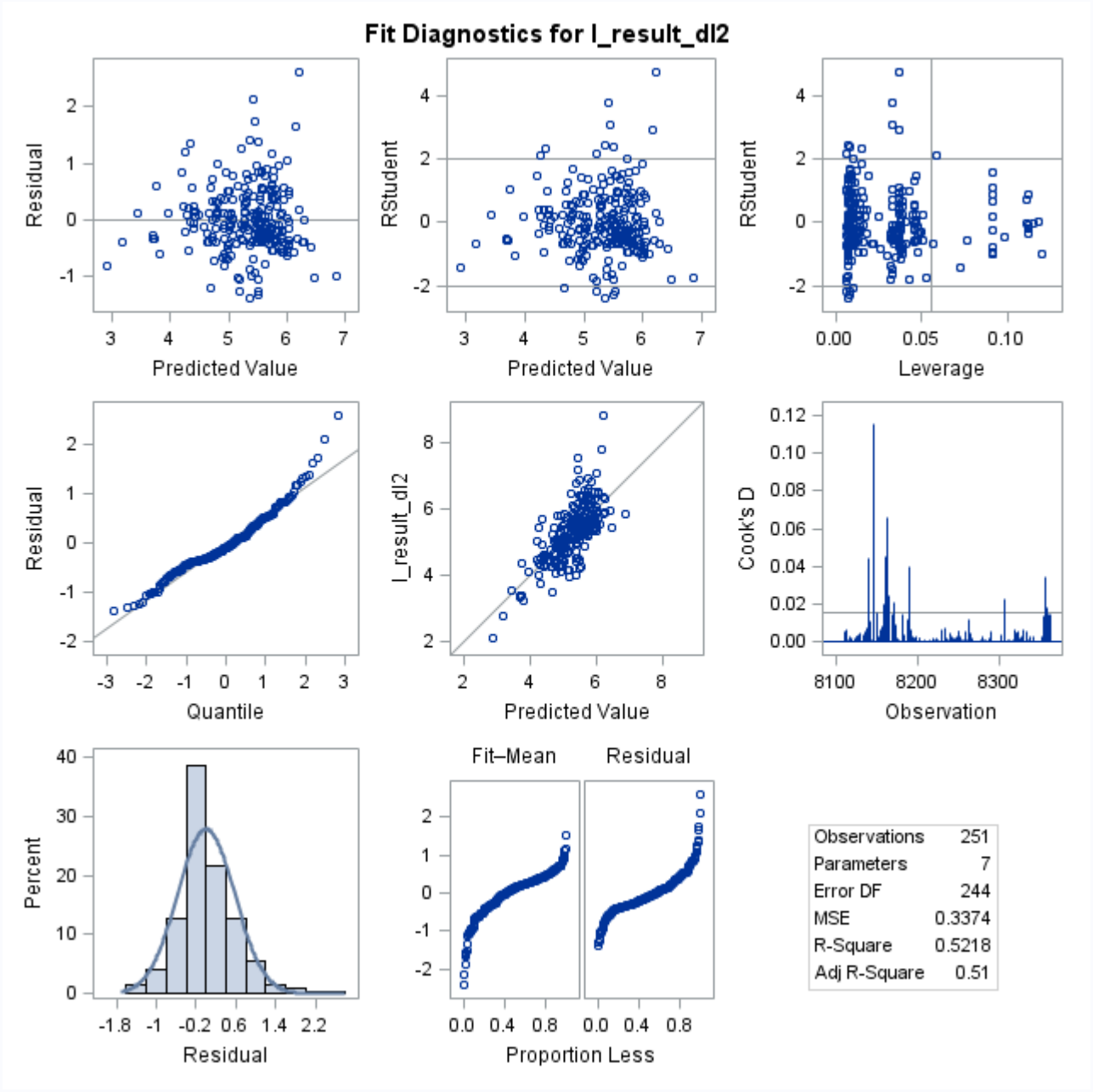
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

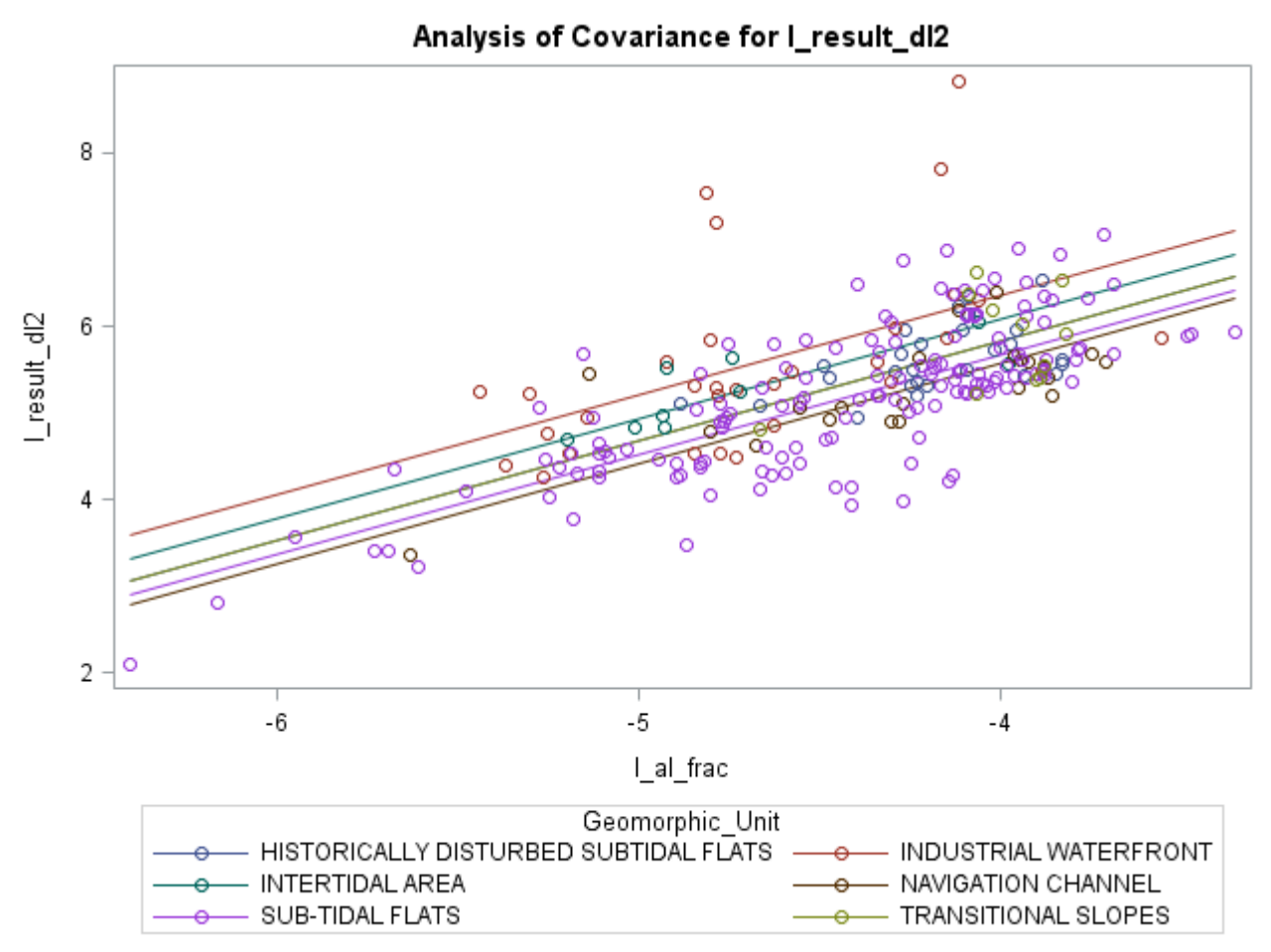
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	89.8336873	14.9722812	44.37	<.0001
Error	244	82.3351591	0.3374392		
Corrected Total	250	172.1688464			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.521777	10.92032	0.580895	5.319397

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	76.50458993	76.50458993	226.72	<.0001
Geomorphic_Unit	5	13.32909739	2.66581948	7.90	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	79.53268954	79.53268954	235.69	<.0001
Geomorphic_Unit	5	13.32909739	2.66581948	7.90	<.0001

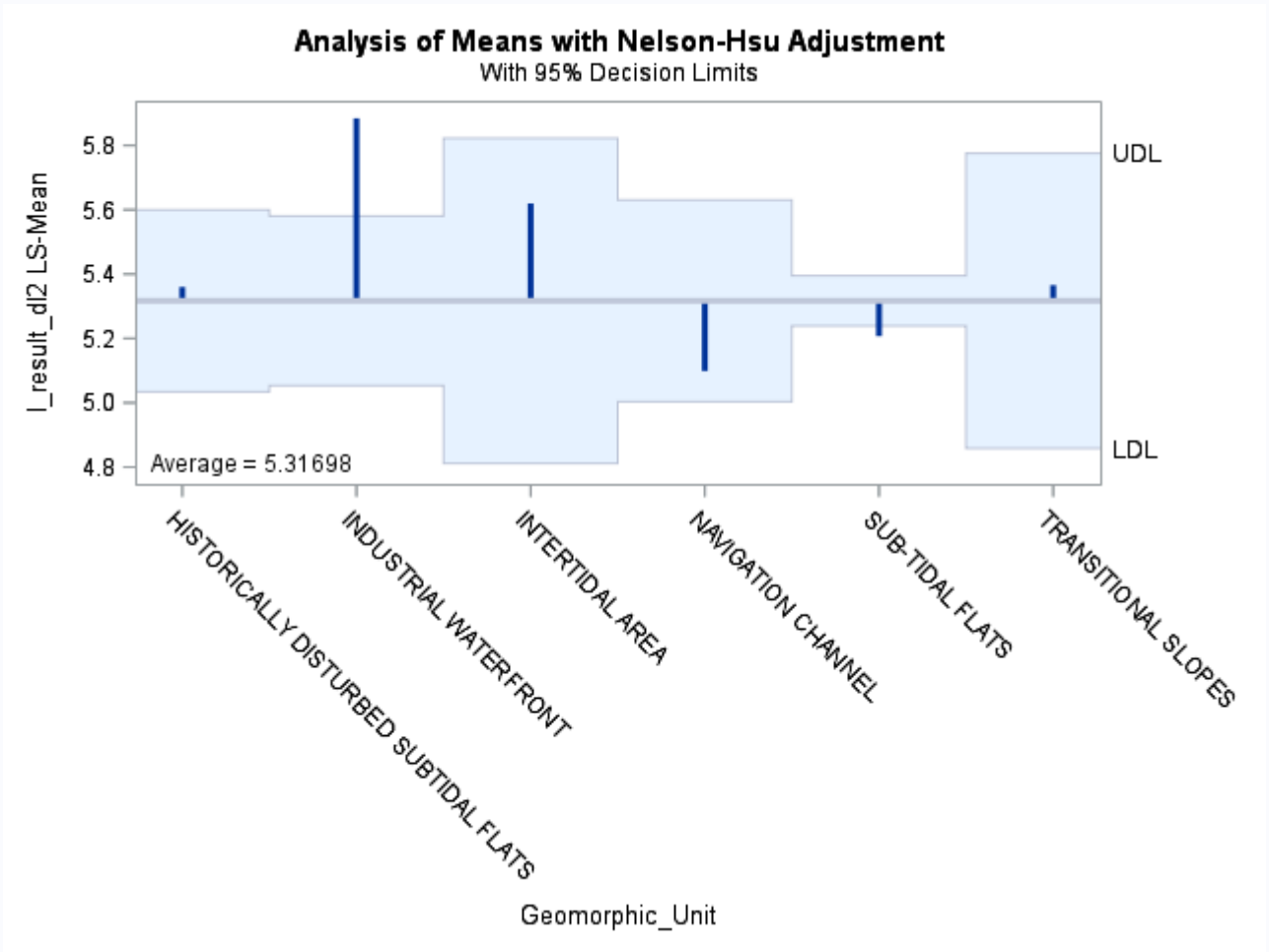

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 251
Parameters 7
Error DF 244
MSE 0.3374
R-Square 0.5218
Adj R-Square 0.51


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
-6
-5
-4
l_al_frac
Geomorphic_Unit
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

Geomorphic_Unit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.35993640	0.9974
INDUSTRIAL WATERFRONT	5.88429929	<.0001
INTERTIDAL AREA	5.61945227	0.4840
NAVIGATION CHANNEL	5.09875834	0.3173
SUB-TIDAL FLATS	5.20706455	0.0014
TRANSITIONAL SLOPES	5.36568980	0.9995


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
5.8
5.6
5.4
5.2
5.0
4.8
UDL
LDL
Average = 5.31698
HISTORICALLY DISTURBED SUBTIDAL FLATS
INDUSTRIAL WATERFRONT
INTERTIDAL AREA
NAVIGATION CHANNEL
SUB-TIDAL FLATS
TRANSITIONAL SLOPES
Geomorphic_Unit

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by geomorphic_unit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

Geomorphic_Unit	l_result_dl2 LSMEAN	LSMEAN Number
HISTORICALLY DISTURBED SUBTIDAL FLATS	5.35993640	1
INDUSTRIAL WATERFRONT	5.88429929	2
INTERTIDAL AREA	5.61945227	3
NAVIGATION CHANNEL	5.09875834	4
SUB-TIDAL FLATS	5.20706455	5
TRANSITIONAL SLOPES	5.36568980	6

Least Squares Means for effect Geomorphic_Unit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0125	0.8633	0.6228	0.8142	1.0000
2	0.0125		0.8347	<.0001	<.0001	0.1359
3	0.8633	0.8347		0.2233	0.3139	0.9322
4	0.6228	<.0001	0.2233		0.9649	0.8168
5	0.8142	<.0001	0.3139	0.9649		0.9551
6	1.0000	0.1359	0.9322	0.8168	0.9551	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

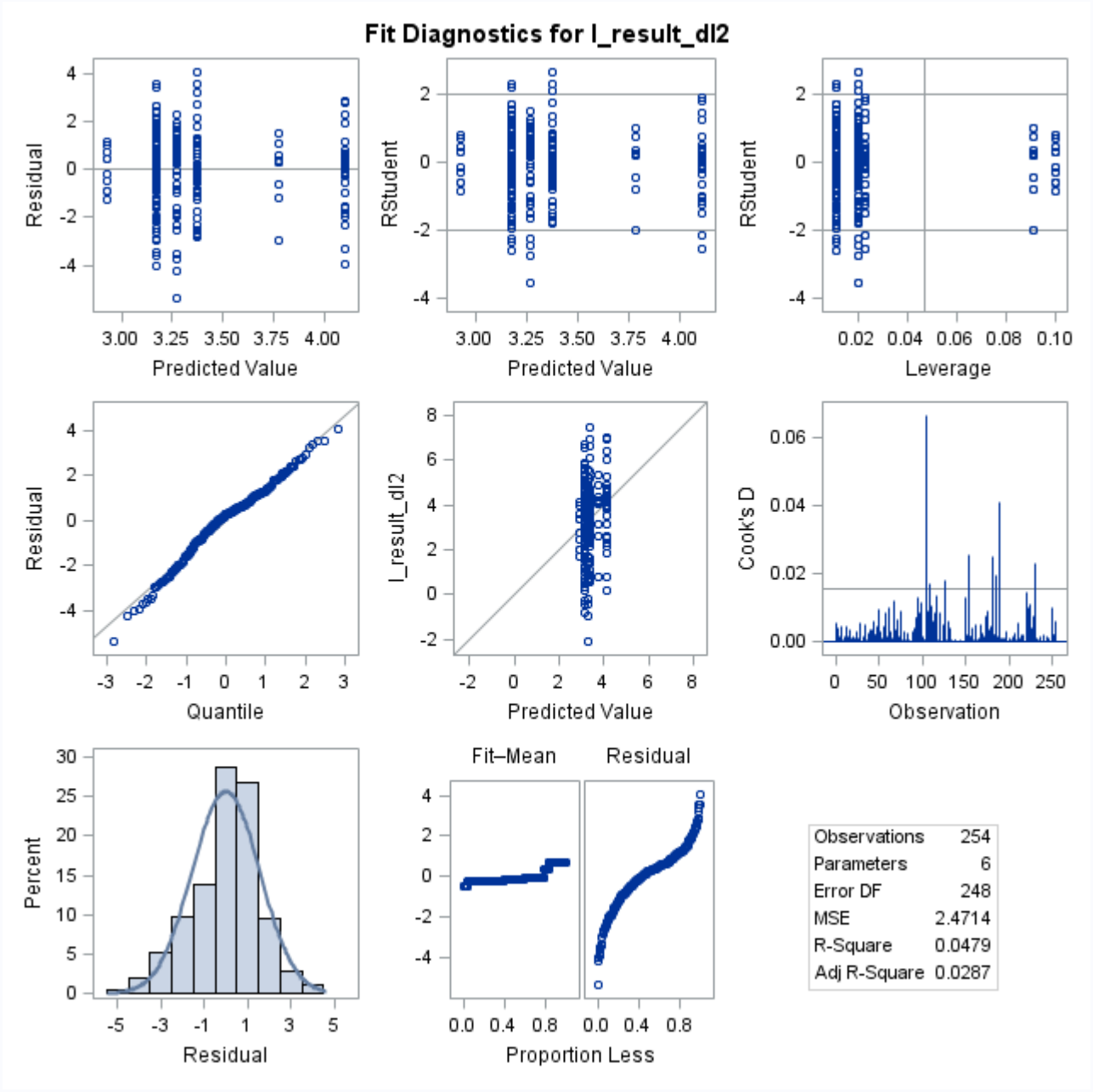
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	30.8160552	6.1632110	2.49	0.0317
Error	248	612.9026685	2.4713817		
Corrected Total	253	643.7187236			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.047872	46.15907	1.572063	3.405751

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	30.81605516	6.16321103	2.49	0.0317

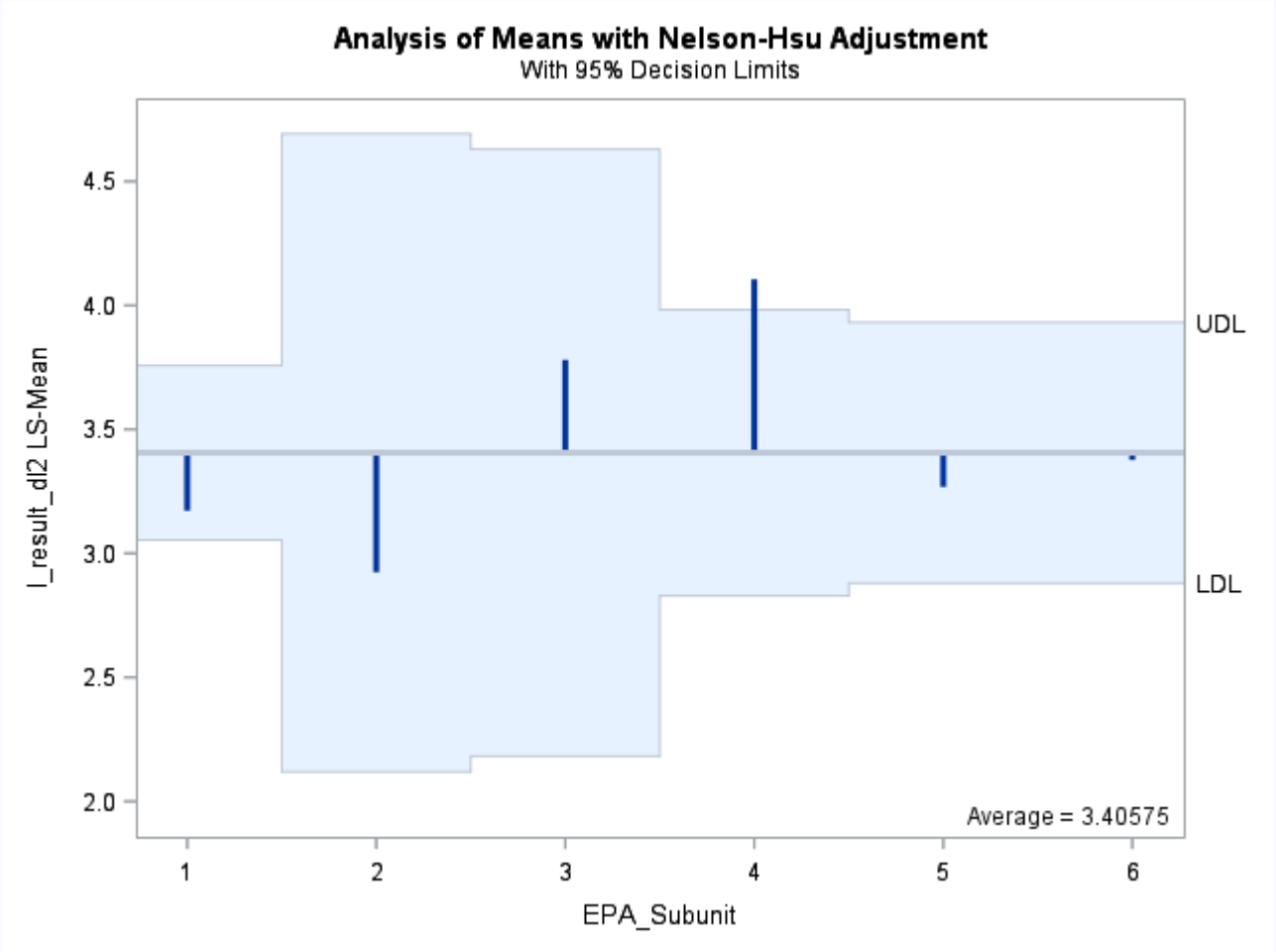
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	30.81605516	6.16321103	2.49	0.0317


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 2.4714
R-Square 0.0479
Adj R-Square 0.0287

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	3.17195456	0.3684
2	2.92390156	0.8710
3	3.78022359	0.9408
4	4.10530811	0.0091
5	3.26818750	0.9693
6	3.37651502	1.0000



Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	3.17195456	1
2	2.92390156	2
3	3.78022359	3
4	4.10530811	4
5	3.26818750	5
6	3.37651502	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9970	0.8310	0.0190	0.9993	0.9770
2	0.9970		0.8133	0.2700	0.9885	0.9615
3	0.8310	0.8133		0.9901	0.9246	0.9721
4	0.0190	0.2700	0.9901		0.1112	0.2282
5	0.9993	0.9885	0.9246	0.1112		0.9994
6	0.9770	0.9615	0.9721	0.2282	0.9994	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	87.2614	17.4523	1.24	0.2922
Error	248	3498.2	14.1057		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.37	0.0102
Error	52.2095		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	3.17195456	1.71412478
2	**10**	2.92390156	0.87045828
3	**11**	3.78022359	1.23264087
4	**43**	4.10530811	1.34143445
5	**50**	3.26818750	1.66929430
6	**50**	3.37651502	1.54701862

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

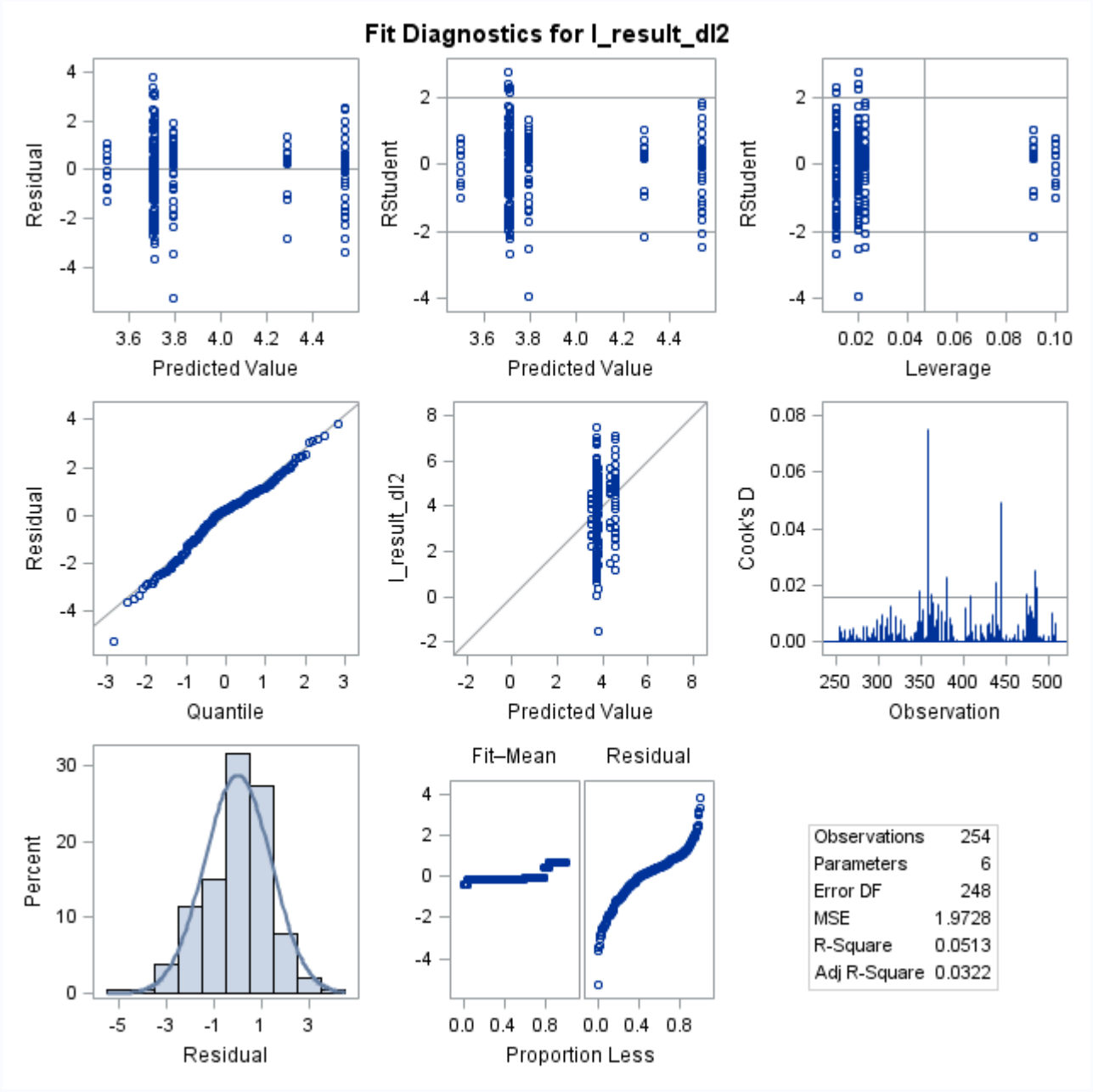
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	26.4626460	5.2925292	2.68	0.0221
Error	248	489.2578223	1.9728138		
Corrected Total	253	515.7204683			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.051312	36.18165	1.404569	3.881993

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	26.46264601	5.29252920	2.68	0.0221

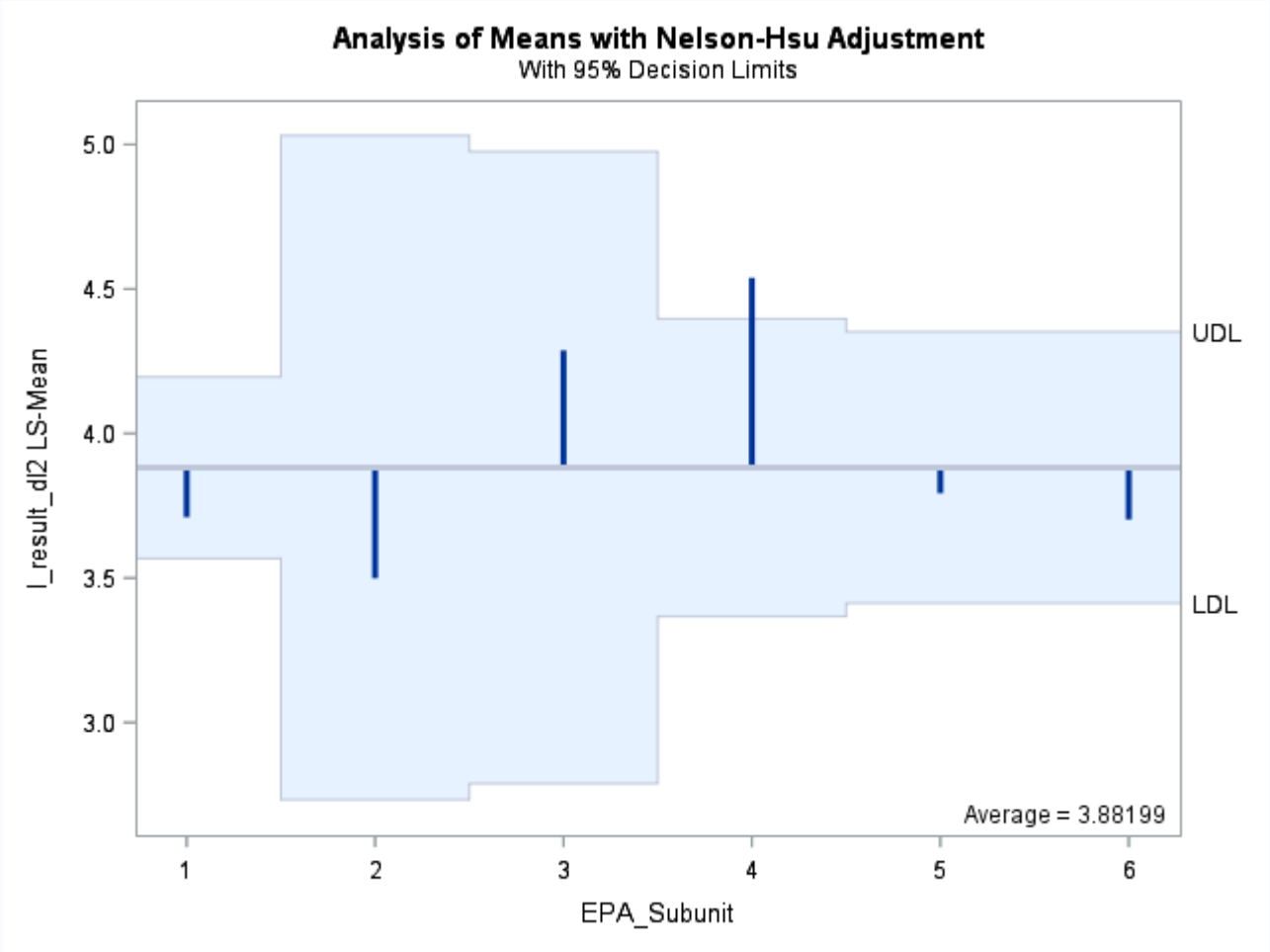
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	26.46264601	5.29252920	2.68	0.0221


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.9728
R-Square 0.0513
Adj R-Square 0.0322

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	3.71041881	0.5838
2	3.49916648	0.9171
3	4.28742237	0.8758
4	4.53848215	0.0053
5	3.79328852	0.9928
6	3.70232051	0.8611


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
5.0
4.5
4.0
3.5
3.0
l_result_dl2 LS-Mean
UDL
LDL
Average = 3.88199
1
2
3
4
5
6
EPA_Subunit

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	3.71041881	1
2	3.49916648	2
3	4.28742237	3
4	4.53848215	4
5	3.79328852	5
6	3.70232051	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9976	0.7924	0.0204	0.9994	1.0000
2	0.9976		0.7934	0.2867	0.9906	0.9984
3	0.7924	0.7934		0.9950	0.8980	0.8111
4	0.0204	0.2867	0.9950		0.1137	0.0514
5	0.9994	0.9906	0.8980	0.1137		0.9995
6	1.0000	0.9984	0.8111	0.0514	0.9995	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	43.4250	8.6850	0.91	0.4734
Error	248	2360.2	9.5170		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.38	0.0103
Error	51.8501		

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	3.71041881	1.51988245
2	**10**	3.49916648	0.77594632
3	**11**	4.28742237	1.22380603
4	**43**	4.53848215	1.24143660
5	**50**	3.79328852	1.38283331
6	**50**	3.70232051	1.46273497

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

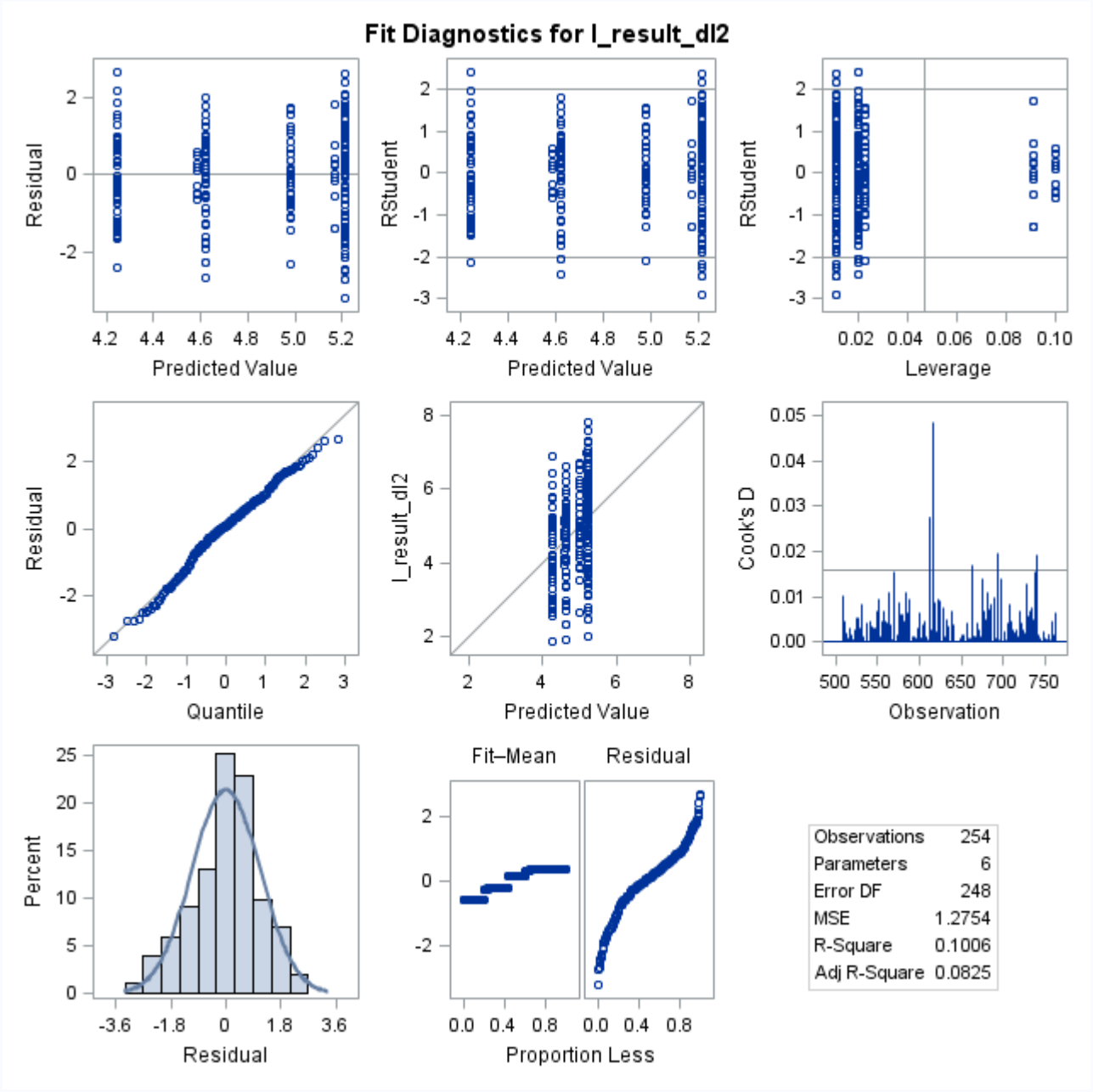
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	35.3833344	7.0766669	5.55	<.0001
Error	248	316.3088488	1.2754389		
Corrected Total	253	351.6921832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.100609	23.34342	1.129353	4.837994

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.38333441	7.07666688	5.55	<.0001

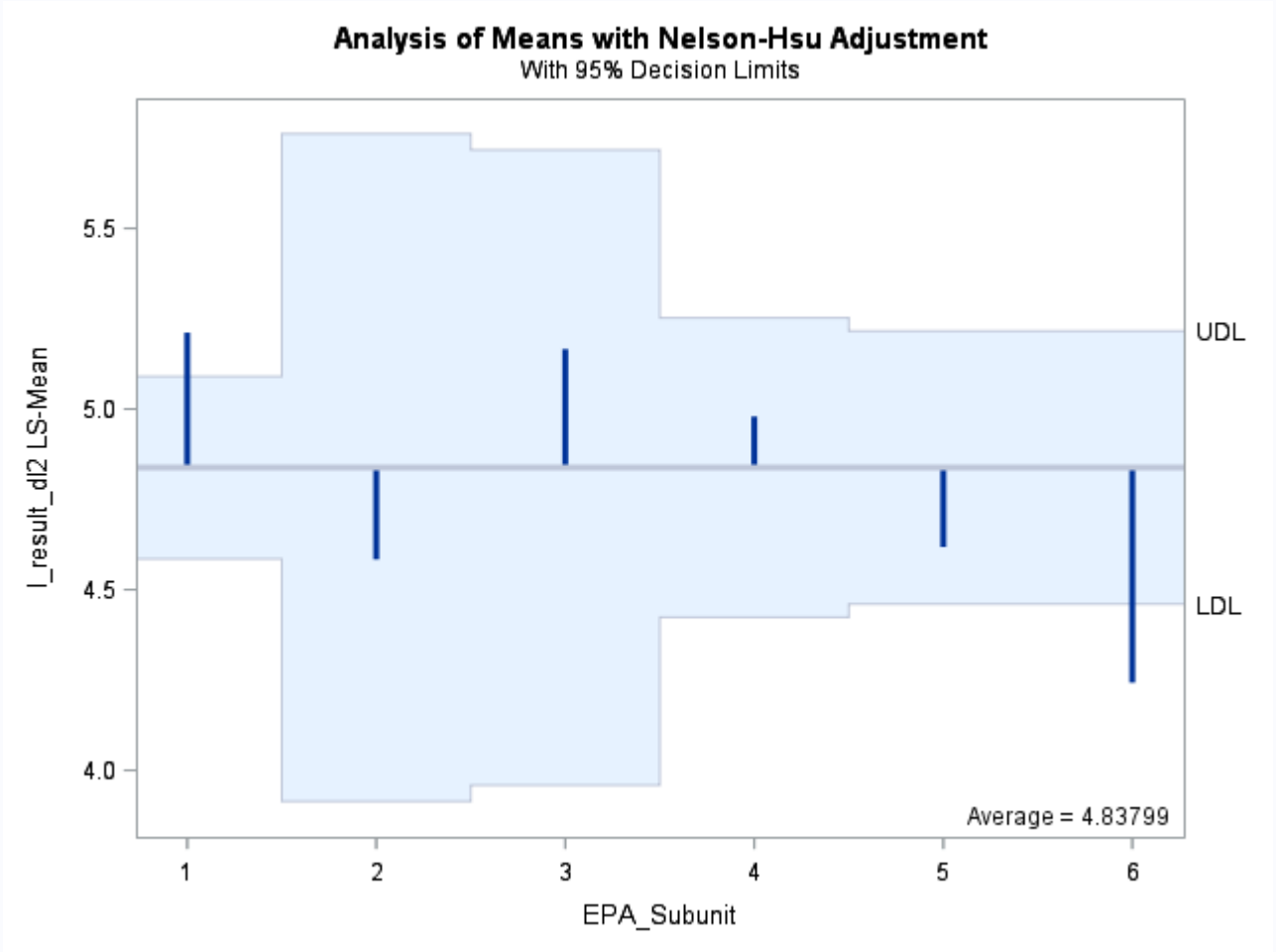
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.38333441	7.07666688	5.55	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.2754
R-Square 0.1006
Adj R-Square 0.0825

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.21149630	0.0007
2	4.58377547	0.9619
3	5.16597099	0.8730
4	4.97940013	0.9090
5	4.61810150	0.5164
6	4.24266219	0.0003



PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.21149630	1
2	4.58377547	2
3	5.16597099	3
4	4.97940013	4
5	4.61810150	5
6	4.24266219	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5546	1.0000	0.8775	0.0371	<.0001
2	0.5546		0.8462	0.9183	1.0000	0.9529
3	1.0000	0.8462		0.9965	0.6921	0.1419
4	0.8775	0.9183	0.9965		0.6399	0.0233
5	0.0371	1.0000	0.6921	0.6399		0.5581
6	<.0001	0.9529	0.1419	0.0233	0.5581	

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	57.7967	11.5593	4.11	0.0013
Error	248	696.7	2.8092		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	5.51	0.0004
Error	54.9746		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	5.21149630	1.34847937
2	**10**	4.58377547	0.44291474
3	**11**	5.16597099	0.91942509
4	**43**	4.97940013	0.80955114
5	**50**	4.61810150	1.08807302
6	**50**	4.24266219	1.09465916

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

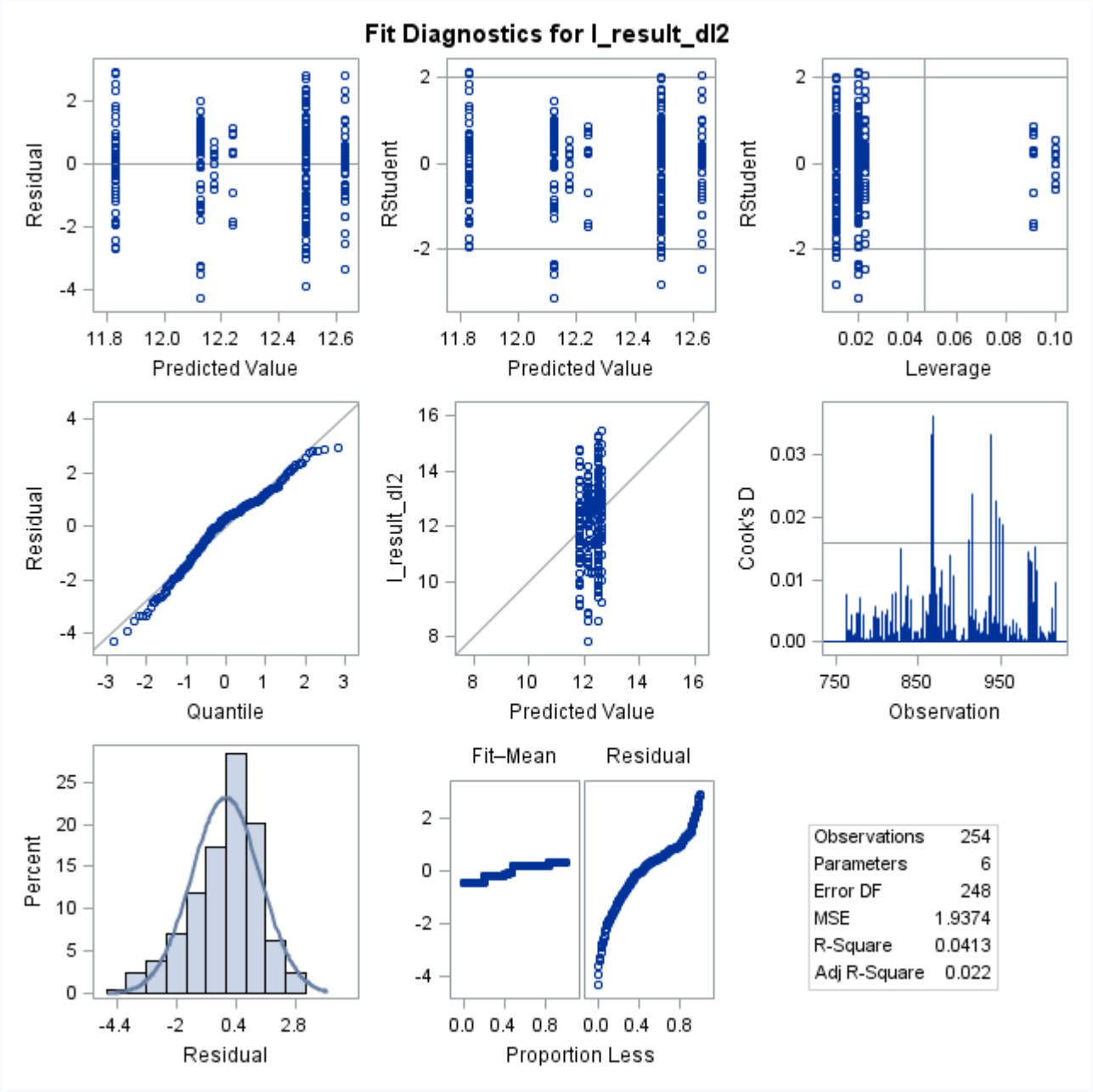
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	20.7098150	4.1419630	2.14	0.0616
Error	248	480.4866307	1.9374461		
Corrected Total	253	501.1964458			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.041321	11.32660	1.391922	12.28896

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.70981503	4.14196301	2.14	0.0616

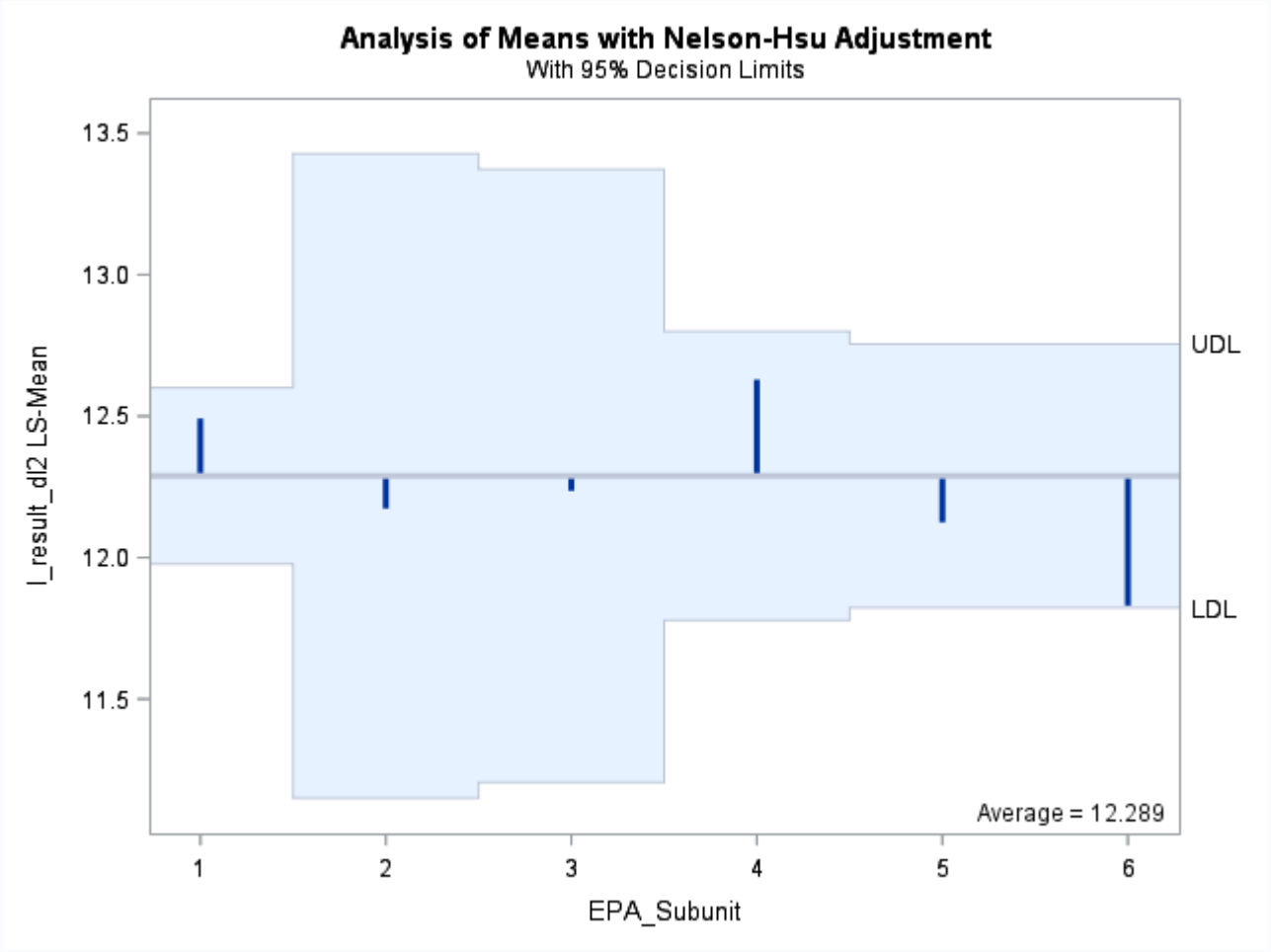
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.70981503	4.14196301	2.14	0.0616


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.9374
R-Square 0.0413
Adj R-Square 0.022

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	12.4917927	0.3908
2	12.1734878	0.9996
3	12.2361341	1.0000
4	12.6291252	0.3668
5	12.1247114	0.8968
6	11.8302974	0.0557



PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	12.4917927	1
2	12.1734878	2
3	12.2361341	3
4	12.6291252	4
5	12.1247114	5
6	11.8302974	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9834	0.9926	0.9948	0.6677	0.0800
2	0.9834		1.0000	0.9378	1.0000	0.9804
3	0.9926	1.0000		0.9606	0.9999	0.9521
4	0.9948	0.9378	0.9606		0.5051	0.0676
5	0.6677	1.0000	0.9999	0.5051		0.8975
6	0.0800	0.9804	0.9521	0.0676	0.8975	

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	63.7126	12.7425	1.66	0.1438
Error	248	1899.0	7.6573		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	2.27	0.0595
Error	56.9007		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	12.4917927	1.50658182
2	**10**	12.1734878	0.48996991
3	**11**	12.2361341	1.08572812
4	**43**	12.6291252	1.20818577
5	**50**	12.1247114	1.52241829
6	**50**	11.8302974	1.35261414

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

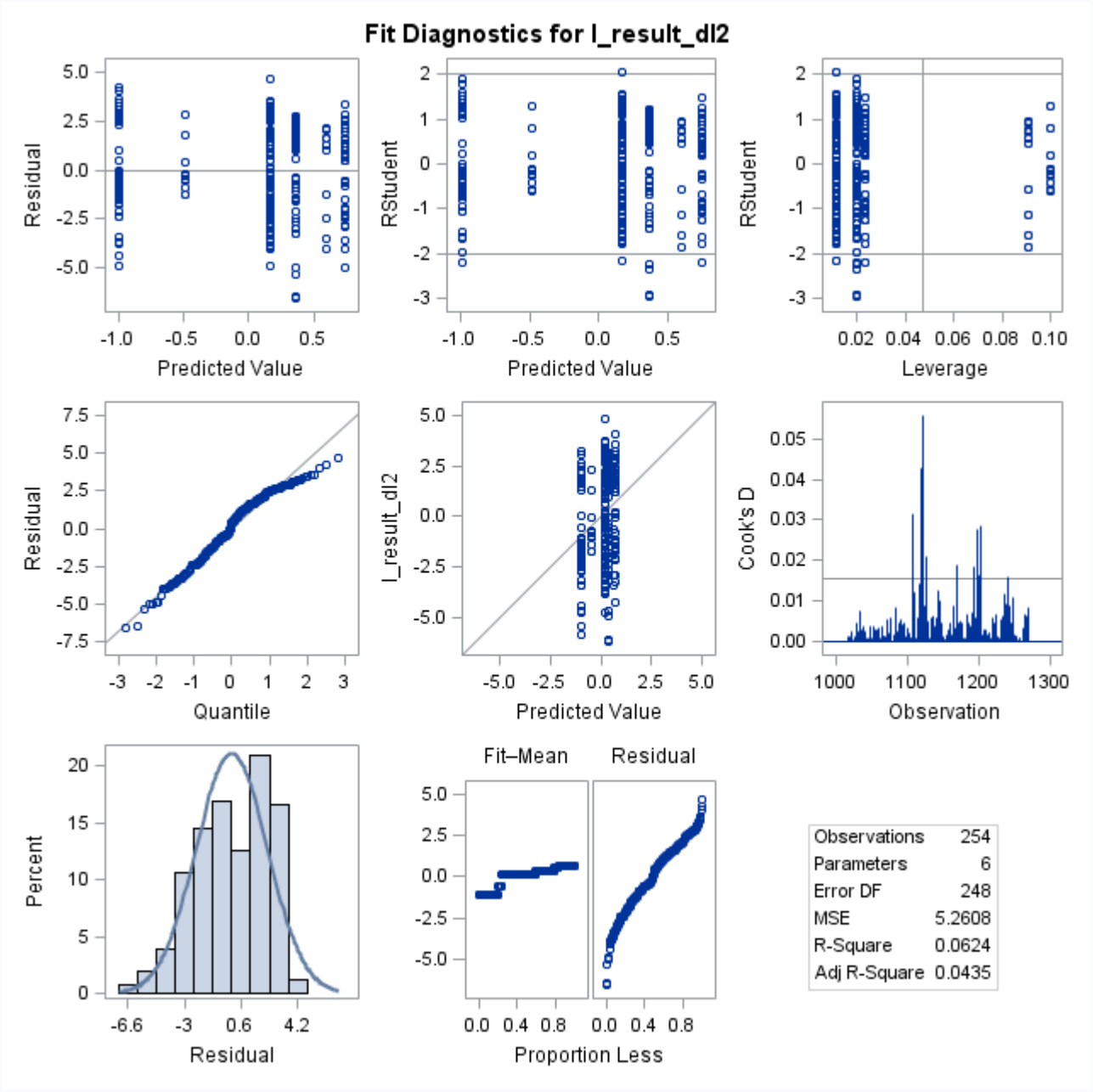
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	86.862771	17.372554	3.30	0.0066
Error	248	1304.667217	5.260755		
Corrected Total	253	1391.529988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.062422	3437.249	2.293634	0.066729

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	86.86277080	17.37255416	3.30	0.0066

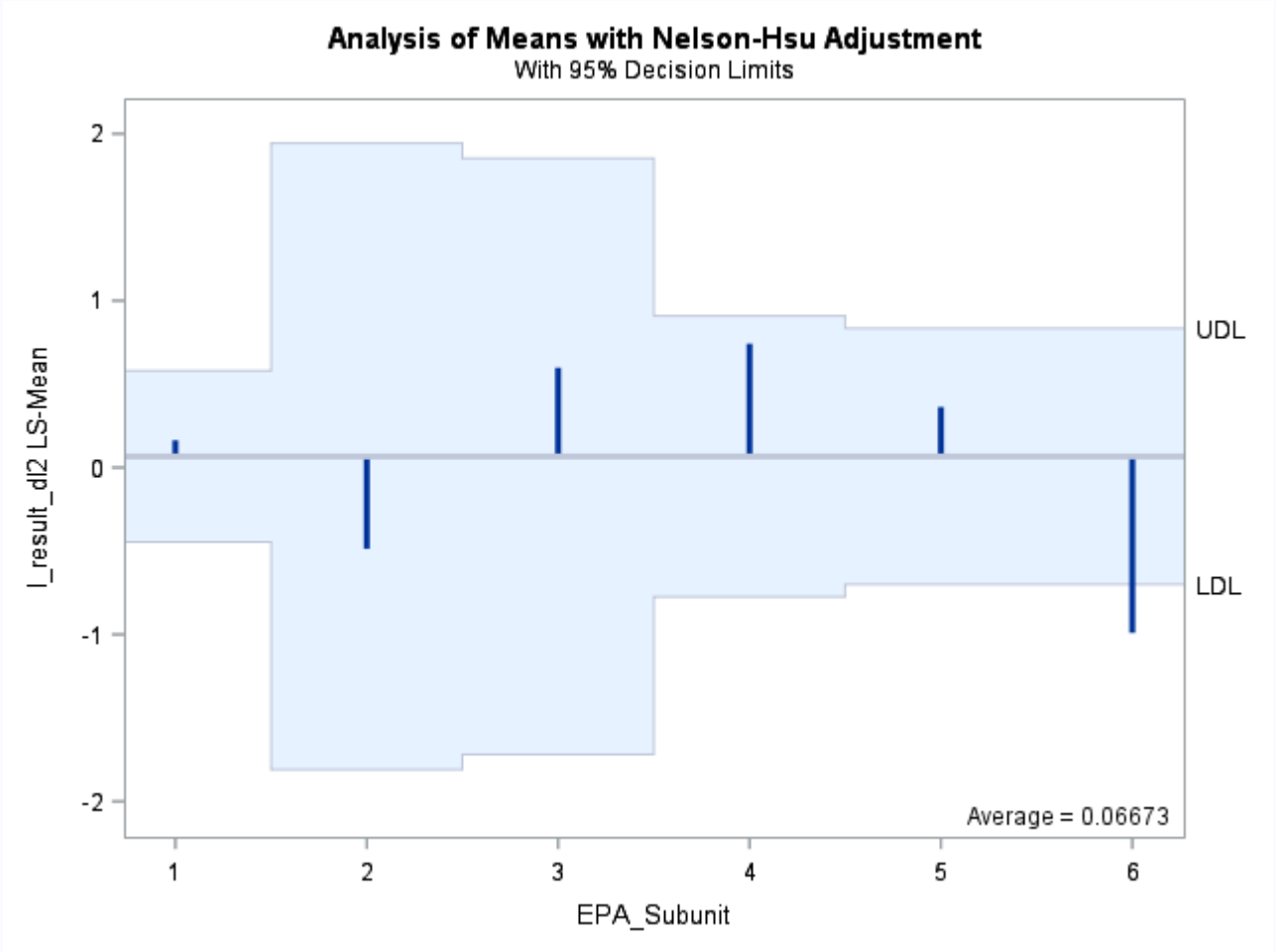
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	86.86277080	17.37255416	3.30	0.0066


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 5.2608
R-Square 0.0624
Adj R-Square 0.0435

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.16339104	0.9929
2	-0.48629366	0.9493
3	0.59801465	0.9472
4	0.74186312	0.1823
5	0.36293359	0.8563
6	-0.99036213	0.0020



PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.16339104	1
2	-0.48629366	2
3	0.59801465	3
4	0.74186312	4
5	0.36293359	5
6	-0.99036213	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9577	0.9914	0.7505	0.9964	0.0528
2	0.9577		0.8882	0.6484	0.8933	0.9883
3	0.9914	0.8882		1.0000	0.9996	0.3015
4	0.7505	0.6484	1.0000		0.9683	0.0046
5	0.9964	0.8933	0.9996	0.9683		0.0402
6	0.0528	0.9883	0.3015	0.0046	0.0402	

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	260.7	52.1398	1.39	0.2296
Error	248	9321.3	37.5857		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.38	0.0103
Error	50.7786		

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	90	0.16339104	2.27418350
2	10	-0.48629366	1.33198915
3	11	0.59801465	2.33806644
4	43	0.74186312	2.06128287
5	50	0.36293359	2.56911176
6	50	-0.99036213	2.35547208

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	253
Number of Observations Used	253

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

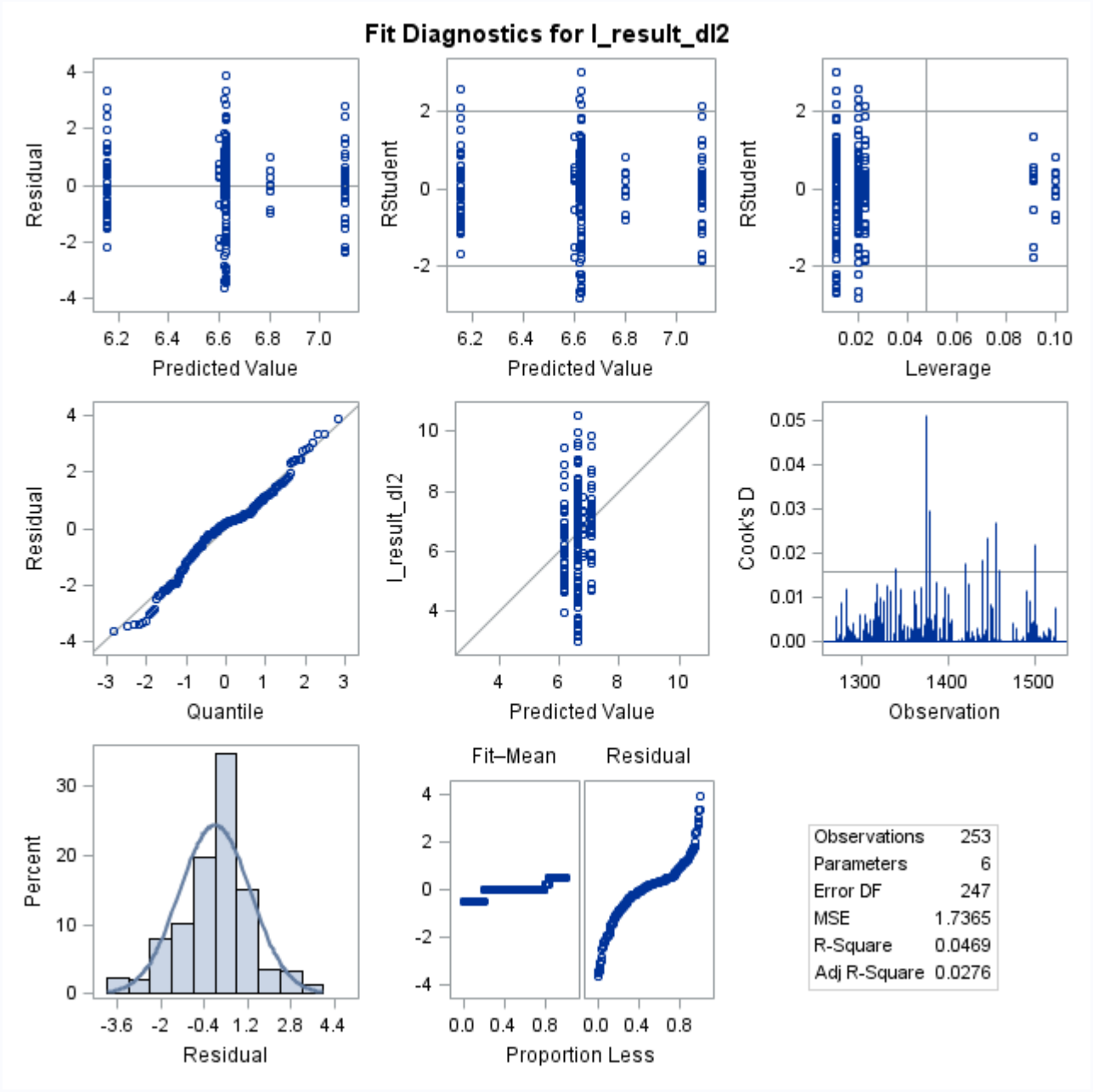
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	21.1137380	4.2227476	2.43	0.0356
Error	247	428.9144708	1.7364958		
Corrected Total	252	450.0282088			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.046916	19.90989	1.317762	6.618627

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	21.11373804	4.22274761	2.43	0.0356

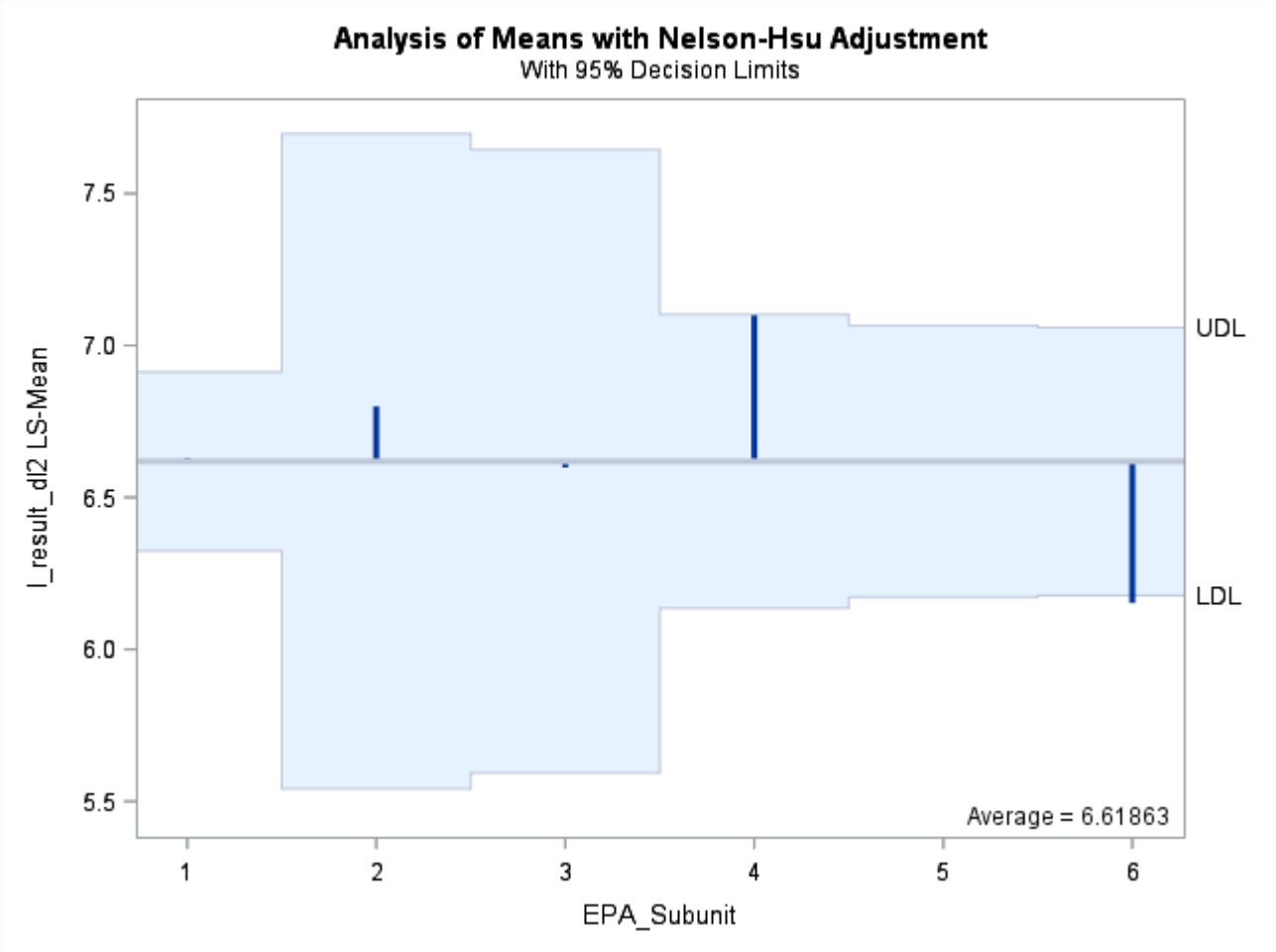
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	21.11373804	4.22274761	2.43	0.0356


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 6
Error DF 247
MSE 1.7365
R-Square 0.0469
Adj R-Square 0.0276

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	6.62830963	1.0000
2	6.79955253	0.9959
3	6.59866344	1.0000
4	7.09896545	0.0522
5	6.62225708	1.0000
6	6.15275676	0.0326



Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	6.62830963	1
2	6.79955253	2
3	6.59866344	3
4	7.09896545	4
5	6.62225708	5
6	6.15275676	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9988	1.0000	0.3884	1.0000	0.3195
2	0.9988		0.9993	0.9872	0.9989	0.7168
3	1.0000	0.9993		0.8712	1.0000	0.9123
4	0.3884	0.9872	0.8712		0.5125	0.0085
5	1.0000	0.9989	1.0000	0.5125		0.4855
6	0.3195	0.7168	0.9123	0.0085	0.4855	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	116.8	23.3667	3.18	0.0084
Error	247	1814.7	7.3470		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.43	0.0093
Error	52.8631		

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	6.62830963	1.61040296
2	**10**	6.79955253	0.62173465
3	**11**	6.59866344	1.15352395
4	**43**	7.09896545	1.05151520
5	**49**	6.62225708	1.21854281
6	**50**	6.15275676	1.13932975

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 253

Number of Observations Used 253

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

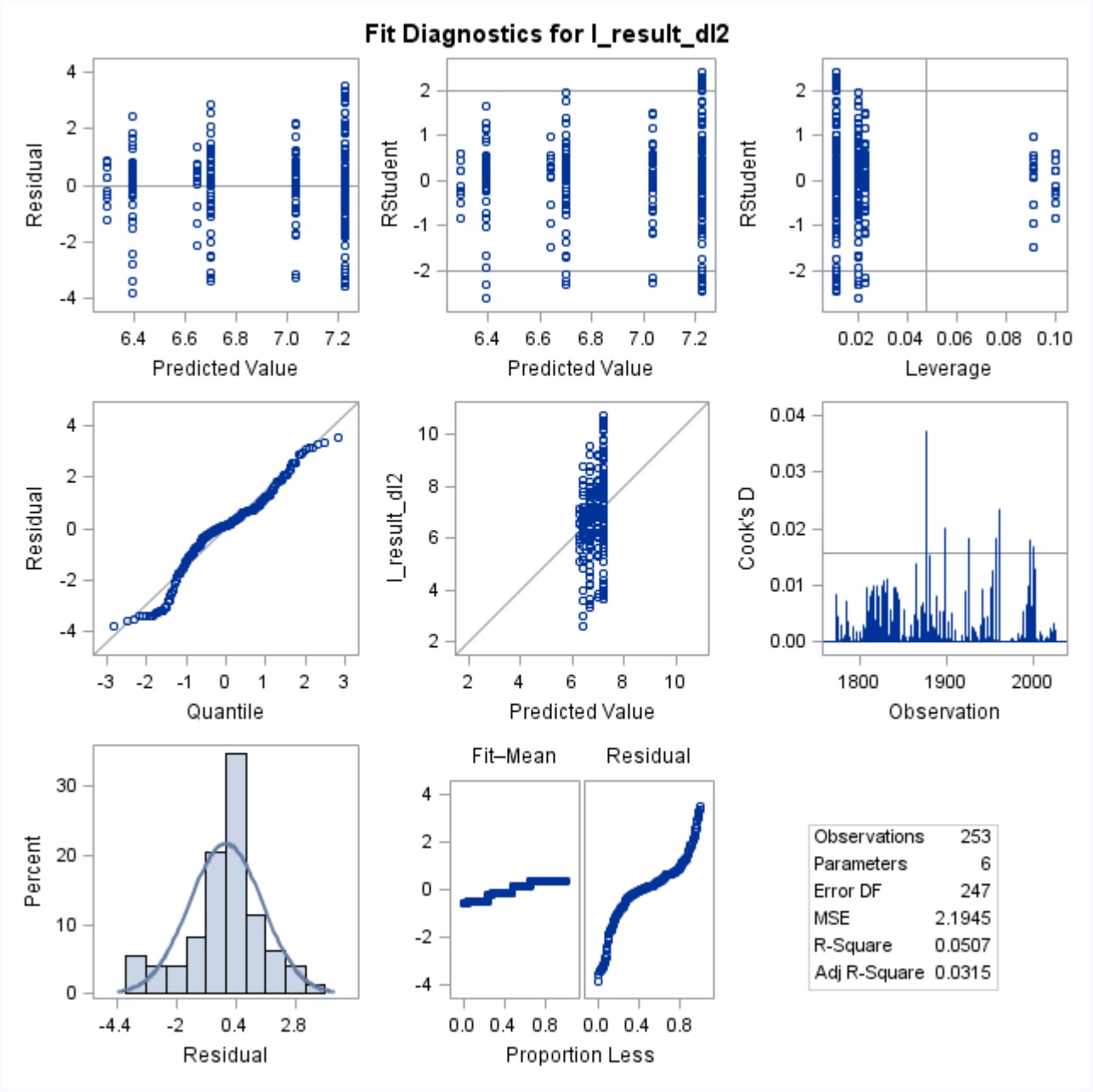
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	28.9330927	5.7866185	2.64	0.0241
Error	247	542.0526849	2.1945453		
Corrected Total	252	570.9857776			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.050672	21.57800	1.481400	6.865325

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	28.93309266	5.78661853	2.64	0.0241

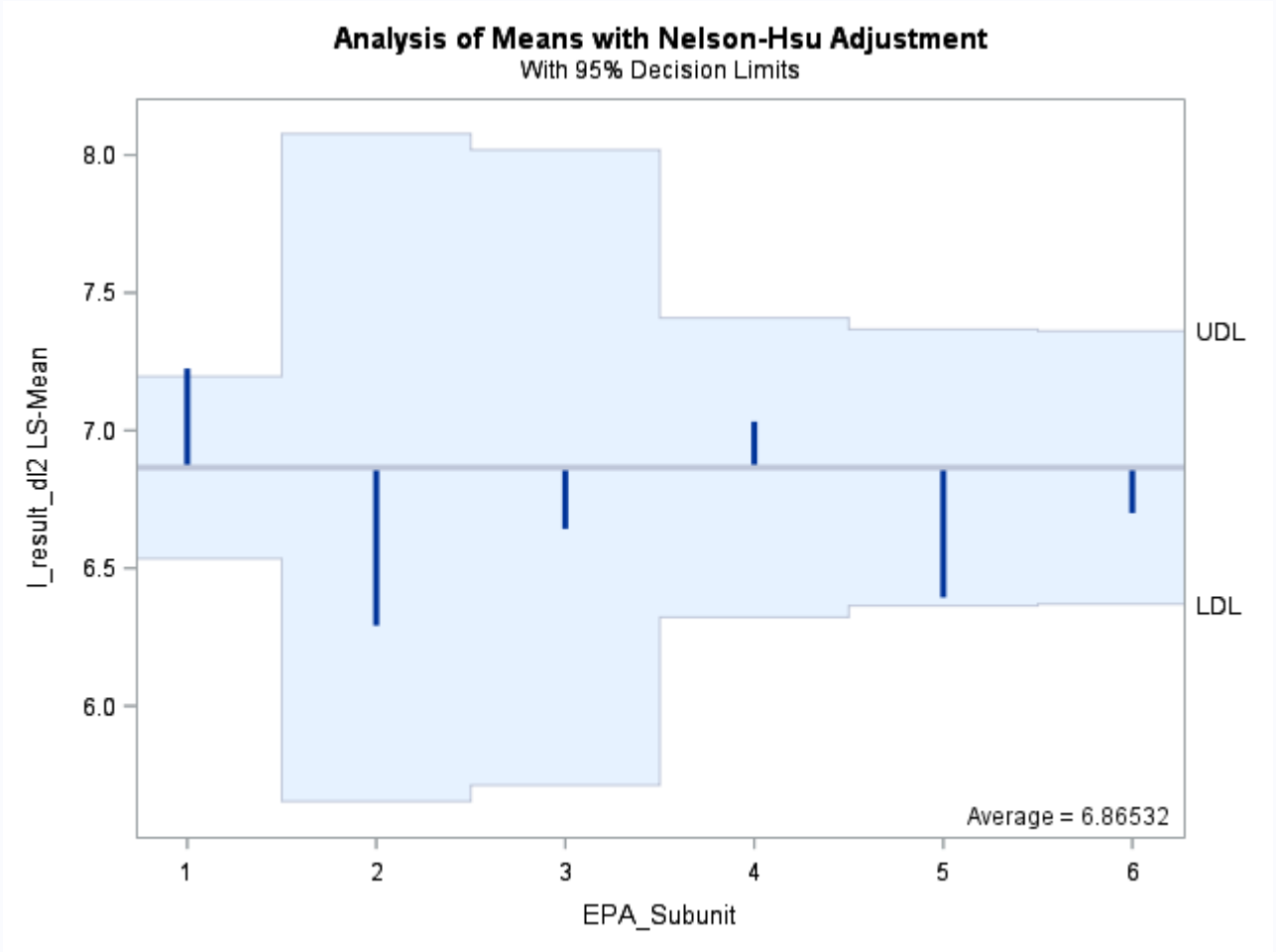
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	28.93309266	5.78661853	2.64	0.0241


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 6
Error DF 247
MSE 2.1945
R-Square 0.0507
Adj R-Square 0.0315

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	7.22503368	0.0258
2	6.29169843	0.7192
3	6.64281849	0.9921
4	7.03208969	0.9401
5	6.39382382	0.0764
6	6.70017758	0.9169



Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	7.22503368	1
2	6.29169843	2
3	6.64281849	3
4	7.03208969	4
5	6.39382382	5
6	6.70017758	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.4107	0.8216	0.9815	0.0217	0.3403
2	0.4107		0.9943	0.7127	1.0000	0.9680
3	0.8216	0.9943		0.9711	0.9960	1.0000
4	0.9815	0.7127	0.9711		0.3109	0.8901
5	0.0217	1.0000	0.9960	0.3109		0.9079
6	0.3403	0.9680	1.0000	0.8901	0.9079	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	277.7	55.5303	5.24	0.0001
Error	247	2618.8	10.6023		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.30	0.0114
Error	53.5579		

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	90	7.22503368	1.87994949
2	10	6.29169843	0.69422467
3	11	6.64281849	1.01727746
4	43	7.03208969	1.11880035
5	49	6.39382382	1.19793576
6	50	6.70017758	1.36551941

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

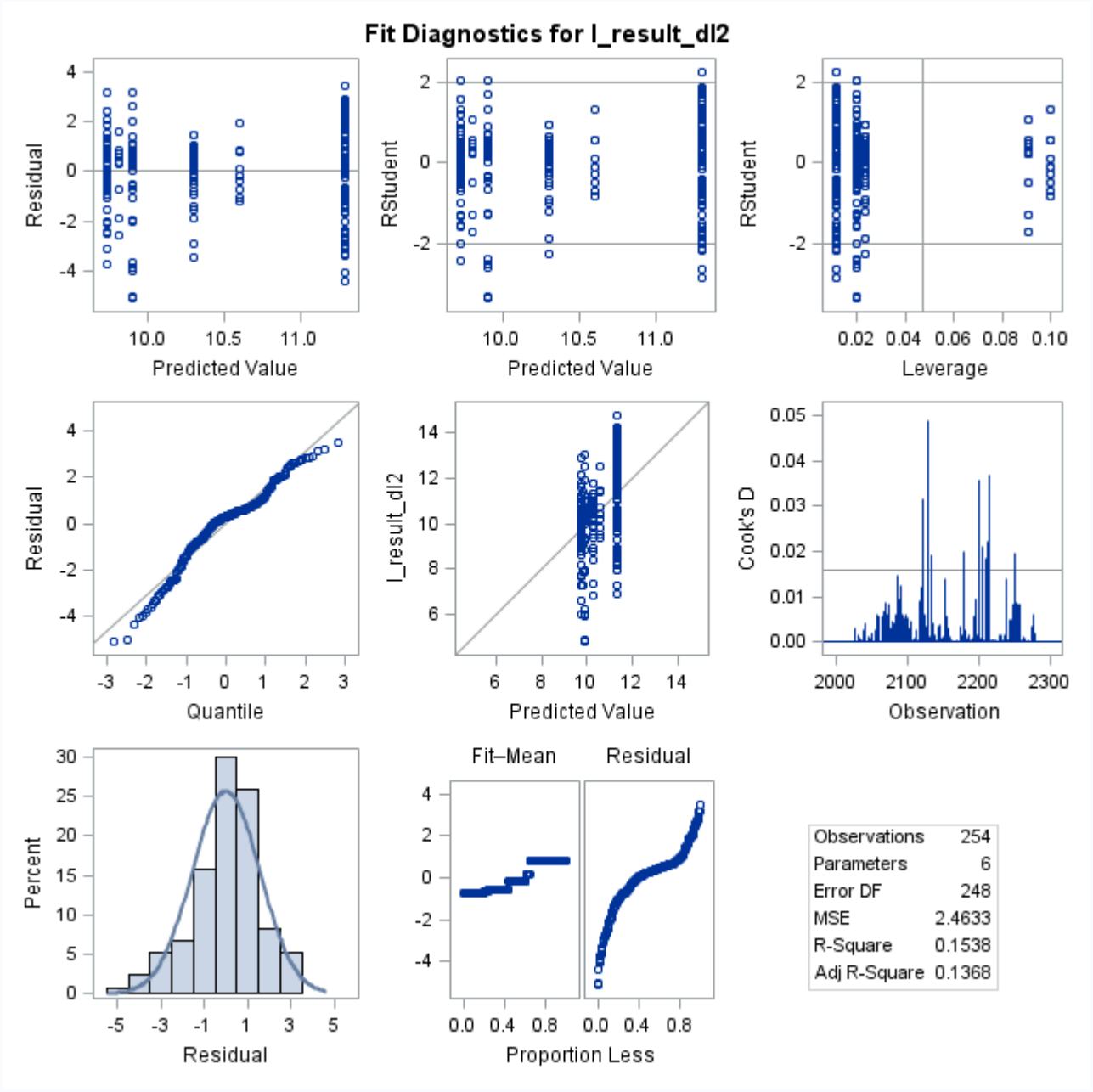
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	111.0751869	22.2150374	9.02	<.0001
Error	248	610.9096553	2.4633454		
Corrected Total	253	721.9848422			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.153847	15.01922	1.569505	10.44997

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	111.0751869	22.2150374	9.02	<.0001

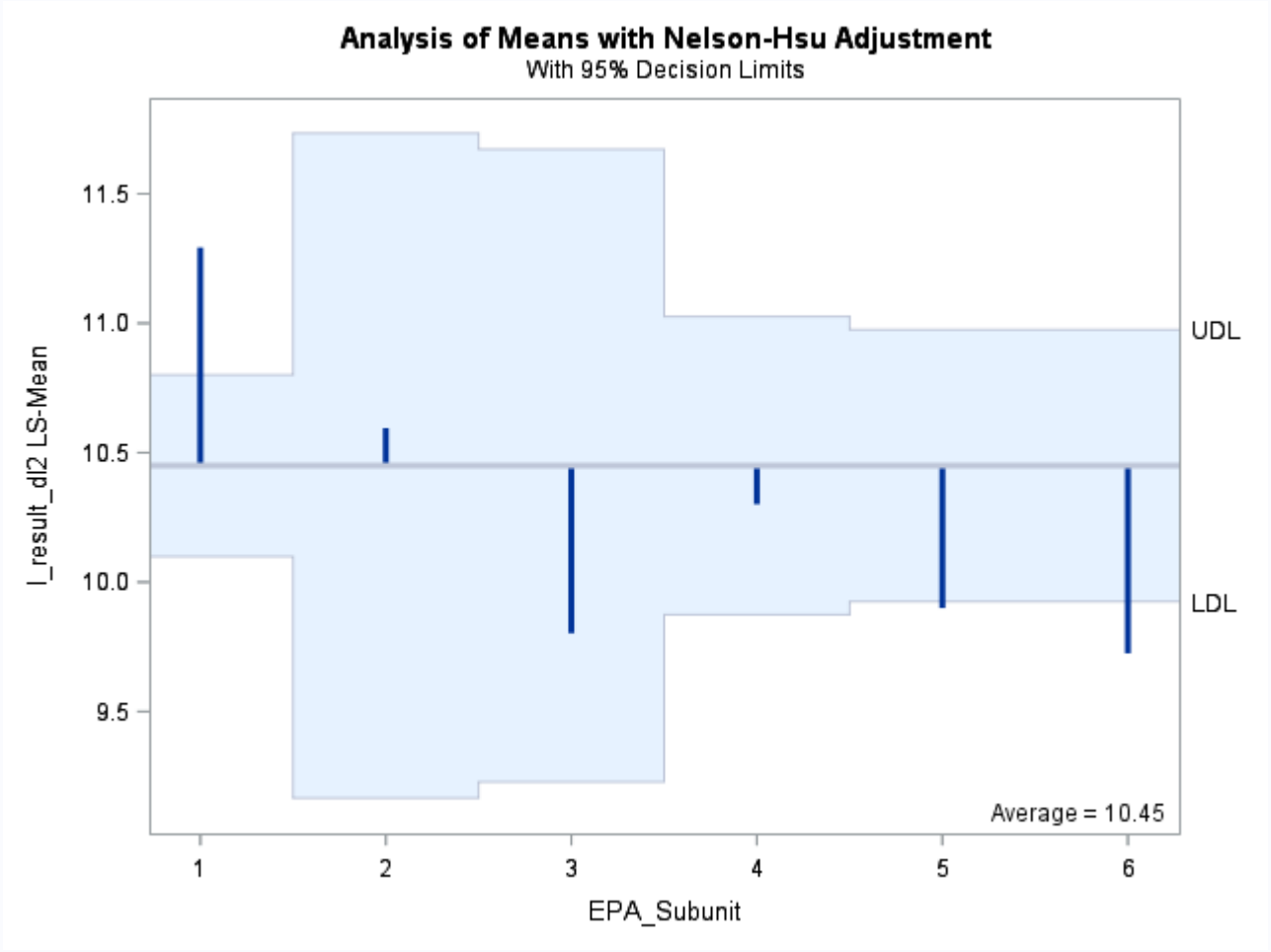
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	111.0751869	22.2150374	9.02	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 2.4633
R-Square 0.1538
Adj R-Square 0.1368

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	11.2925414	<.0001
2	10.5949217	0.9994
3	9.8026226	0.6152
4	10.3009522	0.9706
5	9.8999142	0.0351
6	9.7249996	0.0019



Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	11.2925414	1
2	10.5949217	2
3	9.8026226	3
4	10.3009522	4
5	9.8999142	5
6	9.7249996	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7661	0.0378	0.0098	<.0001	<.0001
2	0.7661		0.8574	0.9948	0.7967	0.5993
3	0.0378	0.8574		0.9358	1.0000	1.0000
4	0.0098	0.9948	0.9358		0.8225	0.4907
5	<.0001	0.7967	1.0000	0.8225		0.9936
6	<.0001	0.5993	1.0000	0.4907	0.9936	

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	231.7	46.3374	2.98	0.0123
Error	248	3850.9	15.5279		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	7.50	<.0001
Error	50.9091		

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	11.2925414	1.85672545
2	**10**	10.5949217	0.97250042
3	**11**	9.8026226	1.23913405
4	**43**	10.3009522	1.00684832
5	**50**	9.8999142	1.69554334
6	**50**	9.7249996	1.40535689

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

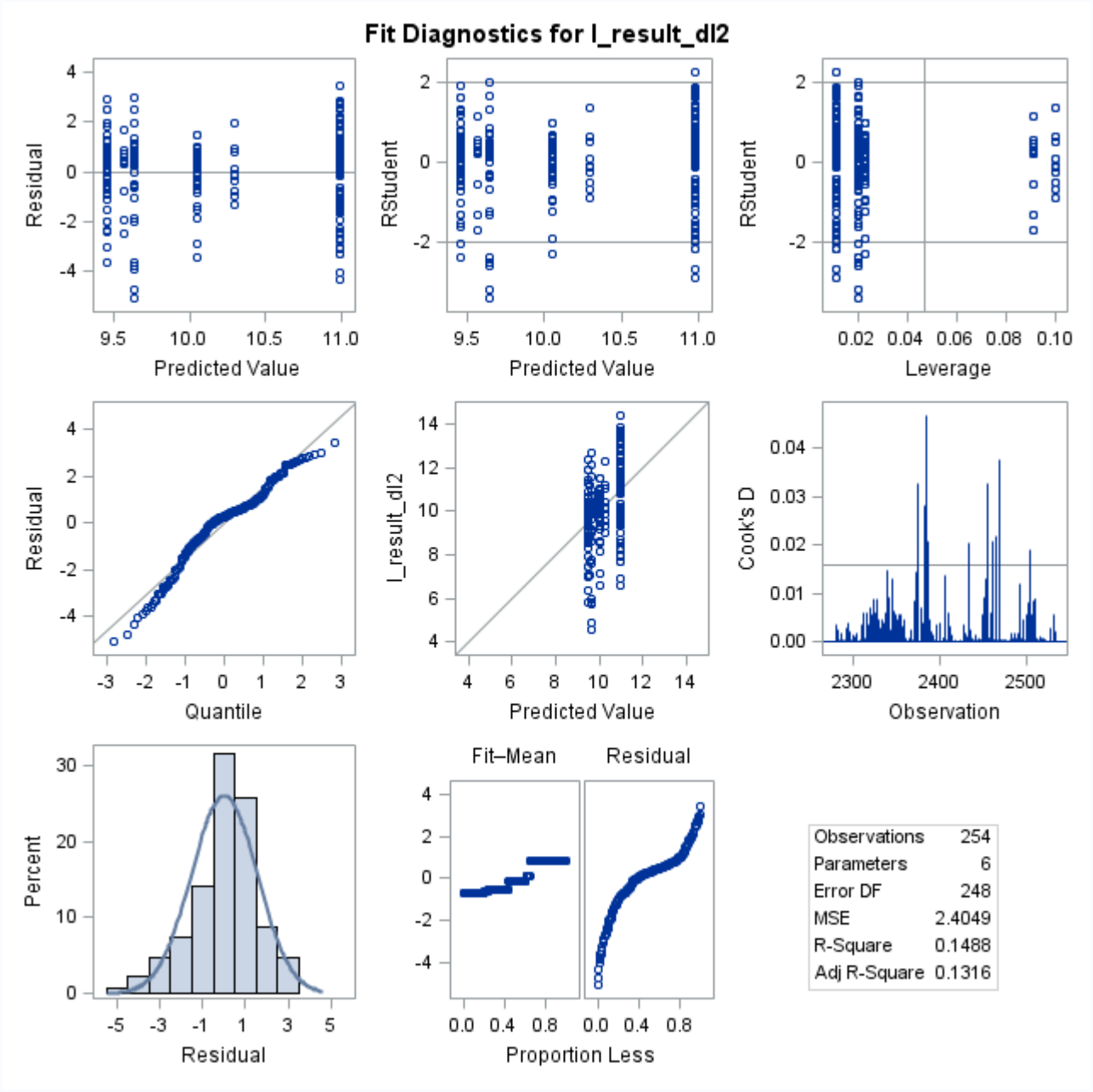
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	104.2473291	20.8494658	8.67	<.0001
Error	248	596.4188952	2.4049149		
Corrected Total	253	700.6662243			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.148783	15.24934	1.550779	10.16948

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	104.2473291	20.8494658	8.67	<.0001

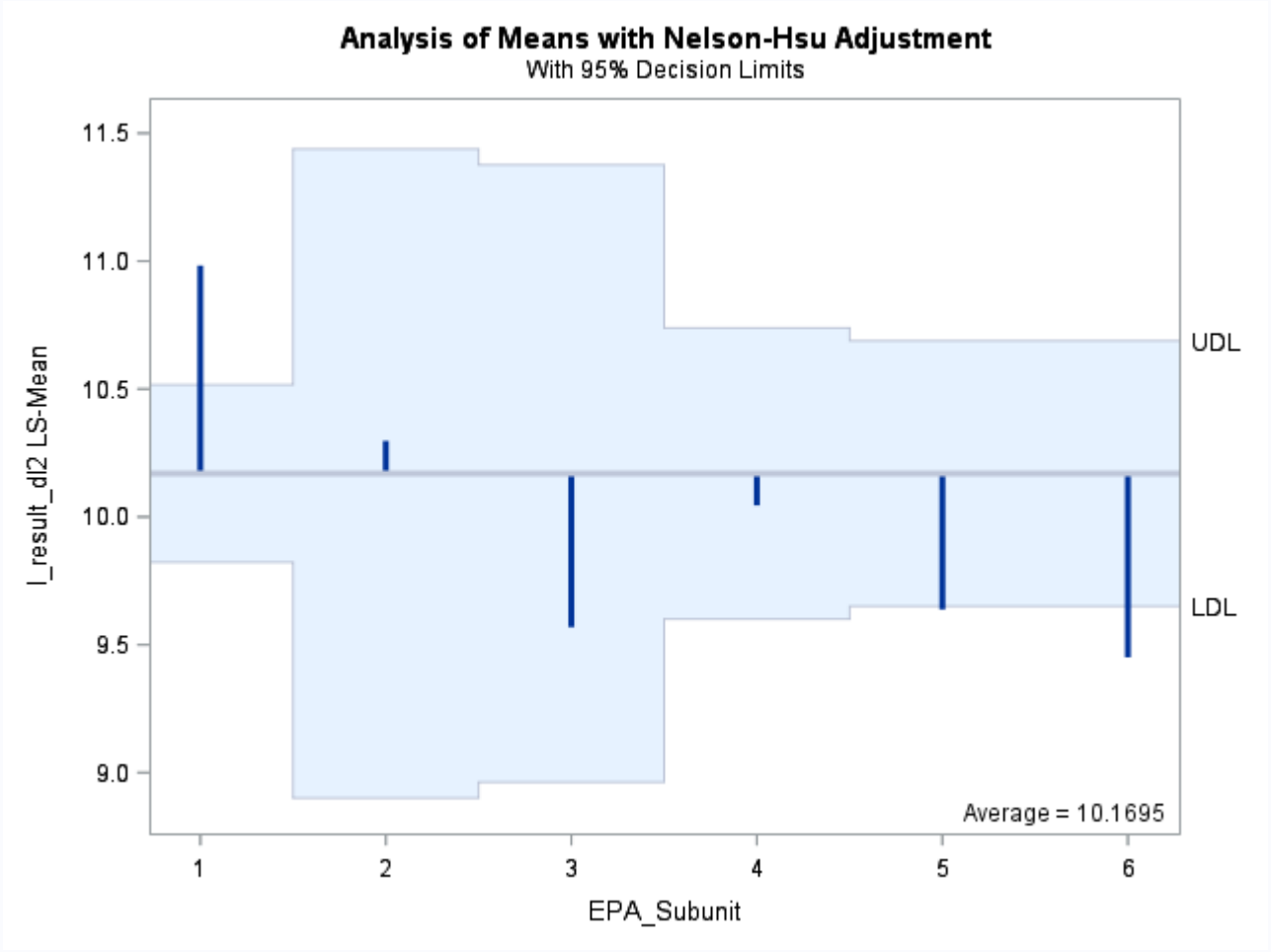
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	104.2473291	20.8494658	8.67	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 2.4049
R-Square 0.1488
Adj R-Square 0.1316

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	10.9826450	<.0001
2	10.2972032	0.9996
3	9.5688430	0.6755
4	10.0449481	0.9860
5	9.6380290	0.0418
6	9.4509319	0.0019



Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	10.9826450	1
2	10.2972032	2
3	9.5688430	3
4	10.0449481	4
5	9.6380290	5
6	9.4509319	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7704	0.0525	0.0158	<.0001	<.0001
2	0.7704		0.8910	0.9973	0.8233	0.6156
3	0.0525	0.8910		0.9441	1.0000	0.9999
4	0.0158	0.9973	0.9441		0.8055	0.4409
5	<.0001	0.8233	1.0000	0.8055		0.9907
6	<.0001	0.6156	0.9999	0.4409	0.9907	

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	218.8	43.7651	3.02	0.0114
Error	248	3588.9	14.4713		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	7.19	<.0001
Error	50.7841		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	10.9826450	1.83927606
2	**10**	10.2972032	0.98200994
3	**11**	9.5688430	1.23393662
4	**43**	10.0449481	1.00267975
5	**50**	9.6380290	1.65979707
6	**50**	9.4509319	1.38663944

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	253
Number of Observations Used	253

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

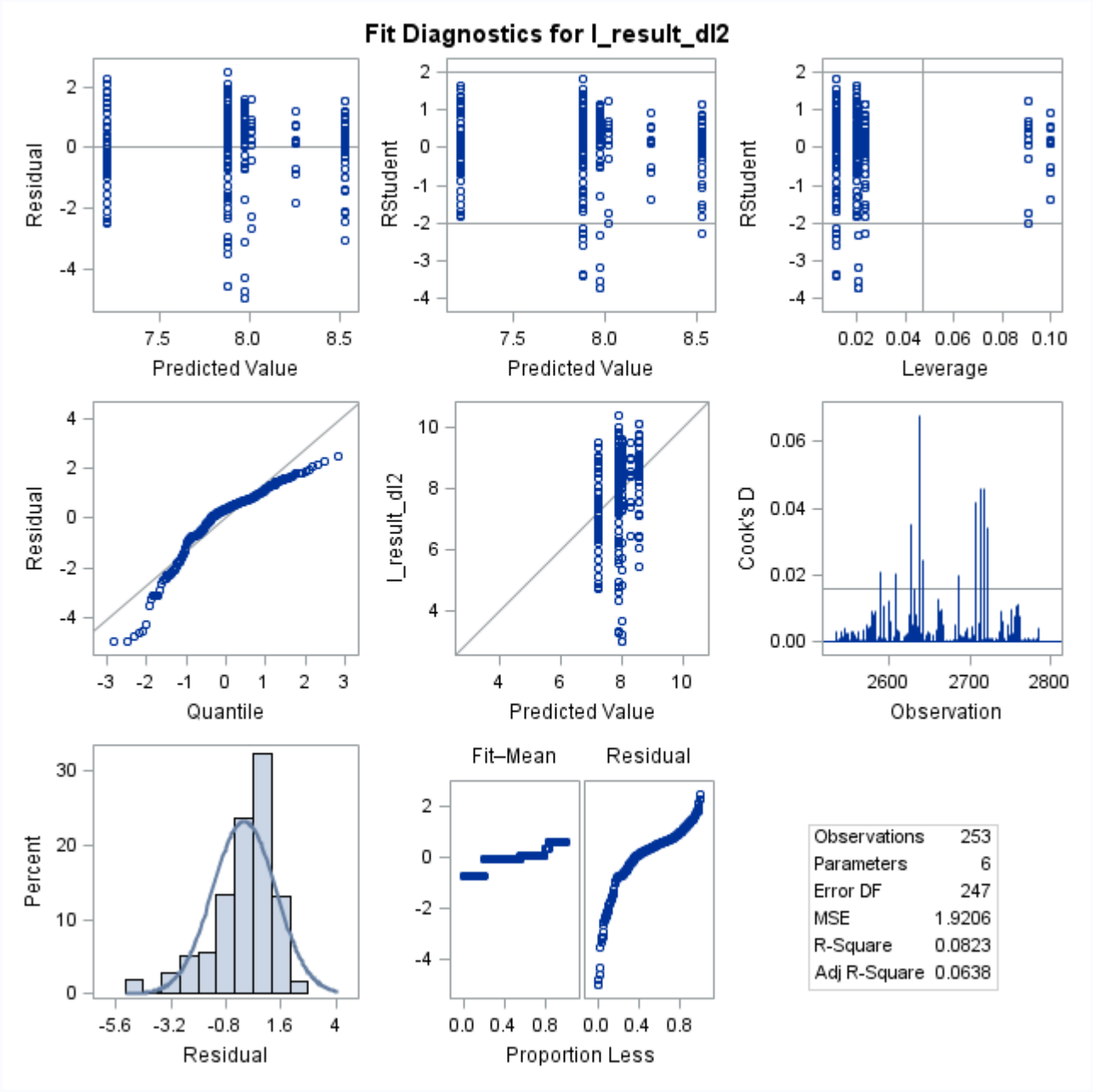
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	42.5717545	8.5143509	4.43	0.0007
Error	247	474.3895566	1.9206055		
Corrected Total	252	516.9613111			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.082350	17.55226	1.385859	7.895615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.57175452	8.51435090	4.43	0.0007

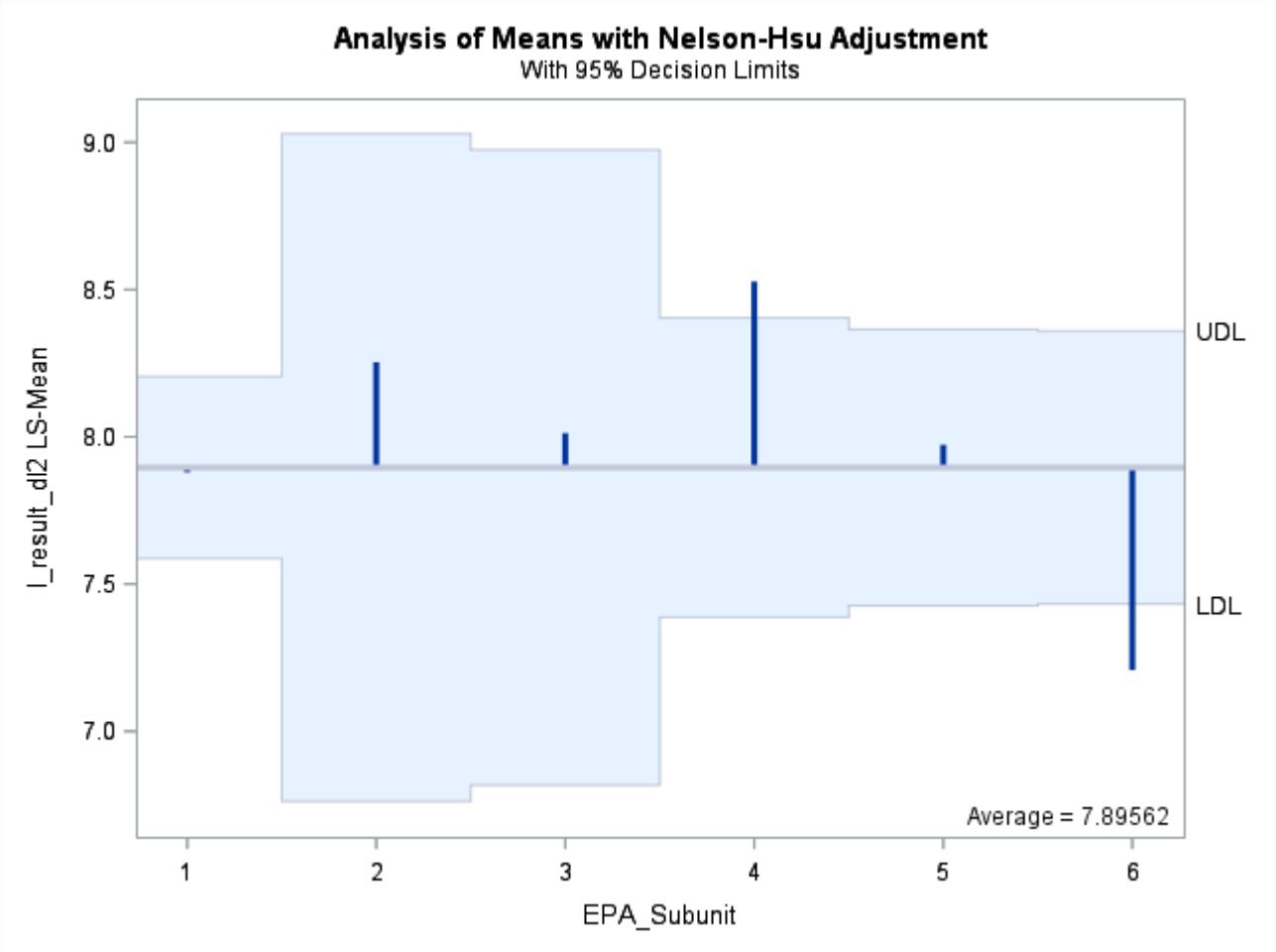
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	42.57175452	8.51435090	4.43	0.0007


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 6
Error DF 247
MSE 1.9206
R-Square 0.0823
Adj R-Square 0.0638

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	7.87968286	1.0000
2	8.25348987	0.9330
3	8.01250273	0.9995
4	8.52757126	0.0070
5	7.97285430	0.9962
6	7.20782592	0.0007



Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	7.87968286	1
2	8.25348987	2
3	8.01250273	3
4	8.52757126	4
5	7.97285430	5
6	7.20782592	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9657	0.9997	0.1218	0.9990	0.0696
2	0.9657		0.9987	0.9932	0.9920	0.2518
3	0.9997	0.9987		0.8811	1.0000	0.5044
4	0.1218	0.9932	0.8811		0.3951	0.0001
5	0.9990	0.9920	1.0000	0.3951		0.0700
6	0.0696	0.2518	0.5044	0.0001	0.0700	

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	97.1363	19.4273	1.36	0.2381
Error	247	3515.9	14.2344		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	6.42	0.0001
Error	50.1590		

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	7.87968286	1.51266119
2	**10**	8.25348987	0.89549594
3	**11**	8.01250273	1.32604865
4	**43**	8.52757126	1.04189803
5	**49**	7.97285430	1.64648947
6	**50**	7.20782592	1.19715477

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	248
Number of Observations Used	248

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

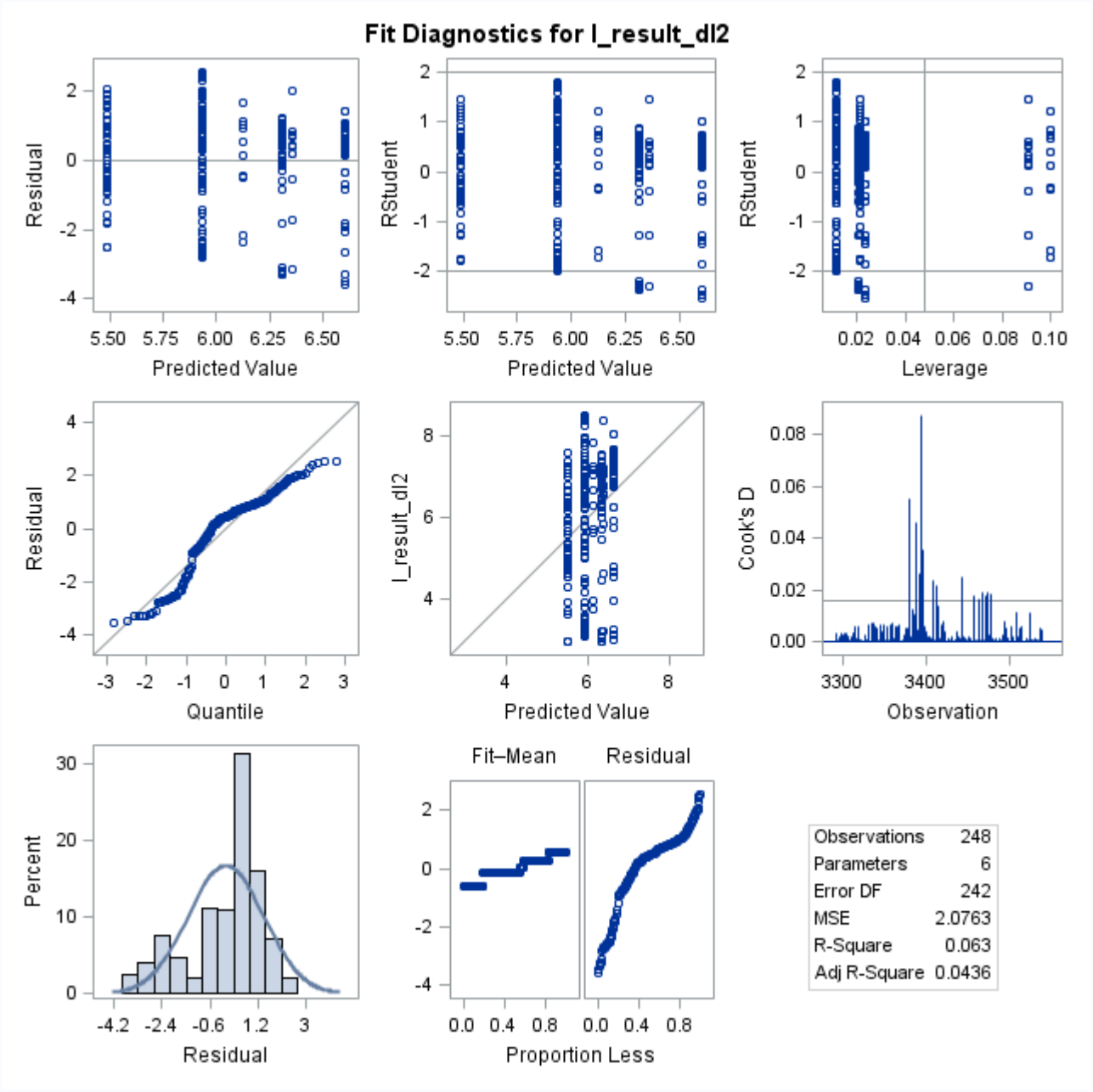
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	33.7837118	6.7567424	3.25	0.0073
Error	242	502.4714738	2.0763284		
Corrected Total	247	536.2551856			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.062999	23.75545	1.440947	6.065755

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	33.78371182	6.75674236	3.25	0.0073

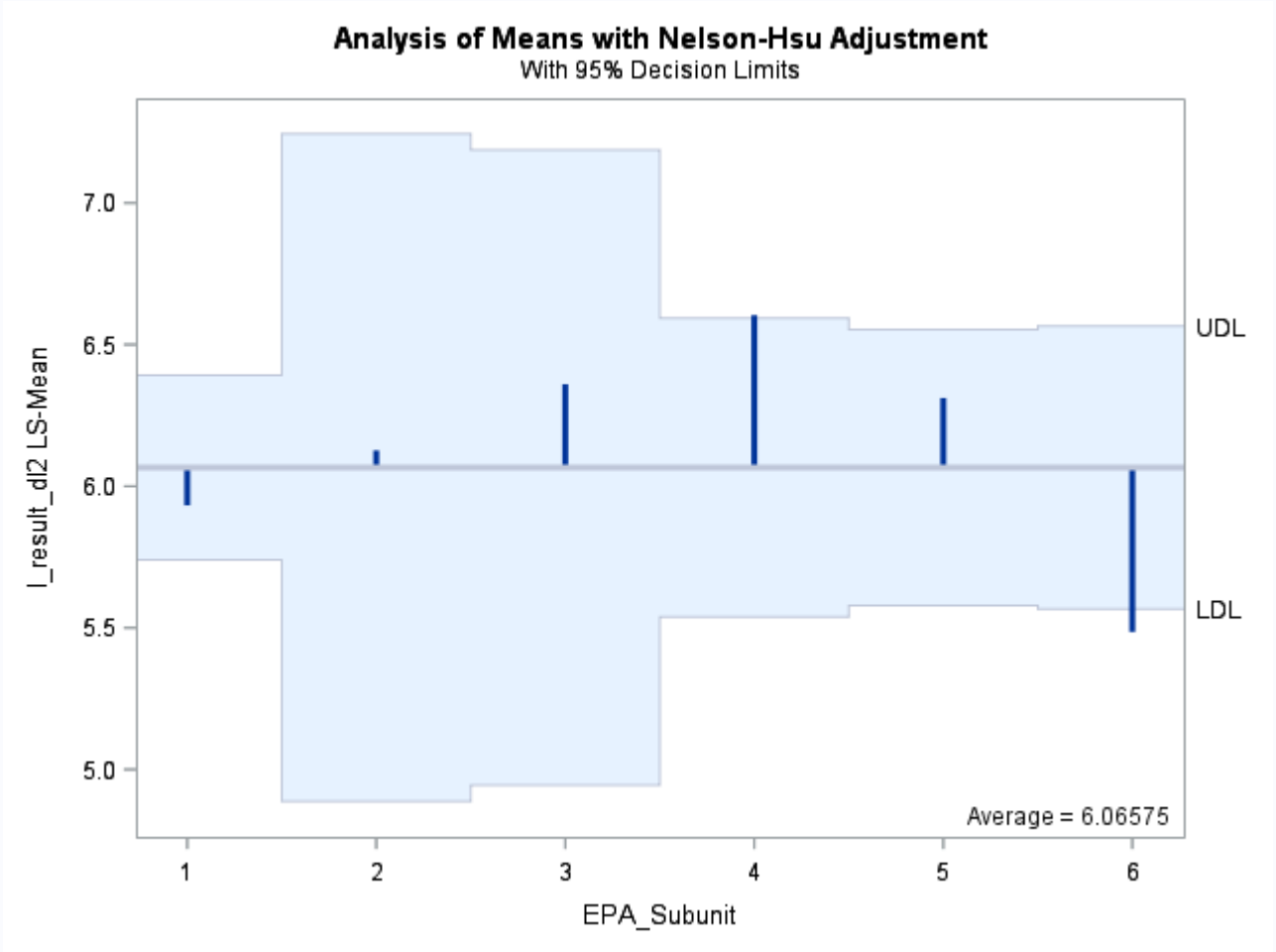
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	33.78371182	6.75674236	3.25	0.0073


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 248
Parameters 6
Error DF 242
MSE 2.0763
R-Square 0.063
Adj R-Square 0.0436

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.93234460	0.8233
2	6.12627910	1.0000
3	6.35993118	0.9688
4	6.60380326	0.0431
5	6.31136330	0.6625
6	5.48549979	0.0141



Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.93234460	1
2	6.12627910	2
3	6.35993118	3
4	6.60380326	4
5	6.31136330	5
6	5.48549979	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9986	0.9390	0.1268	0.6801	0.5222
2	0.9986		0.9991	0.9346	0.9991	0.7974
3	0.9390	0.9991		0.9961	1.0000	0.4601
4	0.1268	0.9346	0.9961		0.9266	0.0039
5	0.6801	0.9991	1.0000	0.9266		0.0597
6	0.5222	0.7974	0.4601	0.0039	0.0597	

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	72.5279	14.5056	1.93	0.0896
Error	242	1816.5	7.5061		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.95	0.0044
Error	48.5919		

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**88**	5.93234460	1.66431837
2	**10**	6.12627910	1.36939323
3	**11**	6.35993118	1.38742966
4	**43**	6.60380326	1.32111682
5	**49**	6.31136330	1.33556028
6	**47**	5.48549979	1.20176749

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

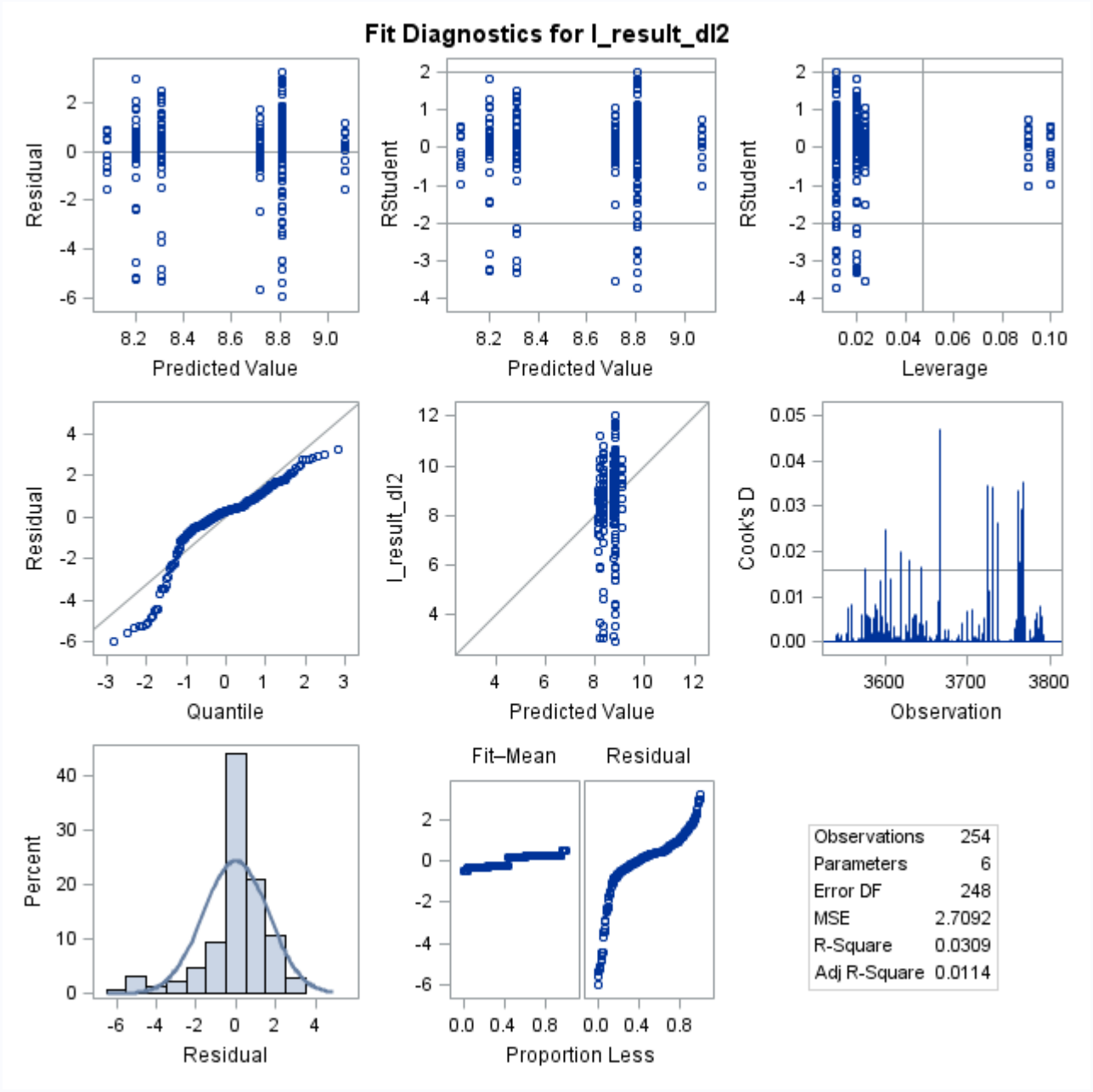
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	21.4325756	4.2865151	1.58	0.1656
Error	248	671.8794447	2.7091913		
Corrected Total	253	693.3120203			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.030913	19.23488	1.645962	8.557173

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	21.43257564	4.28651513	1.58	0.1656

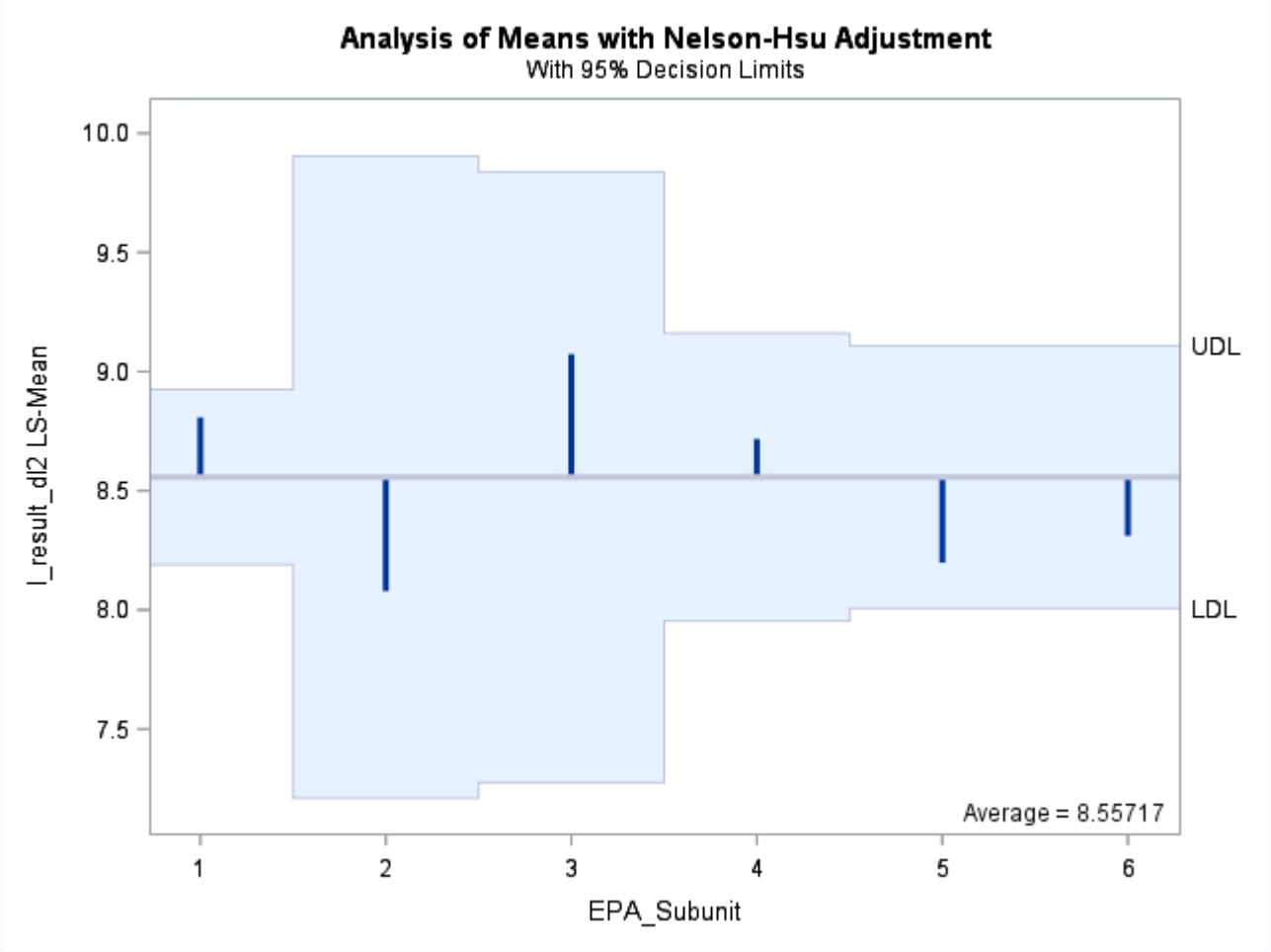
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	21.43257564	4.28651513	1.58	0.1656


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 2.7092
R-Square 0.0309
Adj R-Square 0.0114

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	8.80736782	0.3445
2	8.07879745	0.8940
3	9.07296768	0.8335
4	8.71702883	0.9677
5	8.19818748	0.3906
6	8.31053396	0.7630



PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	8.80736782	1
2	8.07879745	2
3	9.07296768	3
4	8.71702883	4
5	8.19818748	5
6	8.31053396	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7693	0.9959	0.9997	0.2916	0.5256
2	0.7693		0.7376	0.8792	0.9999	0.9986
3	0.9959	0.7376		0.9879	0.6021	0.7325
4	0.9997	0.8792	0.9879		0.6545	0.8426
5	0.2916	0.9999	0.6021	0.6545		0.9994
6	0.5256	0.9986	0.7325	0.8426	0.9994	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	288.0	57.5976	1.74	0.1268
Error	248	8226.5	33.1715		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	2.59	0.0356
Error	54.8434		

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	8.80736782	1.94482024
2	**10**	8.07879745	0.84583109
3	**11**	9.07296768	0.82116974
4	**43**	8.71702883	1.14621807
5	**50**	8.19818748	1.52687188
6	**50**	8.31053396	1.76504938

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

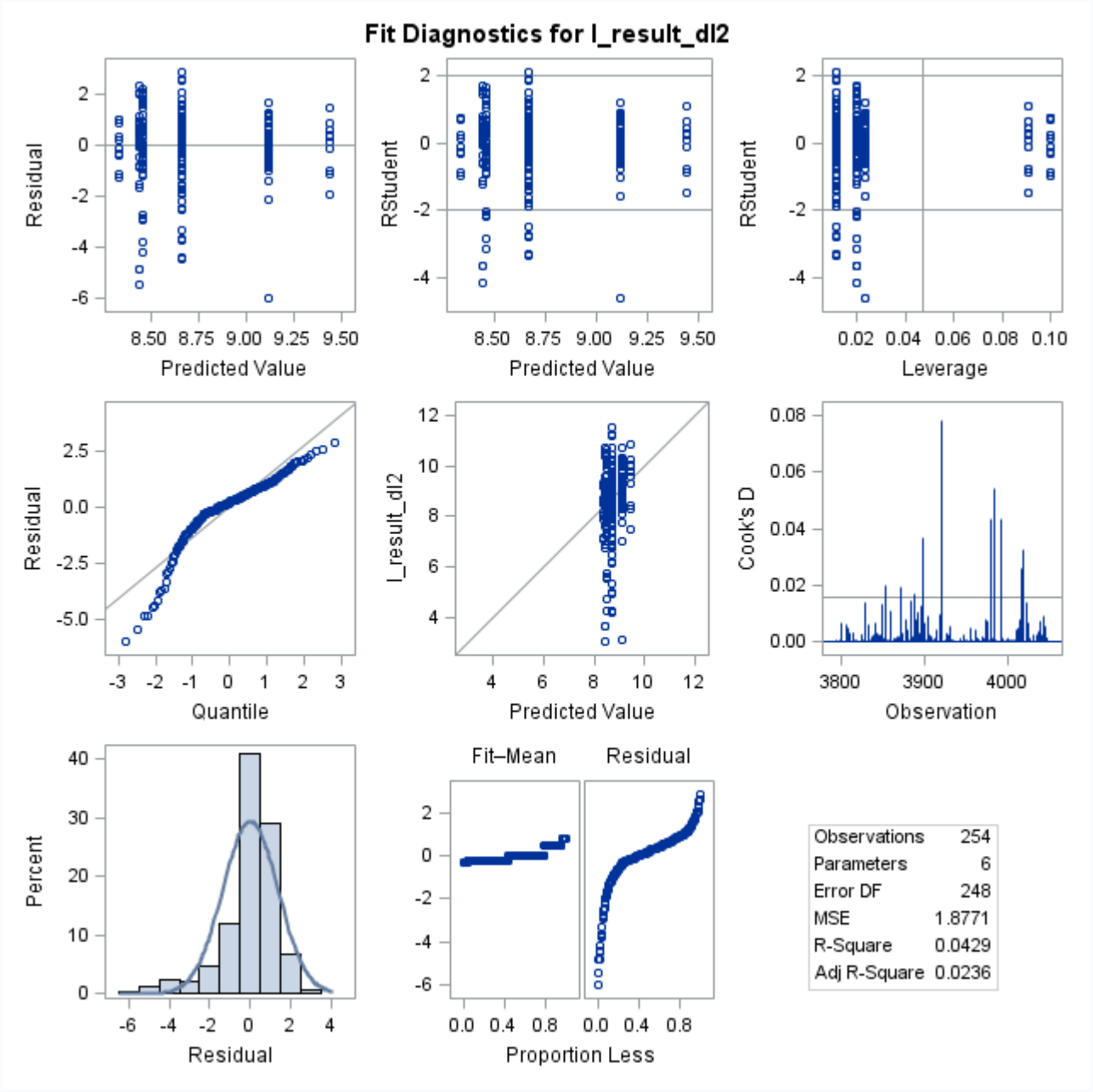
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	20.8718356	4.1743671	2.22	0.0525
Error	248	465.5199309	1.8770965		
Corrected Total	253	486.3917665			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.042912	15.78714	1.370072	8.678405

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.87183555	4.17436711	2.22	0.0525

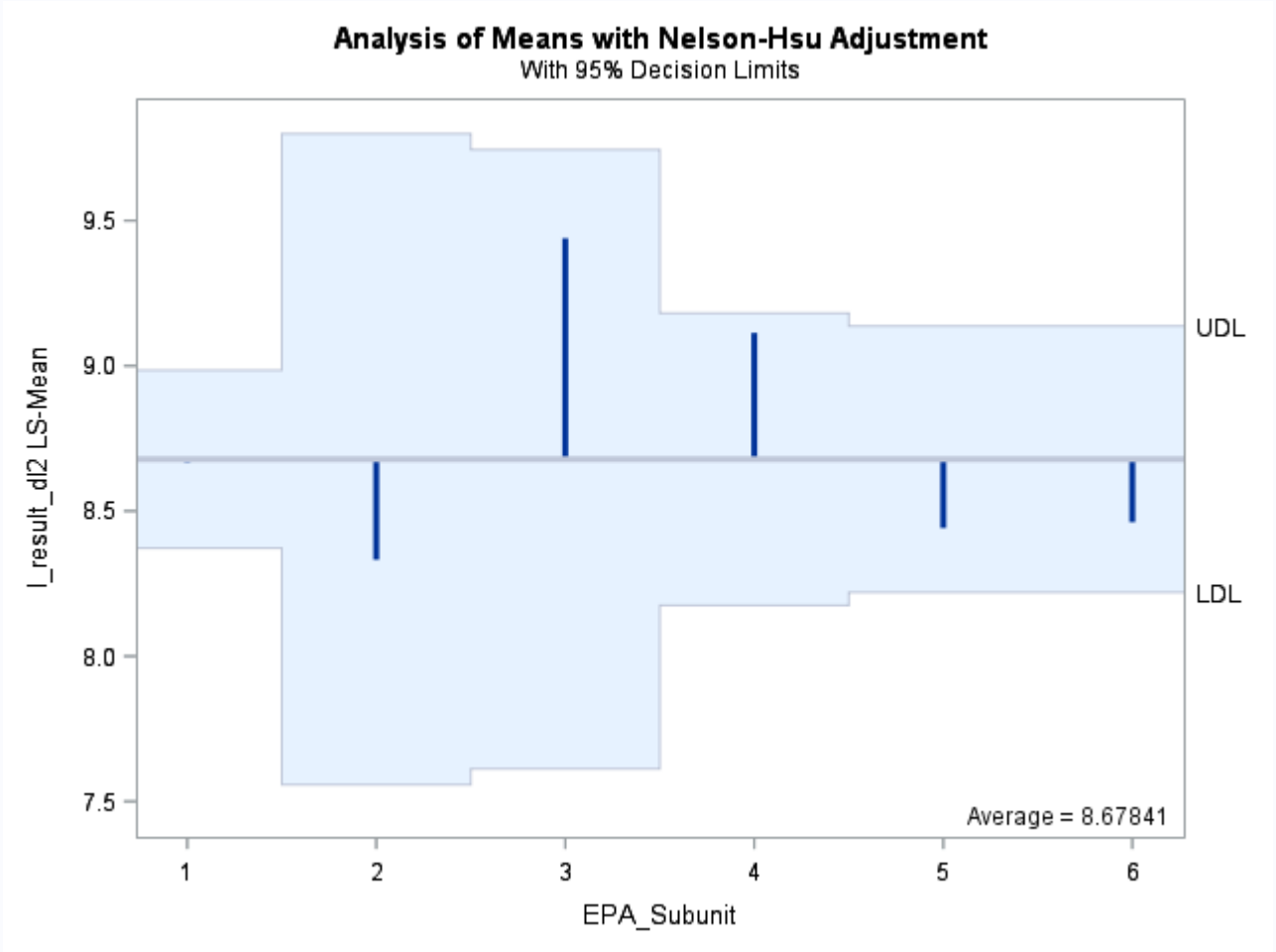
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.87183555	4.17436711	2.22	0.0525


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.8771
R-Square 0.0429
Adj R-Square 0.0236

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	8.66800259	1.0000
2	8.33224868	0.9386
3	9.43923761	0.2934
4	9.11353421	0.1245
5	8.44151036	0.6396
6	8.46166263	0.7201



PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	8.66800259	1
2	8.33224868	2
3	9.43923761	3
4	9.11353421	4
5	8.44151036	5
6	8.46166263	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9774	0.4921	0.4974	0.9365	0.9568
2	0.9774		0.4362	0.5833	0.9999	0.9998
3	0.4921	0.4362		0.9814	0.2477	0.2691
4	0.4974	0.5833	0.9814		0.1752	0.2030
5	0.9365	0.9999	0.2477	0.1752		1.0000
6	0.9568	0.9998	0.2691	0.2030	1.0000	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	41.5248	8.3050	0.41	0.8396
Error	248	4987.7	20.1117		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.09	0.0162
Error	52.0191		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	8.66800259	1.44602365
2	**10**	8.33224868	0.81711204
3	**11**	9.43923761	0.98759621
4	**43**	9.11353421	1.20667929
5	**50**	8.44151036	1.46448534
6	**50**	8.46166263	1.40997549

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

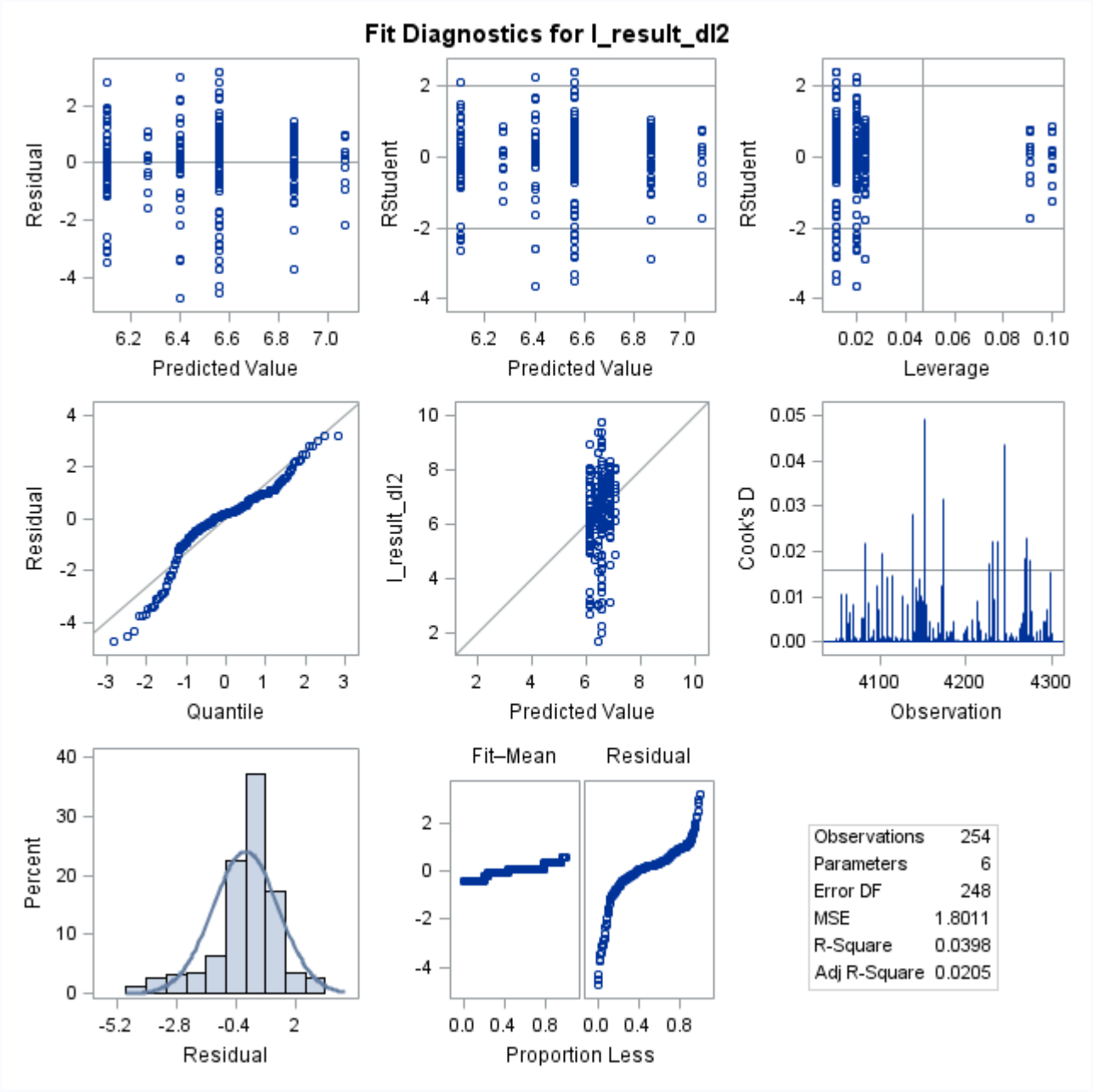
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	18.5256020	3.7051204	2.06	0.0714
Error	248	446.6816544	1.8011357		
Corrected Total	253	465.2072563			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.039822	20.64205	1.342064	6.501603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	18.52560198	3.70512040	2.06	0.0714

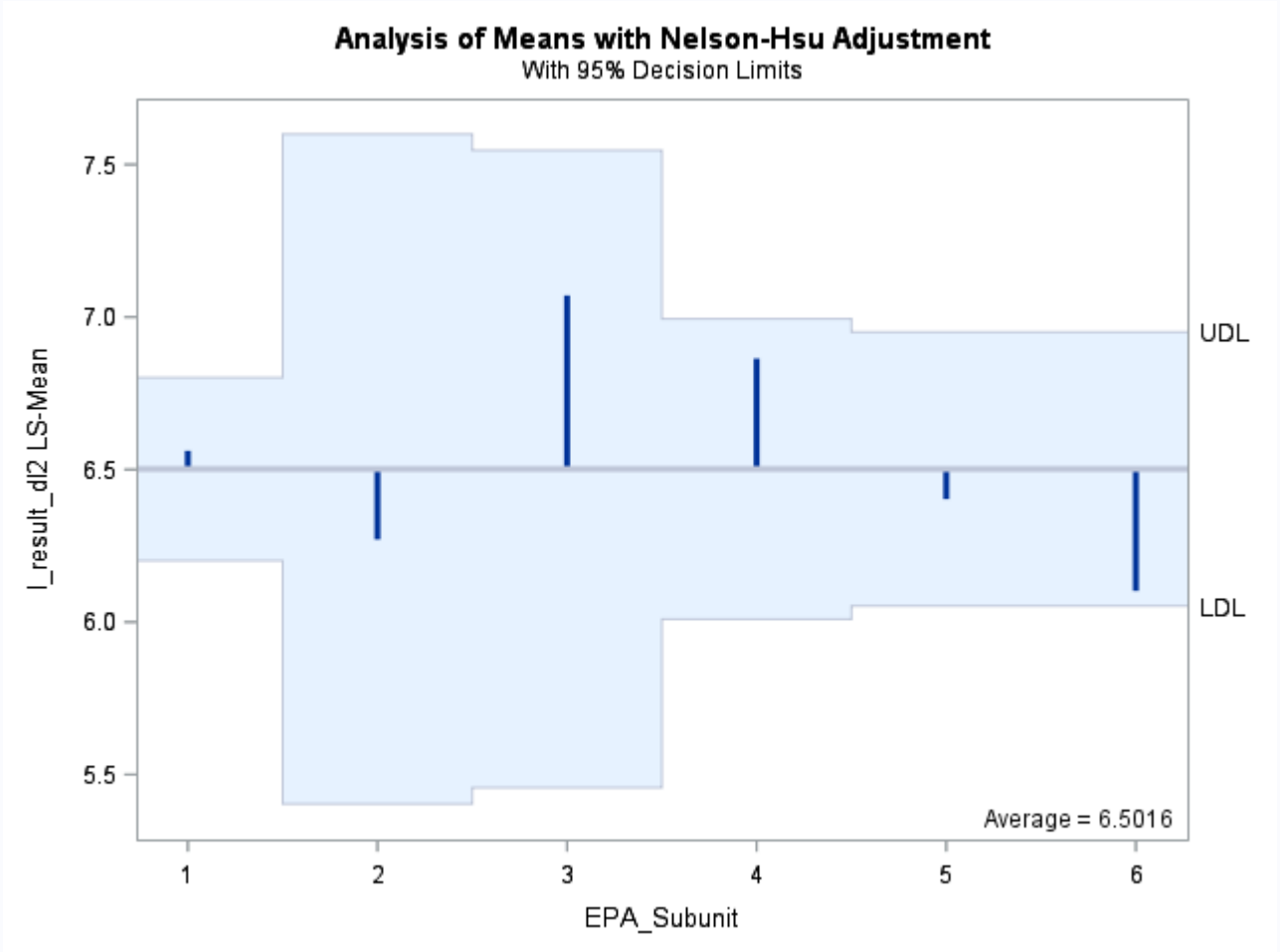
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	18.52560198	3.70512040	2.06	0.0714


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.8011
R-Square 0.0398
Adj R-Square 0.0205

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	6.56141961	0.9908
2	6.27065849	0.9883
3	7.07071191	0.5869
4	6.86377985	0.2623
5	6.40295868	0.9857
6	6.10208937	0.1067



PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	6.56141961	1
2	6.27065849	2
3	7.07071191	3
4	6.86377985	4
5	6.40295868	5
6	6.10208937	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9870	0.8423	0.8291	0.9851	0.3801
2	0.9870		0.7483	0.8070	0.9997	0.9992
3	0.8423	0.7483		0.9975	0.6684	0.2570
4	0.8291	0.8070	0.9975		0.5656	0.0732
5	0.9851	0.9997	0.6684	0.5656		0.8724
6	0.3801	0.9992	0.2570	0.0732	0.8724	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	90.0814	18.0163	1.47	0.1990
Error	248	3031.9	12.2256		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	2.82	0.0254
Error	51.3869		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	6.56141961	1.56820467
2	**10**	6.27065849	0.86743207
3	**11**	7.07071191	0.96799564
4	**43**	6.86377985	0.98670706
5	**50**	6.40295868	1.30140198
6	**50**	6.10208937	1.33848351

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

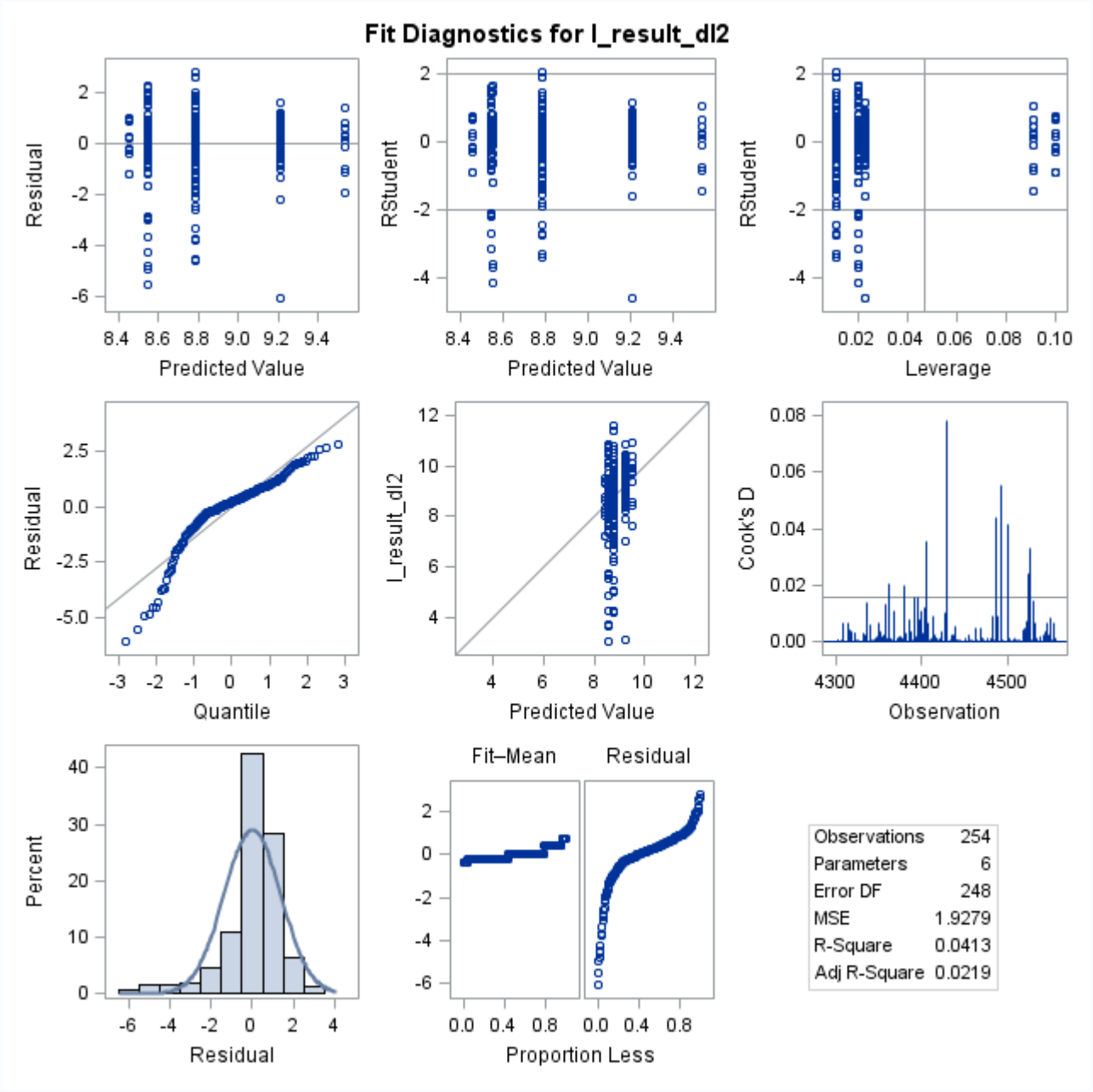
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	20.5741770	4.1148354	2.13	0.0620
Error	248	478.1175881	1.9278935		
Corrected Total	253	498.6917650			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.041256	15.80805	1.388486	8.783410

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.57417696	4.11483539	2.13	0.0620

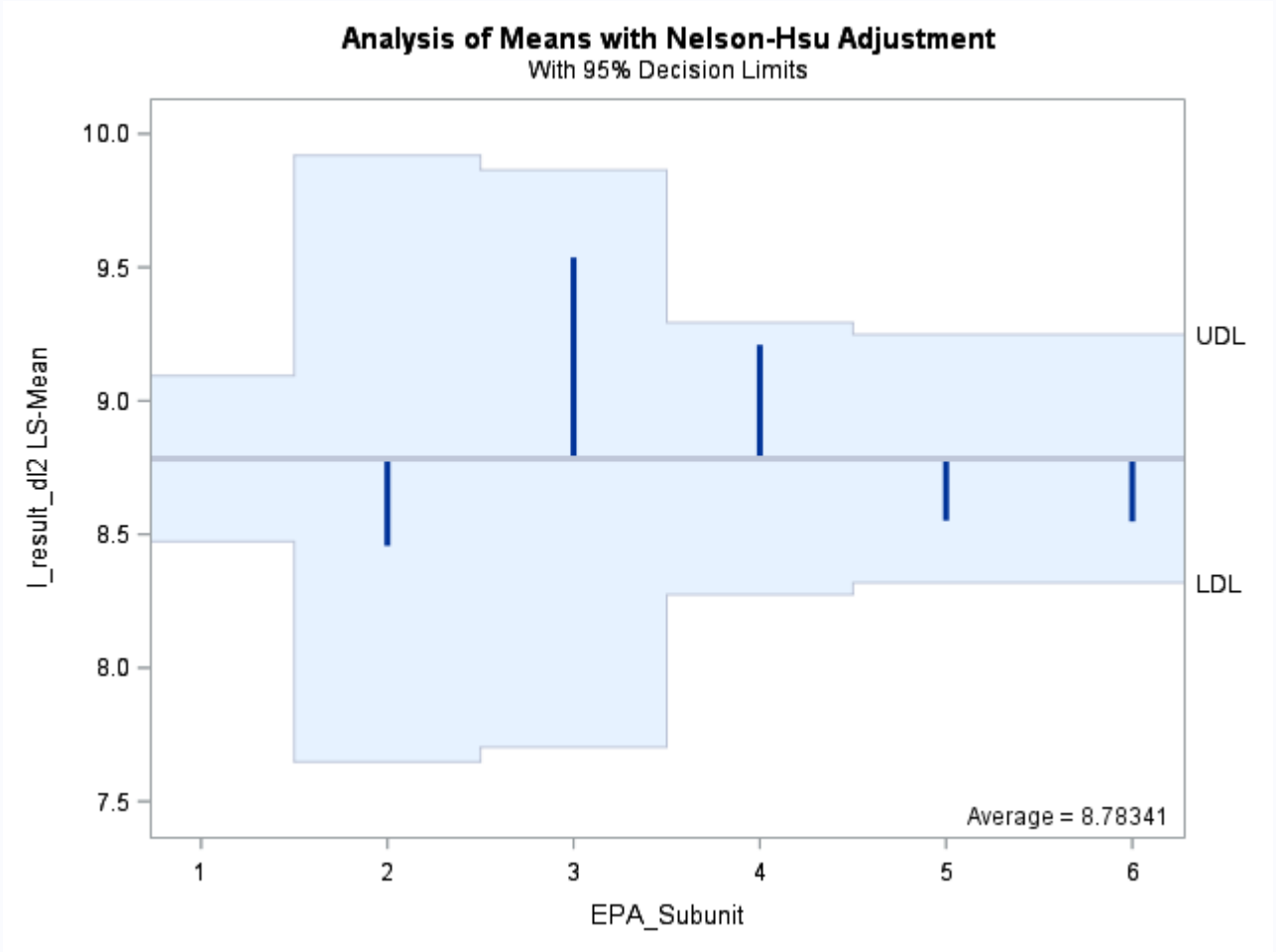
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	20.57417696	4.11483539	2.13	0.0620


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.9279
R-Square 0.0413
Adj R-Square 0.0219

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	8.78359880	1.0000
2	8.45683252	0.9542
3	9.53669363	0.3179
4	9.20954054	0.1490
5	8.55151550	0.6724
6	8.54808713	0.6588



PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	8.78359880	1
2	8.45683252	2
3	9.53669363	3
4	9.20954054	4
5	8.55151550	5
6	8.54808713	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9811	0.5343	0.5631	0.9336	0.9295
2	0.9811		0.4806	0.6360	1.0000	1.0000
3	0.5343	0.4806		0.9821	0.2750	0.2713
4	0.5631	0.6360	0.9821		0.2068	0.2018
5	0.9336	1.0000	0.2750	0.2068		1.0000
6	0.9295	1.0000	0.2713	0.2018	1.0000	

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	46.1523	9.2305	0.43	0.8272
Error	248	5318.8	21.4469		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.00	0.0186
Error	52.2418		

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	8.78359880	1.47057376
2	**10**	8.45683252	0.81525976
3	**11**	9.53669363	0.97796046
4	**43**	9.20954054	1.22069804
5	**50**	8.55151550	1.48830949
6	**50**	8.54808713	1.42125899

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 253

Number of Observations Used 253

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

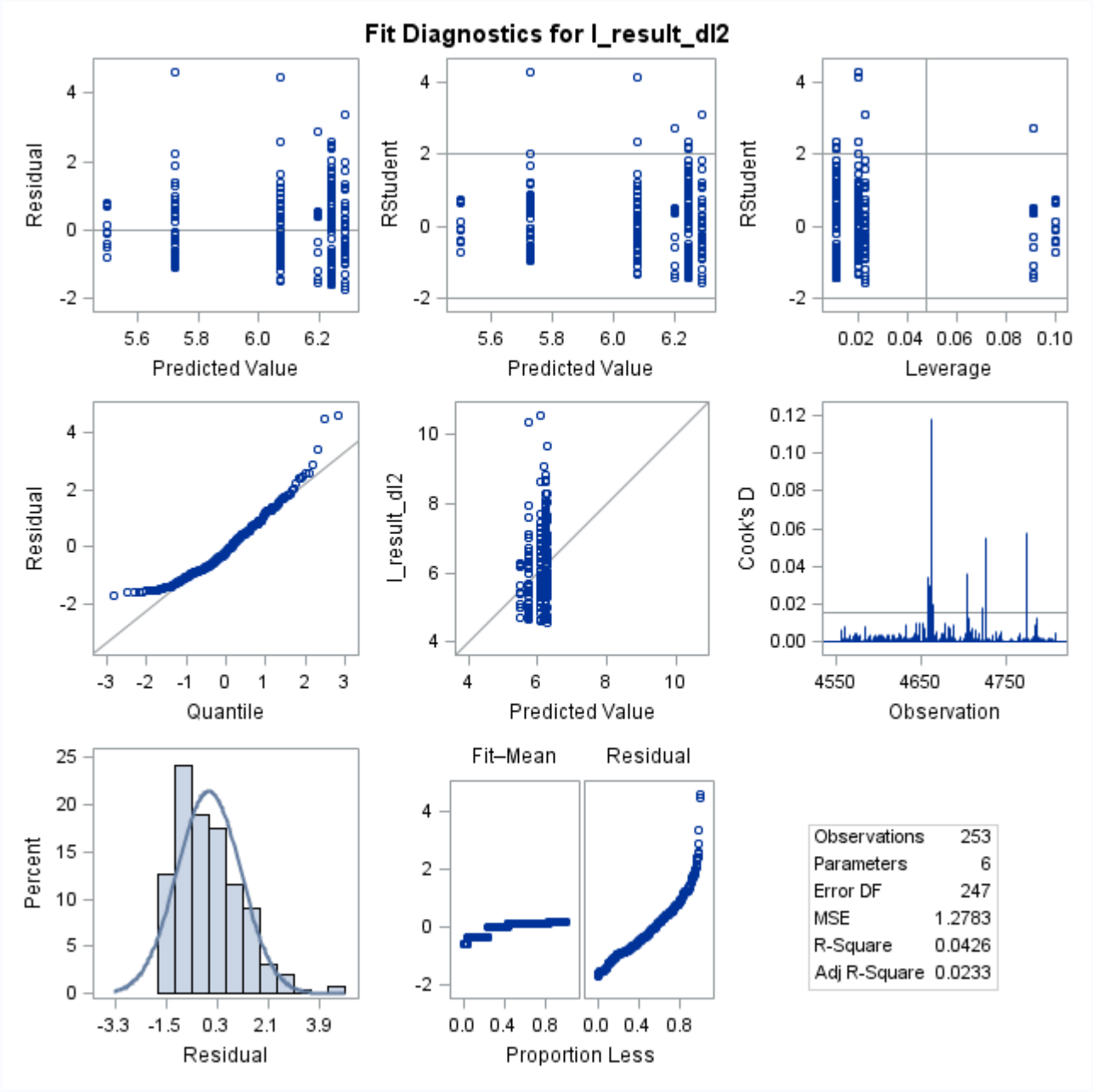
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	14.0655059	2.8131012	2.20	0.0548
Error	247	315.7315654	1.2782654		
Corrected Total	252	329.7970713			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.042649	18.58435	1.130604	6.083634

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	14.06550593	2.81310119	2.20	0.0548

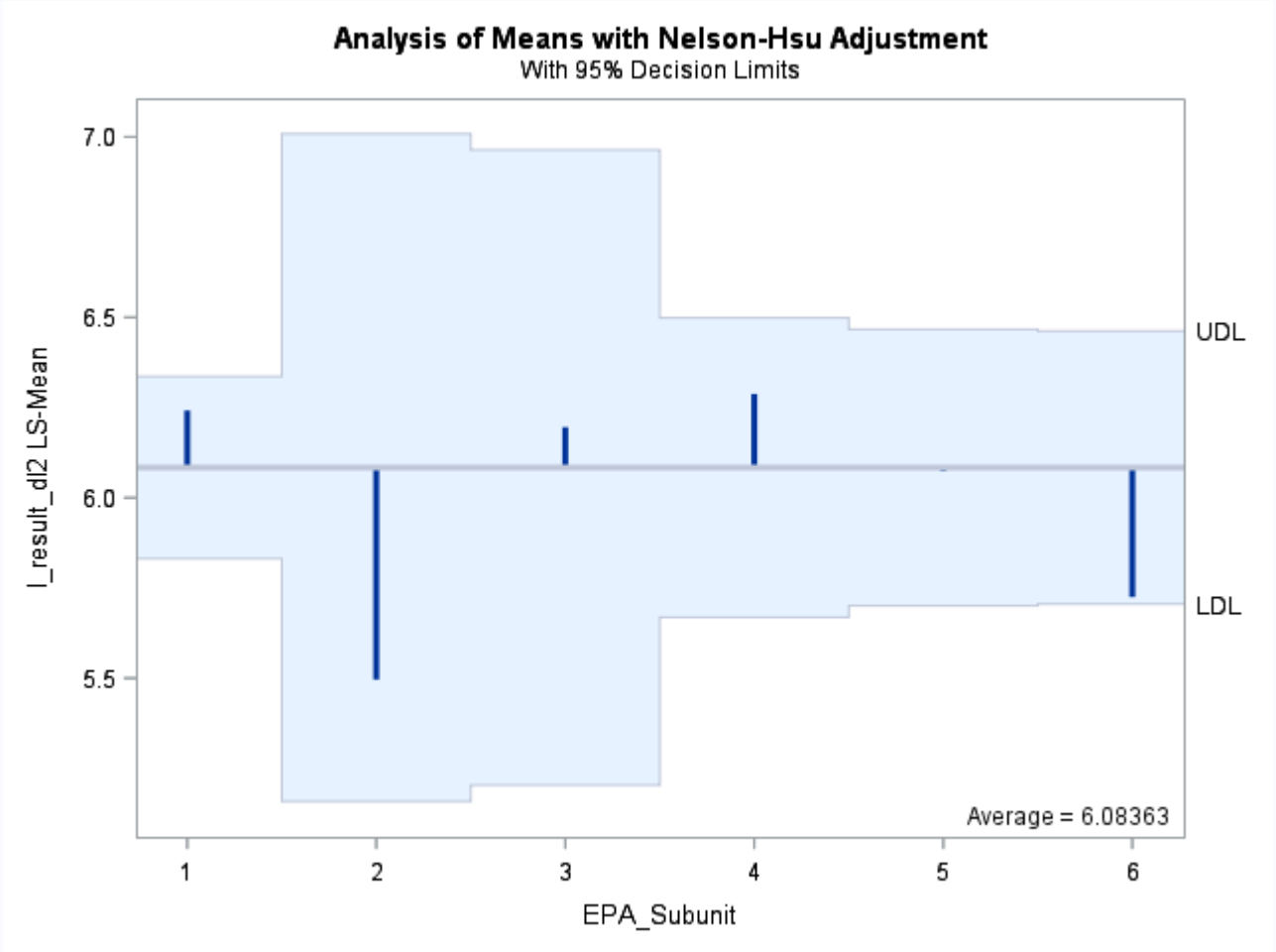
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	14.06550593	2.81310119	2.20	0.0548


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 6
Error DF 247
MSE 1.2783
R-Square 0.0426
Adj R-Square 0.0233

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	6.24185178	0.4347
2	5.49631872	0.4198
3	6.19562519	0.9989
4	6.28760317	0.6858
5	6.07474872	1.0000
6	5.72495928	0.0720



Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	6.24185178	1
2	5.49631872	2
3	6.19562519	3
4	6.28760317	4
5	6.07474872	5
6	5.72495928	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3578	1.0000	0.9999	0.9612	0.1031
2	0.3578		0.7176	0.3490	0.6809	0.9920
3	1.0000	0.7176		0.9999	0.9995	0.8116
4	0.9999	0.3490	0.9999		0.9460	0.1628
5	0.9612	0.6809	0.9995	0.9460		0.6393
6	0.1031	0.9920	0.8116	0.1628	0.6393	

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	22.5302	4.5060	0.89	0.4888
Error	247	1251.5	5.0667		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.45	0.0091
Error	51.8206		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	6.24185178	1.26038886
2	**10**	5.49631872	0.57269102
3	**11**	6.19562519	1.25363050
4	**43**	6.28760317	1.01996036
5	**49**	6.07474872	1.06445193
6	**50**	5.72495928	1.08421030

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

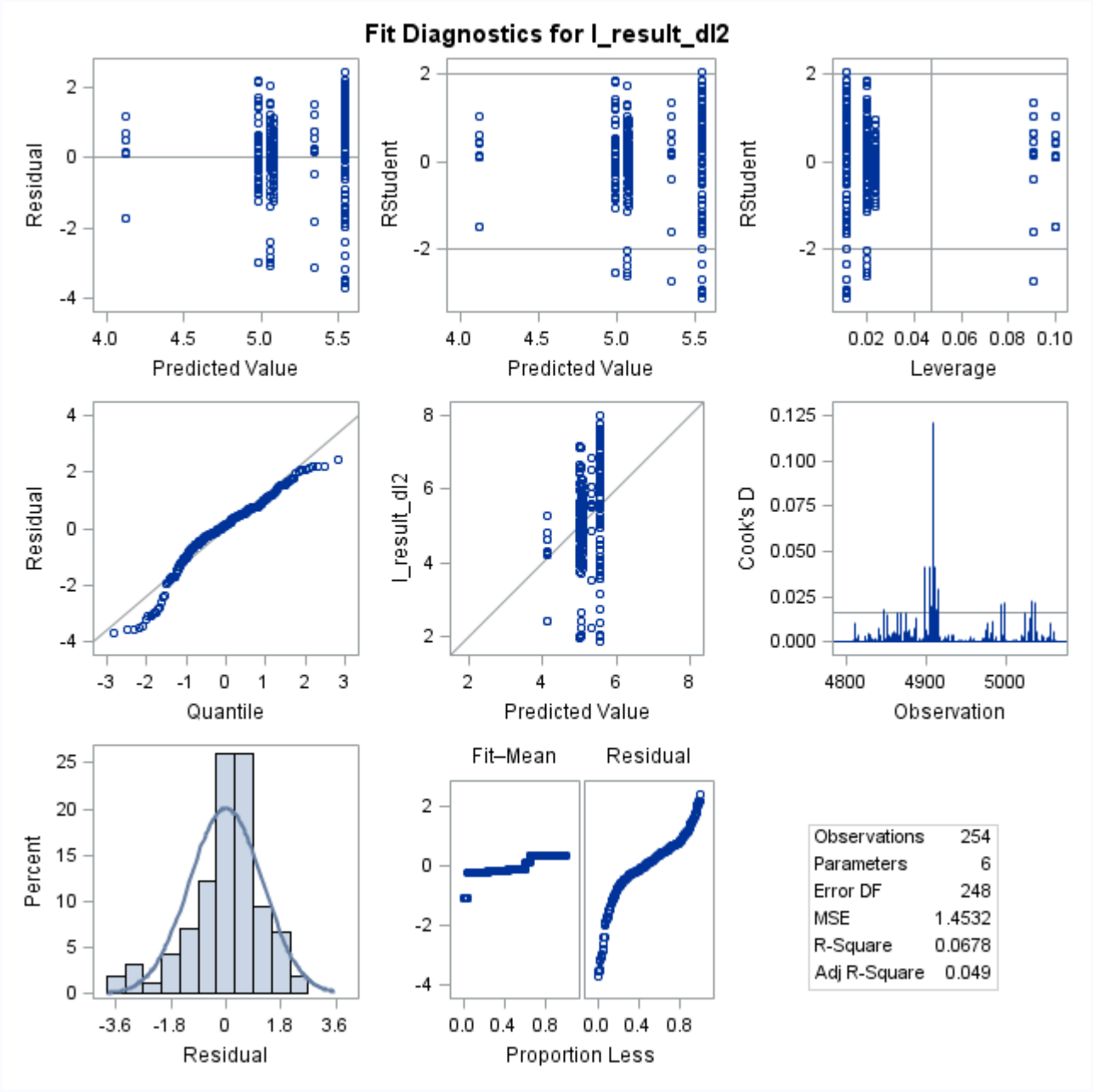
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	26.1932748	5.2386550	3.60	0.0036
Error	248	360.3859280	1.4531691		
Corrected Total	253	386.5792027			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.067757	23.20968	1.205475	5.193845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	26.19327477	5.23865495	3.60	0.0036

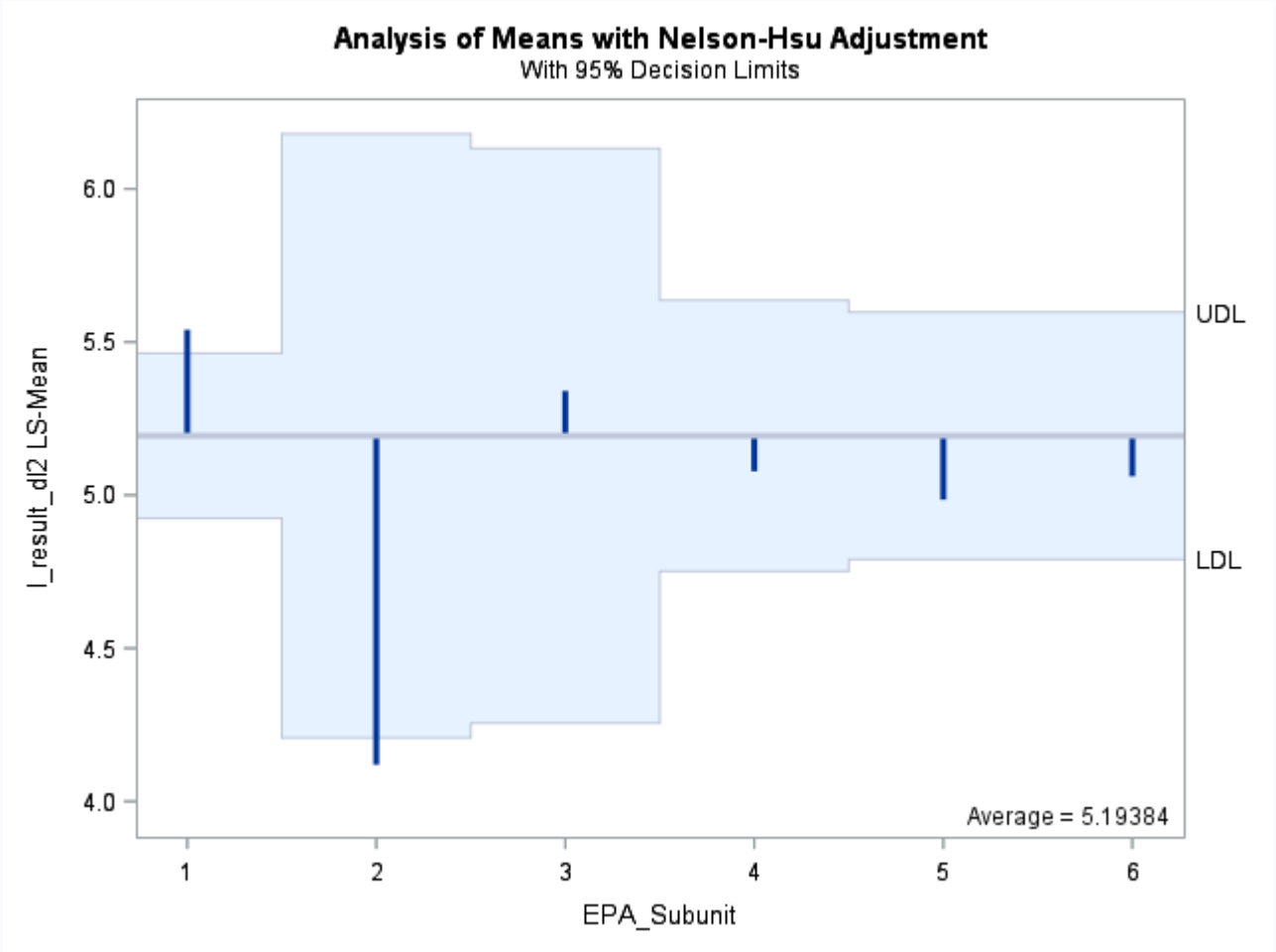
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	26.19327477	5.23865495	3.60	0.0036


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.4532
R-Square 0.0678
Adj R-Square 0.049

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.54012576	0.0048
2	4.11990189	0.0254
3	5.34040593	0.9971
4	5.07797449	0.9691
5	4.98517709	0.6386
6	5.06139948	0.9216



TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.54012576	1
2	4.11990189	2
3	5.34040593	3
4	5.07797449	4
5	4.98517709	5
6	5.06139948	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0064	0.9954	0.3076	0.0987	0.2183
2	0.0064		0.1911	0.2130	0.3054	0.2170
3	0.9954	0.1911		0.9875	0.9499	0.9824
4	0.3076	0.2130	0.9875		0.9991	1.0000
5	0.0987	0.3054	0.9499	0.9991		0.9996
6	0.2183	0.2170	0.9824	1.0000	0.9996	

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	125.9	25.1810	4.37	0.0008
Error	248	1428.3	5.7593		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.64	0.0072
Error	48.3189		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	5.54012576	1.50832708
2	**10**	4.11990189	0.96049676
3	**11**	5.34040593	1.35886775
4	**43**	5.07797449	0.59149139
5	**50**	4.98517709	1.00284330
6	**50**	5.06139948	1.17077489

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

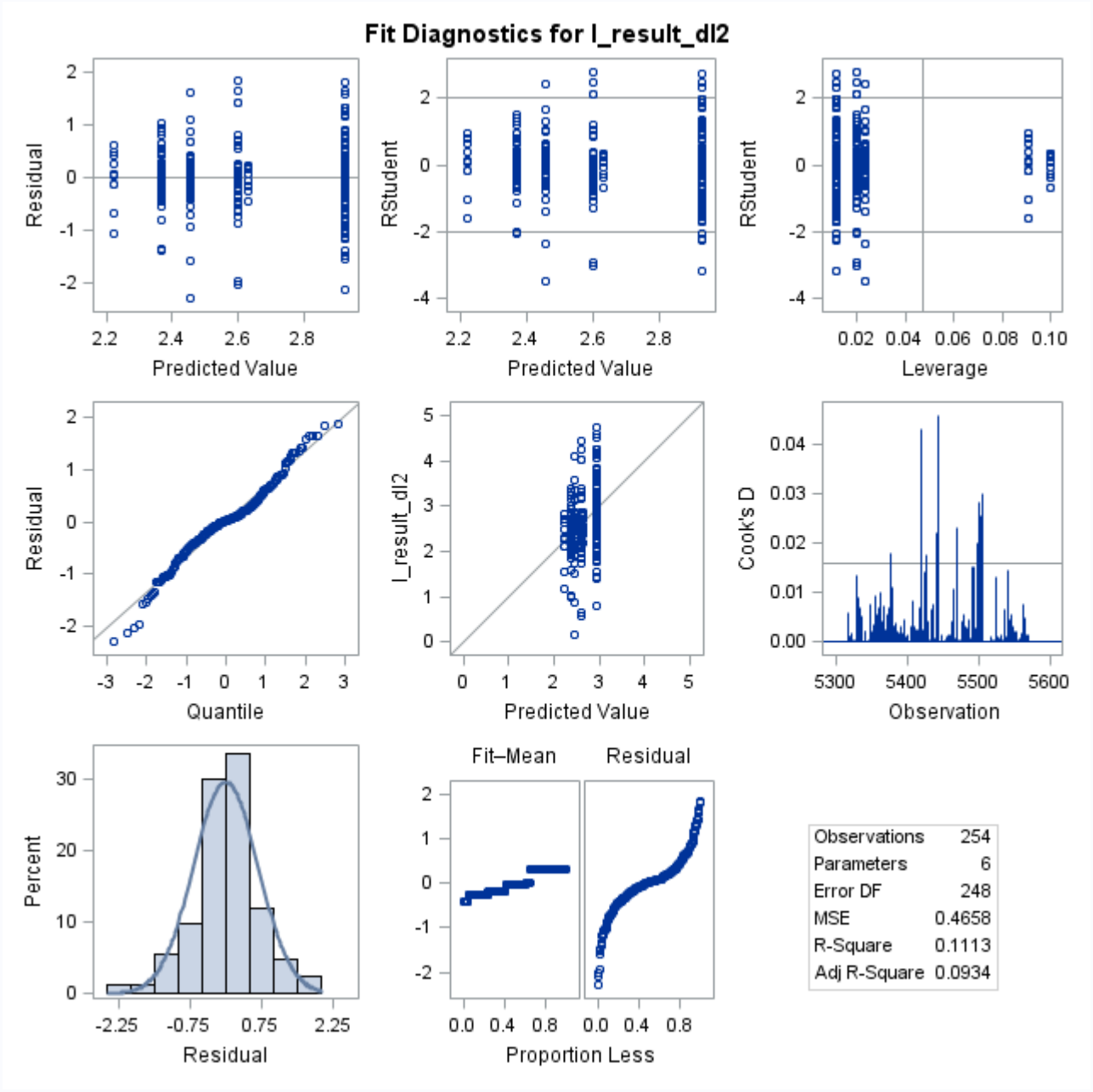
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	14.4669753	2.8933951	6.21	<.0001
Error	248	115.5280252	0.4658388		
Corrected Total	253	129.9950005			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.111289	25.95203	0.682524	2.629944

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	14.46697526	2.89339505	6.21	<.0001

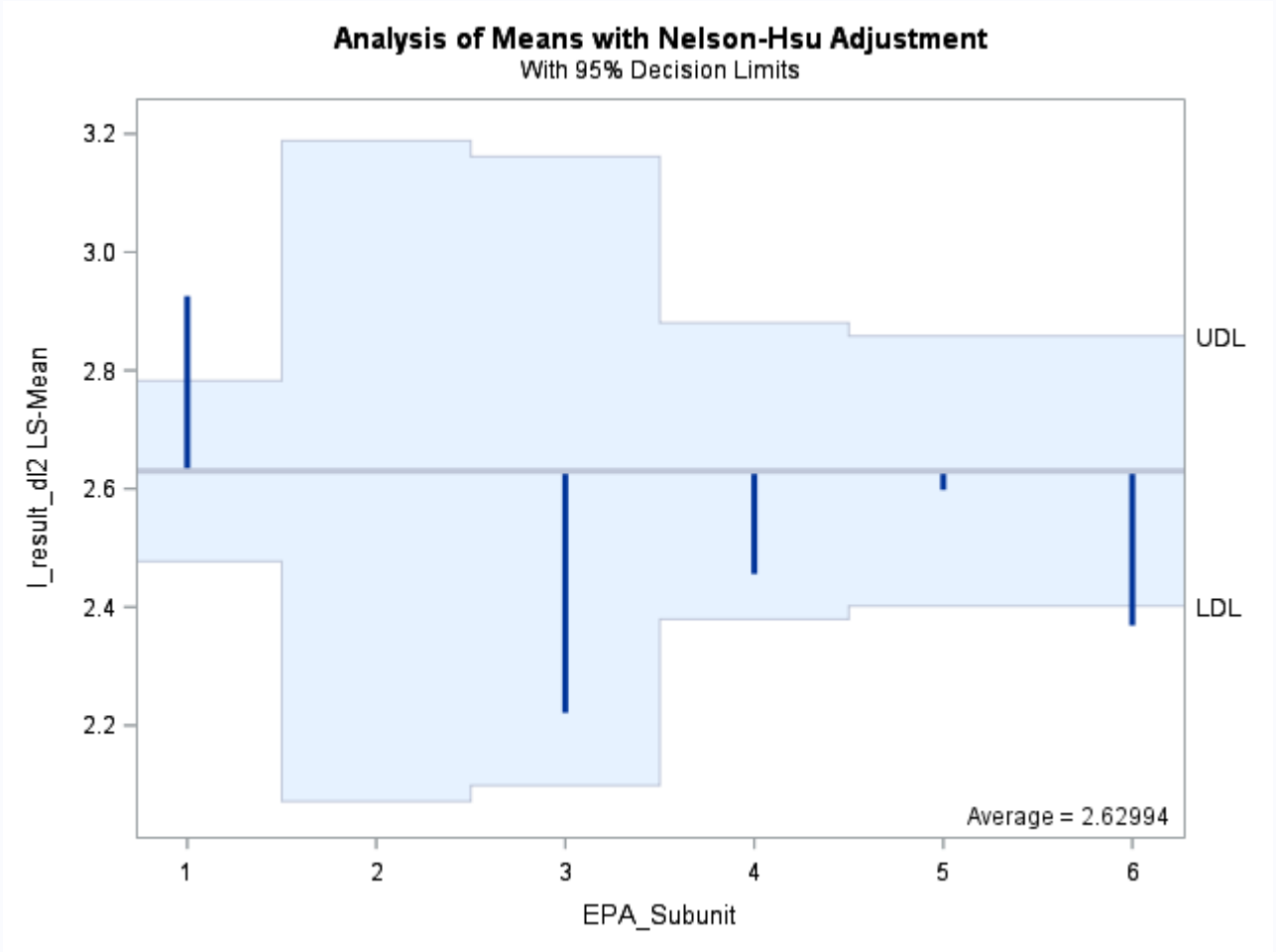
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	14.46697526	2.89339505	6.21	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.4658
R-Square 0.1113
Adj R-Square 0.0934

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	2.92562495	<.0001
2	2.63165604	1.0000
3	2.22128271	0.2195
4	2.45593863	0.3210
5	2.59802202	0.9983
6	2.36884815	0.0164



Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	2.92562495	1
2	2.63165604	2
3	2.22128271	3
4	2.45593863	4
5	2.59802202	5
6	2.36884815	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.7892	0.0174	0.0034	0.0747	<.0001
2	0.7892		0.7413	0.9776	1.0000	0.8763
3	0.0174	0.7413		0.9118	0.5613	0.9870
4	0.0034	0.9776	0.9118		0.9173	0.9900
5	0.0747	1.0000	0.5613	0.9173		0.5471
6	<.0001	0.8763	0.9870	0.9900	0.5471	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	9.0316	1.8063	2.86	0.0156
Error	248	156.5	0.6309		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	6.27	0.0001
Error	57.0743		

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	2.92562495	0.82357540
2	**10**	2.63165604	0.22767261
3	**11**	2.22128271	0.49380404
4	**43**	2.45593863	0.63885421
5	**50**	2.59802202	0.69091769
6	**50**	2.36884815	0.48914401

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

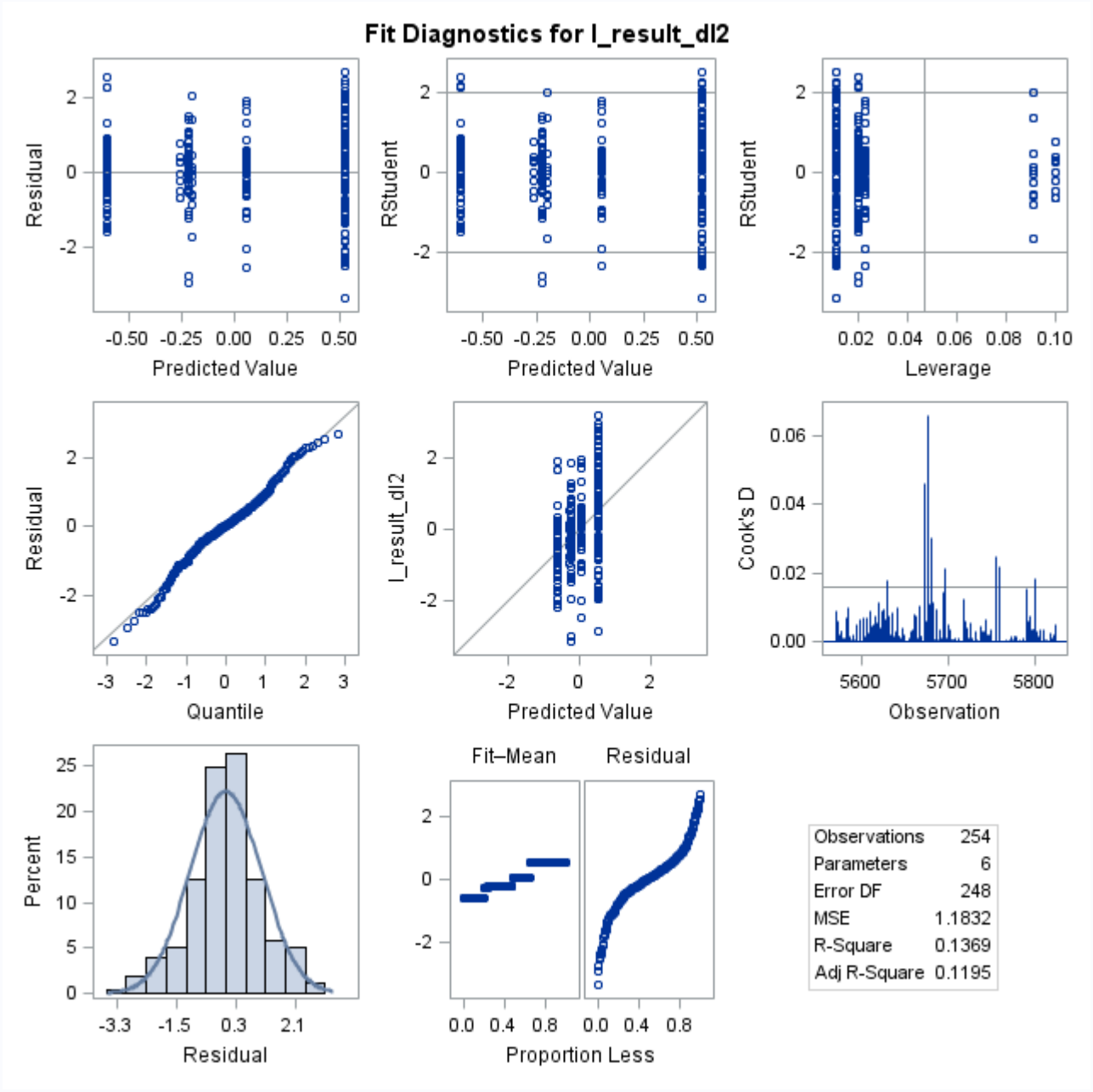
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	46.5425810	9.3085162	7.87	<.0001
Error	248	293.4354818	1.1832076		
Corrected Total	253	339.9780628			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.136899	9333.400	1.087753	0.011654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	46.54258097	9.30851619	7.87	<.0001

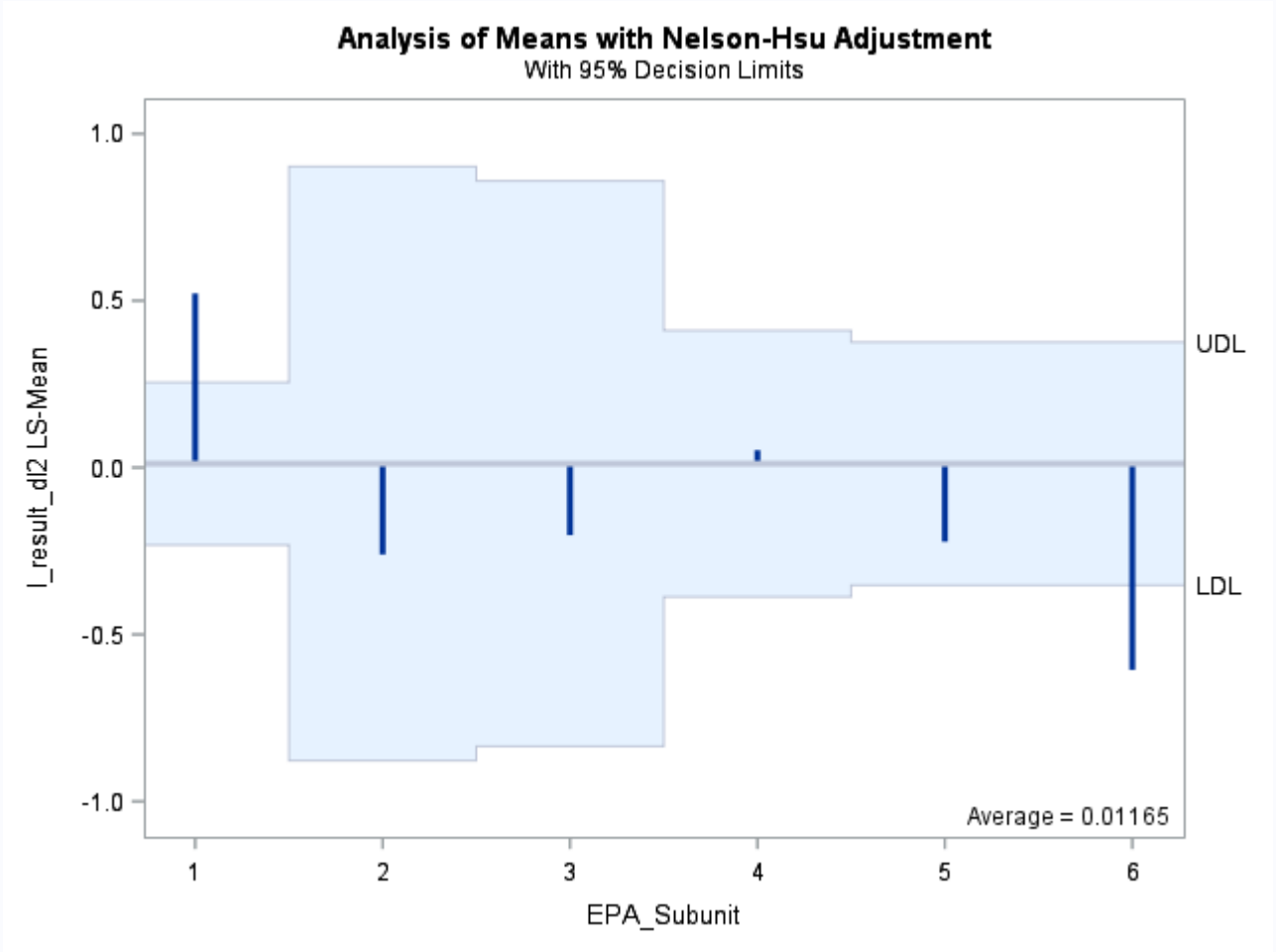
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	46.54258097	9.30851619	7.87	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.1832
R-Square 0.1369
Adj R-Square 0.1195

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.52177573	<.0001
2	-0.26032598	0.9411
3	-0.20248090	0.9734
4	0.05195078	0.9996
5	-0.22199197	0.4075
6	-0.60606658	<.0001



Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.52177573	1
2	-0.26032598	2
3	-0.20248090	3
4	0.05195078	4
5	-0.22199197	5
6	-0.60606658	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.2619	0.2987	0.1861	0.0019	<.0001
2	0.2619		1.0000	0.9641	1.0000	0.9418
3	0.2987	1.0000		0.9827	1.0000	0.8752
4	0.1861	0.9641	0.9827		0.8313	0.0452
5	0.0019	1.0000	1.0000	0.8313		0.4900
6	<.0001	0.9418	0.8752	0.0452	0.4900	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	79.9903	15.9981	5.34	0.0001
Error	248	742.9	2.9957		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	6.83	<.0001
Error	52.5804		

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	90	0.52177573	1.38305684
2	10	-0.26032598	0.49686179
3	11	-0.20248090	1.04611813
4	43	0.05195078	0.87085195
5	50	-0.22199197	0.83833844
6	50	-0.60606658	0.94476911

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

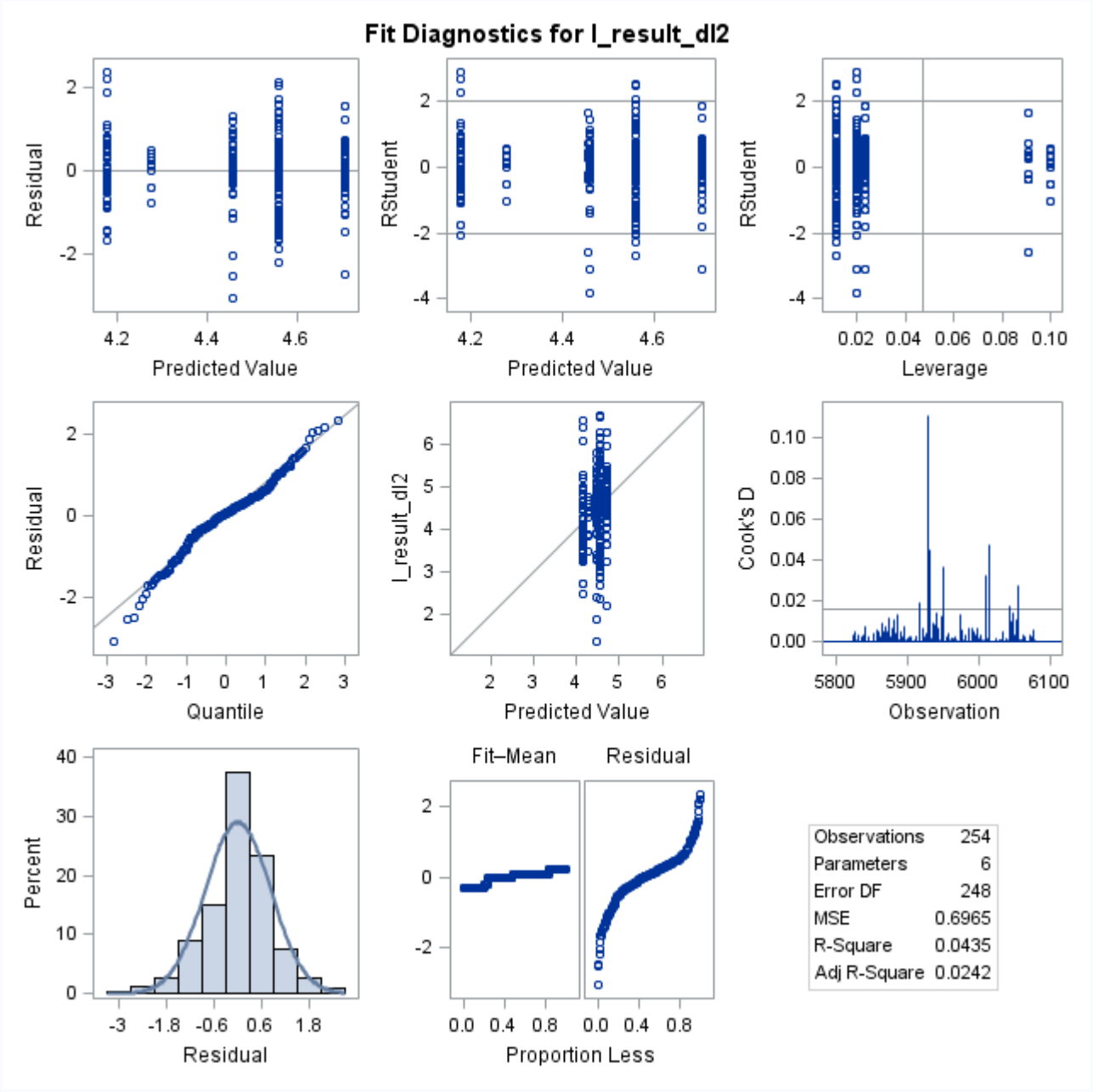
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	7.8560063	1.5712013	2.26	0.0495
Error	248	172.7255843	0.6964741		
Corrected Total	253	180.5815906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.043504	18.65823	0.834550	4.472828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	7.85600634	1.57120127	2.26	0.0495

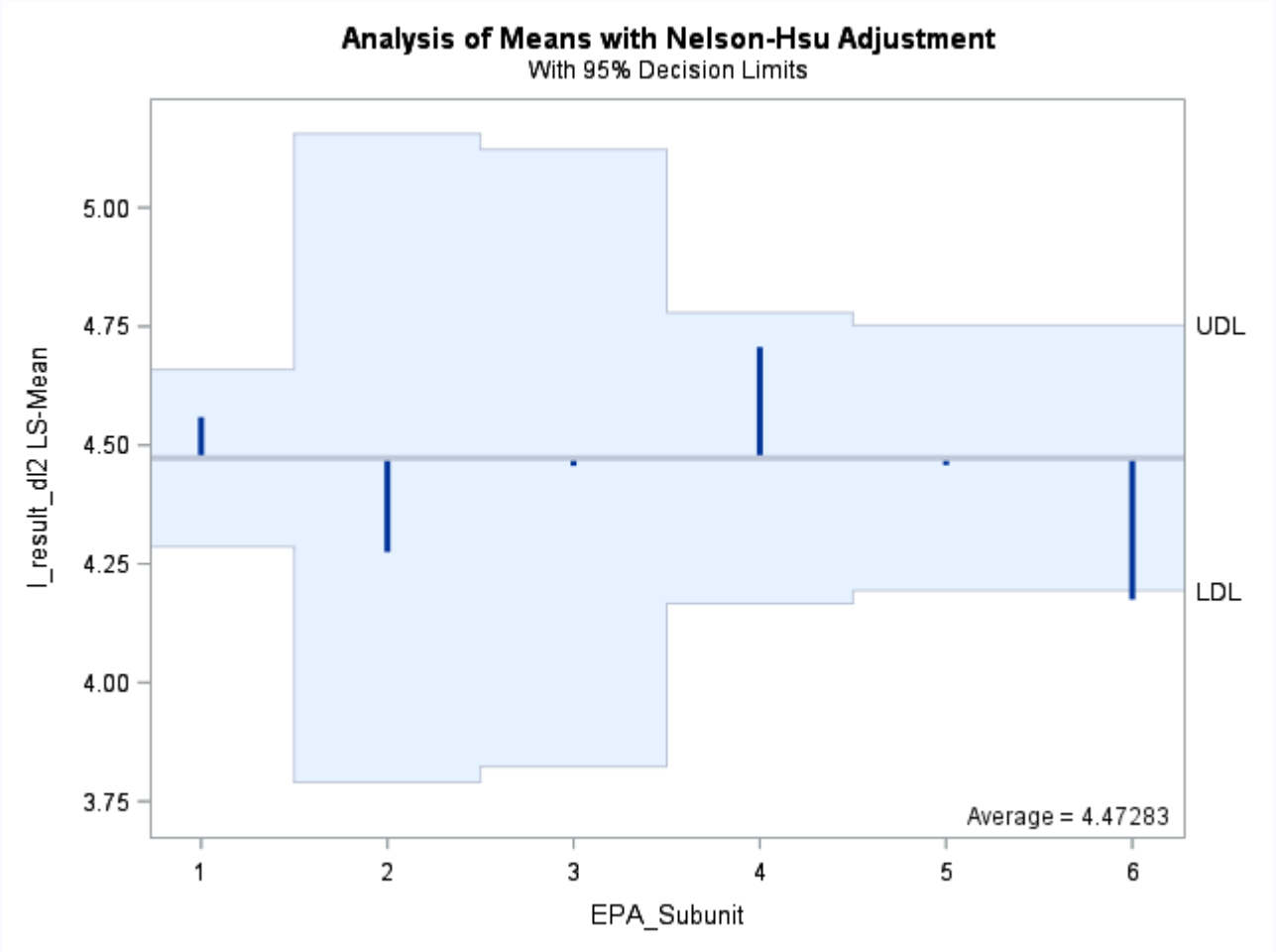
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	7.85600634	1.57120127	2.26	0.0495


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.6965
R-Square 0.0435
Adj R-Square 0.0242

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	4.55893937	0.7399
2	4.27499255	0.9527
3	4.45639975	1.0000
4	4.70646353	0.2269
5	4.45793992	1.0000
6	4.17496824	0.0302



Metals Chromium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	4.55893937	1
2	4.27499255	2
3	4.45639975	3
4	4.70646353	4
5	4.45793992	5
6	4.17496824	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9107	0.9989	0.9319	0.9834	0.0990
2	0.9107		0.9962	0.6821	0.9885	0.9993
3	0.9989	0.9962		0.9494	1.0000	0.9135
4	0.9319	0.6821	0.9494		0.7076	0.0291
5	0.9834	0.9885	1.0000	0.7076		0.5362
6	0.0990	0.9993	0.9135	0.0291	0.5362	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	9.2237	1.8447	1.25	0.2877
Error	248	366.9	1.4793		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	2.65	0.0329
Error	52.2863		

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	4.55893937	0.95614478
2	**10**	4.27499255	0.41461135
3	**11**	4.45639975	0.82976077
4	**43**	4.70646353	0.72859292
5	**50**	4.45793992	0.75345124
6	**50**	4.17496824	0.81836244

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Copper
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

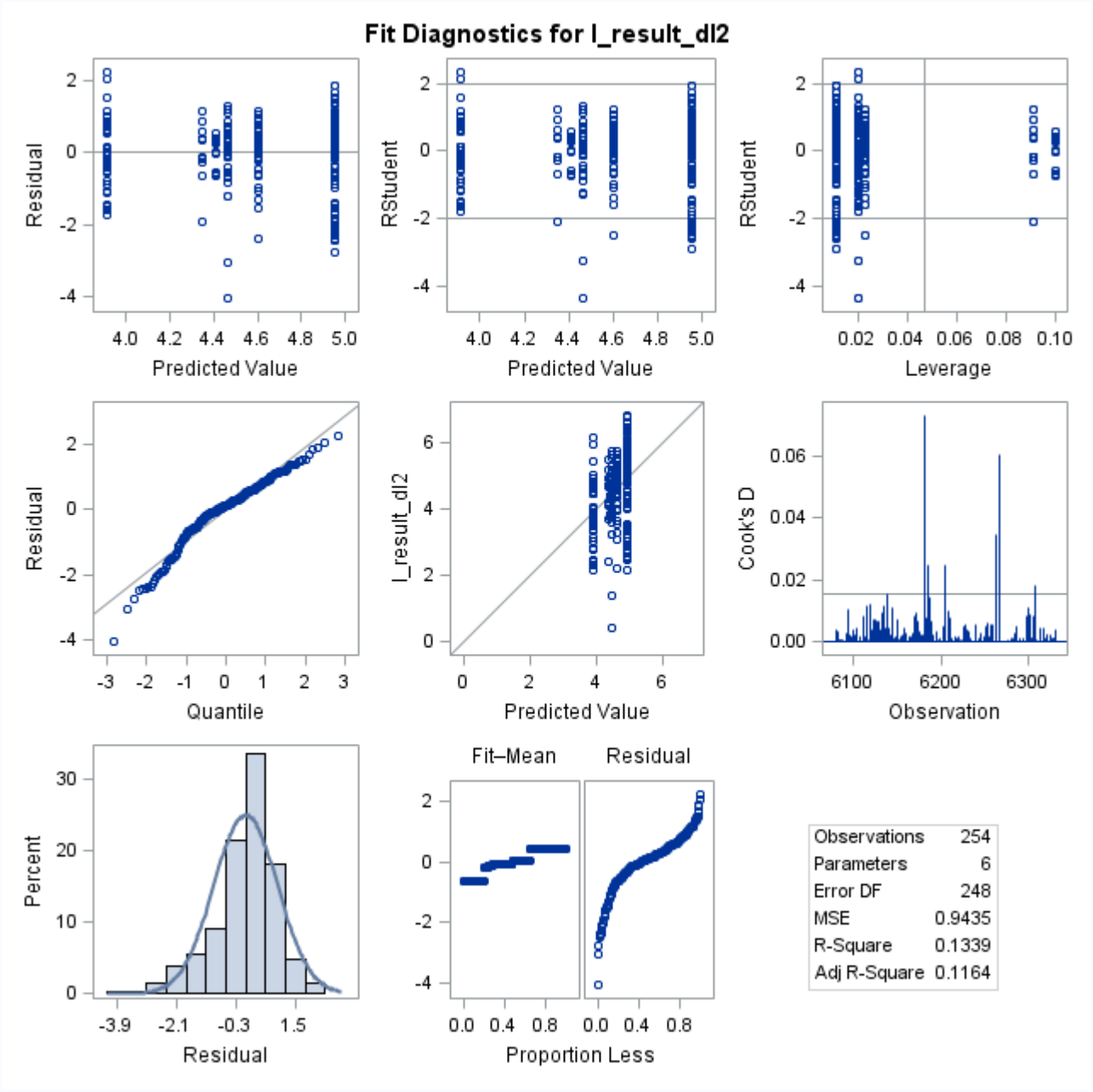
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	36.1713848	7.2342770	7.67	<.0001
Error	248	233.9830385	0.9434800		
Corrected Total	253	270.1544232			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.133892	21.37600	0.971329	4.544017

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	36.17138478	7.23427696	7.67	<.0001

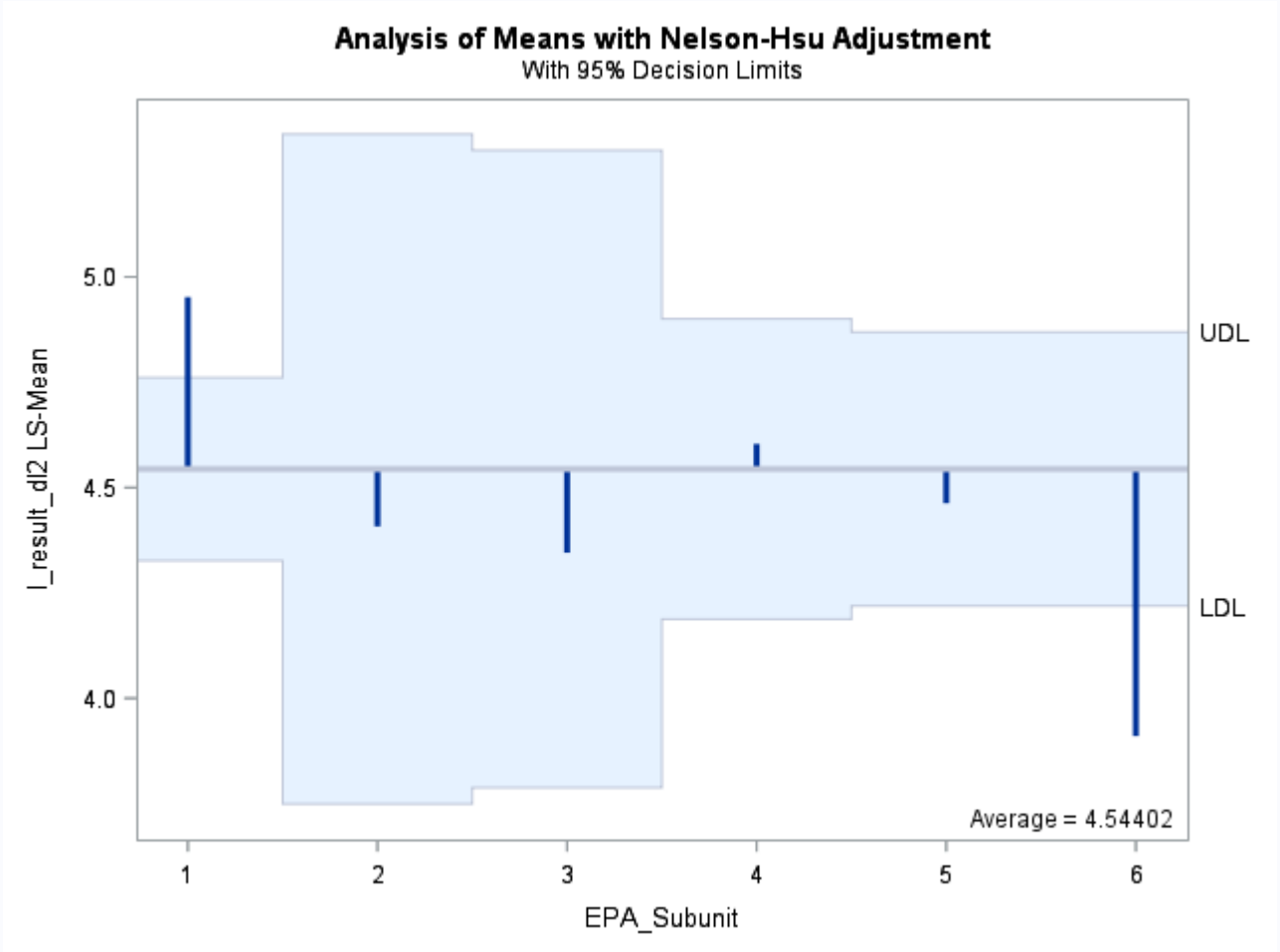
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	36.17138478	7.23427696	7.67	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.9435
R-Square 0.1339
Adj R-Square 0.1164

Metals Copper
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	4.95210771	<.0001
2	4.40784751	0.9954
3	4.34542925	0.9687
4	4.60363746	0.9959
5	4.46284461	0.9748
6	3.91027514	<.0001



Metals Copper
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	4.95210771	1
2	4.40784751	2
3	4.34542925	3
4	4.60363746	4
5	4.46284461	5
6	3.91027514	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5457	0.3712	0.3832	0.0523	<.0001
2	0.5457		1.0000	0.9926	1.0000	0.6782
3	0.3712	1.0000		0.9696	0.9992	0.7594
4	0.3832	0.9926	0.9696		0.9822	0.0091
5	0.0523	1.0000	0.9992	0.9822		0.0539
6	<.0001	0.6782	0.7594	0.0091	0.0539	

Metals Copper
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	35.7503	7.1501	2.50	0.0314
Error	248	709.6	2.8614		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	7.07	<.0001
Error	53.0576		

Metals Copper
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	4.95210771	1.18424445
2	**10**	4.40784751	0.44934854
3	**11**	4.34542925	0.83402306
4	**43**	4.60363746	0.70575438
5	**50**	4.46284461	0.92032616
6	**50**	3.91027514	0.88028750

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Lead
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

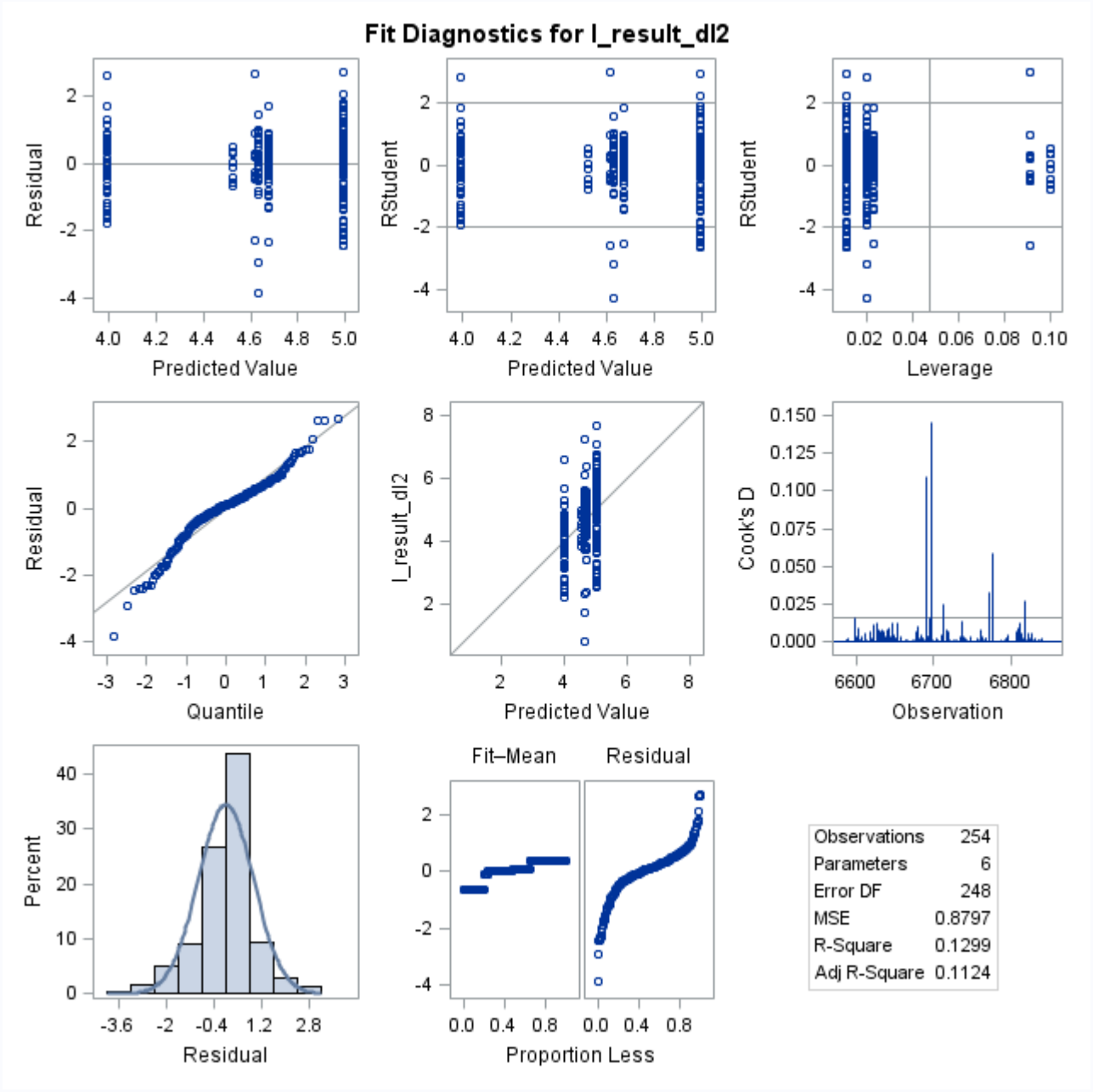
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	32.5803750	6.5160750	7.41	<.0001
Error	248	218.1581013	0.8796698		
Corrected Total	253	250.7384763			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.129938	20.23913	0.937907	4.634128

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	32.58037496	6.51607499	7.41	<.0001

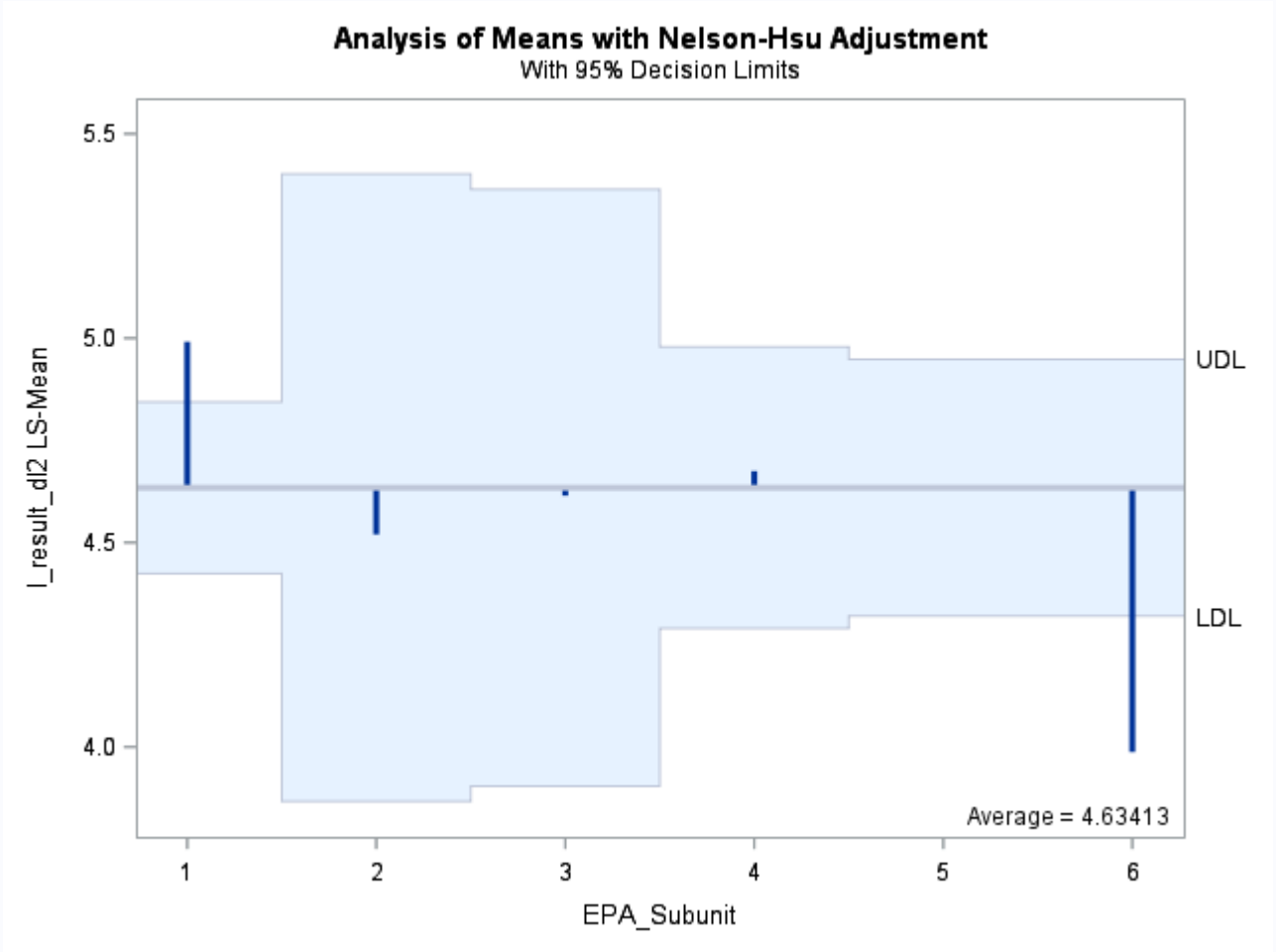
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	32.58037496	6.51607499	7.41	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.8797
R-Square 0.1299
Adj R-Square 0.1124

Metals Lead
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	4.99119102	<.0001
2	4.51990948	0.9977
3	4.61465598	1.0000
4	4.67472802	0.9992
5	4.63015057	1.0000
6	3.98760476	<.0001



Metals Lead
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	4.99119102	1
2	4.51990948	2
3	4.61465598	3
4	4.67472802	4
5	4.63015057	5
6	3.98760476	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.6598	0.8080	0.4547	0.2497	<.0001
2	0.6598		0.9999	0.9971	0.9994	0.5739
3	0.8080	0.9999		1.0000	1.0000	0.3410
4	0.4547	0.9971	1.0000		0.9999	0.0067
5	0.2497	0.9994	1.0000	0.9999		0.0093
6	<.0001	0.5739	0.3410	0.0067	0.0093	

Metals Lead
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	30.4497	6.0899	2.18	0.0567
Error	248	691.9	2.7900		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	7.02	<.0001
Error	52.4742		

Metals Lead
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	4.99119102	1.12717397
2	**10**	4.51990948	0.41666203
3	**11**	4.61465598	1.18051425
4	**43**	4.67472802	0.68806825
5	**50**	4.63015057	0.82609312
6	**50**	3.98760476	0.86022848

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

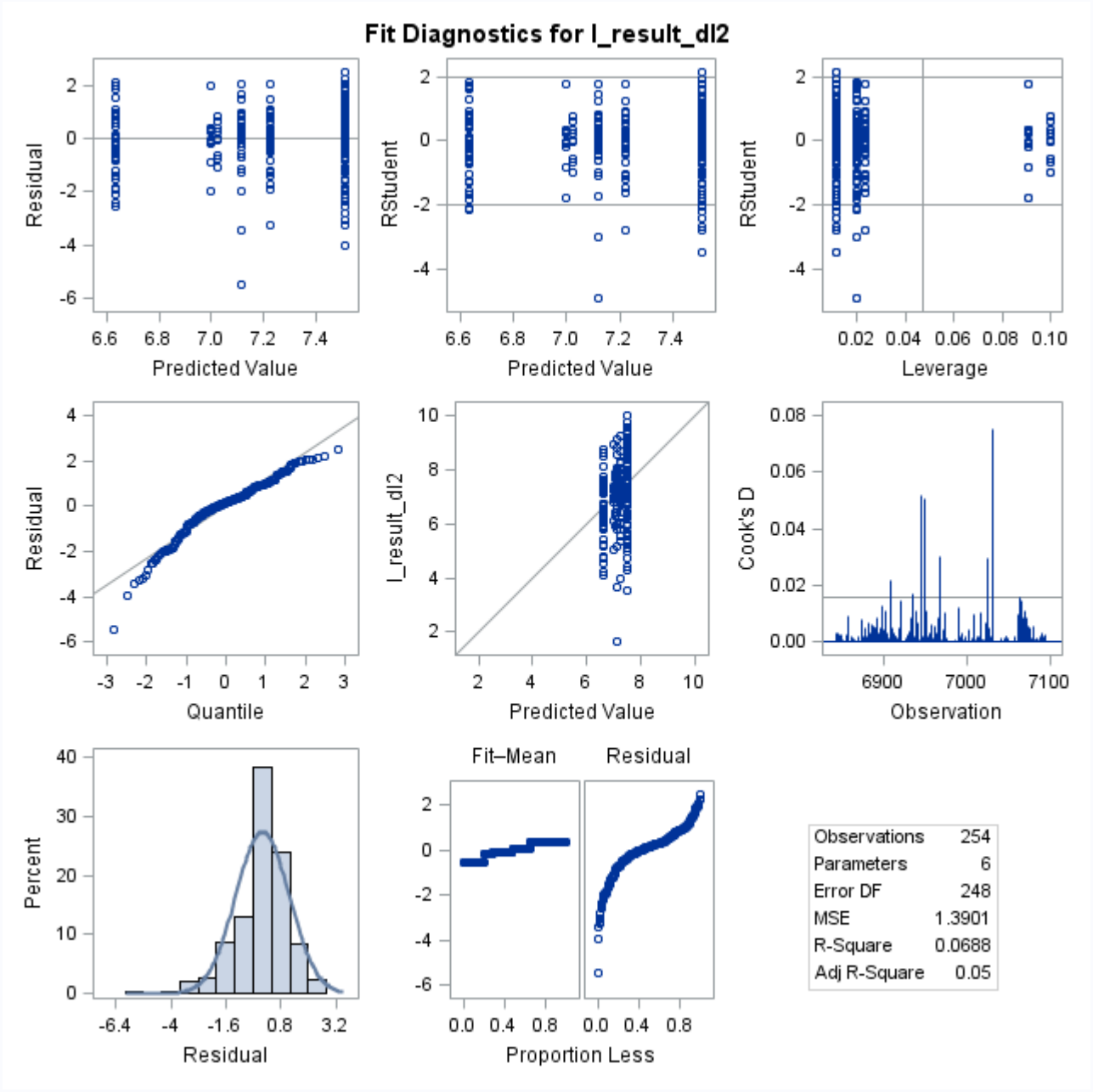
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	25.4765197	5.0953039	3.67	0.0032
Error	248	344.7495278	1.3901191		
Corrected Total	253	370.2260474			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.068813	16.44253	1.179033	7.170631

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.47651968	5.09530394	3.67	0.0032

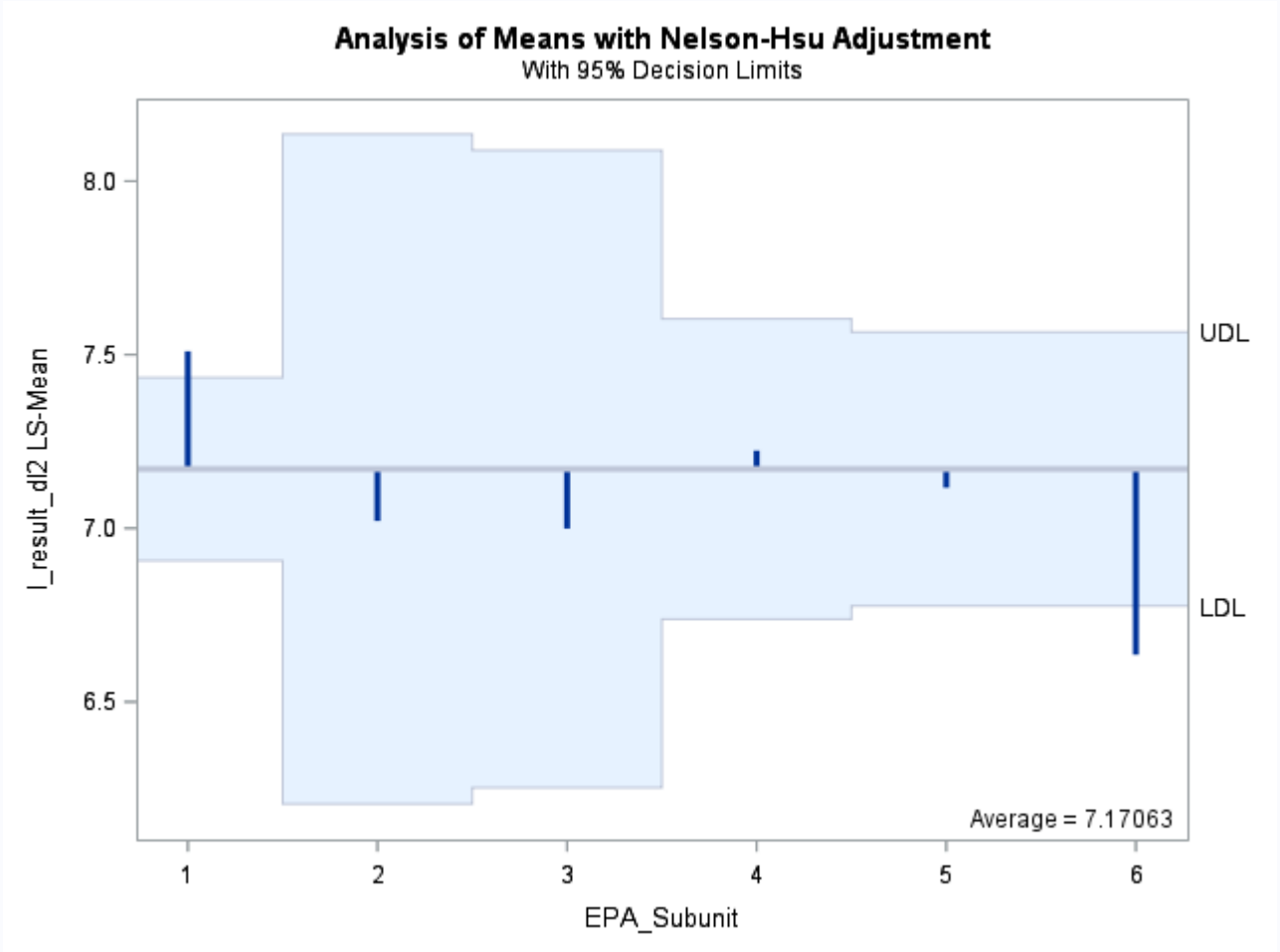
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.47651968	5.09530394	3.67	0.0032


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.3901
R-Square 0.0688
Adj R-Square 0.05

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	7.50989822	0.0047
2	7.02100341	0.9971
3	6.99913340	0.9932
4	7.22363542	0.9991
5	7.11690092	0.9985
6	6.63575243	0.0025



Metals Mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	7.50989822	1
2	7.02100341	2
3	6.99913340	3
4	7.22363542	4
5	7.11690092	5
6	6.63575243	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.8147	0.7530	0.7795	0.4109	0.0005
2	0.8147		1.0000	0.9965	0.9999	0.9348
3	0.7530	1.0000		0.9932	0.9997	0.9397
4	0.7795	0.9965	0.9932		0.9980	0.1611
5	0.4109	0.9999	0.9997	0.9980		0.3226
6	0.0005	0.9348	0.9397	0.1611	0.3226	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	48.6263	9.7253	1.27	0.2755
Error	248	1892.8	7.6321		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	3.35	0.0107
Error	52.3111		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	7.50989822	1.37475891
2	**10**	7.02100341	0.62883597
3	**11**	6.99913340	0.95286858
4	**43**	7.22363542	0.93408468
5	**50**	7.11690092	1.16115101
6	**50**	6.63575243	1.11751820

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

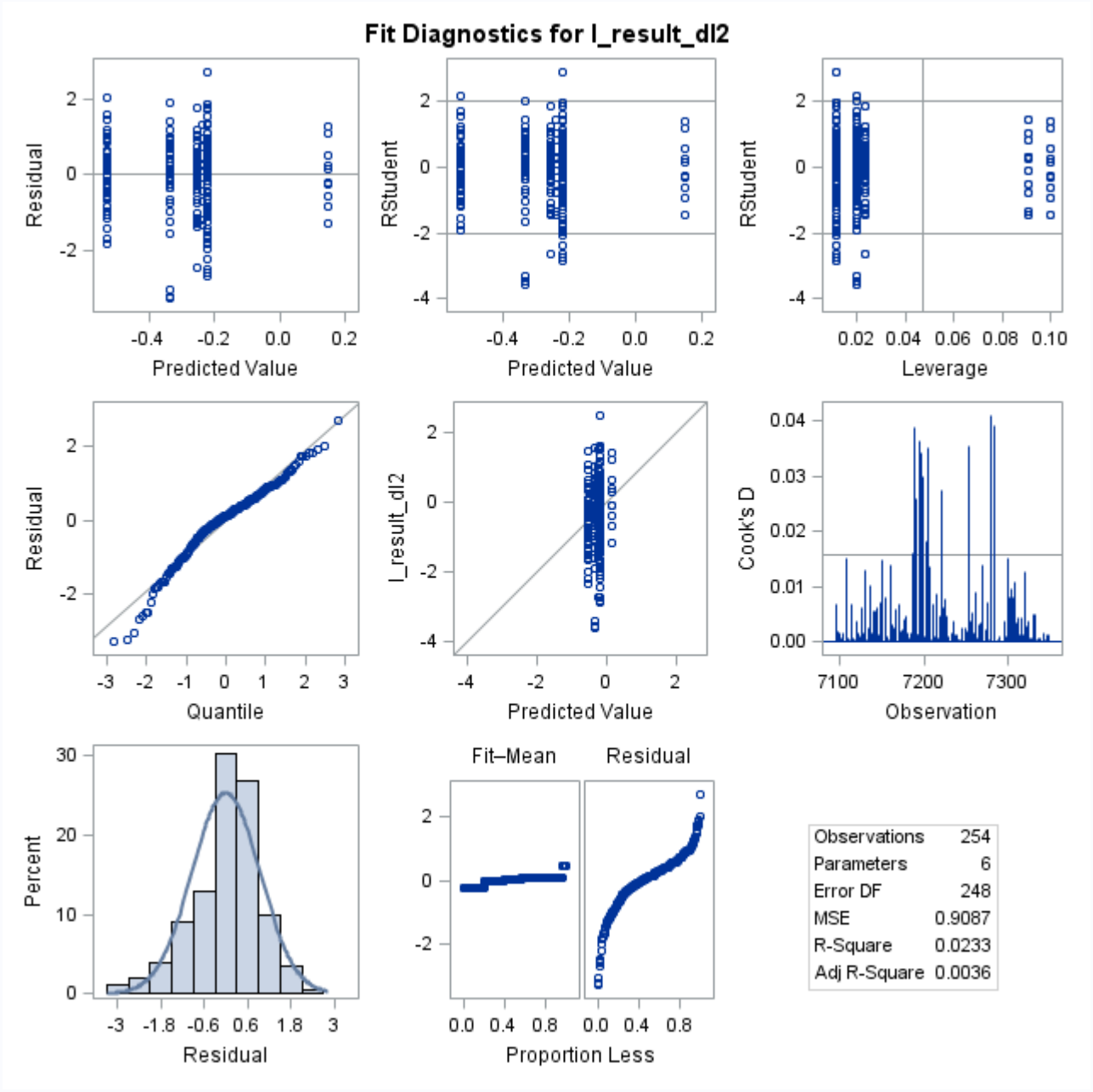
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	5.3726869	1.0745374	1.18	0.3182
Error	248	225.3580745	0.9087019		
Corrected Total	253	230.7307614			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.023286	-321.6788	0.953259	-0.296339

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	5.37268691	1.07453738	1.18	0.3182

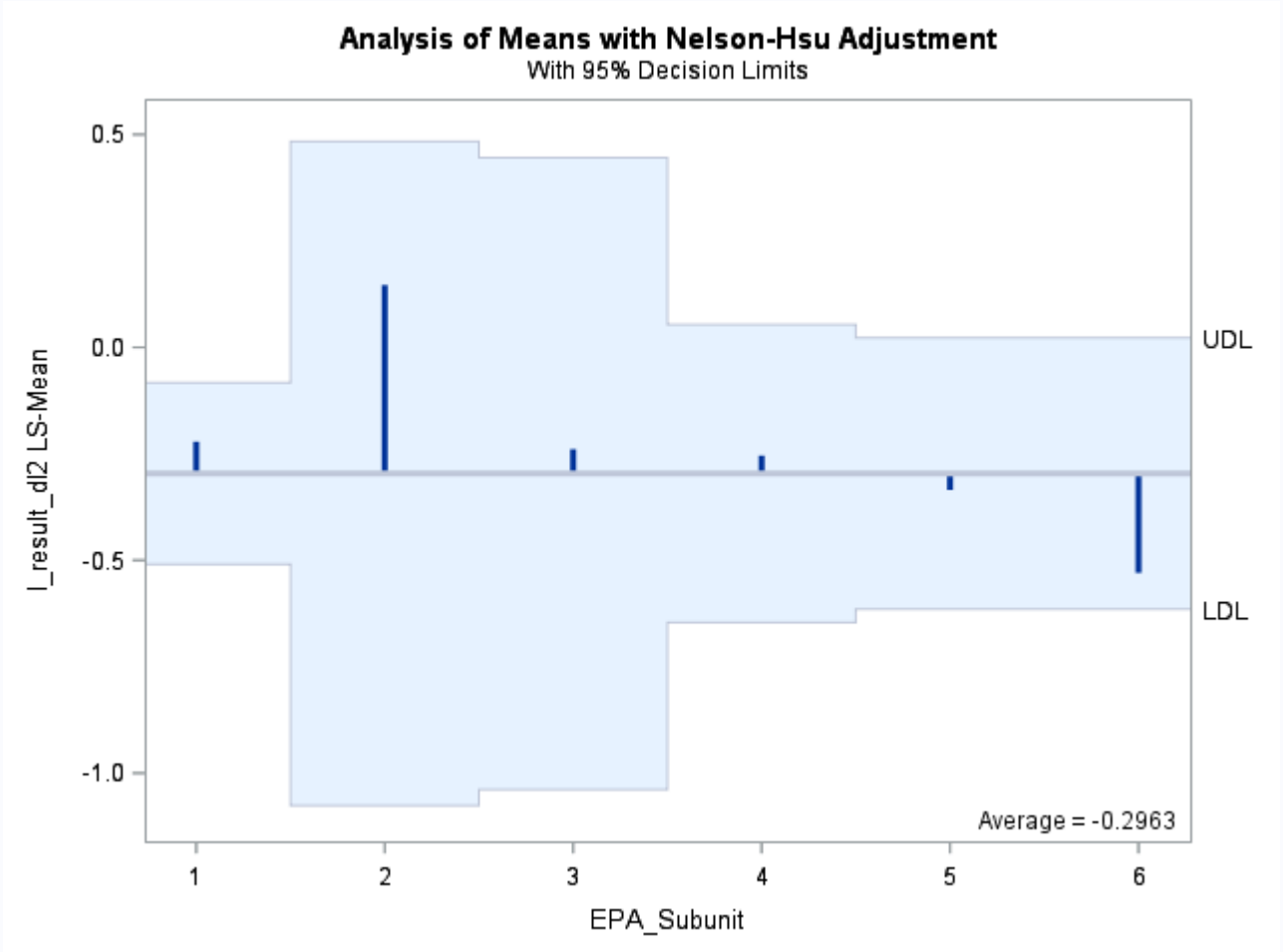
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	5.37268691	1.07453738	1.18	0.3182


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.9087
R-Square 0.0233
Adj R-Square 0.0036

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	-0.22152236	0.8987
2	0.14632967	0.5436
3	-0.23919135	0.9999
4	-0.25425540	0.9992
5	-0.33494990	0.9991
6	-0.52969430	0.2675



Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	-0.22152236	1
2	0.14632967	2
3	-0.23919135	3
4	-0.25425540	4
5	-0.33494990	5
6	-0.52969430	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.8563	1.0000	1.0000	0.9846	0.4466
2	0.8563		0.9396	0.8380	0.6916	0.3189
3	1.0000	0.9396		1.0000	0.9997	0.9424
4	1.0000	0.8380	1.0000		0.9986	0.7335
5	0.9846	0.6916	0.9997	0.9986		0.9104
6	0.4466	0.3189	0.9424	0.7335	0.9104	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	12.1791	2.4358	0.96	0.4427
Error	248	629.0	2.5362		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	1.42	0.2320
Error	49.3021		

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	90	-0.22152236	1.05451756
2	10	0.14632967	0.81307462
3	11	-0.23919135	0.85551868
4	43	-0.25425540	0.78633081
5	50	-0.33494990	1.03593661
6	50	-0.52969430	0.83989972

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

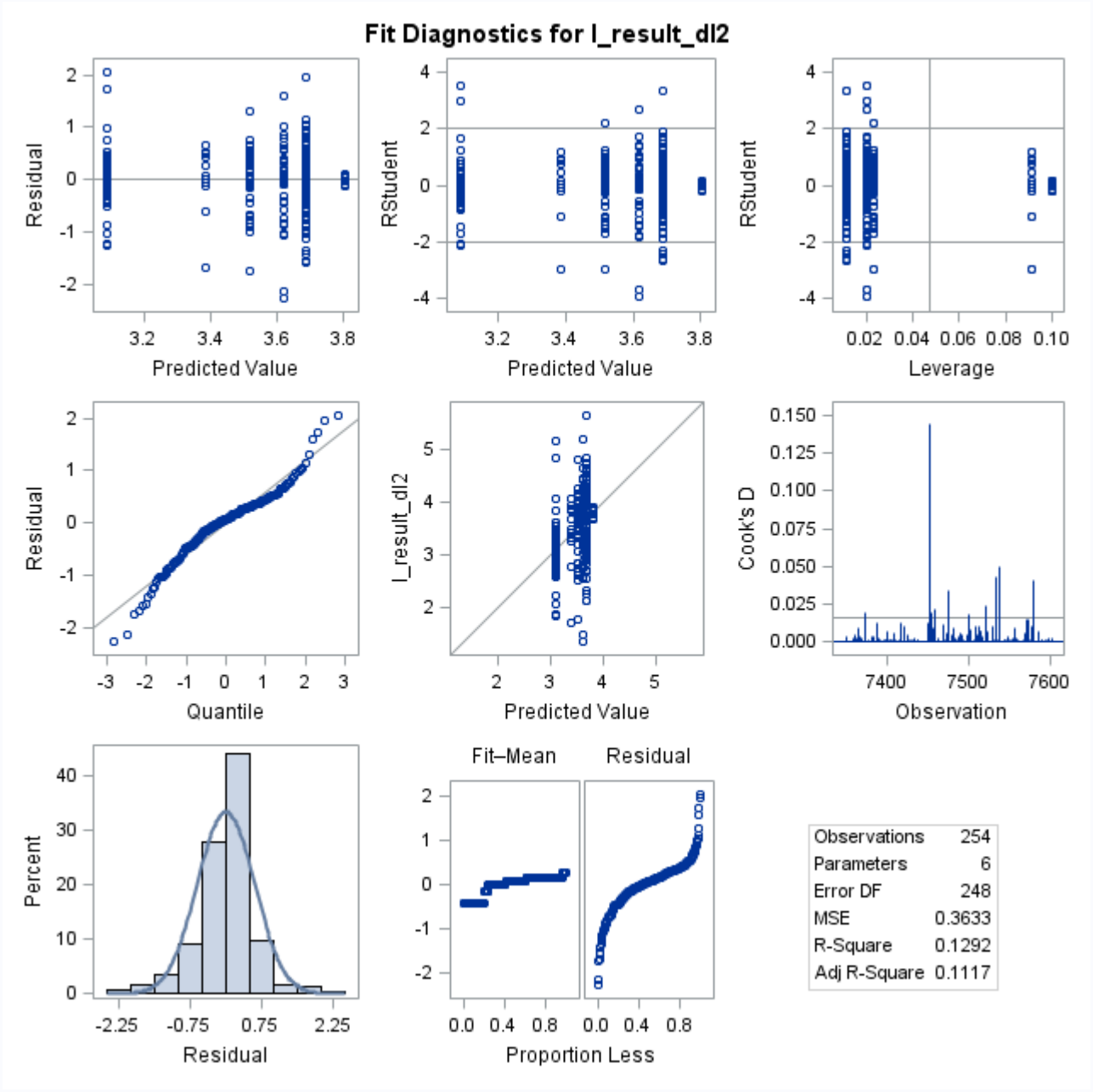
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	13.3686104	2.6737221	7.36	<.0001
Error	248	90.0979764	0.3632983		
Corrected Total	253	103.4665868			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.129207	17.13409	0.602742	3.517795

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	13.36861039	2.67372208	7.36	<.0001

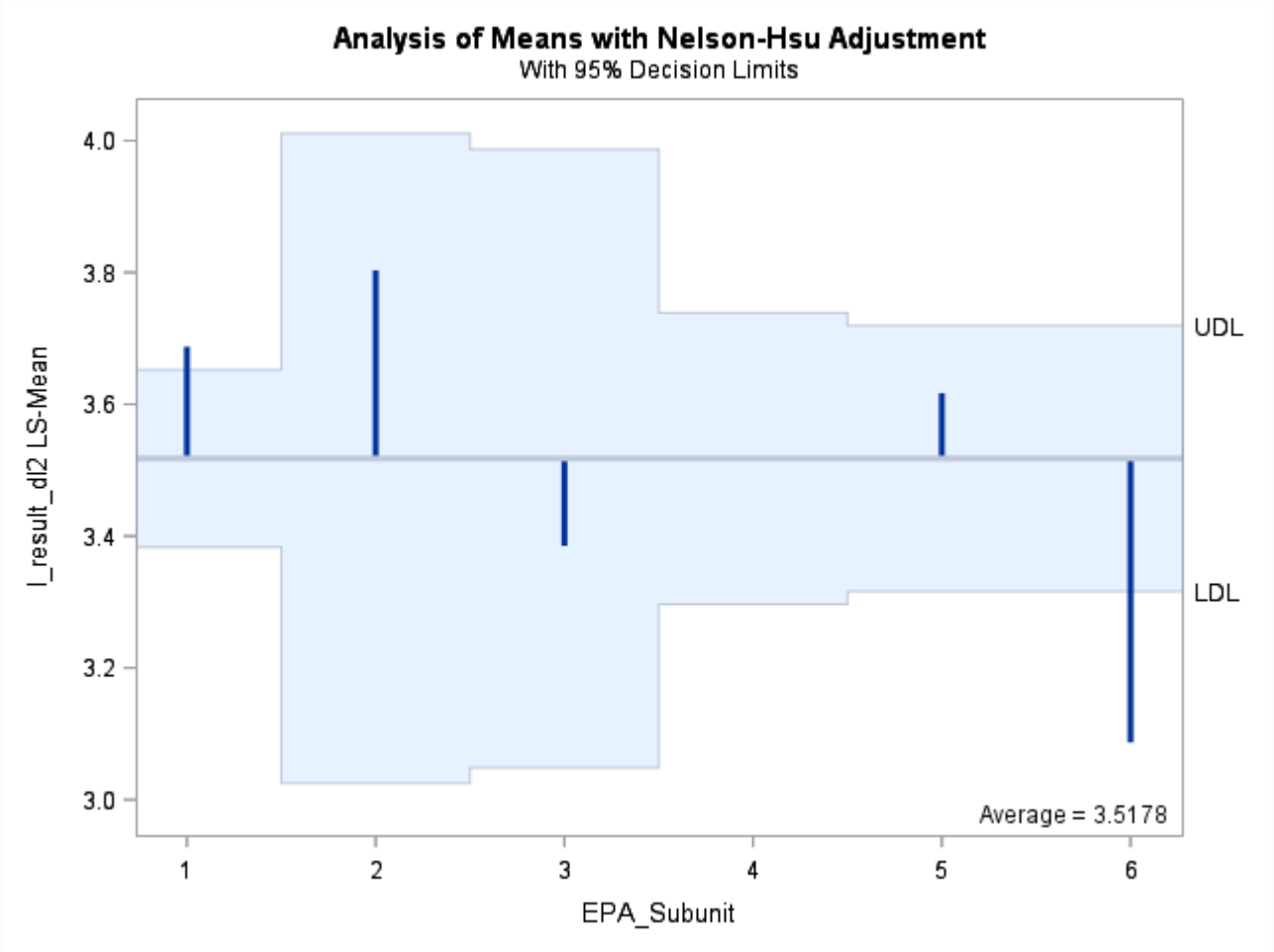
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	13.36861039	2.67372208	7.36	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.3633
R-Square 0.1292
Adj R-Square 0.1117

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	3.68737022	0.0061
2	3.80319442	0.5225
3	3.38516087	0.9573
4	3.51617706	1.0000
5	3.61689788	0.6866
6	3.08694995	<.0001



Metals Nickel
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	3.68737022	1
2	3.80319442	2
3	3.38516087	3
4	3.51617706	4
5	3.61689788	5
6	3.08694995	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9925	0.6193	0.6439	0.9858	<.0001
2	0.9925		0.6077	0.7529	0.9481	0.0091
3	0.6193	0.6077		0.9876	0.8578	0.6738
4	0.6439	0.7529	0.9876		0.9667	0.0093
5	0.9858	0.9481	0.8578	0.9667		0.0002
6	<.0001	0.0091	0.6738	0.0093	0.0002	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	1.8126	0.3625	0.67	0.6430
Error	248	133.2	0.5373		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	14.76	<.0001
Error	67.0207		

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	3.68737022	0.61121427
2	**10**	3.80319442	0.08247894
3	**11**	3.38516087	0.67114319
4	**43**	3.51617706	0.55189690
5	**50**	3.61689788	0.67322966
6	**50**	3.08694995	0.59388180

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	253
Number of Observations Used	253

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

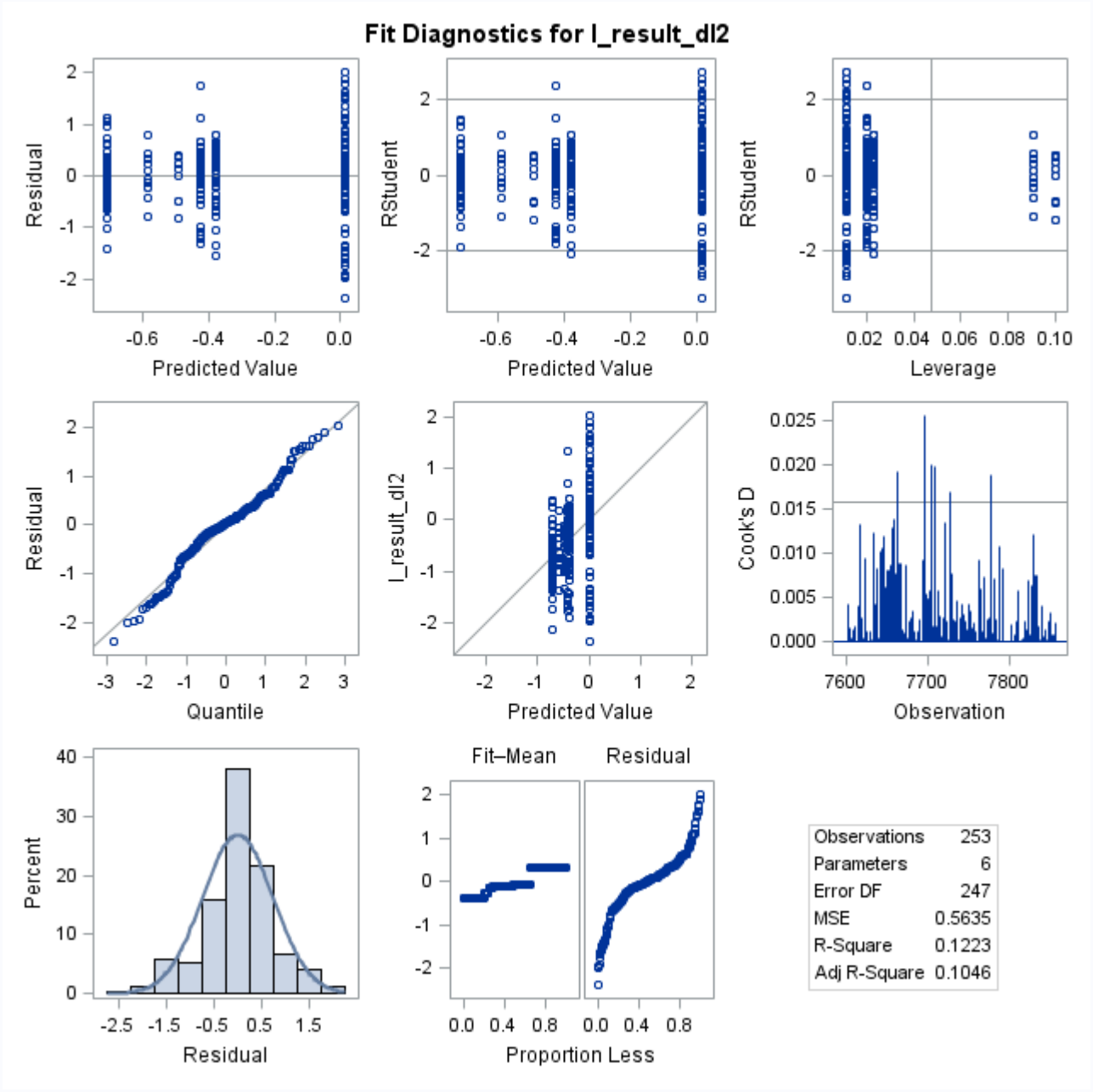
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	19.4000483	3.8800097	6.89	<.0001
Error	247	139.1791520	0.5634783		
Corrected Total	252	158.5792003			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.122337	-227.8231	0.750652	-0.329489

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	19.40004827	3.88000965	6.89	<.0001

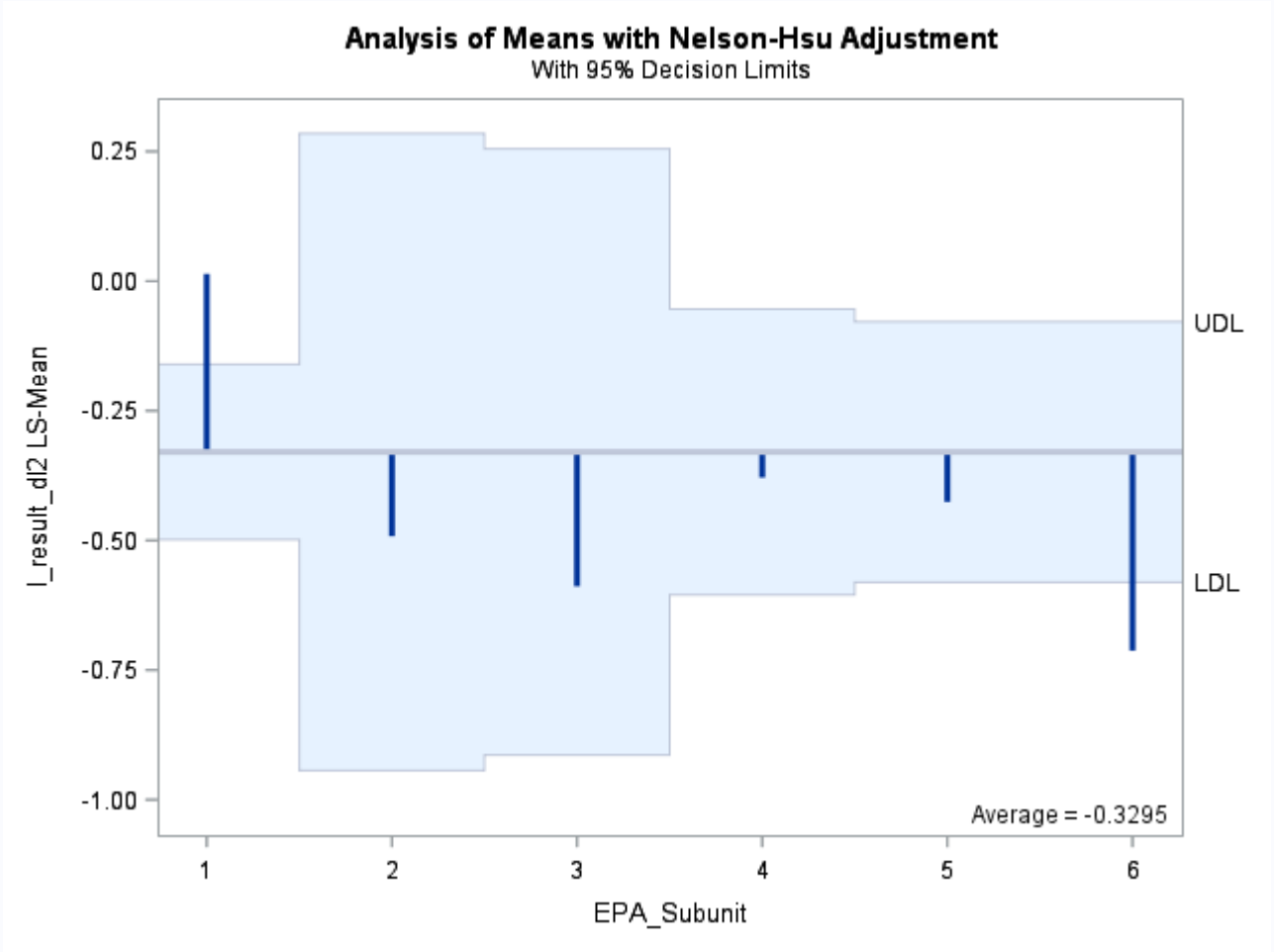
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	19.40004827	3.88000965	6.89	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 6
Error DF 247
MSE 0.5635
R-Square 0.1223
Adj R-Square 0.1046

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Selenium

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.01386998	<.0001
2	-0.49189064	0.9678
3	-0.58851555	0.7707
4	-0.37878778	0.9944
5	-0.42570714	0.8599
6	-0.71258615	0.0004



Metals Selenium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Selenium

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.01386998	1
2	-0.49189064	2
3	-0.58851555	3
4	-0.37878778	4
5	-0.42570714	5
6	-0.71258615	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3339	0.1249	0.0582	0.0134	<.0001
2	0.3339		0.9997	0.9981	0.9999	0.9579
3	0.1249	0.9997		0.9623	0.9869	0.9963
4	0.0582	0.9981	0.9623		0.9997	0.2713
5	0.0134	0.9999	0.9869	0.9997		0.3979
6	<.0001	0.9579	0.9963	0.2713	0.3979	

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	34.2666	6.8533	9.63	<.0001
Error	247	175.8	0.7118		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	6.21	0.0001
Error	51.8897		

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**89**	0.01386998	1.02916314
2	**10**	-0.49189064	0.44660588
3	**11**	-0.58851555	0.43371620
4	**43**	-0.37878778	0.55883845
5	**50**	-0.42570714	0.56775551
6	**50**	-0.71258615	0.52262681

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Silver
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

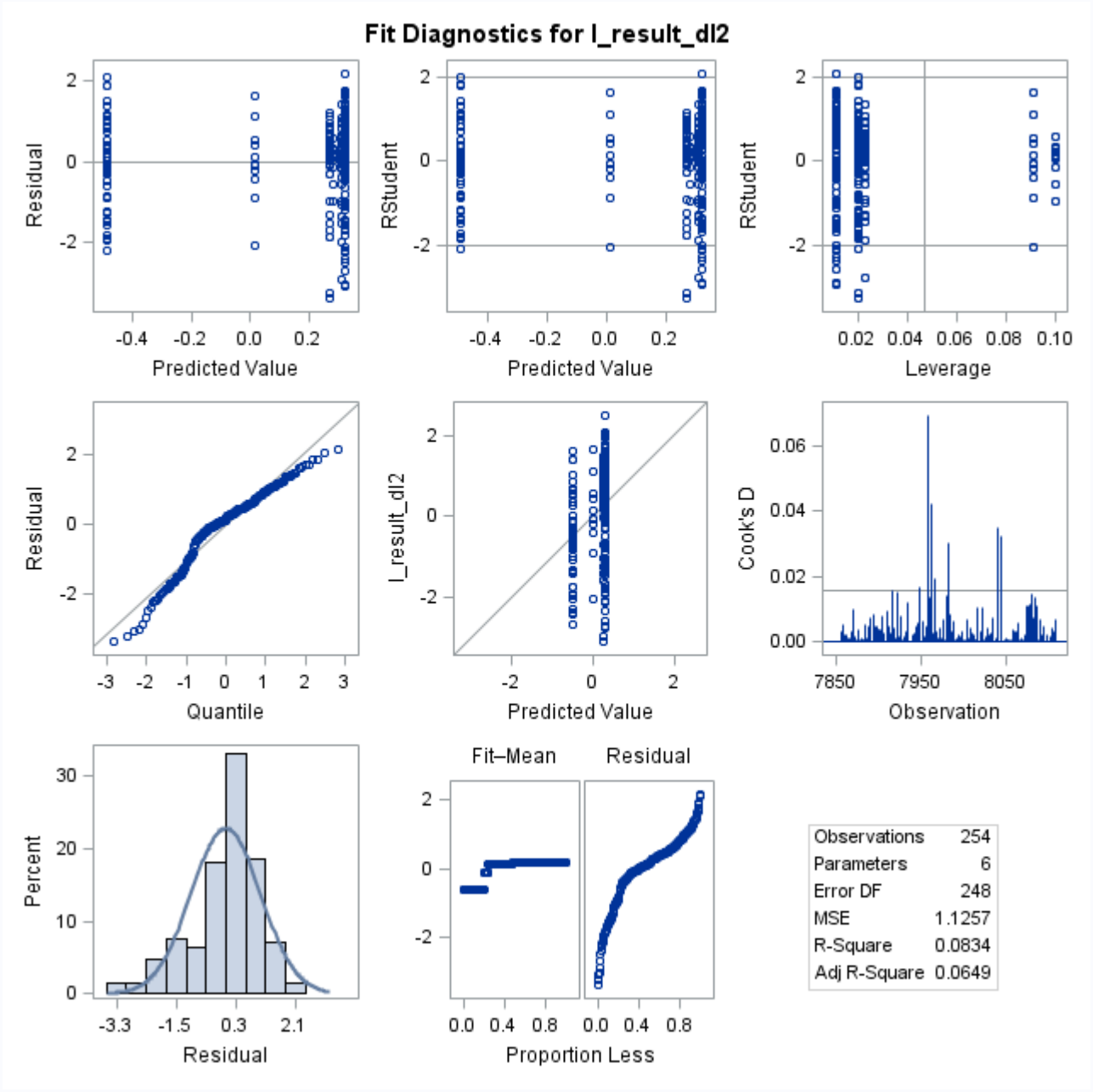
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	25.3996420	5.0799284	4.51	0.0006
Error	248	279.1840213	1.1257420		
Corrected Total	253	304.5836633			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.083391	781.0040	1.061010	0.135852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.39964197	5.07992839	4.51	0.0006

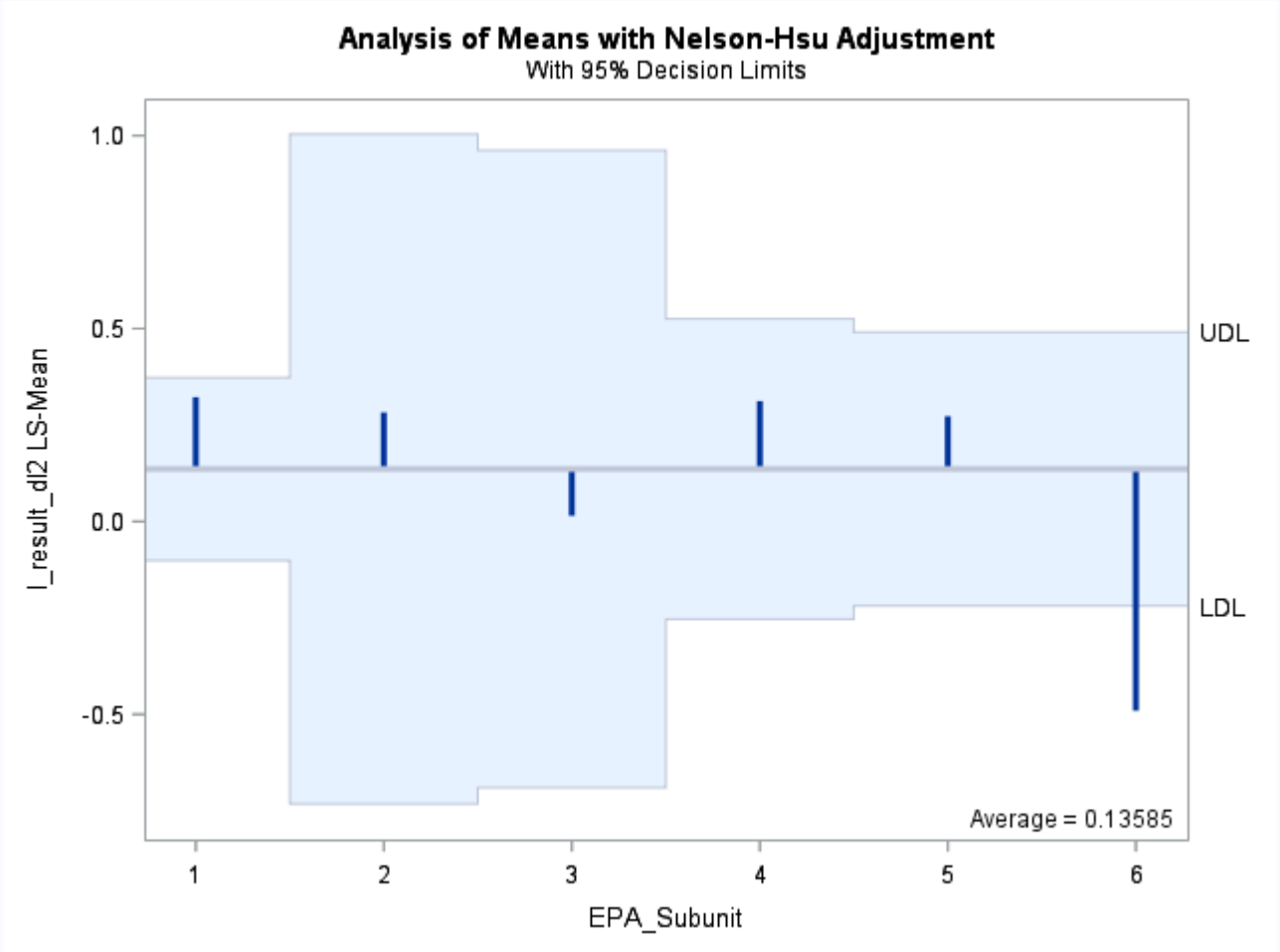
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	25.39964197	5.07992839	4.51	0.0006


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 1.1257
R-Square 0.0834
Adj R-Square 0.0649

Metals Silver
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.32226477	0.2001
2	0.28253390	0.9957
3	0.01469292	0.9978
4	0.31194331	0.7555
5	0.27270051	0.8570
6	-0.49065914	<.0001



Metals Silver
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.32226477	1
2	0.28253390	2
3	0.01469292	3
4	0.31194331	4
5	0.27270051	5
6	-0.49065914	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		1.0000	0.9443	1.0000	0.9998	0.0003
2	1.0000		0.9924	1.0000	1.0000	0.2888
3	0.9443	0.9924		0.9619	0.9781	0.7086
4	1.0000	1.0000	0.9619		1.0000	0.0045
5	0.9998	1.0000	0.9781	1.0000		0.0052
6	0.0003	0.2888	0.7086	0.0045	0.0052	

Metals Silver
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	30.3469	6.0694	1.96	0.0853
Error	248	768.3	3.0978		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	4.48	0.0018
Error	53.8436		

Metals Silver
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	0.32226477	1.22896224
2	**10**	0.28253390	0.45607122
3	**11**	0.01469292	0.97935738
4	**43**	0.31194331	0.85309458
5	**50**	0.27270051	0.98939987
6	**50**	-0.49065914	1.05720625

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure

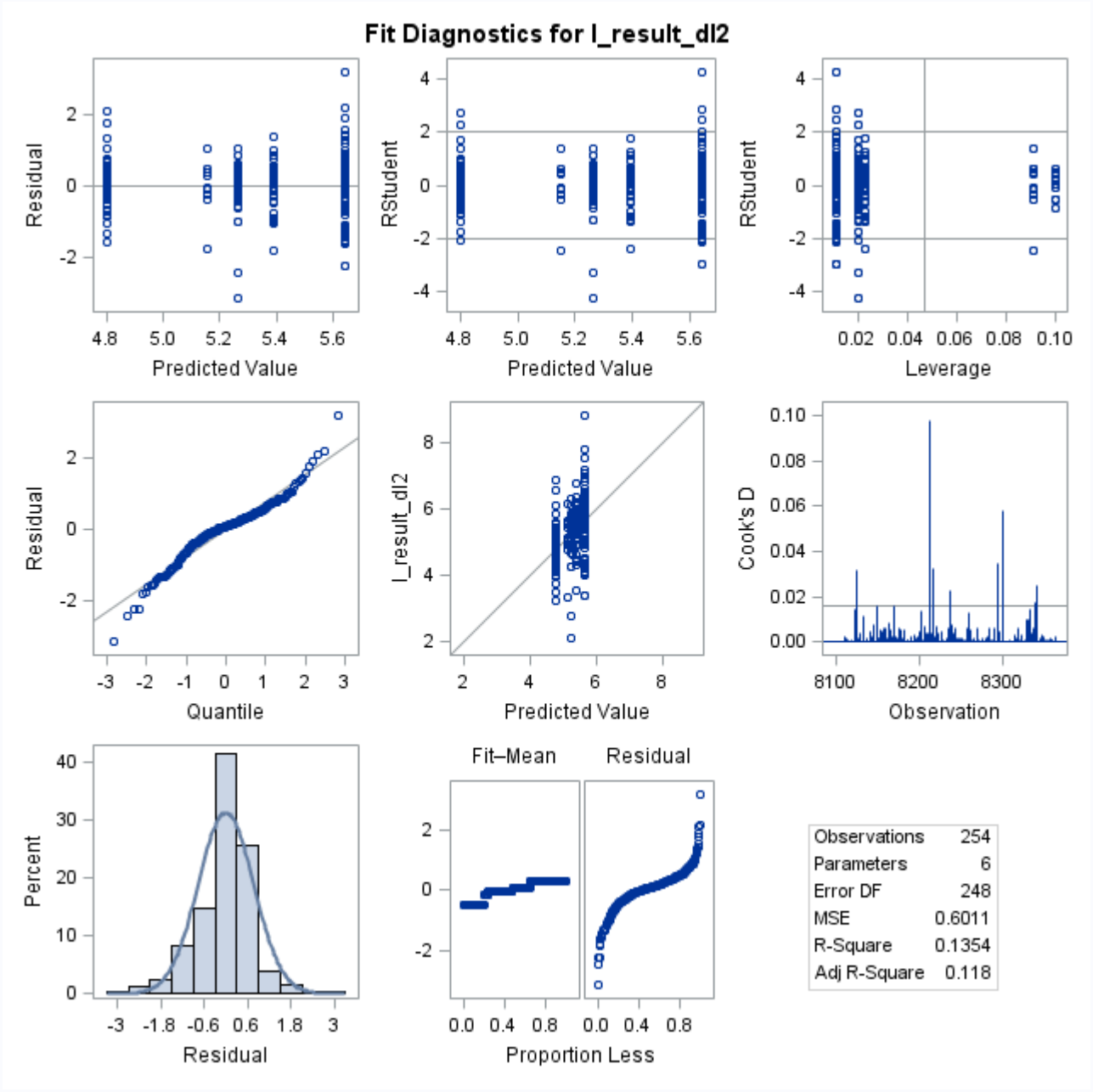
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	23.3484622	4.6696924	7.77	<.0001
Error	248	149.0649100	0.6010682		
Corrected Total	253	172.4133722			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.135421	14.56610	0.775286	5.322537

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	23.34846224	4.66969245	7.77	<.0001

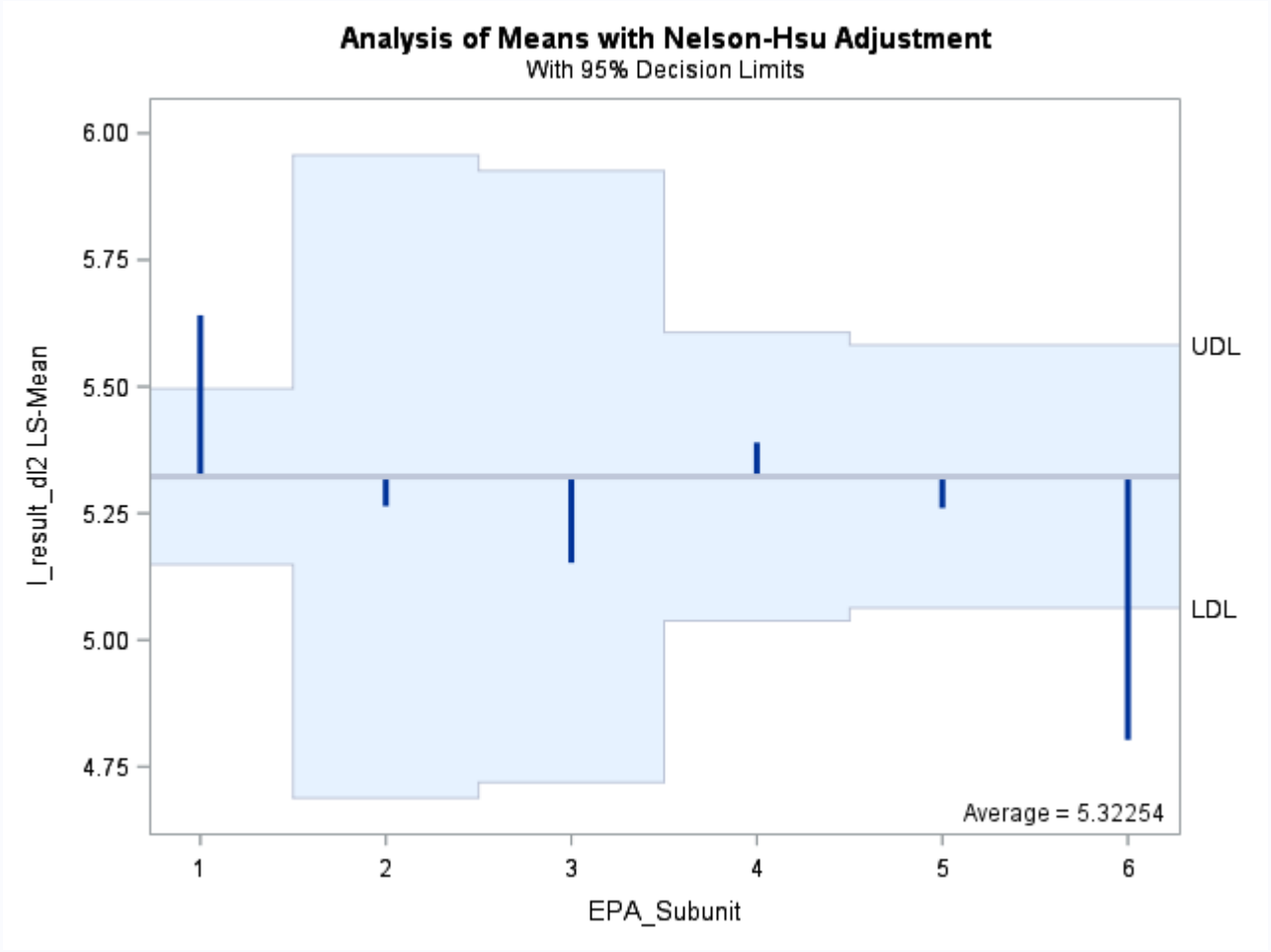
Source	DF	Type III SS	Mean Square	F Value	Pr > F
EPA_Subunit	5	23.34846224	4.66969245	7.77	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 6
Error DF 248
MSE 0.6011
R-Square 0.1354
Adj R-Square 0.118

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.64081426	<.0001
2	5.26411443	0.9998
3	5.15250970	0.9579
4	5.38966668	0.9804
5	5.26047453	0.9791
6	4.80305787	<.0001



Metals Zinc
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.64081426	1
2	5.26411443	2
3	5.15250970	3
4	5.38966668	4
5	5.26047453	5
6	4.80305787	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.6915	0.3615	0.5018	0.0638	<.0001
2	0.6915		0.9995	0.9974	1.0000	0.5220
3	0.3615	0.9995		0.9449	0.9984	0.7546
4	0.5018	0.9974	0.9449		0.9671	0.0045
5	0.0638	1.0000	0.9984	0.9671		0.0402
6	<.0001	0.5220	0.7546	0.0045	0.0402	

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
EPA_Subunit	5	15.0928	3.0186	1.97	0.0837
Error	248	380.1	1.5327		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
EPA_Subunit	5.0000	7.28	<.0001
Error	52.9203		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by epa_subunit

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Level of EPA_Subunit	N	l_result_dl2	
		Mean	Std Dev
1	**90**	5.64081426	0.95334270
2	**10**	5.26411443	0.35604377
3	**11**	5.15250970	0.71680096
4	**43**	5.38966668	0.58831733
5	**50**	5.26047453	0.69501036
6	**50**	4.80305787	0.69533970

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

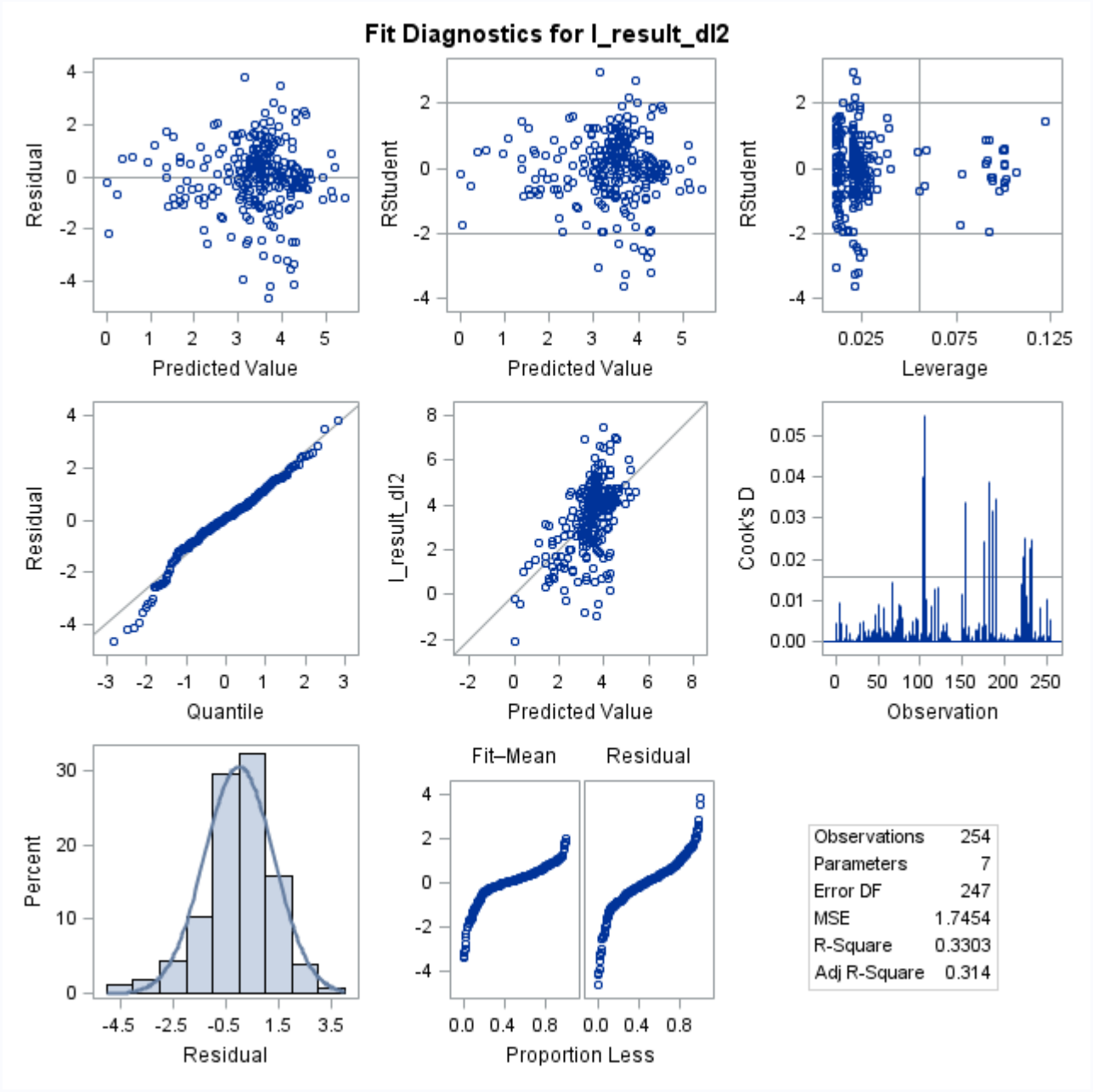
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

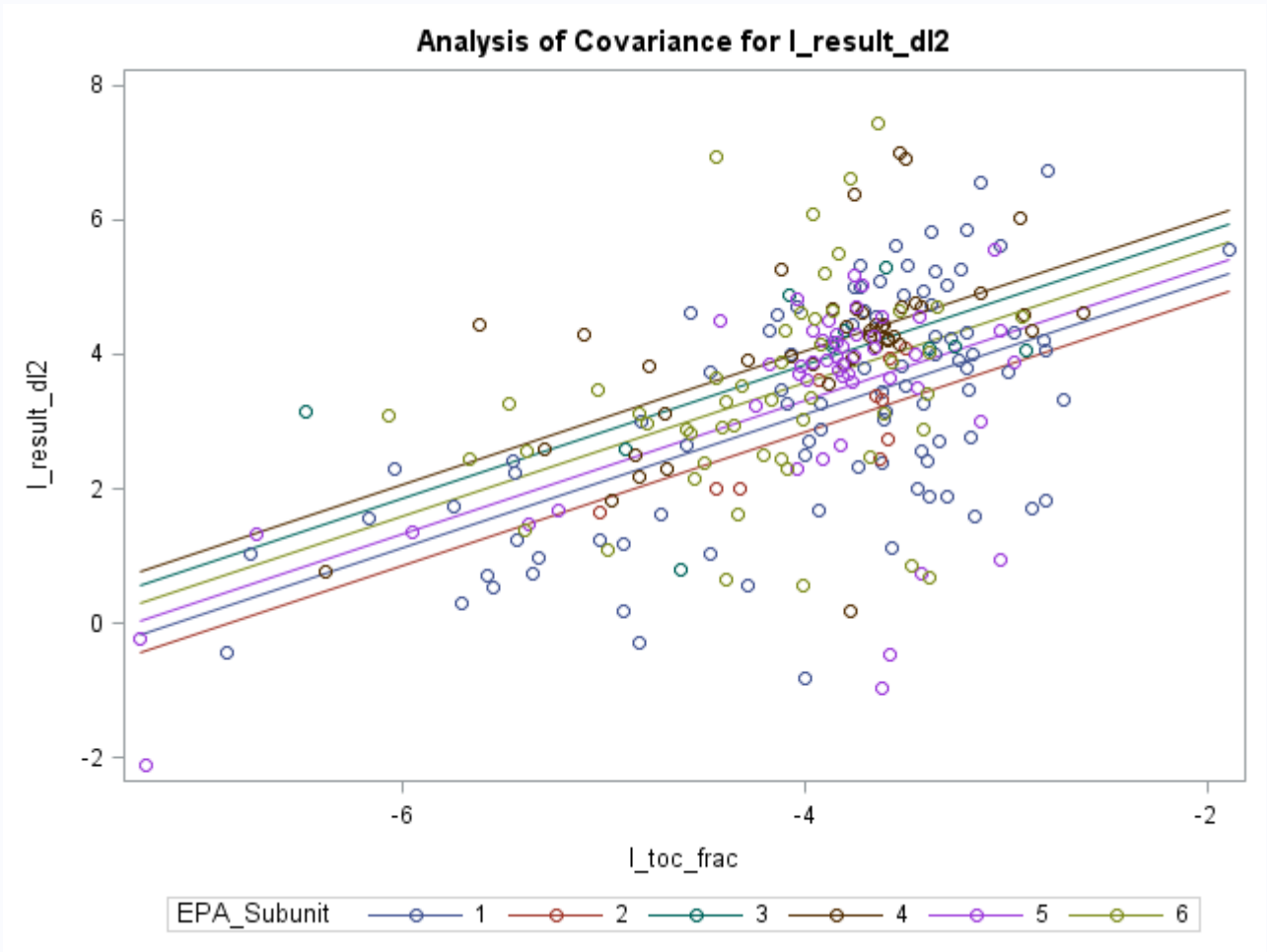
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	212.6094389	35.4349065	20.30	<.0001
Error	247	431.1092848	1.7453817		
Corrected Total	253	643.7187236			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.330283	38.79112	1.321129	3.405751

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	179.5595079	179.5595079	102.88	<.0001
EPA_Subunit	5	33.0499310	6.6099862	3.79	0.0025

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	181.7933837	181.7933837	104.16	<.0001
EPA_Subunit	5	33.0499310	6.6099862	3.79	0.0025

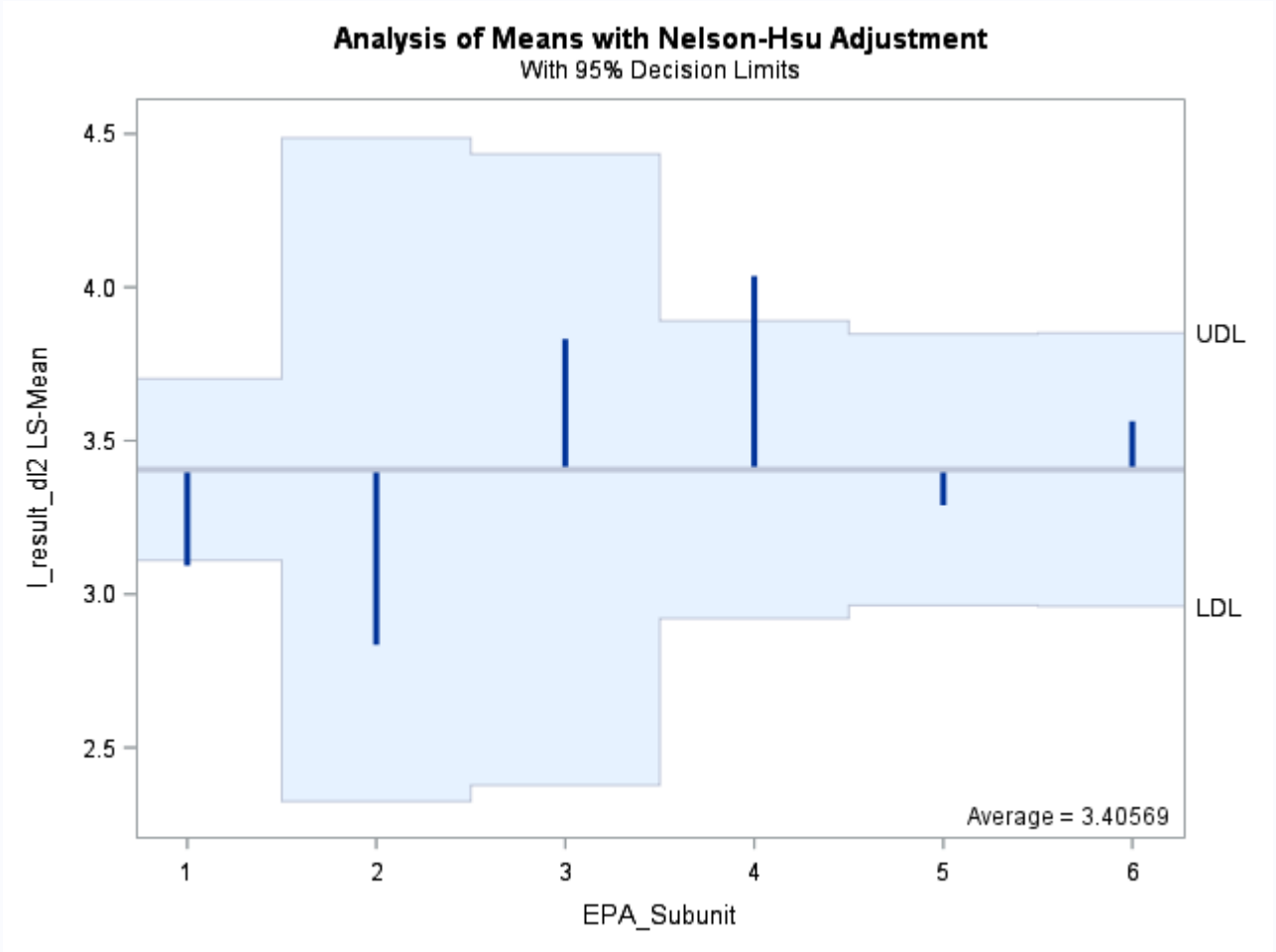

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.7454
R-Square 0.3303
Adj R-Square 0.314


Analysis of Covariance for l_result_dl2
8
6
4
2
0
-2
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	3.09282348	0.0327
2	2.83493936	0.6186
3	3.83128007	0.8170
4	4.03647068	0.0041
5	3.28967169	0.9687
6	3.56322699	0.8956



Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	3.09282348	1
2	2.83493936	2
3	3.83128007	3
4	4.03647068	4
5	3.28967169	5
6	3.56322699	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9919	0.5007	0.0020	0.9589	0.3418
2	0.9919		0.5162	0.1035	0.9198	0.6069
3	0.5007	0.5162		0.9974	0.8213	0.9903
4	0.0020	0.1035	0.9974		0.0756	0.5230
5	0.9589	0.9198	0.8213	0.0756		0.9063
6	0.3418	0.6069	0.9903	0.5230	0.9063	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

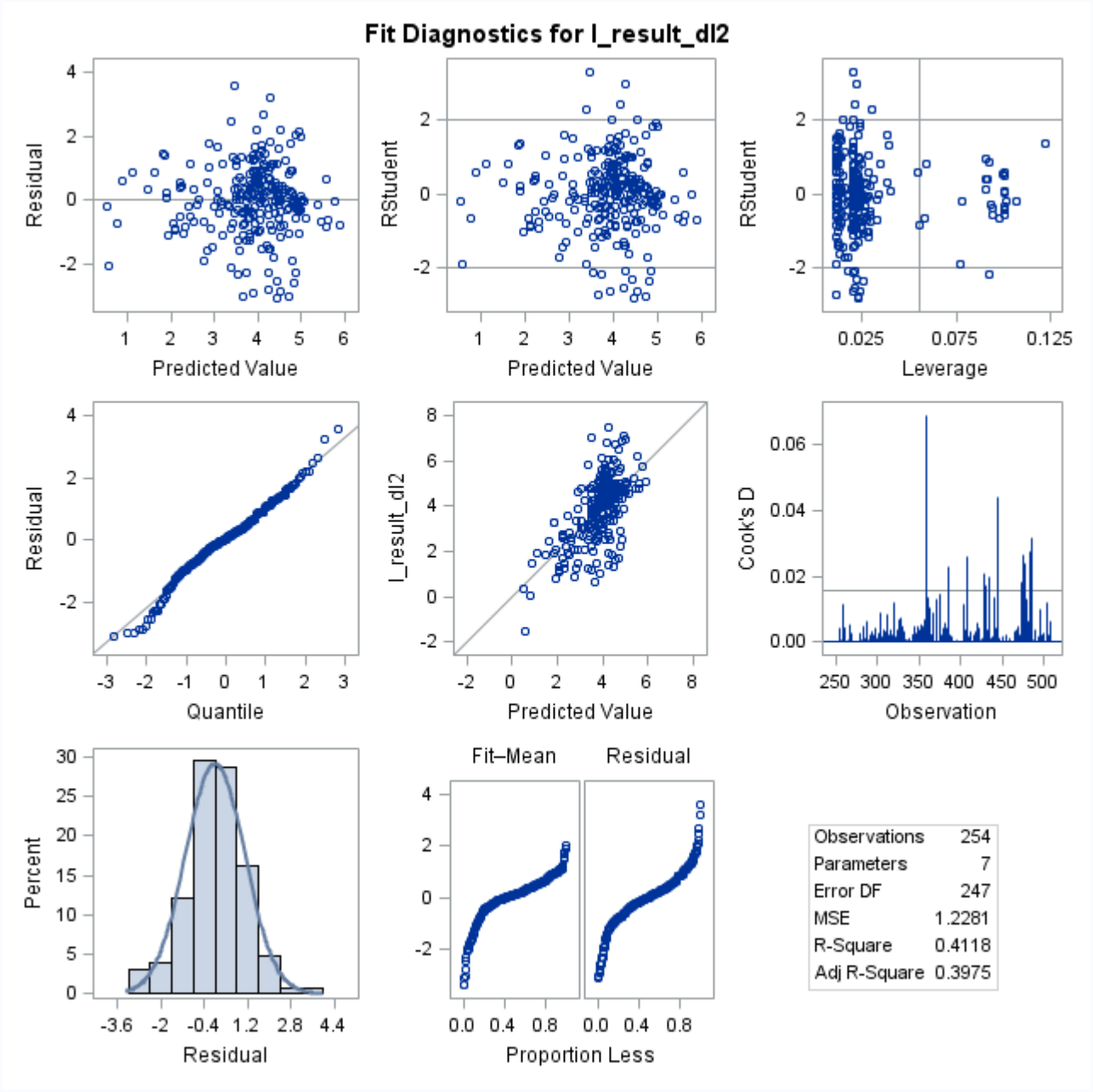
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

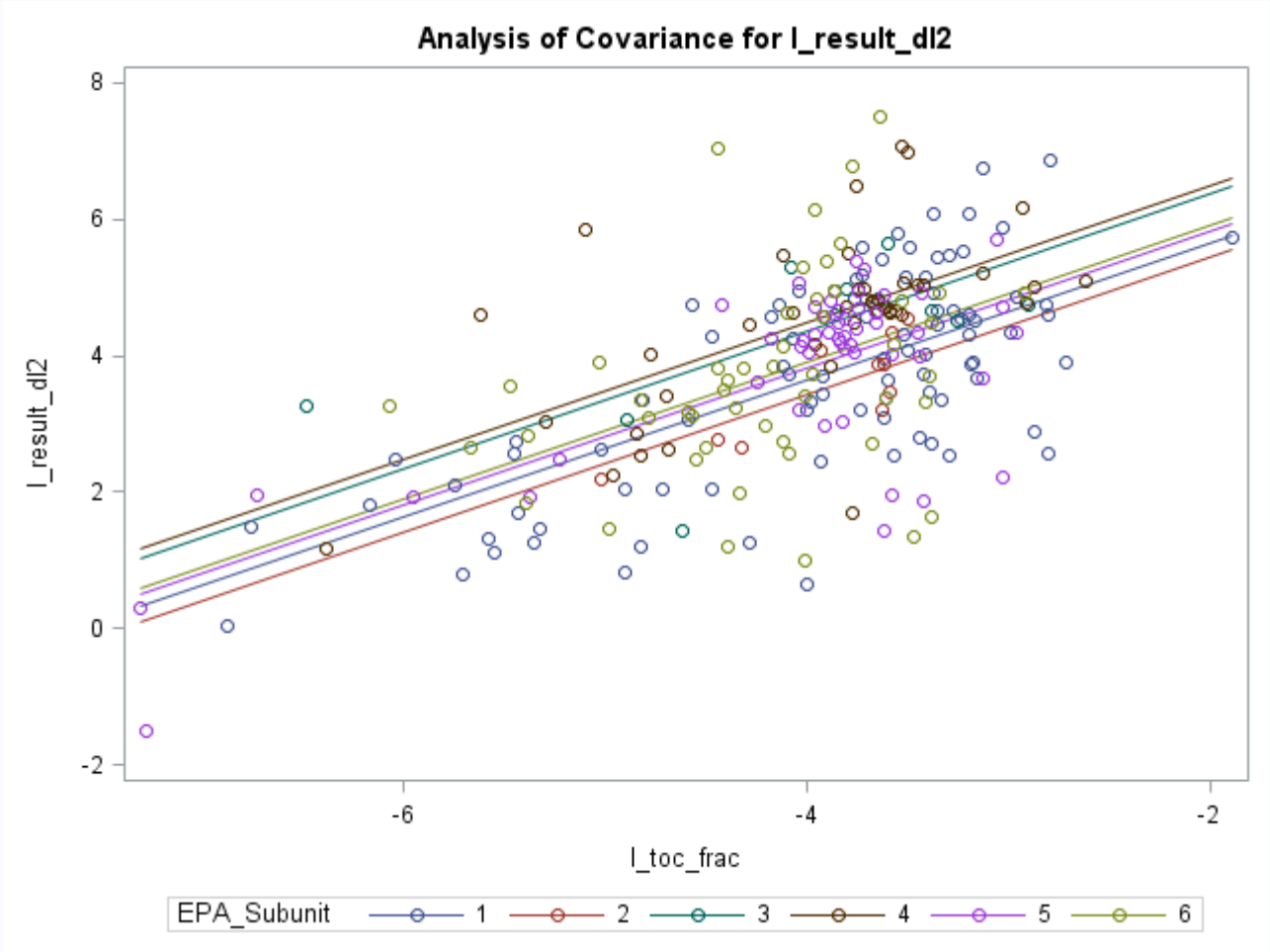
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	212.3861837	35.3976973	28.82	<.0001
Error	247	303.3342847	1.2280740		
Corrected Total	253	515.7204683			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.411824	28.54681	1.108185	3.881993

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	187.1201013	187.1201013	152.37	<.0001
EPA_Subunit	5	25.2660824	5.0532165	4.11	0.0013

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	185.9235376	185.9235376	151.39	<.0001
EPA_Subunit	5	25.2660824	5.0532165	4.11	0.0013

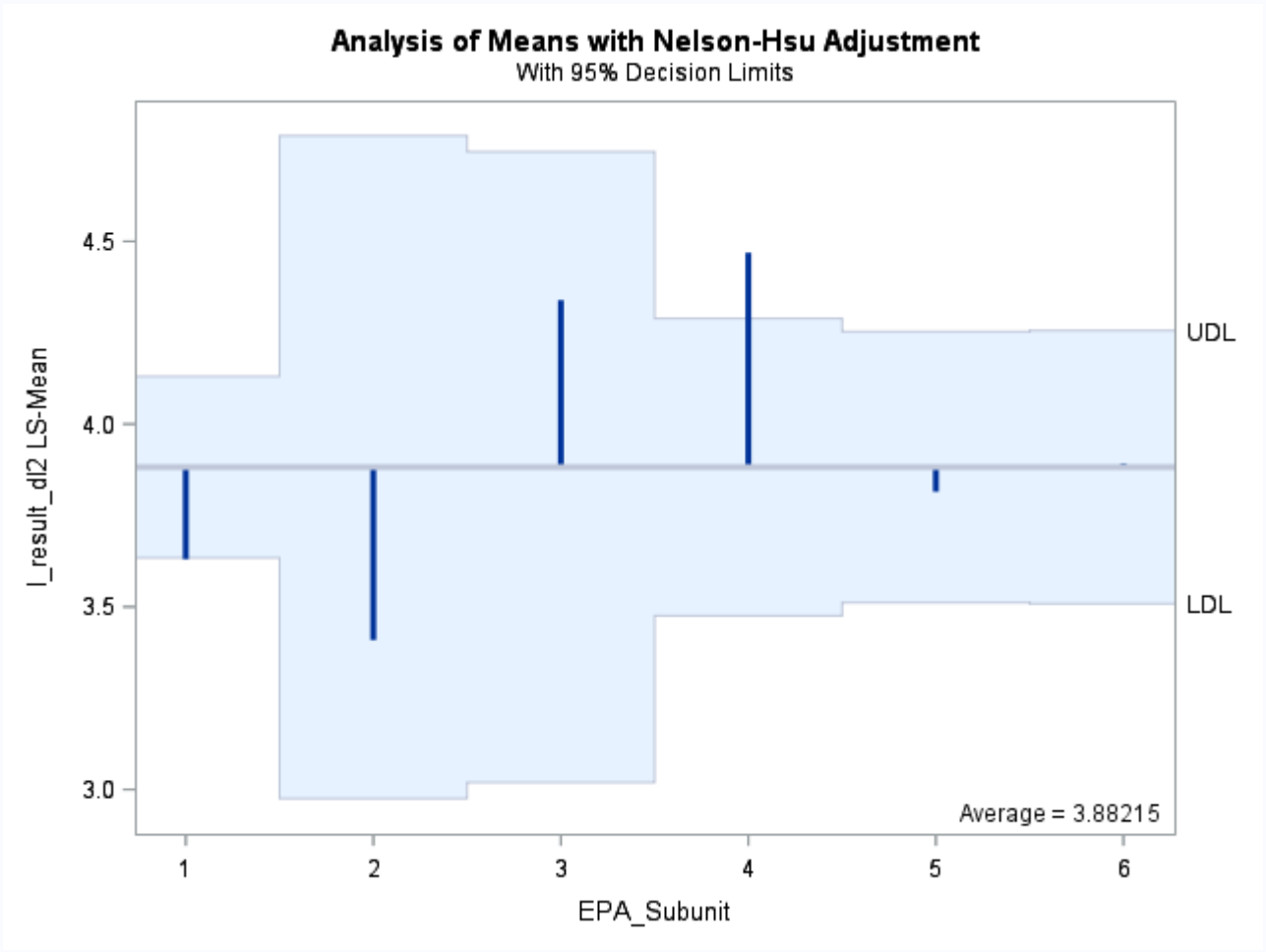

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.2281
R-Square 0.4118
Adj R-Square 0.3975


Analysis of Covariance for l_result_dl2
8
6
4
2
0
-2
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	3.63039389	0.0452
2	3.40919939	0.6307
3	4.33905558	0.6155
4	4.46886715	0.0011
5	3.81501538	0.9941
6	3.89114151	1.0000


Analysis of Means with Nelson-Hsu Adjustment
With 95% Decision Limits
l_result_dl2 LS-Mean
4.5
4.0
3.5
3.0
UDL
LDL
Average = 3.88215
1
2
3
4
5
6
EPA_Subunit

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	3.63039389	1
2	3.40919939	2
3	4.33905558	3
4	4.46886715	4
5	3.81501538	5
6	3.89114151	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9910	0.3446	0.0008	0.9347	0.7705
2	0.9910		0.3925	0.0742	0.8978	0.8099
3	0.3446	0.3925		0.9993	0.7149	0.8302
4	0.0008	0.0742	0.9993		0.0553	0.1292
5	0.9347	0.8978	0.7149	0.0553		0.9994
6	0.7705	0.8099	0.8302	0.1292	0.9994	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

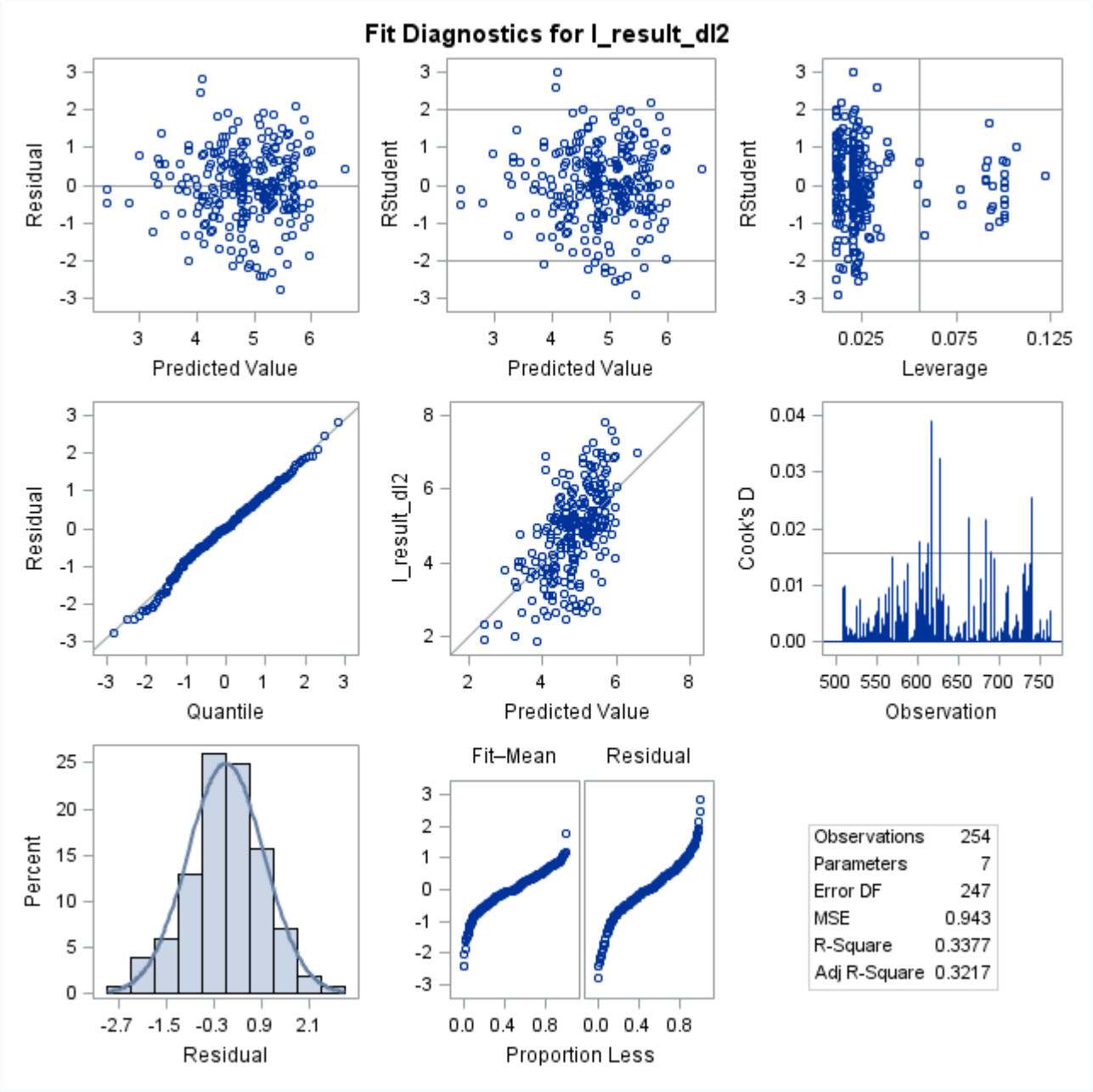
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

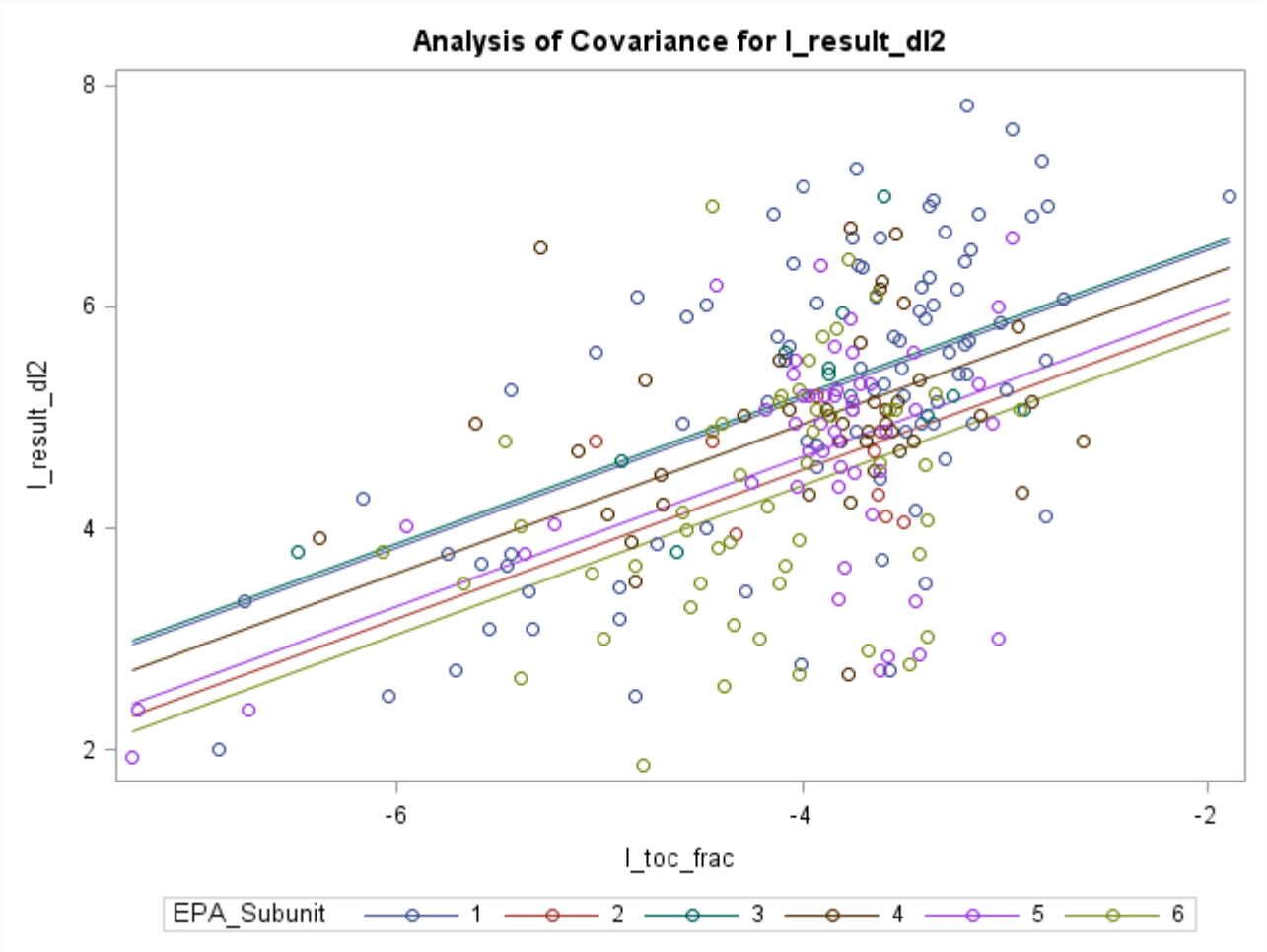
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	118.7815792	19.7969299	20.99	<.0001
Error	247	232.9106040	0.9429579		
Corrected Total	253	351.6921832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.337743	20.07155	0.971060	4.837994

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	93.89112244	93.89112244	99.57	<.0001
EPA_Subunit	5	24.89045676	4.97809135	5.28	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	83.39824479	83.39824479	88.44	<.0001
EPA_Subunit	5	24.89045676	4.97809135	5.28	0.0001

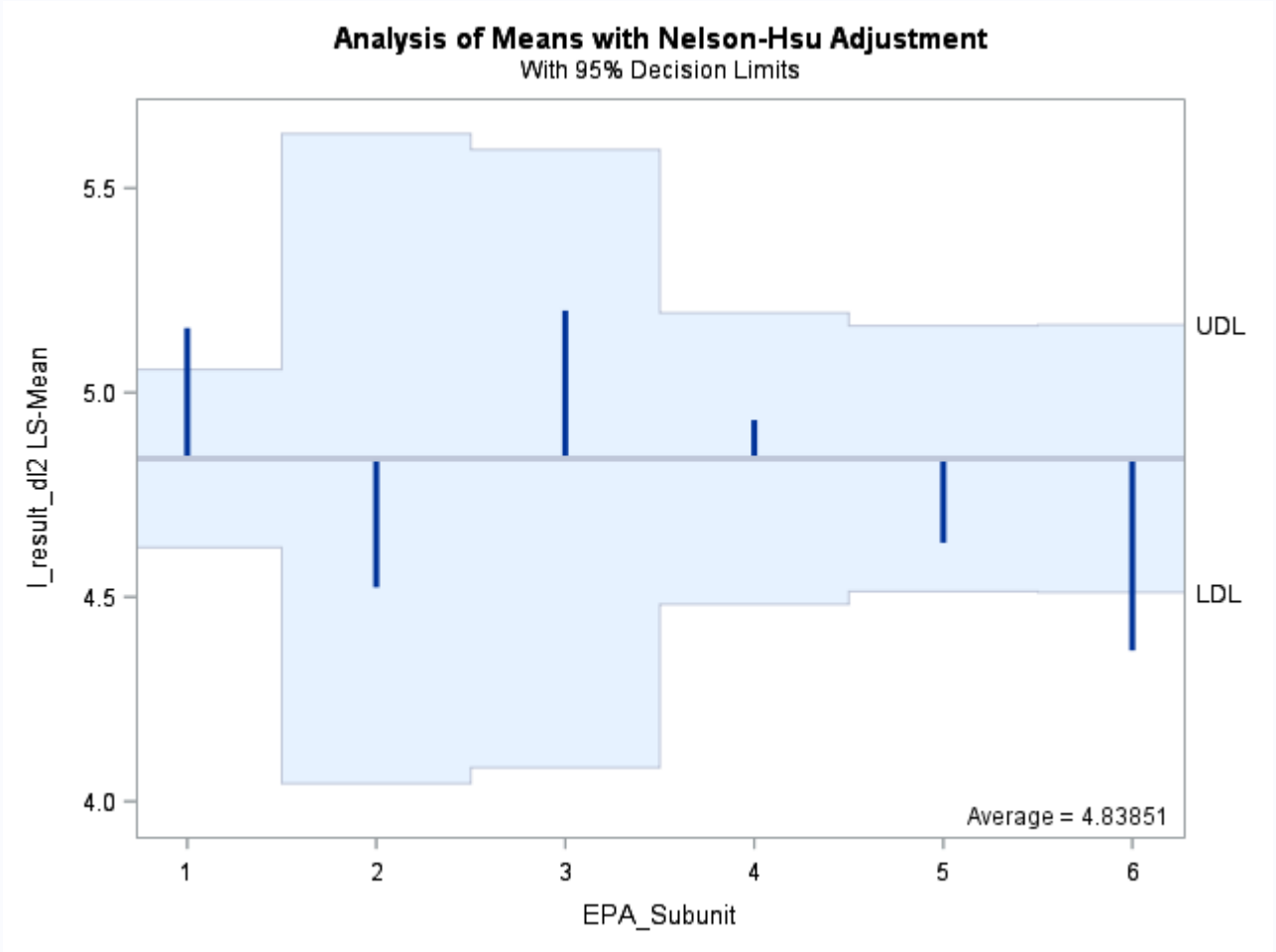

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.943
R-Square 0.3377
Adj R-Square 0.3217


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.15789979	0.0008
2	4.52352021	0.8422
3	5.20055222	0.7092
4	4.93277564	0.9678
5	4.63265302	0.4214
6	4.36912463	0.0011



PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.15789979	1
2	4.52352021	2
3	5.20055222	3
4	4.93277564	4
5	4.63265302	5
6	4.36912463	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.3686	1.0000	0.8113	0.0290	0.0001
2	0.3686		0.6025	0.8364	0.9995	0.9974
3	1.0000	0.6025		0.9644	0.4962	0.1087
4	0.8113	0.8364	0.9644		0.6740	0.0642
5	0.0290	0.9995	0.4962	0.6740		0.7541
6	0.0001	0.9974	0.1087	0.0642	0.7541	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

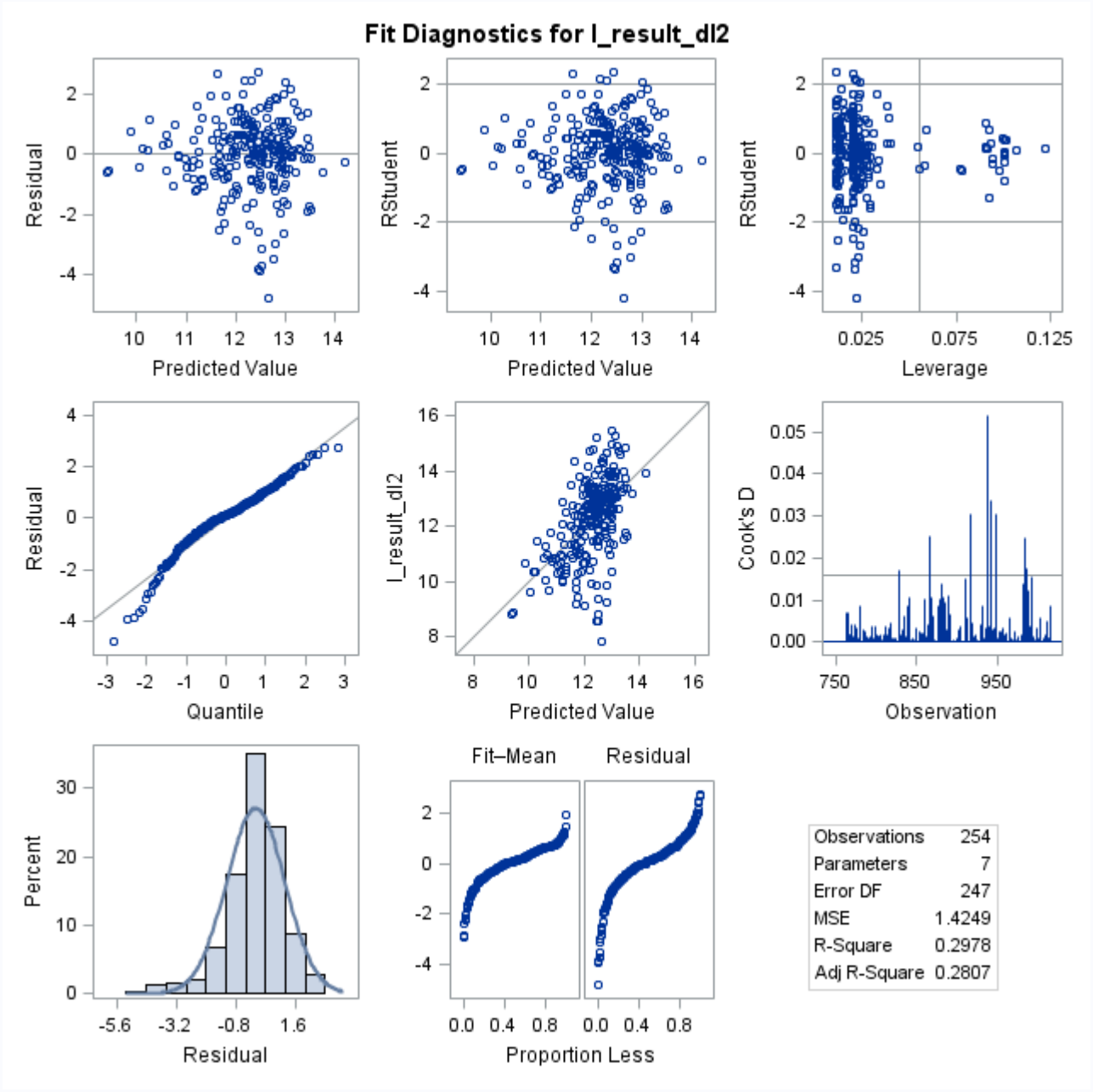
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

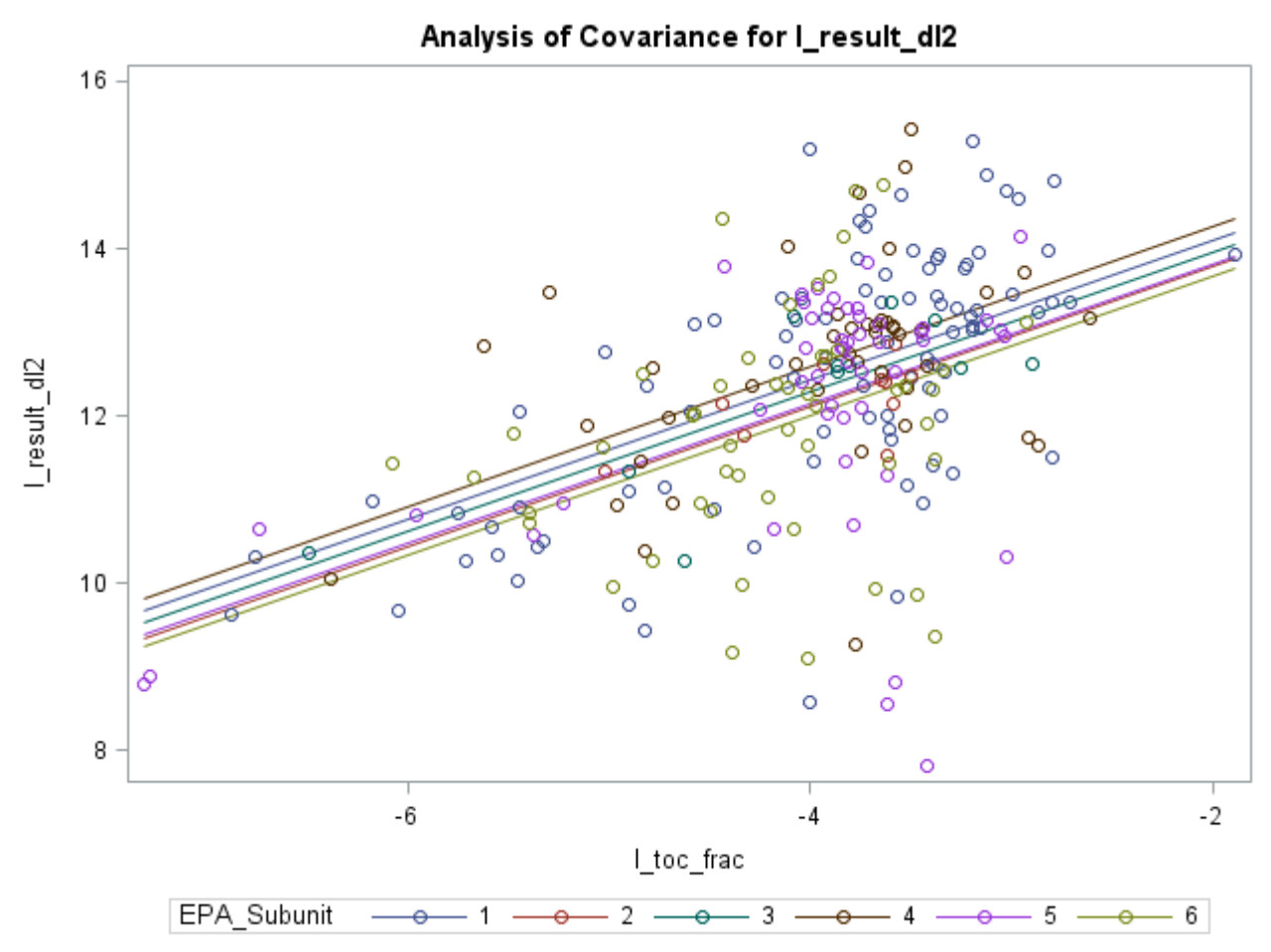
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	149.2410917	24.8735153	17.46	<.0001
Error	247	351.9553541	1.4249205		
Corrected Total	253	501.1964458			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.297770	9.713597	1.193700	12.28896

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	138.2765475	138.2765475	97.04	<.0001
EPA_Subunit	5	10.9645442	2.1929088	1.54	0.1783

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	128.5312767	128.5312767	90.20	<.0001
EPA_Subunit	5	10.9645442	2.1929088	1.54	0.1783

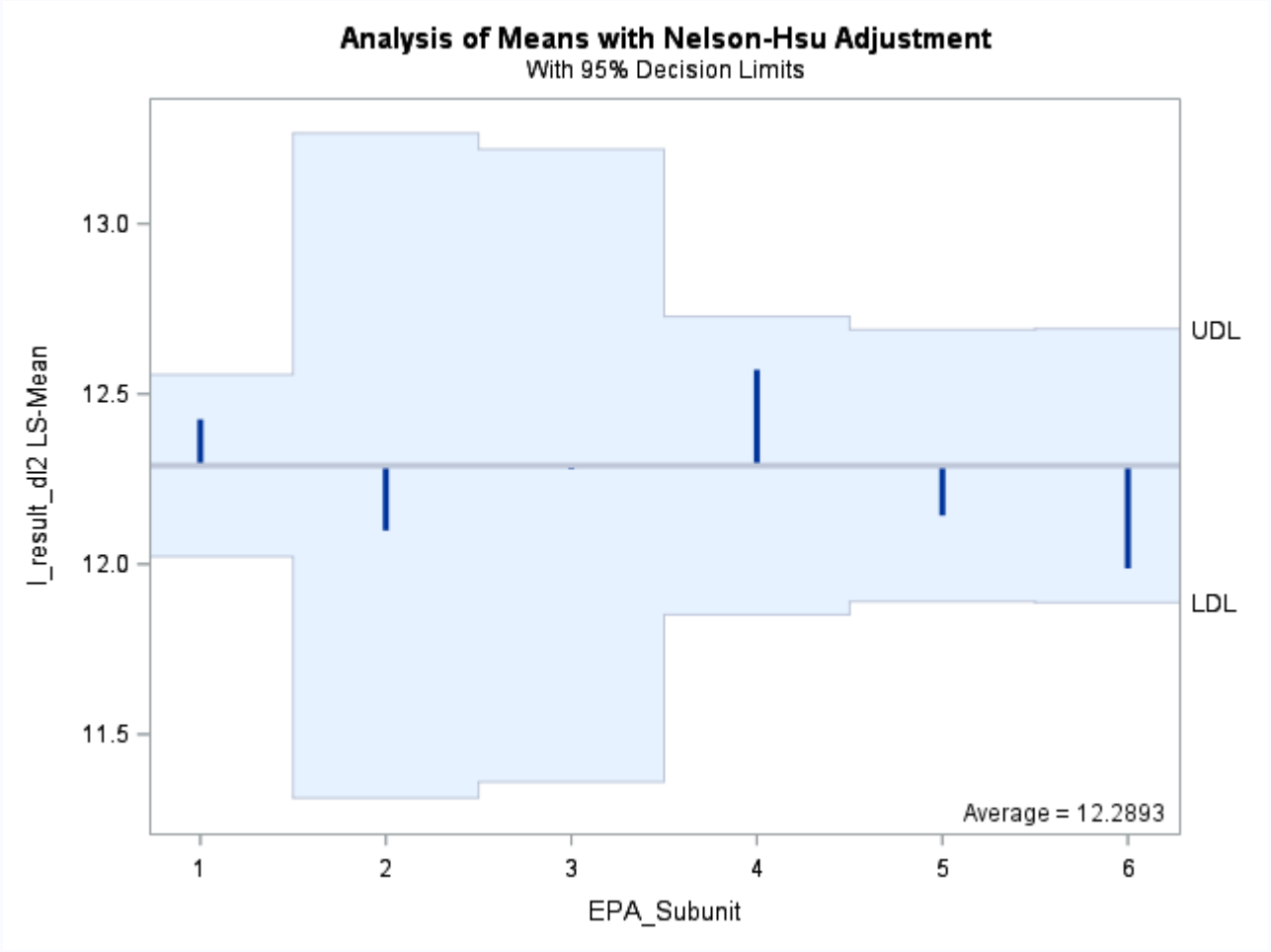

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.4249
R-Square 0.2978
Adj R-Square 0.2807


Analysis of Covariance for l_result_dl2
16
14
12
10
8
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	12.4252558	0.6559
2	12.0986845	0.9917
3	12.2790646	1.0000
4	12.5712437	0.4050
5	12.1427762	0.8801
6	11.9872930	0.2424



PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	12.4252558	1
2	12.0986845	2
3	12.2790646	3
4	12.5712437	4
5	12.1427762	5
6	11.9872930	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9635	0.9989	0.9861	0.7621	0.3080
2	0.9635		0.9993	0.8695	1.0000	0.9998
3	0.9989	0.9993		0.9788	0.9994	0.9776
4	0.9861	0.8695	0.9788		0.5166	0.1813
5	0.7621	1.0000	0.9994	0.5166		0.9870
6	0.3080	0.9998	0.9776	0.1813	0.9870	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

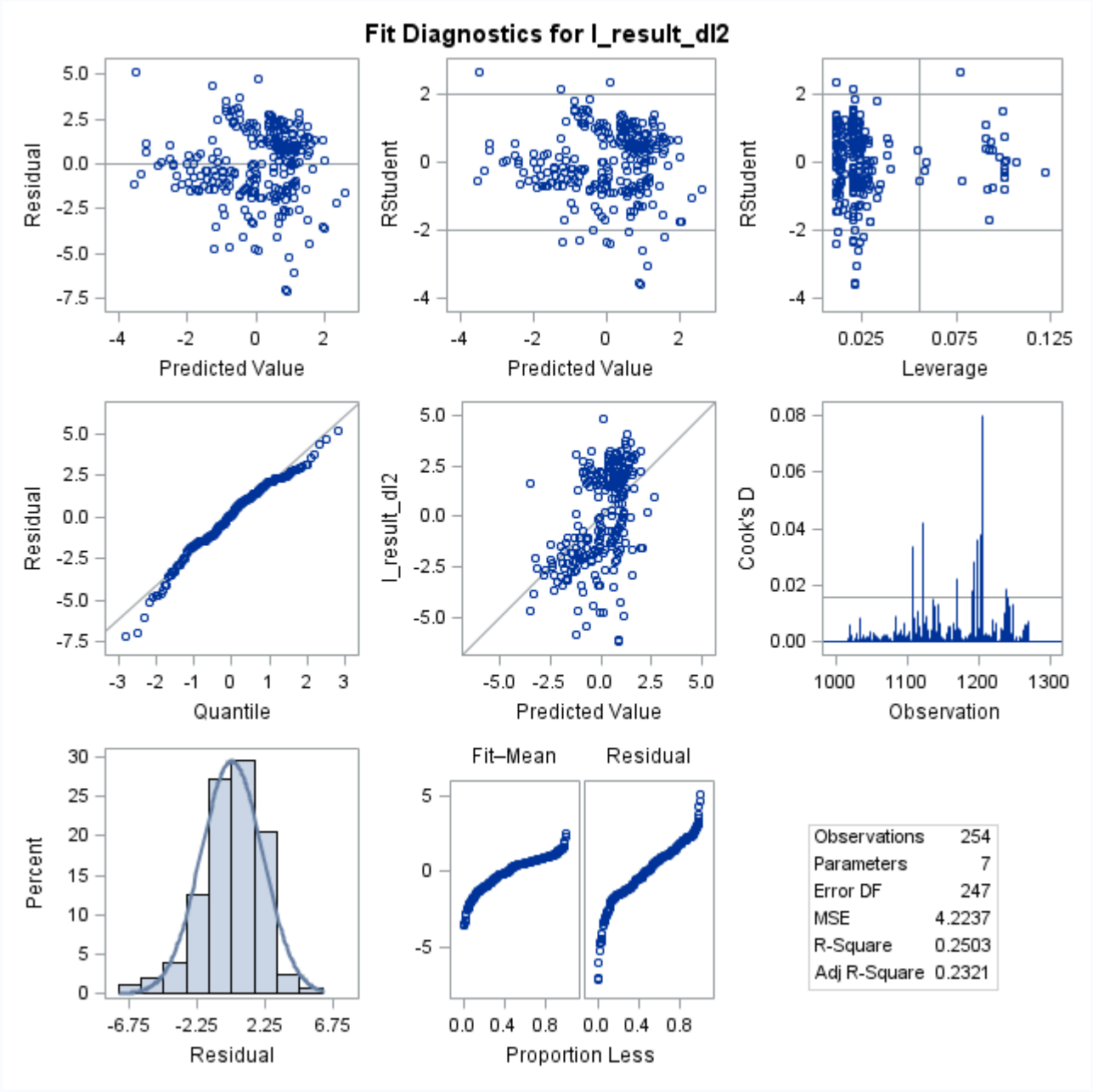
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

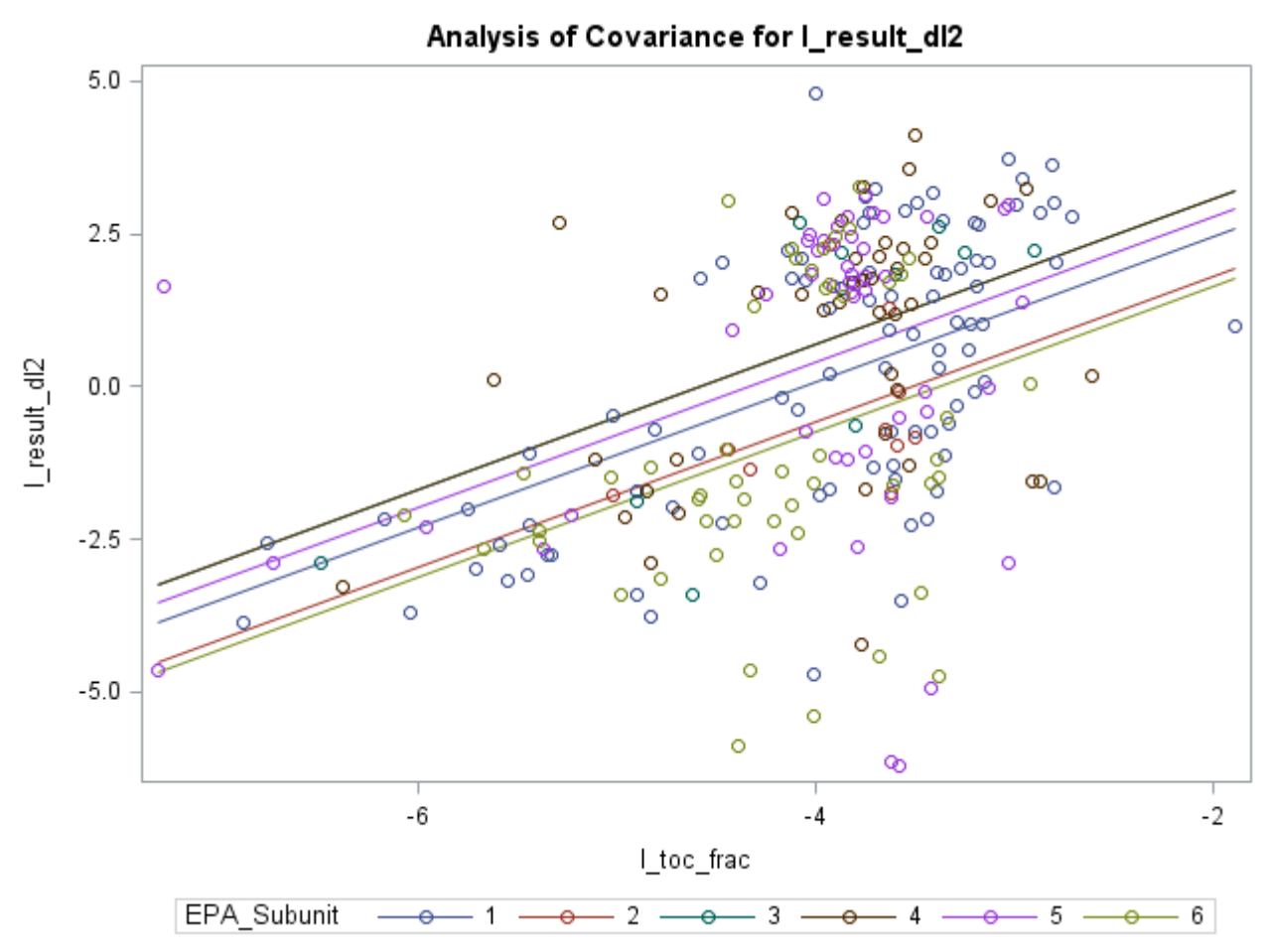
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	348.278863	58.046477	13.74	<.0001
Error	247	1043.251125	4.223689		
Corrected Total	253	1391.529988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.250285	3079.874	2.055161	0.066729

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	285.4428401	285.4428401	67.58	<.0001
EPA_Subunit	5	62.8360225	12.5672045	2.98	0.0126

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	261.4160919	261.4160919	61.89	<.0001
EPA_Subunit	5	62.8360225	12.5672045	2.98	0.0126

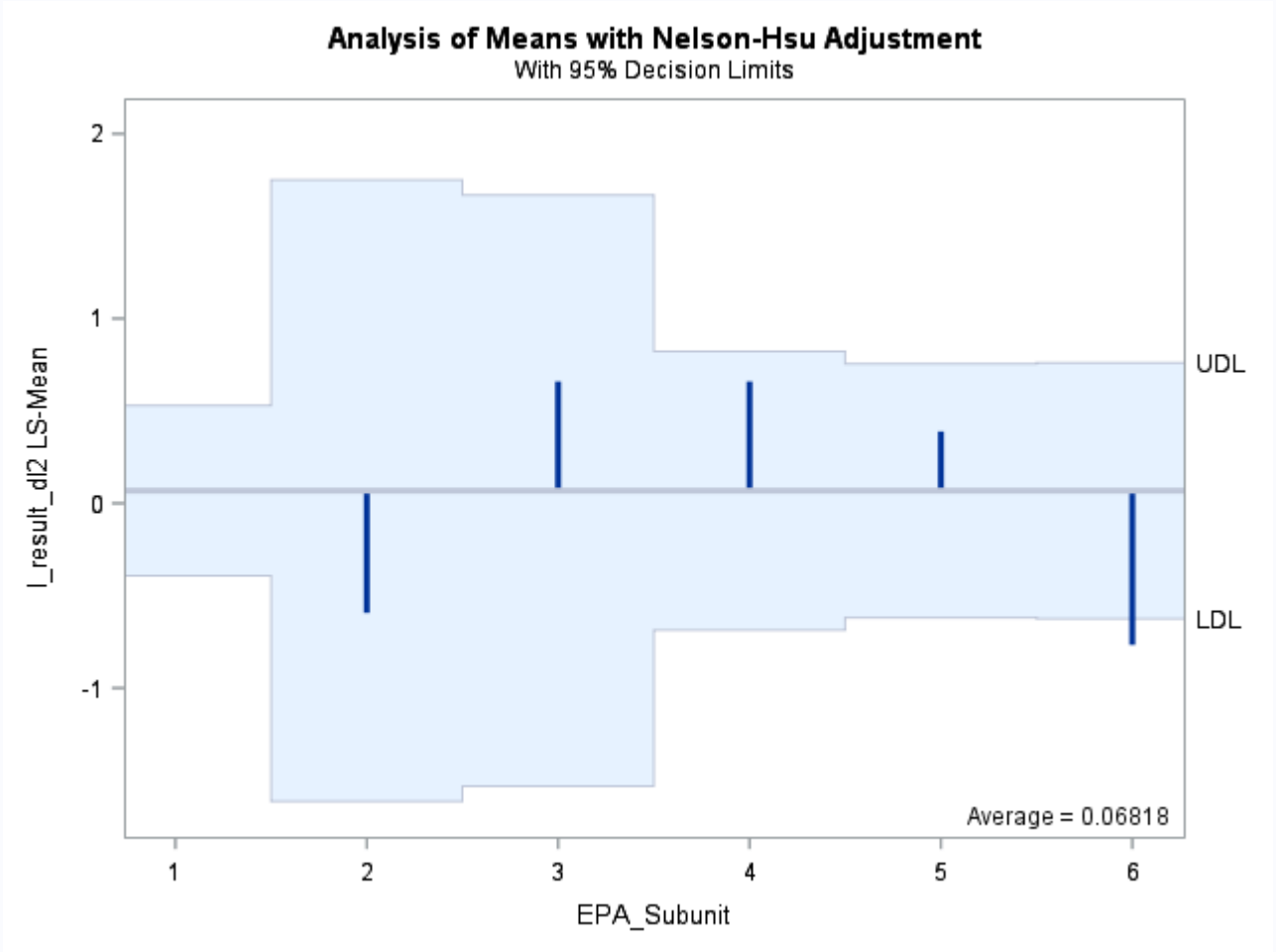

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 4.2237
R-Square 0.2503
Adj R-Square 0.2321


Analysis of Covariance for l_result_dl2
5.0
2.5
0.0
-2.5
-5.0
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.06850022	1.0000
2	-0.59297356	0.8467
3	0.65923954	0.8774
4	0.65931602	0.2024
5	0.38869657	0.7313
6	-0.76646461	0.0097



PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.06850022	1
2	-0.59297356	2
3	0.65923954	3
4	0.65931602	4
5	0.38869657	5
6	-0.76646461	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9283	0.9463	0.6317	0.9504	0.2024
2	0.9283		0.7306	0.5096	0.7399	0.9999
3	0.9463	0.7306		1.0000	0.9987	0.3001
4	0.6317	0.5096	1.0000		0.9885	0.0130
5	0.9504	0.7399	0.9987	0.9885		0.0600
6	0.2024	0.9999	0.3001	0.0130	0.0600	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 253

Number of Observations Used 253

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

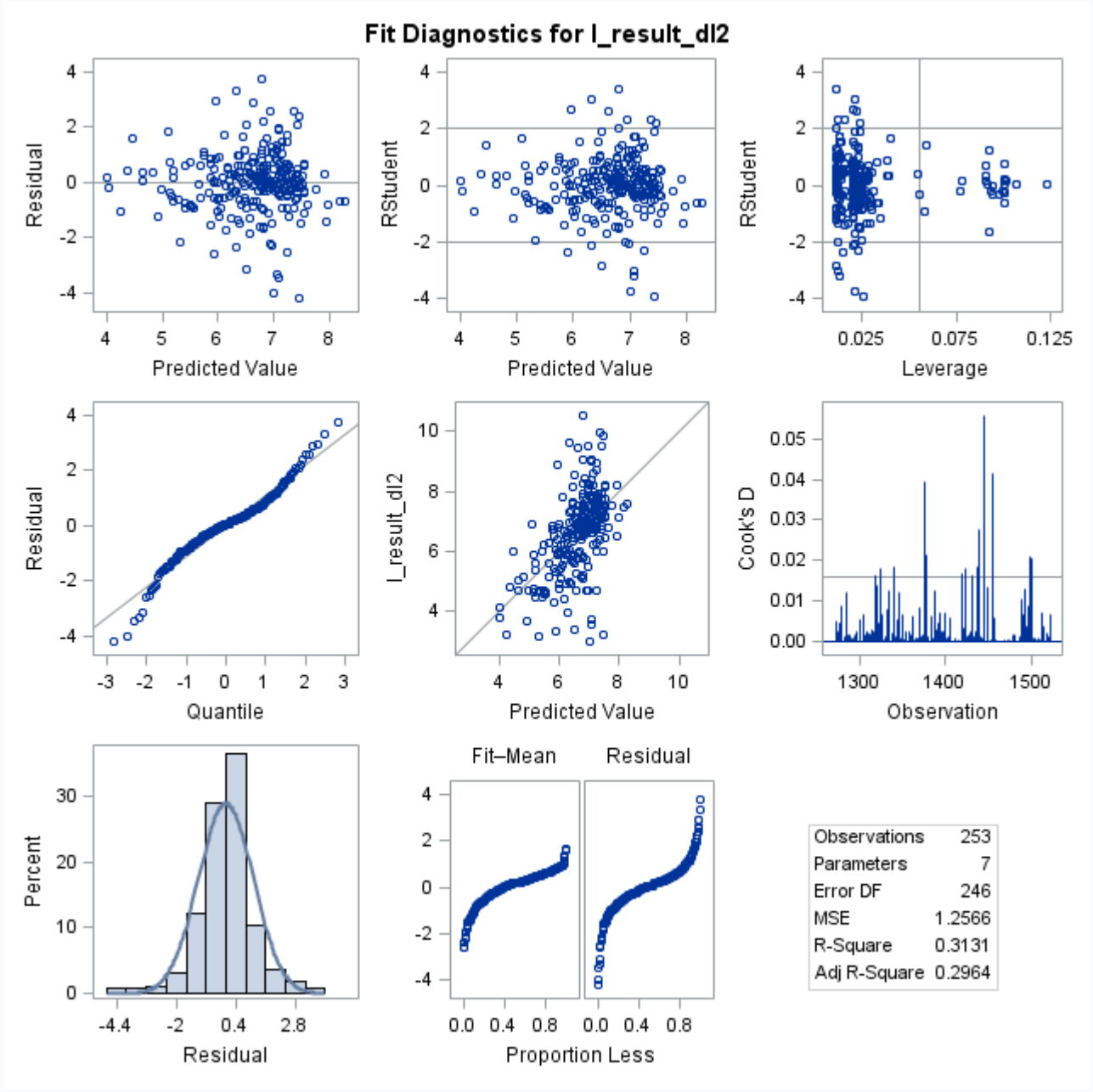
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

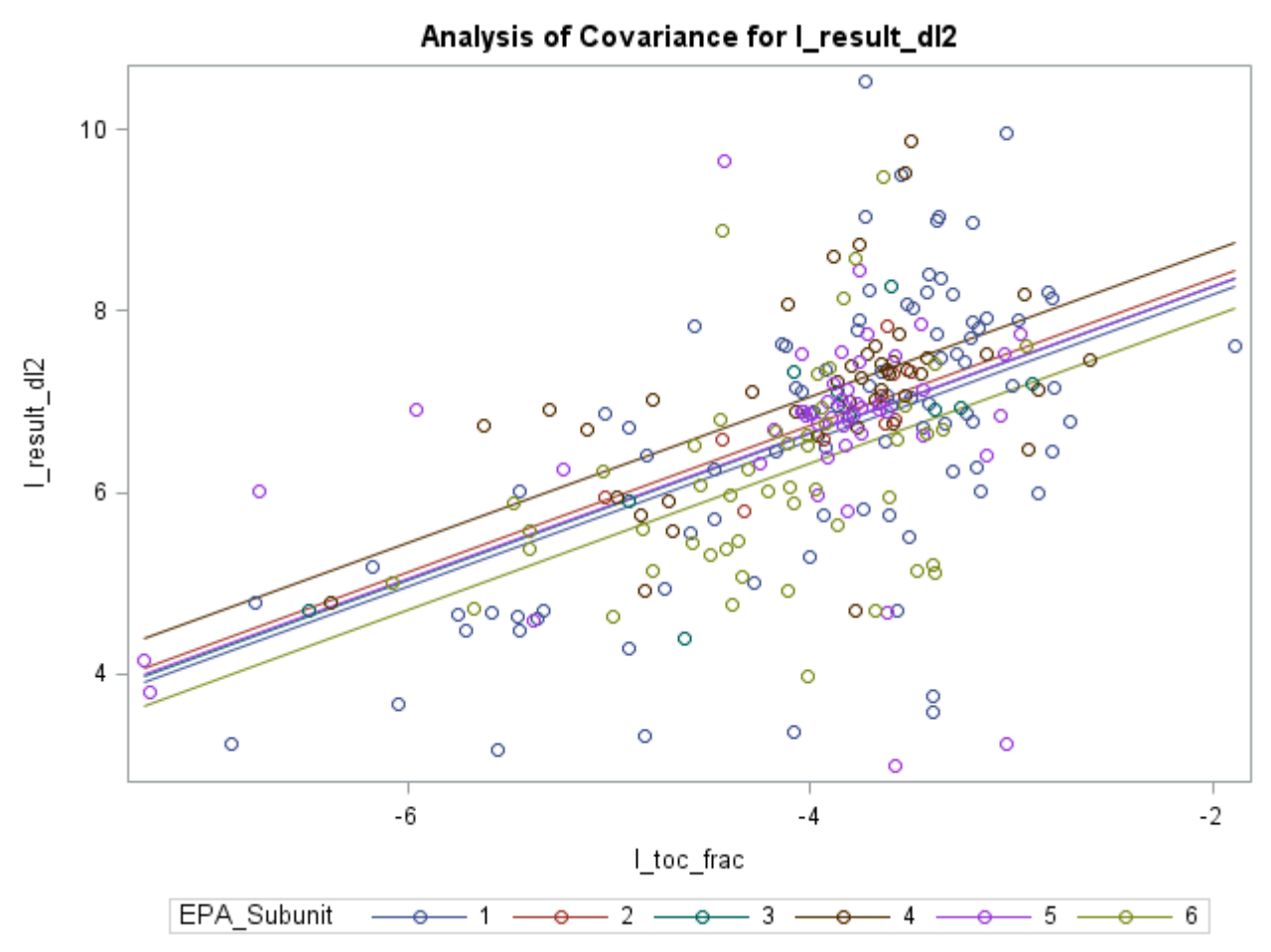
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	140.9126466	23.4854411	18.69	<.0001
Error	246	309.1155622	1.2565673		
Corrected Total	252	450.0282088			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.313120	16.93655	1.120967	6.618627

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	127.8747015	127.8747015	101.77	<.0001
EPA_Subunit	5	13.0379452	2.6075890	2.08	0.0691

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	119.7989086	119.7989086	95.34	<.0001
EPA_Subunit	5	13.0379452	2.6075890	2.08	0.0691

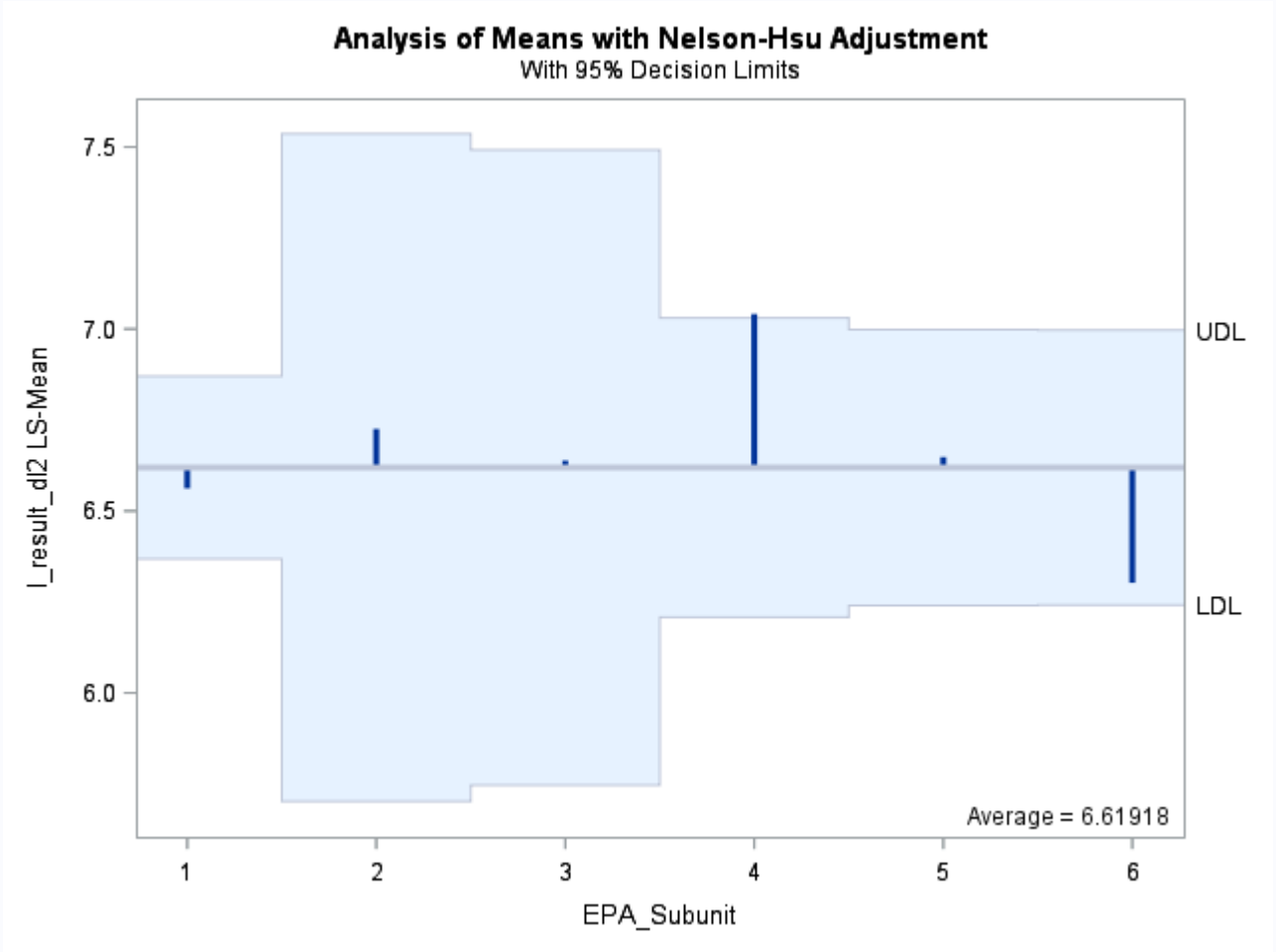

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 7
Error DF 246
MSE 1.2566
R-Square 0.3131
Adj R-Square 0.2964


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	6.56209985	0.9833
2	6.72535359	0.9993
3	6.63824926	1.0000
4	7.04112070	0.0413
5	6.64800211	0.9999
6	6.30258163	0.1472



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	6.56209985	1
2	6.72535359	2
3	6.63824926	3
4	7.04112070	4
5	6.64800211	5
6	6.30258163	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9980	0.9999	0.1959	0.9981	0.7824
2	0.9980		1.0000	0.9669	1.0000	0.8863
3	0.9999	1.0000		0.8954	1.0000	0.9465
4	0.1959	0.9669	0.8954		0.5482	0.0220
5	0.9981	1.0000	1.0000	0.5482		0.6449
6	0.7824	0.8863	0.9465	0.0220	0.6449	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	253
Number of Observations Used	253

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

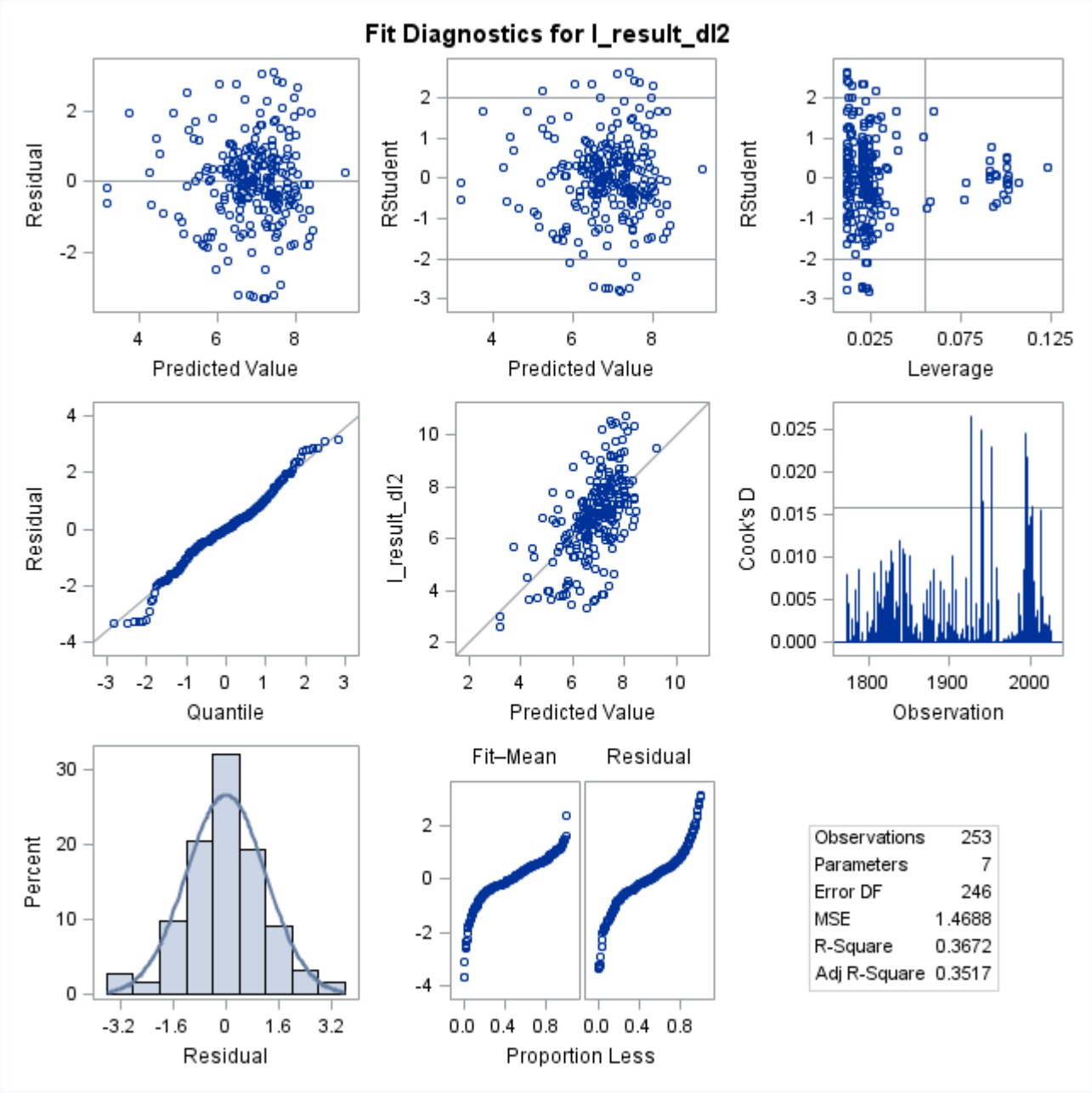
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

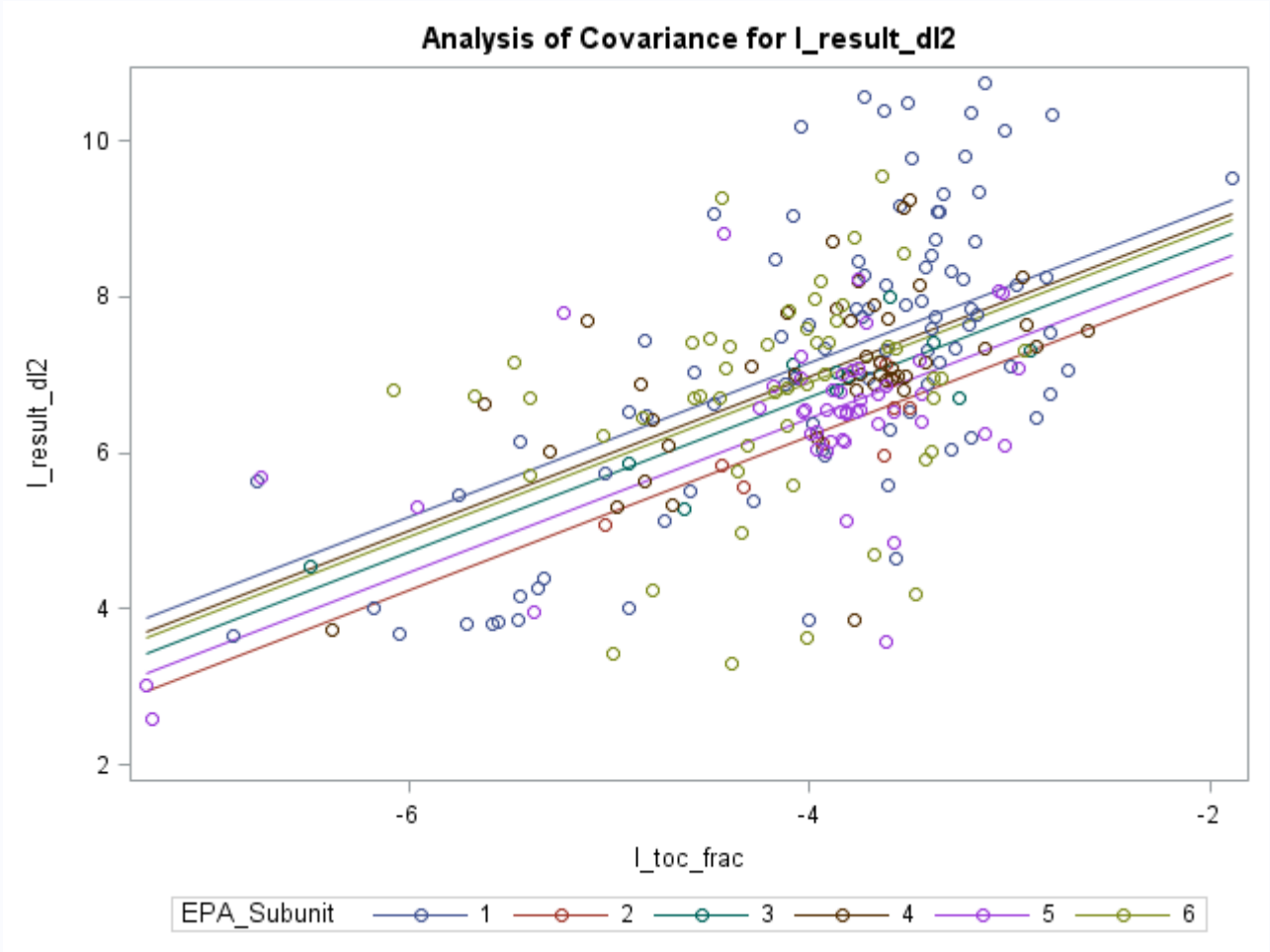
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	209.6567644	34.9427941	23.79	<.0001
Error	246	361.3290132	1.4688171		
Corrected Total	252	570.9857776			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.367184	17.65317	1.211948	6.865325

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	188.0666047	188.0666047	128.04	<.0001
EPA_Subunit	5	21.5901597	4.3180319	2.94	0.0135

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	180.7236717	180.7236717	123.04	<.0001
EPA_Subunit	5	21.5901597	4.3180319	2.94	0.0135

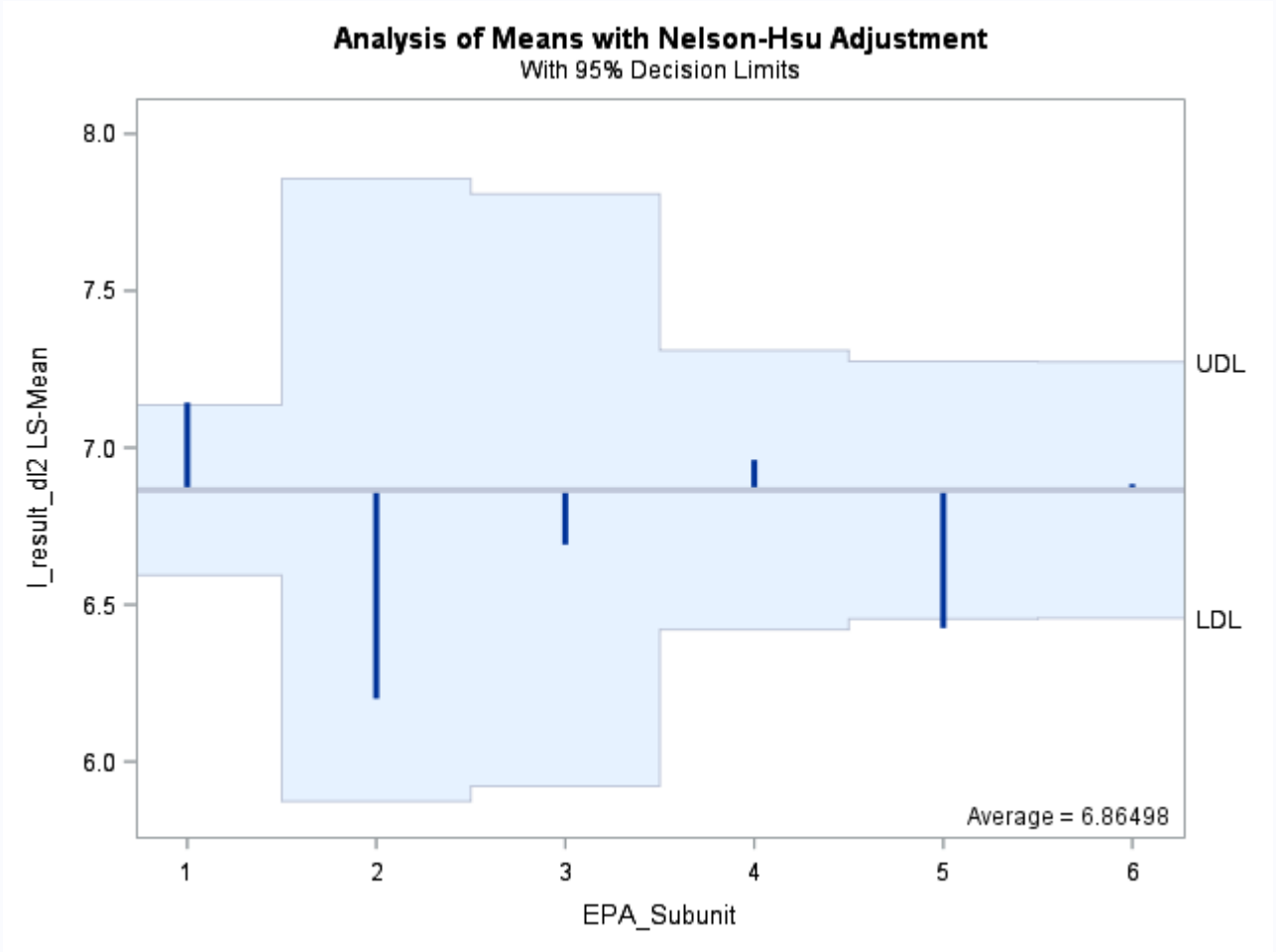

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 7
Error DF 246
MSE 1.4688
R-Square 0.3672
Adj R-Square 0.3517


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	7.14371258	0.0409
2	6.20056478	0.3604
3	6.69143914	0.9936
4	6.96104280	0.9868
5	6.42544474	0.0291
6	6.88419757	1.0000



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	7.14371258	1
2	6.20056478	2
3	6.69143914	3
4	6.96104280	4
5	6.42544474	5
6	6.88419757	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.1843	0.8517	0.9650	0.0125	0.8334
2	0.1843		0.9393	0.4759	0.9947	0.5825
3	0.8517	0.9393		0.9862	0.9862	0.9969
4	0.9650	0.4759	0.9862		0.2837	0.9997
5	0.0125	0.9947	0.9862	0.2837		0.4169
6	0.8334	0.5825	0.9969	0.9997	0.4169	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

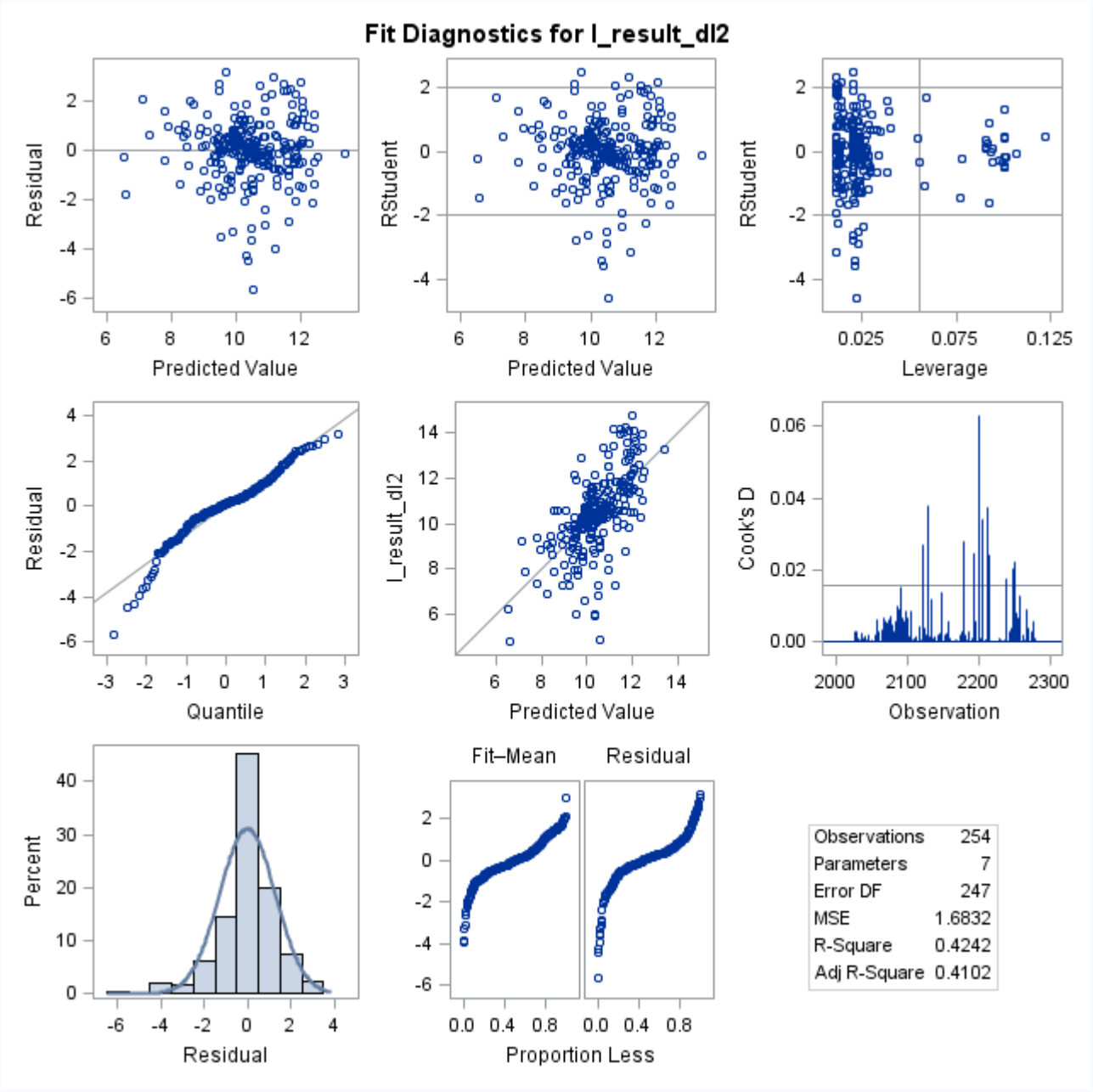
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

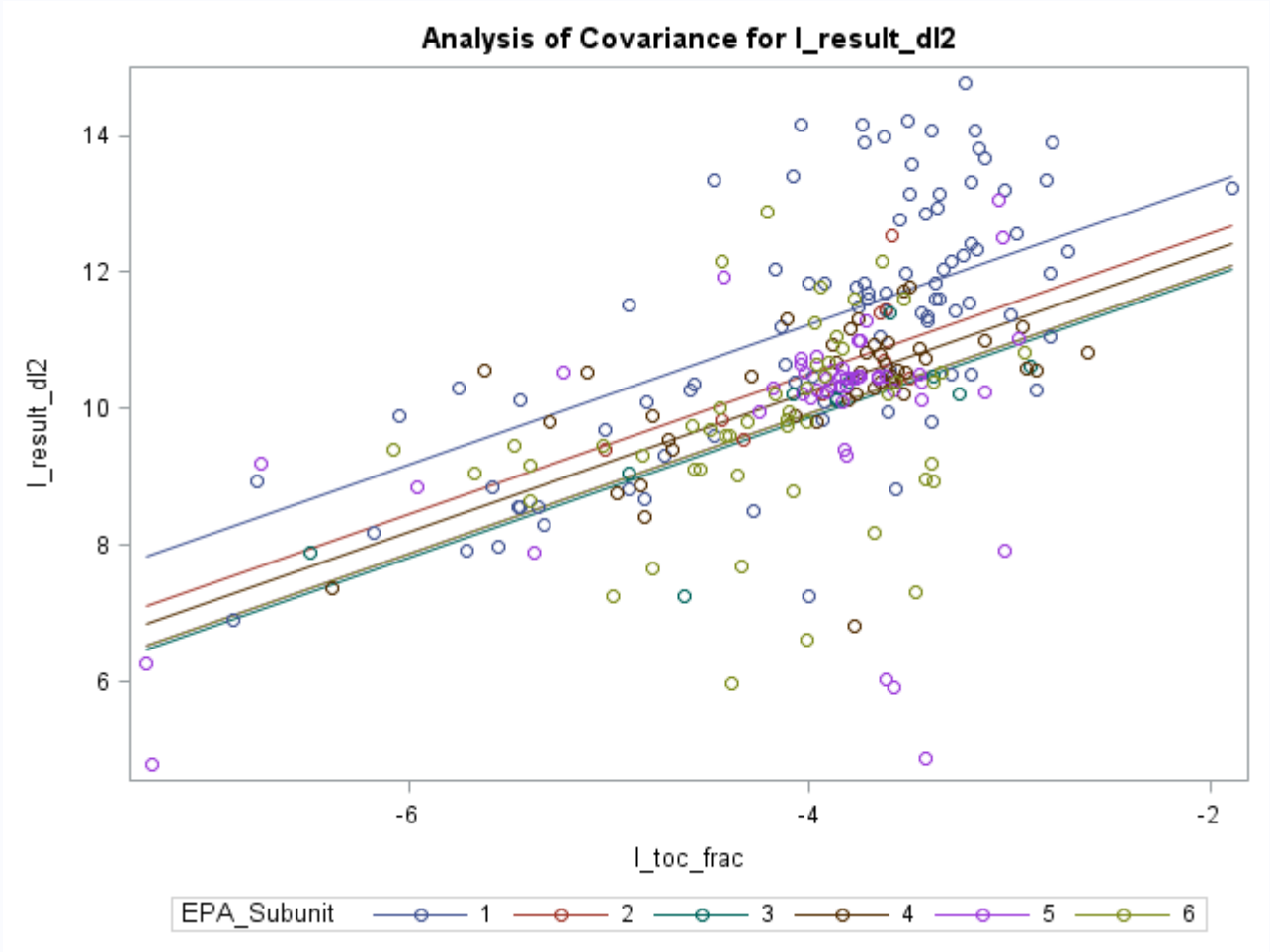
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	306.2360683	51.0393447	30.32	<.0001
Error	247	415.7487739	1.6831934		
Corrected Total	253	721.9848422			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.424159	12.41515	1.297379	10.44997

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	220.7337057	220.7337057	131.14	<.0001
EPA_Subunit	5	85.5023626	17.1004725	10.16	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	195.1608814	195.1608814	115.95	<.0001
EPA_Subunit	5	85.5023626	17.1004725	10.16	<.0001

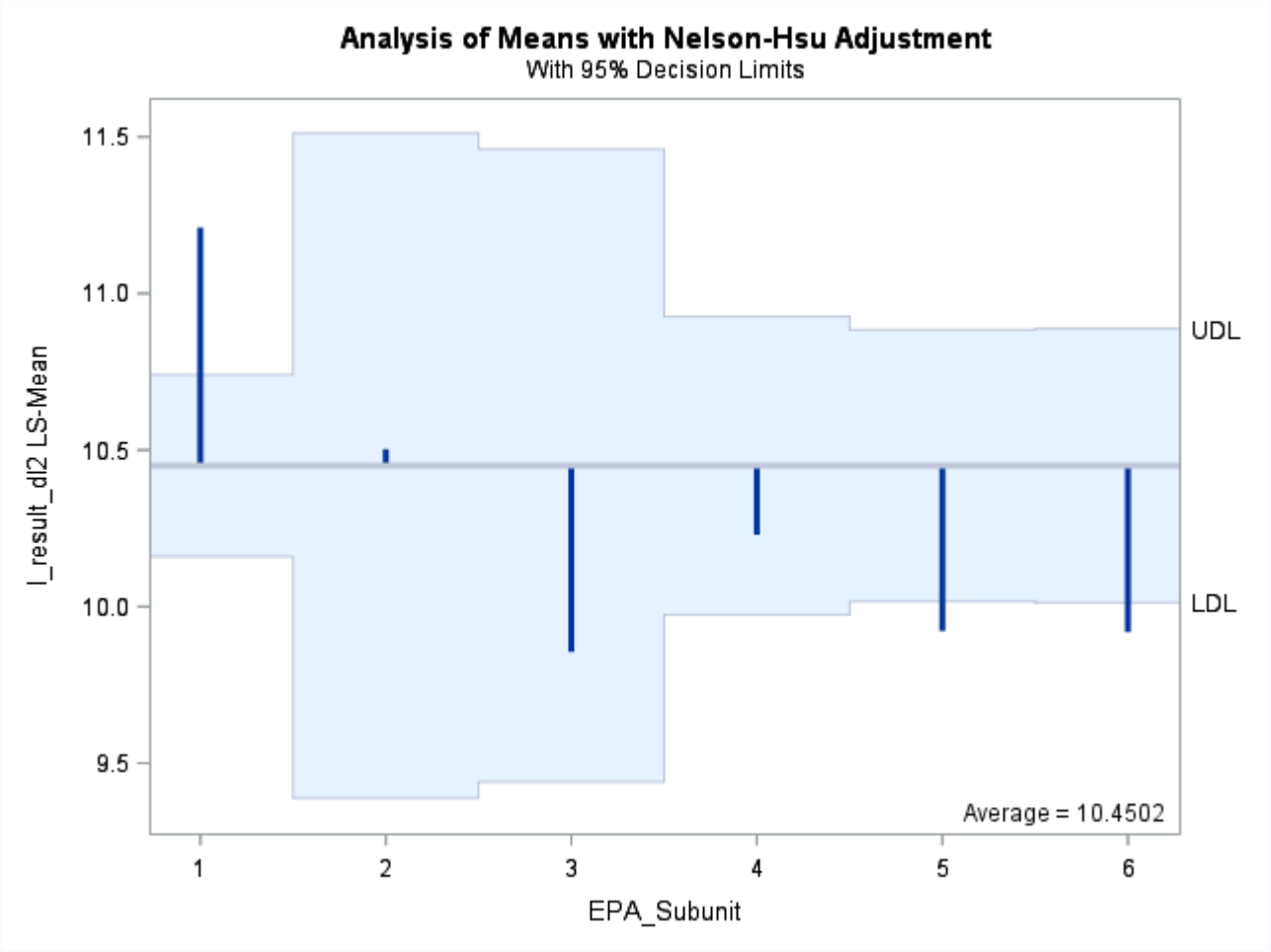

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.6832
R-Square 0.4242
Adj R-Square 0.4102


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	11.2105526	<.0001
2	10.5027468	1.0000
3	9.8555229	0.5036
4	10.2296288	0.7369
5	9.9221742	0.0087
6	9.9184544	0.0089



Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	11.2105526	1
2	10.5027468	2
3	9.8555229	3
4	10.2296288	4
5	9.9221742	5
6	9.9184544	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5750	0.0155	0.0009	<.0001	<.0001
2	0.5750		0.8636	0.9910	0.7896	0.7861
3	0.0155	0.8636		0.9570	1.0000	1.0000
4	0.0009	0.9910	0.9570		0.8647	0.8605
5	<.0001	0.7896	1.0000	0.8647		1.0000
6	<.0001	0.7861	1.0000	0.8605	1.0000	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

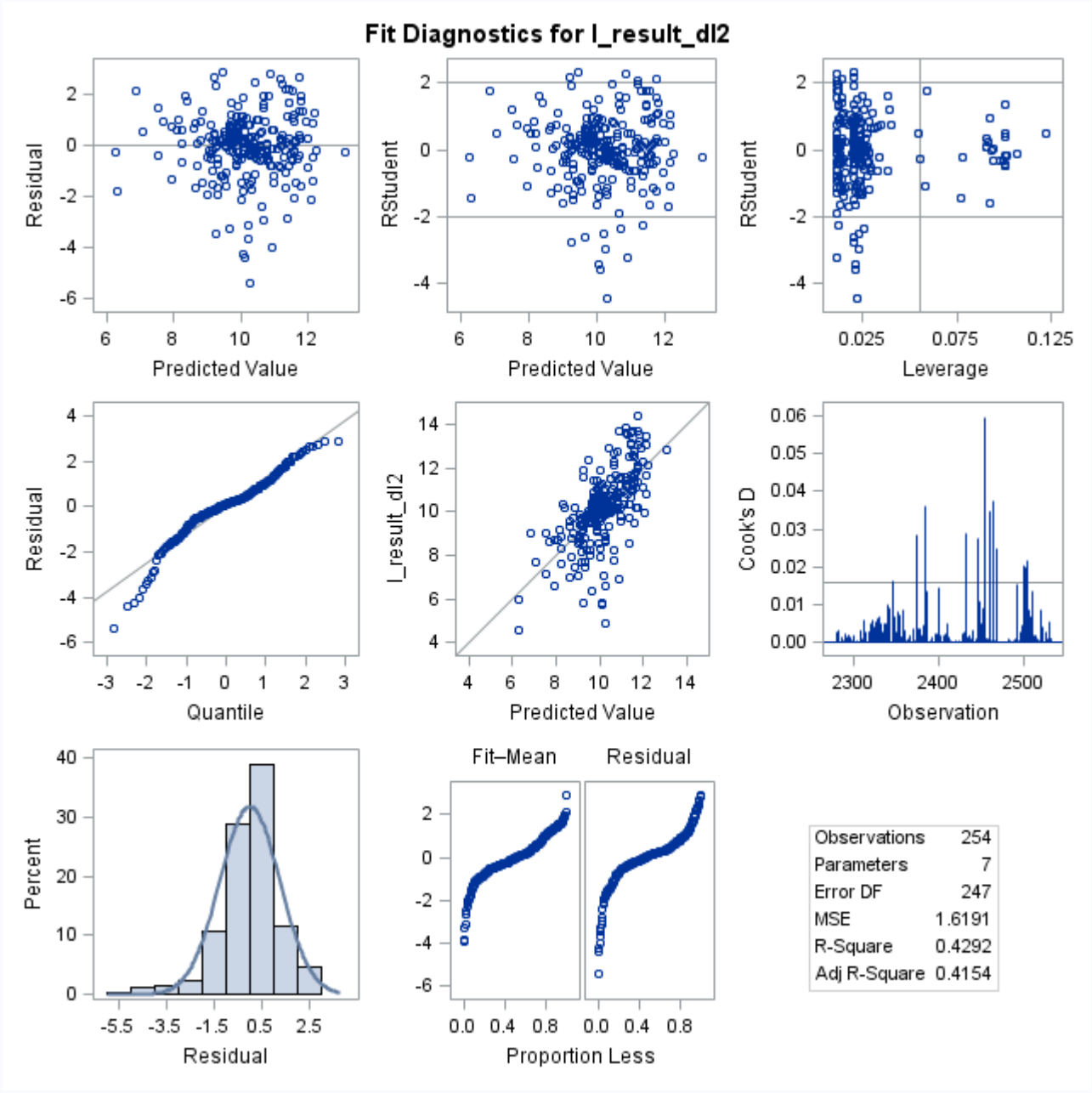
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

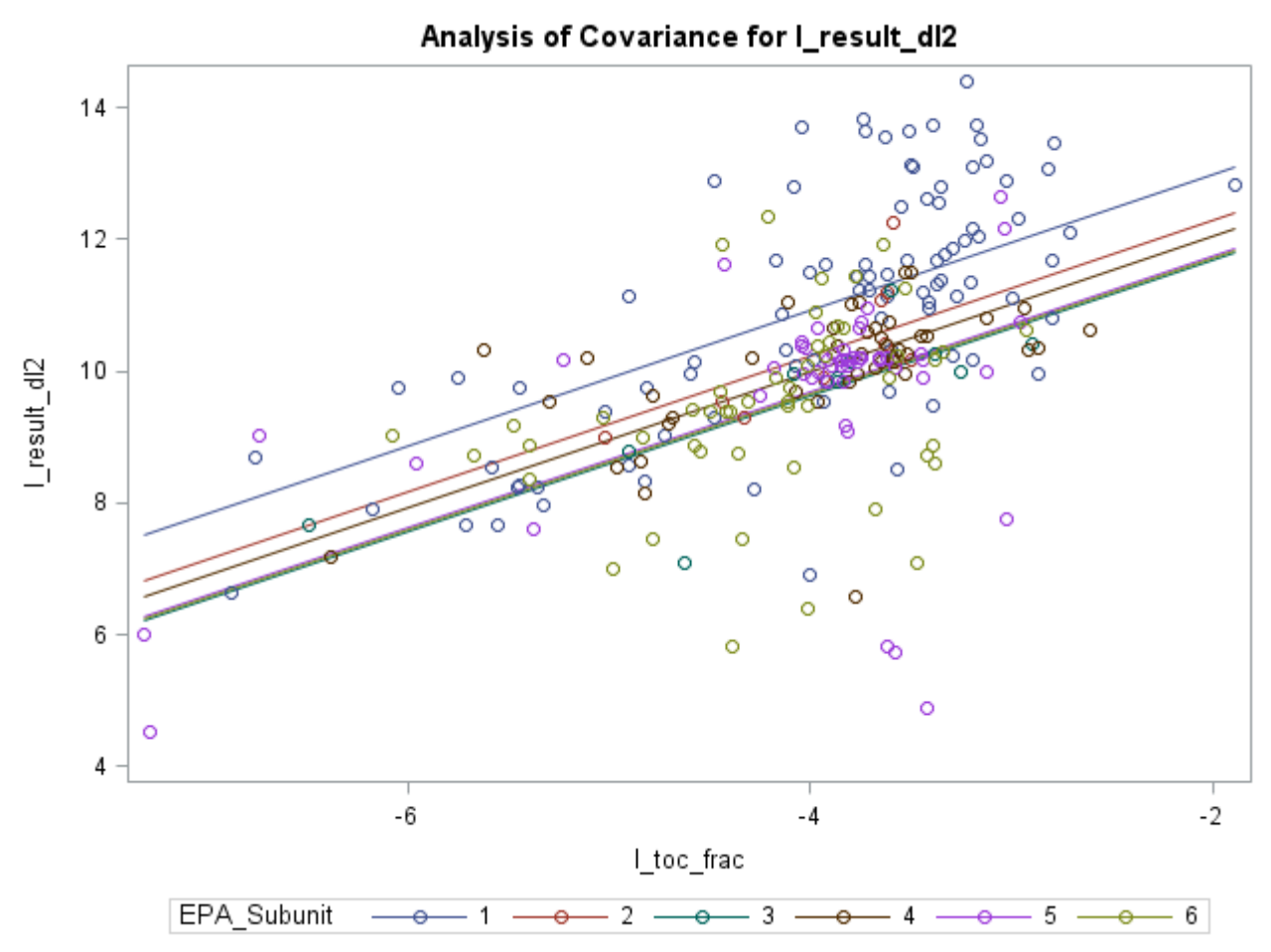
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	300.7419540	50.1236590	30.96	<.0001
Error	247	399.9242702	1.6191266		
Corrected Total	253	700.6662243			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.429223	12.51243	1.272449	10.16948

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	221.5748711	221.5748711	136.85	<.0001
EPA_Subunit	5	79.1670829	15.8334166	9.78	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	196.4946250	196.4946250	121.36	<.0001
EPA_Subunit	5	79.1670829	15.8334166	9.78	<.0001

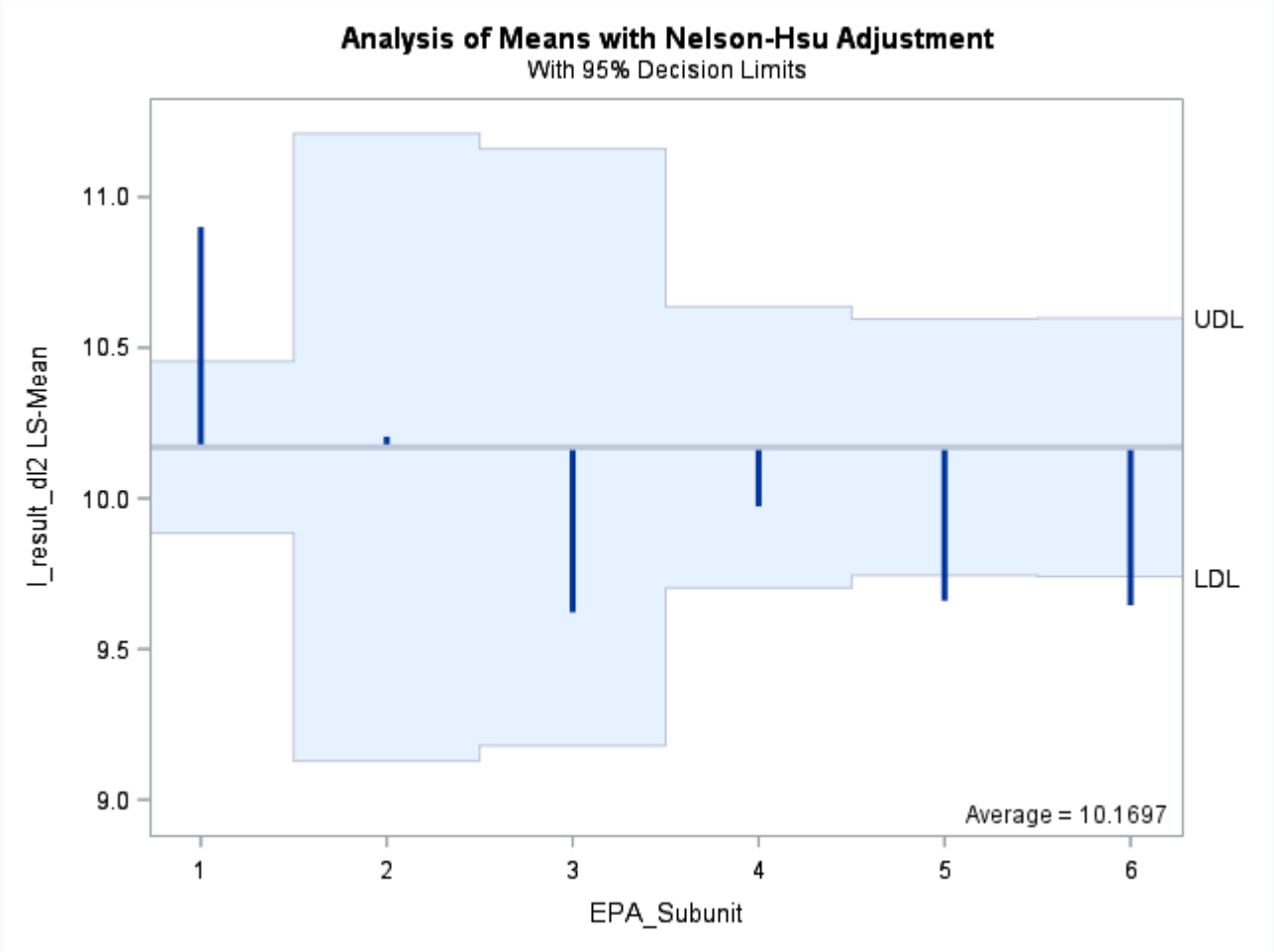

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.6191
R-Square 0.4292
Adj R-Square 0.4154


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
4
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	10.9003765	<.0001
2	10.2047138	1.0000
3	9.6219237	0.5711
4	9.9733814	0.8070
5	9.6603650	0.0104
6	9.6450466	0.0083



Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	10.9003765	1
2	10.2047138	2
3	9.6219237	3
4	9.9733814	4
5	9.6603650	5
6	9.6450466	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5728	0.0228	0.0015	<.0001	<.0001
2	0.5728		0.9011	0.9954	0.8195	0.8024
3	0.0228	0.9011		0.9642	1.0000	1.0000
4	0.0015	0.9954	0.9642		0.8451	0.8190
5	<.0001	0.8195	1.0000	0.8451		1.0000
6	<.0001	0.8024	1.0000	0.8190	1.0000	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	253
Number of Observations Used	253

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

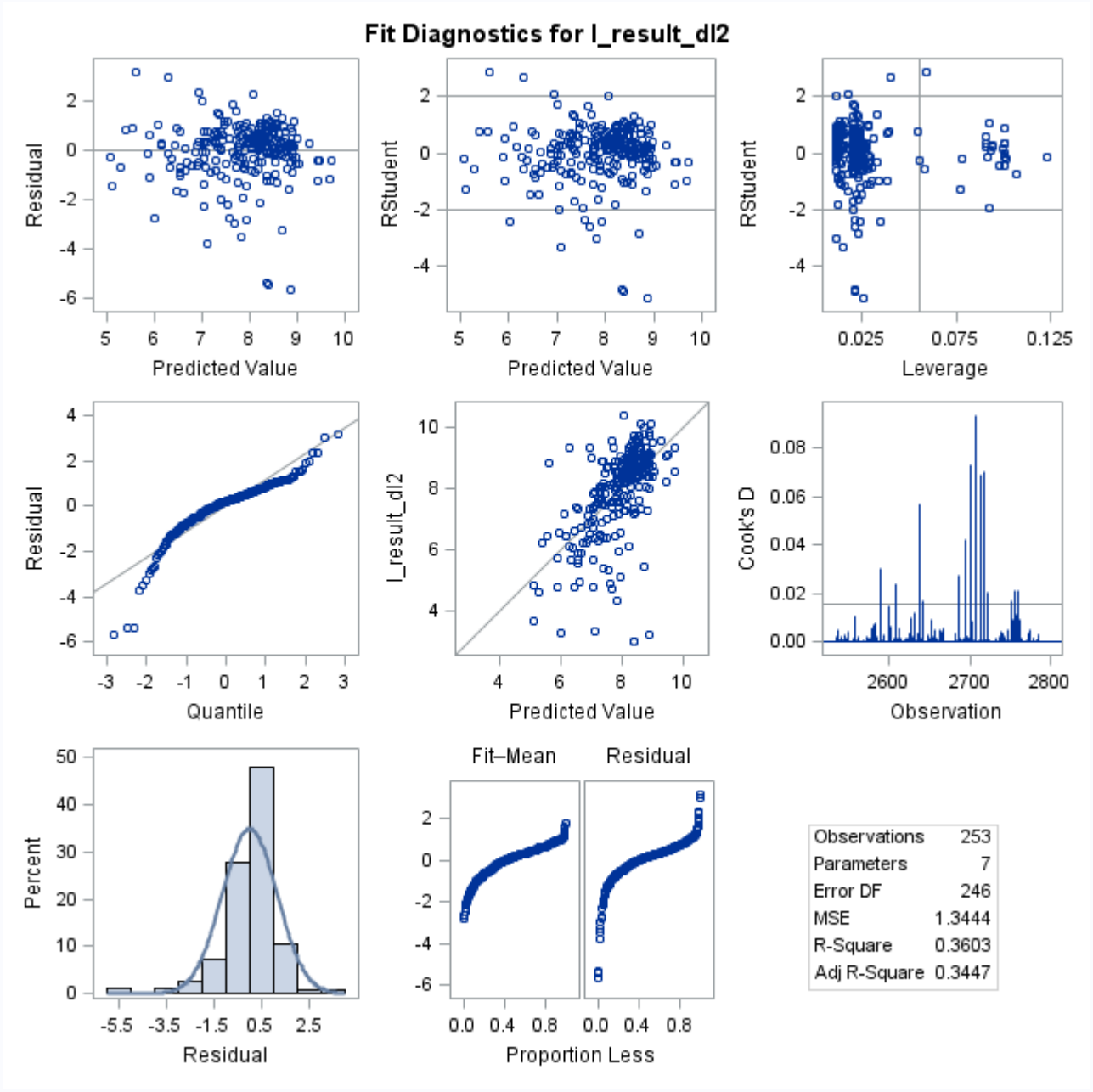
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

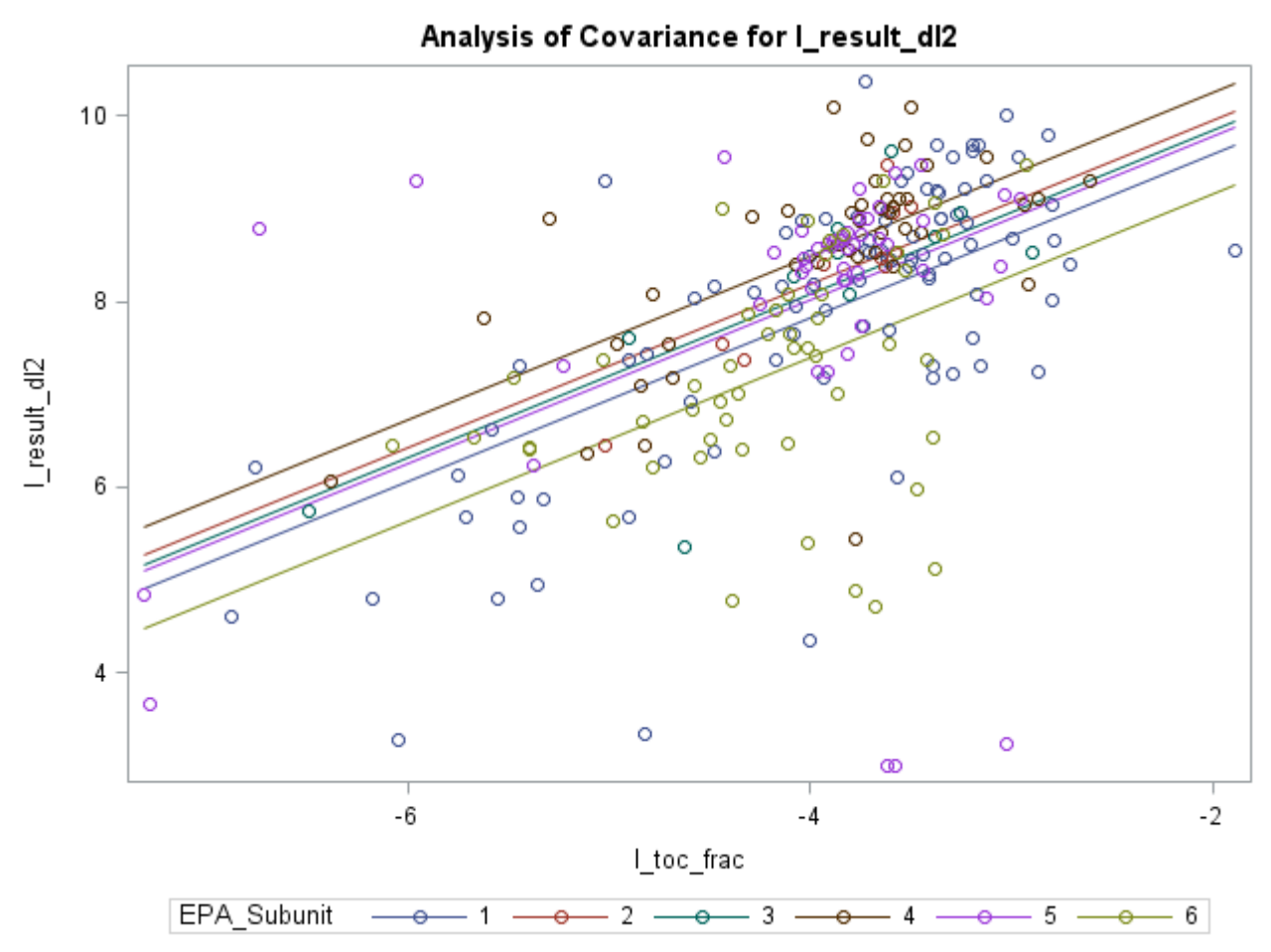
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	186.2494452	31.0415742	23.09	<.0001
Error	246	330.7118659	1.3443572		
Corrected Total	252	516.9613111			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.360277	14.68491	1.159464	7.895615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	156.5275385	156.5275385	116.43	<.0001
EPA_Subunit	5	29.7219068	5.9443814	4.42	0.0007

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	143.6776907	143.6776907	106.87	<.0001
EPA_Subunit	5	29.7219068	5.9443814	4.42	0.0007

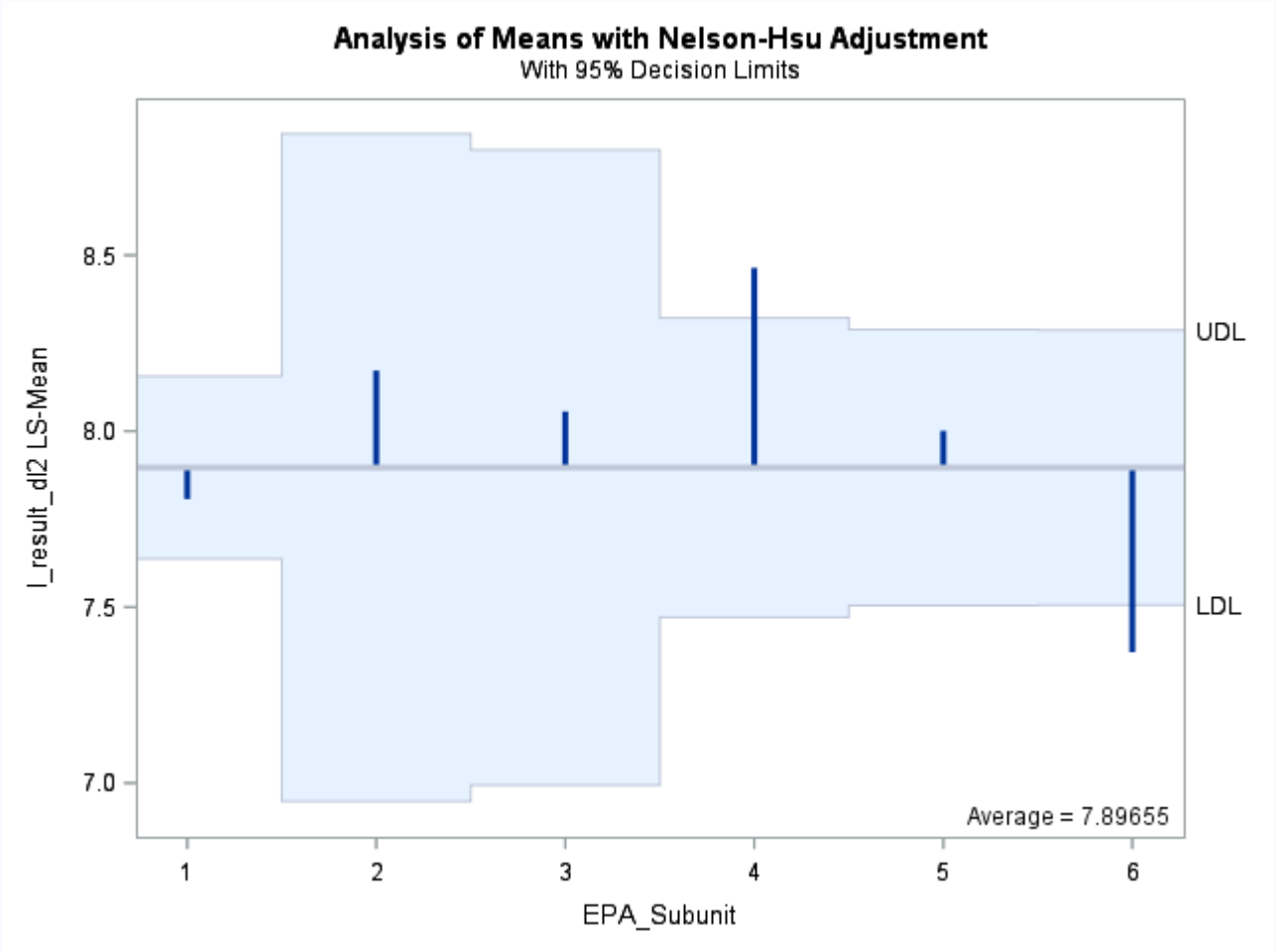

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 7
Error DF 246
MSE 1.3444
R-Square 0.3603
Adj R-Square 0.3447


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	7.80717412	0.9059
2	8.17223191	0.9521
3	8.05585460	0.9948
4	8.46422336	0.0030
5	8.00104862	0.9668
6	7.37190460	0.0028



Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	7.80717412	1
2	8.17223191	2
3	8.05585460	3
4	8.46422336	4
5	8.00104862	5
6	7.37190460	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9344	0.9849	0.0296	0.9355	0.2829
2	0.9344		0.9999	0.9797	0.9982	0.3515
3	0.9849	0.9999		0.9032	1.0000	0.4868
4	0.0296	0.9797	0.9032		0.3982	0.0001
5	0.9355	0.9982	1.0000	0.3982		0.0799
6	0.2829	0.3515	0.4868	0.0001	0.0799	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	248
Number of Observations Used	248

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

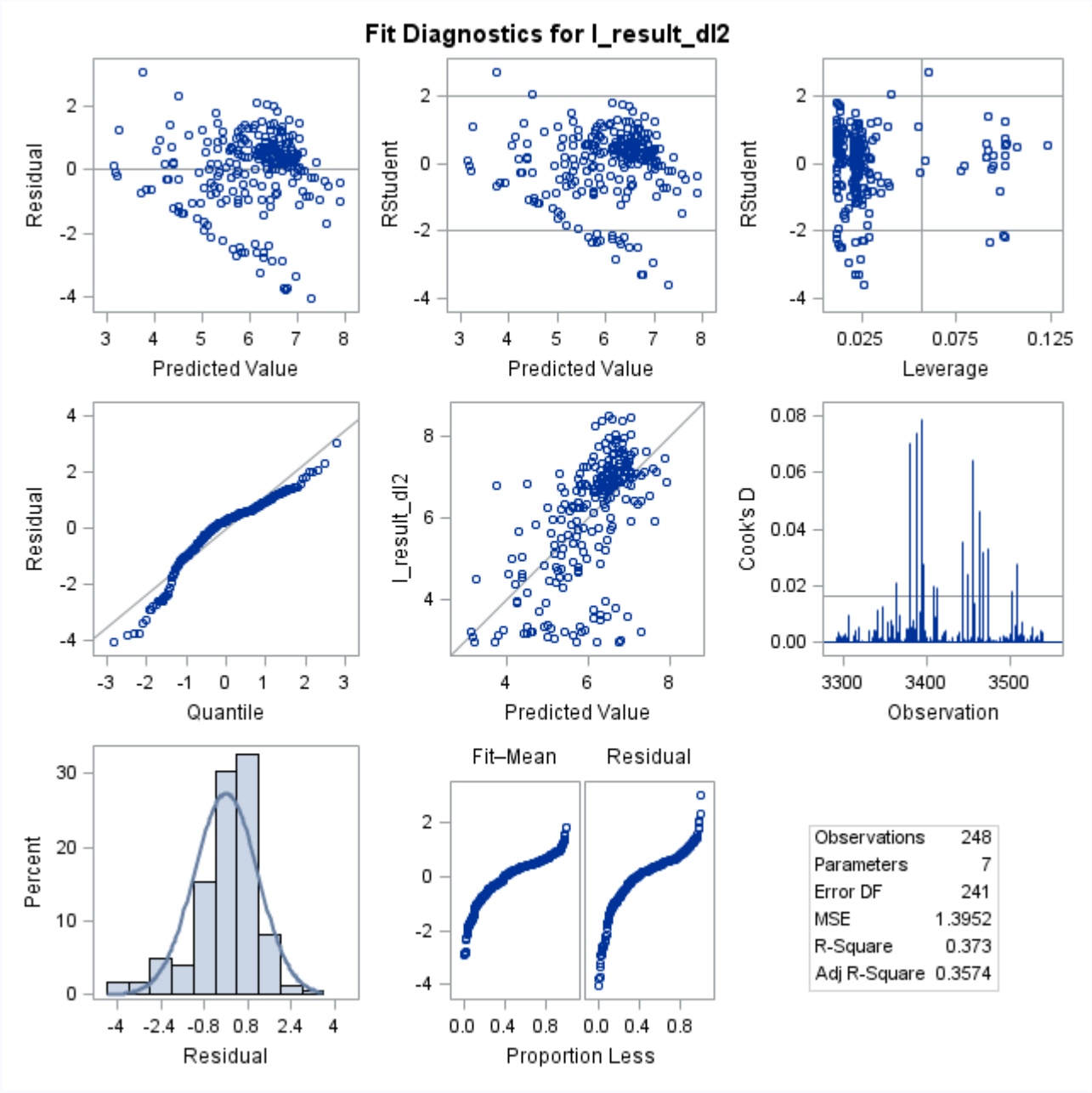
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

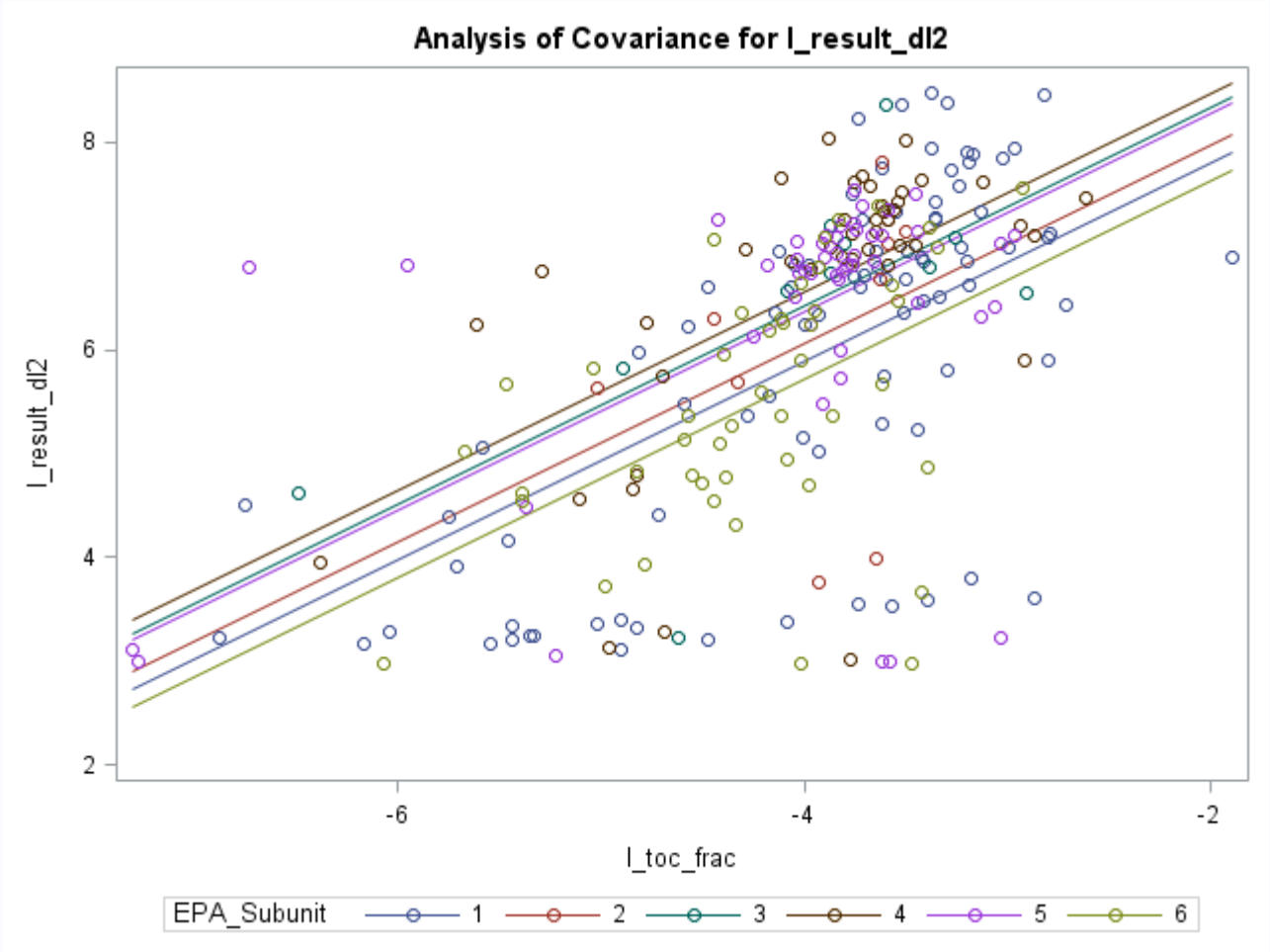
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	200.0035790	33.3339298	23.89	<.0001
Error	241	336.2516066	1.3952349		
Corrected Total	247	536.2551856			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.372963	19.47327	1.181201	6.065755

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	175.8514798	175.8514798	126.04	<.0001
EPA_Subunit	5	24.1520992	4.8304198	3.46	0.0049

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	166.2198672	166.2198672	119.13	<.0001
EPA_Subunit	5	24.1520992	4.8304198	3.46	0.0049

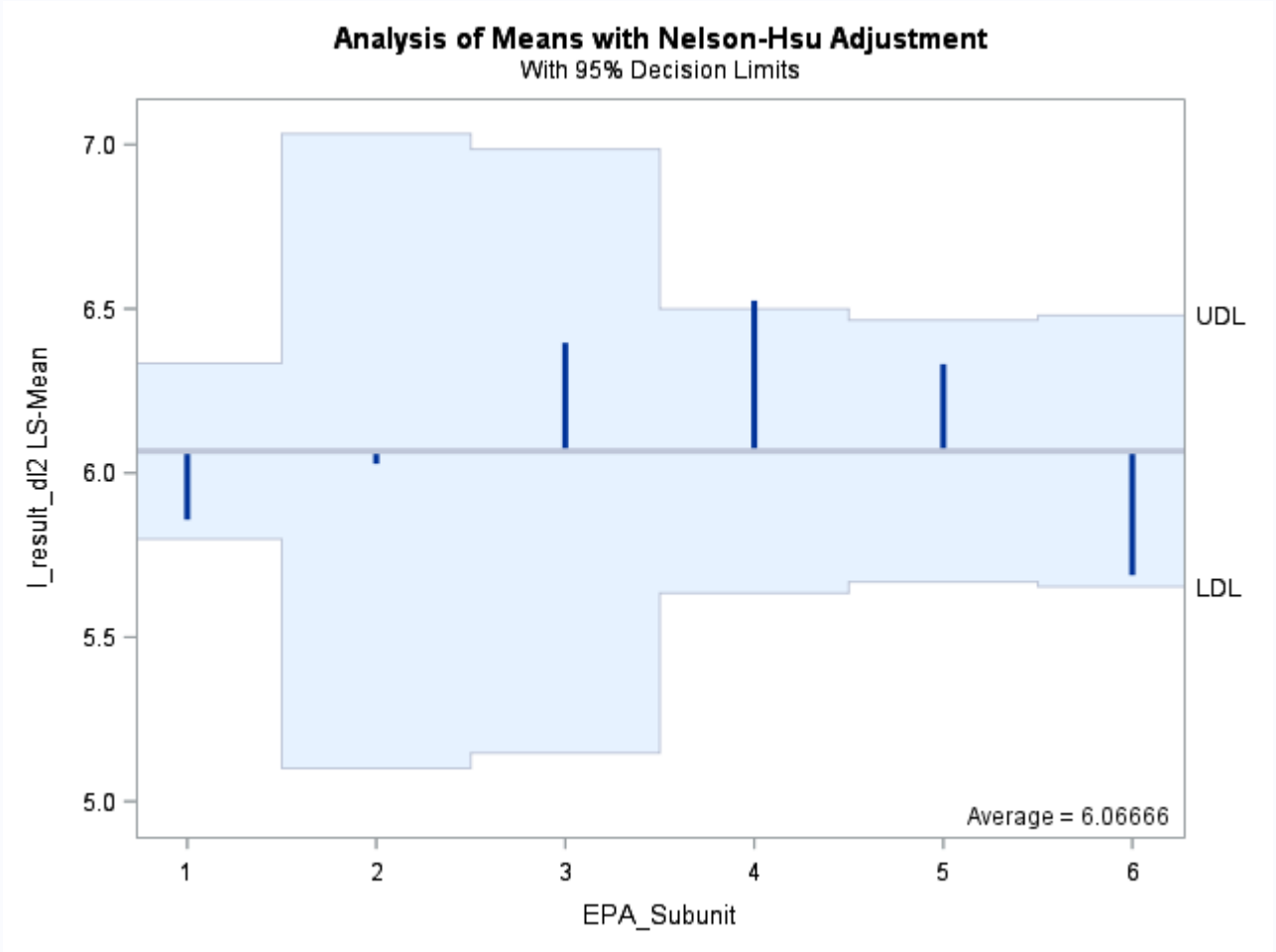

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 248
Parameters 7
Error DF 241
MSE 1.3952
R-Square 0.373
Adj R-Square 0.3574


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.85786737	0.2061
2	6.02789958	1.0000
3	6.39636609	0.8900
4	6.52480050	0.0321
5	6.33139936	0.3704
6	5.68874149	0.0907



Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.85786737	1
2	6.02789958	2
3	6.39636609	3
4	6.52480050	4
5	6.33139936	5
6	5.68874149	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9981	0.7118	0.0316	0.2203	0.9695
2	0.9981		0.9802	0.8374	0.9767	0.9631
3	0.7118	0.9802		0.9995	1.0000	0.4759
4	0.0316	0.8374	0.9995		0.9702	0.0125
5	0.2203	0.9767	1.0000	0.9702		0.0877
6	0.9695	0.9631	0.4759	0.0125	0.0877	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

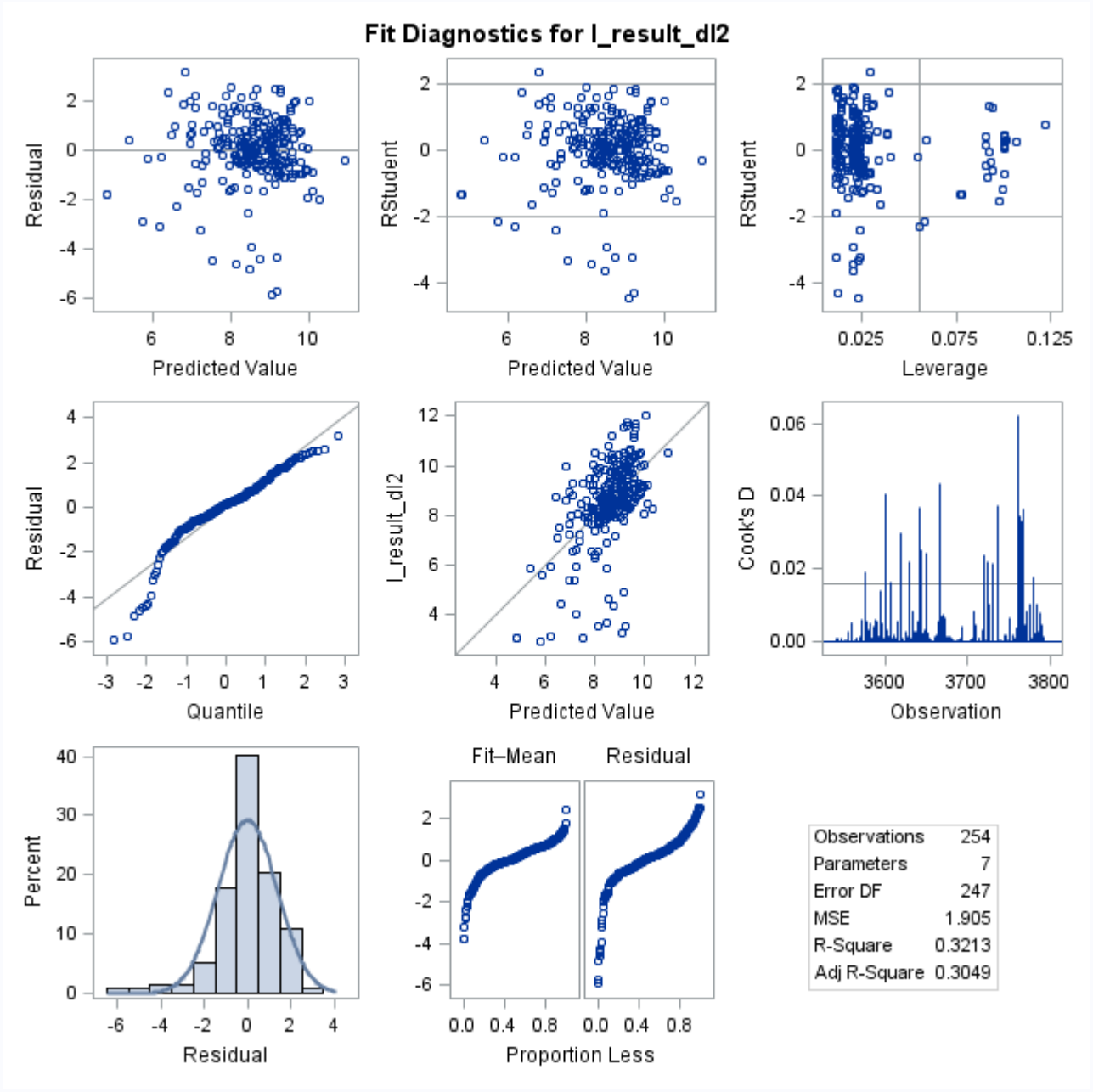
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

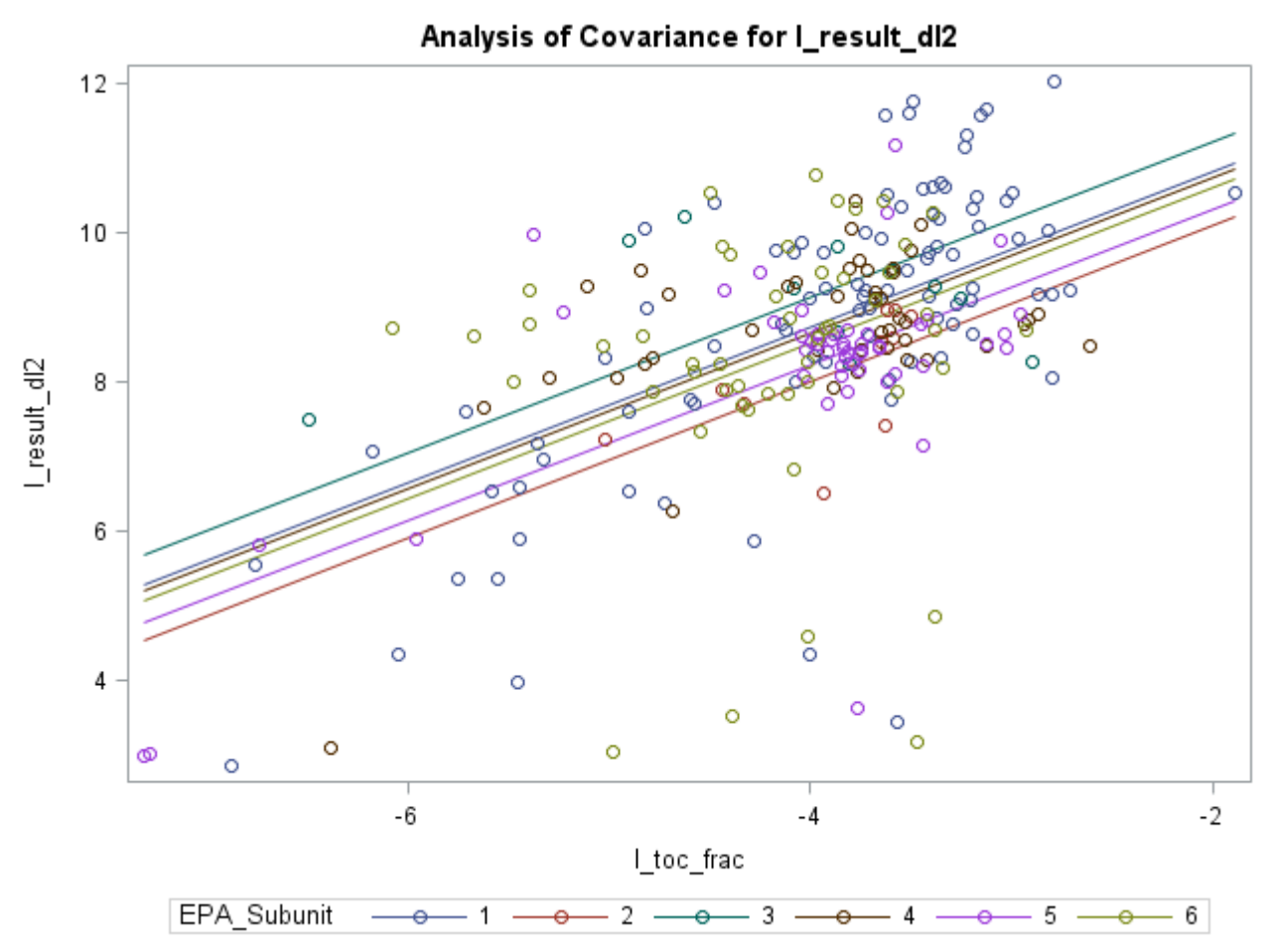
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	222.7863317	37.1310553	19.49	<.0001
Error	247	470.5256886	1.9049623		
Corrected Total	253	693.3120203			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.321336	16.12920	1.380204	8.557173

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	207.3387555	207.3387555	108.84	<.0001
EPA_Subunit	5	15.4475762	3.0895152	1.62	0.1548

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	201.3537561	201.3537561	105.70	<.0001
EPA_Subunit	5	15.4475762	3.0895152	1.62	0.1548

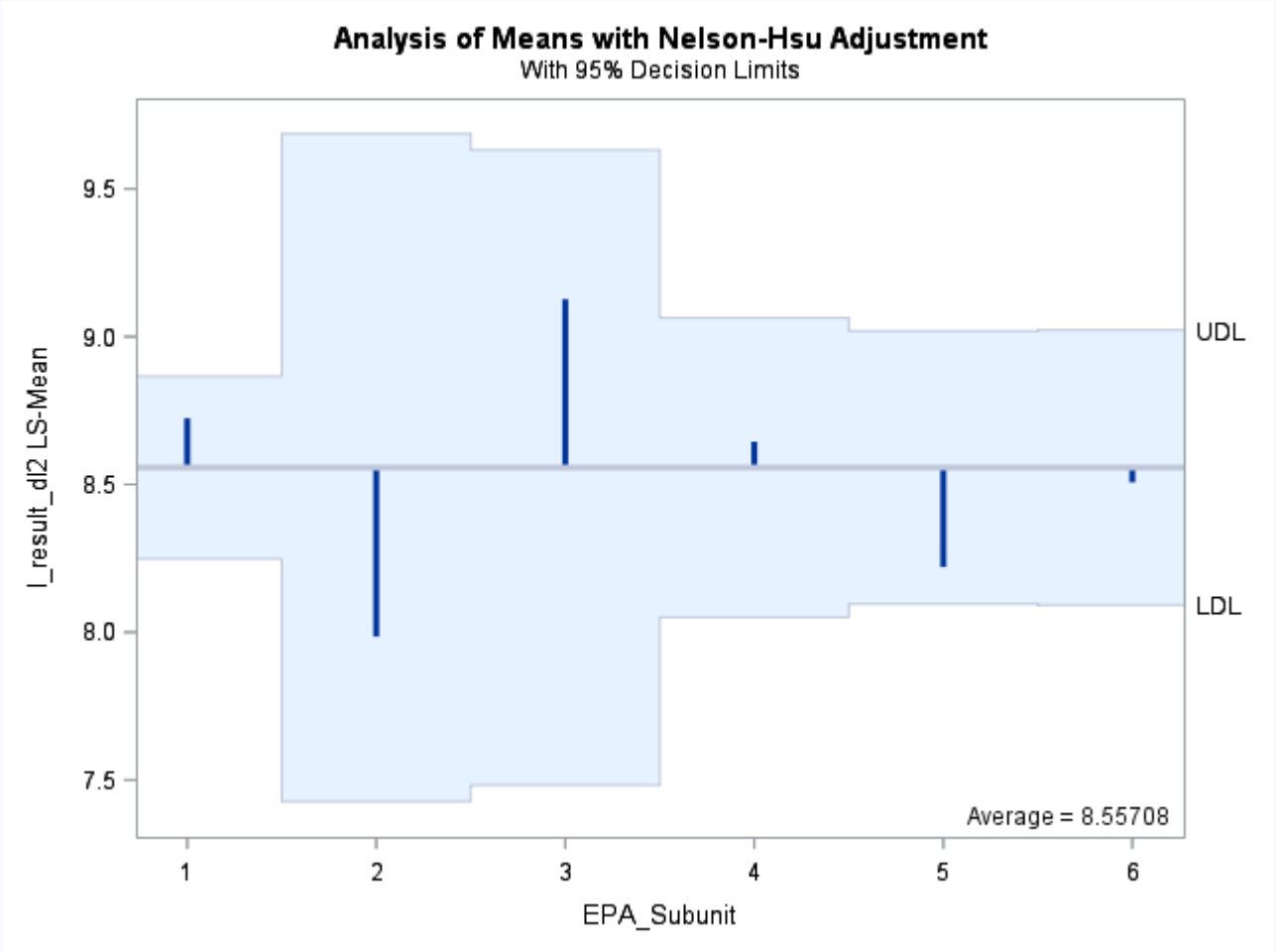

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.905
R-Square 0.3213
Adj R-Square 0.3049


Analysis of Covariance for l_result_dl2
l_result_dl2
12
10
8
6
4
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	8.72408836	0.5960
2	7.98517148	0.6591
3	9.12670076	0.6145
4	8.64458264	0.9953
5	8.22079796	0.2716
6	8.50703415	0.9995



PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	8.72408836	1
2	7.98517148	2
3	9.12670076	3
4	8.64458264	4
5	8.22079796	5
6	8.50703415	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5953	0.9430	0.9996	0.3089	0.9496
2	0.5953		0.4093	0.7503	0.9964	0.8852
3	0.9430	0.4093		0.9063	0.3621	0.7581
4	0.9996	0.7503	0.9063		0.6802	0.9969
5	0.3089	0.9964	0.3621	0.6802		0.9057
6	0.9496	0.8852	0.7581	0.9969	0.9057	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

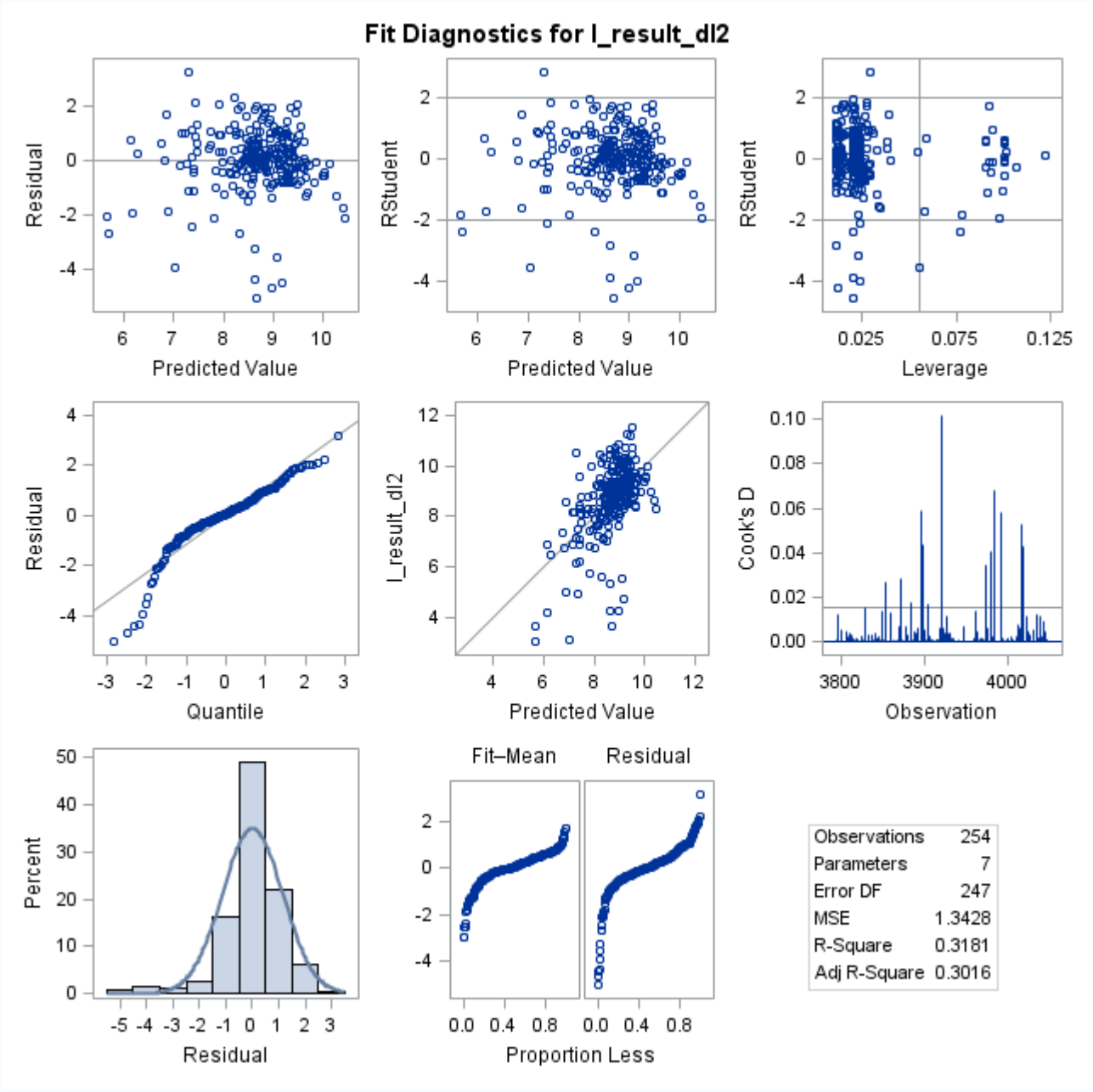
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

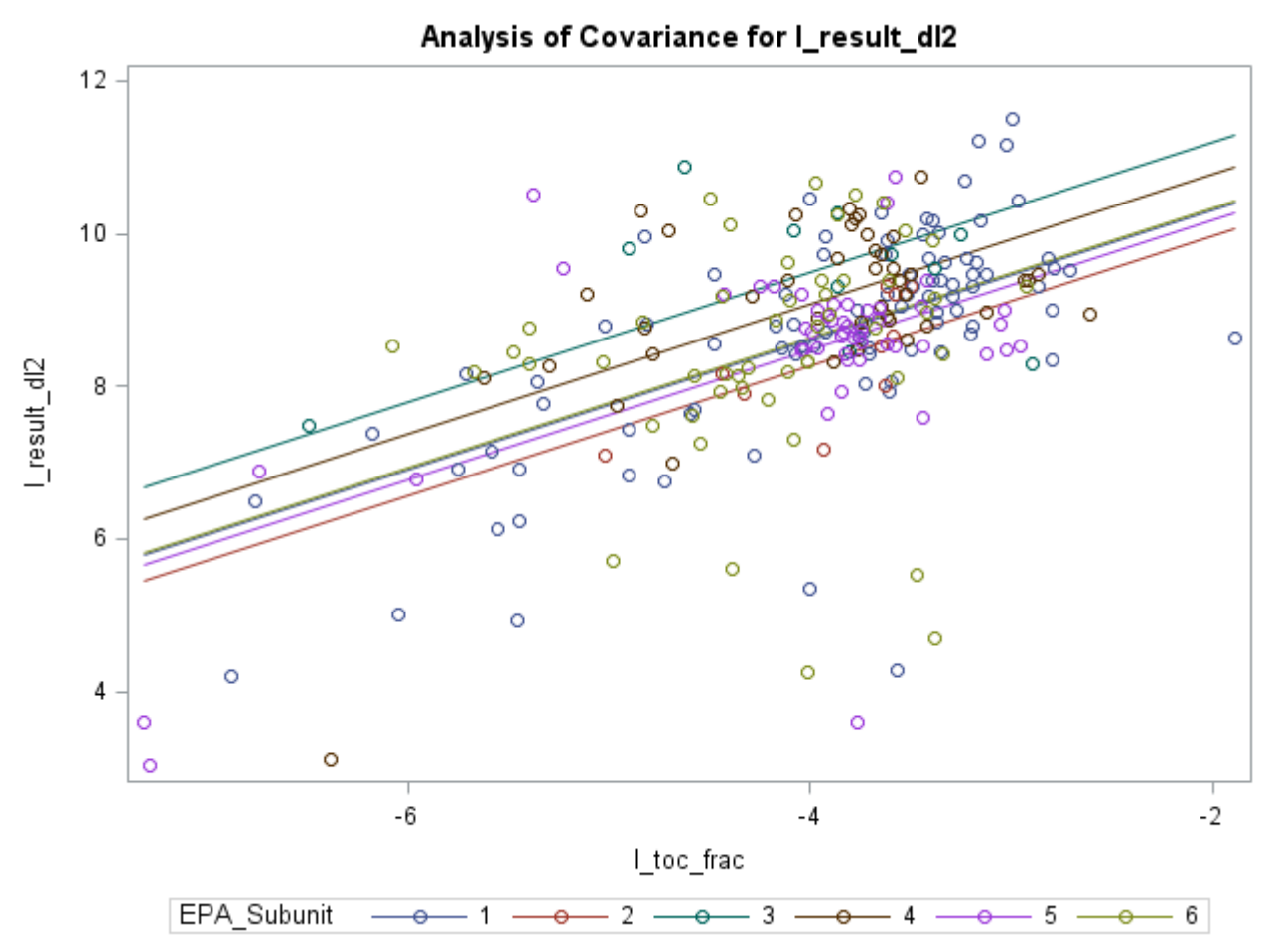
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	154.7290849	25.7881808	19.21	<.0001
Error	247	331.6626816	1.3427639		
Corrected Total	253	486.3917665			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.318116	13.35242	1.158777	8.678405

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	136.6444618	136.6444618	101.76	<.0001
EPA_Subunit	5	18.0846231	3.6169246	2.69	0.0216

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	133.8572493	133.8572493	99.69	<.0001
EPA_Subunit	5	18.0846231	3.6169246	2.69	0.0216

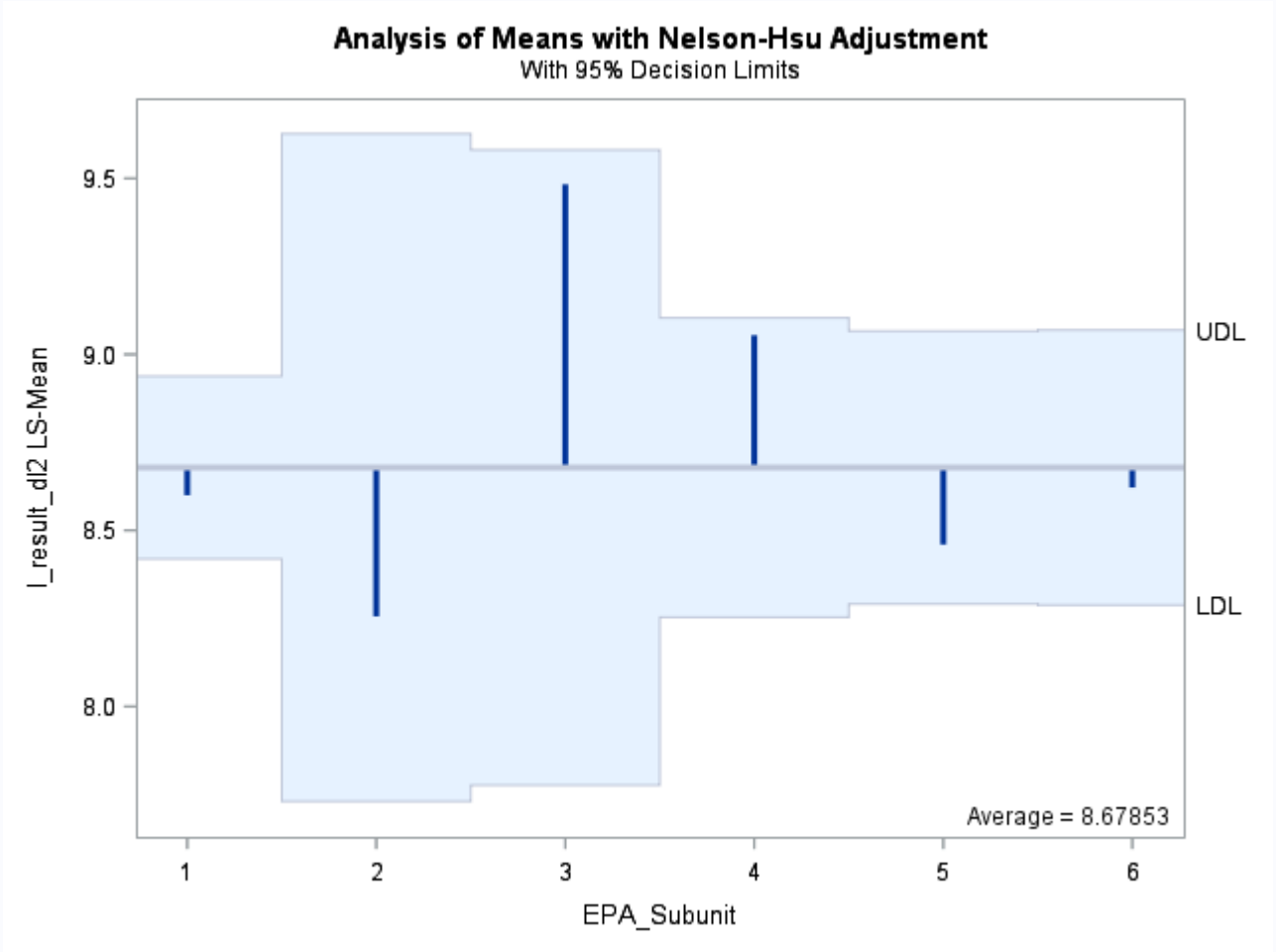

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.3428
R-Square 0.3181
Adj R-Square 0.3016


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	8.60010114	0.9439
2	8.25591127	0.7666
3	9.48304858	0.1053
4	9.05446562	0.1108
5	8.45994569	0.5499
6	8.62187796	0.9979



PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	8.60010114	1
2	8.25591127	2
3	9.48304858	3
4	9.05446562	4
5	8.45994569	5
6	8.62187796	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9484	0.1657	0.2829	0.9835	1.0000
2	0.9484		0.1523	0.3668	0.9958	0.9437
3	0.1657	0.1523		0.8834	0.0892	0.2276
4	0.2829	0.3668	0.8834		0.1385	0.4757
5	0.9835	0.9958	0.0892	0.1385		0.9821
6	1.0000	0.9437	0.2276	0.4757	0.9821	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

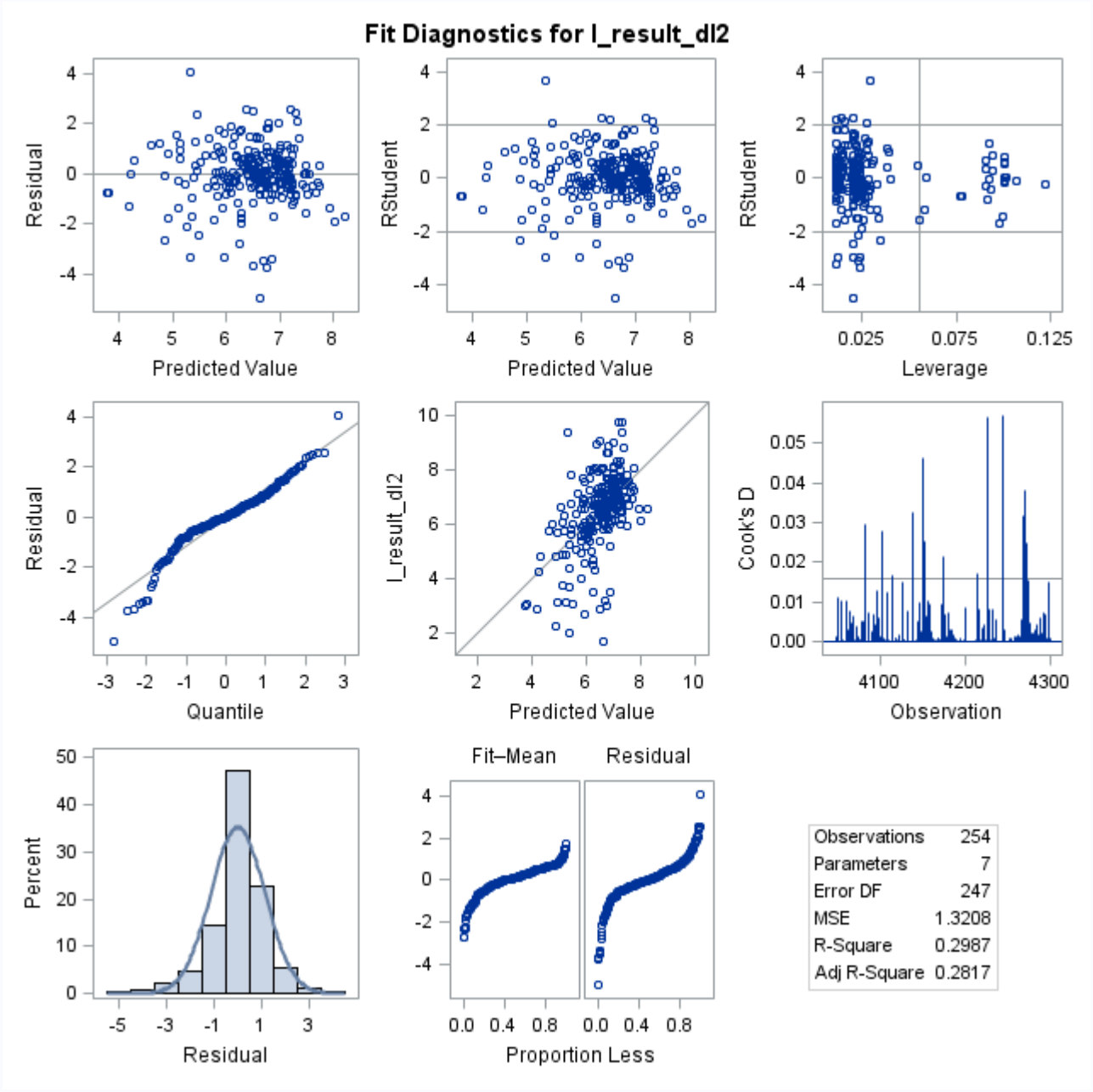
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

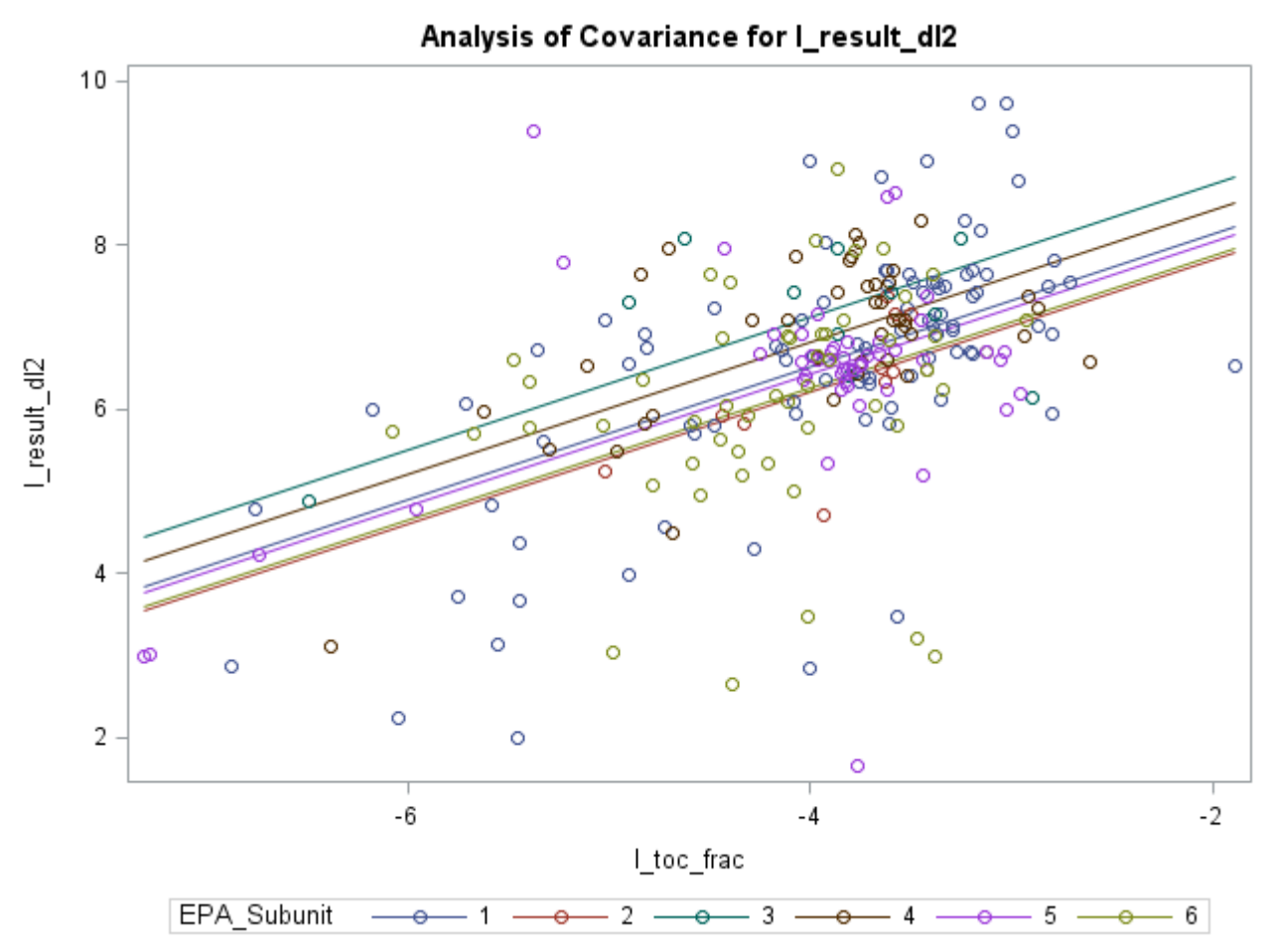
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	138.9686398	23.1614400	17.54	<.0001
Error	247	326.2386165	1.3208041		
Corrected Total	253	465.2072563			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.298724	17.67660	1.149262	6.501603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	126.5594978	126.5594978	95.82	<.0001
EPA_Subunit	5	12.4091421	2.4818284	1.88	0.0985

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	120.4430378	120.4430378	91.19	<.0001
EPA_Subunit	5	12.4091421	2.4818284	1.88	0.0985

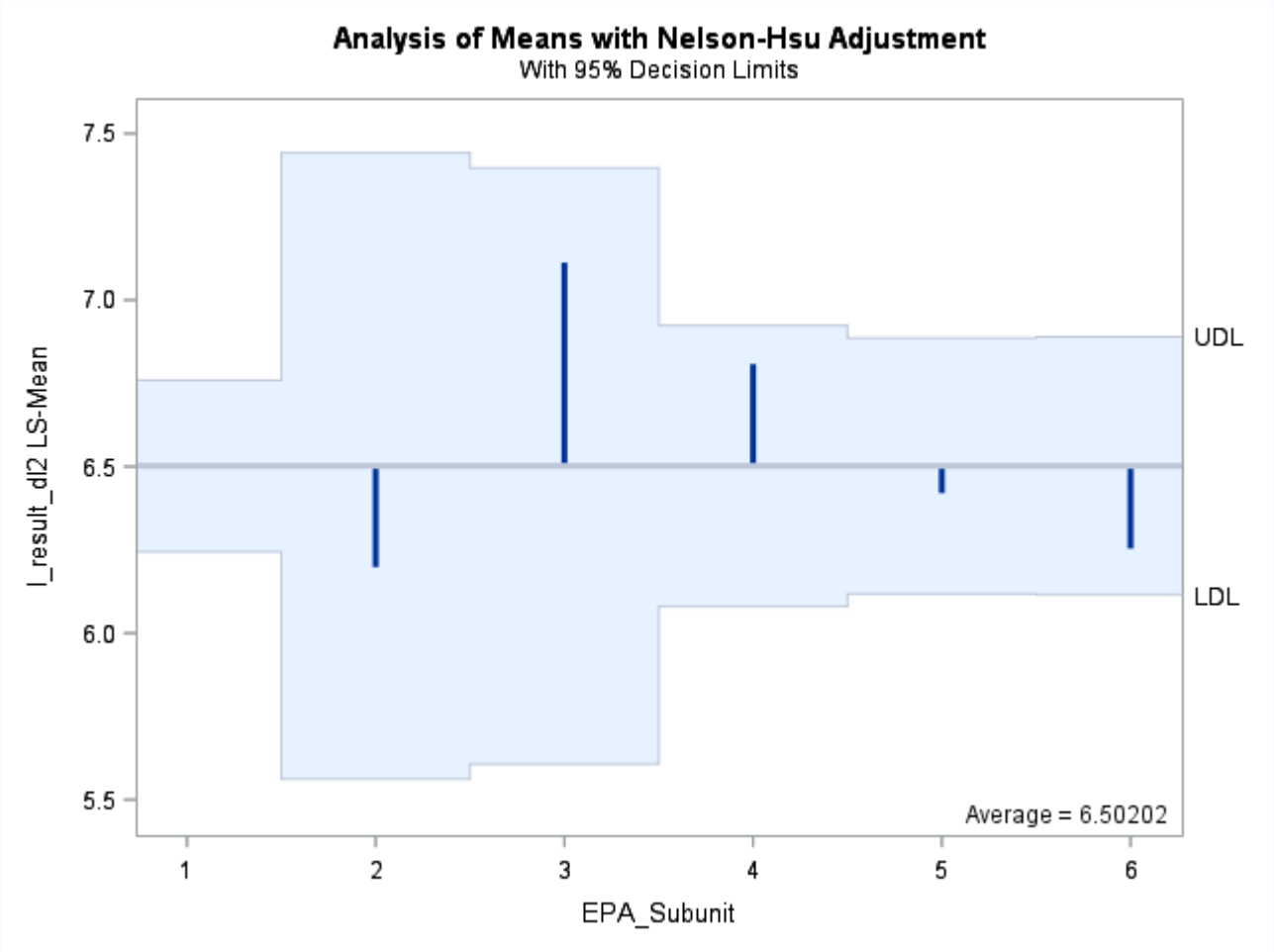

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.3208
R-Square 0.2987
Adj R-Square 0.2817


Analysis of Covariance for l_result_dl2
10
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	6.49701026	1.0000
2	6.19824703	0.9265
3	7.11226973	0.3409
4	6.80774909	0.2770
5	6.42044589	0.9878
6	6.25406500	0.4109



PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	6.49701026	1
2	6.19824703	2
3	7.11226973	3
4	6.80774909	4
5	6.42044589	5
6	6.25406500	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9707	0.5494	0.6910	0.9990	0.8409
2	0.9707		0.4550	0.6578	0.9935	1.0000
3	0.5494	0.4550		0.9701	0.4628	0.2228
4	0.6910	0.6578	0.9701		0.5864	0.1952
5	0.9990	0.9935	0.4628	0.5864		0.9791
6	0.8409	1.0000	0.2228	0.1952	0.9791	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

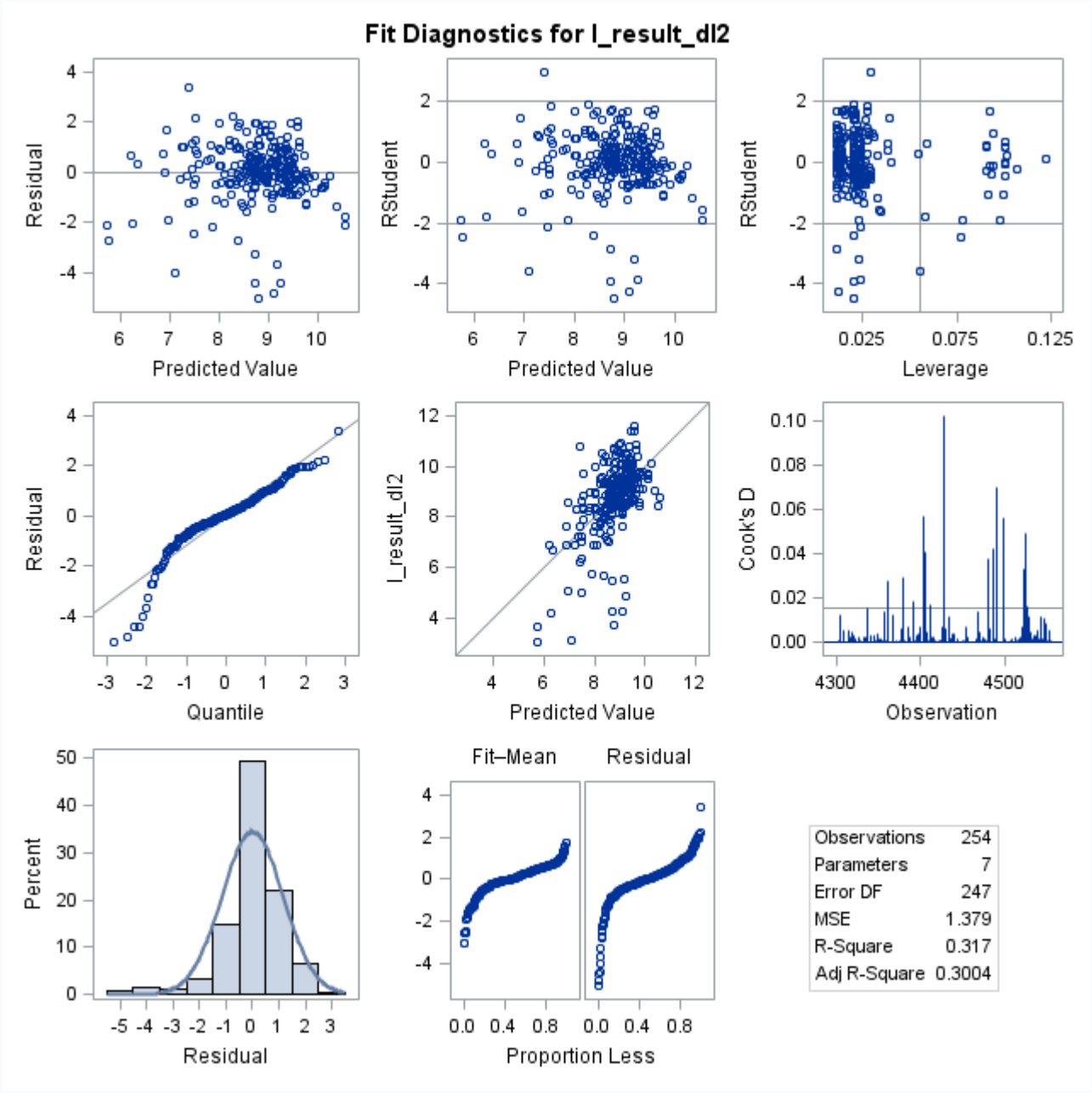
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

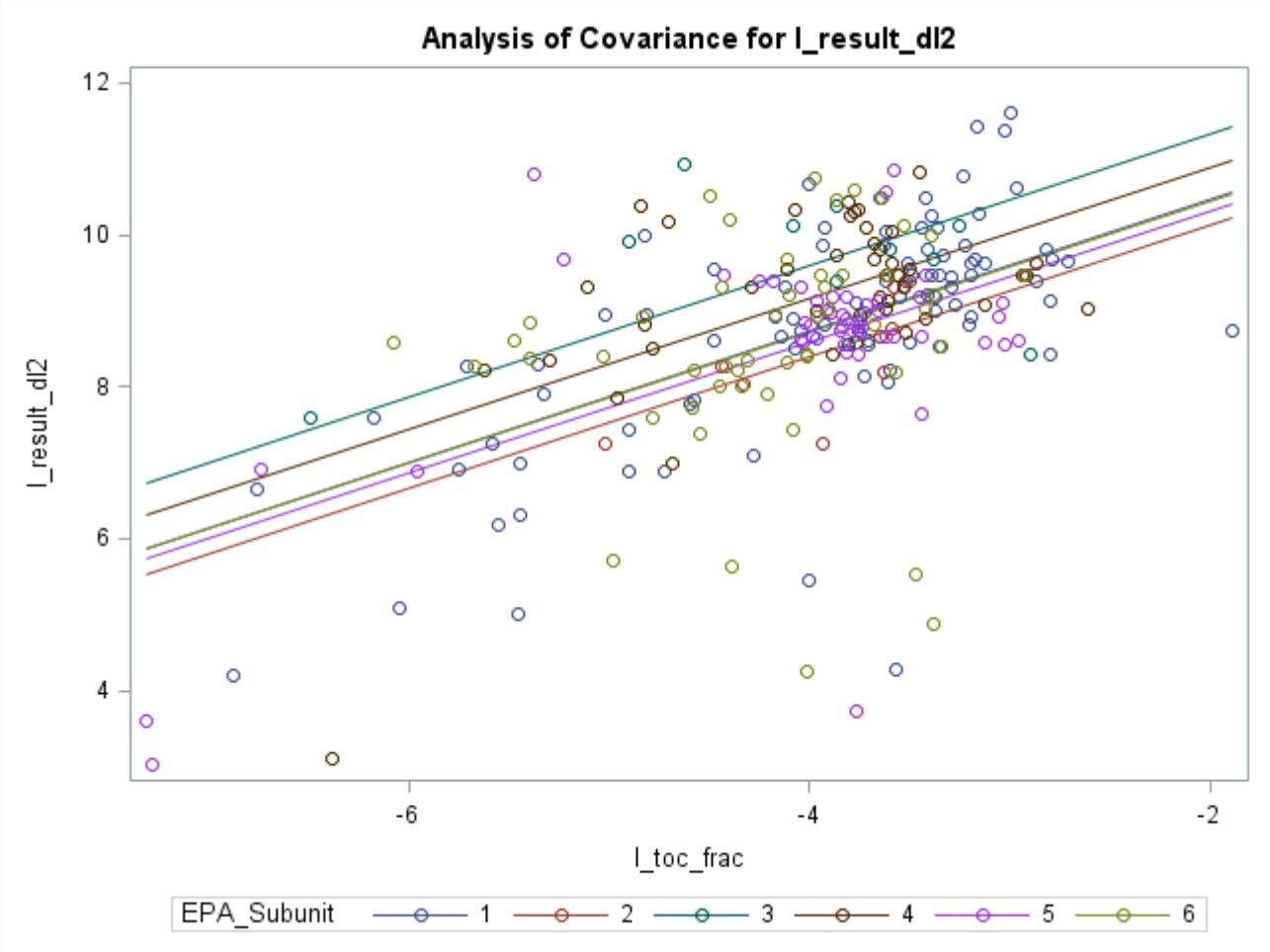
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	158.0885713	26.3480952	19.11	<.0001
Error	247	340.6031937	1.3789603		
Corrected Total	253	498.6917650			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.317007	13.36942	1.174291	8.783410

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	140.7289287	140.7289287	102.05	<.0001
EPA_Subunit	5	17.3596426	3.4719285	2.52	0.0303

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	137.5143944	137.5143944	99.72	<.0001
EPA_Subunit	5	17.3596426	3.4719285	2.52	0.0303

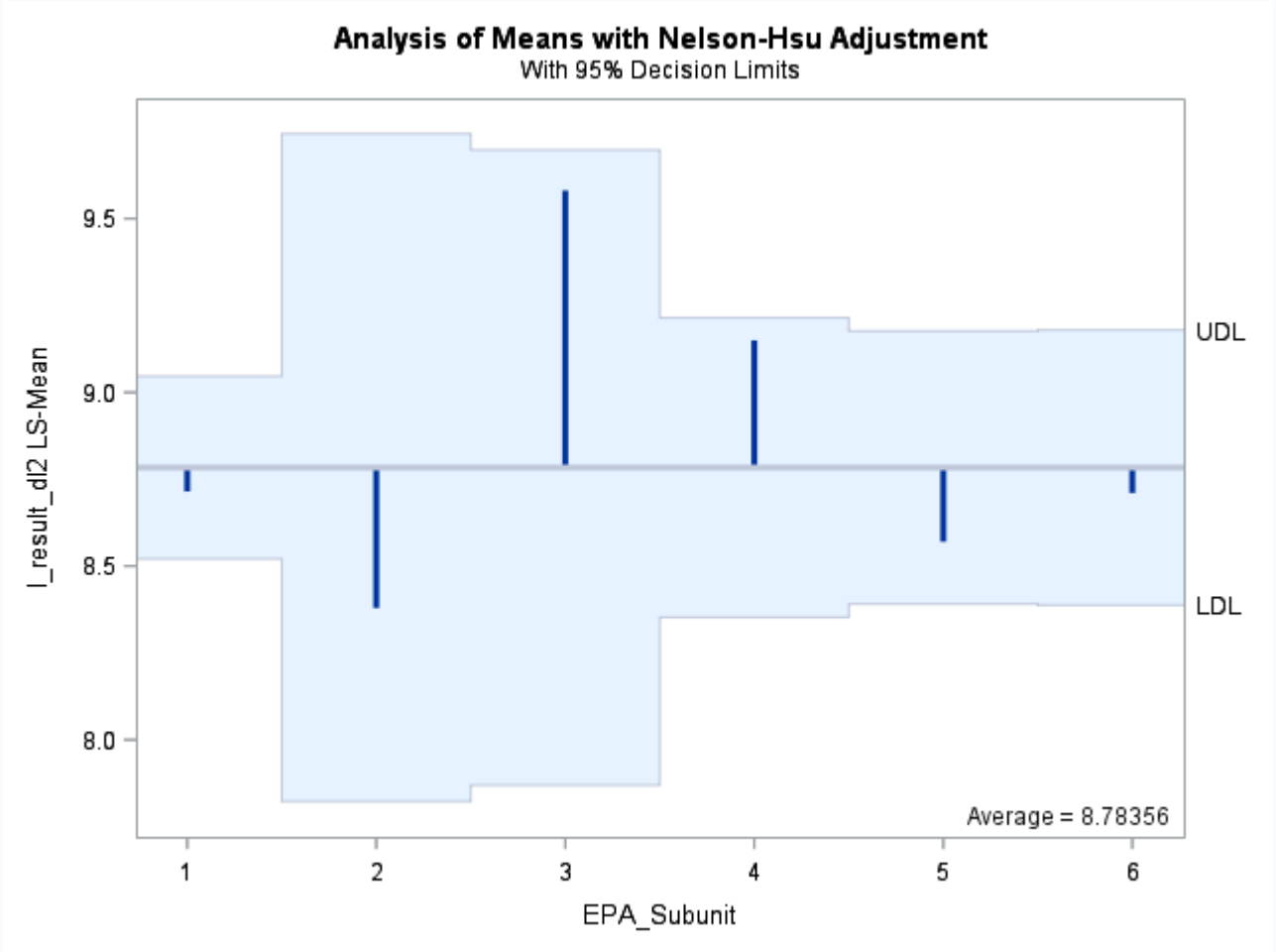

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.379
R-Square 0.317
Adj R-Square 0.3004


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	8.71477604	0.9694
2	8.37945932	0.8068
3	9.58109905	0.1192
4	9.14967047	0.1376
5	8.57020097	0.5893
6	8.71047635	0.9935



PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	8.71477604	1
2	8.37945932	2
3	9.58109905	3
4	9.14967047	4
5	8.57020097	5
6	8.71047635	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9562	0.1945	0.3466	0.9821	1.0000
2	0.9562		0.1817	0.4243	0.9972	0.9651
3	0.1945	0.1817		0.8863	0.1049	0.2300
4	0.3466	0.4243	0.8863		0.1704	0.4735
5	0.9821	0.9972	0.1049	0.1704		0.9912
6	1.0000	0.9651	0.2300	0.4735	0.9912	

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 253

Number of Observations Used 253

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

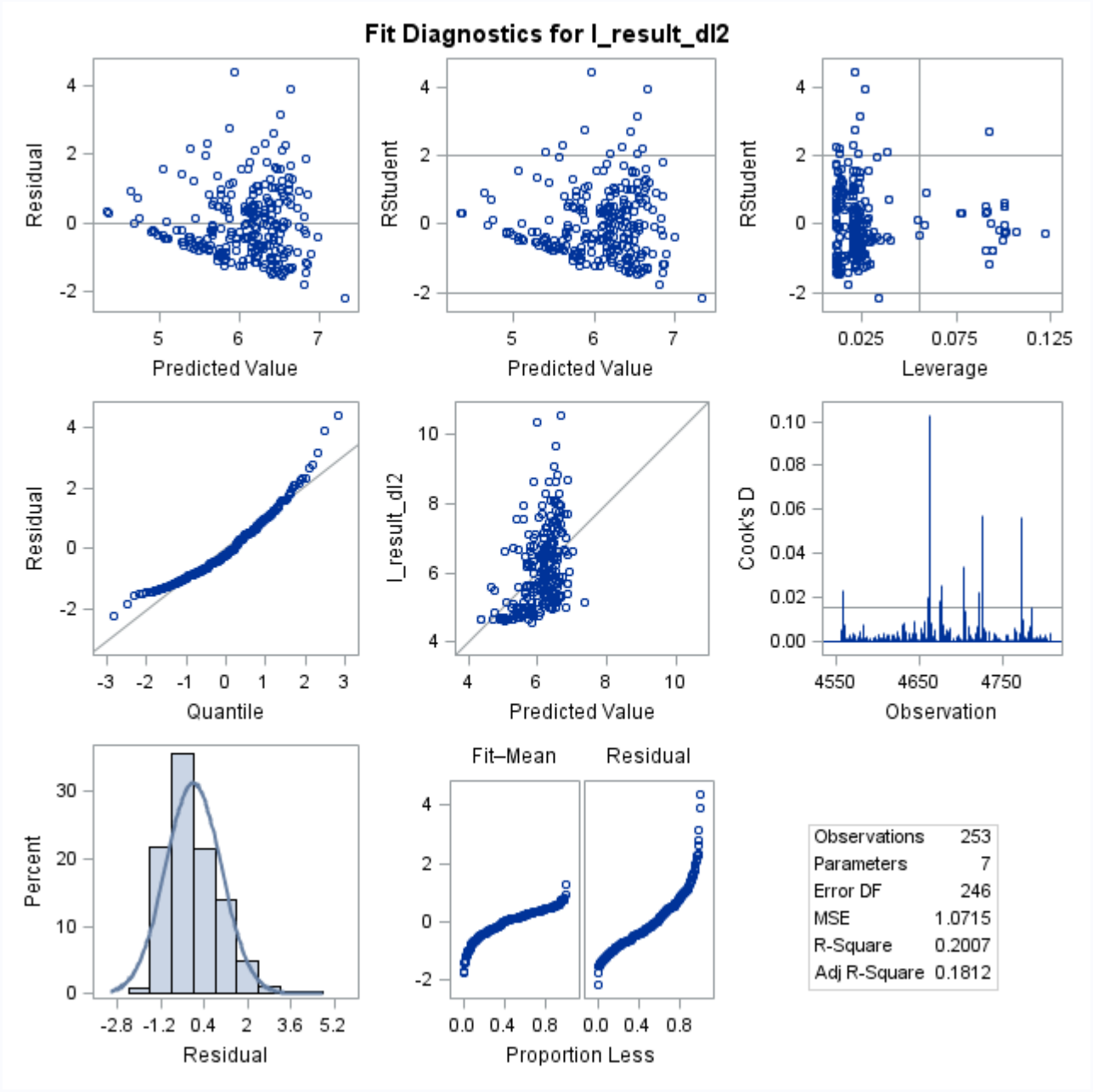
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

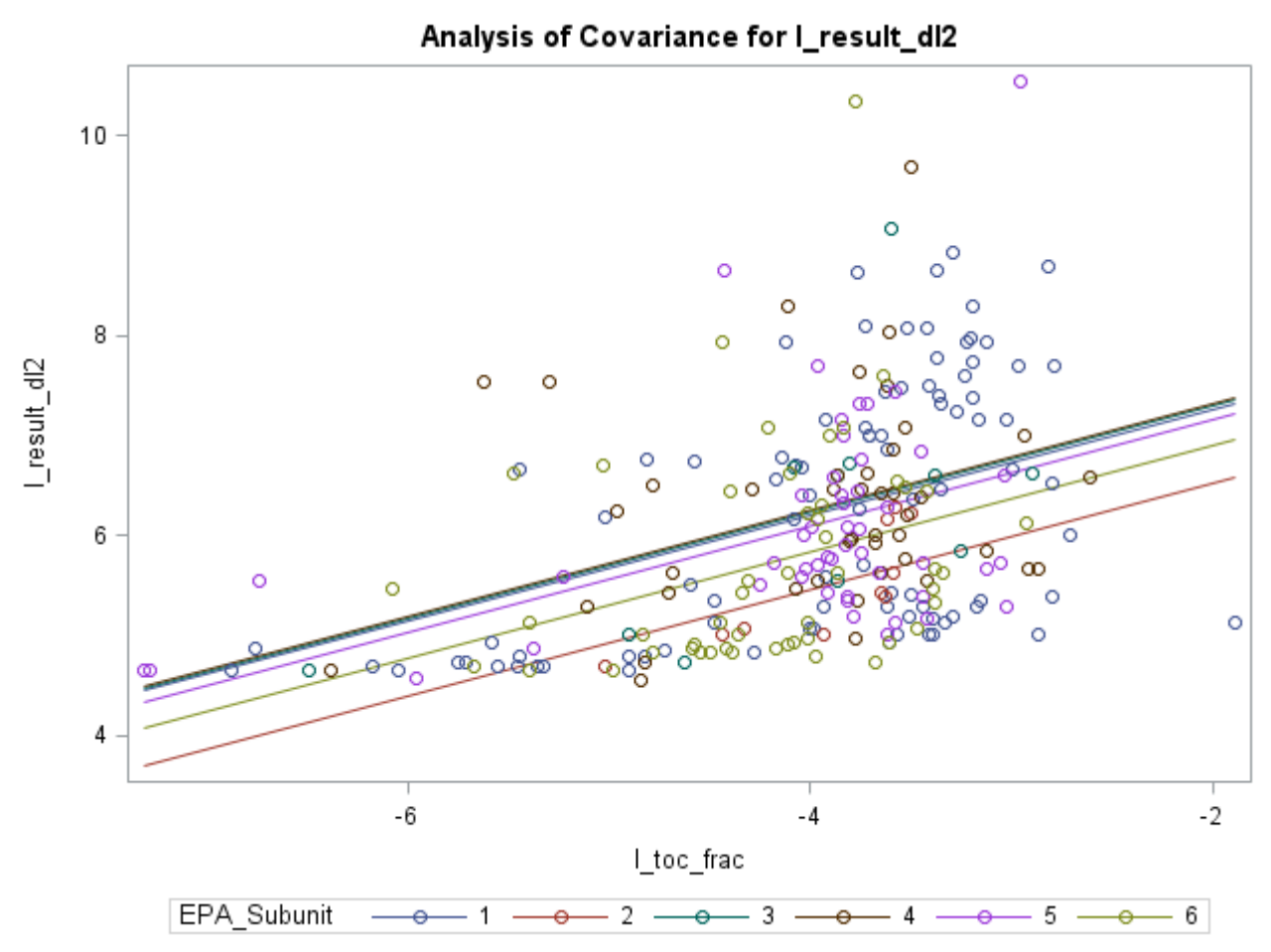
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	66.1960485	11.0326747	10.30	<.0001
Error	246	263.6010229	1.0715489		
Corrected Total	252	329.7970713			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.200718	17.01543	1.035156	6.083634

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	56.24700629	56.24700629	52.49	<.0001
EPA_Subunit	5	9.94904216	1.98980843	1.86	0.1025

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	52.13054253	52.13054253	48.65	<.0001
EPA_Subunit	5	9.94904216	1.98980843	1.86	0.1025

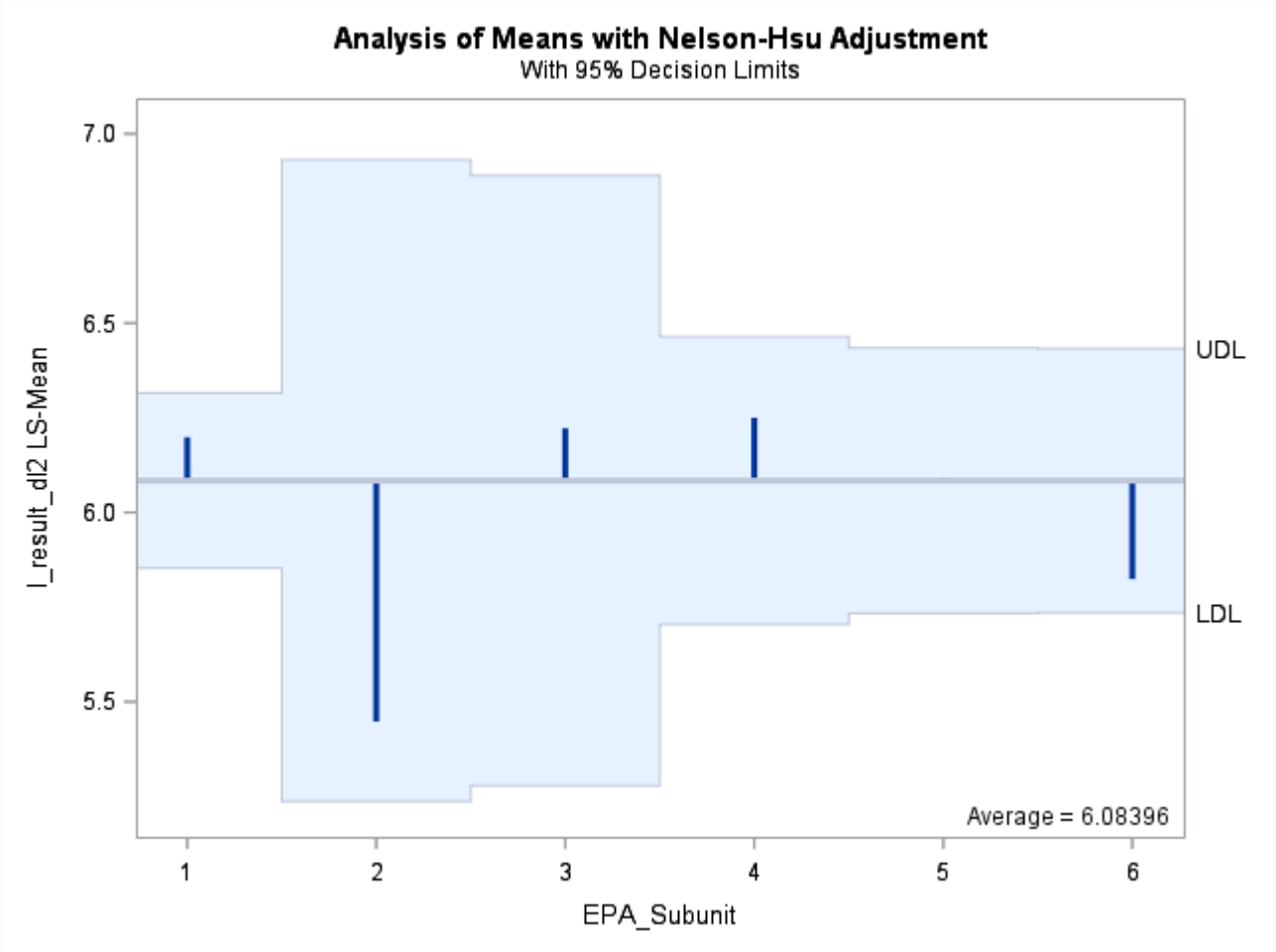

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 7
Error DF 246
MSE 1.0715
R-Square 0.2007
Adj R-Square 0.1812


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	6.19871108	0.6799
2	5.44791140	0.2420
3	6.22222715	0.9954
4	6.24997687	0.7806
5	6.08961309	1.0000
6	5.82423310	0.2500



Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	6.19871108	1
2	5.44791140	2
3	6.22222715	3
4	6.24997687	4
5	6.08961309	5
6	5.82423310	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.2528	1.0000	0.9998	0.9914	0.3238
2	0.2528		0.5255	0.2383	0.4768	0.9012
3	1.0000	0.5255		1.0000	0.9989	0.8580
4	0.9998	0.2383	1.0000		0.9766	0.3630
5	0.9914	0.4768	0.9989	0.9766		0.7994
6	0.3238	0.9012	0.8580	0.3630	0.7994	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read 254

Number of Observations Used 254

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure

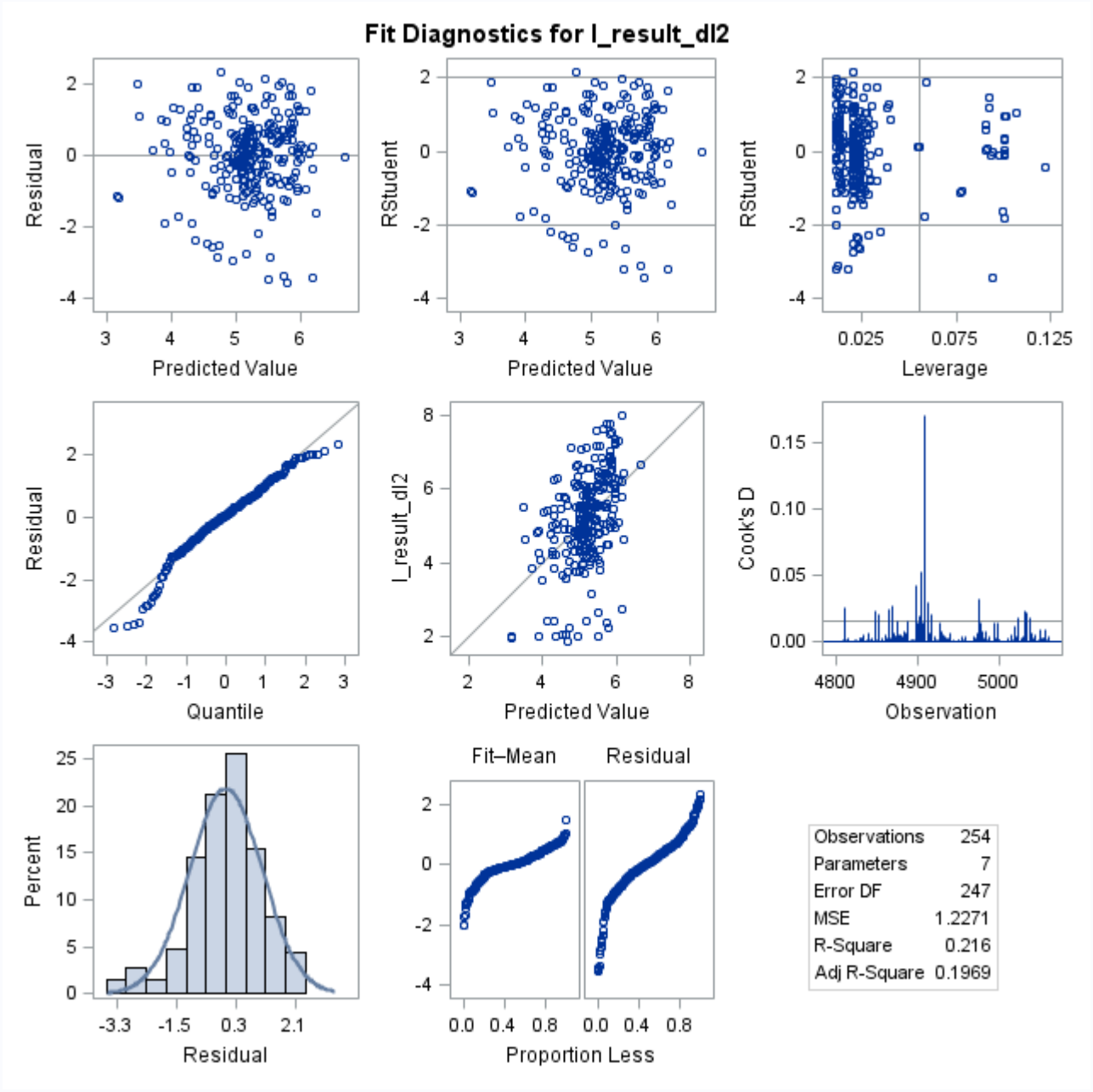
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

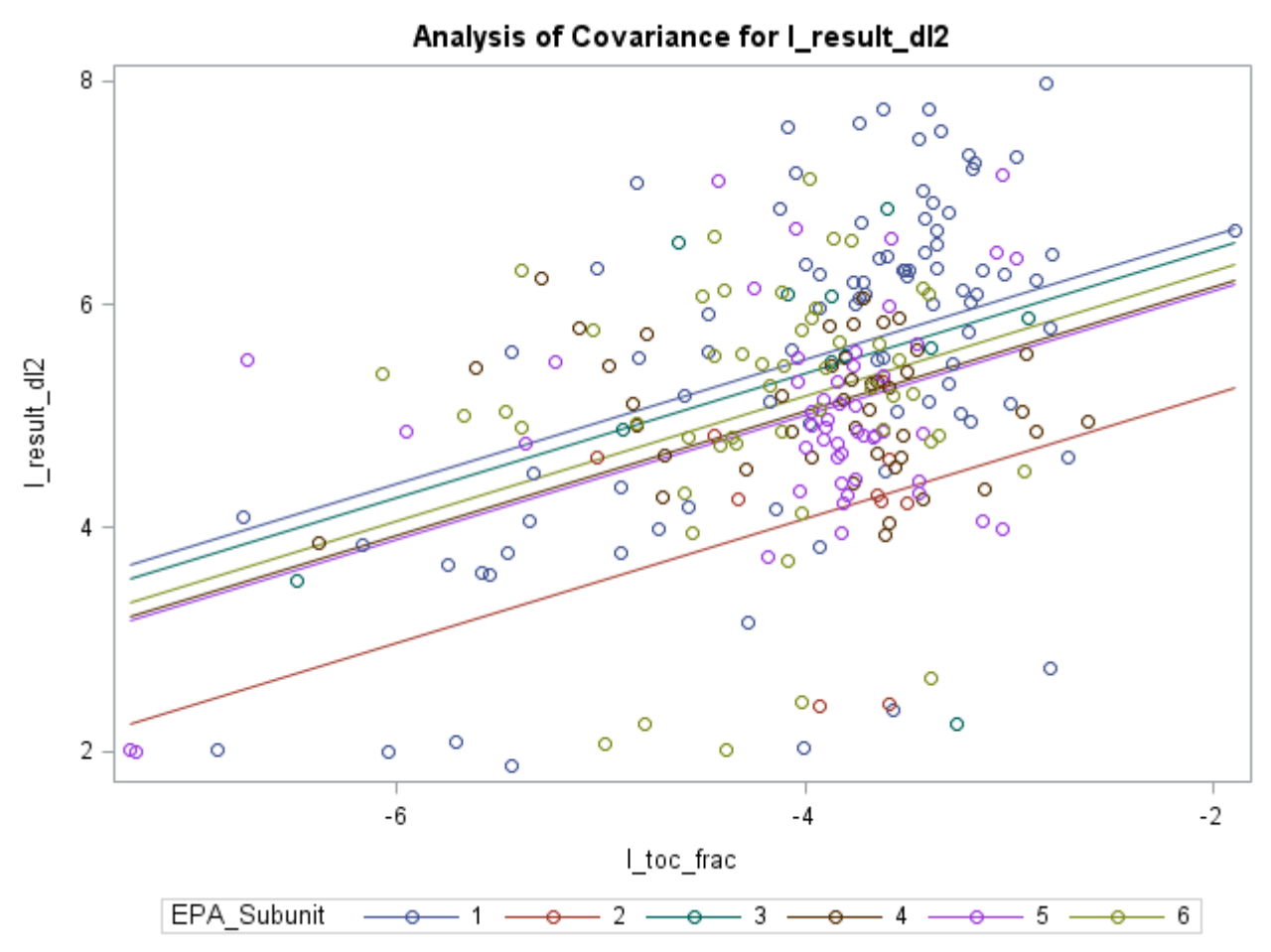
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	83.4865262	13.9144210	11.34	<.0001
Error	247	303.0926766	1.2270959		
Corrected Total	253	386.5792027			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.215962	21.32801	1.107744	5.193845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	59.32561859	59.32561859	48.35	<.0001
EPA_Subunit	5	24.16090757	4.83218151	3.94	0.0019

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	57.29325139	57.29325139	46.69	<.0001
EPA_Subunit	5	24.16090757	4.83218151	3.94	0.0019

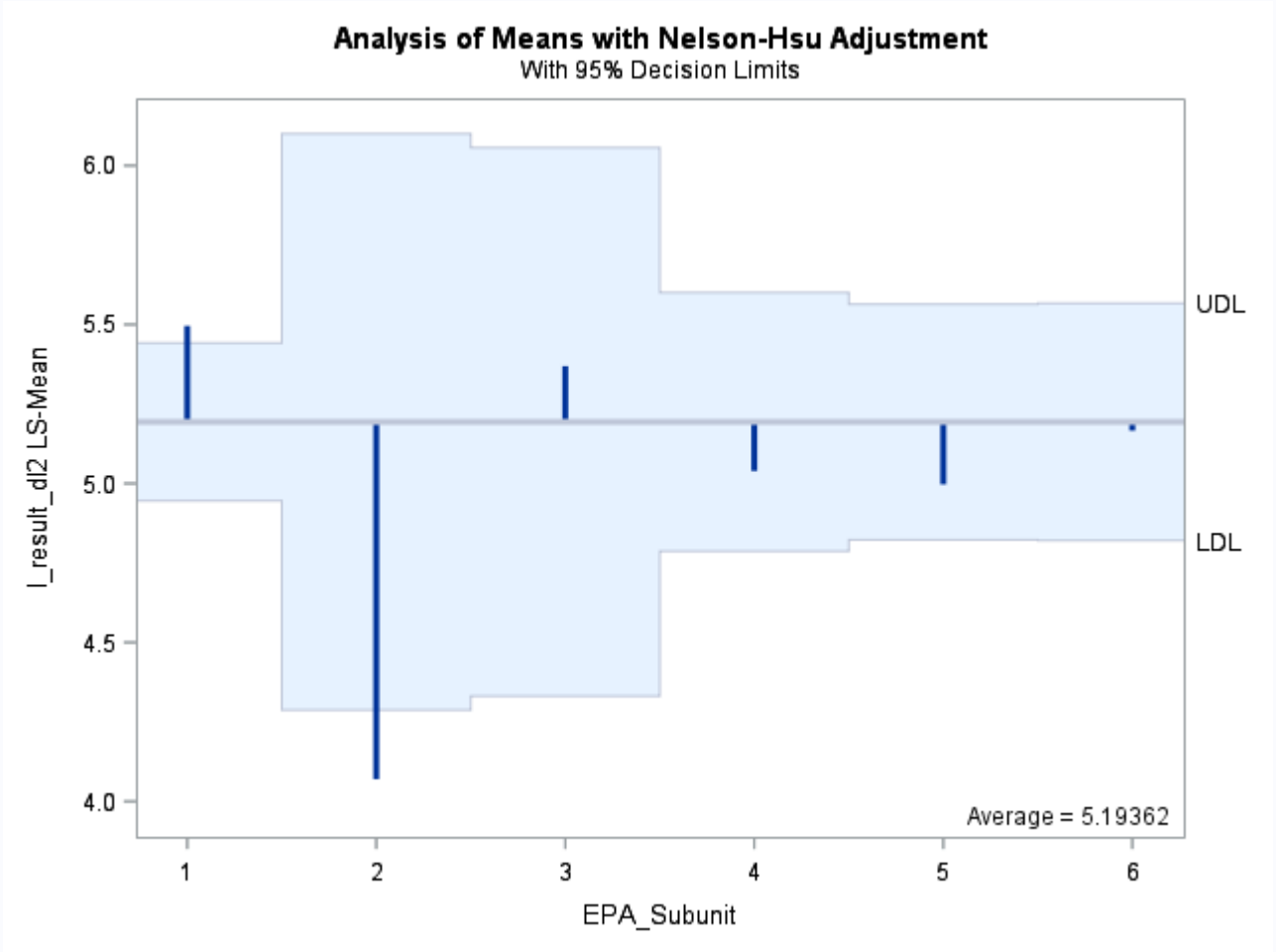

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 1.2271
R-Square 0.216
Adj R-Square 0.1969


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
EPA_Subunit
1
2
3
4
5
6

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.49570257	0.0088
2	4.06995963	0.0072
3	5.36906841	0.9899
4	5.03933001	0.8648
5	4.99723804	0.6144
6	5.16621723	0.9999



TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.49570257	1
2	4.06995963	2
3	5.36906841	3
4	5.03933001	4
5	4.99723804	5
6	5.16621723	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0020	0.9992	0.2313	0.1143	0.5491
2	0.0020		0.0823	0.1303	0.1548	0.0529
3	0.9992	0.0823		0.9509	0.9150	0.9940
4	0.2313	0.1303	0.9509		1.0000	0.9940
5	0.1143	0.1548	0.9150	1.0000		0.9736
6	0.5491	0.0529	0.9940	0.9940	0.9736	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

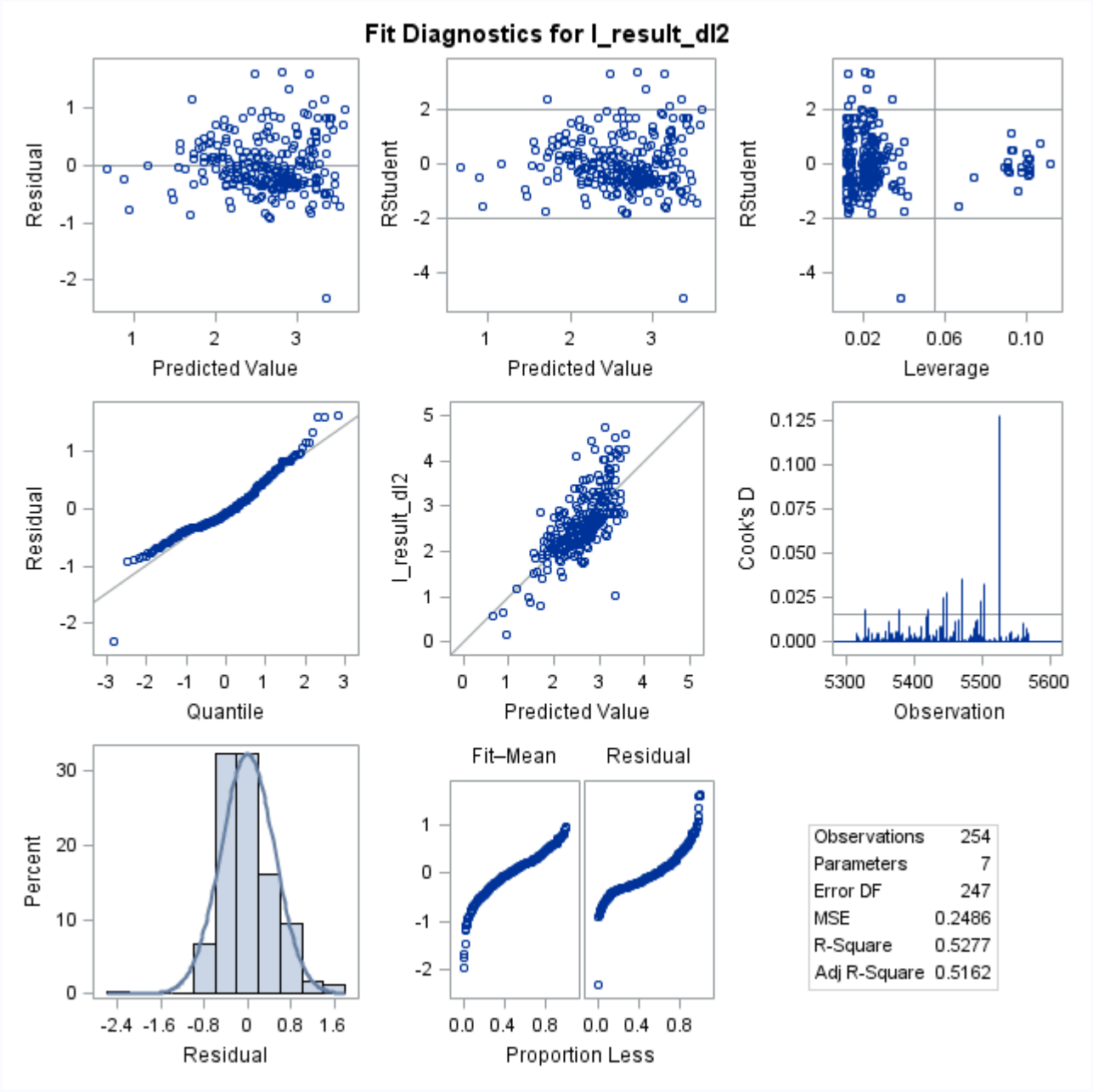
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

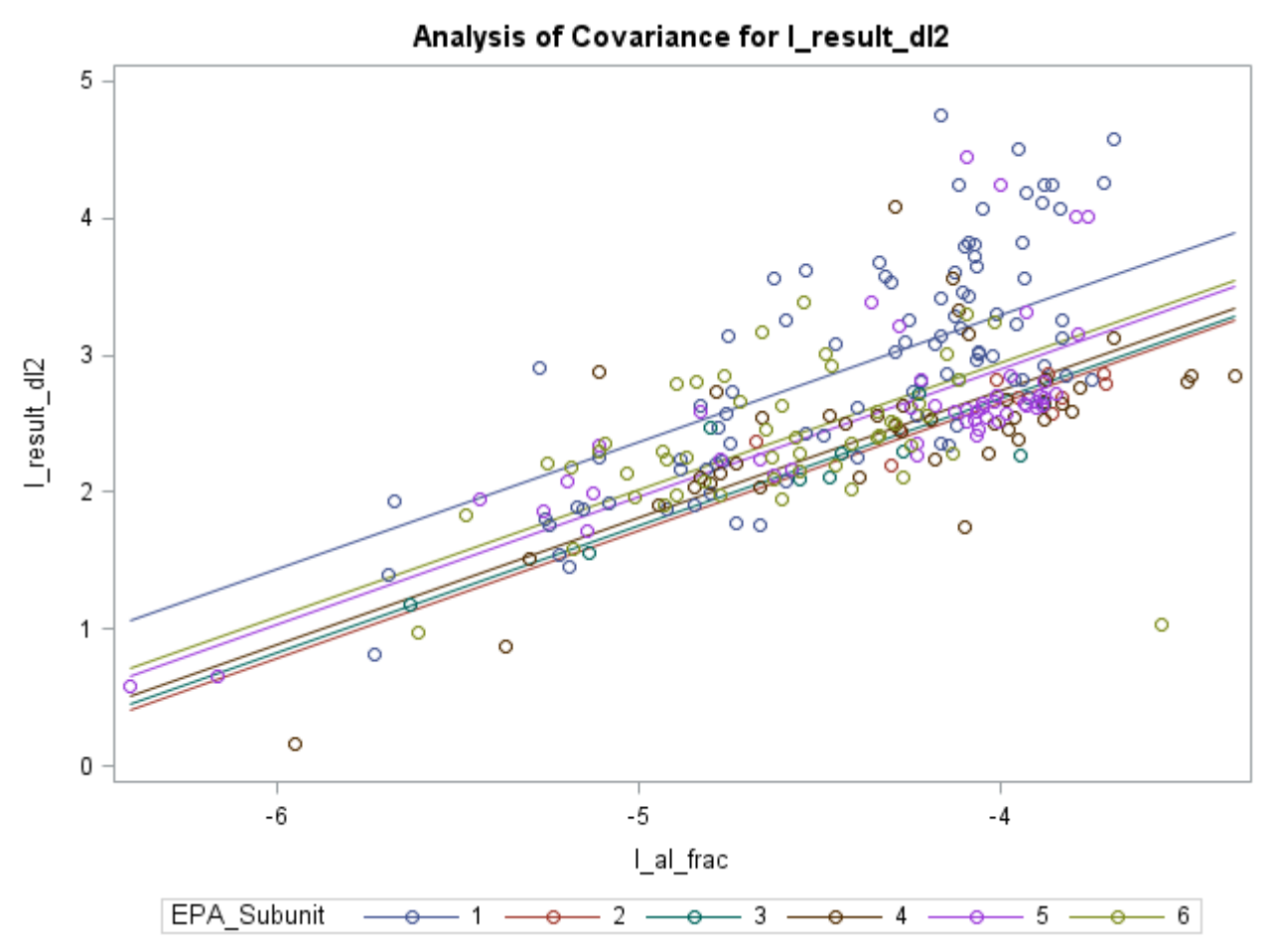
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	68.5990782	11.4331797	46.00	<.0001
Error	247	61.3959223	0.2485665		
Corrected Total	253	129.9950005			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.527706	18.95723	0.498564	2.629944

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	55.04718823	55.04718823	221.46	<.0001
EPA_Subunit	5	13.55188998	2.71037800	10.90	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	54.13210296	54.13210296	217.78	<.0001
EPA_Subunit	5	13.55188998	2.71037800	10.90	<.0001

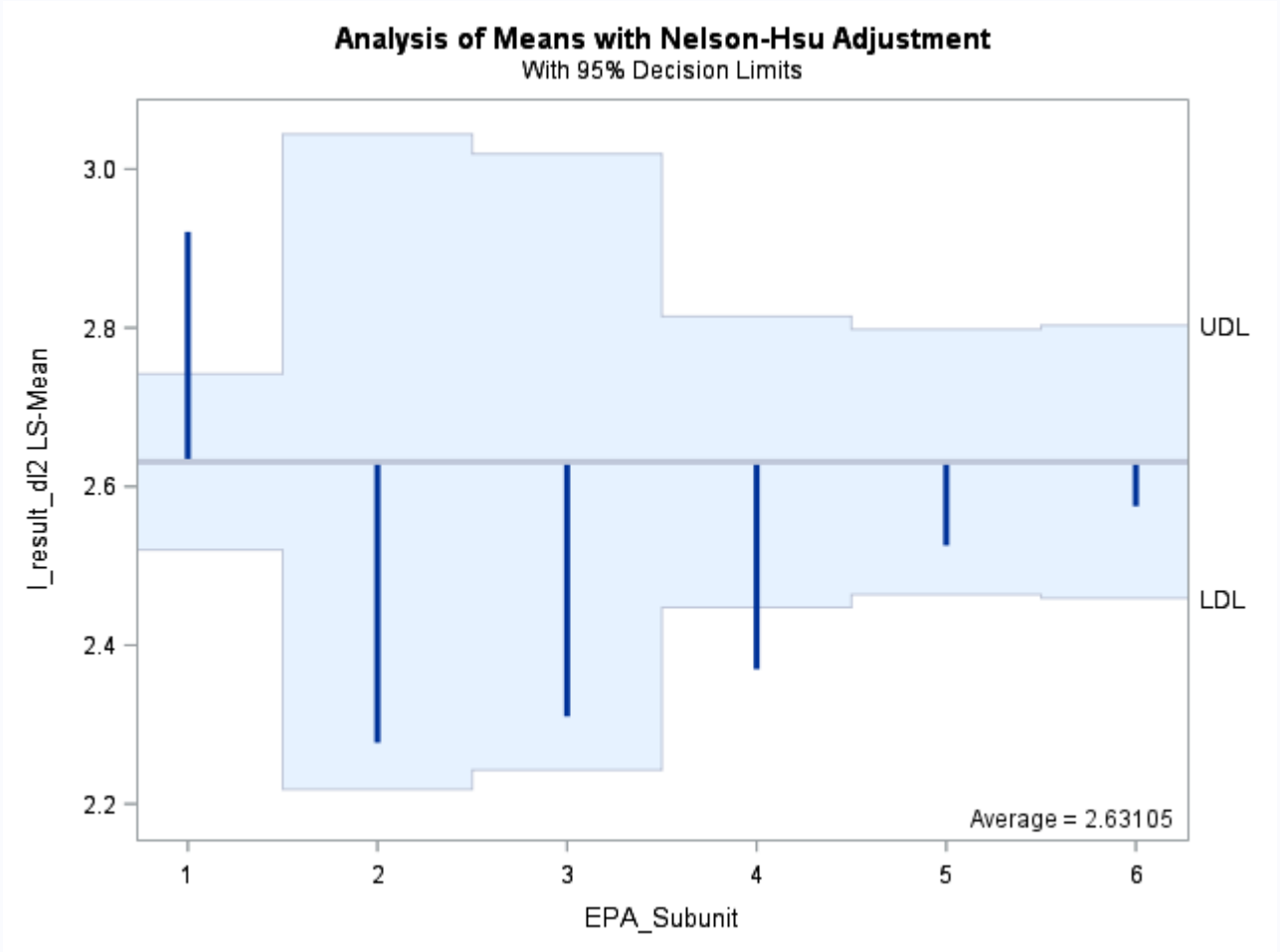

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.2486
R-Square 0.5277
Adj R-Square 0.5162


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
1
0
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	2.92093119	<.0001
2	2.27711260	0.1313
3	2.31024367	0.1584
4	2.36972006	0.0013
5	2.52568034	0.4272
6	2.57512385	0.9245



Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	2.92093119	1
2	2.27711260	2
3	2.31024367	3
4	2.36972006	4
5	2.52568034	5
6	2.57512385	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0022	0.0022	<.0001	0.0002	0.0018
2	0.0022		1.0000	0.9951	0.7084	0.5429
3	0.0022	1.0000		0.9993	0.7878	0.6036
4	<.0001	0.9951	0.9993		0.6620	0.3770
5	0.0002	0.7084	0.7878	0.6620		0.9966
6	0.0018	0.5429	0.6036	0.3770	0.9966	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

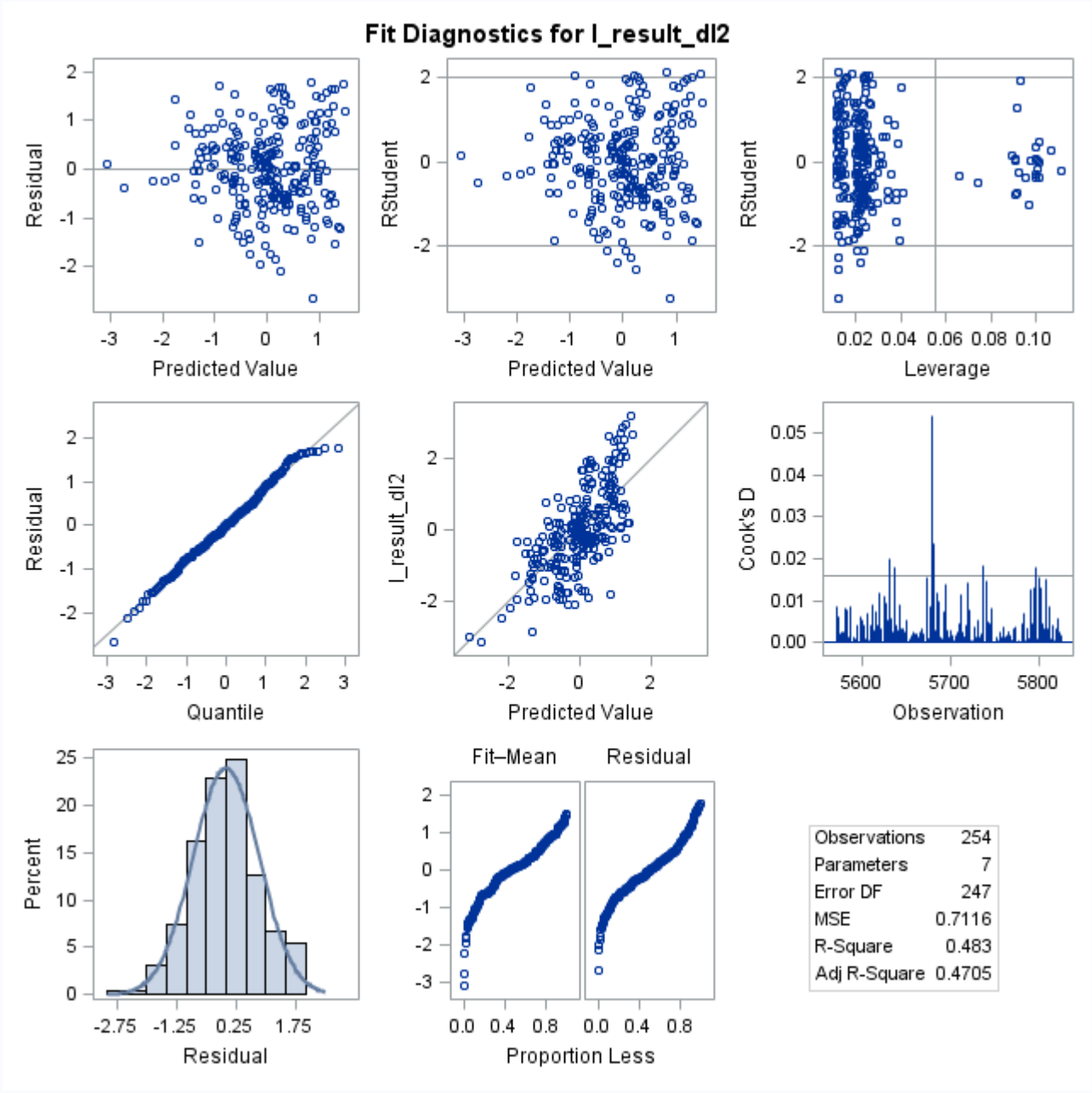
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

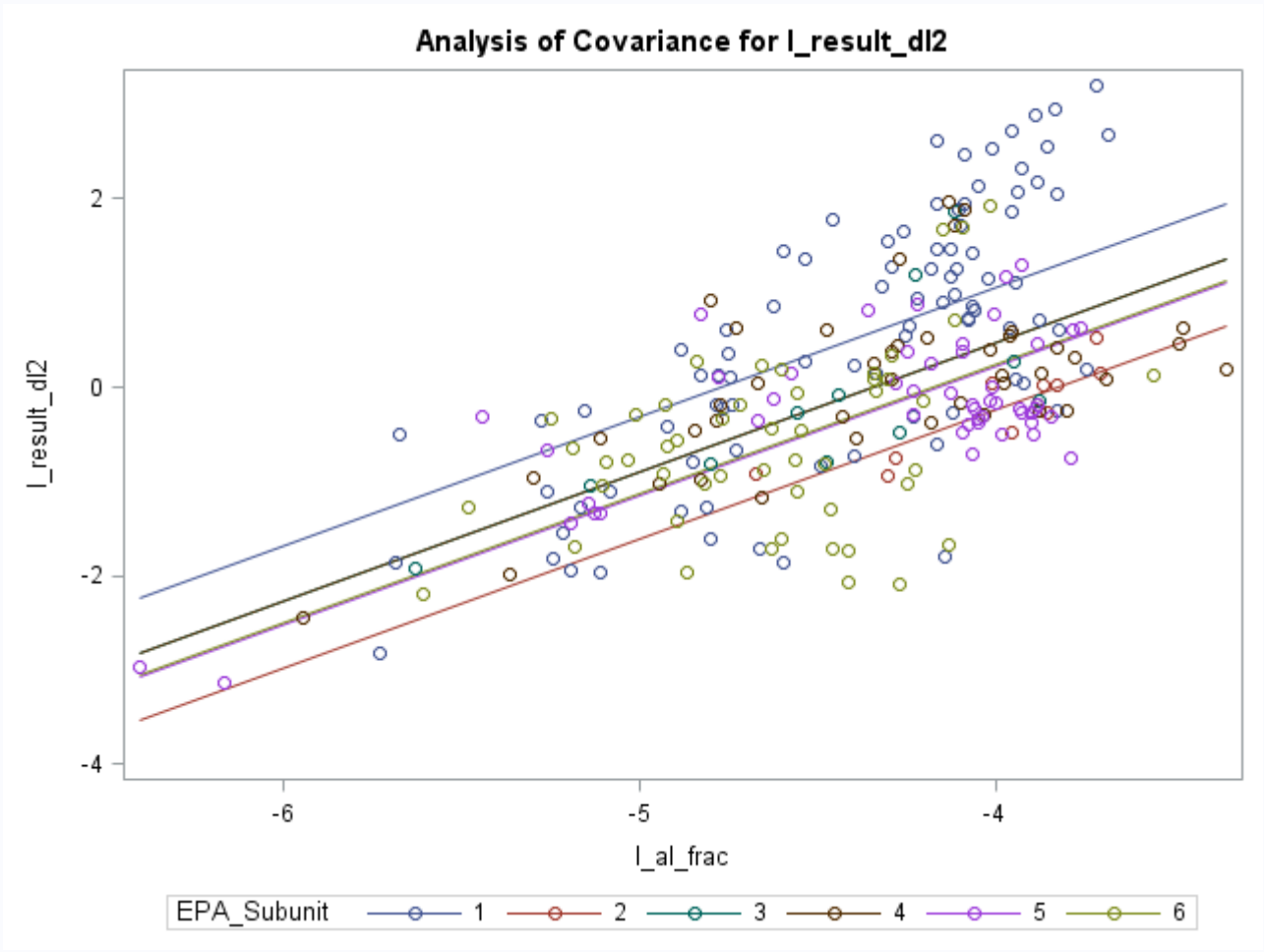
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	164.2187707	27.3697951	38.46	<.0001
Error	247	175.7592921	0.7115761		
Corrected Total	253	339.9780628			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.483028	7238.025	0.843550	0.011654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	124.0189771	124.0189771	174.29	<.0001
EPA_Subunit	5	40.1997936	8.0399587	11.30	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	117.6761897	117.6761897	165.37	<.0001
EPA_Subunit	5	40.1997936	8.0399587	11.30	<.0001

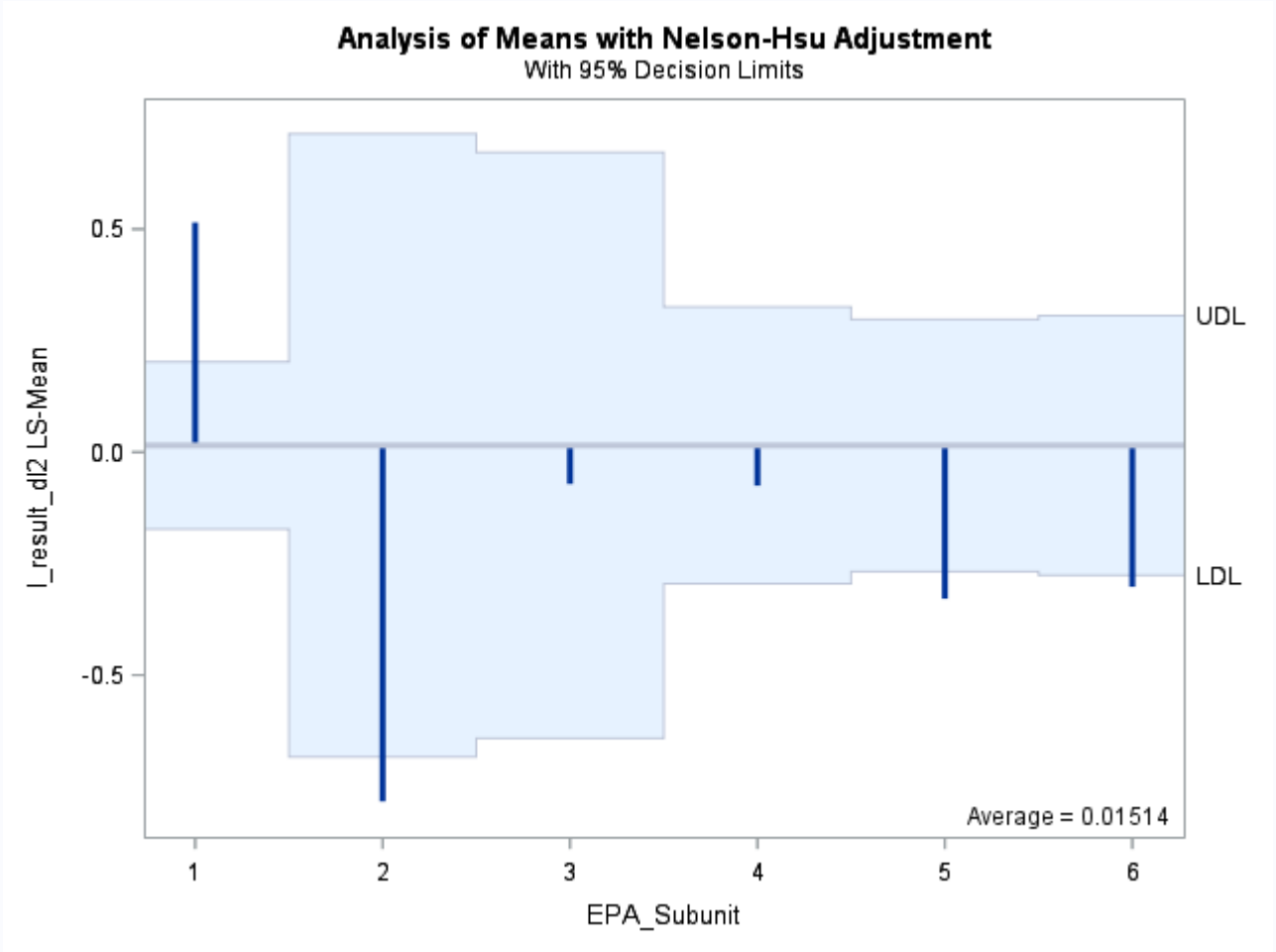

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.7116
R-Square 0.483
Adj R-Square 0.4705


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-4
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.51485523	<.0001
2	-0.78306667	0.0165
3	-0.07131640	0.9987
4	-0.07517033	0.9518
5	-0.32865292	0.0088
6	-0.30193262	0.0253



Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.51485523	1
2	-0.78306667	2
3	-0.07131640	3
4	-0.07517033	4
5	-0.32865292	5
6	-0.30193262	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0001	0.2538	0.0028	<.0001	<.0001
2	0.0001		0.3967	0.1682	0.6351	0.5940
3	0.2538	0.3967		1.0000	0.9427	0.9637
4	0.0028	0.1682	1.0000		0.6996	0.8013
5	<.0001	0.6351	0.9427	0.6996		1.0000
6	<.0001	0.5940	0.9637	0.8013	1.0000	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

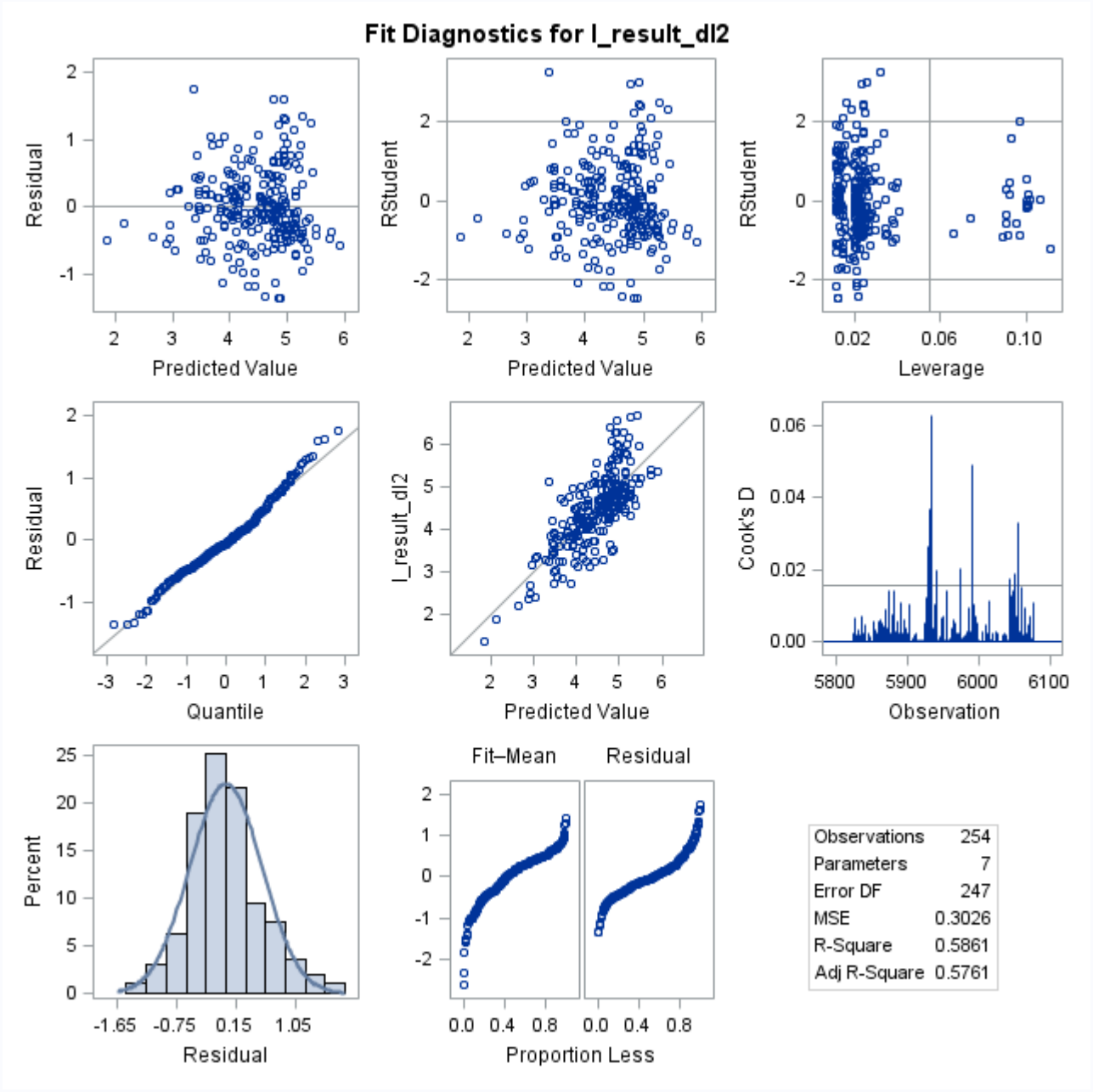
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

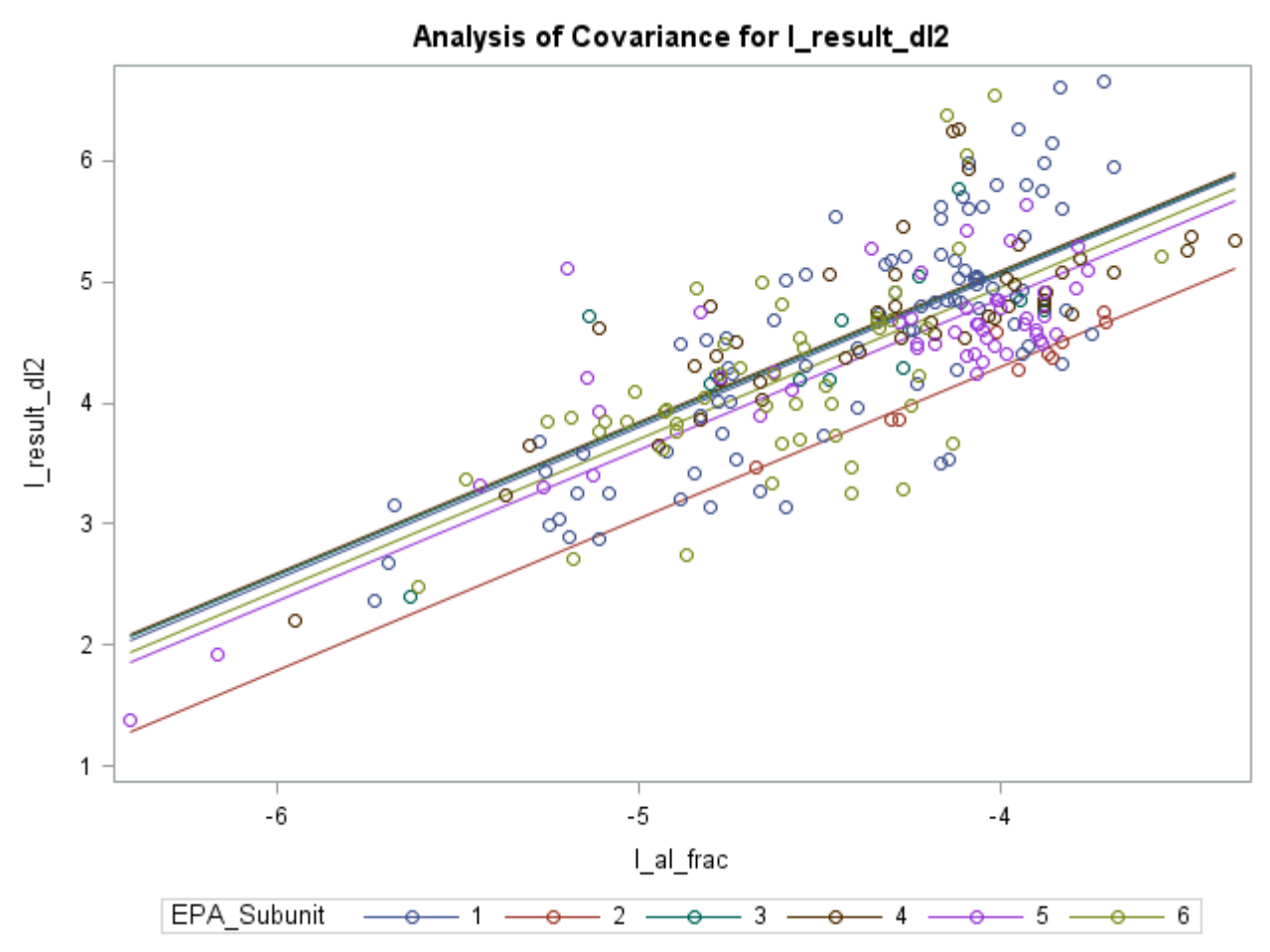
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	105.8431084	17.6405181	58.30	<.0001
Error	247	74.7384822	0.3025849		
Corrected Total	253	180.5815906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.586123	12.29820	0.550077	4.472828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	99.43794574	99.43794574	328.63	<.0001
EPA_Subunit	5	6.40516267	1.28103253	4.23	0.0010

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	97.98710206	97.98710206	323.83	<.0001
EPA_Subunit	5	6.40516267	1.28103253	4.23	0.0010

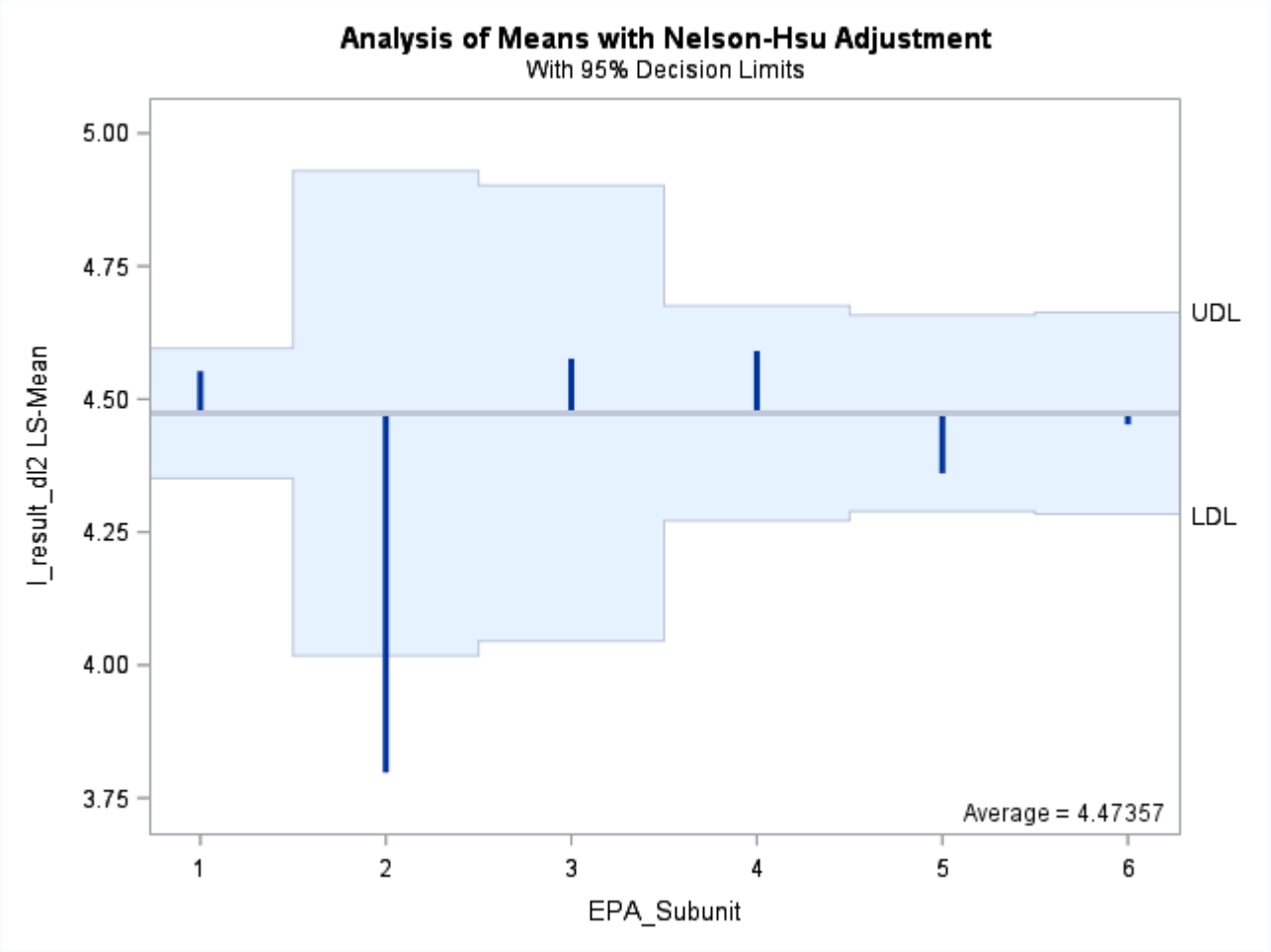

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.3026
R-Square 0.5861
Adj R-Square 0.5761


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
2
1
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	4.55262431	0.3999
2	3.79798367	0.0007
3	4.57608937	0.9791
4	4.59046357	0.5244
5	4.36061017	0.4593
6	4.45249513	0.9994



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	4.55262431	1
2	3.79798367	2
3	4.57608937	3
4	4.59046357	4
5	4.36061017	5
6	4.45249513	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0009	1.0000	0.9991	0.3589	0.9114
2	0.0009		0.0188	0.0008	0.0420	0.0117
3	1.0000	0.0188		1.0000	0.8490	0.9847
4	0.9991	0.0008	1.0000		0.3401	0.8440
5	0.3589	0.0420	0.8490	0.3401		0.9635
6	0.9114	0.0117	0.9847	0.8440	0.9635	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

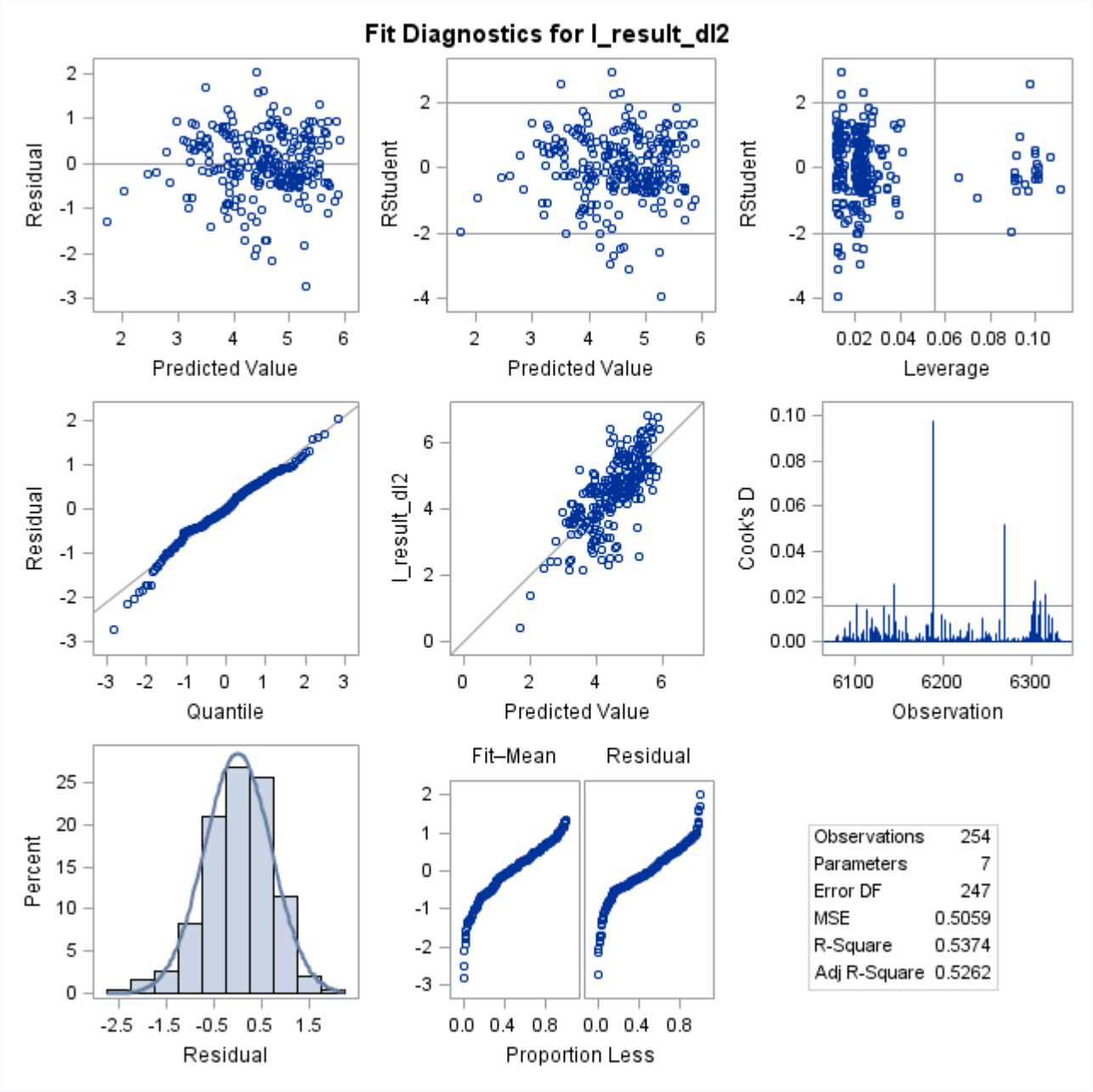
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

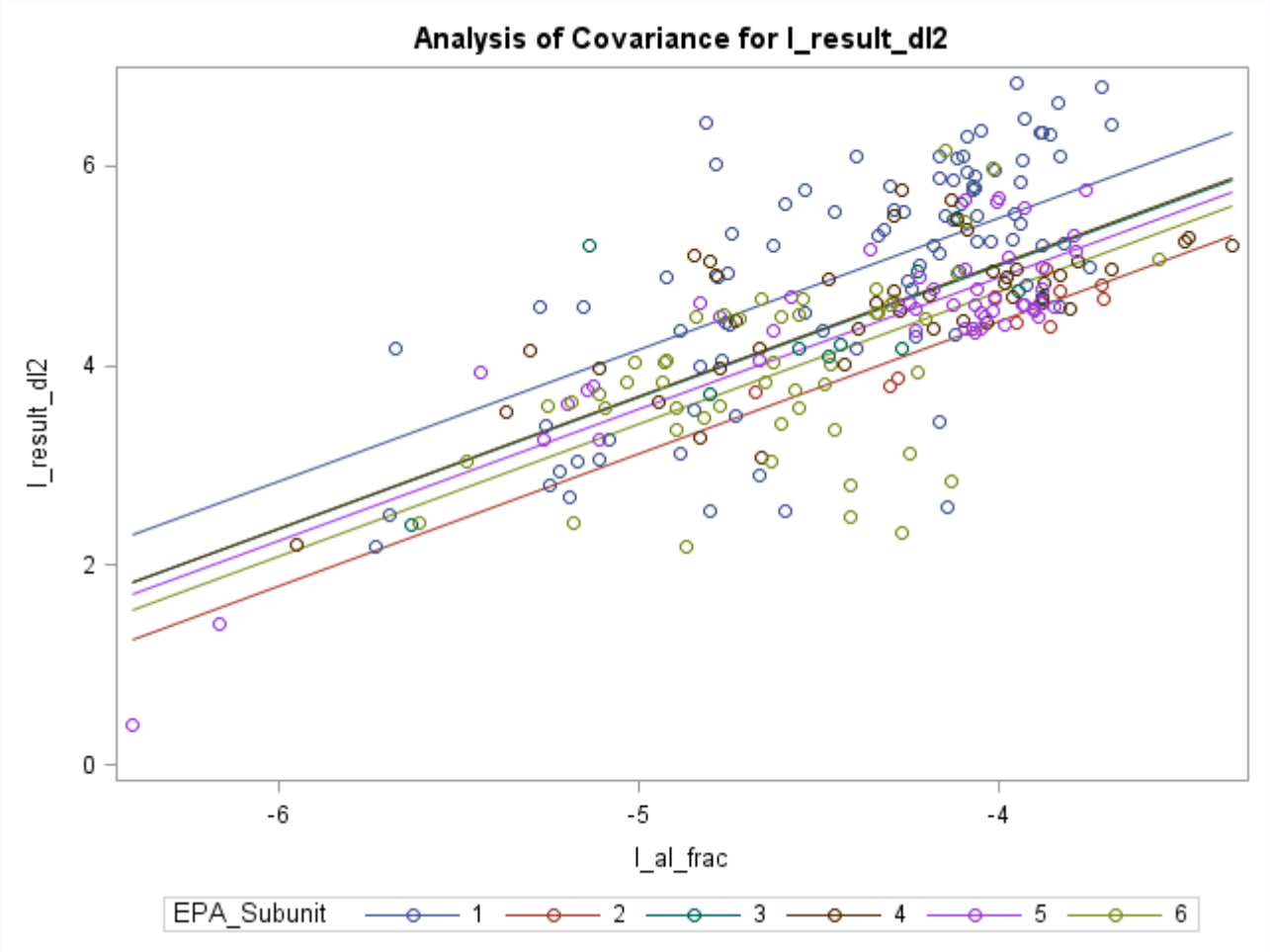
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	145.1909023	24.1984837	47.83	<.0001
Error	247	124.9635210	0.5059252		
Corrected Total	253	270.1544232			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.537437	15.65320	0.711284	4.544017

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	118.8756914	118.8756914	234.97	<.0001
EPA_Subunit	5	26.3152109	5.2630422	10.40	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	109.0195175	109.0195175	215.49	<.0001
EPA_Subunit	5	26.3152109	5.2630422	10.40	<.0001

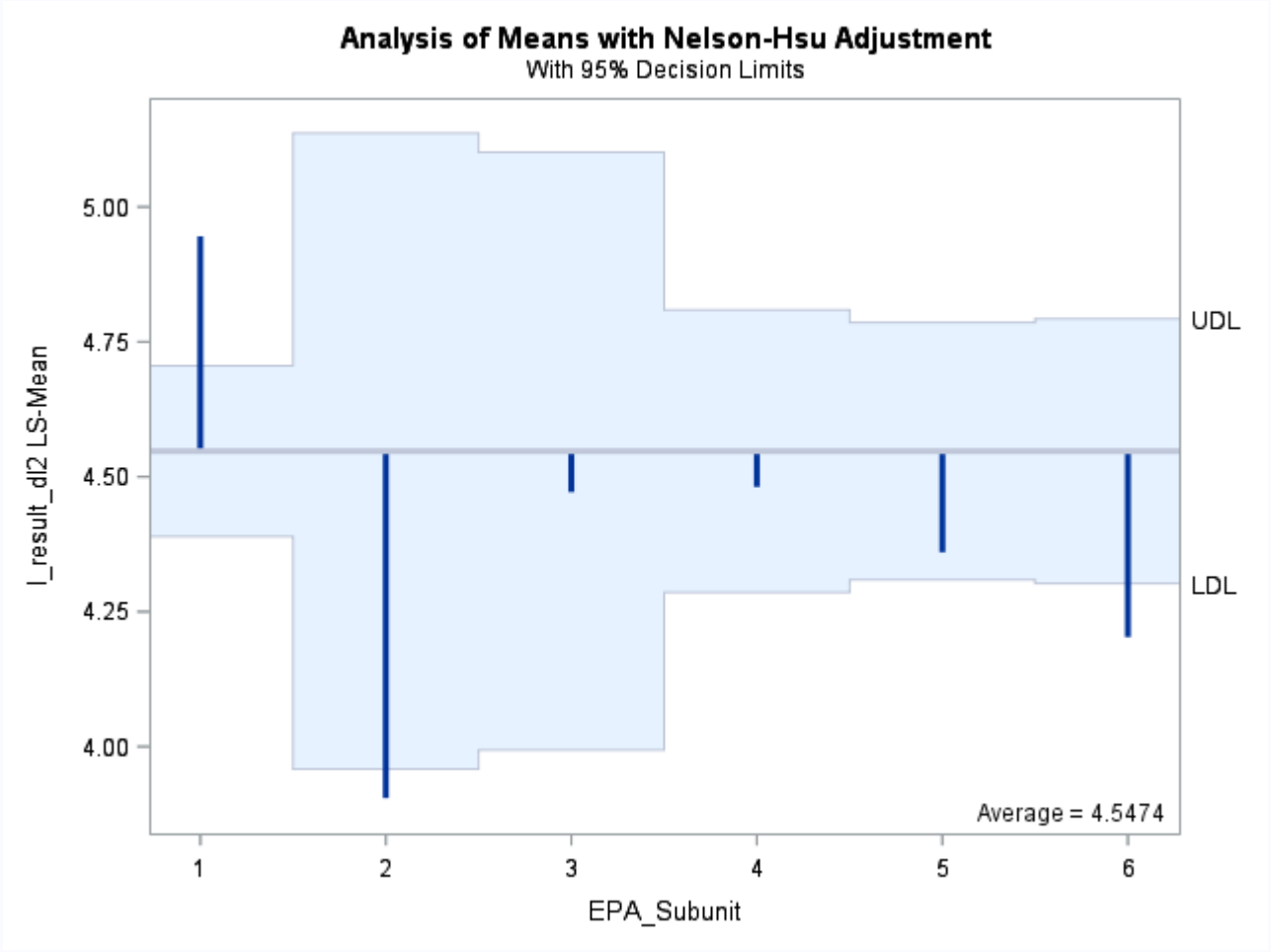

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.5059
R-Square 0.5374
Adj R-Square 0.5262


Analysis of Covariance for l_result_dl2
l_result_dl2
0
2
4
6
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	4.94544662	<.0001
2	3.90470138	0.0251
3	4.47167715	0.9984
4	4.48128139	0.9735
5	4.36018177	0.2004
6	4.20300886	0.0016



Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	4.94544662	1
2	3.90470138	2
3	4.47167715	3
4	4.48128139	4
5	4.36018177	5
6	4.20300886	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0003	0.2992	0.0069	<.0001	<.0001
2	0.0003		0.4630	0.1994	0.4437	0.8450
3	0.2992	0.4630		1.0000	0.9971	0.8673
4	0.0069	0.1994	1.0000		0.9639	0.4372
5	<.0001	0.4437	0.9971	0.9639		0.8868
6	<.0001	0.8450	0.8673	0.4372	0.8868	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

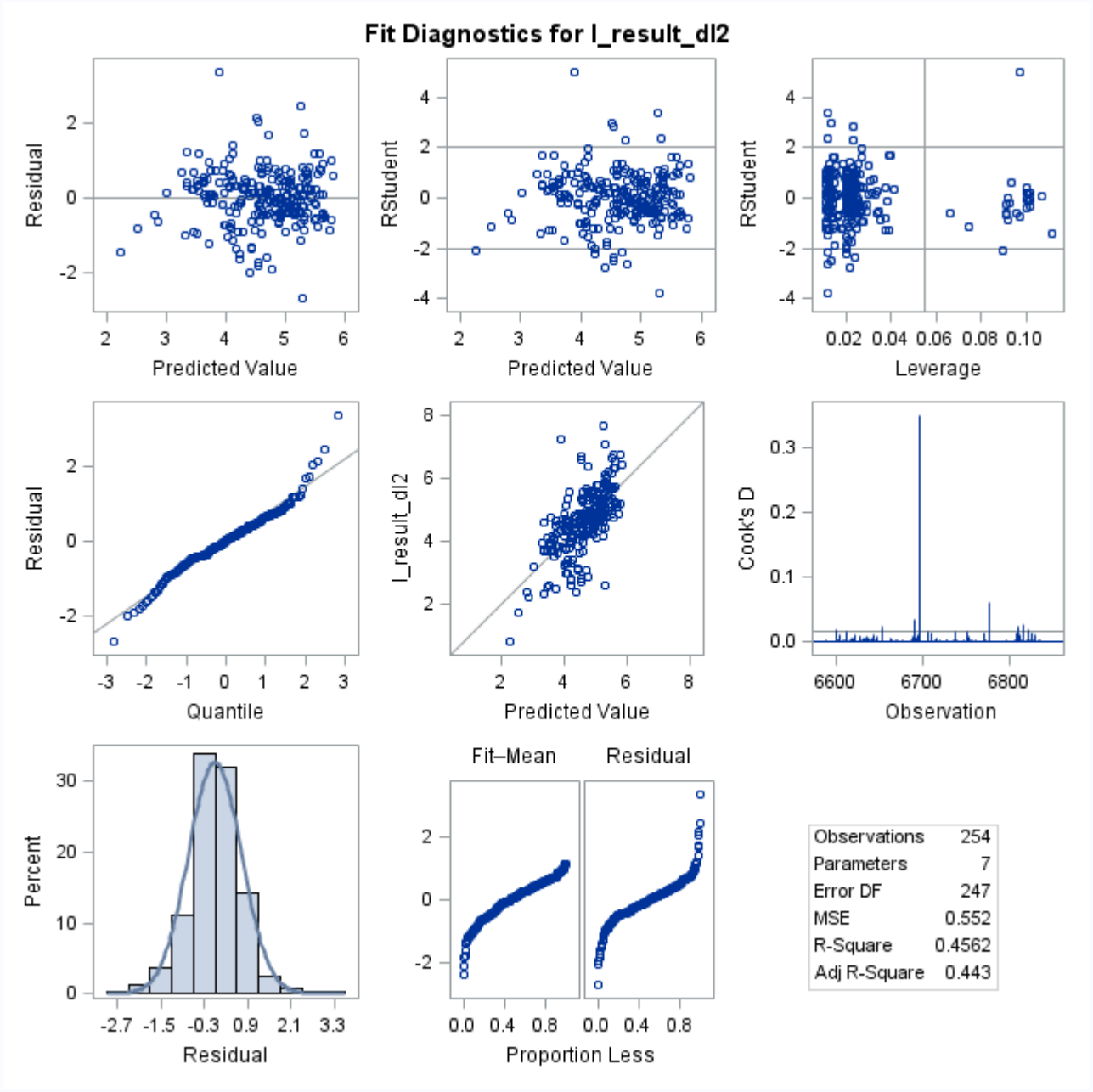
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

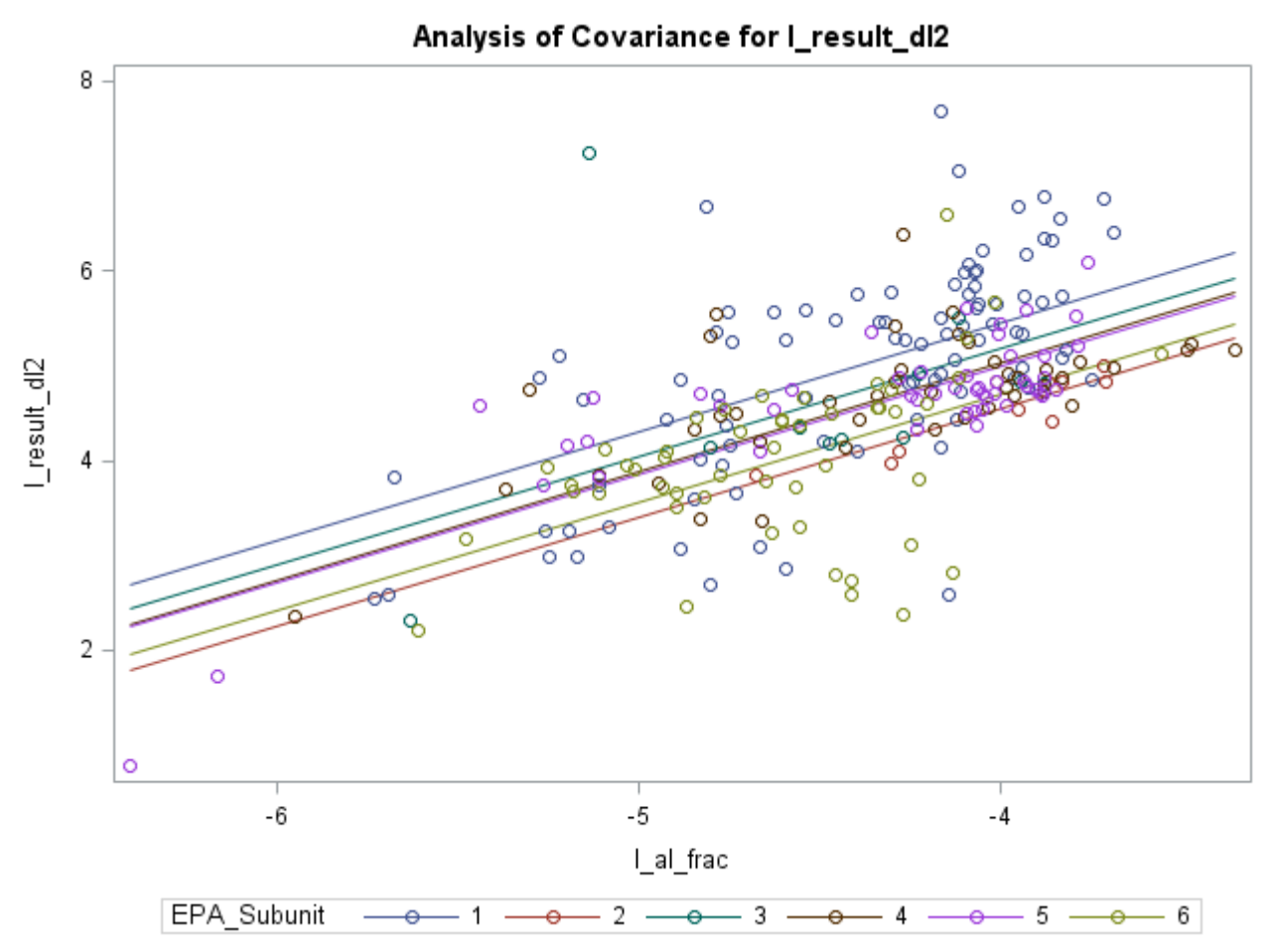
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	114.3959525	19.0659921	34.54	<.0001
Error	247	136.3425237	0.5519940		
Corrected Total	253	250.7384763			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.456236	16.03242	0.742963	4.634128

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	91.88237672	91.88237672	166.46	<.0001
EPA_Subunit	5	22.51357579	4.50271516	8.16	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	81.81557756	81.81557756	148.22	<.0001
EPA_Subunit	5	22.51357579	4.50271516	8.16	<.0001

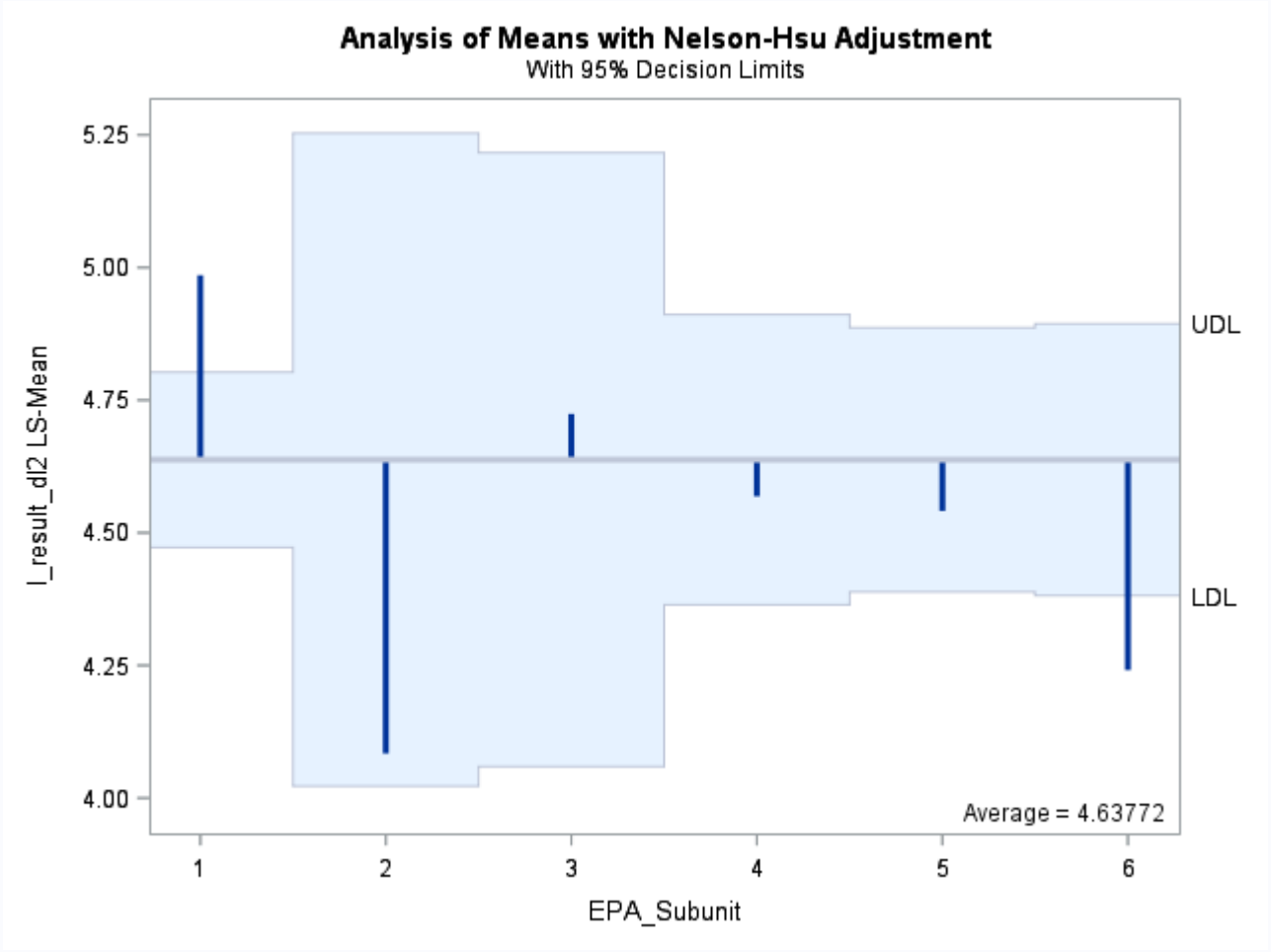

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.552
R-Square 0.4562
Adj R-Square 0.443


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	4.98542055	<.0001
2	4.08403644	0.1001
3	4.72402392	0.9976
4	4.56873155	0.9736
5	4.54121425	0.8541
6	4.24119855	0.0004



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	4.98542055	1
2	4.08403644	2
3	4.72402392	3
4	4.56873155	4
5	4.54121425	5
6	4.24119855	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0051	0.8808	0.0329	0.0106	<.0001
2	0.0051		0.3726	0.4368	0.4900	0.9912
3	0.8808	0.3726		0.9897	0.9771	0.3749
4	0.0329	0.4368	0.9897		1.0000	0.3001
5	0.0106	0.4900	0.9771	1.0000		0.3546
6	<.0001	0.9912	0.3749	0.3001	0.3546	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

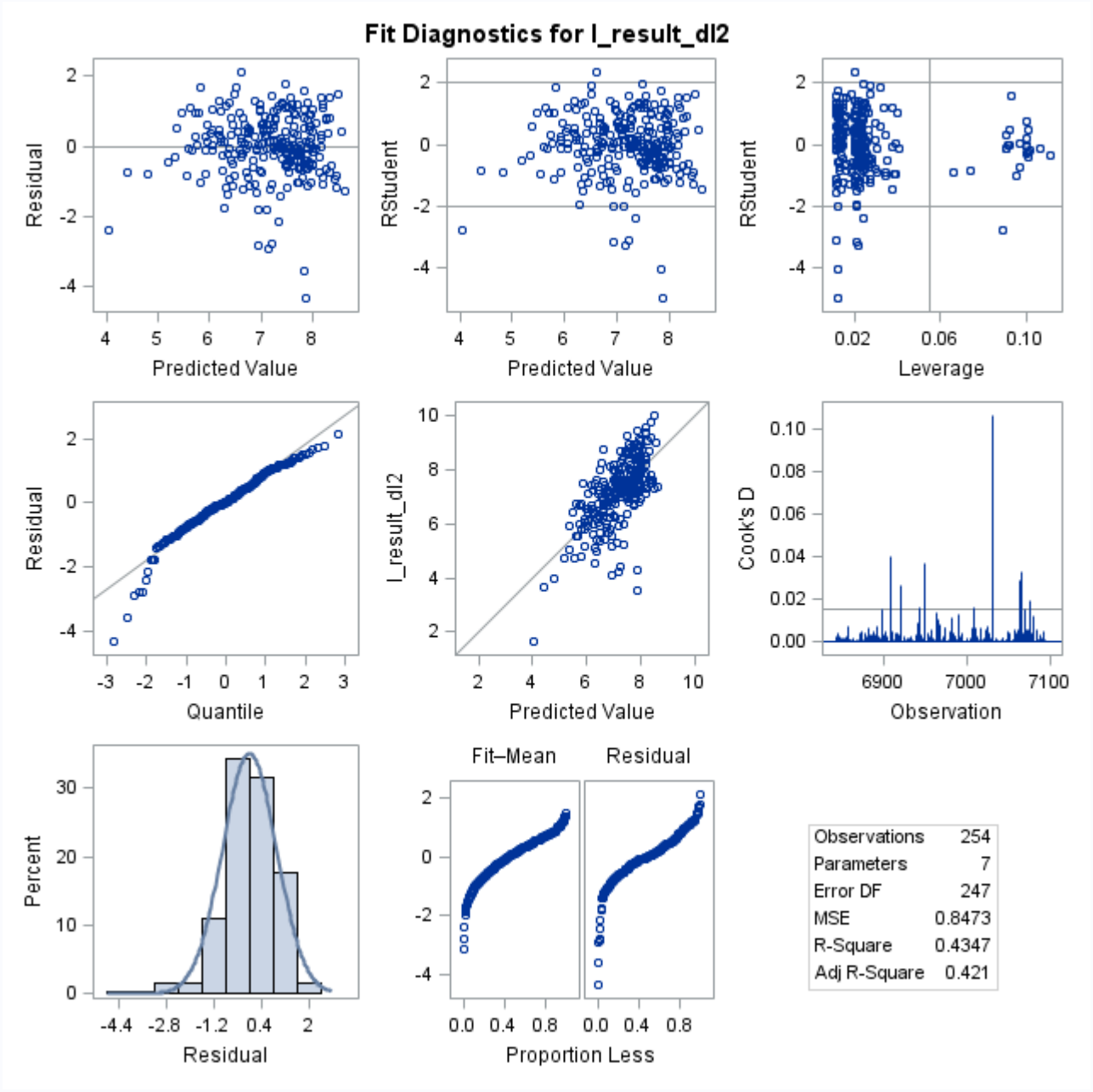
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

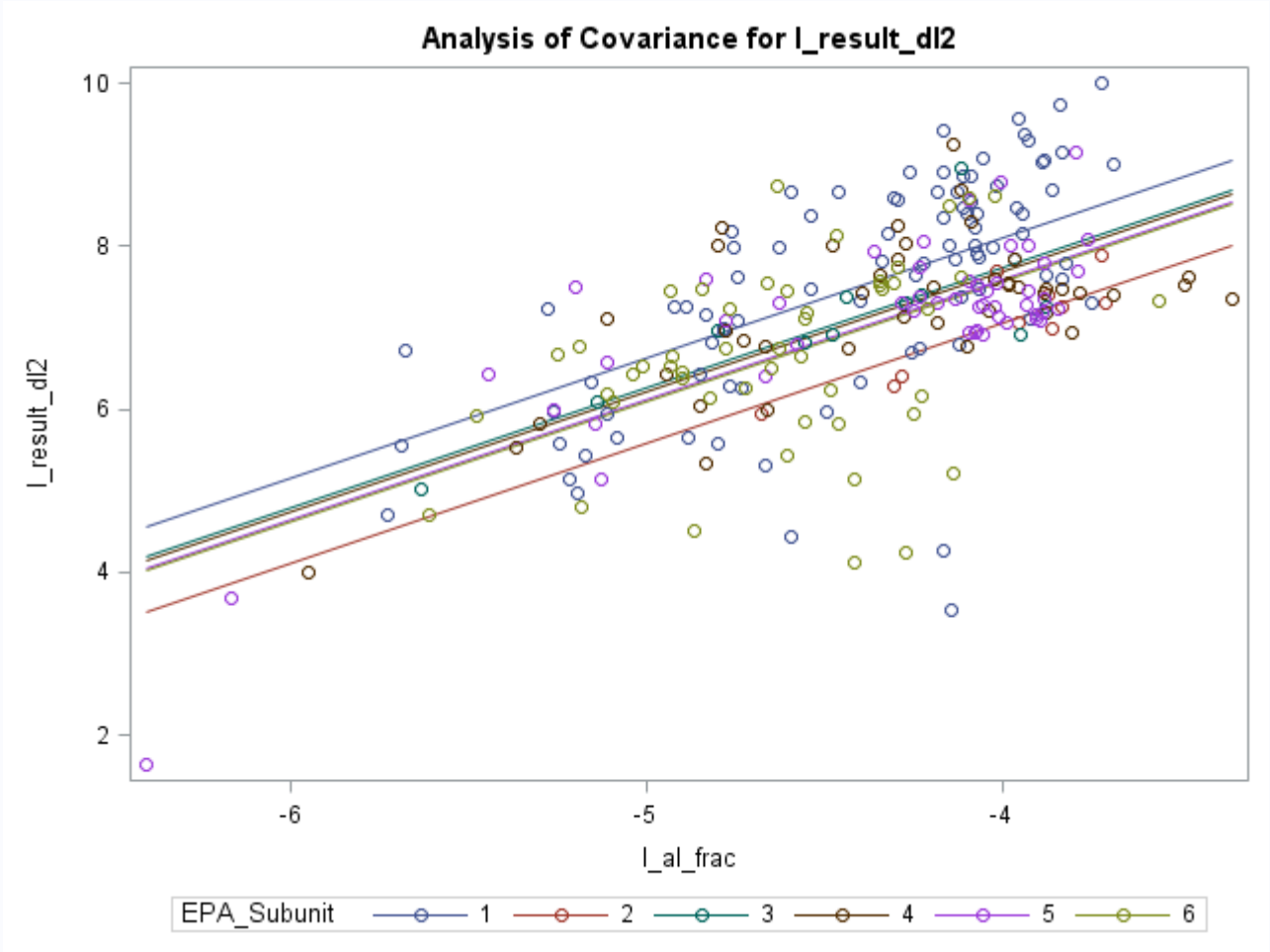
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	160.9335841	26.8222640	31.65	<.0001
Error	247	209.2924633	0.8473379		
Corrected Total	253	370.2260474			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.434690	12.83722	0.920510	7.170631

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	142.0979414	142.0979414	167.70	<.0001
EPA_Subunit	5	18.8356427	3.7671285	4.45	0.0007

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	135.4570644	135.4570644	159.86	<.0001
EPA_Subunit	5	18.8356427	3.7671285	4.45	0.0007

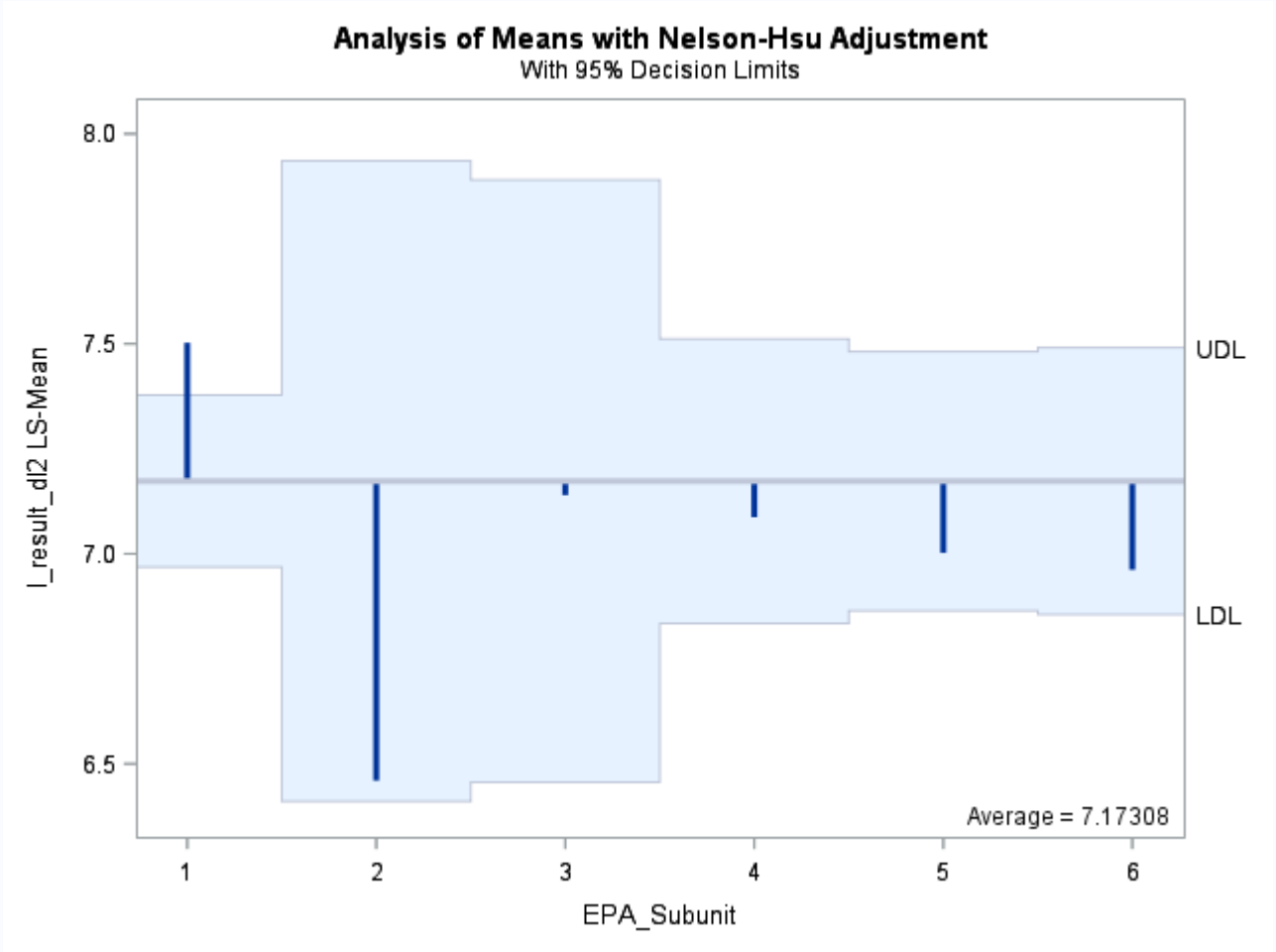

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.8473
R-Square 0.4347
Adj R-Square 0.421


Analysis of Covariance for l_result_dl2
10
8
6
4
2
l_result_dl2
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	7.50247326	0.0002
2	6.46015843	0.0790
3	7.13985892	1.0000
4	7.08724803	0.9731
5	7.00246510	0.5709
6	6.96205571	0.3693



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	7.50247326	1
2	6.46015843	2
3	7.13985892	3
4	7.08724803	4
5	7.00246510	5
6	6.96205571	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0114	0.8206	0.1504	0.0280	0.0147
2	0.0114		0.5502	0.3863	0.5395	0.6406
3	0.8206	0.5502		1.0000	0.9977	0.9923
4	0.1504	0.3863	1.0000		0.9978	0.9877
5	0.0280	0.5395	0.9977	0.9978		0.9999
6	0.0147	0.6406	0.9923	0.9877	0.9999	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

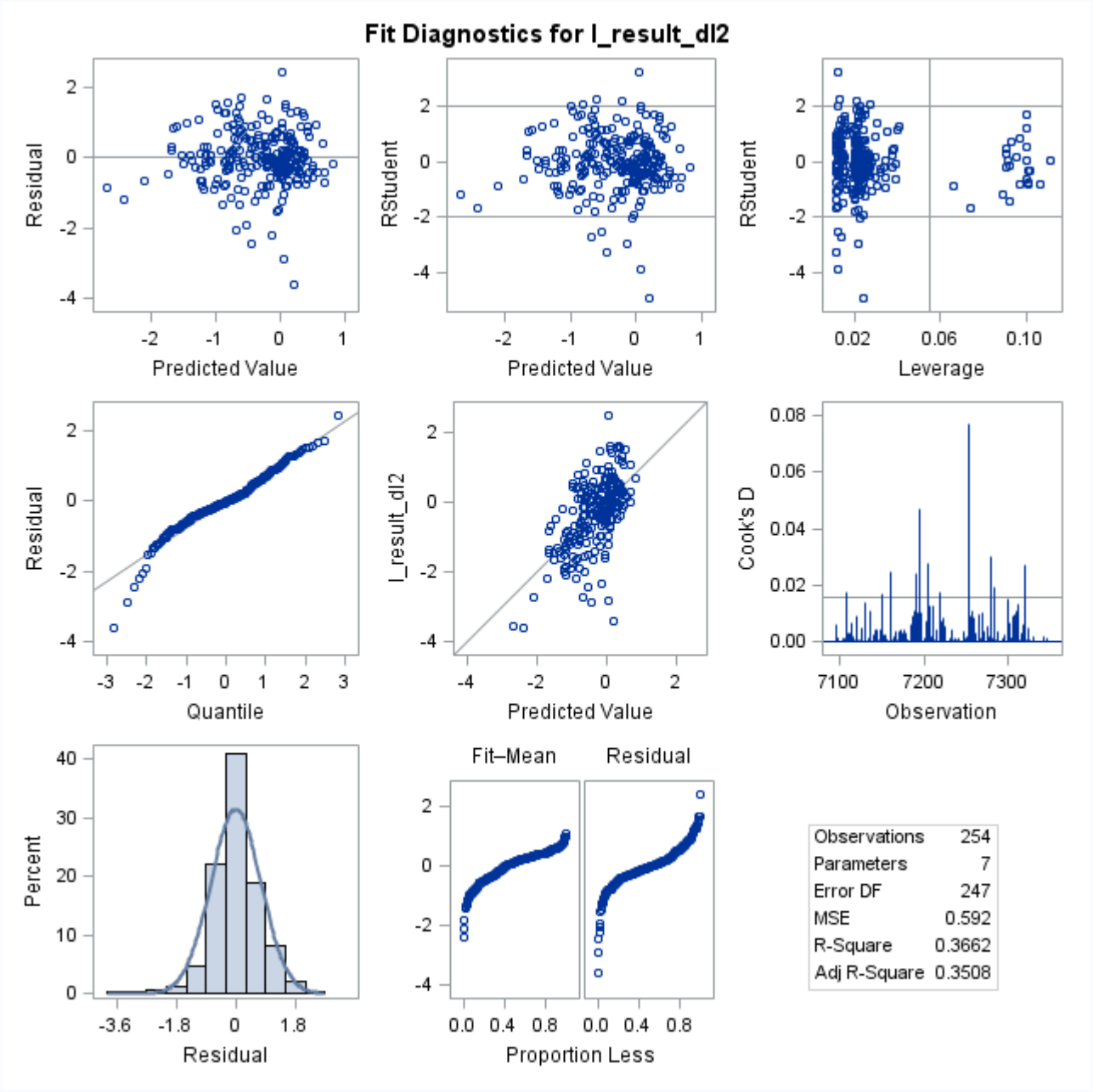
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

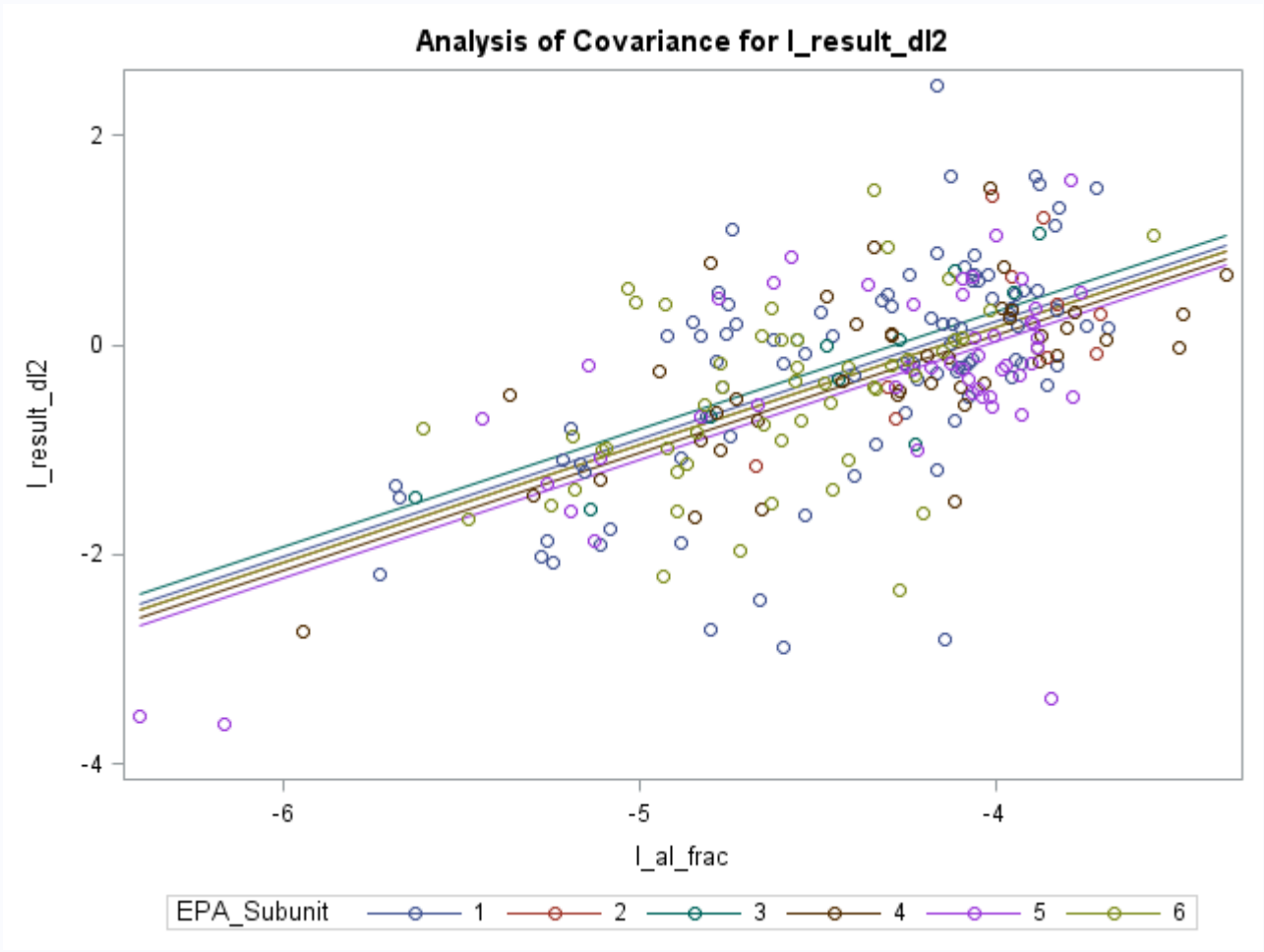
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	84.5005583	14.0834264	23.79	<.0001
Error	247	146.2302031	0.5920251		
Corrected Total	253	230.7307614			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.366230	-259.6461	0.769432	-0.296339

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	82.81120868	82.81120868	139.88	<.0001
EPA_Subunit	5	1.68934964	0.33786993	0.57	0.7224

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	79.12787141	79.12787141	133.66	<.0001
EPA_Subunit	5	1.68934964	0.33786993	0.57	0.7224

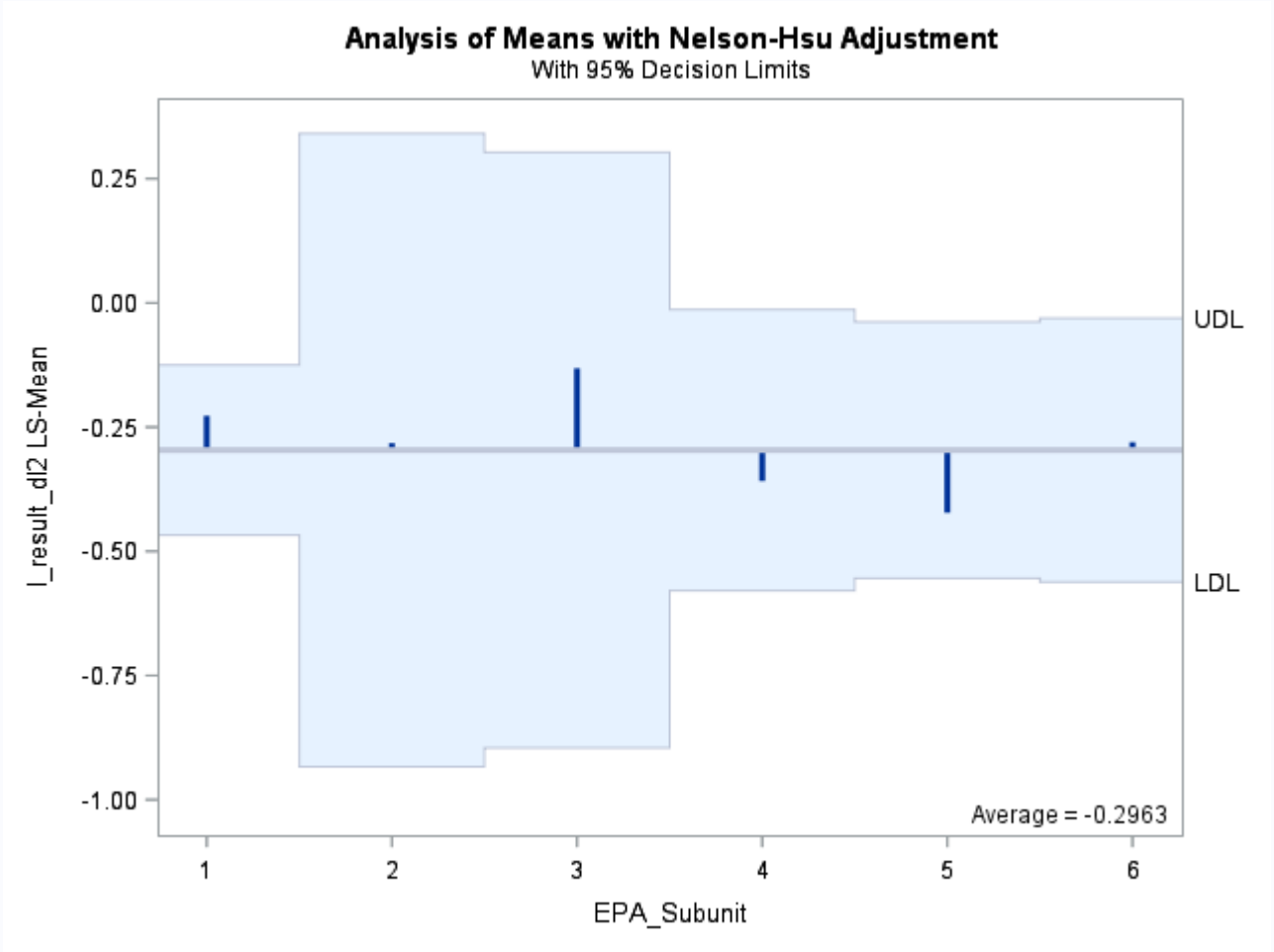

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.592
R-Square 0.3662
Adj R-Square 0.3508


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-4
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	-0.22719725	0.8315
2	-0.28232420	1.0000
3	-0.13163483	0.9621
4	-0.35849629	0.9857
5	-0.42241321	0.6908
6	-0.28030067	1.0000



Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	-0.22719725	1
2	-0.28232420	2
3	-0.13163483	3
4	-0.35849629	4
5	-0.42241321	5
6	-0.28030067	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.9999	0.9988	0.9414	0.7047	0.9989
2	0.9999		0.9978	0.9998	0.9953	1.0000
3	0.9988	0.9978		0.9532	0.8675	0.9923
4	0.9414	0.9998	0.9532		0.9987	0.9968
5	0.7047	0.9953	0.8675	0.9987		0.9444
6	0.9989	1.0000	0.9923	0.9968	0.9444	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

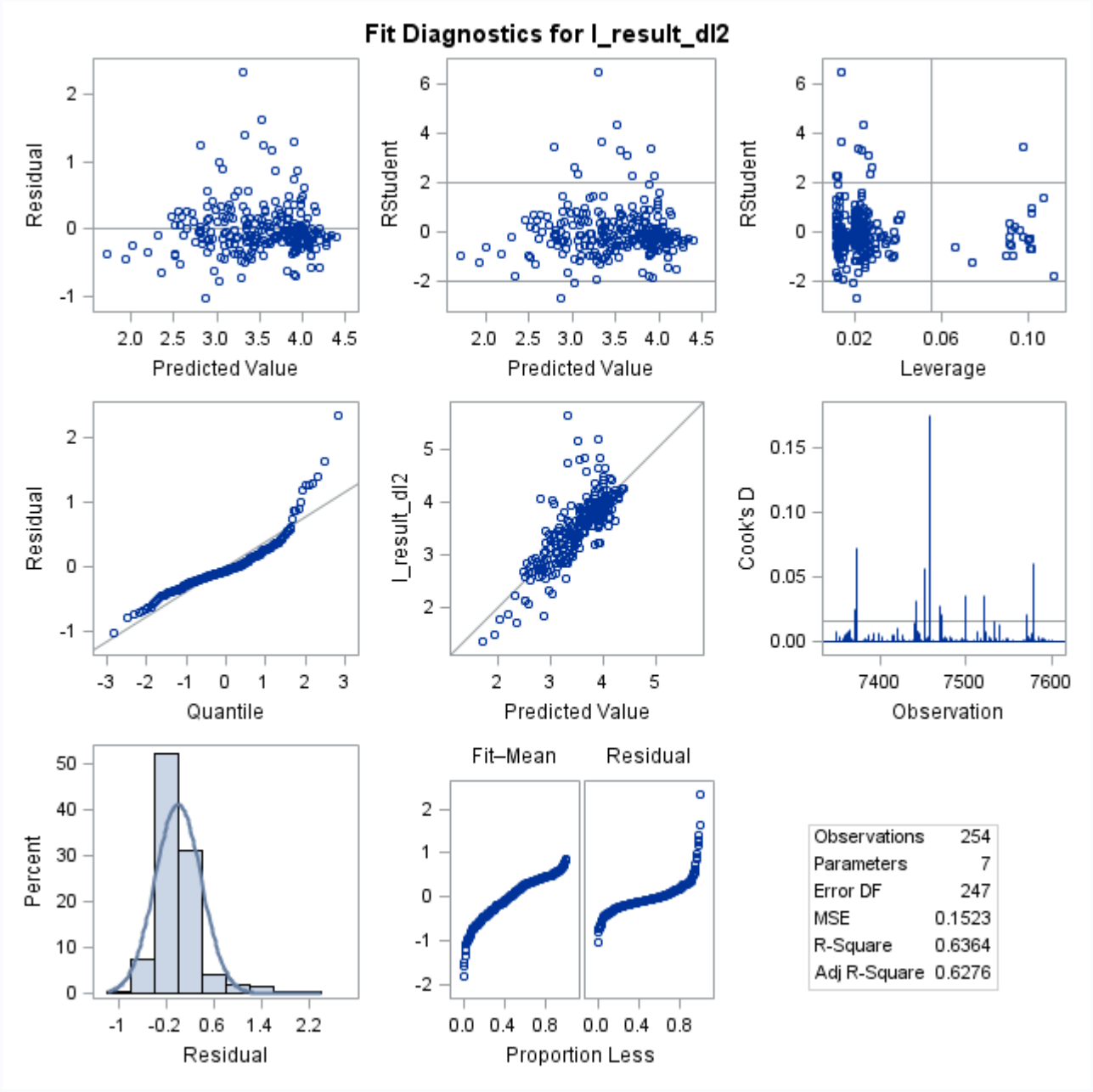
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

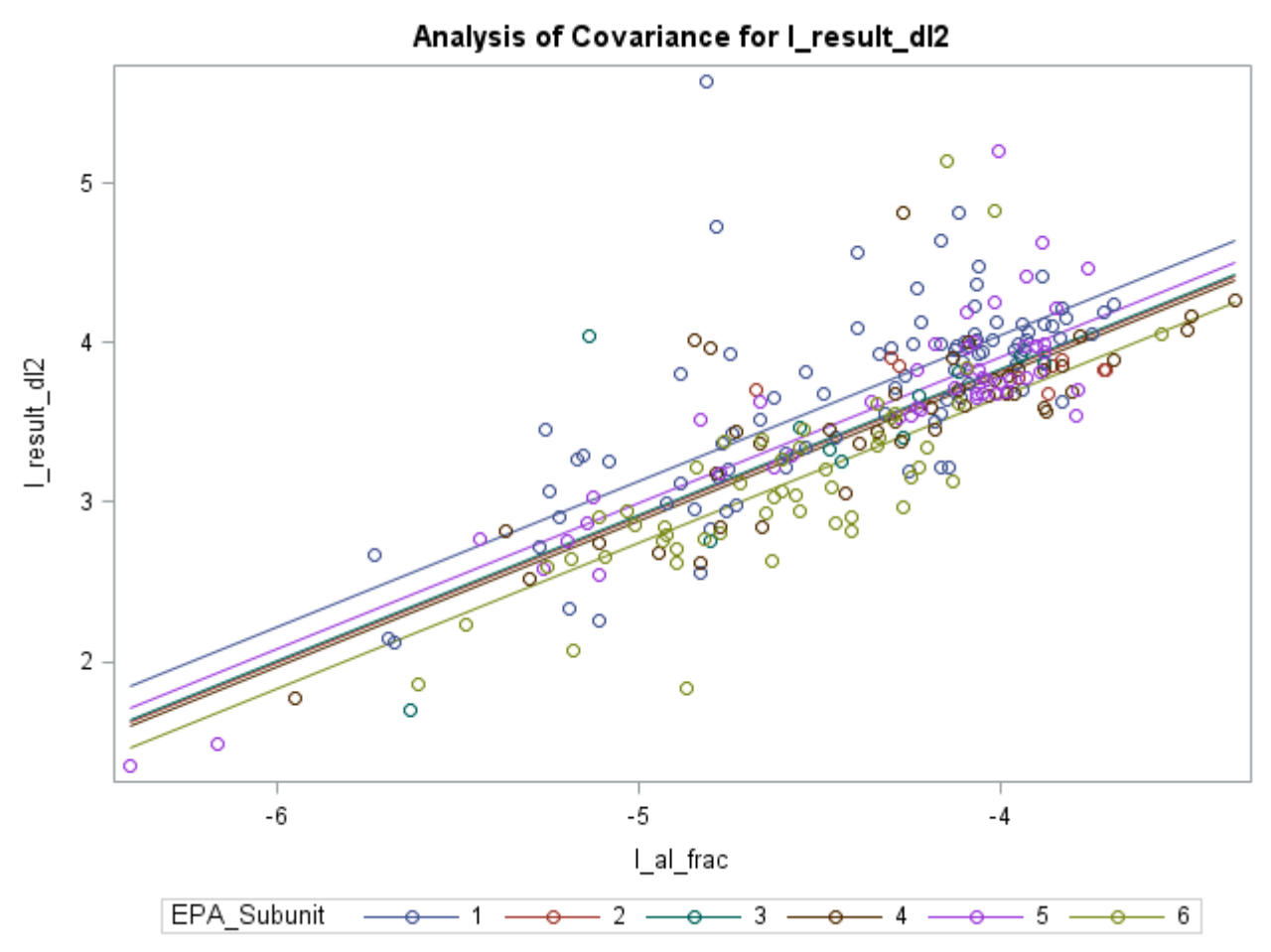
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	65.8496999	10.9749500	72.06	<.0001
Error	247	37.6168870	0.1522951		
Corrected Total	253	103.4665868			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.636434	11.09360	0.390250	3.517795

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	60.45392188	60.45392188	396.95	<.0001
EPA_Subunit	5	5.39577799	1.07915560	7.09	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	52.48108948	52.48108948	344.60	<.0001
EPA_Subunit	5	5.39577799	1.07915560	7.09	<.0001

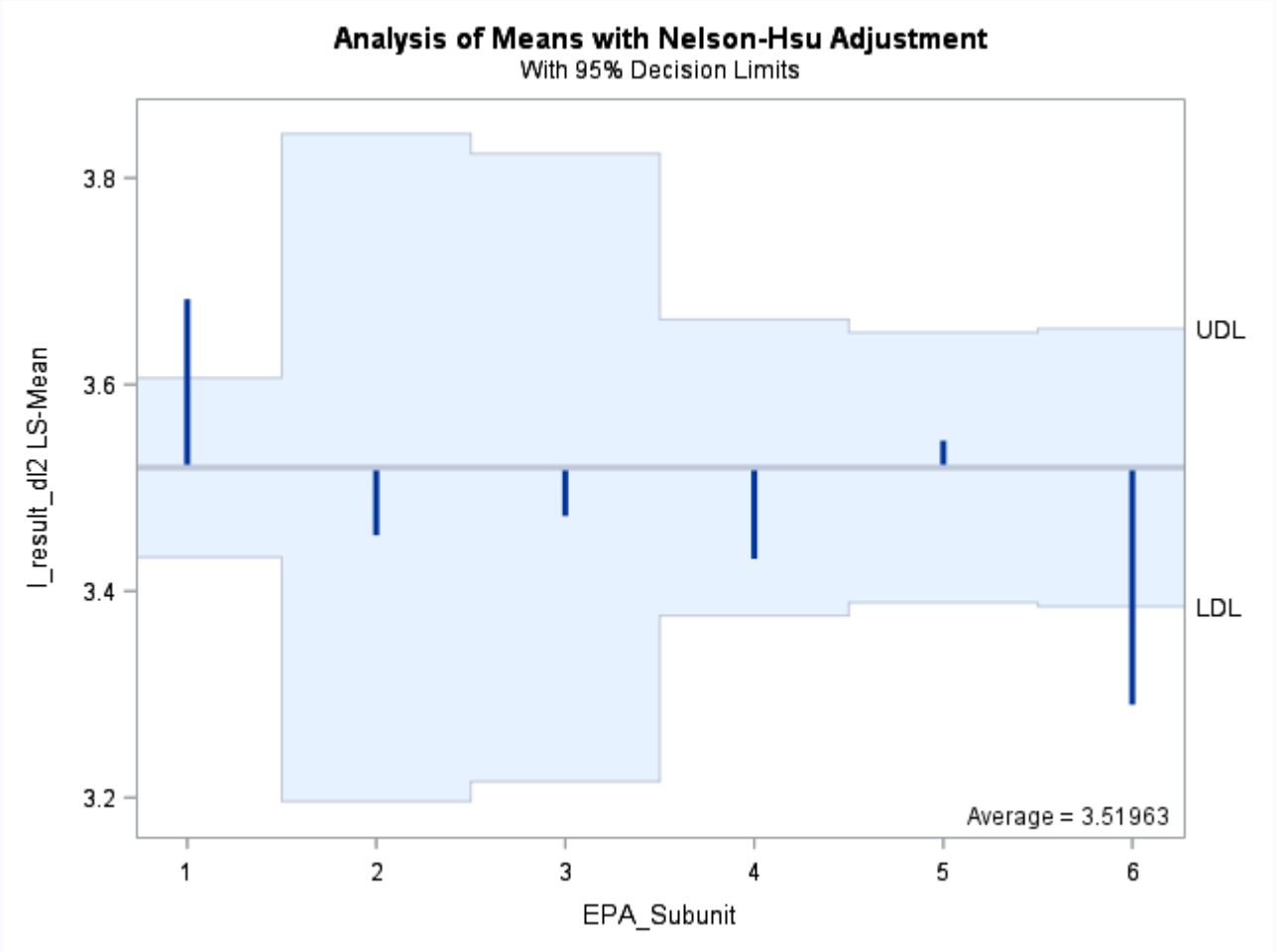

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.1523
R-Square 0.6364
Adj R-Square 0.6276


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	3.68274859	<.0001
2	3.45409958	0.9901
3	3.47275469	0.9972
4	3.43128349	0.4547
5	3.54566794	0.9908
6	3.29005562	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	3.68274859	1
2	3.45409958	2
3	3.47275469	3
4	3.43128349	4
5	3.54566794	5
6	3.29005562	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.5067	0.5441	0.0080	0.3517	<.0001
2	0.5067		1.0000	1.0000	0.9847	0.8437
3	0.5441	1.0000		0.9996	0.9934	0.7245
4	0.0080	1.0000	0.9996		0.7214	0.5271
5	0.3517	0.9847	0.9934	0.7214		0.0181
6	<.0001	0.8437	0.7245	0.5271	0.0181	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	253
Number of Observations Used	253

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

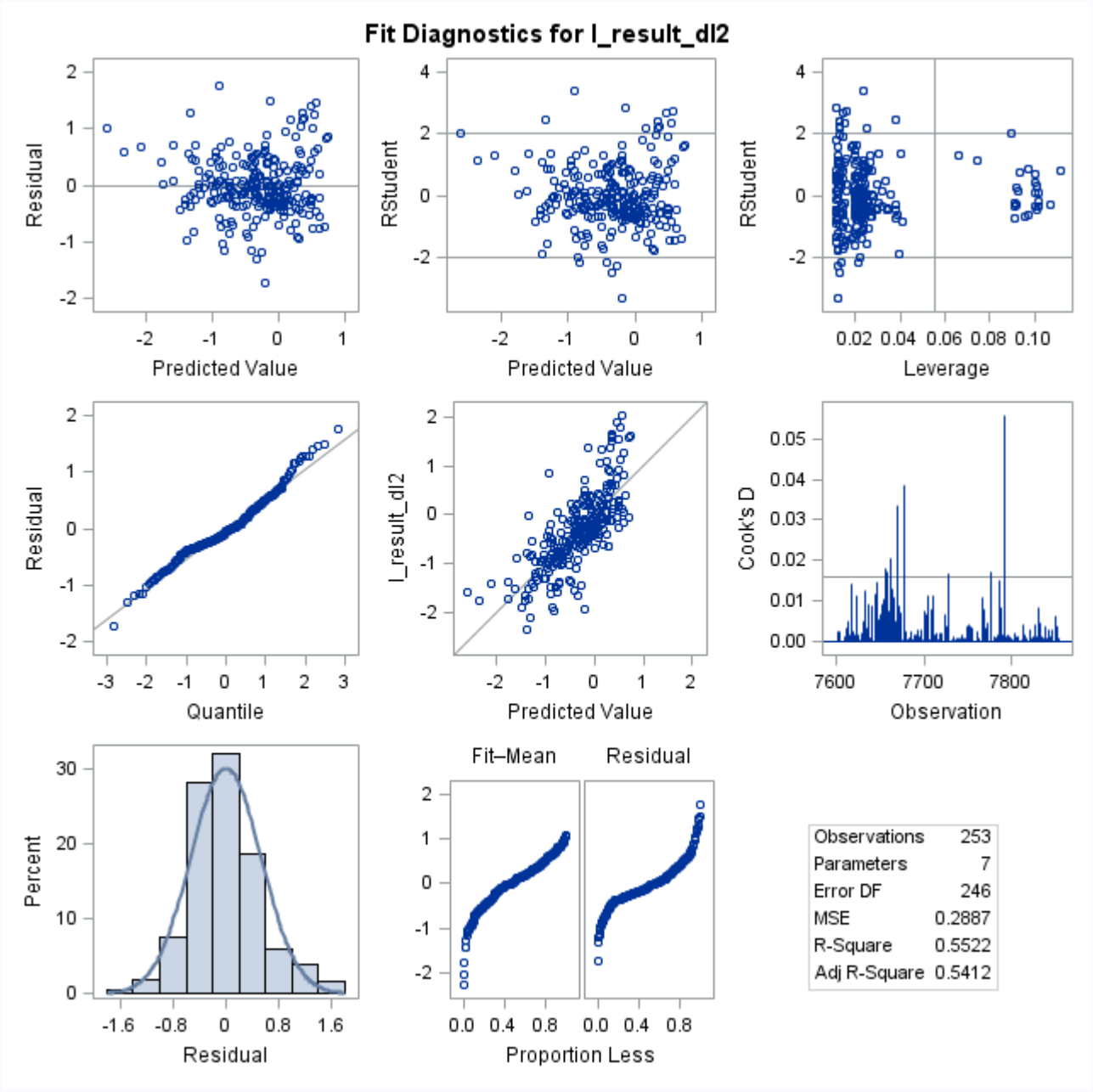
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

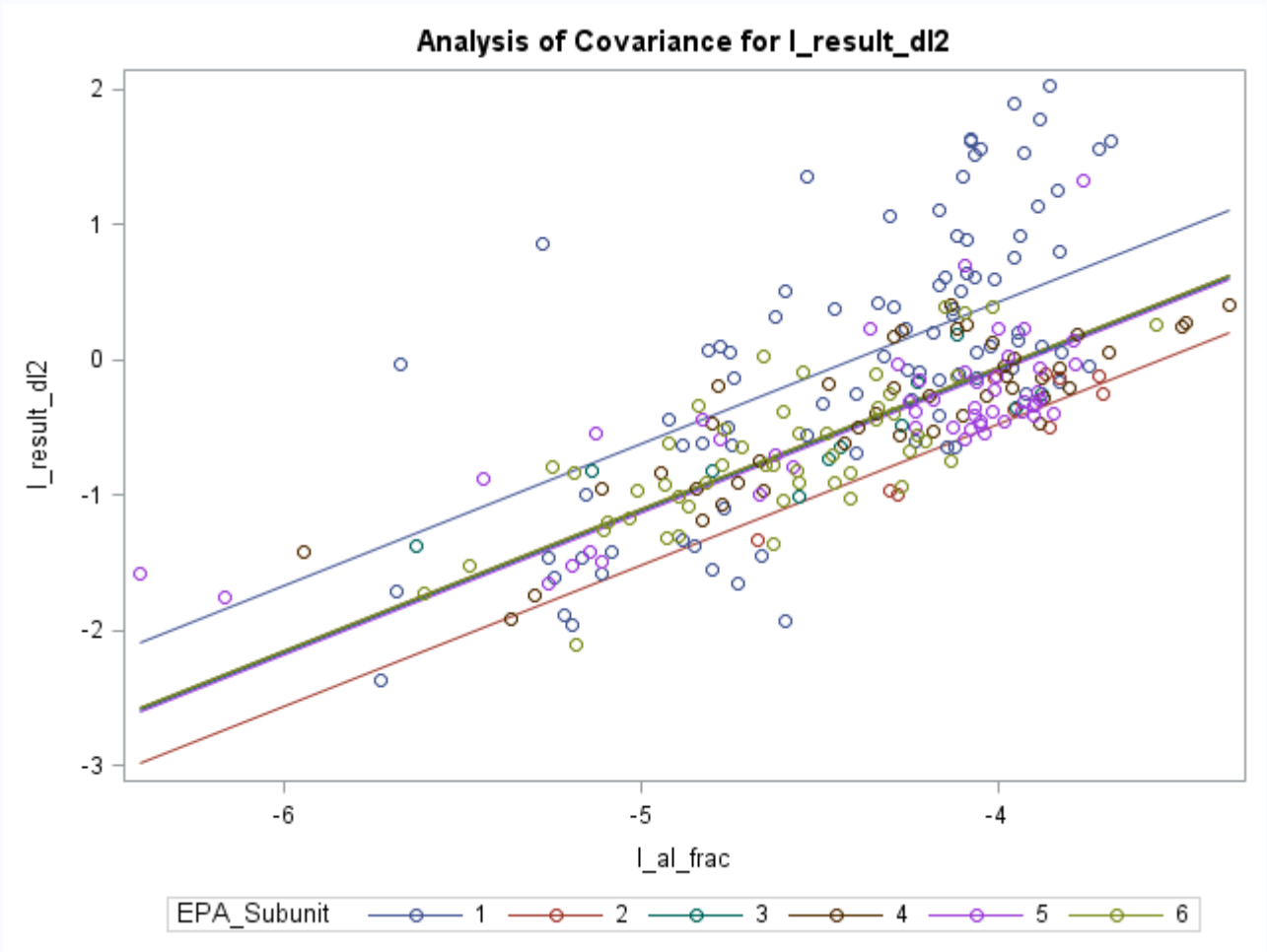
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	87.5623412	14.5937235	50.55	<.0001
Error	246	71.0168591	0.2886864		
Corrected Total	252	158.5792003			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.552168	-163.0694	0.537295	-0.329489

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	70.62459757	70.62459757	244.64	<.0001
EPA_Subunit	5	16.93774366	3.38754873	11.73	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	68.16229297	68.16229297	236.11	<.0001
EPA_Subunit	5	16.93774366	3.38754873	11.73	<.0001

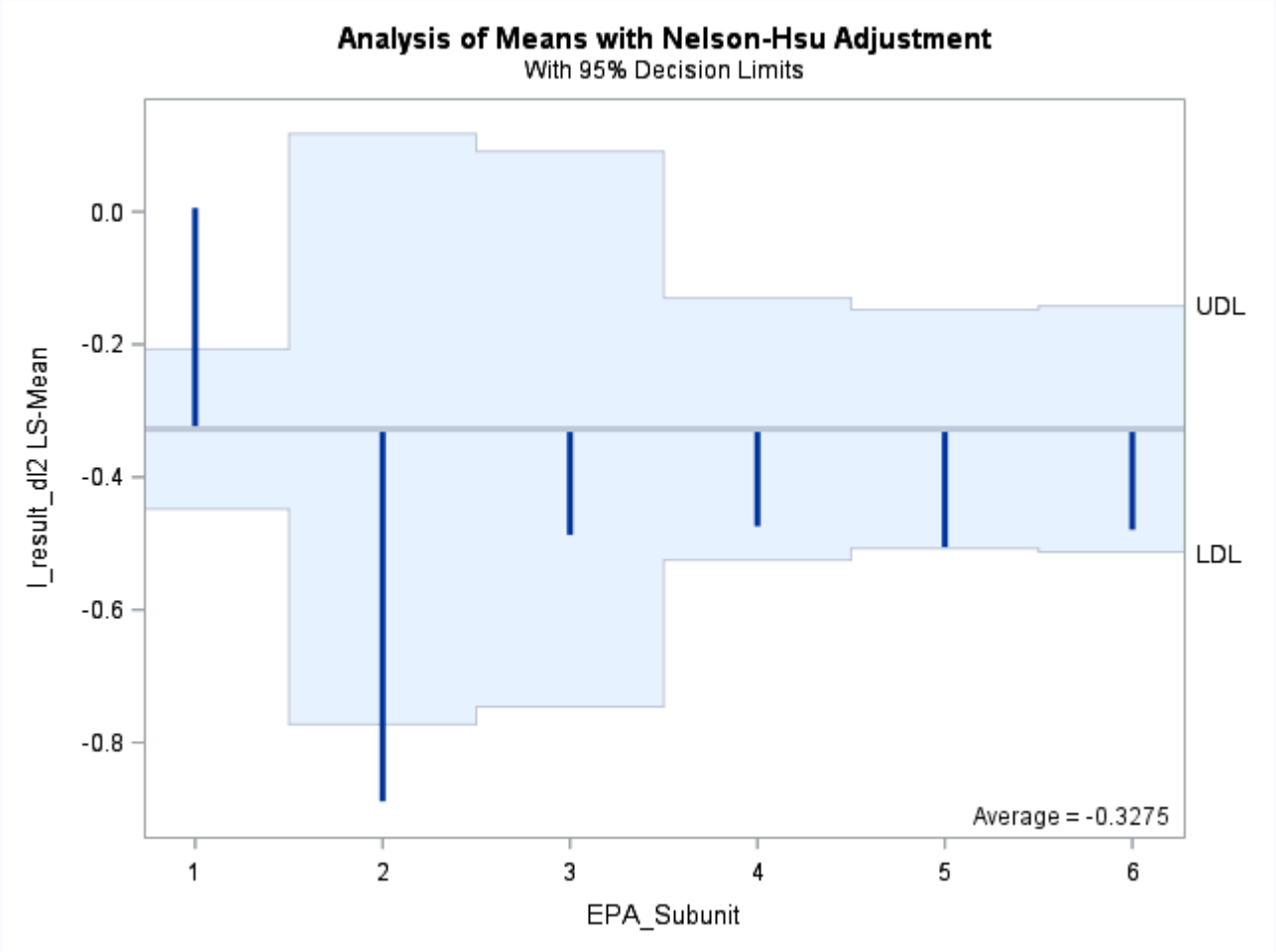

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 7
Error DF 246
MSE 0.2887
R-Square 0.5522
Adj R-Square 0.5412


Analysis of Covariance for l_result_dl2
l_result_dl2
2
1
0
-1
-2
-3
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Selenium

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.00563056	<.0001
2	-0.88864064	0.0059
3	-0.48699099	0.8628
4	-0.47407639	0.2538
5	-0.50540514	0.0543
6	-0.47925918	0.1658



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Selenium

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.00563056	1
2	-0.88864064	2
3	-0.48699099	3
4	-0.47407639	4
5	-0.50540514	5
6	-0.47925918	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		<.0001	0.0508	<.0001	<.0001	<.0001
2	<.0001		0.5365	0.2481	0.3193	0.2664
3	0.0508	0.5365		1.0000	1.0000	1.0000
4	<.0001	0.2481	1.0000		0.9998	1.0000
5	<.0001	0.3193	1.0000	0.9998		0.9999
6	<.0001	0.2664	1.0000	1.0000	0.9999	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

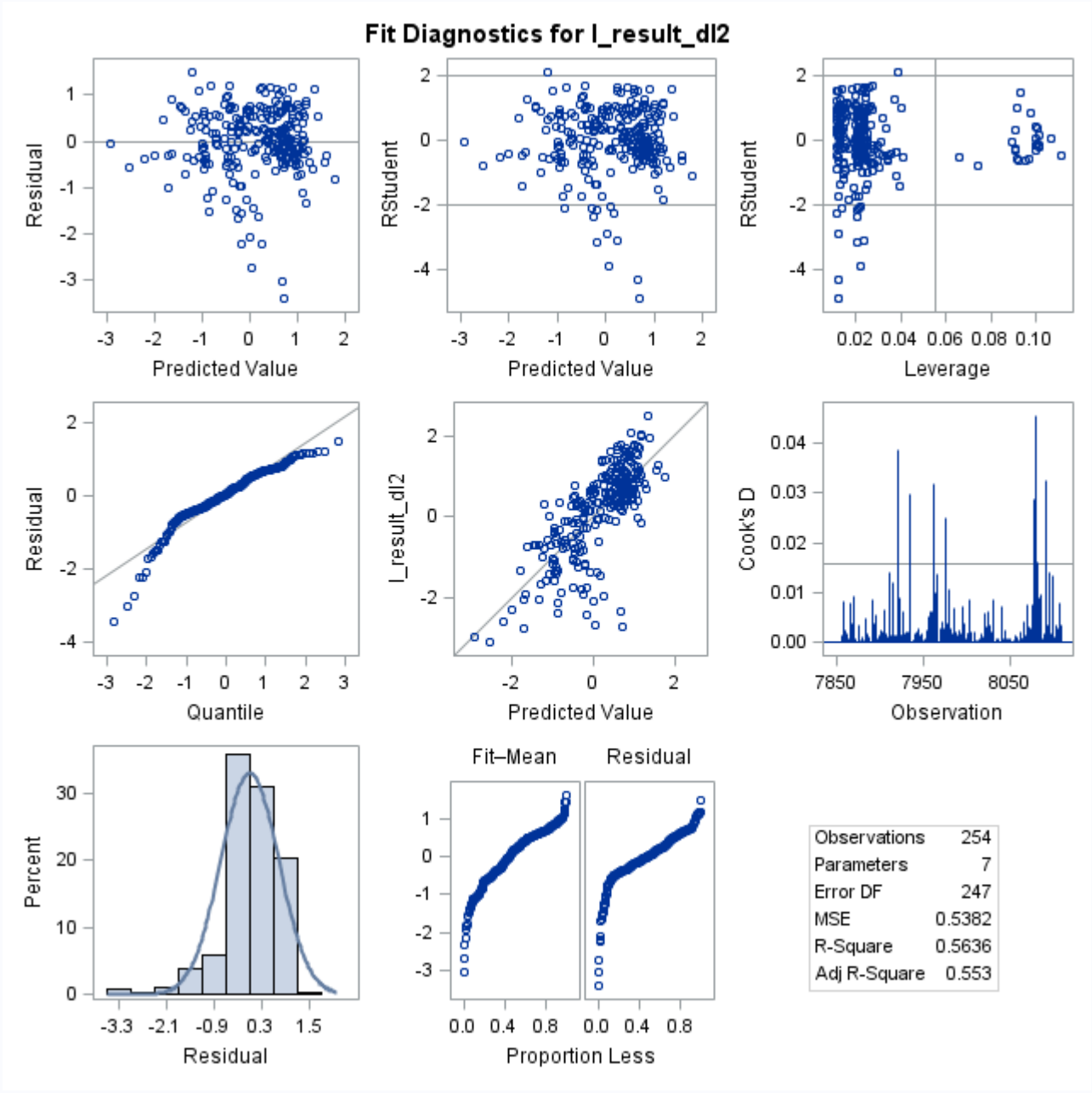
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

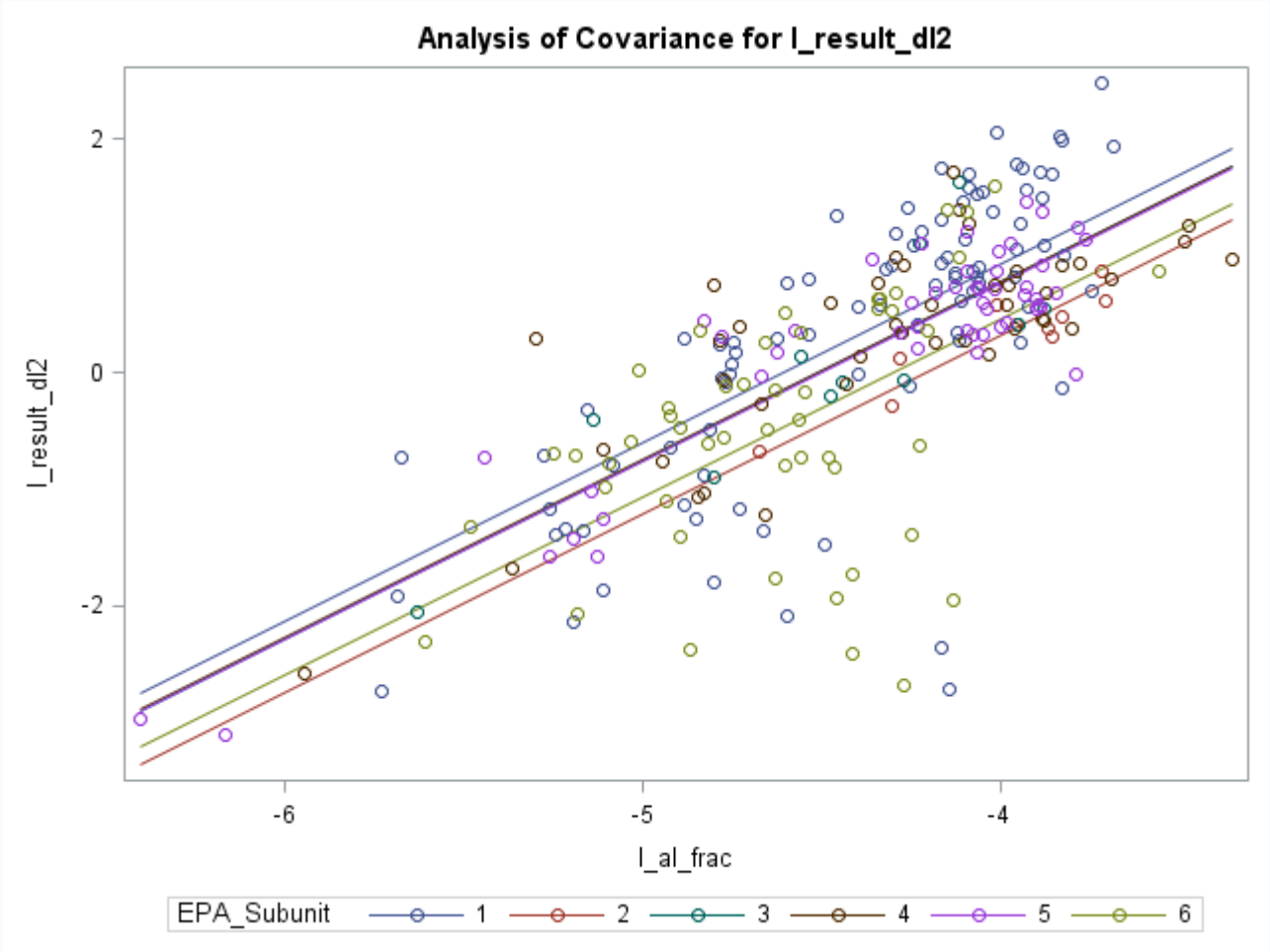
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	171.6552195	28.6092033	53.16	<.0001
Error	247	132.9284438	0.5381718		
Corrected Total	253	304.5836633			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.563573	540.0006	0.733602	0.135852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	162.7217846	162.7217846	302.36	<.0001
EPA_Subunit	5	8.9334349	1.7866870	3.32	0.0064

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	146.2555775	146.2555775	271.76	<.0001
EPA_Subunit	5	8.9334349	1.7866870	3.32	0.0064

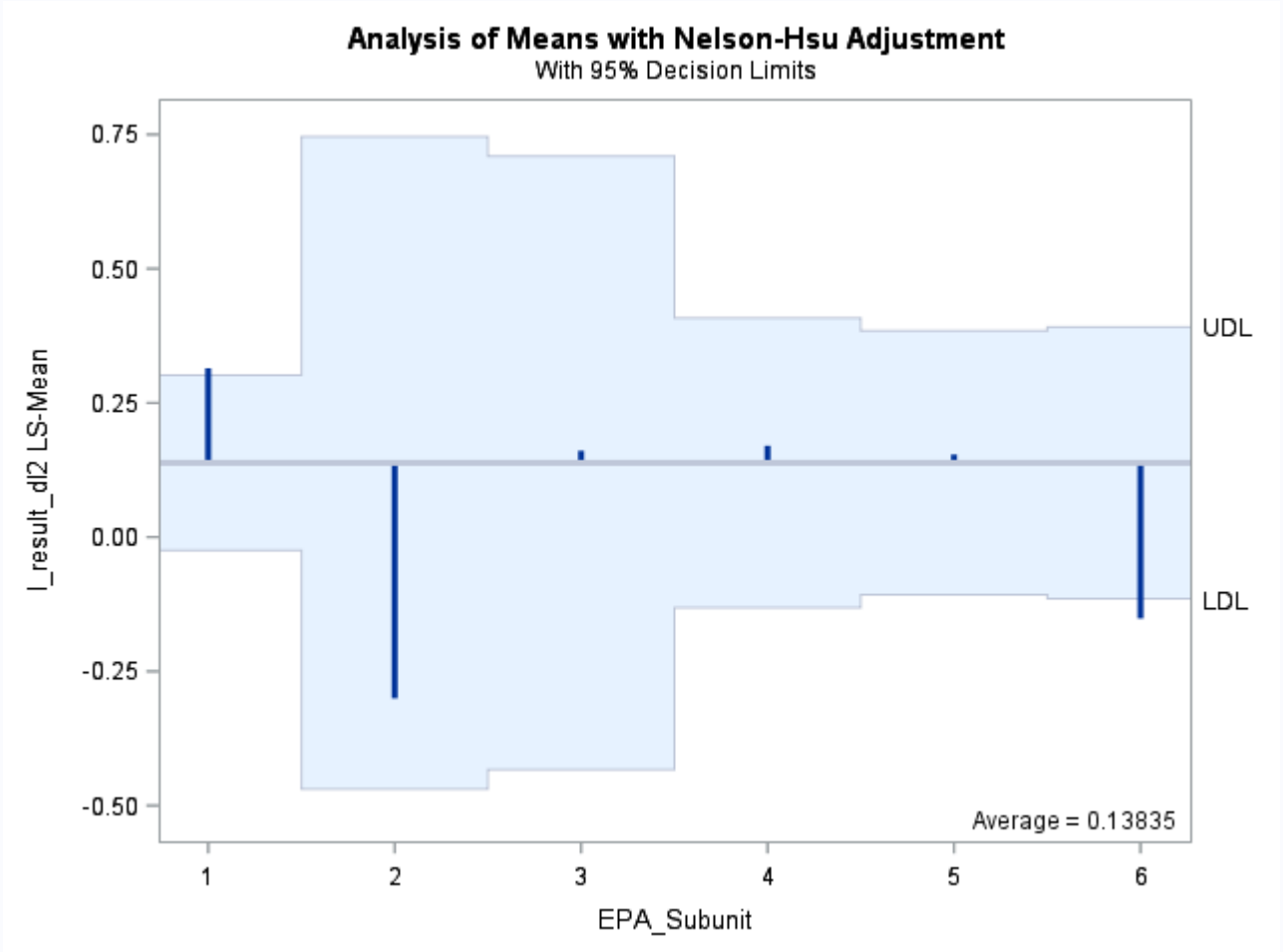

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.5382
R-Square 0.5636
Adj R-Square 0.553


Analysis of Covariance for l_result_dl2
2
0
-2
l_result_dl2
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	0.31454953	0.0272
2	-0.30023749	0.2814
3	0.16092014	1.0000
4	0.17022381	0.9992
5	0.15379078	1.0000
6	-0.15159892	0.0161



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	0.31454953	1
2	-0.30023749	2
3	0.16092014	3
4	0.17022381	4
5	0.15379078	5
6	-0.15159892	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.1314	0.9865	0.8969	0.8164	0.0060
2	0.1314		0.7117	0.4568	0.4833	0.9928
3	0.9865	0.7117		1.0000	1.0000	0.7970
4	0.8969	0.4568	1.0000		1.0000	0.3056
5	0.8164	0.4833	1.0000	1.0000		0.3200
6	0.0060	0.9928	0.7970	0.3056	0.3200	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
EPA_Subunit	6	1 2 3 4 5 6

Number of Observations Read	254
Number of Observations Used	254

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure

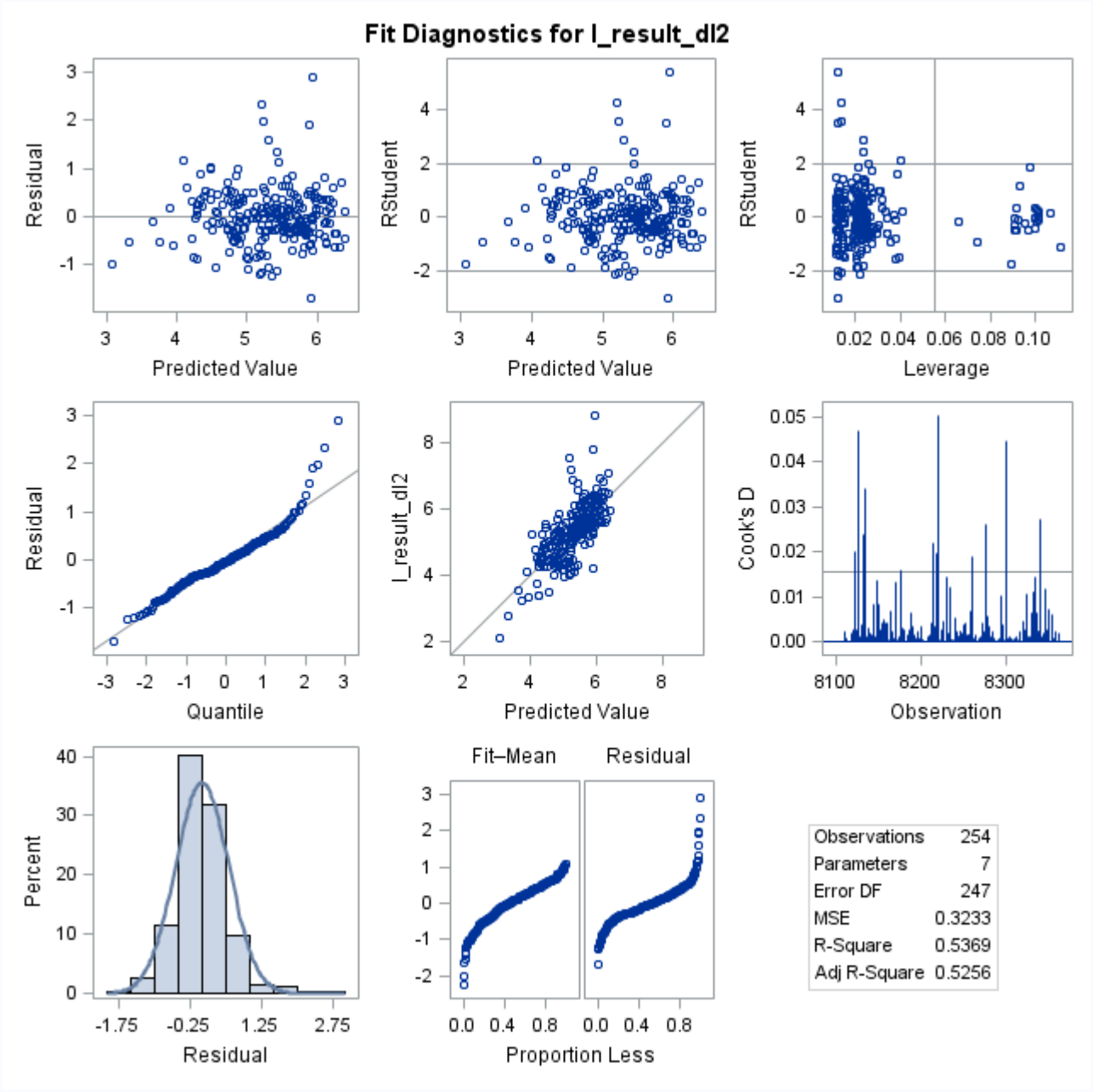
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

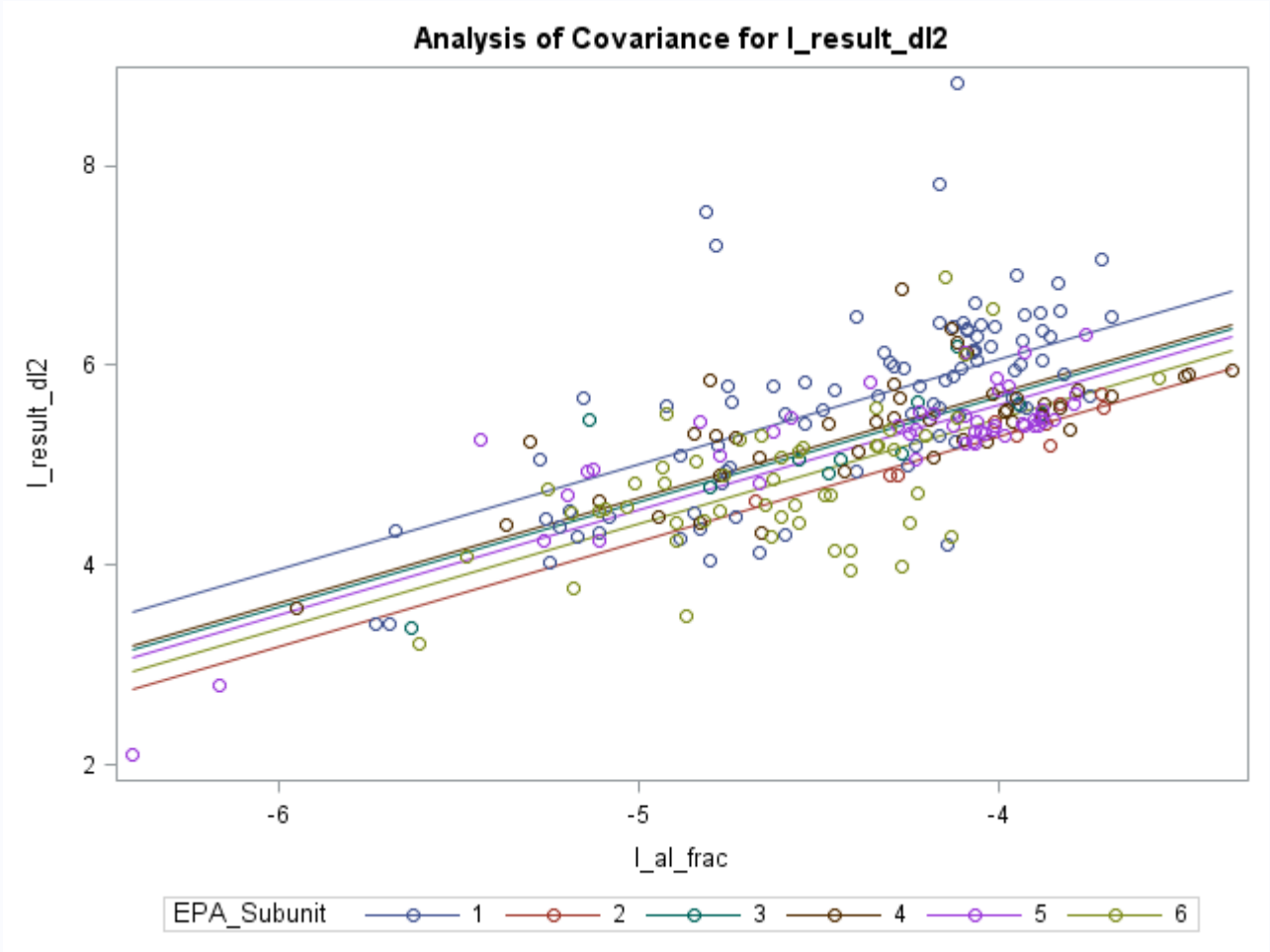
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	92.5629511	15.4271585	47.72	<.0001
Error	247	79.8504212	0.3232811		
Corrected Total	253	172.4133722			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.536866	10.68246	0.568578	5.322537

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	76.42736816	76.42736816	236.41	<.0001
EPA_Subunit	5	16.13558290	3.22711658	9.98	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	69.21448881	69.21448881	214.10	<.0001
EPA_Subunit	5	16.13558290	3.22711658	9.98	<.0001

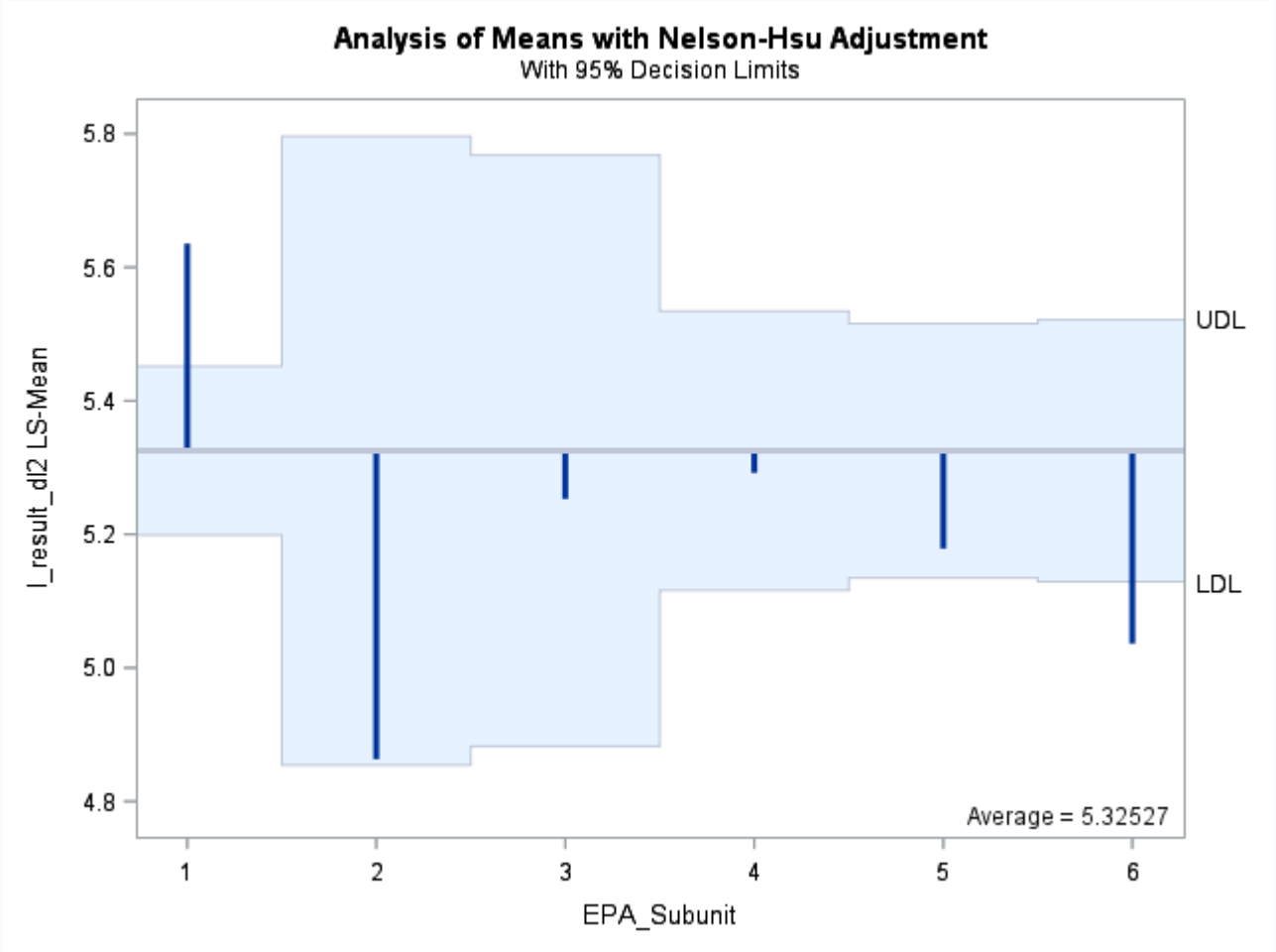

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 7
Error DF 247
MSE 0.3233
R-Square 0.5369
Adj R-Square 0.5256


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
-6
-5
-4
l_al_frac
EPA_Subunit
1
2
3
4
5
6

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

EPA_Subunit	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
1	5.63550674	<.0001
2	4.86321032	0.0573
3	5.25310334	0.9964
4	5.29217402	0.9969
5	5.17867333	0.2190
6	5.03630651	0.0008



Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by epa_subunit

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

EPA_Subunit	l_result_dl2 LSMEAN	LSMEAN Number
1	5.63550674	1
2	4.86321032	2
3	5.25310334	3
4	5.29217402	4
5	5.17867333	5
6	5.03630651	6

Least Squares Means for effect EPA_Subunit
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3	4	5	6
1		0.0010	0.2886	0.0163	0.0001	<.0001
2	0.0010		0.6291	0.2716	0.6047	0.9559
3	0.2886	0.6291		1.0000	0.9988	0.8626
4	0.0163	0.2716	1.0000		0.9301	0.2777
5	0.0001	0.6047	0.9988	0.9301		0.8217
6	<.0001	0.9559	0.8626	0.2777	0.8217	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

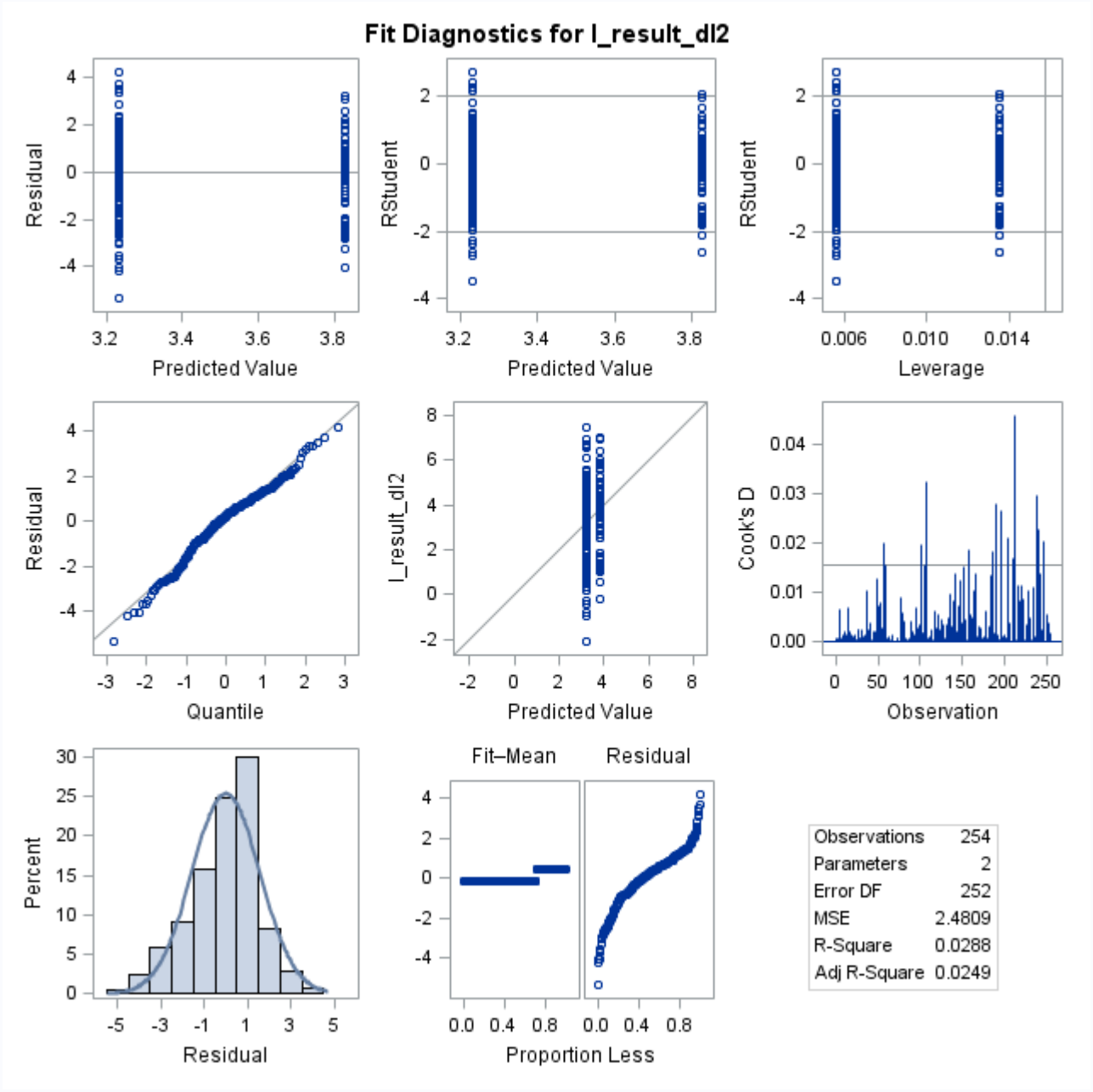
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	18.5381165	18.5381165	7.47	0.0067
Error	252	625.1806071	2.4808754		
Corrected Total	253	643.7187236			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.028798	46.24764	1.575079	3.405751

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	18.53811655	18.53811655	7.47	0.0067

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	18.53811655	18.53811655	7.47	0.0067


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 2.4809
R-Square 0.0288
Adj R-Square 0.0249

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	3.23253202	0.0067
YES	3.82709456	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	19.0282	19.0282	1.33	0.2506
Error	252	3616.4	14.3506		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	3.23253202	1.62836284
YES	**74**	3.82709456	1.43608283

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

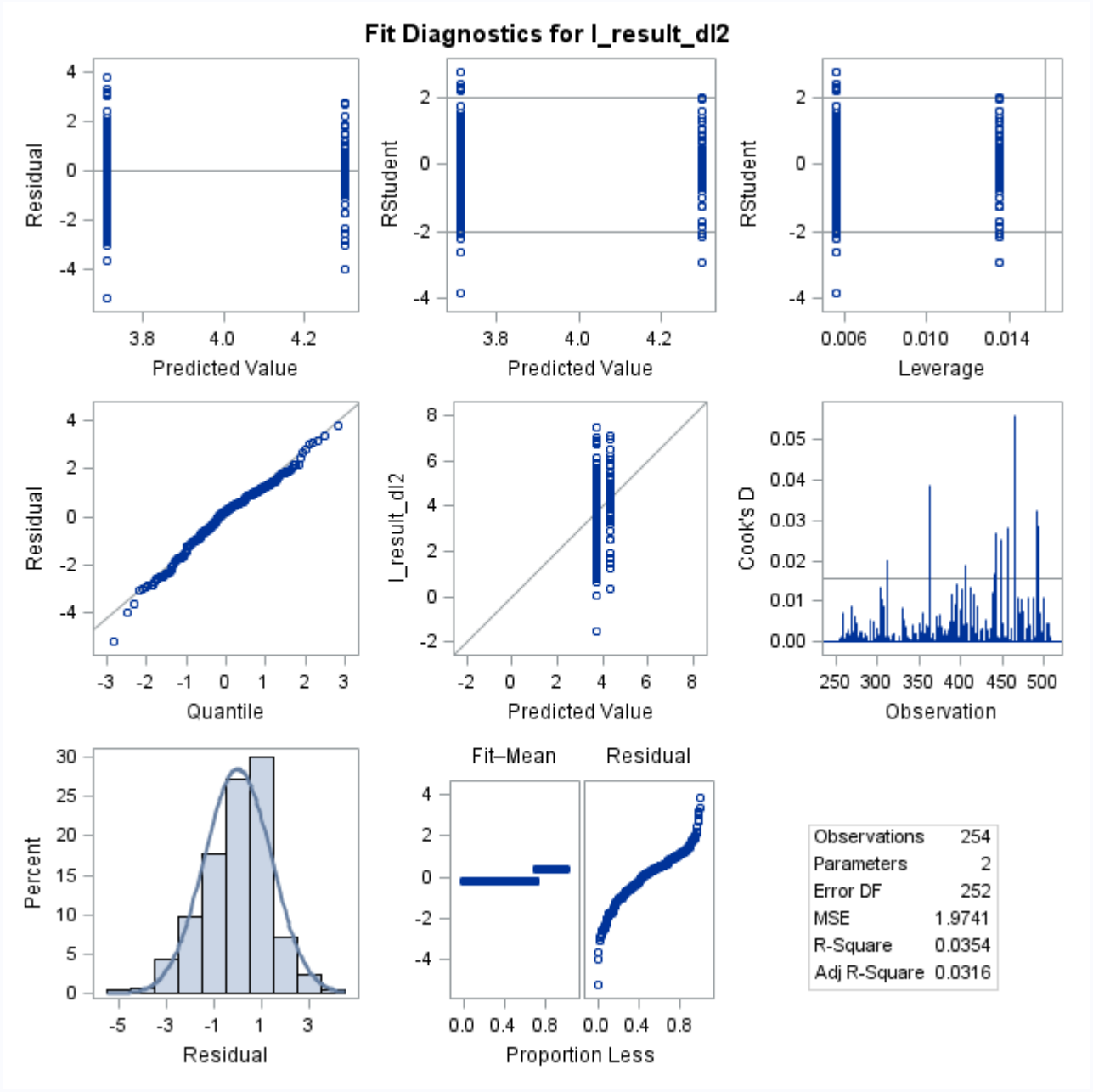
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	18.2499893	18.2499893	9.24	0.0026
Error	252	497.4704791	1.9740892		
Corrected Total	253	515.7204683			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.035387	36.19334	1.405023	3.881993

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	18.24998930	18.24998930	9.24	0.0026

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	18.24998930	18.24998930	9.24	0.0026


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.9741
R-Square 0.0354
Adj R-Square 0.0316

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	3.71012525	0.0026
YES	4.30004923	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	13.9141	13.9141	1.47	0.2268
Error	252	2388.8	9.4792		

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	3.71012525	1.45615718
YES	**74**	4.30004923	1.27096125

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

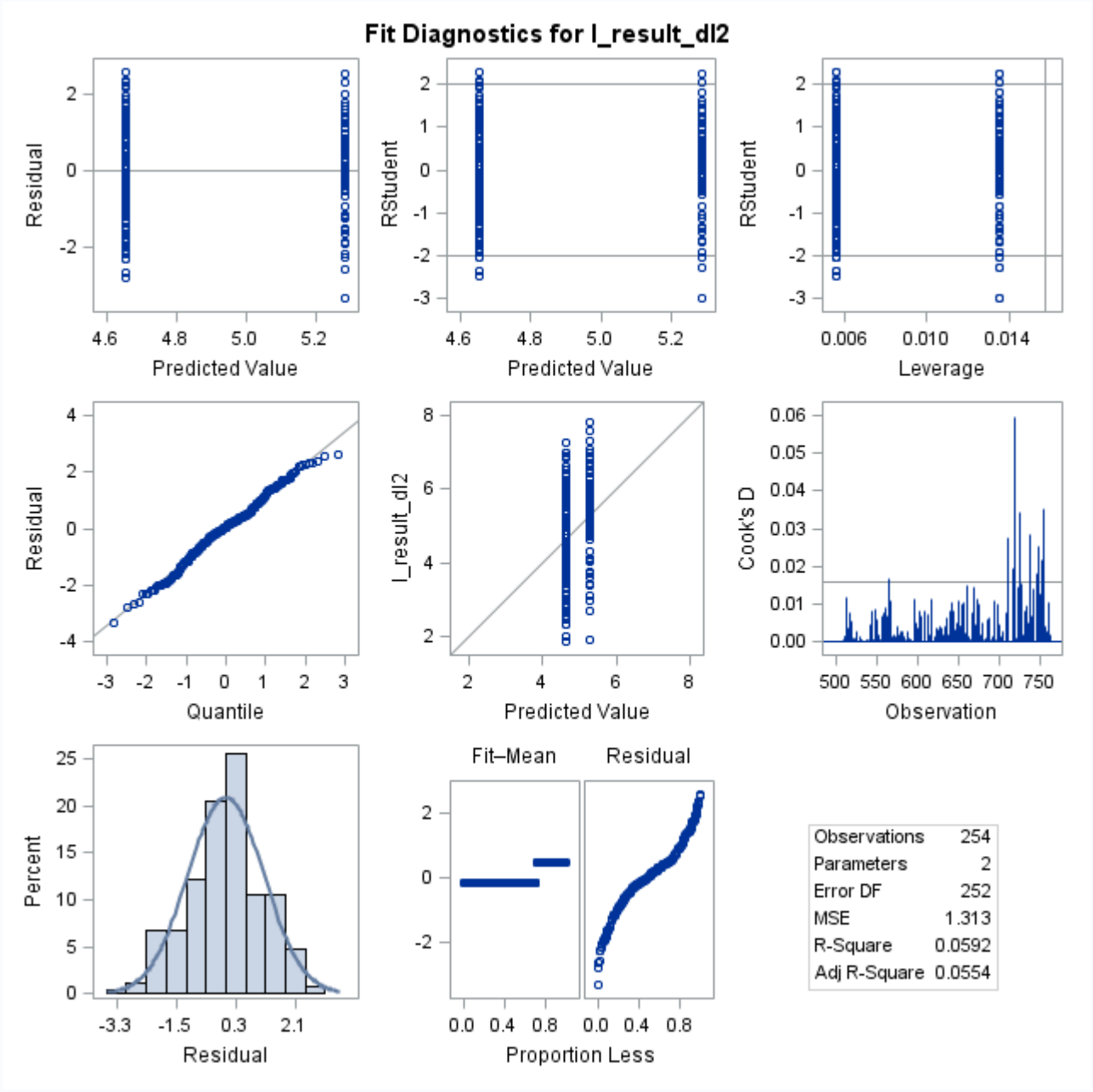
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	20.8134014	20.8134014	15.85	<.0001
Error	252	330.8787818	1.3130110		
Corrected Total	253	351.6921832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.059181	23.68475	1.145867	4.837994

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	20.81340142	20.81340142	15.85	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	20.81340142	20.81340142	15.85	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.313
R-Square 0.0592
Adj R-Square 0.0554

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.65445257	<.0001
YES	5.28444637	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.1656	0.1656	0.05	0.8173
Error	252	779.9	3.0950		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	4.65445257	1.15170029
YES	74	5.28444637	1.13143596

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

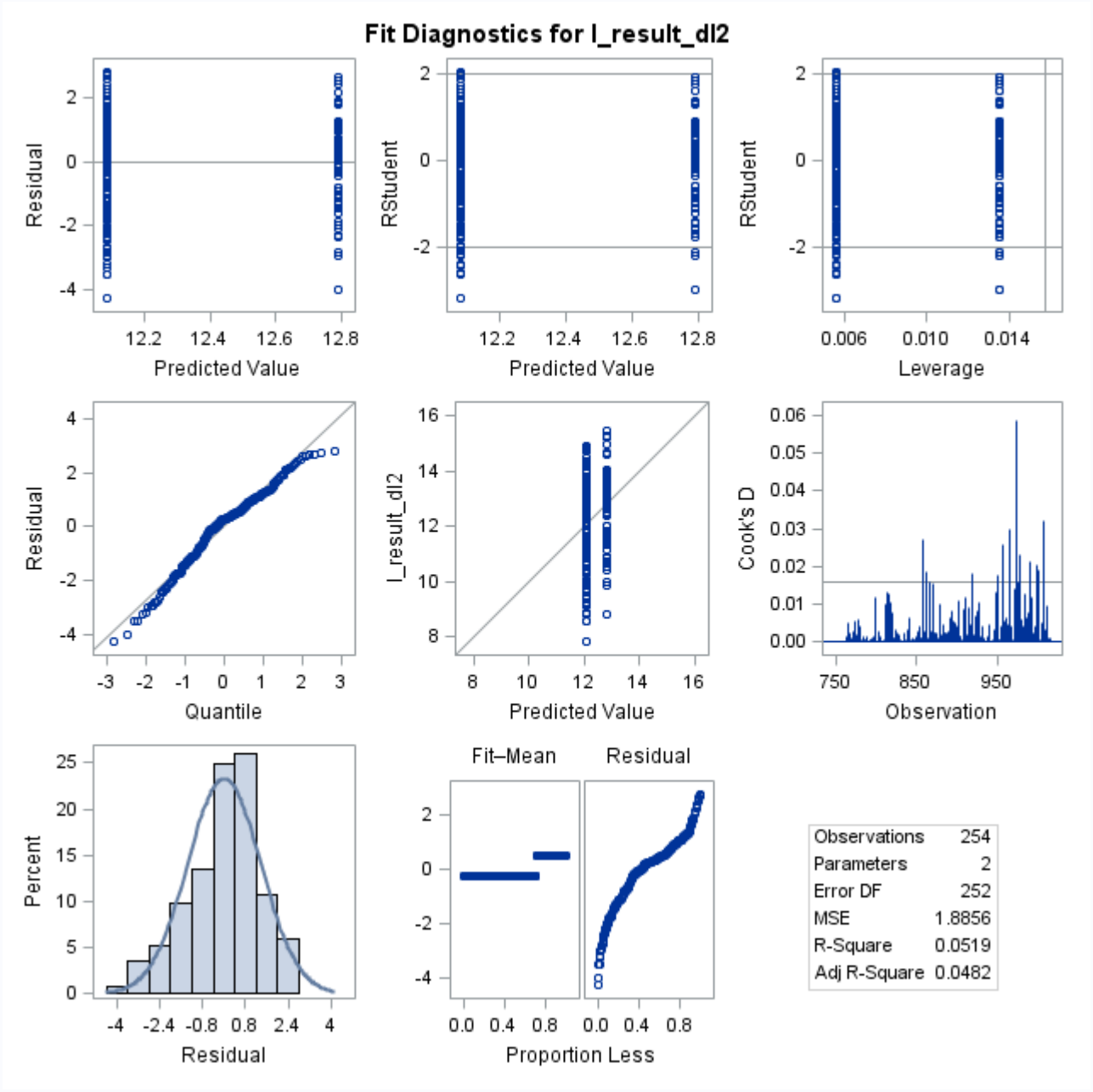
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	26.0366349	26.0366349	13.81	0.0002
Error	252	475.1598109	1.8855548		
Corrected Total	253	501.1964458			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.051949	11.17389	1.373155	12.28896

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	26.03663489	26.03663489	13.81	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	26.03663489	26.03663489	13.81	0.0002


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.8856
R-Square 0.0519
Adj R-Square 0.0482

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
NO	12.0836786	0.0002
YES	12.7883022	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	5.0953	5.0953	0.68	0.4097
Error	252	1882.5	7.4704		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	12.0836786	1.40444961
YES	**74**	12.7883022	1.29321793

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

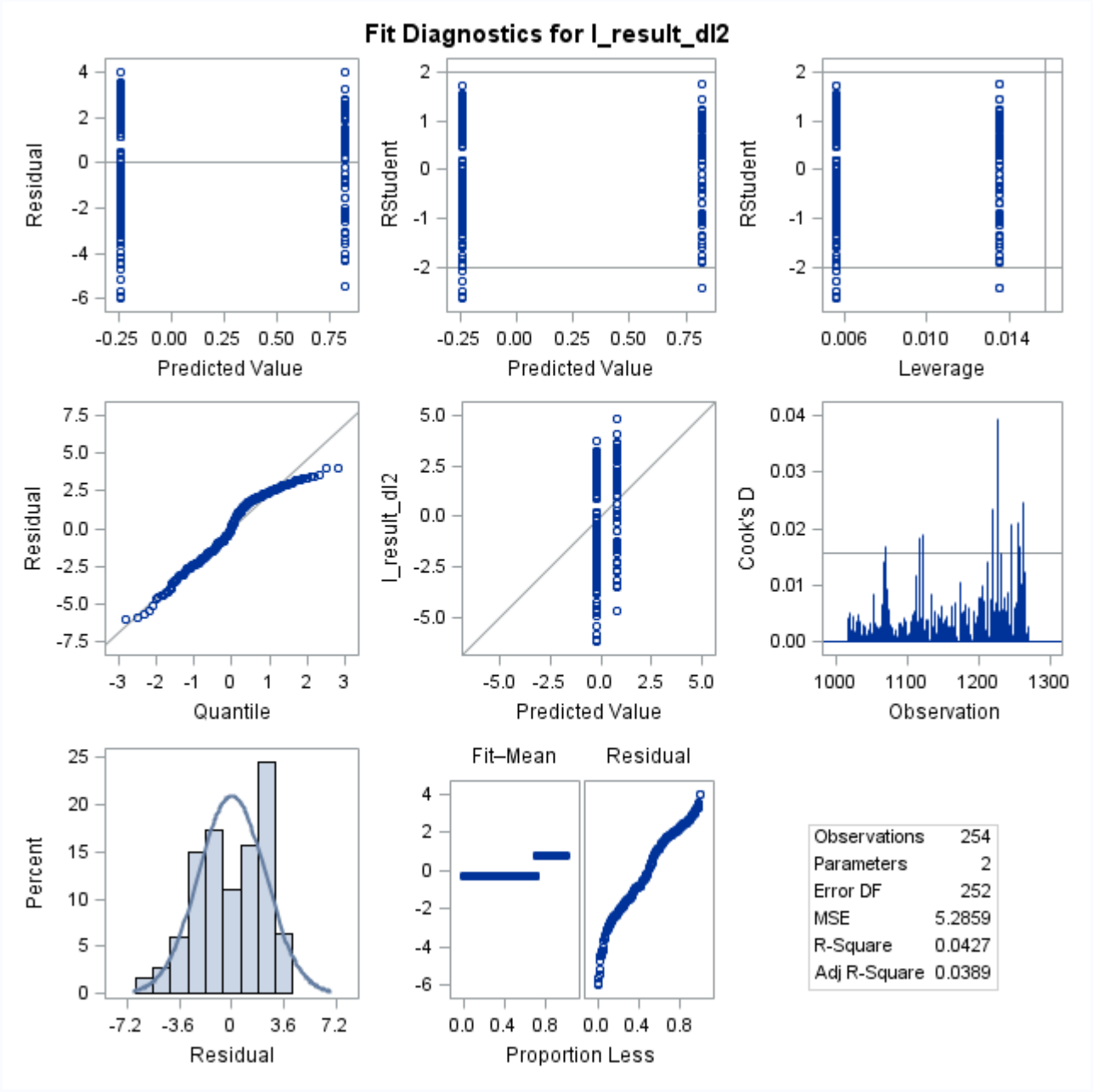
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	59.477263	59.477263	11.25	0.0009
Error	252	1332.052725	5.285924		
Corrected Total	253	1391.529988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.042742	3445.461	2.299114	0.066729

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	59.47726325	59.47726325	11.25	0.0009

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	59.47726325	59.47726325	11.25	0.0009


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 5.2859
R-Square 0.0427
Adj R-Square 0.0389

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
NO	-0.24354013	0.0009
YES	0.82143688	

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	52.7005	52.7005	1.60	0.2070
Error	252	8297.4	32.9262		

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	-0.24354013	2.35951060
YES	**74**	0.82143688	2.14382761

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

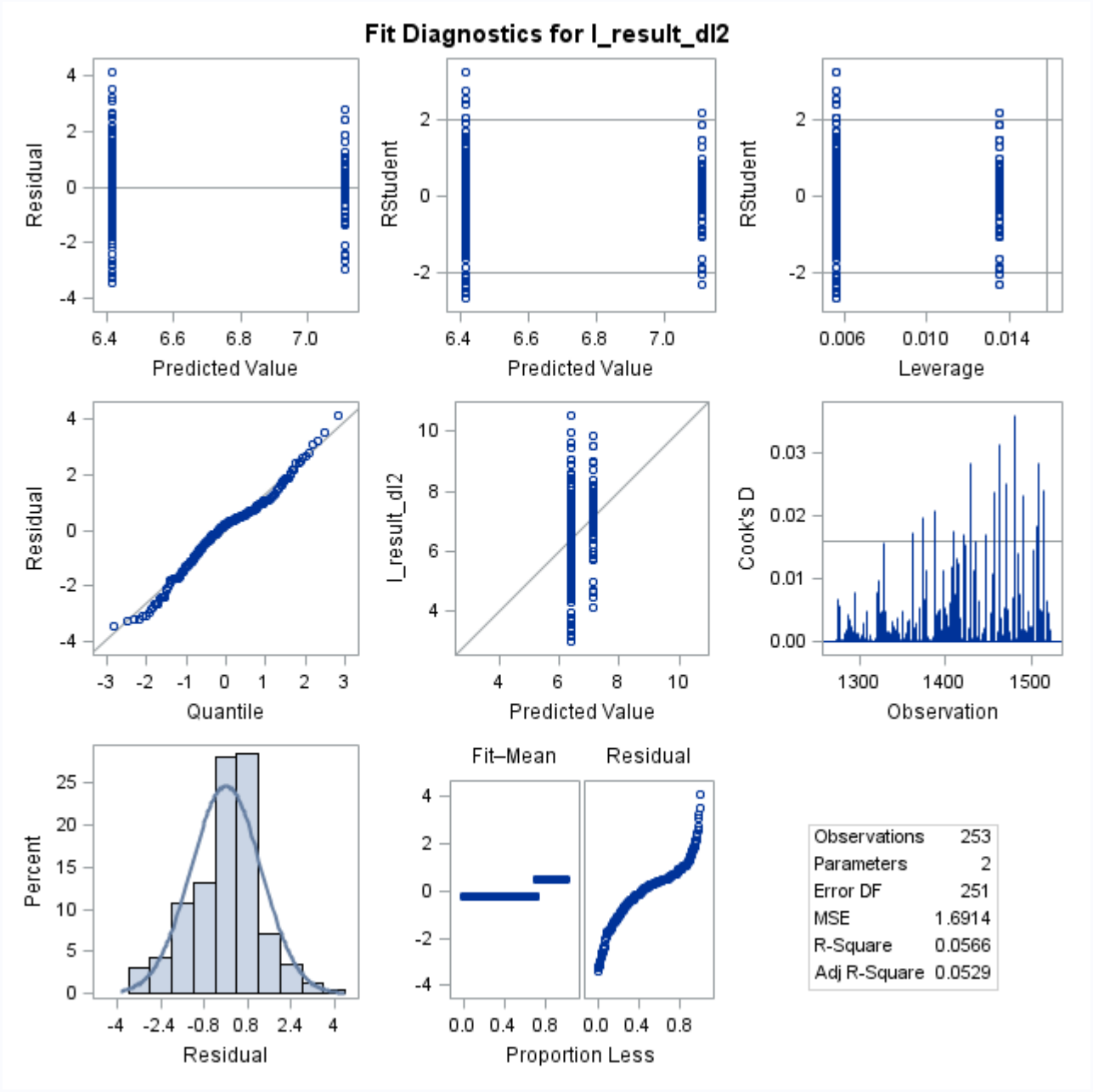
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	25.4922668	25.4922668	15.07	0.0001
Error	251	424.5359421	1.6913783		
Corrected Total	252	450.0282088			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.056646	19.64954	1.300530	6.618627

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	25.49226676	25.49226676	15.07	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	25.49226676	25.49226676	15.07	0.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 2
Error DF 251
MSE 1.6914
R-Square 0.0566
Adj R-Square 0.0529

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	6.41453159	0.0001
YES	7.11231736	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	17.5283	17.5283	2.52	0.1138
Error	251	1747.5	6.9623		

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	179	6.41453159	1.36294681
YES	74	7.11231736	1.13402464

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

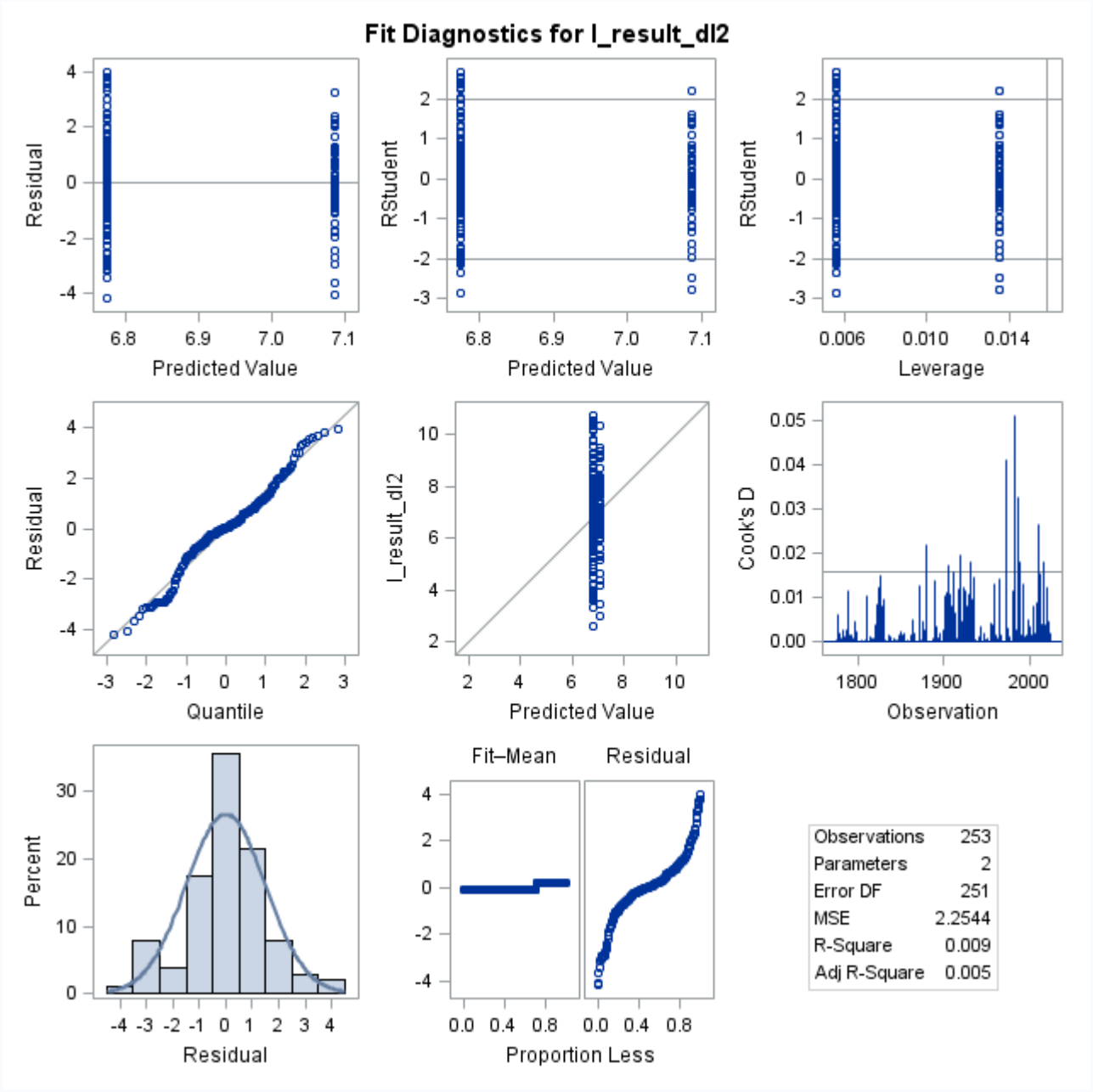
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.1198696	5.1198696	2.27	0.1331
Error	251	565.8659080	2.2544458		
Corrected Total	252	570.9857776			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.008967	21.87051	1.501481	6.865325

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	5.11986963	5.11986963	2.27	0.1331

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	5.11986963	5.11986963	2.27	0.1331


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 2
Error DF 251
MSE 2.2544
R-Square 0.009
Adj R-Square 0.005

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	6.77385883	0.1331
YES	7.08657284	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	25.8653	25.8653	2.03	0.1555
Error	251	3199.0	12.7448		

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	179	6.77385883	1.56713997
YES	74	7.08657284	1.32784088

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

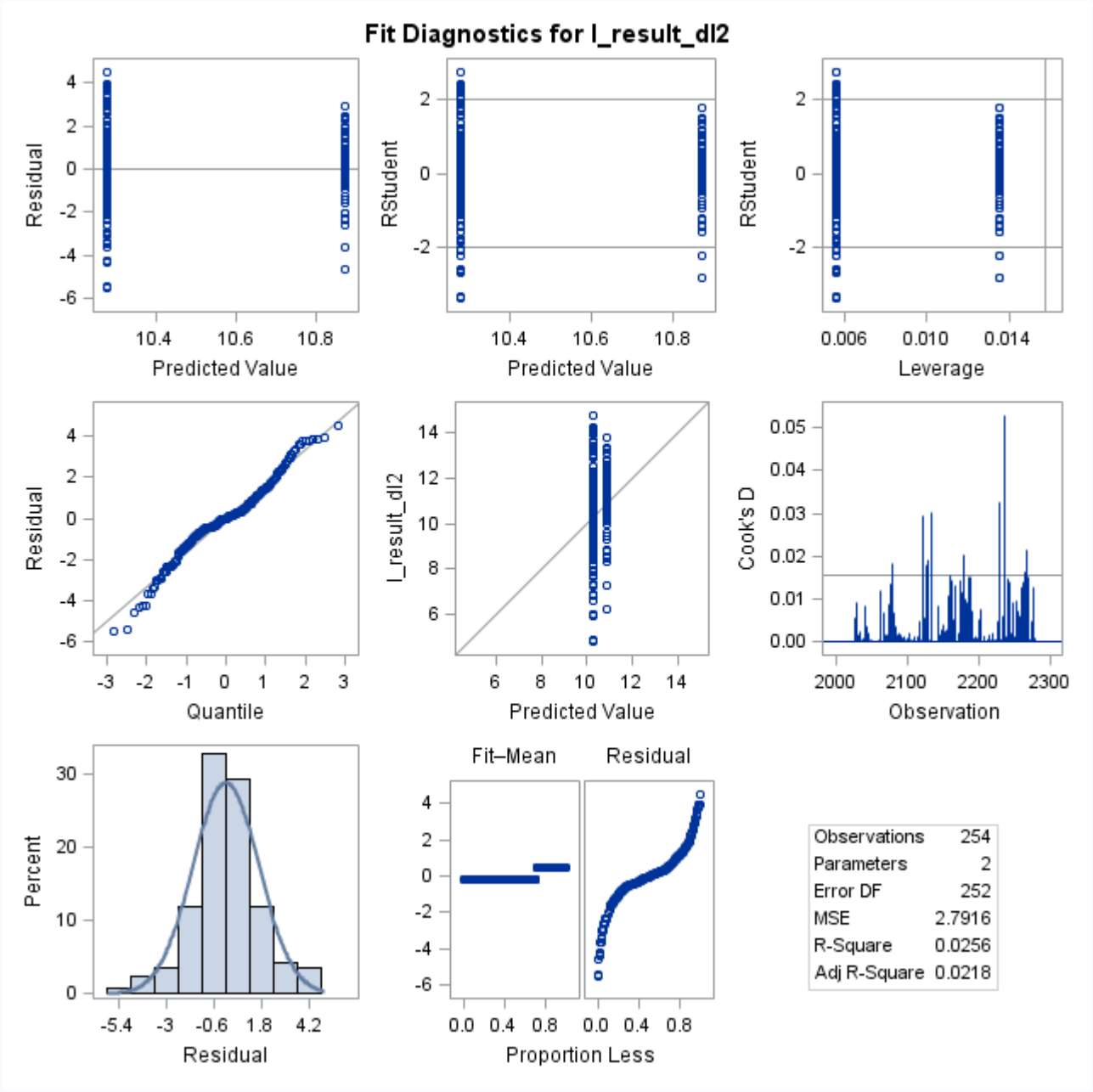
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	18.4985672	18.4985672	6.63	0.0106
Error	252	703.4862750	2.7916122		
Corrected Total	253	721.9848422			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.025622	15.98867	1.670812	10.44997

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	18.49856724	18.49856724	6.63	0.0106

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	18.49856724	18.49856724	6.63	0.0106


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 2.7916
R-Square 0.0256
Adj R-Square 0.0218

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	10.2769400	0.0106
YES	10.8708680	

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	88.3660	88.3660	3.80	0.0525
Error	252	5866.2	23.2786		

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	10.2769400	1.77915780
YES	**74**	10.8708680	1.36932757

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

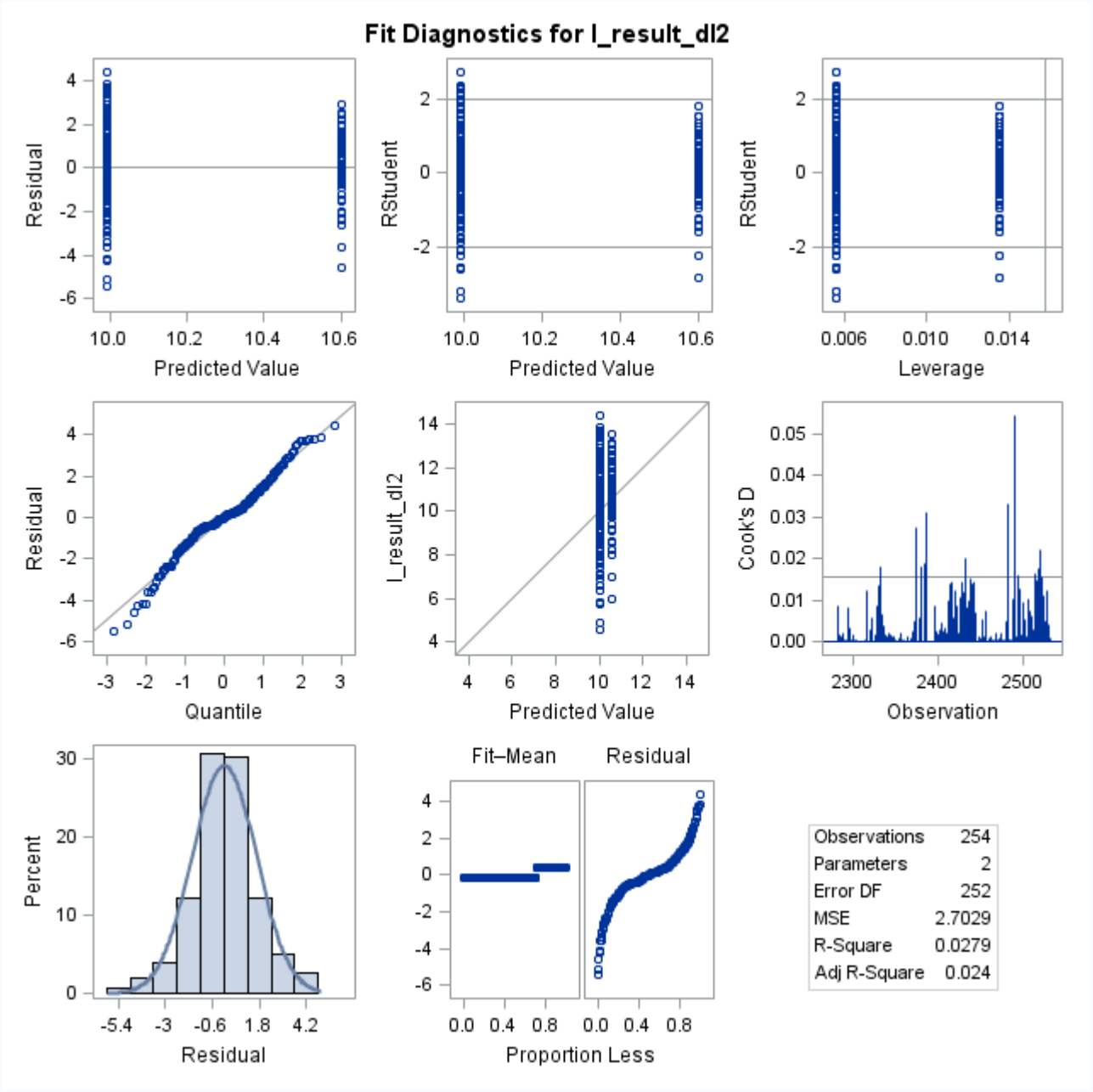
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	19.5257566	19.5257566	7.22	0.0077
Error	252	681.1404676	2.7029384		
Corrected Total	253	700.6662243			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.027867	16.16662	1.644062	10.16948

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	19.52575663	19.52575663	7.22	0.0077

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	19.52575663	19.52575663	7.22	0.0077


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 2.7029
R-Square 0.0279
Adj R-Square 0.024

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	9.9917076	0.0077
YES	10.6019027	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	71.9459	71.9459	3.40	0.0664
Error	252	5333.9	21.1662		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	9.9917076	1.74349871
YES	74	10.6019027	1.37002378

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

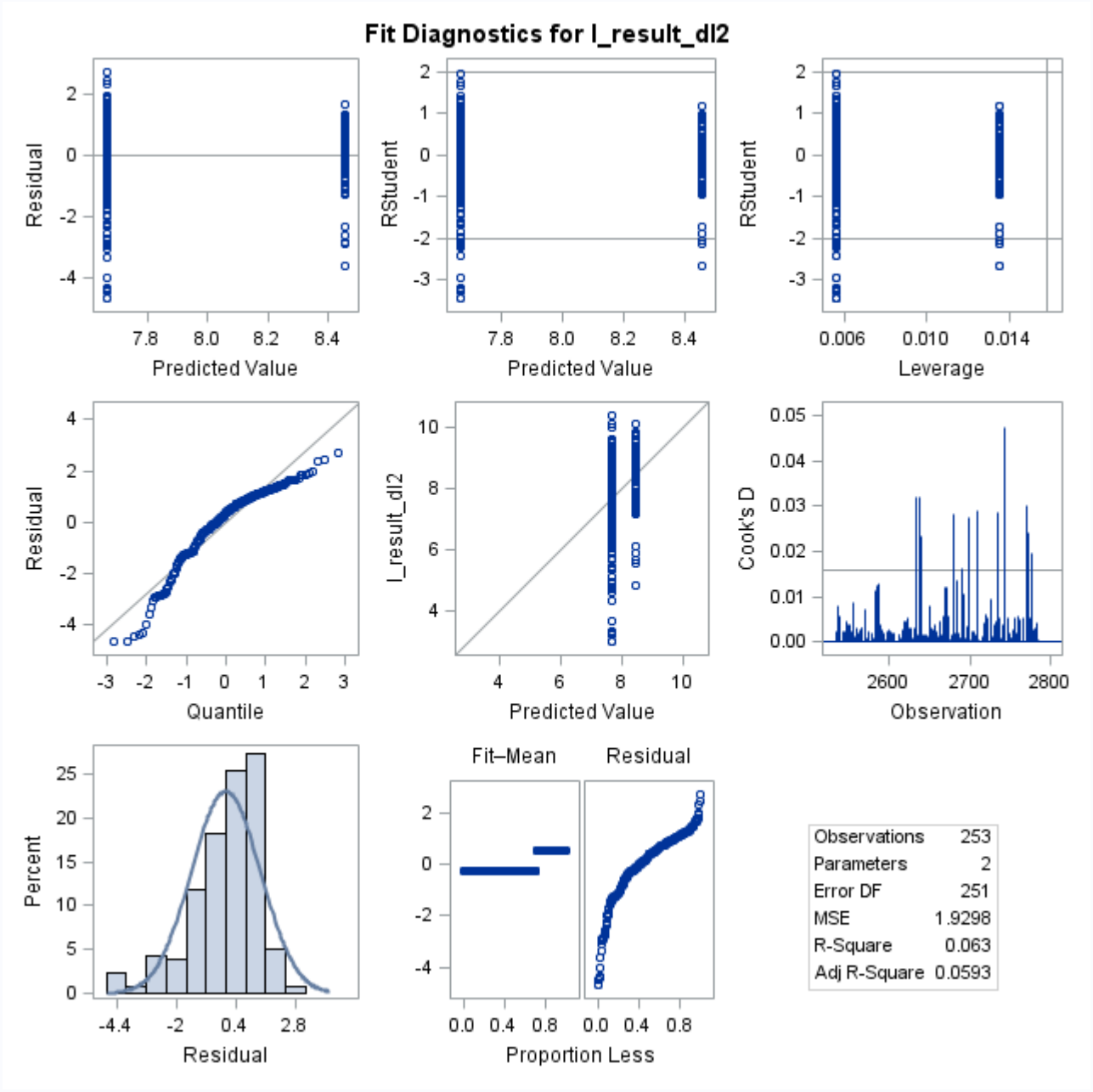
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	32.5809544	32.5809544	16.88	<.0001
Error	251	484.3803567	1.9298022		
Corrected Total	252	516.9613111			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.063024	17.59424	1.389173	7.895615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	32.58095443	32.58095443	16.88	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	32.58095443	32.58095443	16.88	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 2
Error DF 251
MSE 1.9298
R-Square 0.063
Adj R-Square 0.0593

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	7.66488137	<.0001
YES	8.45374110	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	71.3418	71.3418	6.07	0.0144
Error	251	2951.7	11.7598		

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	179	7.66488137	1.50620397
YES	74	8.45374110	1.05050925

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	248
Number of Observations Used	248

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

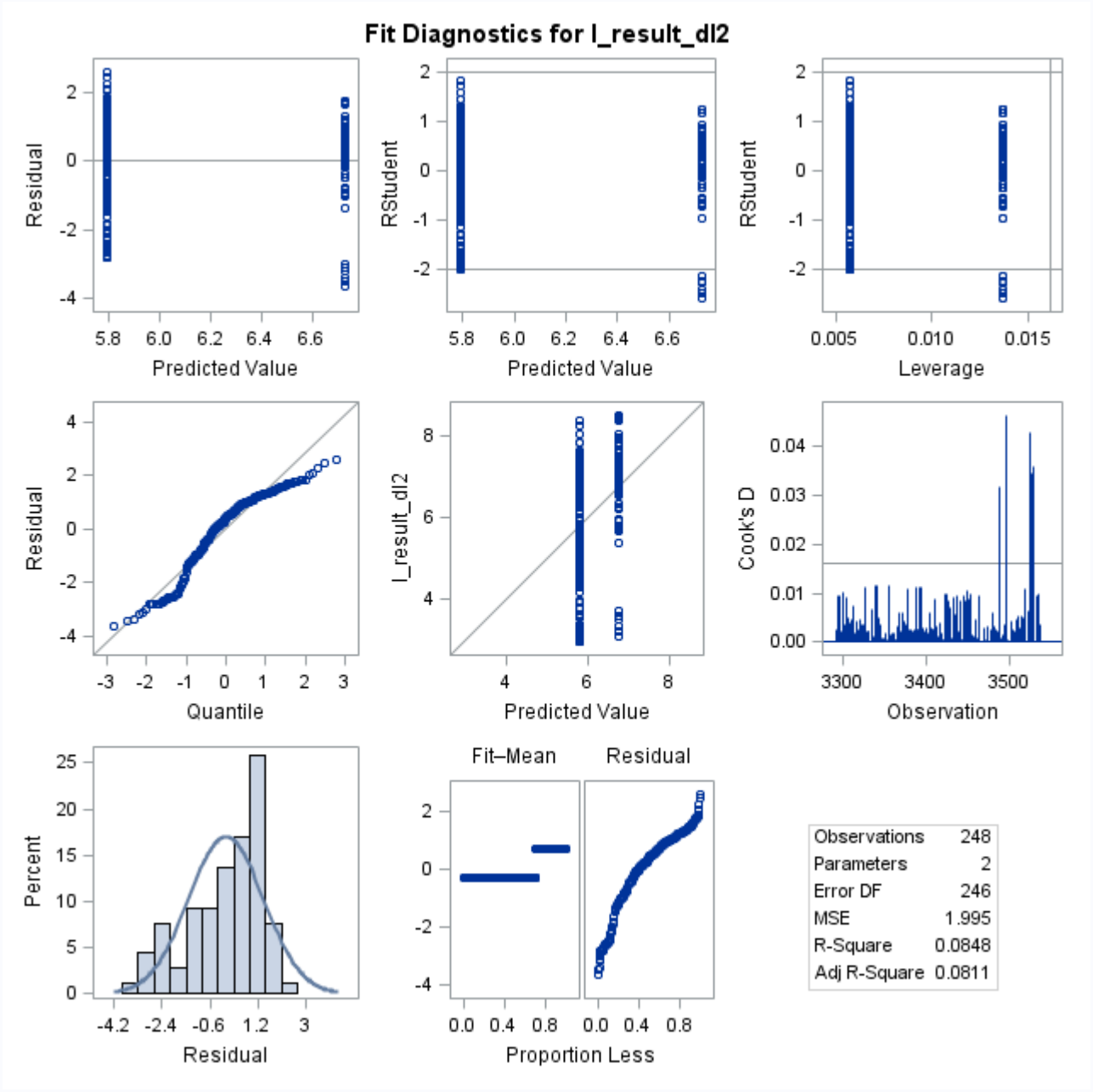
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	45.4794785	45.4794785	22.80	<.0001
Error	246	490.7757071	1.9950232		
Corrected Total	247	536.2551856			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.084809	23.28569	1.412453	6.065755

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	45.47947849	45.47947849	22.80	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	45.47947849	45.47947849	22.80	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 248
Parameters 2
Error DF 246
MSE 1.995
R-Square 0.0848
Adj R-Square 0.0811

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.78917255	<.0001
YES	6.72879444	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	29.9877	29.9877	4.87	0.0282
Error	246	1514.2	6.1553		

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**175**	5.78917255	1.48868631
YES	**73**	6.72879444	1.20852975

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

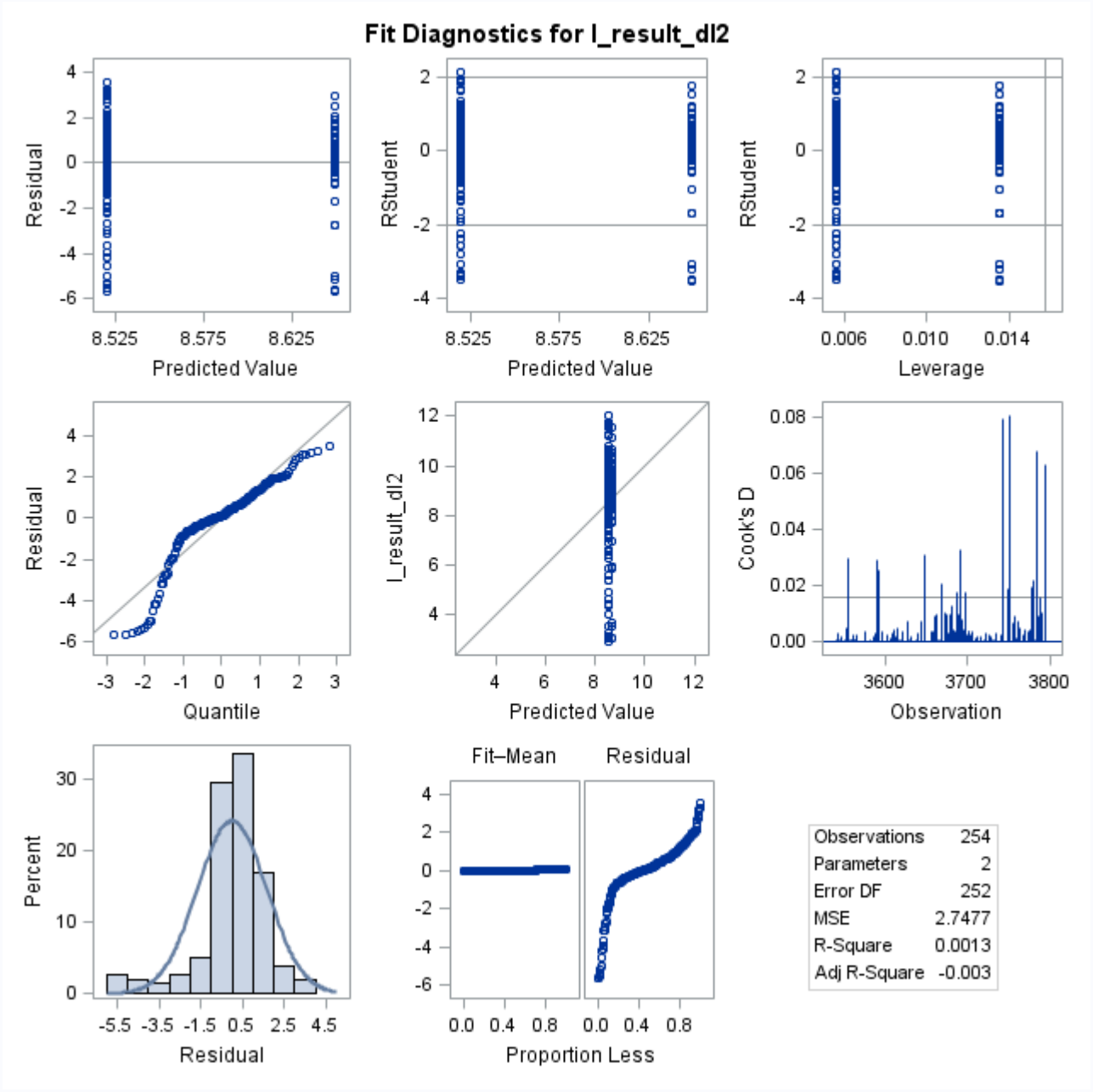
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.8790978	0.8790978	0.32	0.5722
Error	252	692.4329225	2.7477497		
Corrected Total	253	693.3120203			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001268	19.37128	1.657634	8.557173

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.87909779	0.87909779	0.32	0.5722

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.87909779	0.87909779	0.32	0.5722


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 2.7477
R-Square 0.0013
Adj R-Square -0.003

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	8.51945252	0.5722
YES	8.64892676	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.2533	0.2533	0.01	0.9327
Error	252	8927.2	35.4255		

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	8.51945252	1.66183815
YES	**74**	8.64892676	1.64727895

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

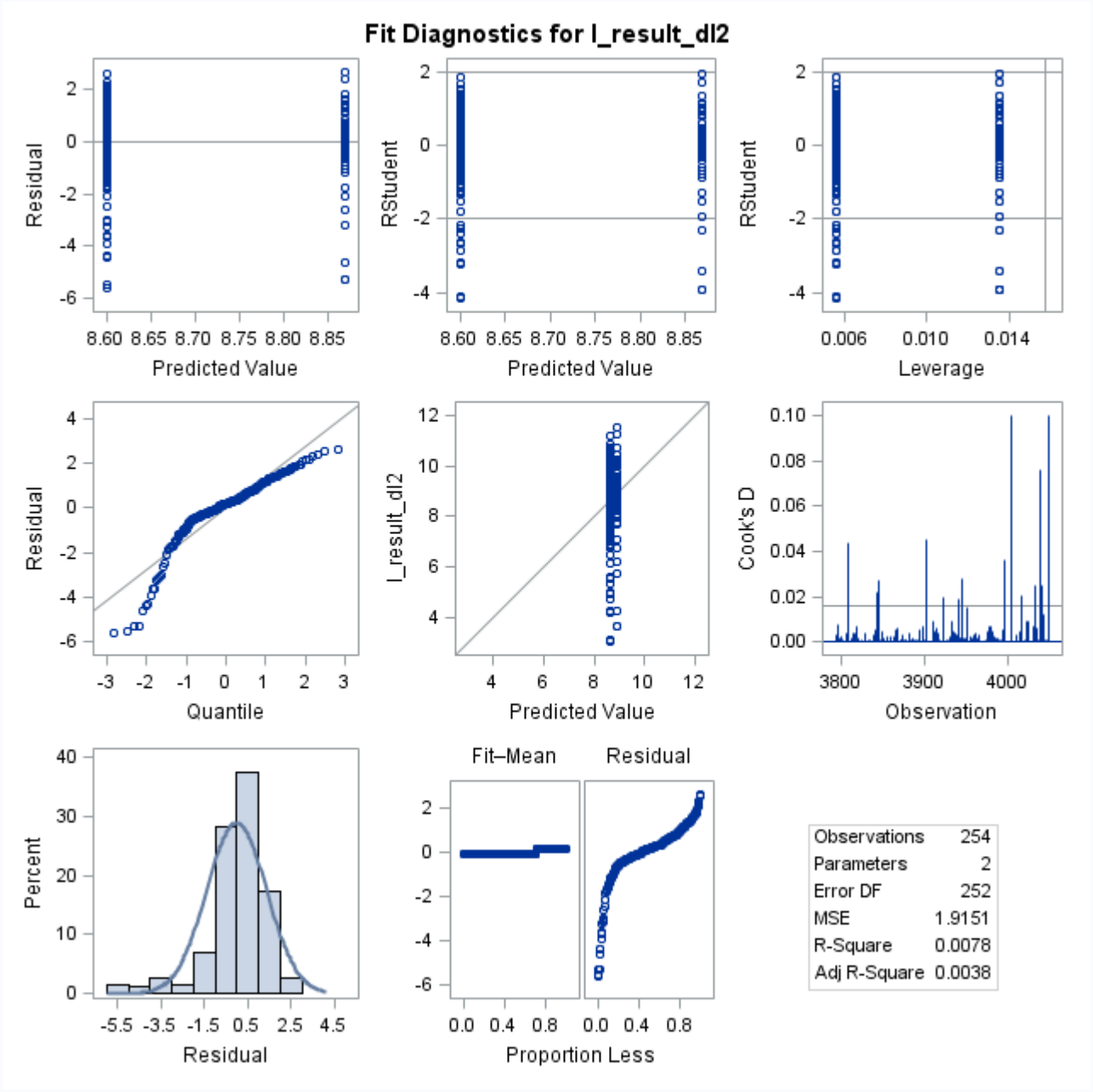
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.7747908	3.7747908	1.97	0.1616
Error	252	482.6169757	1.9151467		
Corrected Total	253	486.3917665			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.007761	15.94634	1.383888	8.678405

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	3.77479082	3.77479082	1.97	0.1616

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	3.77479082	3.77479082	1.97	0.1616


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.9151
R-Square 0.0078
Adj R-Square 0.0038

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	8.60024090	0.1616
YES	8.86853504	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	1.0490	1.0490	0.05	0.8230
Error	252	5272.6	20.9231		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	8.60024090	1.36720360
YES	**74**	8.86853504	1.42397282

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

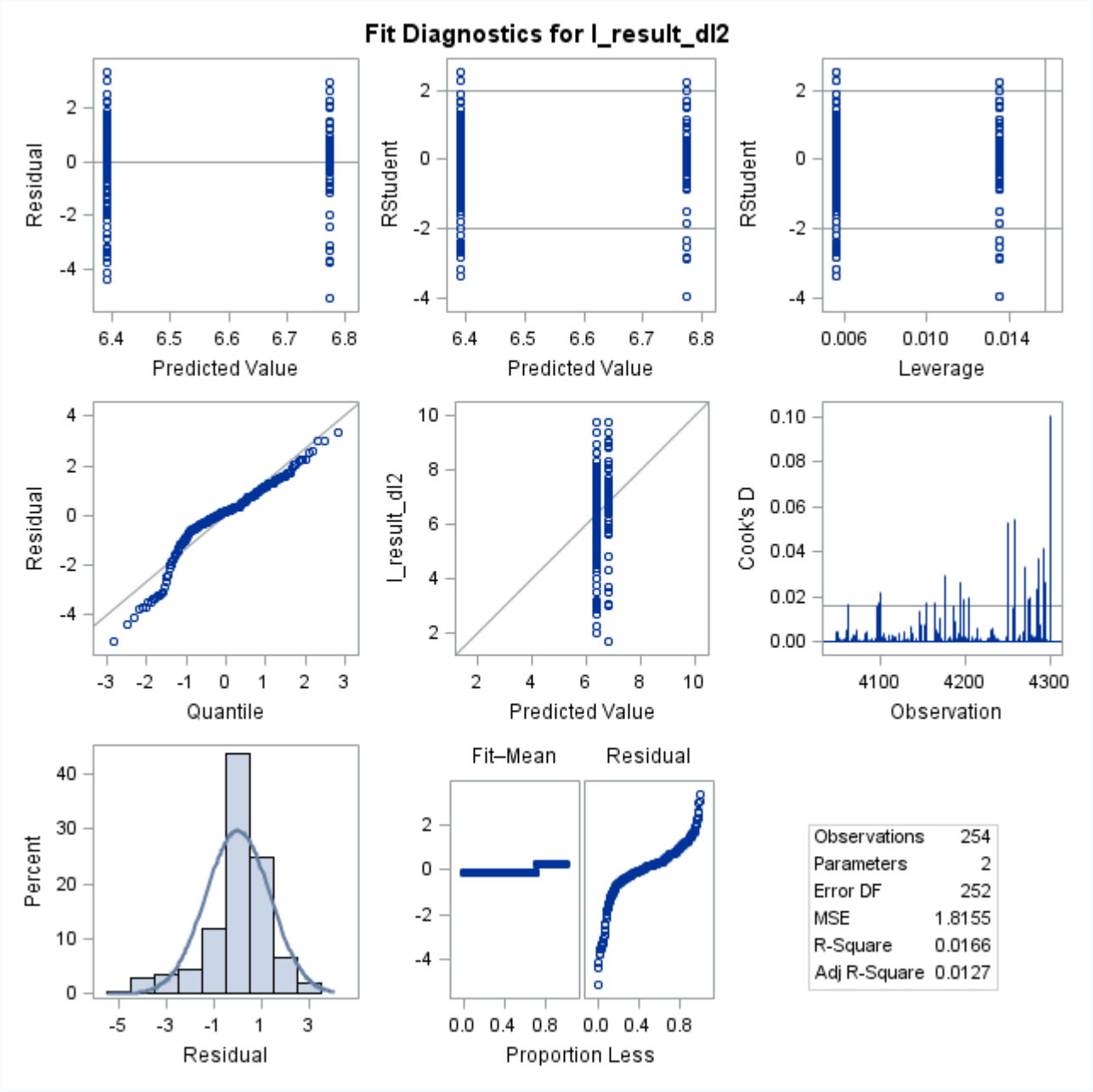
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.7024787	7.7024787	4.24	0.0404
Error	252	457.5047776	1.8154951		
Corrected Total	253	465.2072563			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.016557	20.72417	1.347403	6.501603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	7.70247869	7.70247869	4.24	0.0404

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	7.70247869	7.70247869	4.24	0.0404


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.8155
R-Square 0.0166
Adj R-Square 0.0127

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	6.38994787	0.0404
YES	6.77319596	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.7772	0.7772	0.06	0.8062
Error	252	3247.0	12.8850		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	6.38994787	1.33251511
YES	**74**	6.77319596	1.38323128

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

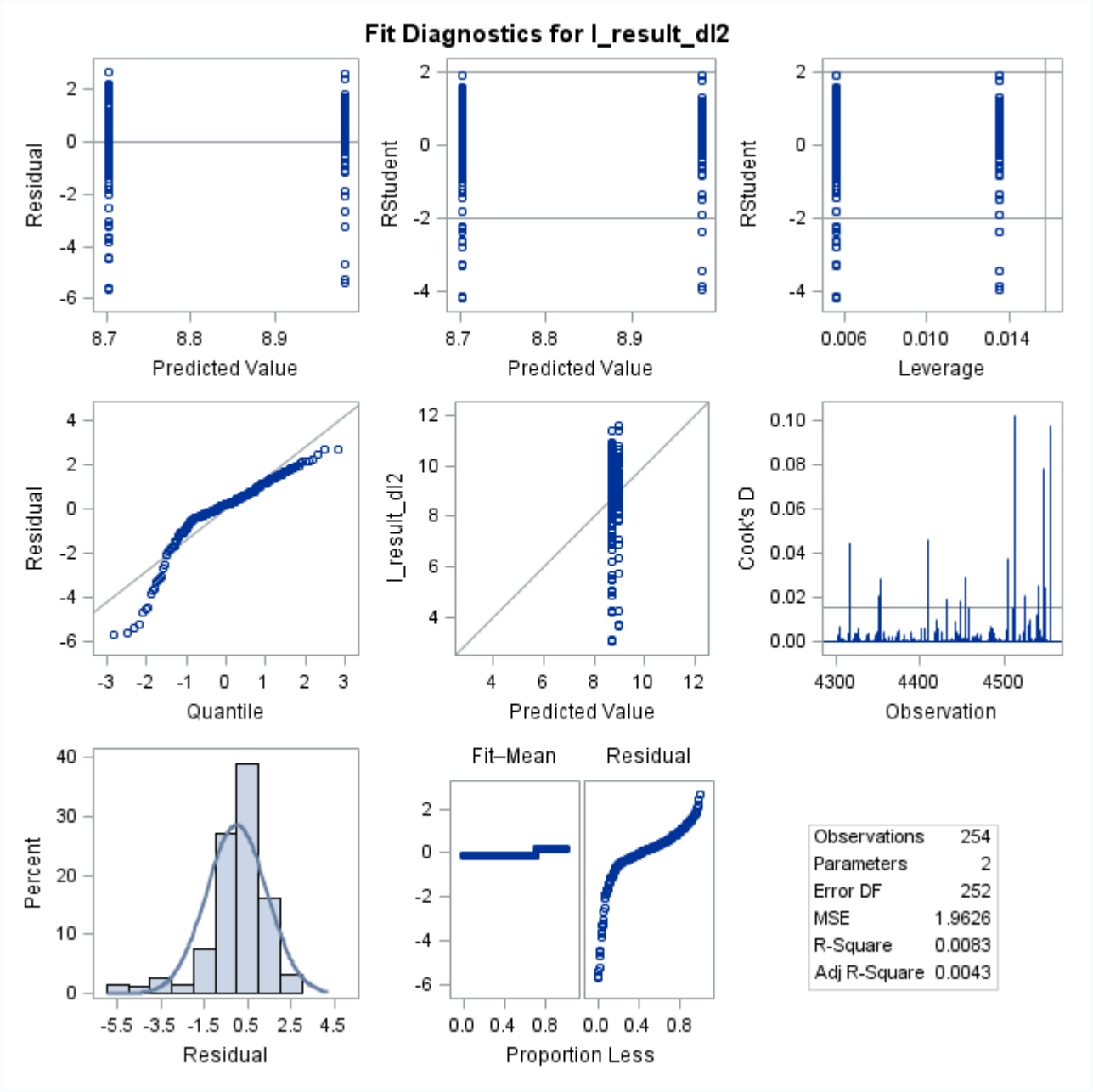
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.1238071	4.1238071	2.10	0.1484
Error	252	494.5679579	1.9625713		
Corrected Total	253	498.6917650			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.008269	15.94959	1.400918	8.783410

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	4.12380711	4.12380711	2.10	0.1484

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	4.12380711	4.12380711	2.10	0.1484


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.9626
R-Square 0.0083
Adj R-Square 0.0043

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	8.70171223	0.1484
YES	8.98213541	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	1.3051	1.3051	0.06	0.8089
Error	252	5610.0	22.2620		

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	8.70171223	1.38267090
YES	**74**	8.98213541	1.44468582

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

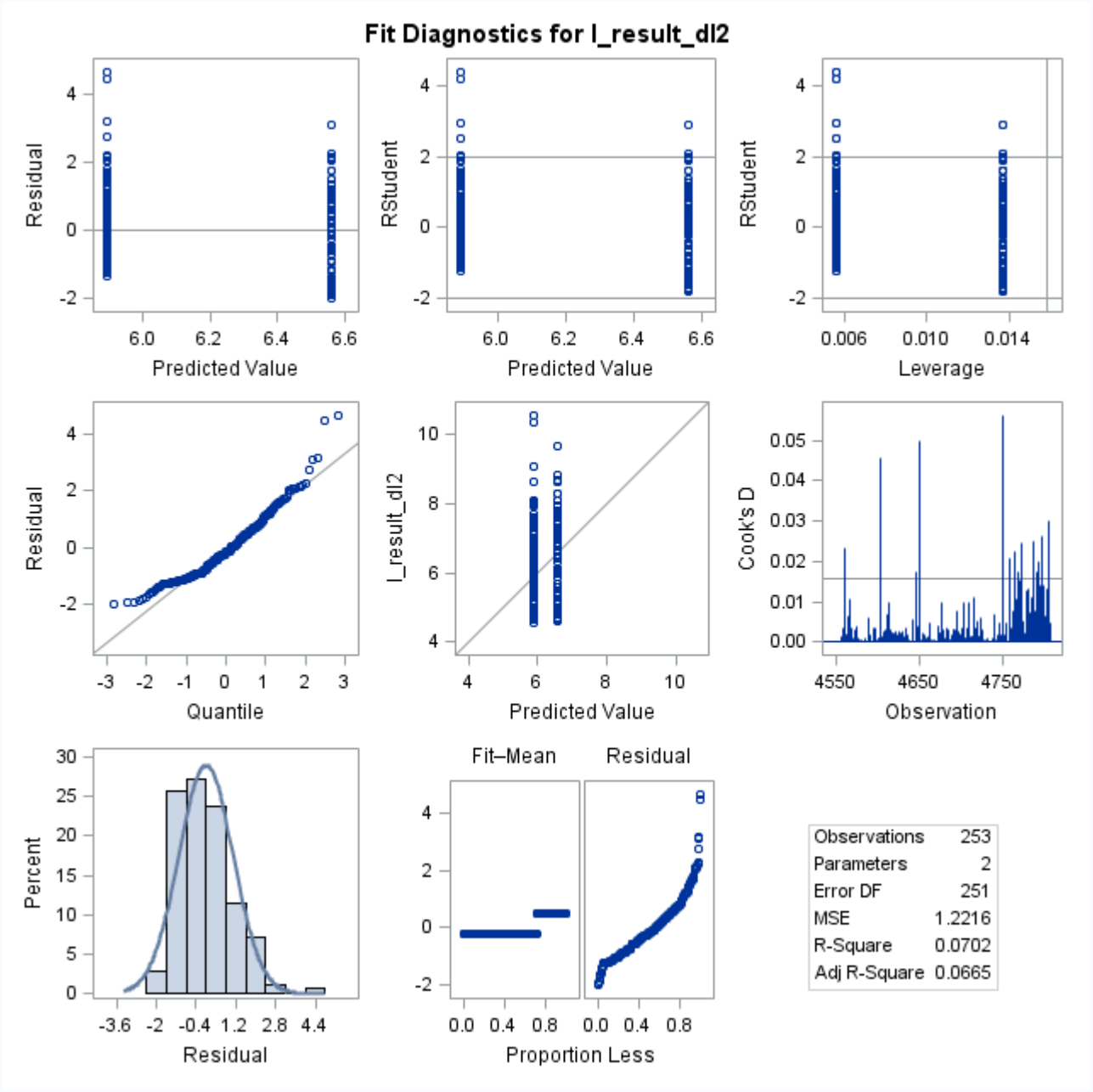
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	23.1680735	23.1680735	18.96	<.0001
Error	251	306.6289978	1.2216295		
Corrected Total	252	329.7970713			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.070249	18.16798	1.105273	6.083634

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	23.16807350	23.16807350	18.96	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	23.16807350	23.16807350	18.96	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 2
Error DF 251
MSE 1.2216
R-Square 0.0702
Adj R-Square 0.0665

The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.89092115	<.0001
YES	6.55881514	

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	3.1119	3.1119	0.61	0.4342
Error	251	1273.1	5.0722		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	5.89092115	1.07131707
YES	**73**	6.55881514	1.18548553

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

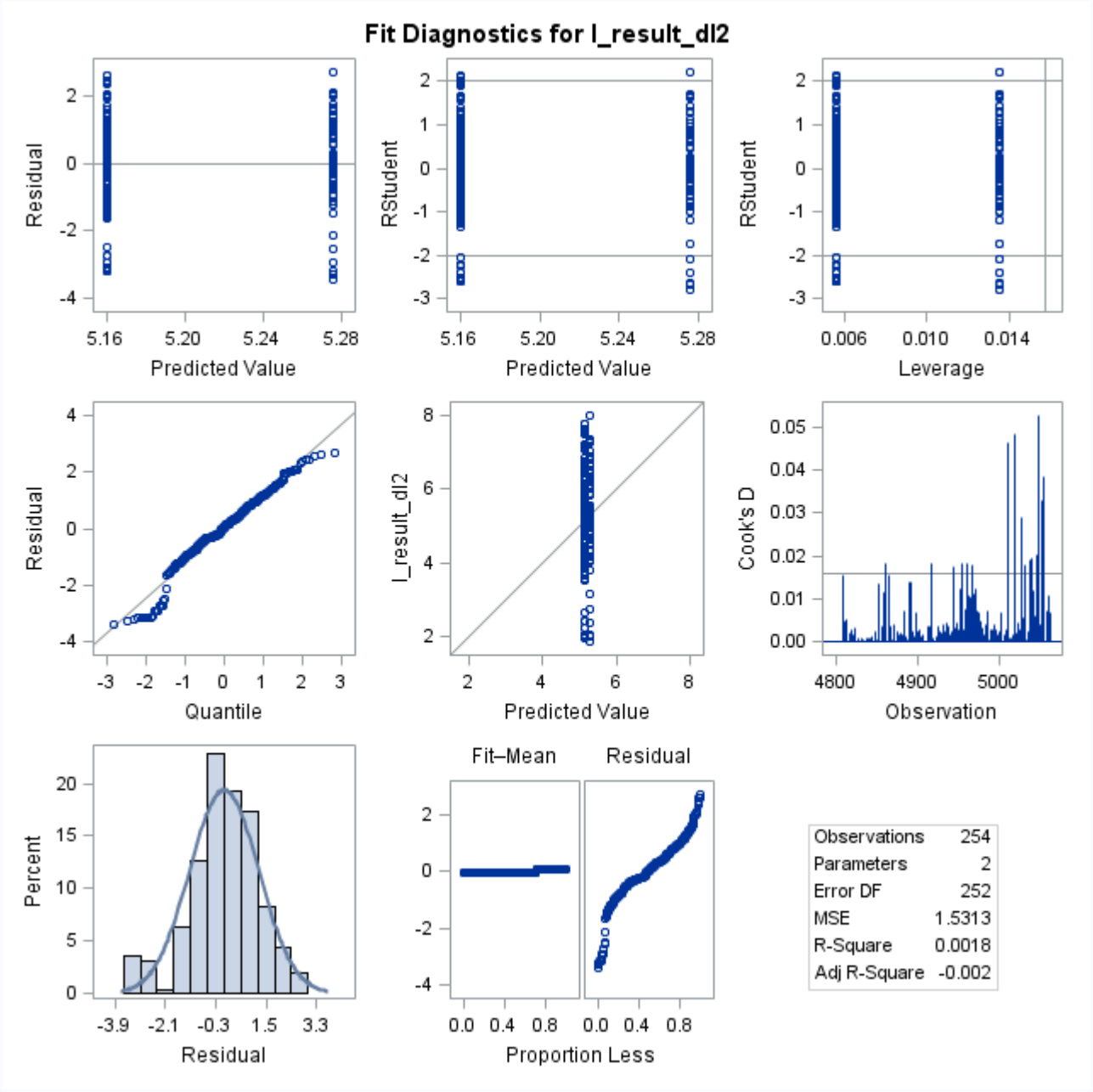
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.6968364	0.6968364	0.46	0.5006
Error	252	385.8823664	1.5312792		
Corrected Total	253	386.5792027			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001803	23.82529	1.237449	5.193845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.69683636	0.69683636	0.46	0.5006

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.69683636	0.69683636	0.46	0.5006


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.5313
R-Square 0.0018
Adj R-Square -0.002

The GLM Procedure
Least Squares Means
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.16026095	0.5006
YES	5.27553463	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.00441	0.00441	0.00	0.9782
Error	252	1486.1	5.8972		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	5.16026095	1.23709140
YES	74	5.27553463	1.23832430

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

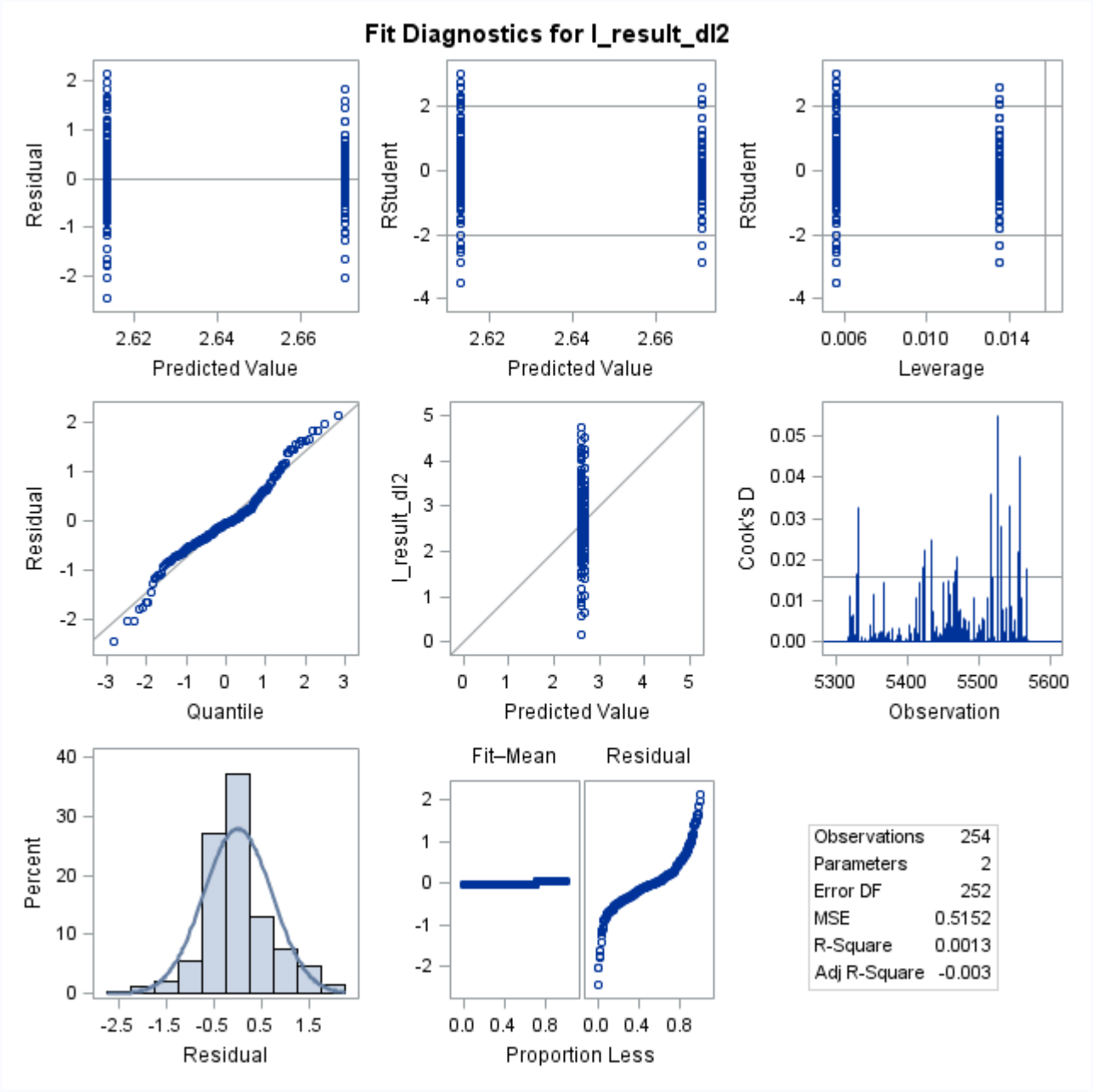
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.1739790	0.1739790	0.34	0.5617
Error	252	129.8210215	0.5151628		
Corrected Total	253	129.9950005			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001338	27.29139	0.717748	2.629944

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.17397900	0.17397900	0.34	0.5617

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.17397900	0.17397900	0.34	0.5617


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 0.5152
R-Square 0.0013
Adj R-Square -0.003

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	2.61316329	0.5617
YES	2.67076206	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.6544	0.6544	0.80	0.3727
Error	252	206.8	0.8205		

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	2.61316329	0.73938422
YES	74	2.67076206	0.66170892

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

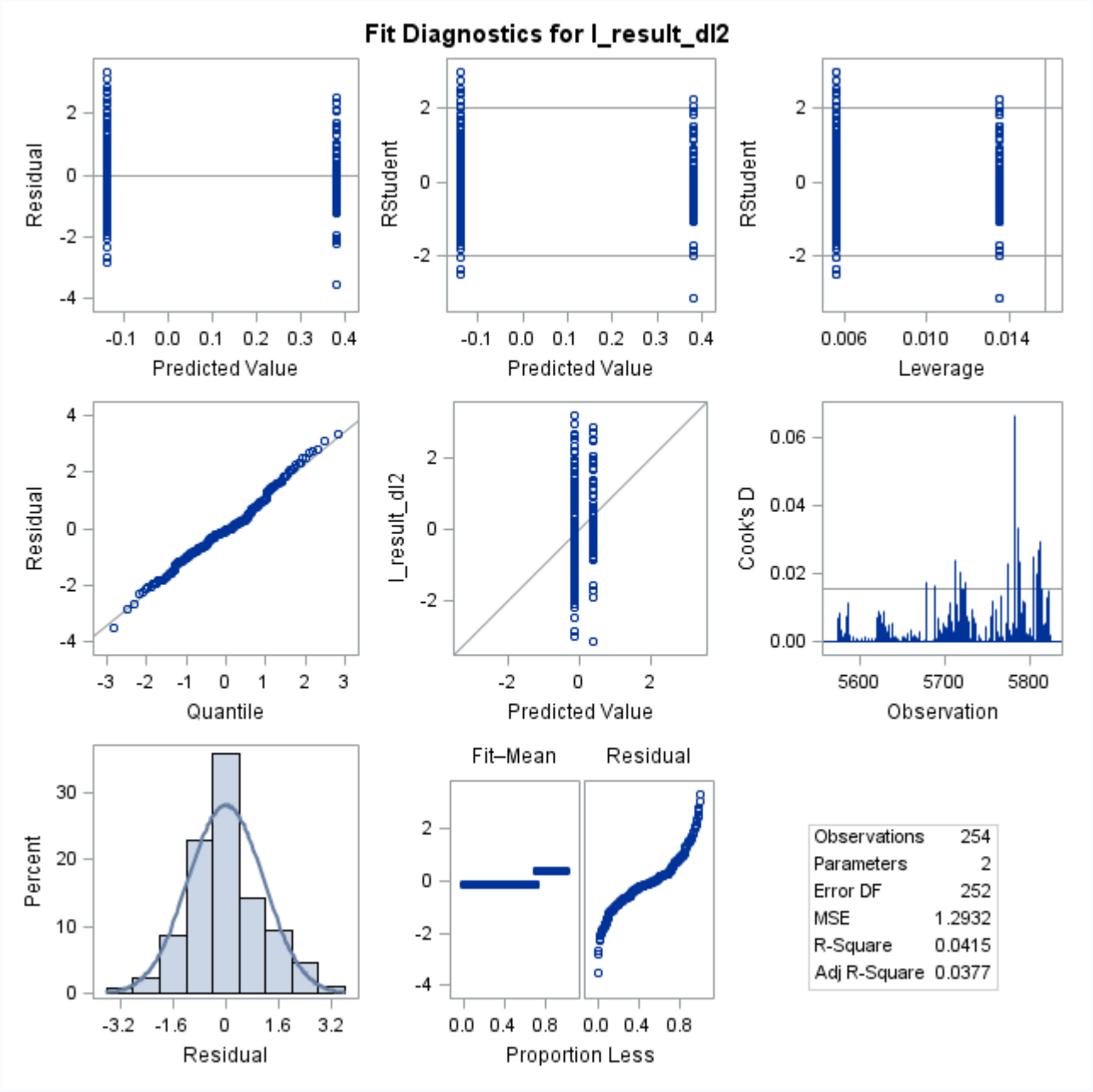
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	14.0939878	14.0939878	10.90	0.0011
Error	252	325.8840749	1.2931908		
Corrected Total	253	339.9780628			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.041456	9757.548	1.137185	0.011654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	14.09398784	14.09398784	10.90	0.0011

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	14.09398784	14.09398784	10.90	0.0011


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.2932
R-Square 0.0415
Adj R-Square 0.0377

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.13938131	0.0011
YES	0.37903862	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.1285	0.1285	0.03	0.8555
Error	252	974.5	3.8670		

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	-0.13938131	1.14222462
YES	**74**	0.37903862	1.12473363

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

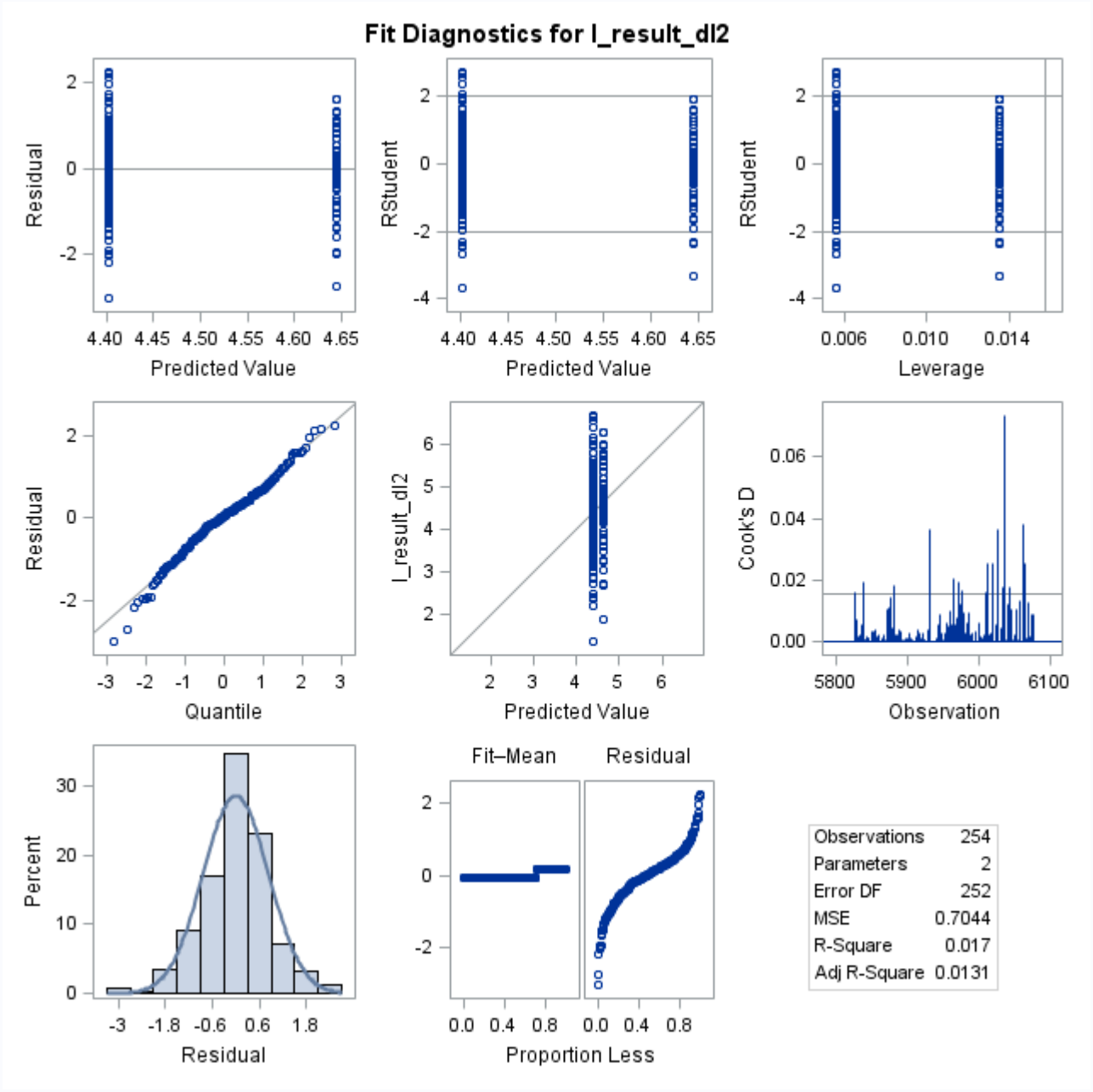
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.0672048	3.0672048	4.35	0.0379
Error	252	177.5143858	0.7044222		
Corrected Total	253	180.5815906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.016985	18.76439	0.839299	4.472828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	3.06720479	3.06720479	4.35	0.0379

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	3.06720479	3.06720479	4.35	0.0379


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 0.7044
R-Square 0.017
Adj R-Square 0.0131

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Chromium

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.40236896	0.0379
YES	4.64421341	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.2099	0.2099	0.15	0.7023
Error	252	361.3	1.4338		

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	4.40236896	0.84930196
YES	**74**	4.64421341	0.81424992

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Copper
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

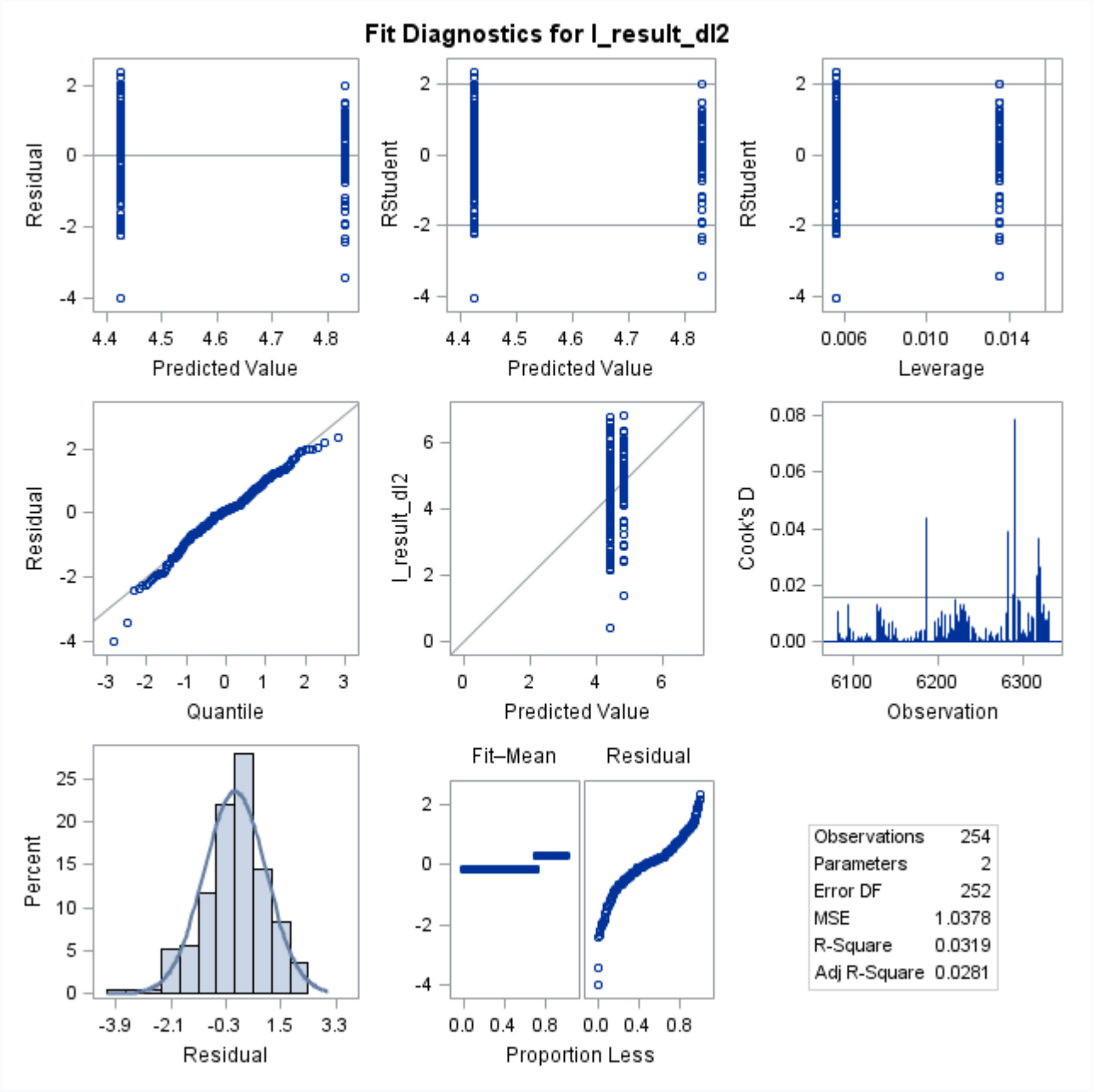
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.6190046	8.6190046	8.30	0.0043
Error	252	261.5354186	1.0378390		
Corrected Total	253	270.1544232			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.031904	22.41945	1.018744	4.544017

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	8.61900459	8.61900459	8.30	0.0043

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	8.61900459	8.61900459	8.30	0.0043


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.0378
R-Square 0.0319
Adj R-Square 0.0281

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.42590563	0.0043
YES	4.83131455	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	1.1655	1.1655	0.39	0.5346
Error	252	759.5	3.0139		

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	4.42590563	1.03879491
YES	**74**	4.83131455	0.96782086

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Lead
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

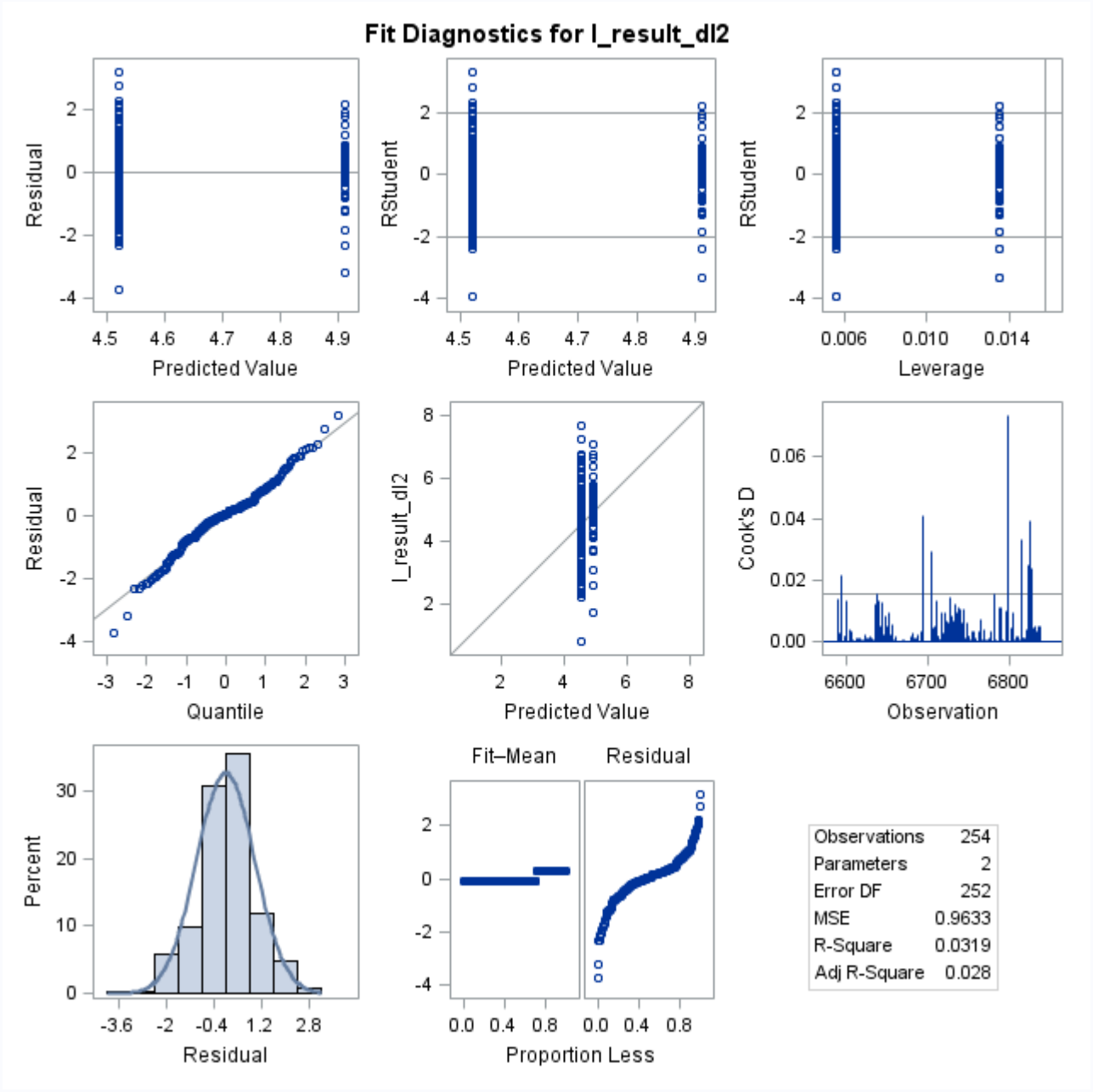
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.9890156	7.9890156	8.29	0.0043
Error	252	242.7494607	0.9632915		
Corrected Total	253	250.7384763			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.031862	21.17926	0.981474	4.634128

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	7.98901557	7.98901557	8.29	0.0043

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	7.98901557	7.98901557	8.29	0.0043


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 0.9633
R-Square 0.0319
Adj R-Square 0.028

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.52041544	0.0043
YES	4.91072696	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	7.0129	7.0129	2.35	0.1264
Error	252	751.4	2.9818		

Metals Lead
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	4.52041544	1.03352833
YES	**74**	4.91072696	0.84029590

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

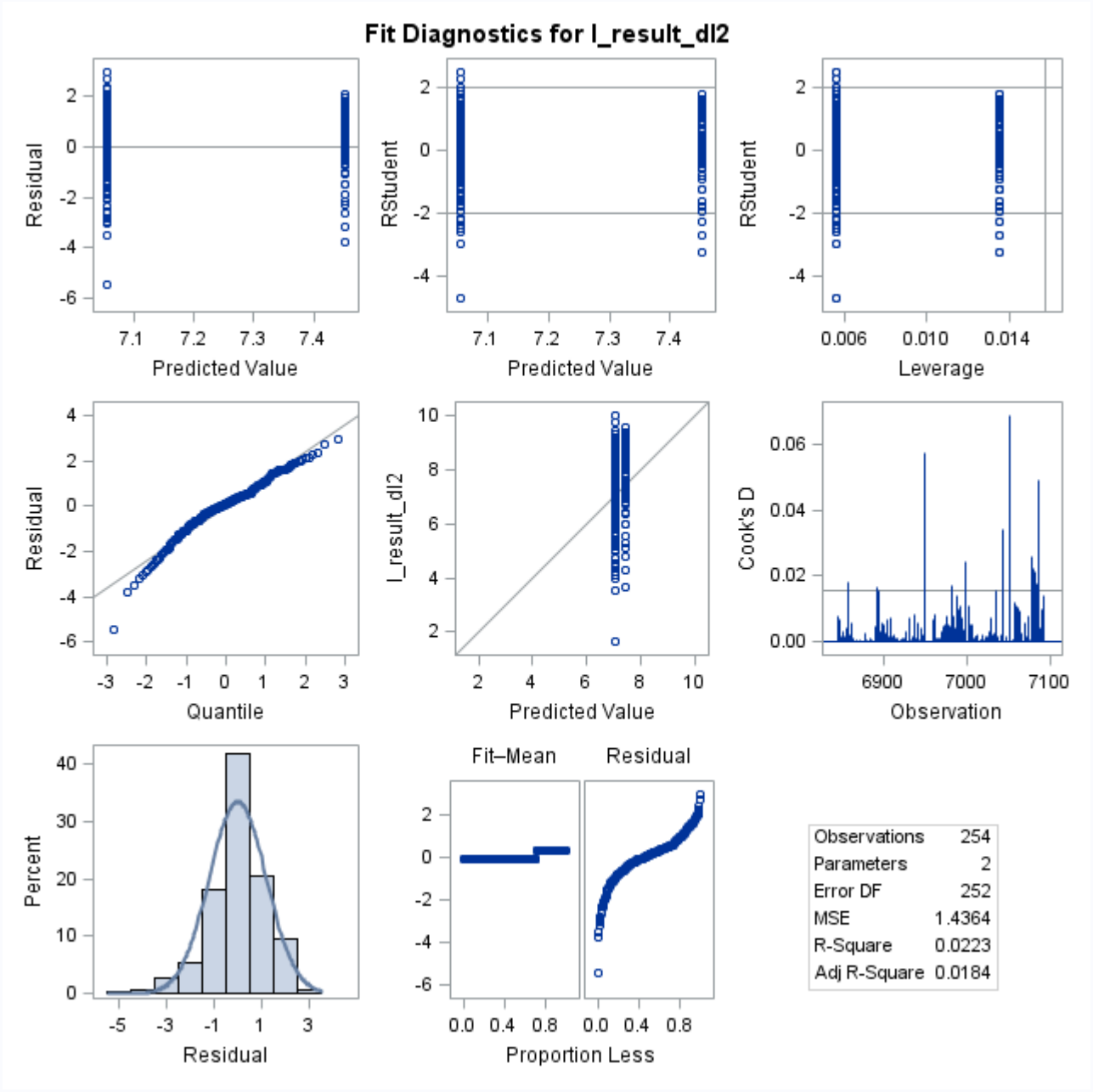
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.2507082	8.2507082	5.74	0.0173
Error	252	361.9753392	1.4364101		
Corrected Total	253	370.2260474			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.022286	16.71406	1.198503	7.170631

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	8.25070819	8.25070819	5.74	0.0173

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	8.25070819	8.25070819	5.74	0.0173


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.4364
R-Square 0.0223
Adj R-Square 0.0184

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	7.05507101	0.0173
YES	7.45172366	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	4.1878	4.1878	0.55	0.4594
Error	252	1922.0	7.6270		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	7.05507101	1.23119874
YES	74	7.45172366	1.11427924

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

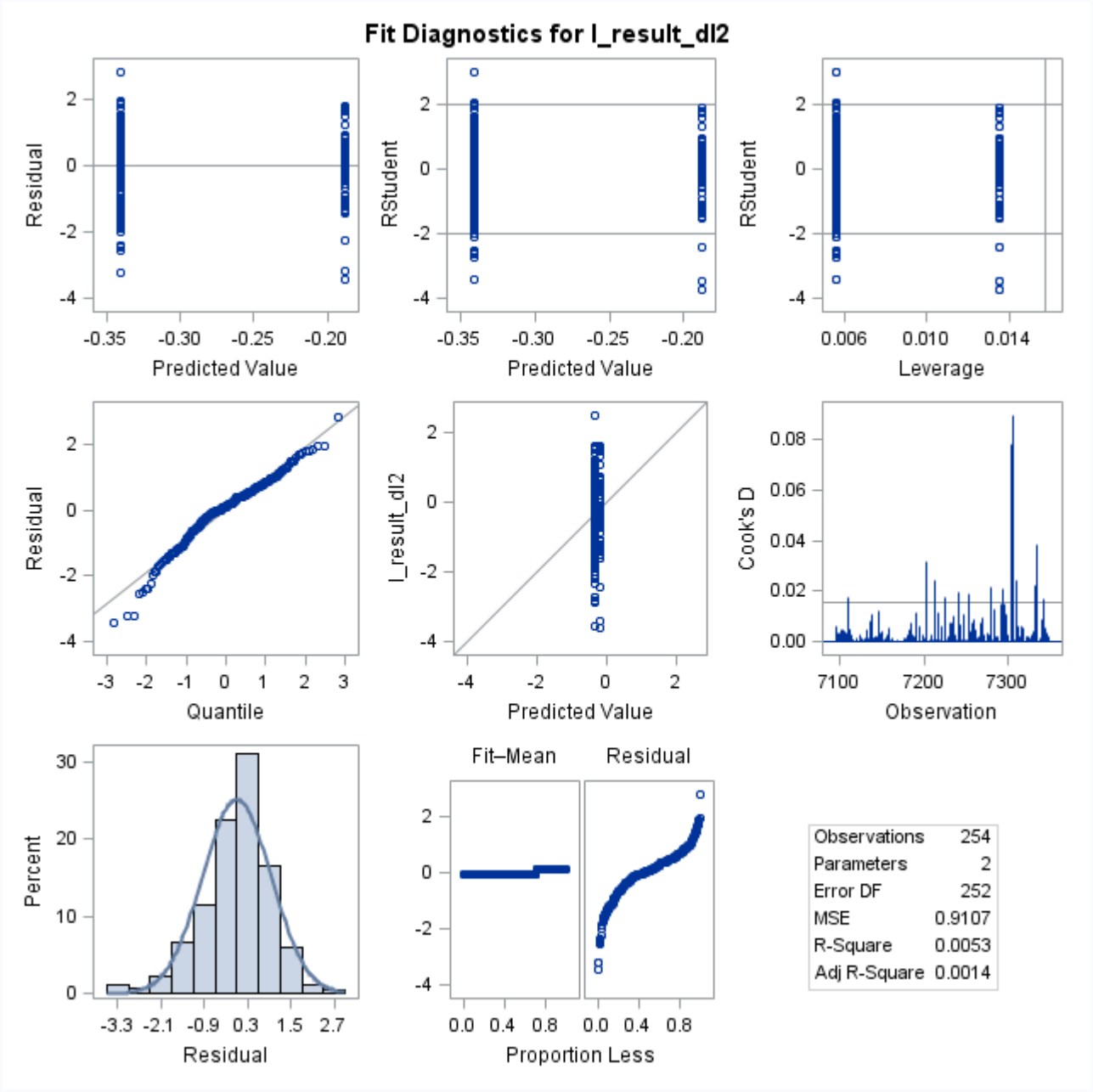
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.2264015	1.2264015	1.35	0.2470
Error	252	229.5043599	0.9107316		
Corrected Total	253	230.7307614			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.005315	-322.0379	0.954323	-0.296339

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	1.22640149	1.22640149	1.35	0.2470

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	1.22640149	1.22640149	1.35	0.2470


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 0.9107
R-Square 0.0053
Adj R-Square 0.0014

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.34089185	0.2470
YES	-0.18796594	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.00136	0.00136	0.00	0.9819
Error	252	662.6	2.6294		

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	-0.34089185	0.95399187
YES	74	-0.18796594	0.95513302

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

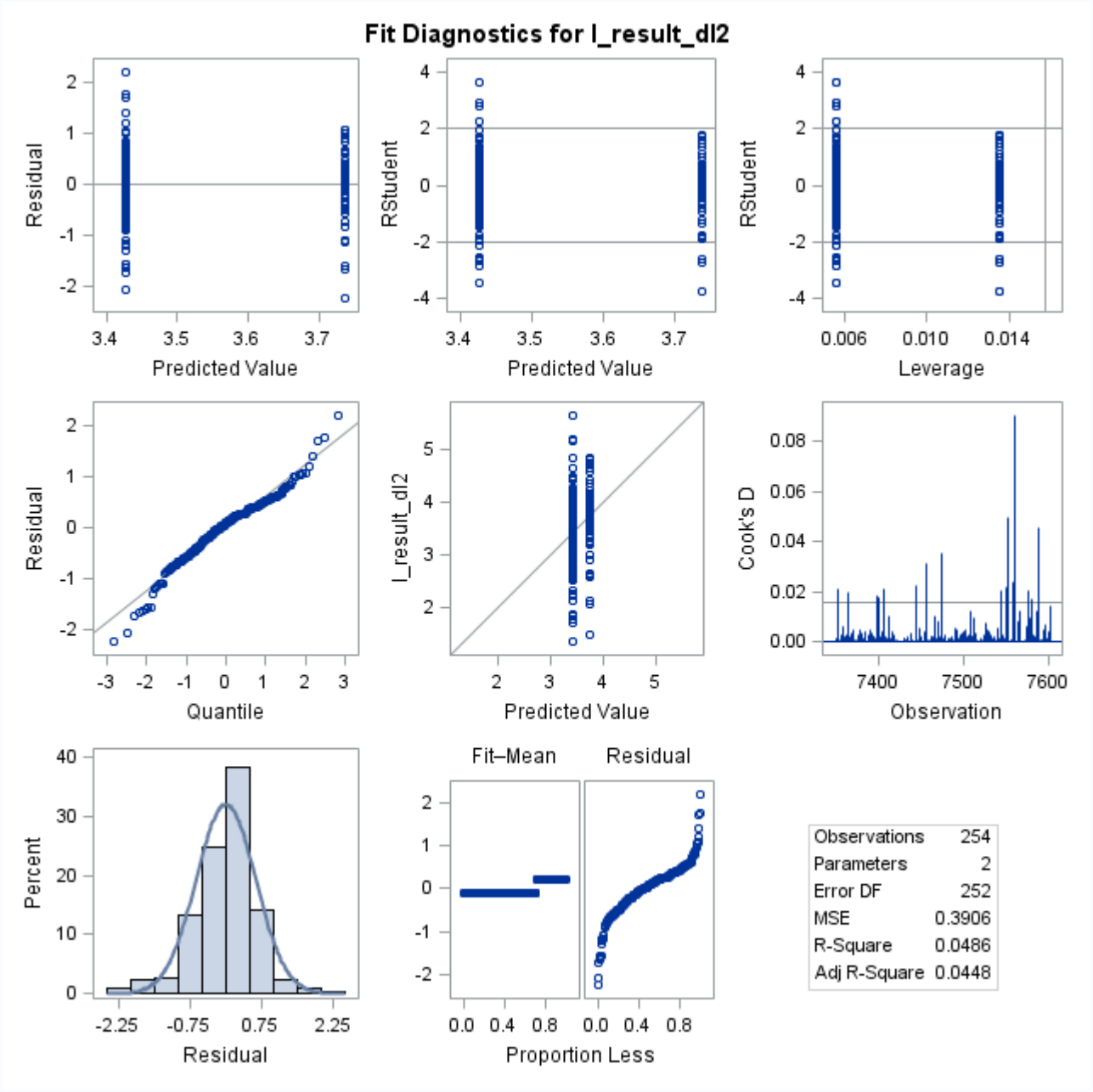
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.0299297	5.0299297	12.88	0.0004
Error	252	98.4366571	0.3906217		
Corrected Total	253	103.4665868			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.048614	17.76673	0.624997	3.517795

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	5.02992974	5.02992974	12.88	0.0004

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	5.02992974	5.02992974	12.88	0.0004


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 0.3906
R-Square 0.0486
Adj R-Square 0.0448

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	3.42756693	0.0004
YES	3.73727014	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.1606	0.1606	0.30	0.5854
Error	252	135.6	0.5383		

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	180	3.42756693	0.63712270
YES	74	3.73727014	0.59421898

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

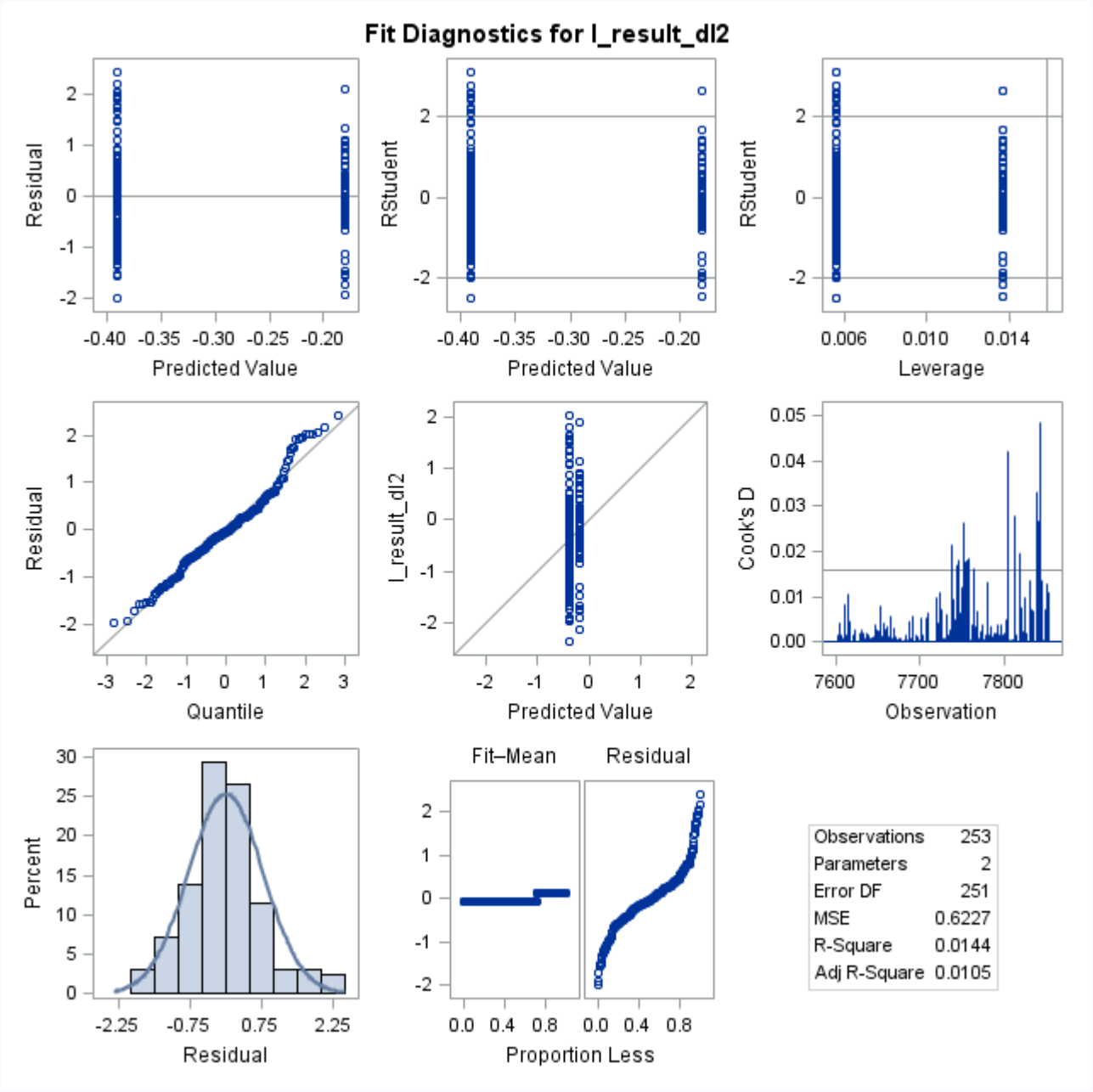
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.2847402	2.2847402	3.67	0.0566
Error	251	156.2944601	0.6226871		
Corrected Total	252	158.5792003			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.014408	-239.4937	0.789105	-0.329489

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	2.28474025	2.28474025	3.67	0.0566

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	2.28474025	2.28474025	3.67	0.0566


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 2
Error DF 251
MSE 0.6227
R-Square 0.0144
Adj R-Square 0.0105

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Selenium

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.39000671	0.0566
YES	-0.18026685	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	1.4432	1.4432	1.39	0.2388
Error	251	259.8	1.0350		

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	-0.39000671	0.81828035
YES	**73**	-0.18026685	0.71140659

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Silver
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

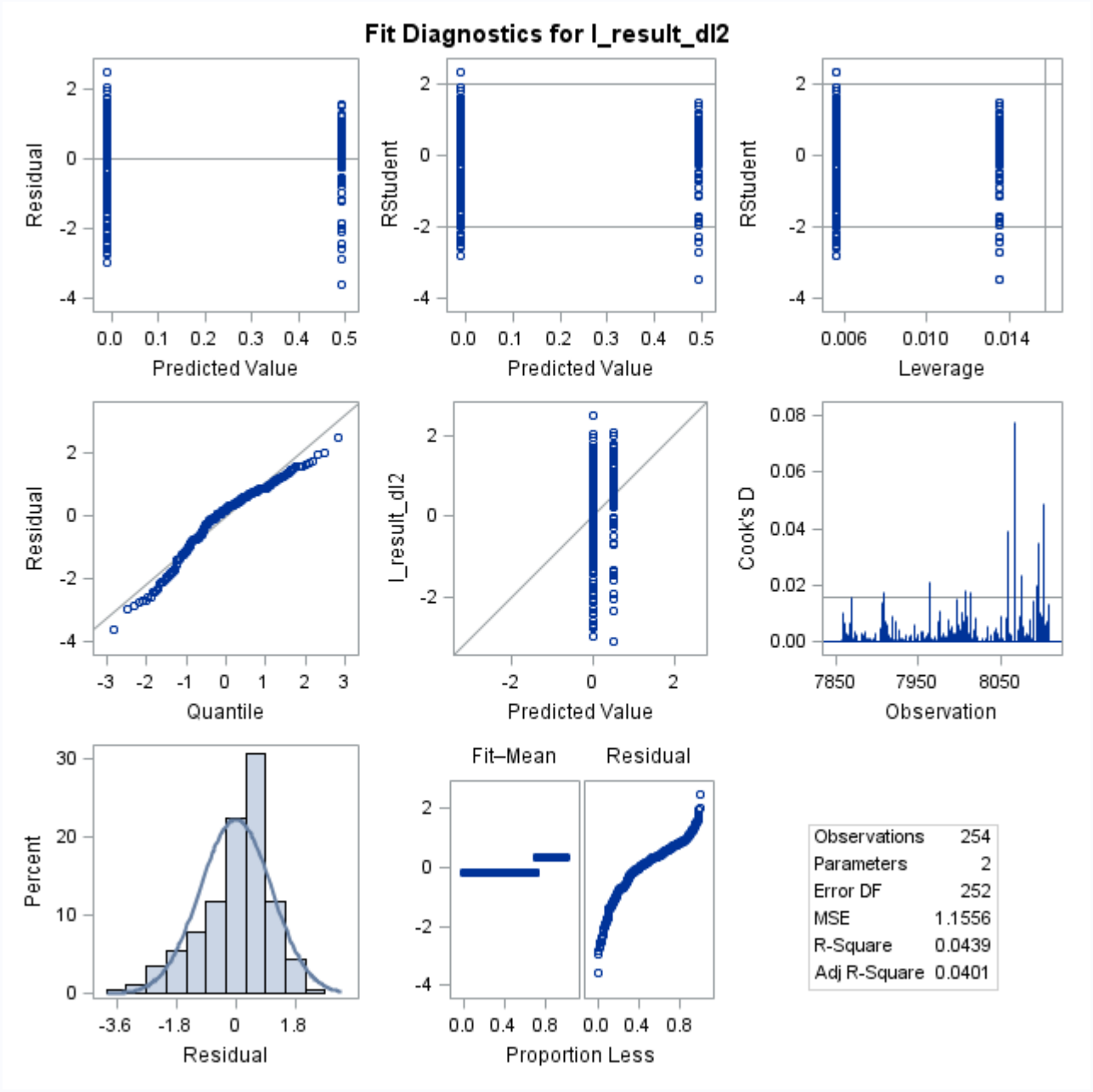
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13.3694461	13.3694461	11.57	0.0008
Error	252	291.2142172	1.1556120		
Corrected Total	253	304.5836633			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.043894	791.2975	1.074994	0.135852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	13.36944610	13.36944610	11.57	0.0008

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	13.36944610	13.36944610	11.57	0.0008


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 1.1556
R-Square 0.0439
Adj R-Square 0.0401

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.01125025	0.0008
YES	0.49366845	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.5540	0.5540	0.18	0.6758
Error	252	796.4	3.1602		

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	-0.01125025	1.08767185
YES	**74**	0.49366845	1.04325516

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure

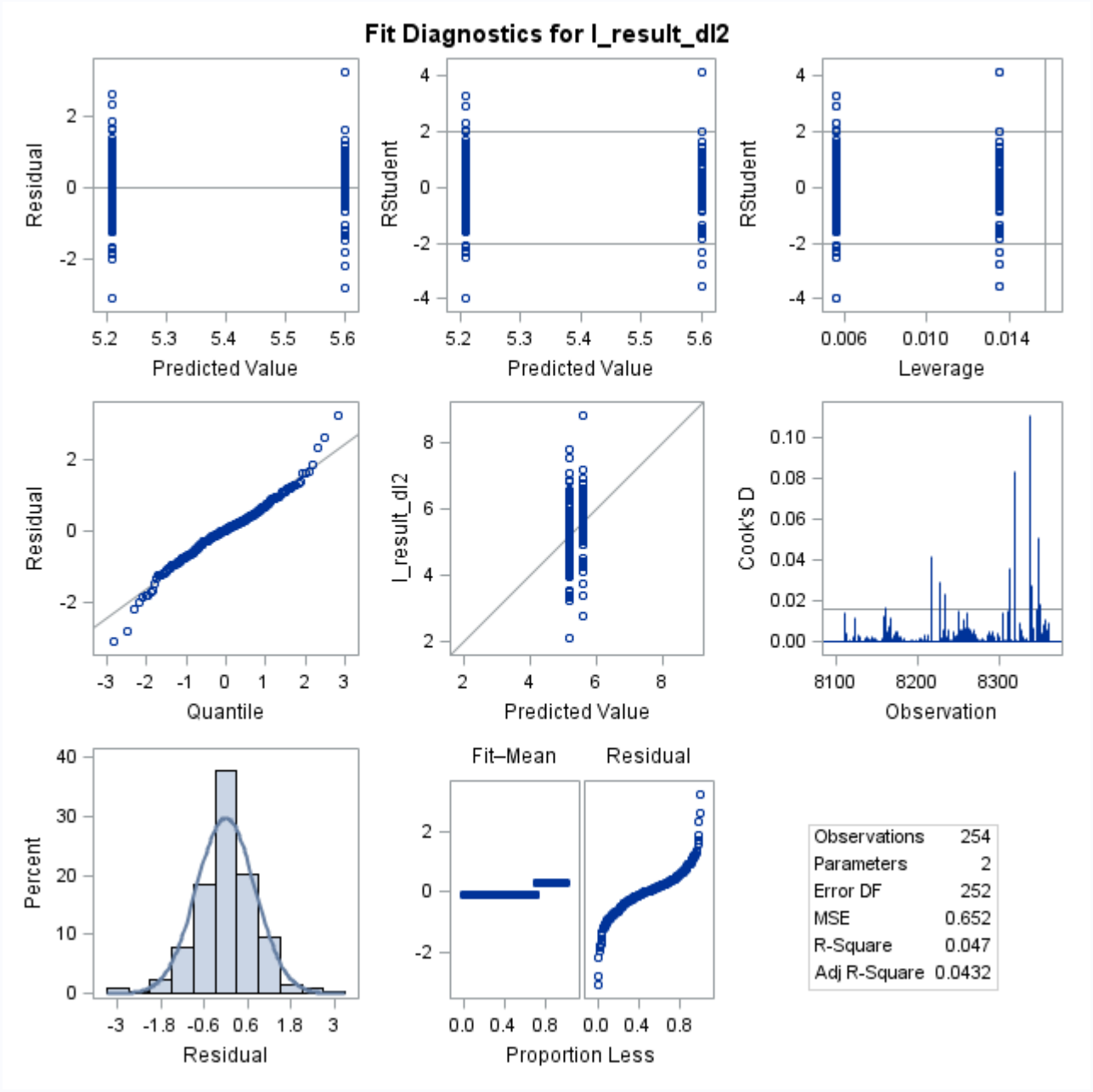
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.0988575	8.0988575	12.42	0.0005
Error	252	164.3145147	0.6520417		
Corrected Total	253	172.4133722			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.046973	15.17117	0.807491	5.322537

Source	DF	Type I SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	8.09885755	8.09885755	12.42	0.0005

Source	DF	Type III SS	Mean Square	F Value	Pr > F
USACE_ACCUM	1	8.09885755	8.09885755	12.42	0.0005


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 2
Error DF 252
MSE 0.652
R-Square 0.047
Adj R-Square 0.0432

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.20804484	0.0005
YES	5.60103043	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
USACE_ACCUM	1	0.2479	0.2479	0.14	0.7051
Error	252	435.2	1.7270		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by usace_accum

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Level of USACE_ACCUM	N	l_result_dl2	
		Mean	Std Dev
NO	**180**	5.20804484	0.79396311
YES	**74**	5.60103043	0.83974031

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

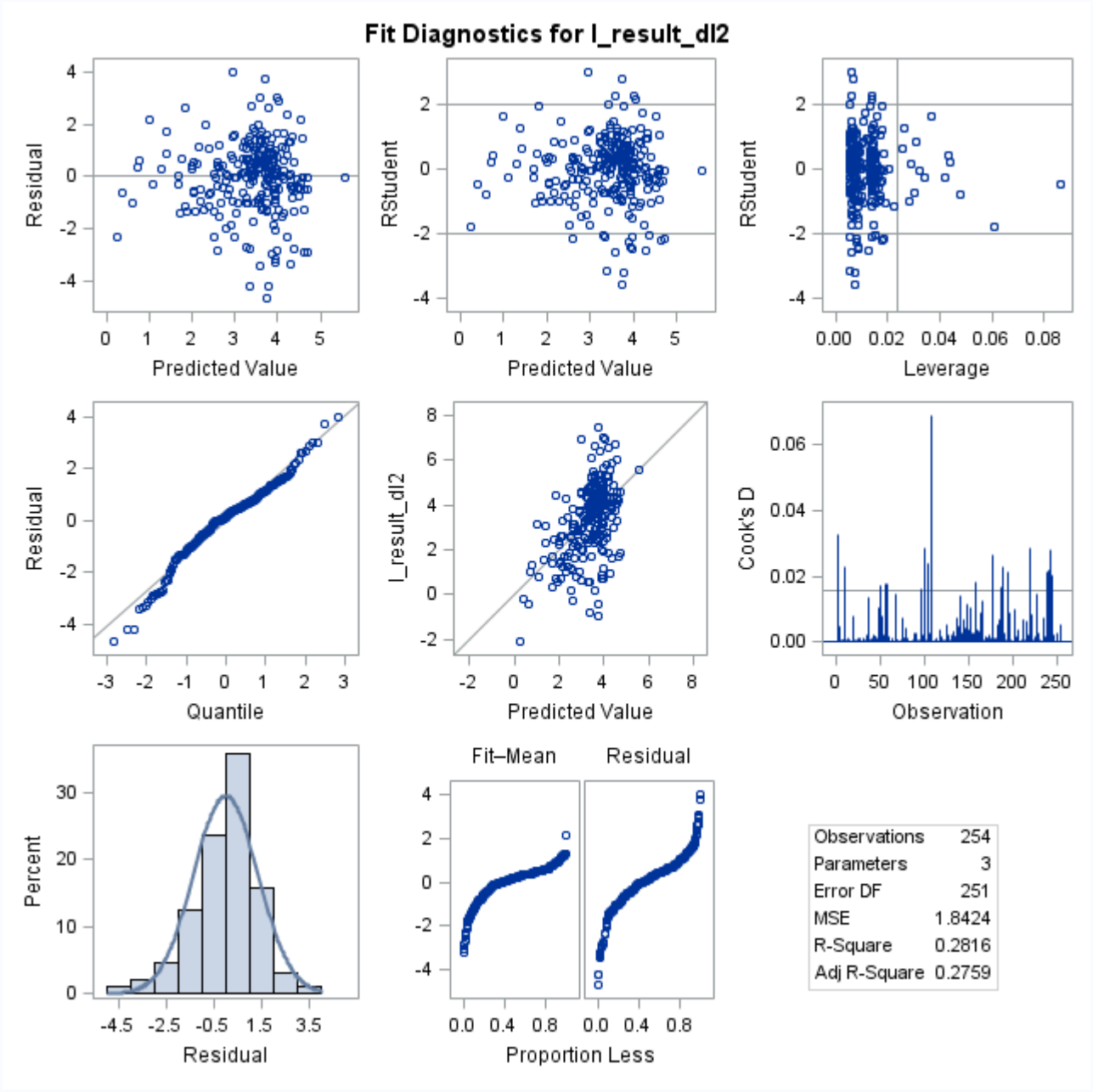
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

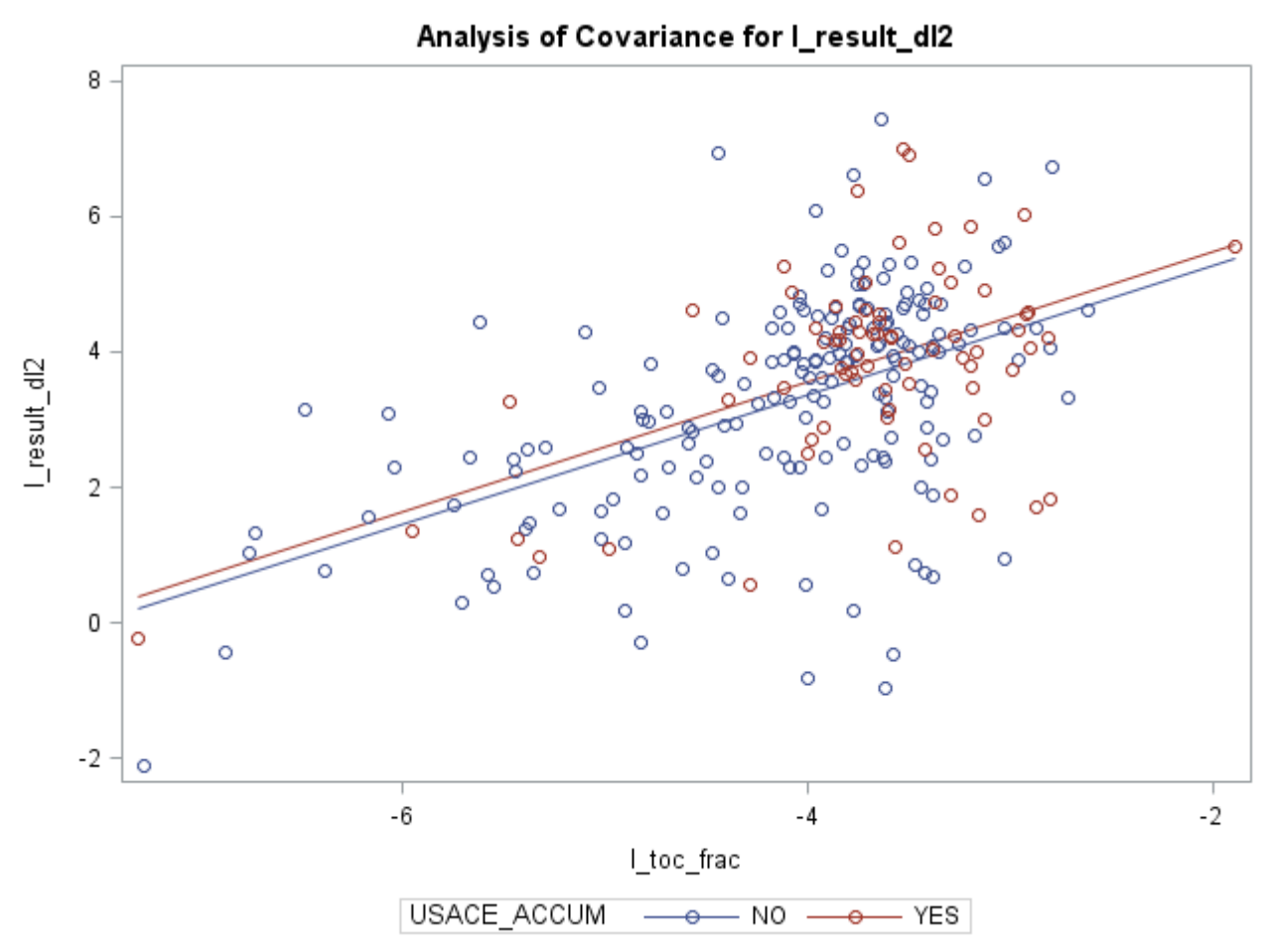
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	181.2736351	90.6368176	49.19	<.0001
Error	251	462.4450885	1.8424107		
Corrected Total	253	643.7187236			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.281604	39.85477	1.357354	3.405751

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	179.5595079	179.5595079	97.46	<.0001
USACE_ACCUM	1	1.7141273	1.7141273	0.93	0.3357

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	162.7355186	162.7355186	88.33	<.0001
USACE_ACCUM	1	1.7141273	1.7141273	0.93	0.3357


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.8424
R-Square 0.2816
Adj R-Square 0.2759


Analysis of Covariance for l_result_dl2
8
6
4
2
0
-2
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	3.35167771	0.3357
YES	3.53728070	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

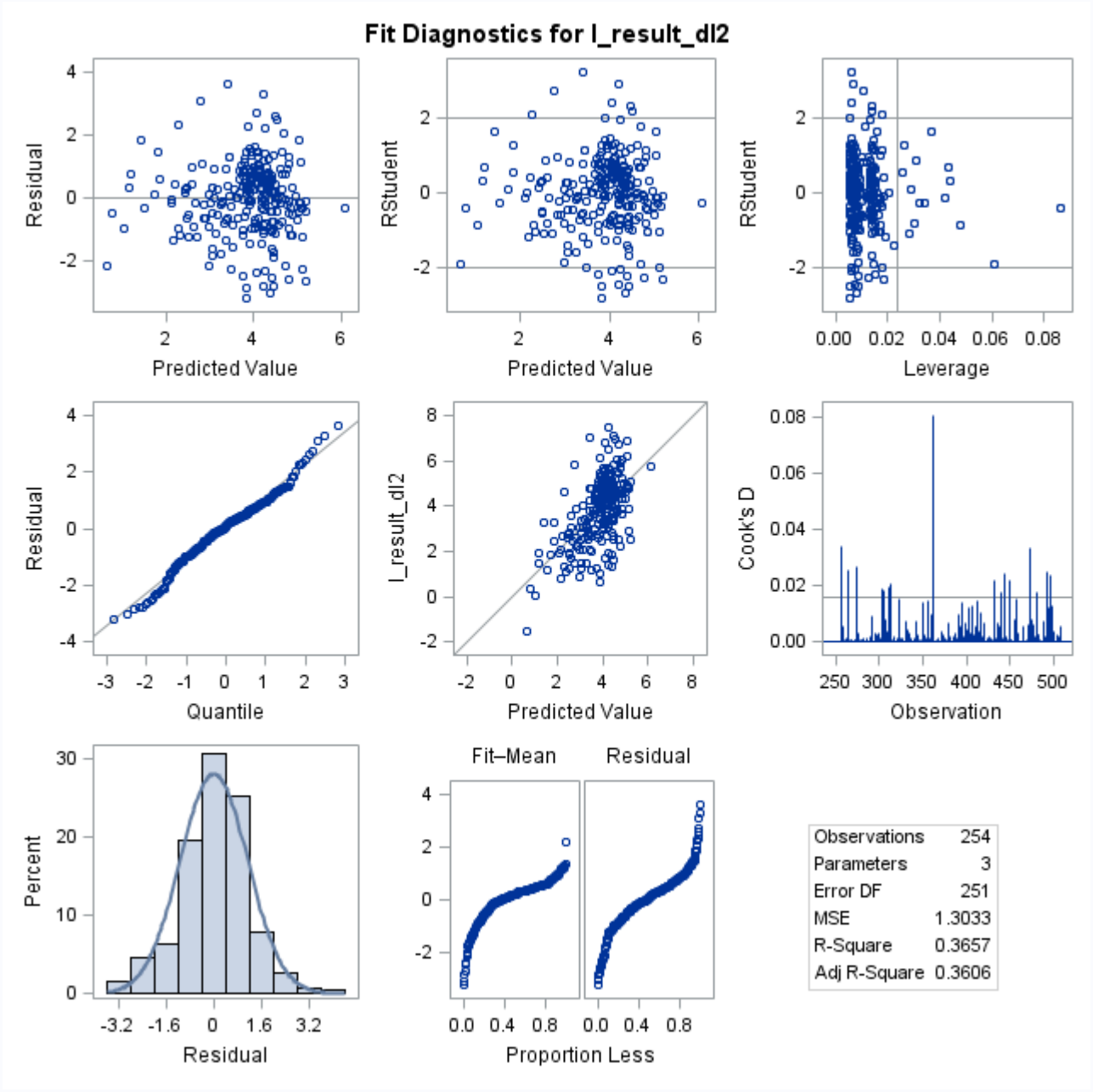
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

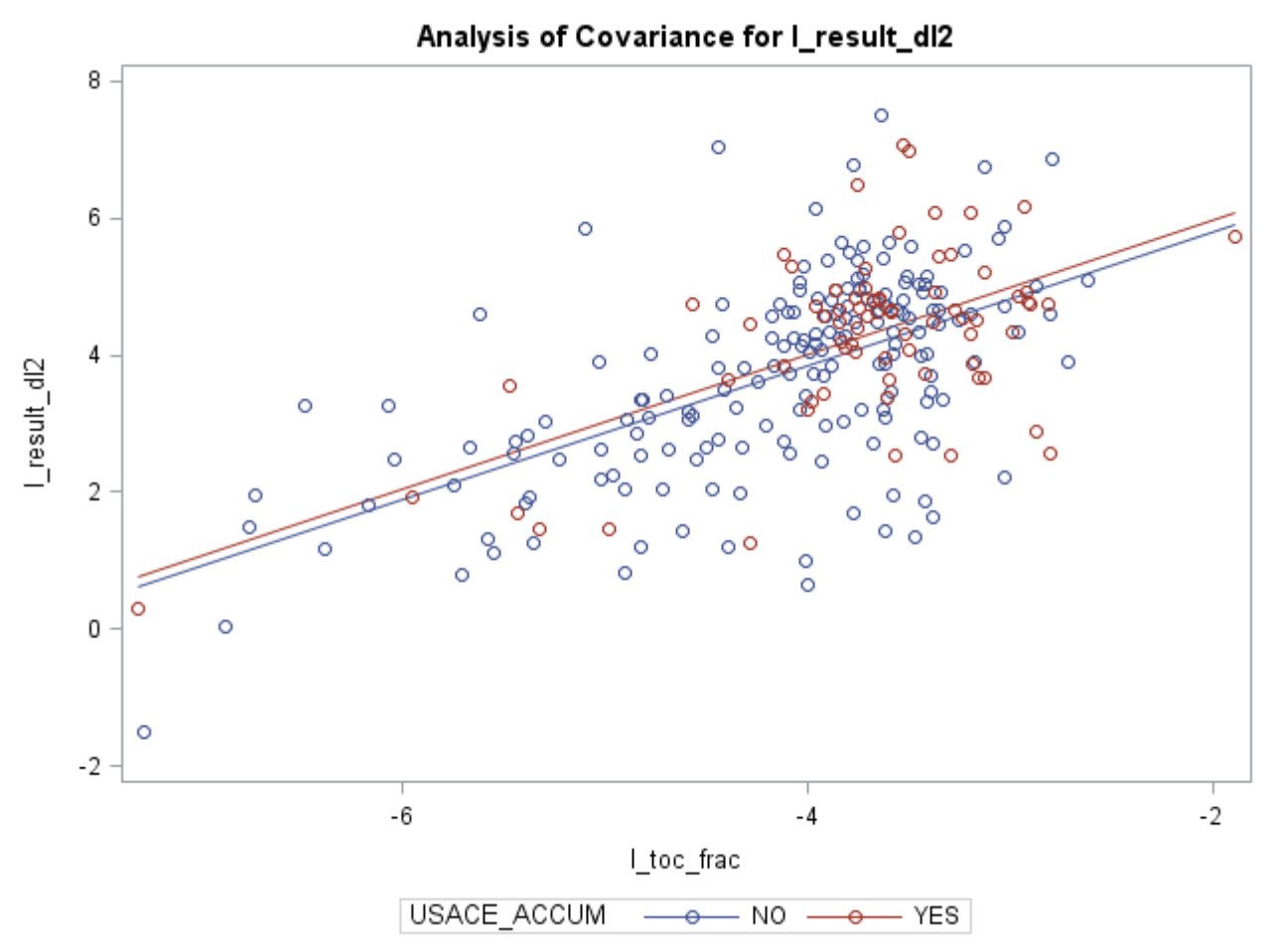
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	188.5840680	94.2920340	72.35	<.0001
Error	251	327.1364004	1.3033323		
Corrected Total	253	515.7204683			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.365671	29.40850	1.141636	3.881993

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	187.1201013	187.1201013	143.57	<.0001
USACE_ACCUM	1	1.4639667	1.4639667	1.12	0.2902

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	170.3340787	170.3340787	130.69	<.0001
USACE_ACCUM	1	1.4639667	1.4639667	1.12	0.2902


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.3033
R-Square 0.3657
Adj R-Square 0.3606


Analysis of Covariance for l_result_dl2
8
6
4
2
0
-2
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	3.83202083	0.2902
YES	4.00354646	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

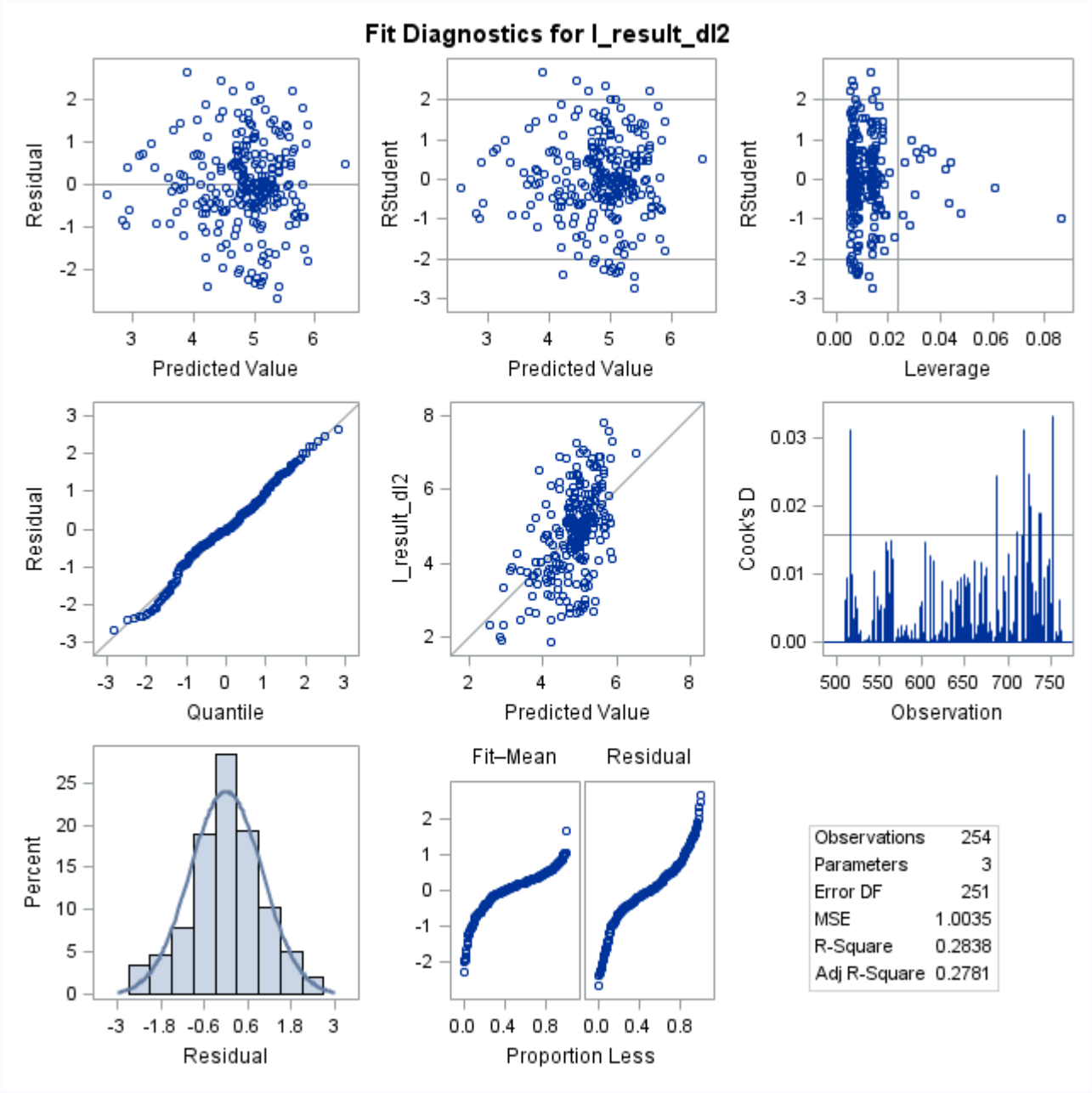
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

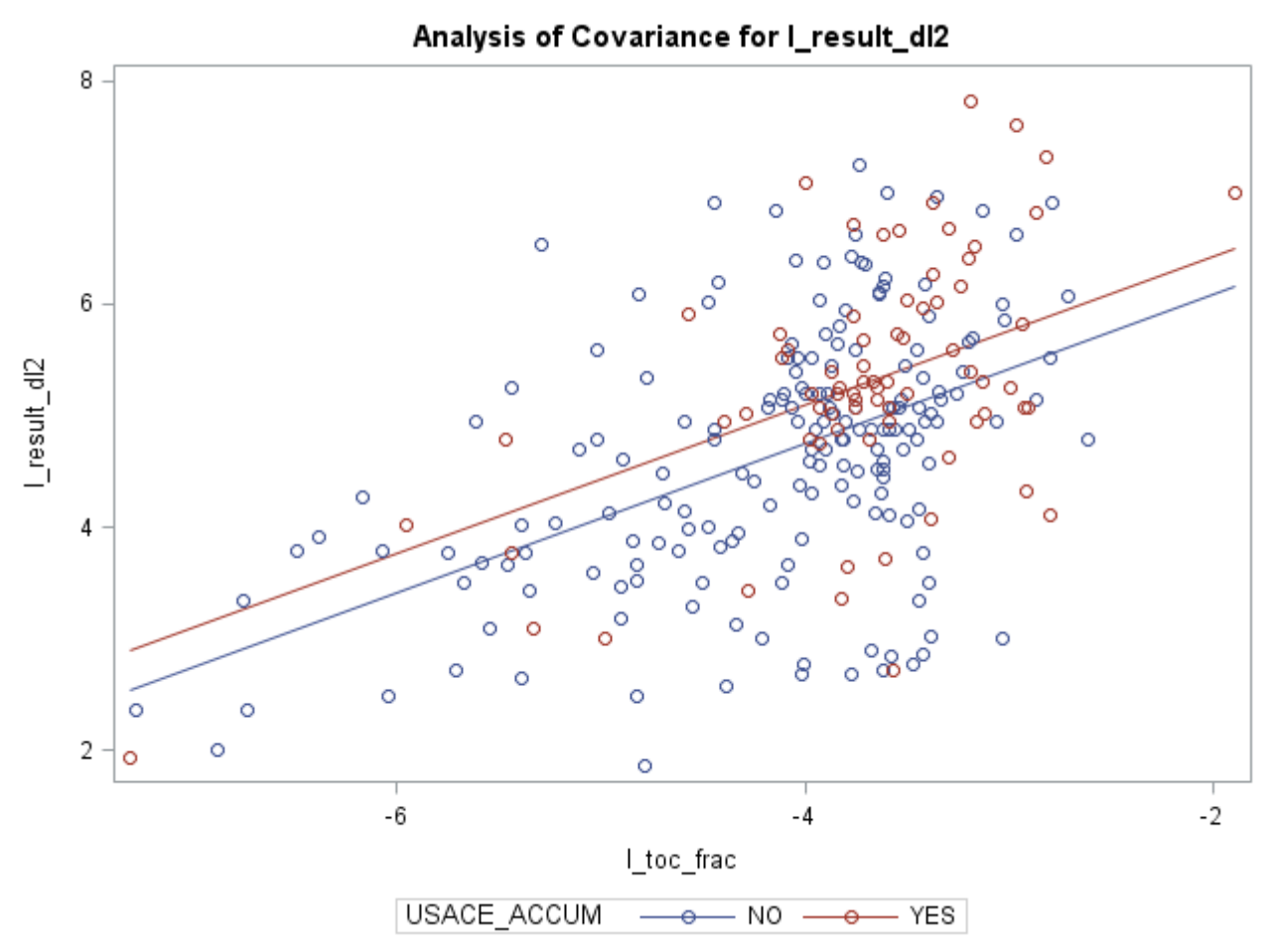
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	99.8154441	49.9077220	49.73	<.0001
Error	251	251.8767392	1.0034930		
Corrected Total	253	351.6921832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.283815	20.70579	1.001745	4.837994

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	93.89112244	93.89112244	93.56	<.0001
USACE_ACCUM	1	5.92432163	5.92432163	5.90	0.0158

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	79.00204265	79.00204265	78.73	<.0001
USACE_ACCUM	1	5.92432163	5.92432163	5.90	0.0158


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.0035
R-Square 0.2838
Adj R-Square 0.2781


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.73746752	0.0158
YES	5.08251809	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

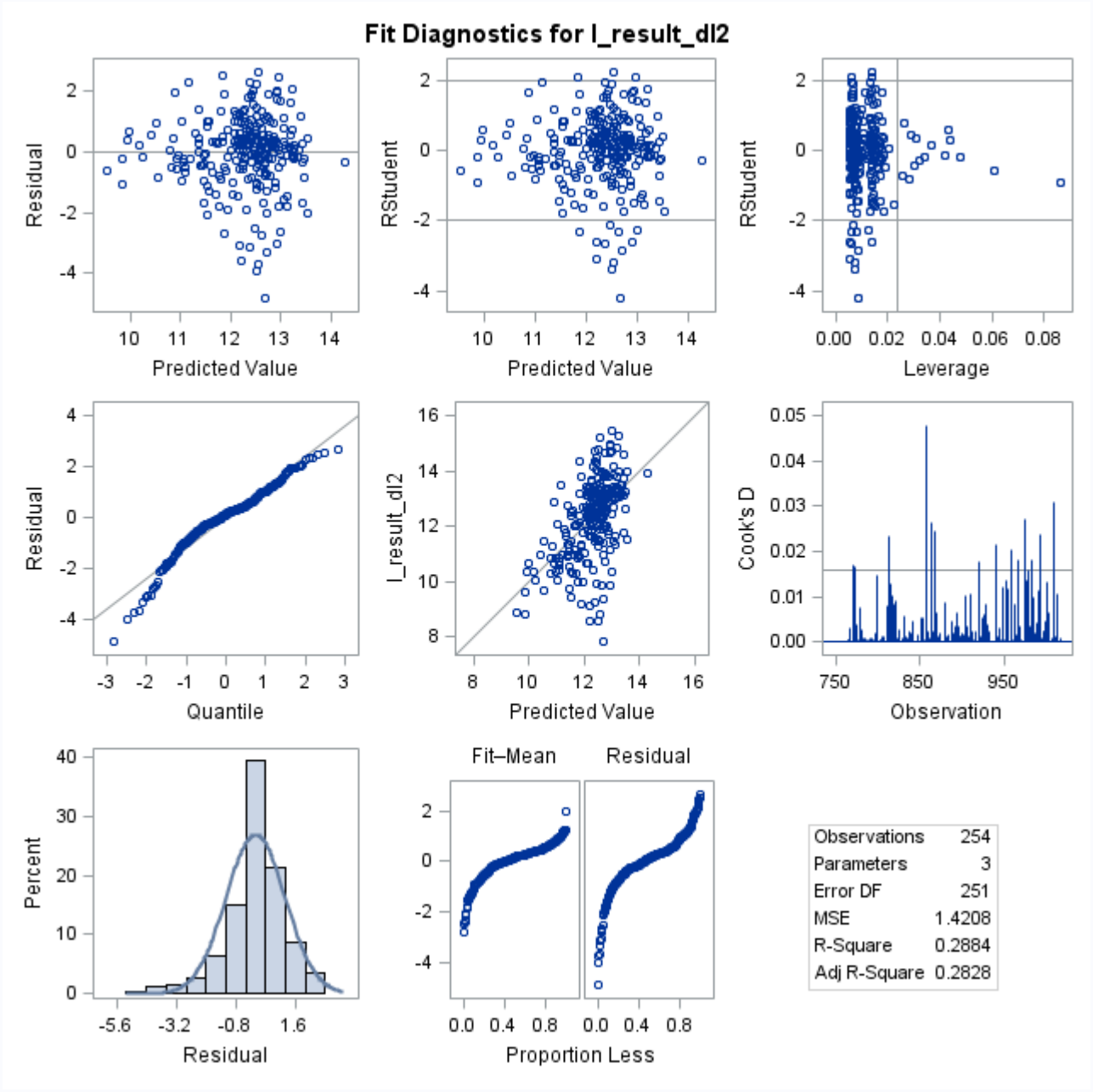
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

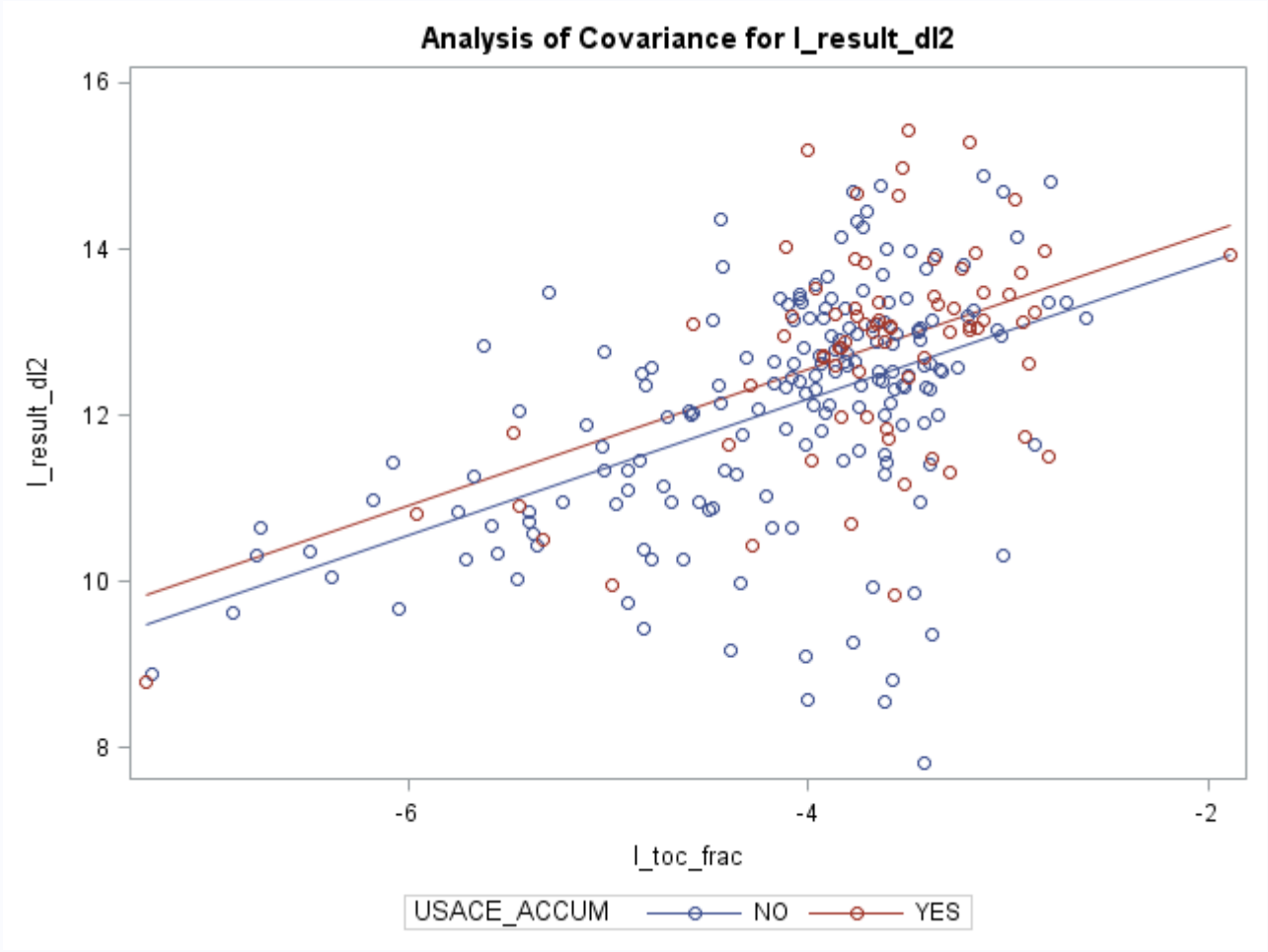
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	144.5686008	72.2843004	50.87	<.0001
Error	251	356.6278449	1.4208281		
Corrected Total	253	501.1964458			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.288447	9.699638	1.191985	12.28896

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	138.2765475	138.2765475	97.32	<.0001
USACE_ACCUM	1	6.2920533	6.2920533	4.43	0.0363

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	118.5319659	118.5319659	83.42	<.0001
USACE_ACCUM	1	6.2920533	6.2920533	4.43	0.0363


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.4208
R-Square 0.2884
Adj R-Square 0.2828


Analysis of Covariance for l_result_dl2
16
14
12
10
8
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	12.1853632	0.0363
YES	12.5409614	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

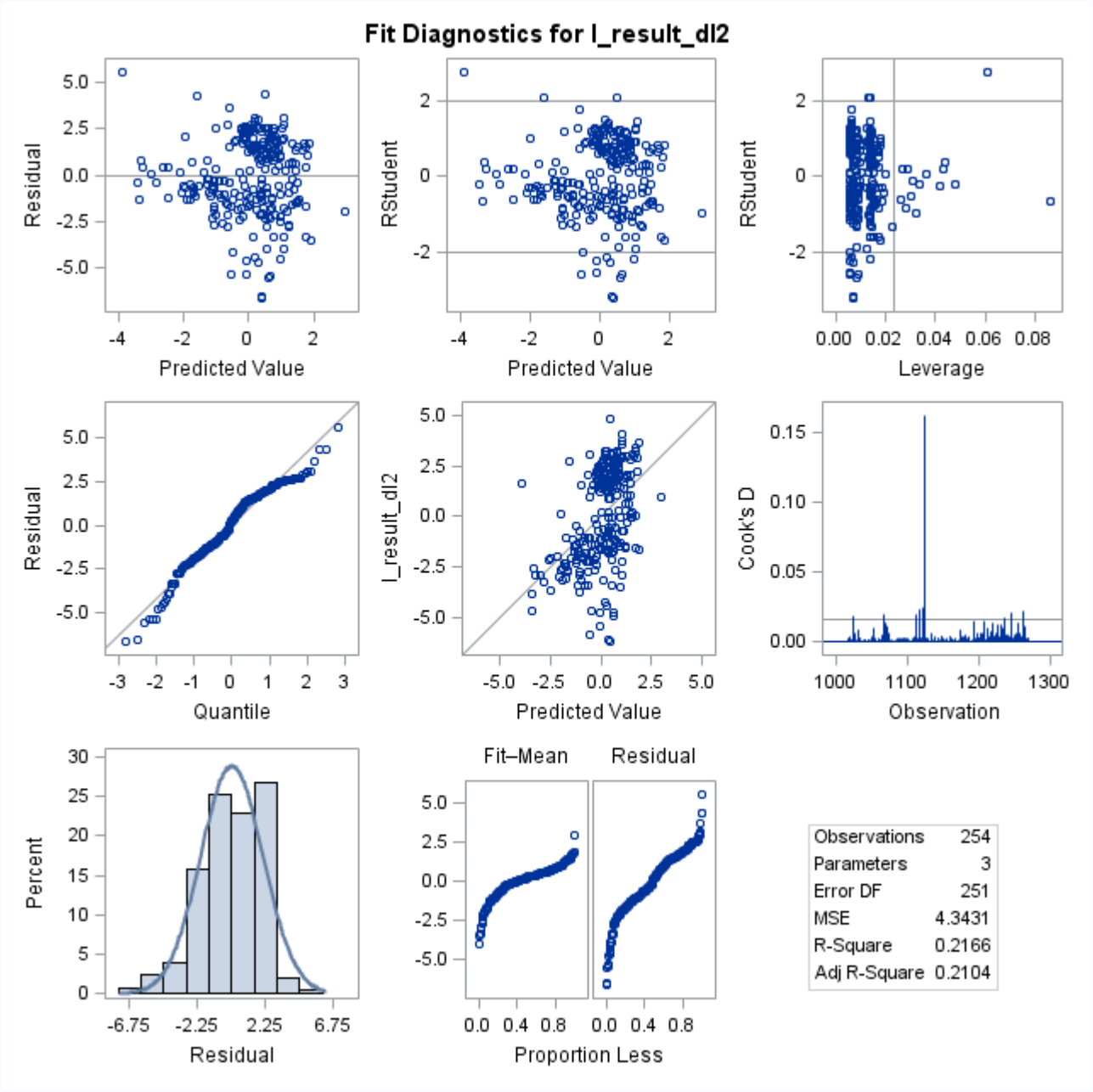
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

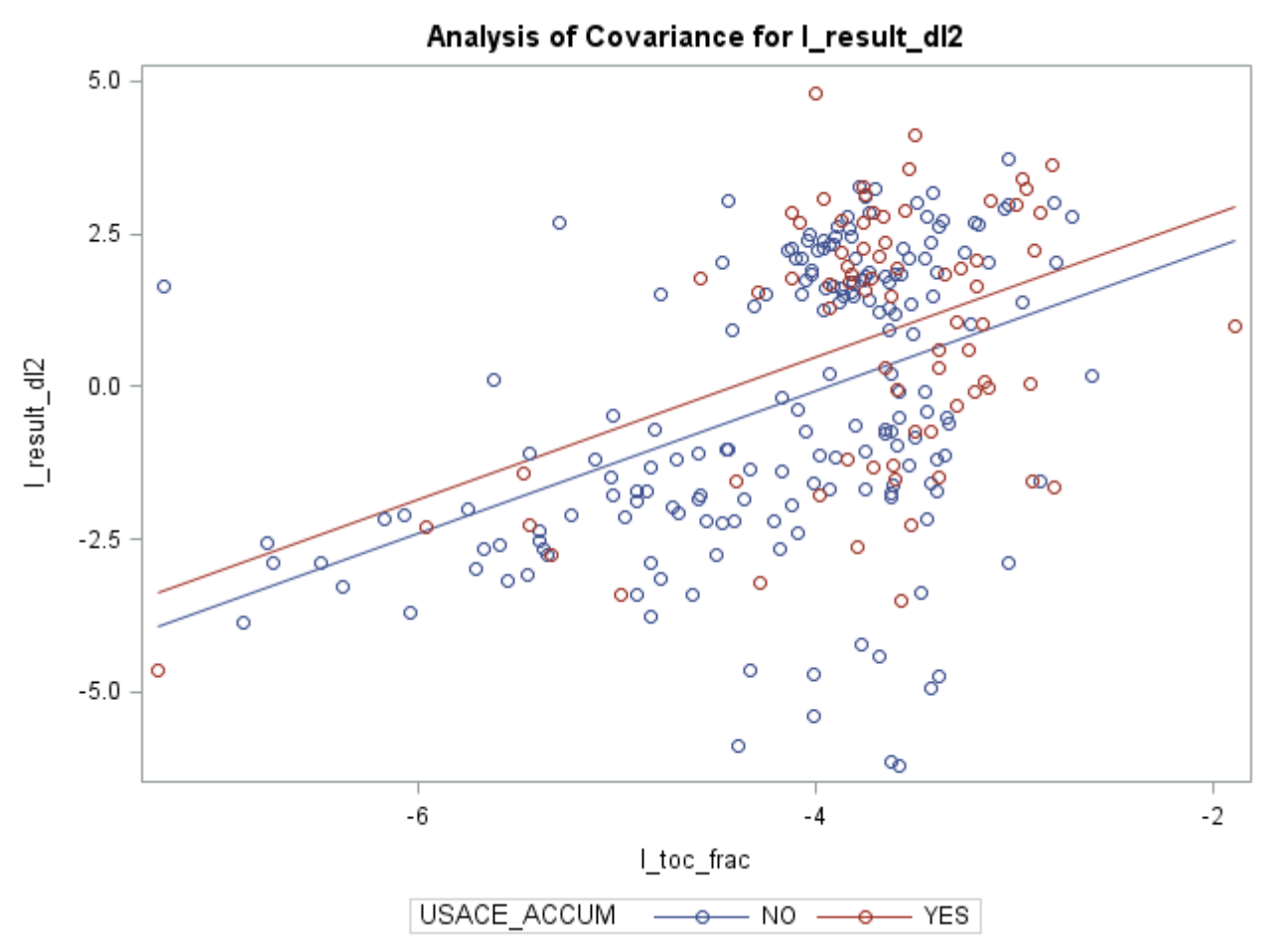
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	301.402928	150.701464	34.70	<.0001
Error	251	1090.127060	4.343136		
Corrected Total	253	1391.529988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.216598	3123.120	2.084019	0.066729

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	285.4428401	285.4428401	65.72	<.0001
USACE_ACCUM	1	15.9600878	15.9600878	3.67	0.0564

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	241.9256647	241.9256647	55.70	<.0001
USACE_ACCUM	1	15.9600878	15.9600878	3.67	0.0564


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 4.3431
R-Square 0.2166
Adj R-Square 0.2104


Analysis of Covariance for l_result_dl2
5.0
2.5
0.0
-2.5
-5.0
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.09826939	0.0564
YES	0.46807561	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

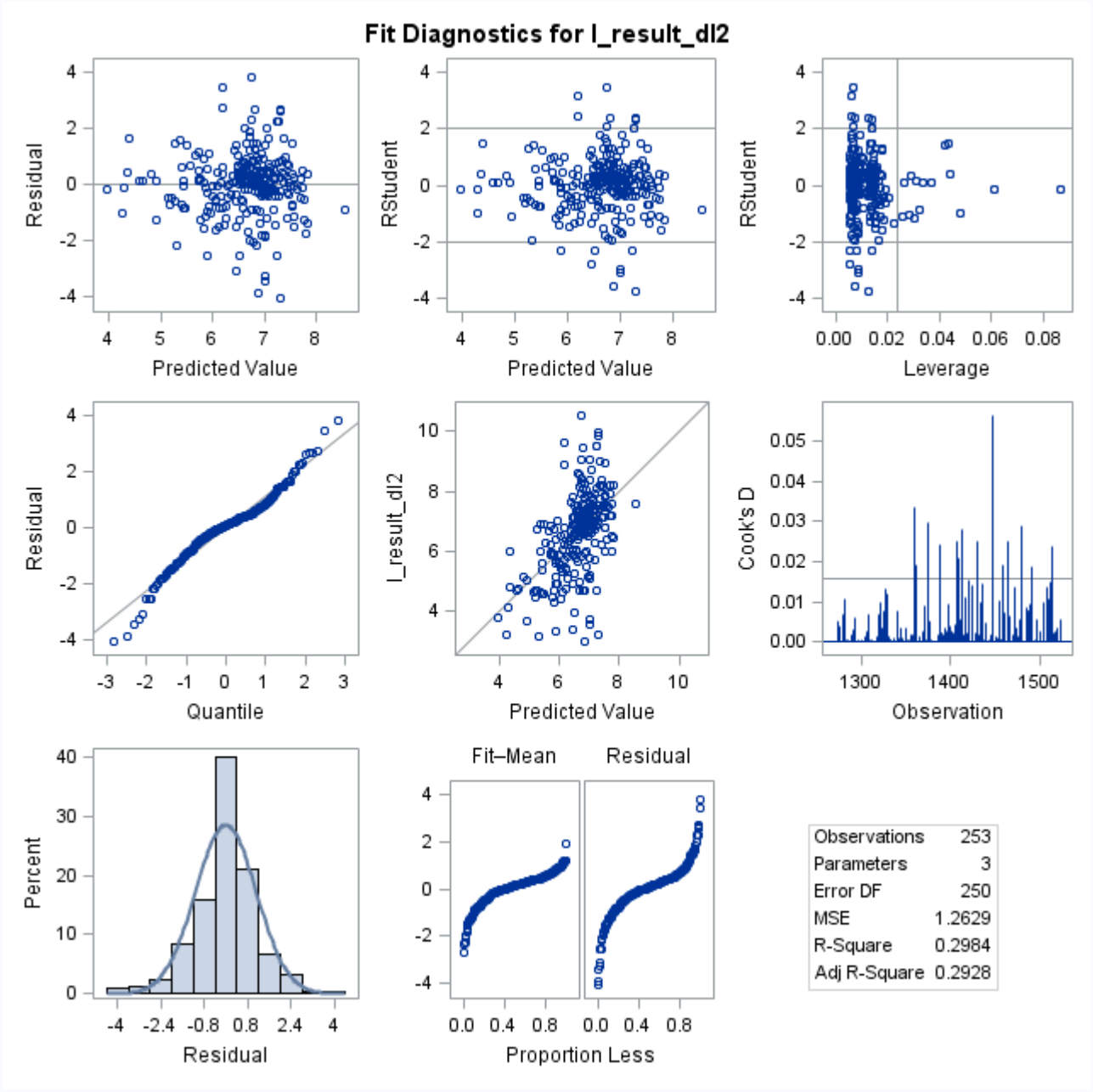
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

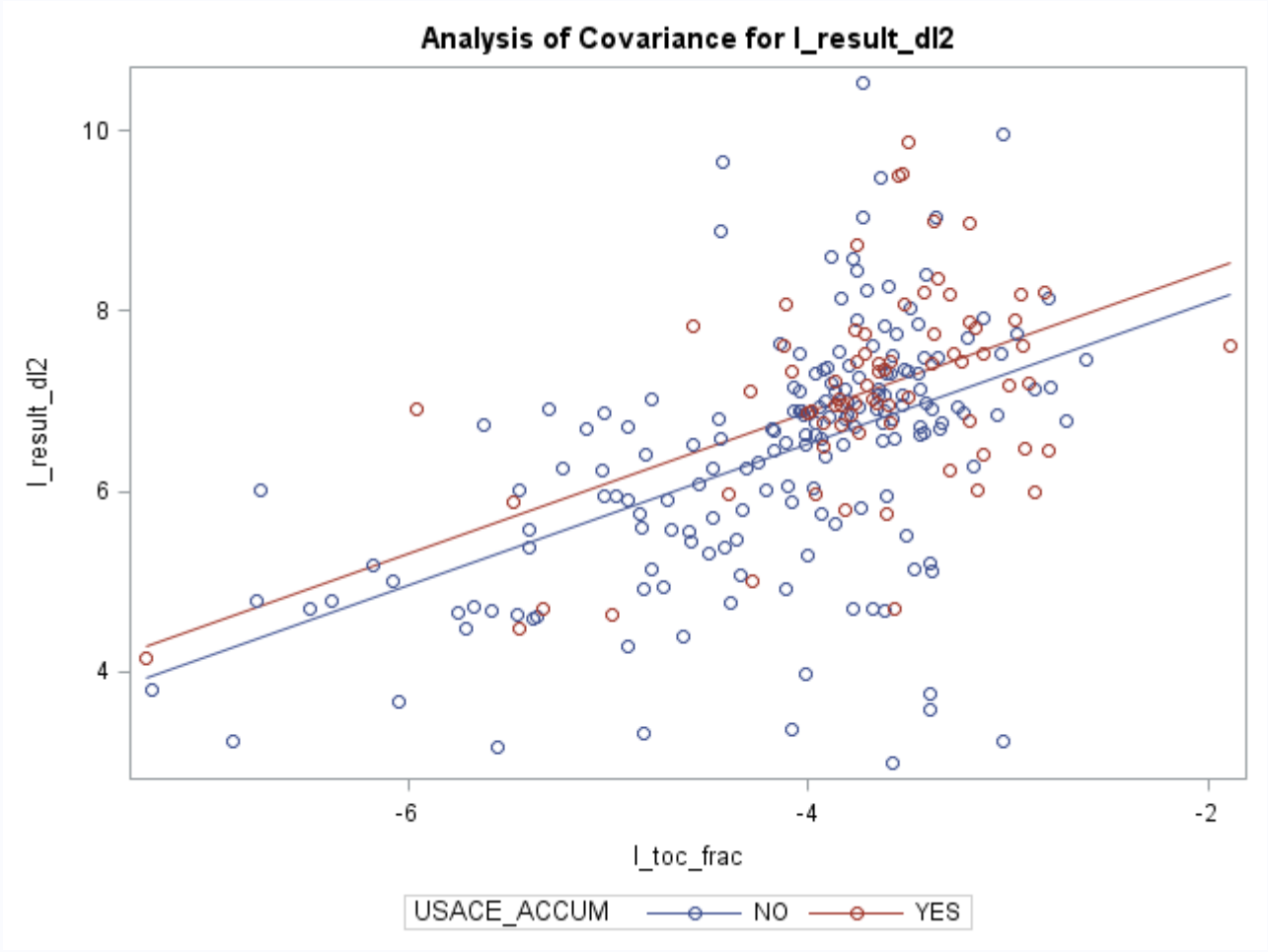
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	134.2967932	67.1483966	53.17	<.0001
Error	250	315.7314156	1.2629257		
Corrected Total	252	450.0282088			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.298419	16.97935	1.123800	6.618627

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	127.8747015	127.8747015	101.25	<.0001
USACE_ACCUM	1	6.4220917	6.4220917	5.09	0.0250

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	108.8045264	108.8045264	86.15	<.0001
USACE_ACCUM	1	6.4220917	6.4220917	5.09	0.0250


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 1.2629
R-Square 0.2984
Adj R-Square 0.2928


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	6.51340866	0.0250
YES	6.87314174	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

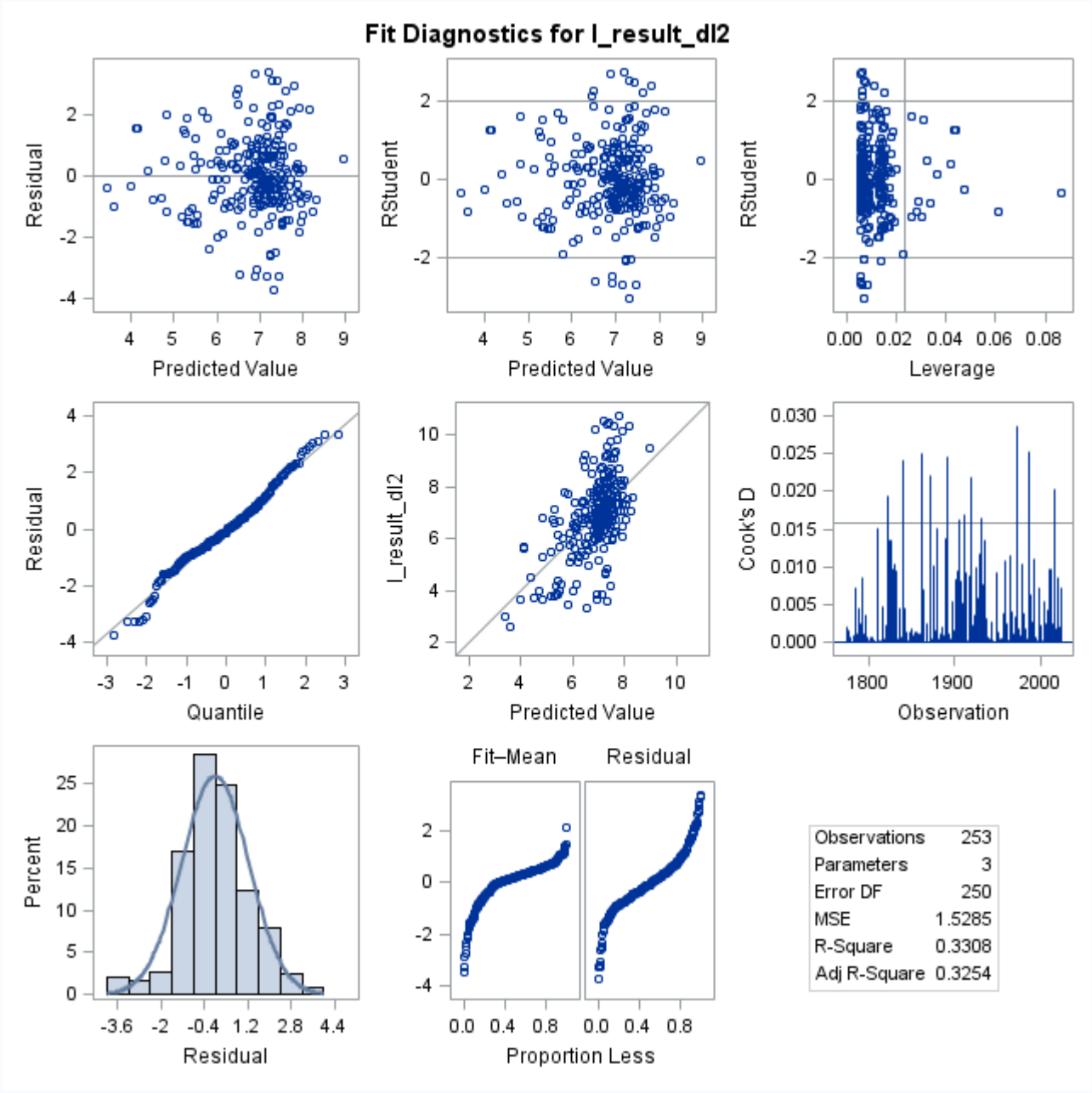
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

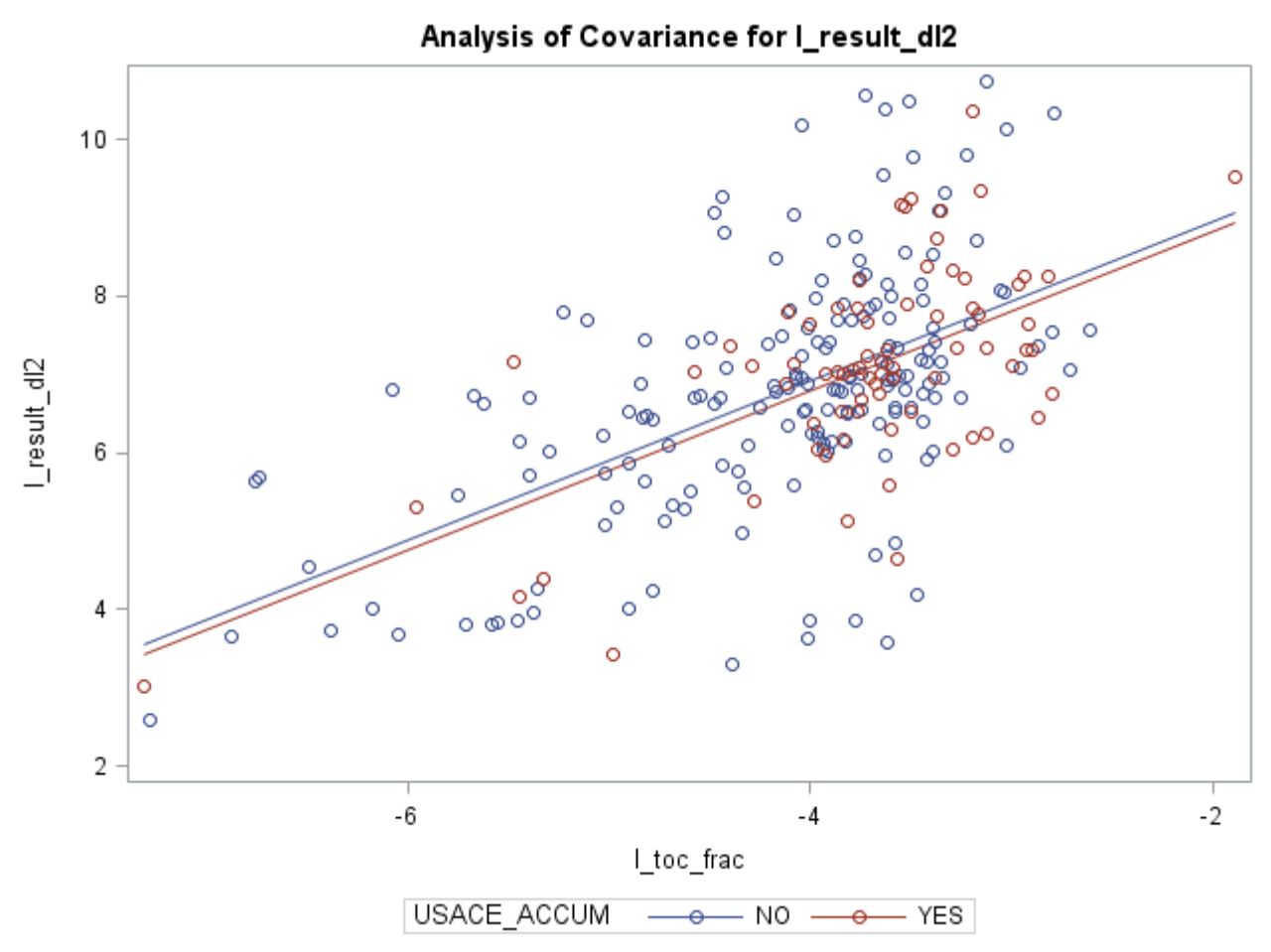
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	188.8618744	94.4309372	61.78	<.0001
Error	250	382.1239031	1.5284956		
Corrected Total	252	570.9857776			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.330765	18.00823	1.236323	6.865325

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	188.0666047	188.0666047	123.04	<.0001
USACE_ACCUM	1	0.7952698	0.7952698	0.52	0.4714

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	183.7420048	183.7420048	120.21	<.0001
USACE_ACCUM	1	0.7952698	0.7952698	0.52	0.4714


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 1.5285
R-Square 0.3308
Adj R-Square 0.3254


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	6.90235091	0.4714
YES	6.77576092	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

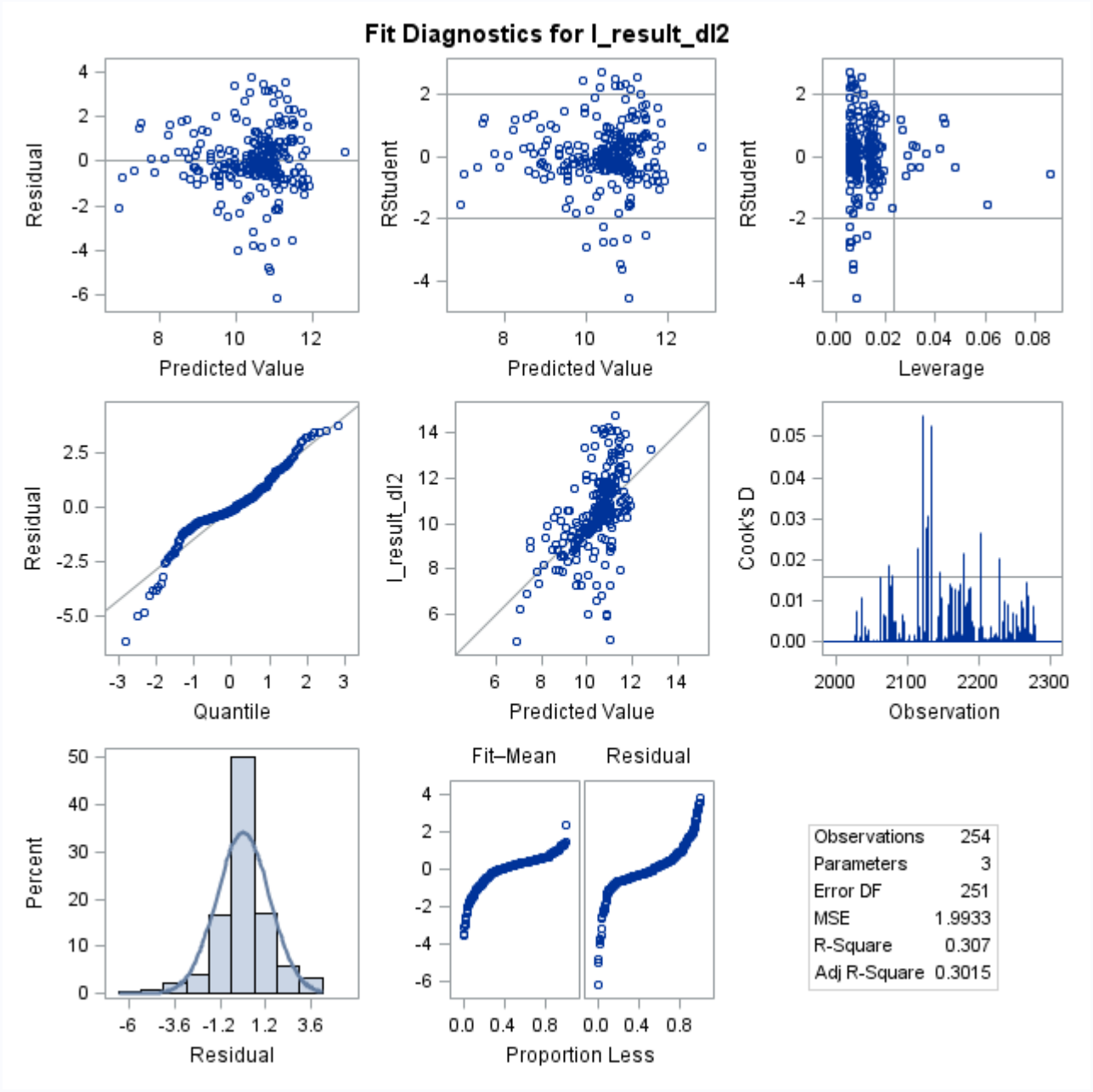
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

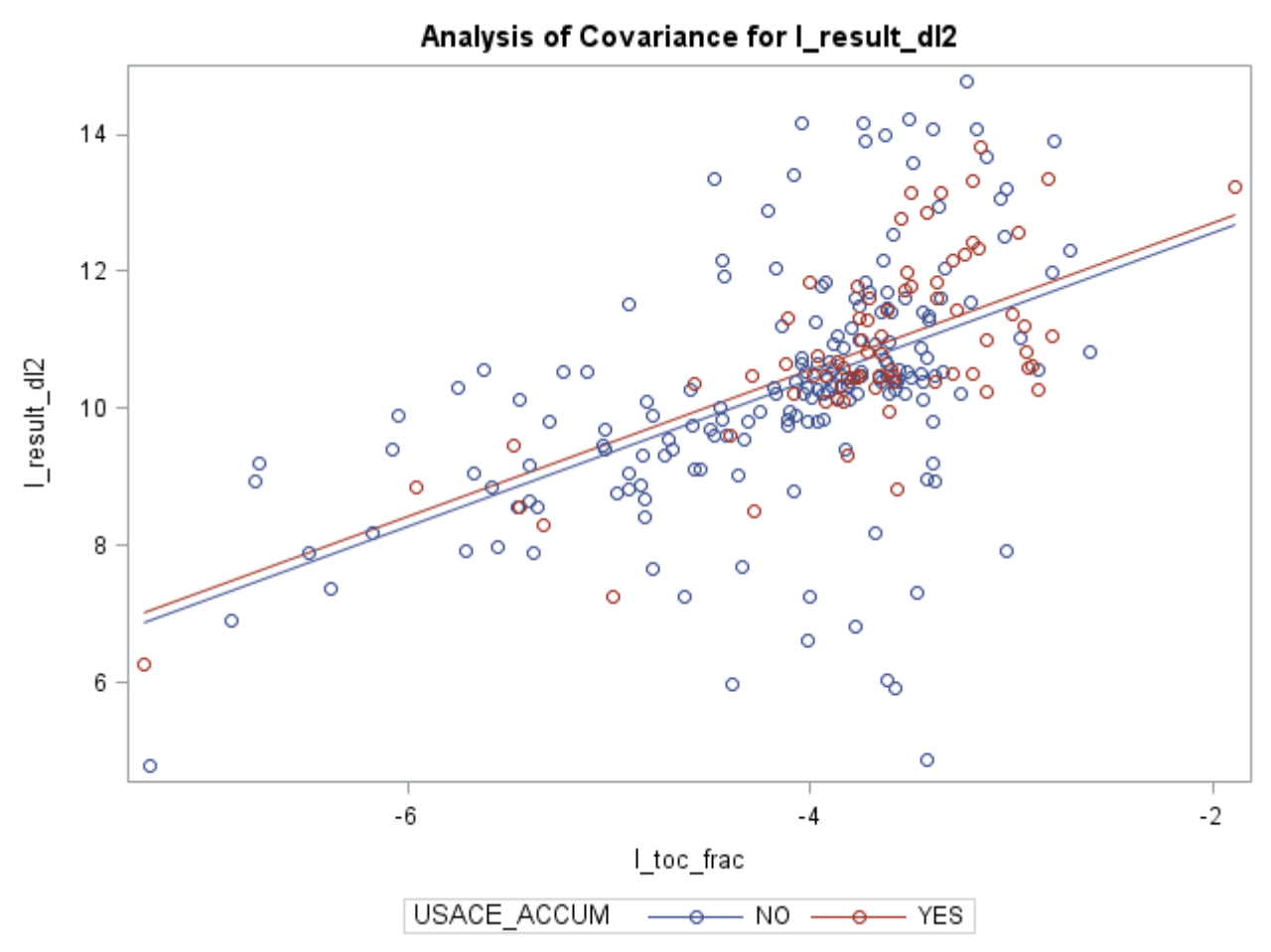
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	221.6673498	110.8336749	55.60	<.0001
Error	251	500.3174924	1.9932968		
Corrected Total	253	721.9848422			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.307025	13.51048	1.411842	10.44997

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	220.7337057	220.7337057	110.74	<.0001
USACE_ACCUM	1	0.9336442	0.9336442	0.47	0.4944

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	203.1687826	203.1687826	101.93	<.0001
USACE_ACCUM	1	0.9336442	0.9336442	0.47	0.4944


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.9933
R-Square 0.307
Adj R-Square 0.3015


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	10.4100668	0.4944
YES	10.5470459	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

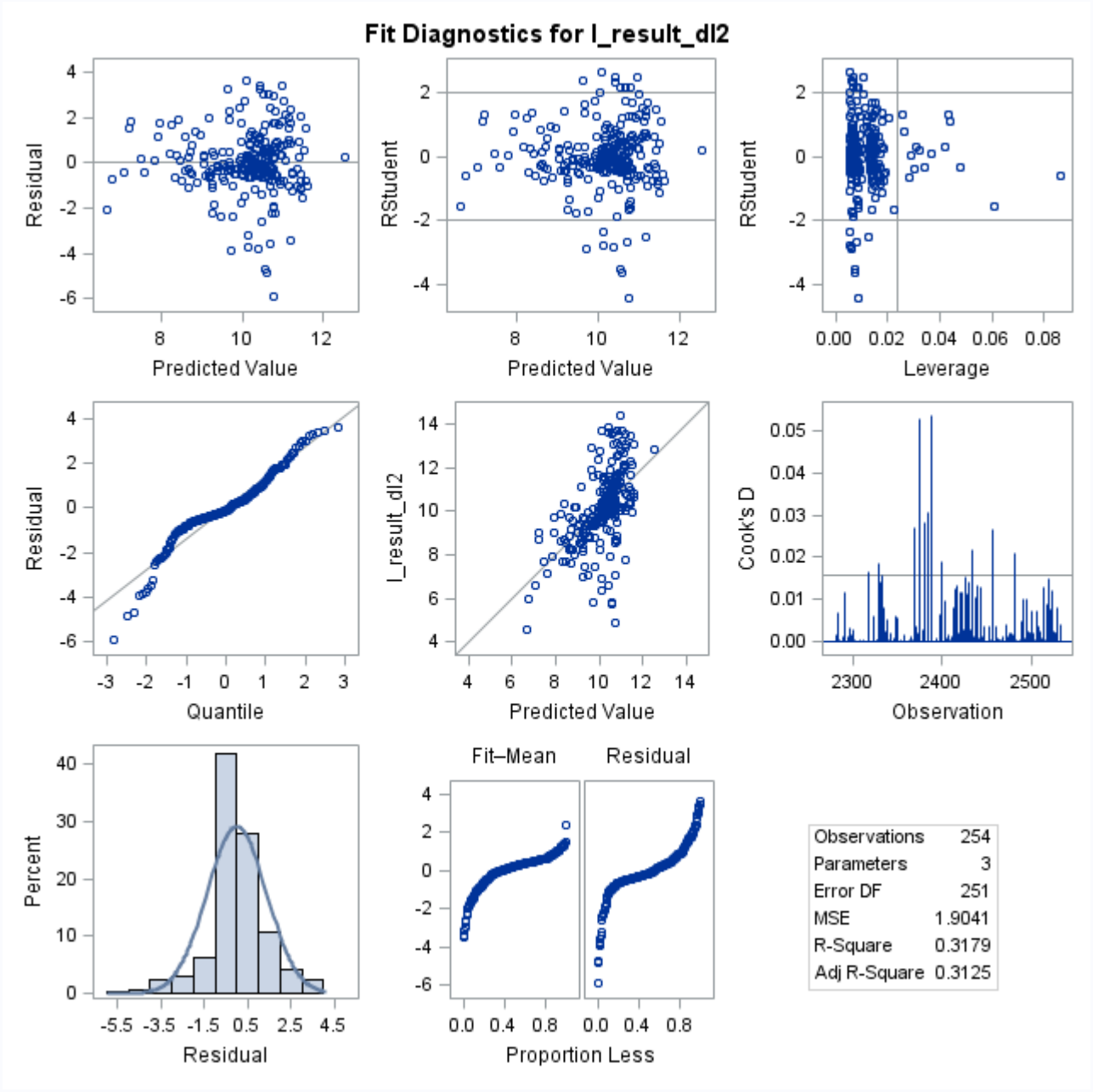
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

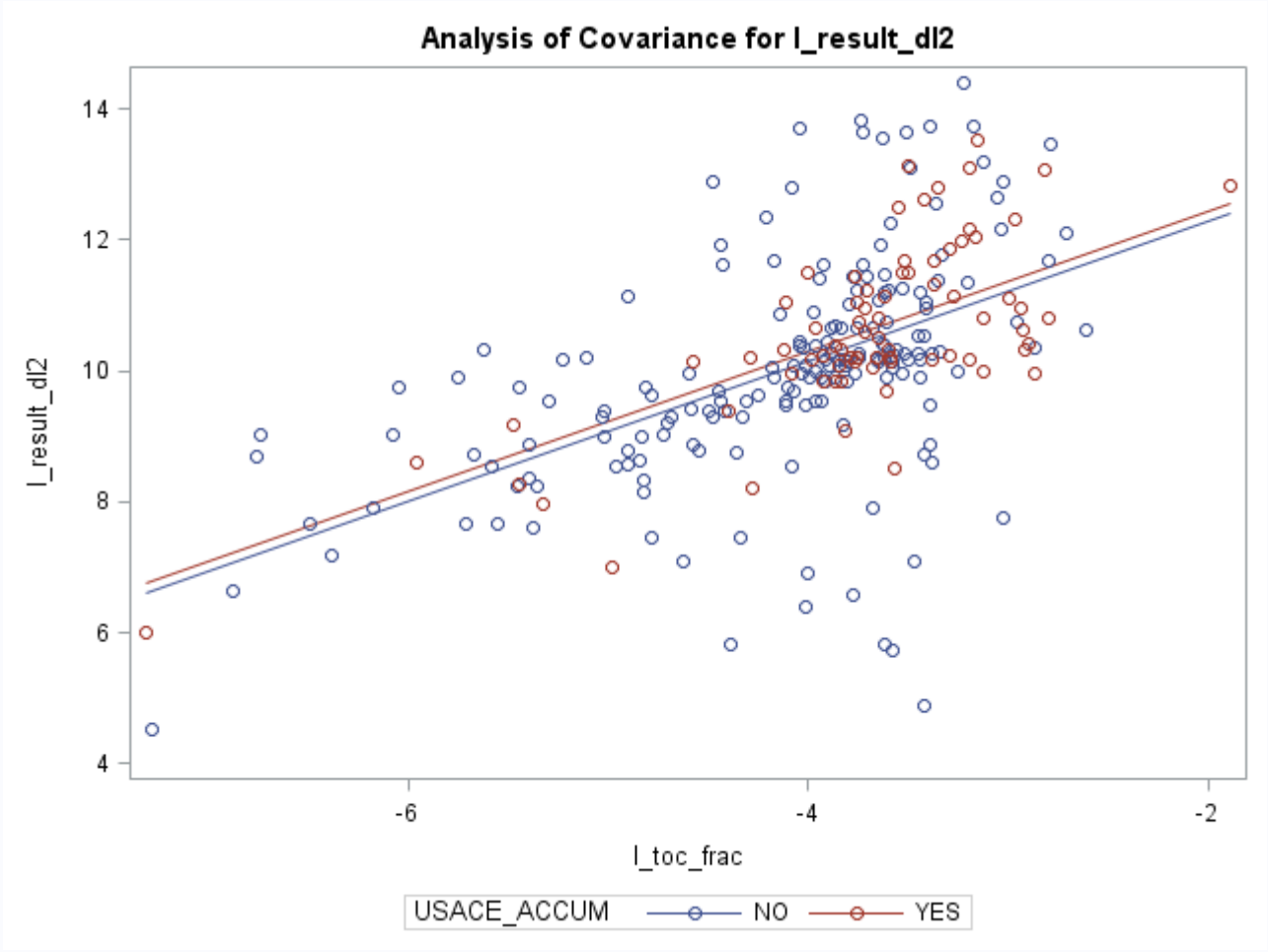
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	222.7426096	111.3713048	58.49	<.0001
Error	251	477.9236147	1.9040781		
Corrected Total	253	700.6662243			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.317901	13.56887	1.379883	10.16948

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	221.5748711	221.5748711	116.37	<.0001
USACE_ACCUM	1	1.1677385	1.1677385	0.61	0.4343

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	203.2168530	203.2168530	106.73	<.0001
USACE_ACCUM	1	1.1677385	1.1677385	0.61	0.4343


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.9041
R-Square 0.3179
Adj R-Square 0.3125


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
4
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	10.1248502	0.4343
YES	10.2780423	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

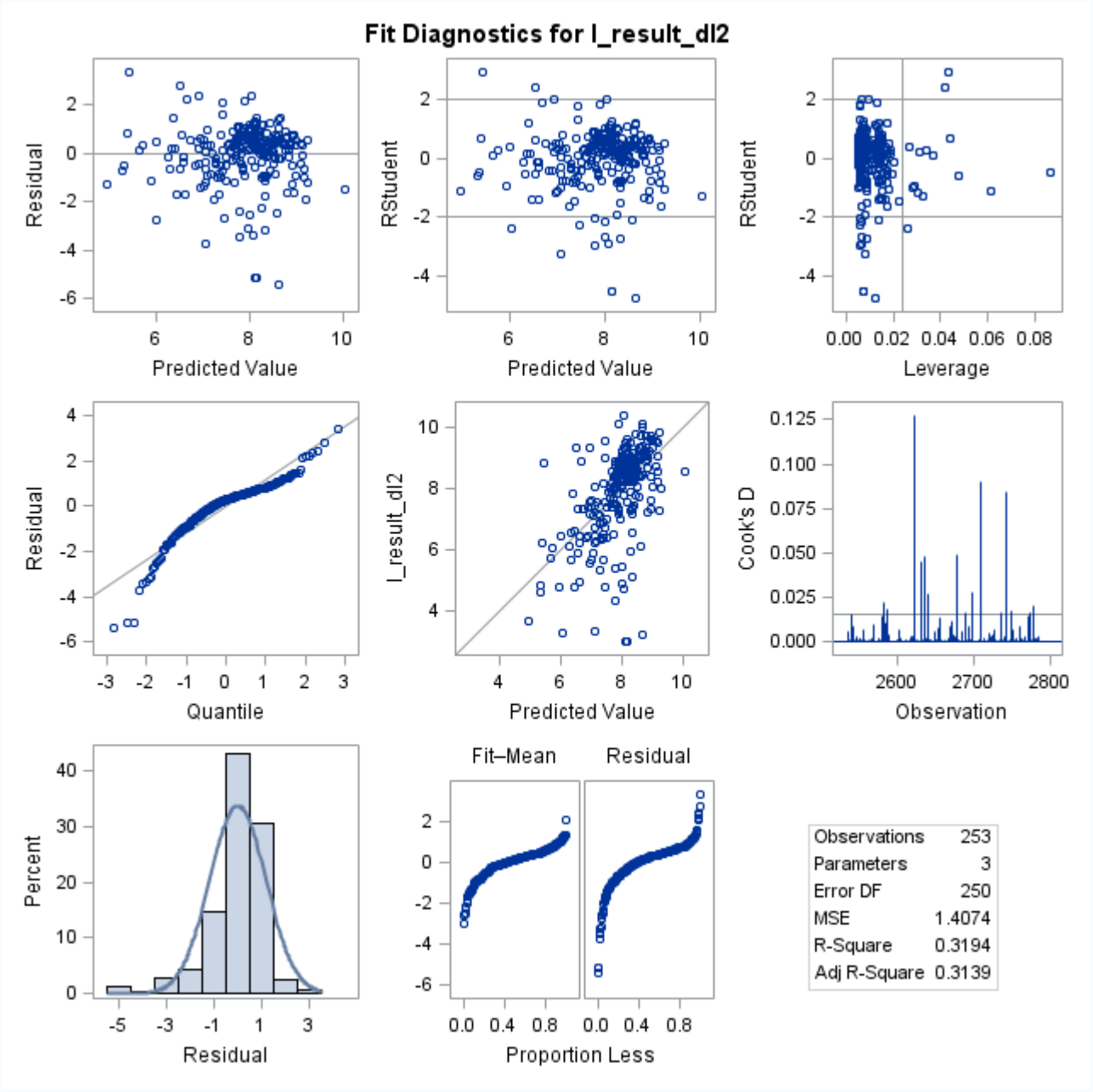
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

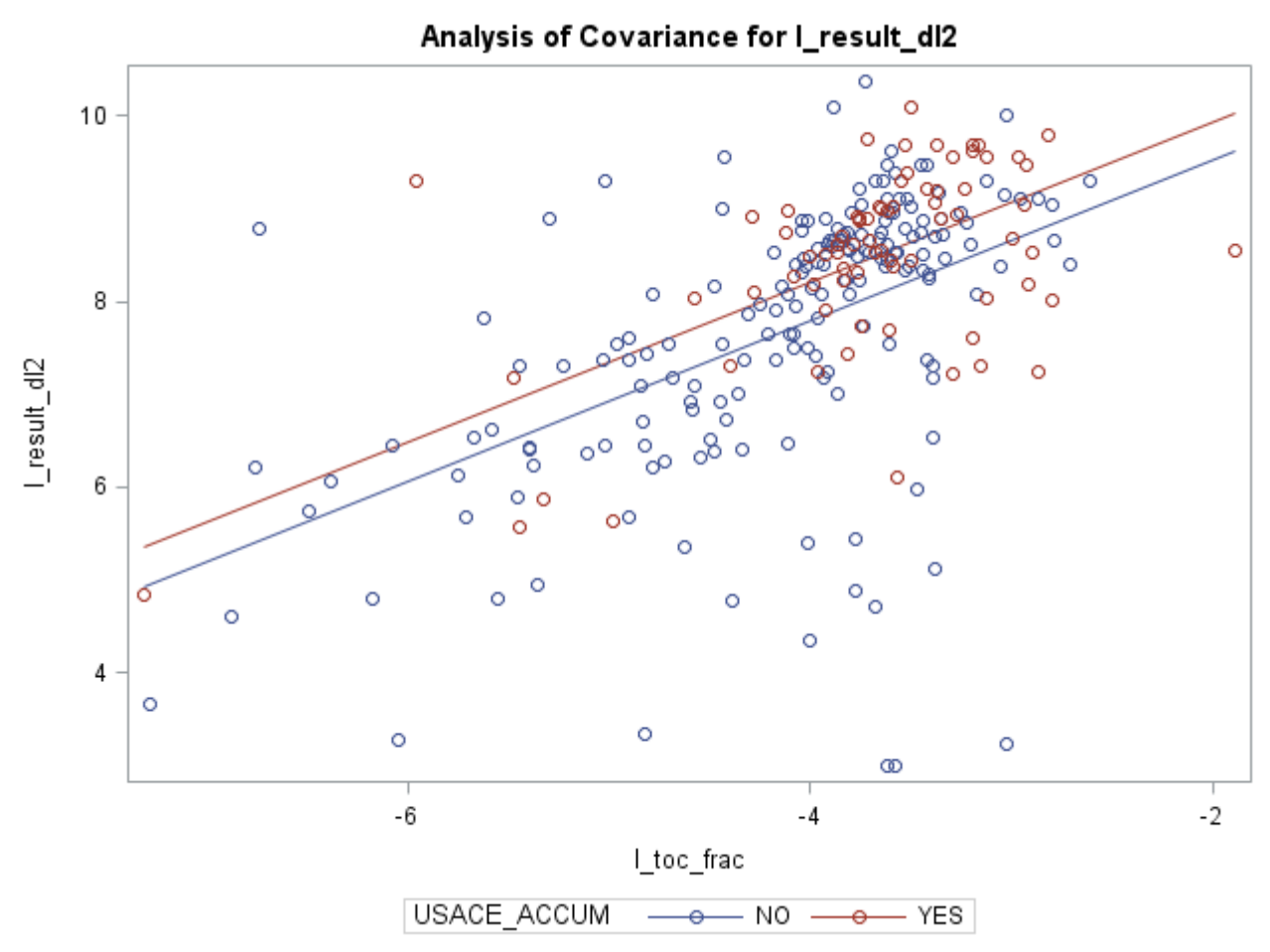
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	165.1063496	82.5531748	58.66	<.0001
Error	250	351.8549615	1.4074198		
Corrected Total	252	516.9613111			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.319379	15.02539	1.186347	7.895615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	156.5275385	156.5275385	111.22	<.0001
USACE_ACCUM	1	8.5788112	8.5788112	6.10	0.0142

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	132.5253952	132.5253952	94.16	<.0001
USACE_ACCUM	1	8.5788112	8.5788112	6.10	0.0142


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 1.4074
R-Square 0.3194
Adj R-Square 0.3139


Analysis of Covariance for l_result_dl2
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	7.77400572	0.0142
YES	8.18977814	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	248
Number of Observations Used	248

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

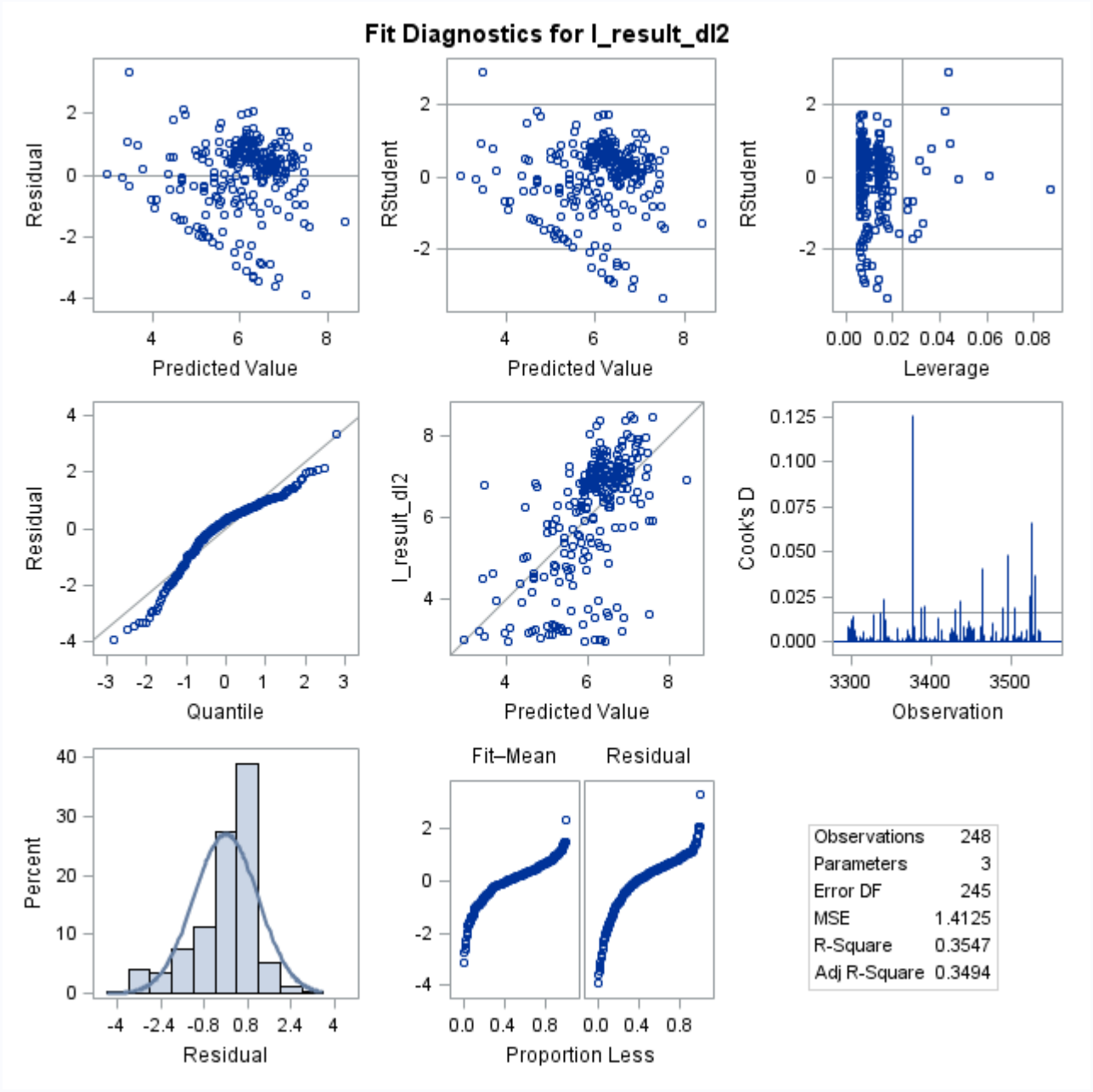
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

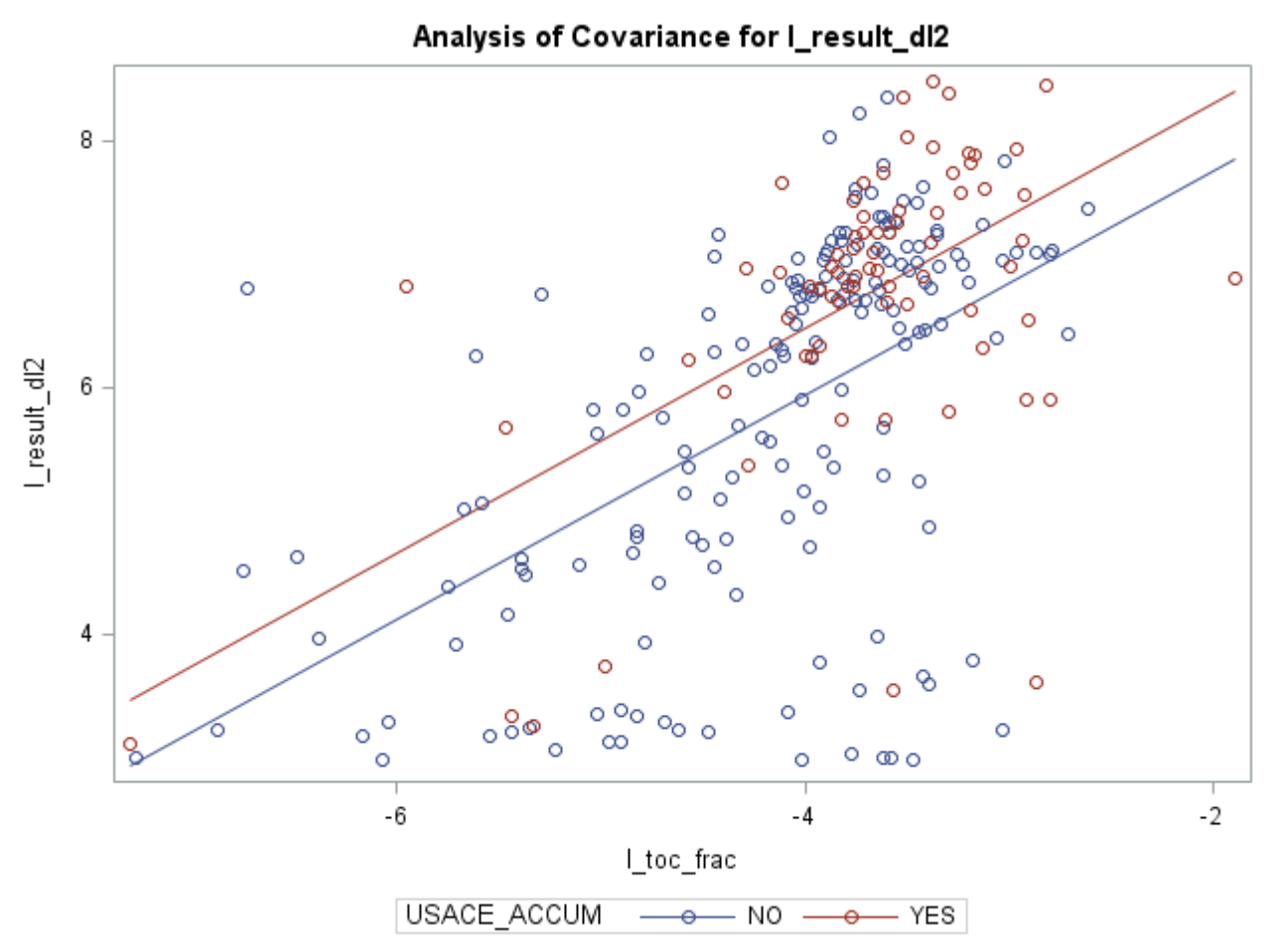
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	190.2030199	95.1015099	67.33	<.0001
Error	245	346.0521657	1.4124578		
Corrected Total	247	536.2551856			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.354688	19.59309	1.188469	6.065755

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	175.8514798	175.8514798	124.50	<.0001
USACE_ACCUM	1	14.3515400	14.3515400	10.16	0.0016

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	144.7235414	144.7235414	102.46	<.0001
USACE_ACCUM	1	14.3515400	14.3515400	10.16	0.0016


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 248
Parameters 3
Error DF 245
MSE 1.4125
R-Square 0.3547
Adj R-Square 0.3494


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.90608301	0.0016
YES	6.44852966	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

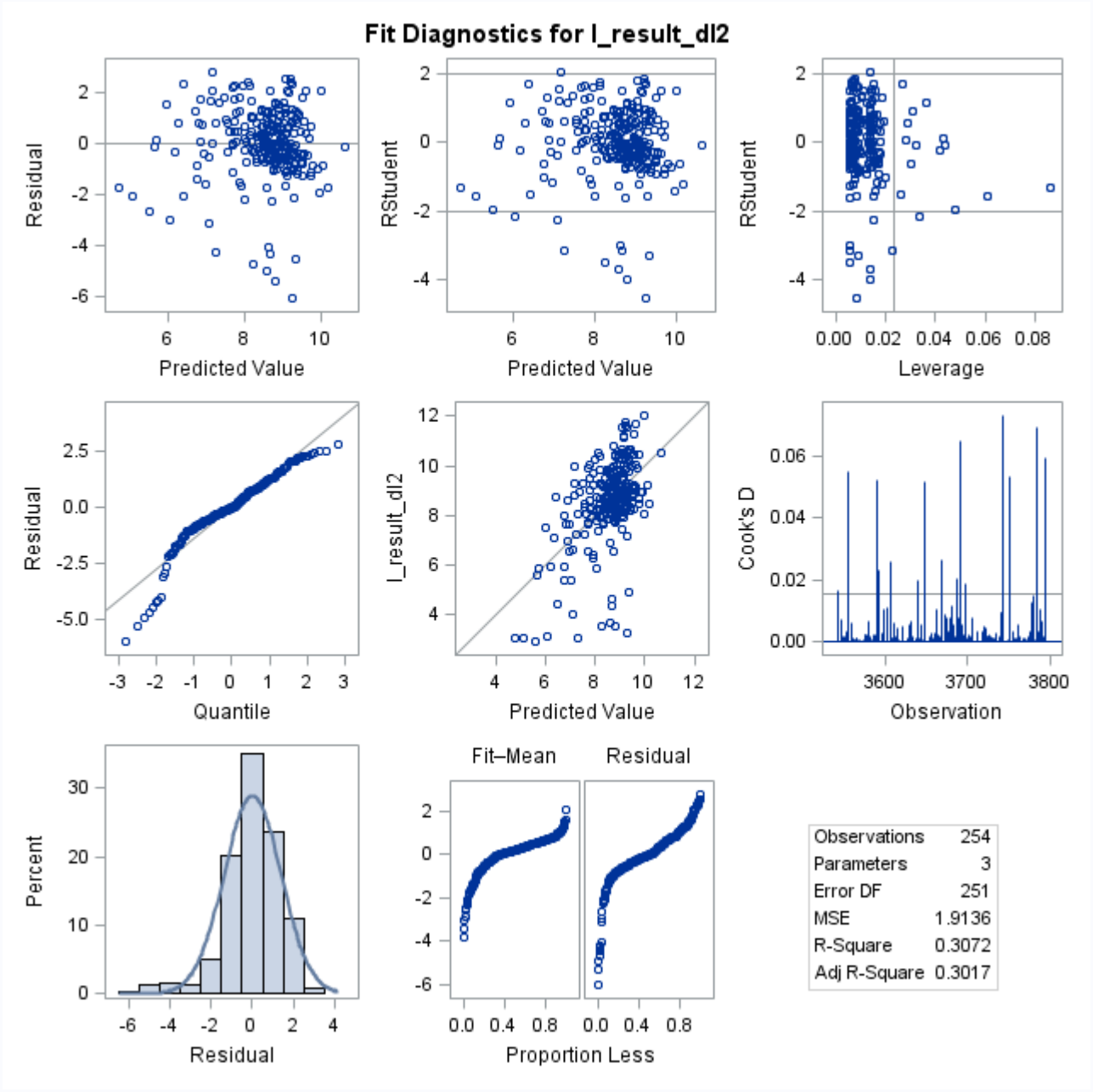
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

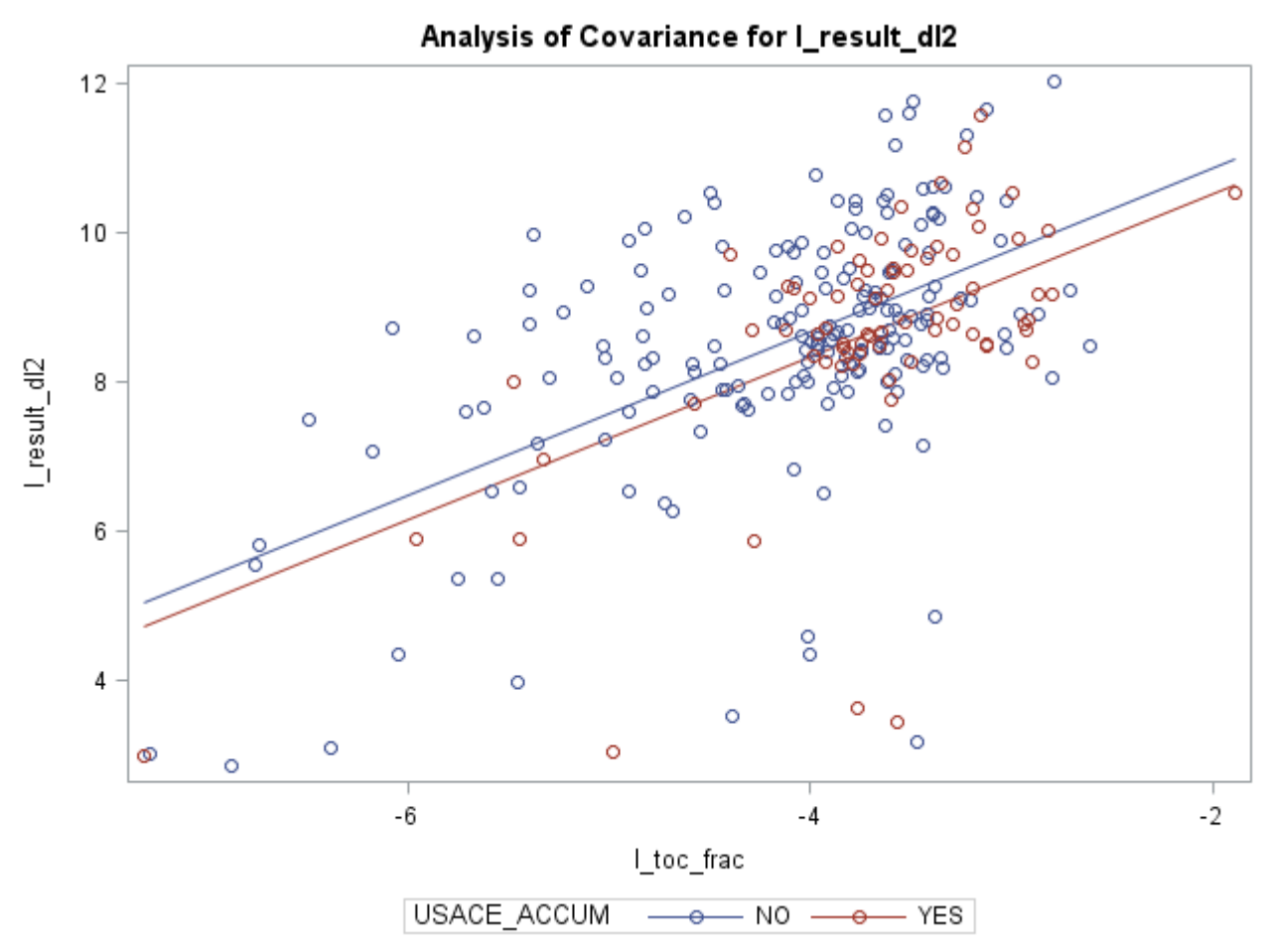
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	213.0045665	106.5022833	55.66	<.0001
Error	251	480.3074538	1.9135755		
Corrected Total	253	693.3120203			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.307228	16.16562	1.383320	8.557173

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	207.3387555	207.3387555	108.35	<.0001
USACE_ACCUM	1	5.6658110	5.6658110	2.96	0.0865

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	212.1254687	212.1254687	110.85	<.0001
USACE_ACCUM	1	5.6658110	5.6658110	2.96	0.0865


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.9136
R-Square 0.3072
Adj R-Square 0.3017


Analysis of Covariance for l_result_dl2
l_result_dl2
12
10
8
6
4
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	8.65548218	0.0865
YES	8.31804381	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

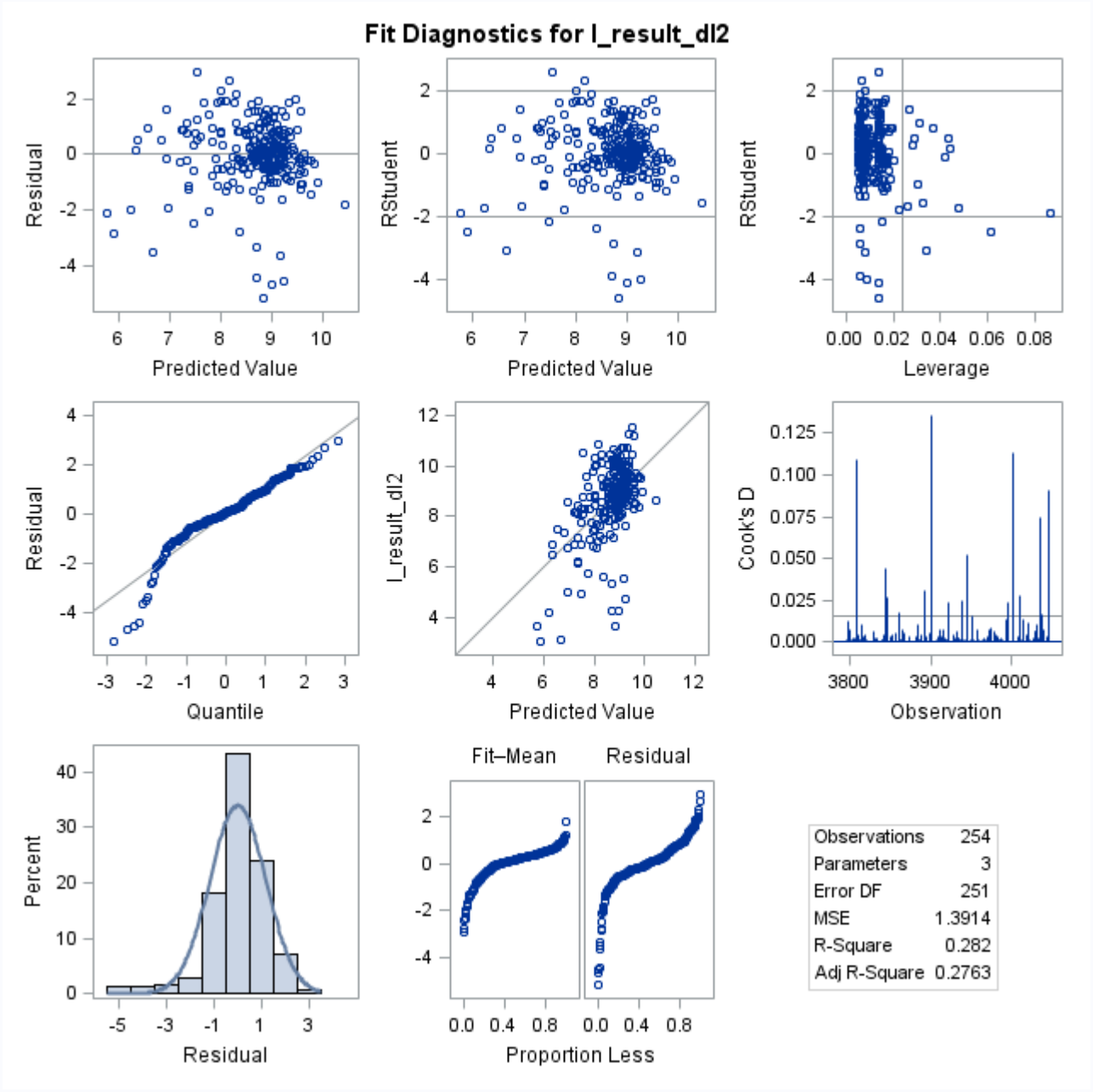
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

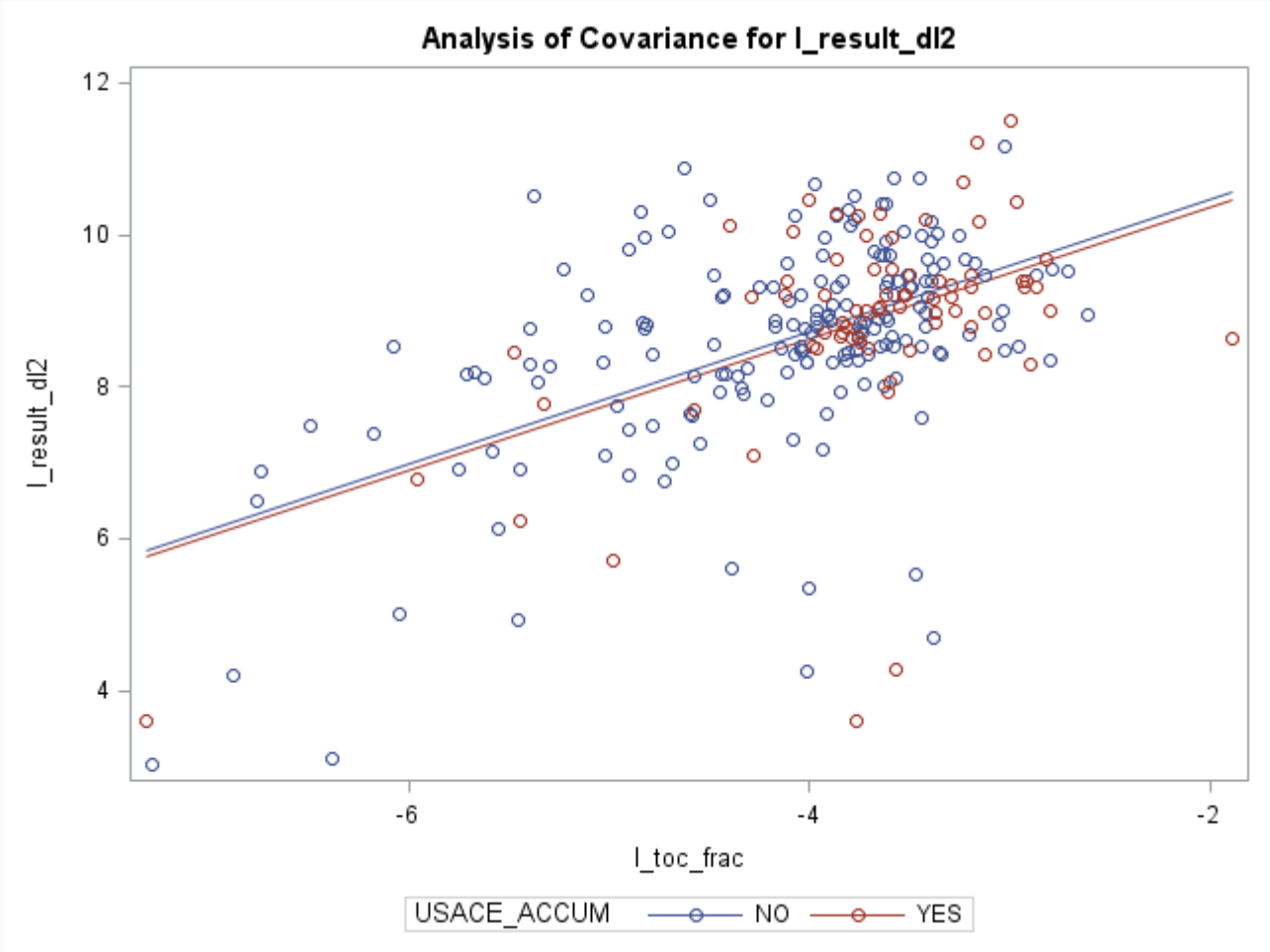
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	137.1617148	68.5808574	49.29	<.0001
Error	251	349.2300517	1.3913548		
Corrected Total	253	486.3917665			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.281998	13.59186	1.179557	8.678405

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	136.6444618	136.6444618	98.21	<.0001
USACE_ACCUM	1	0.5172530	0.5172530	0.37	0.5426

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	133.3869239	133.3869239	95.87	<.0001
USACE_ACCUM	1	0.5172530	0.5172530	0.37	0.5426


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.3914
R-Square 0.282
Adj R-Square 0.2763


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	8.70810919	0.5426
YES	8.60615269	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

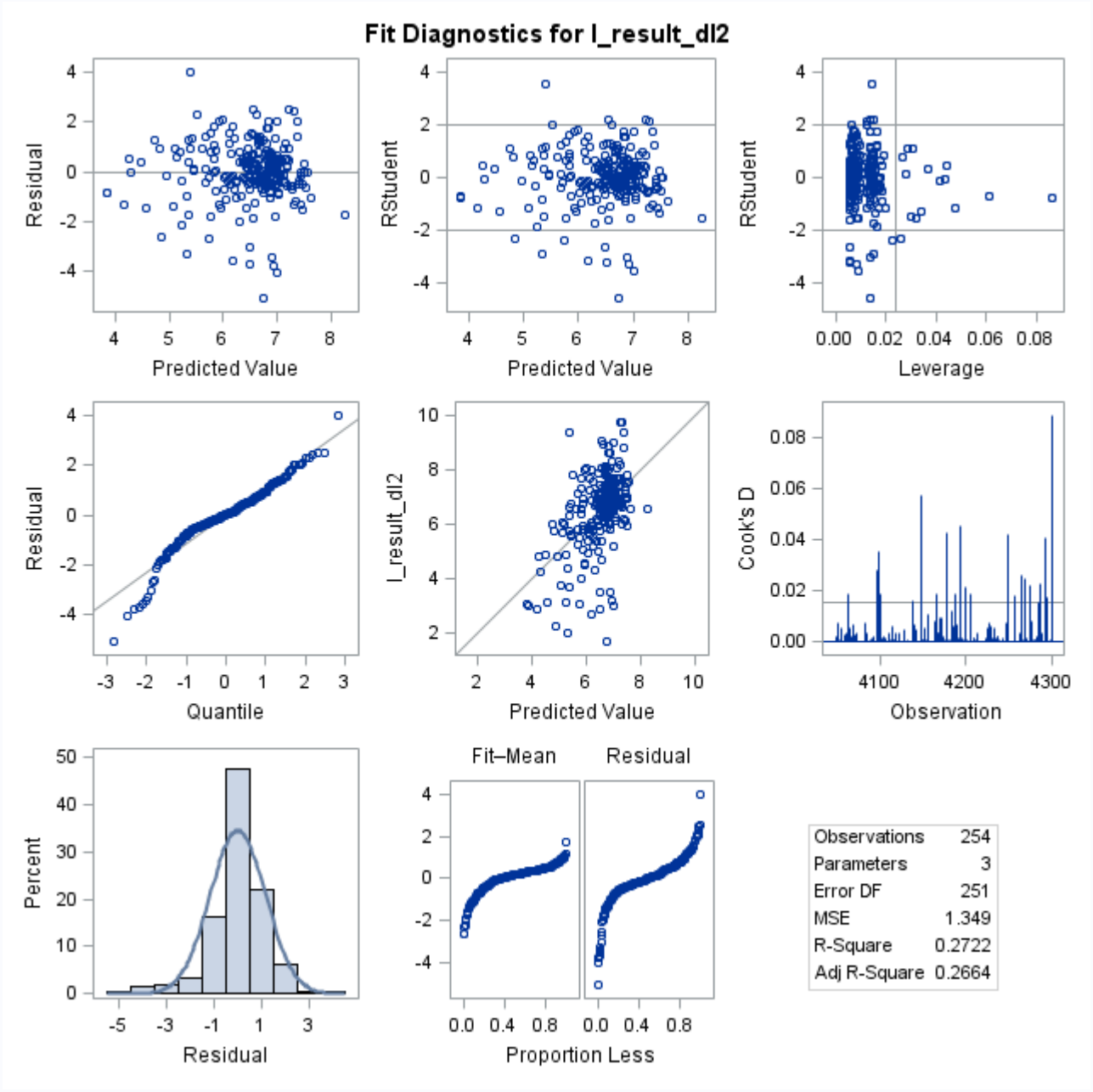
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

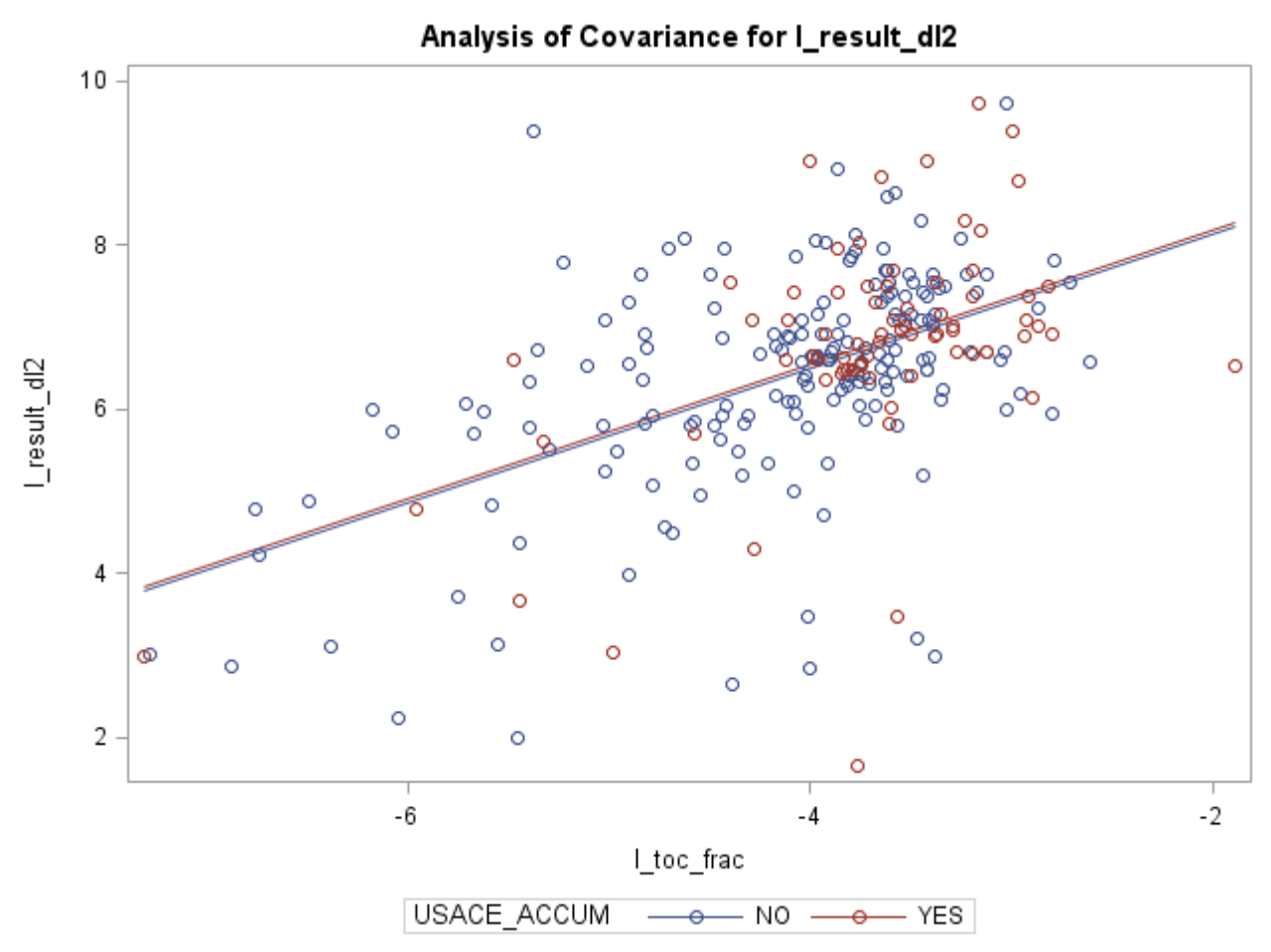
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	126.6158802	63.3079401	46.93	<.0001
Error	251	338.5913762	1.3489696		
Corrected Total	253	465.2072563			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.272171	17.86408	1.161452	6.501603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	126.5594978	126.5594978	93.82	<.0001
USACE_ACCUM	1	0.0563824	0.0563824	0.04	0.8382

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	118.9134015	118.9134015	88.15	<.0001
USACE_ACCUM	1	0.0563824	0.0563824	0.04	0.8382


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.349
R-Square 0.2722
Adj R-Square 0.2664


Analysis of Covariance for l_result_dl2
10
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	6.49179589	0.8382
YES	6.52545752	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

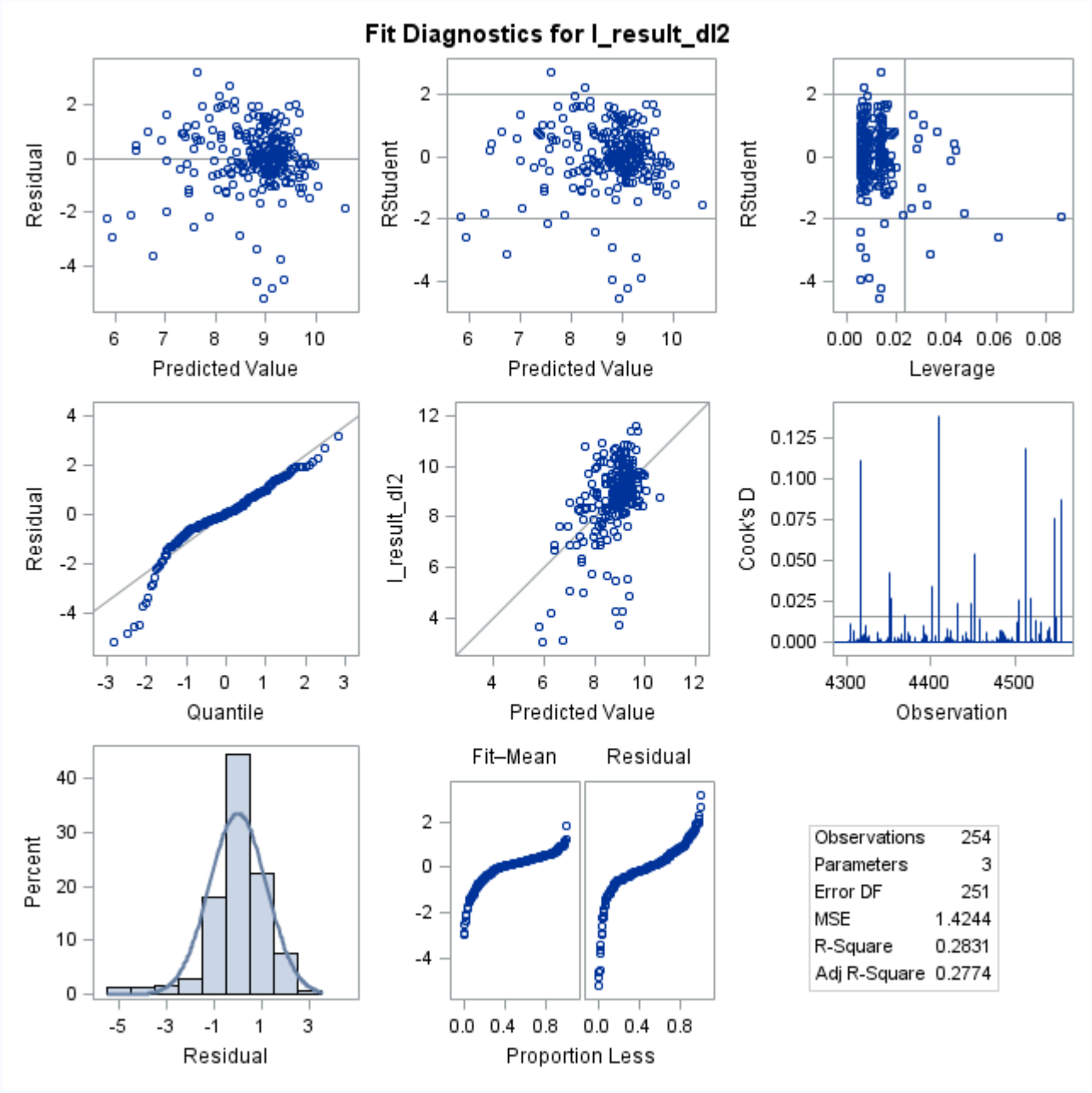
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

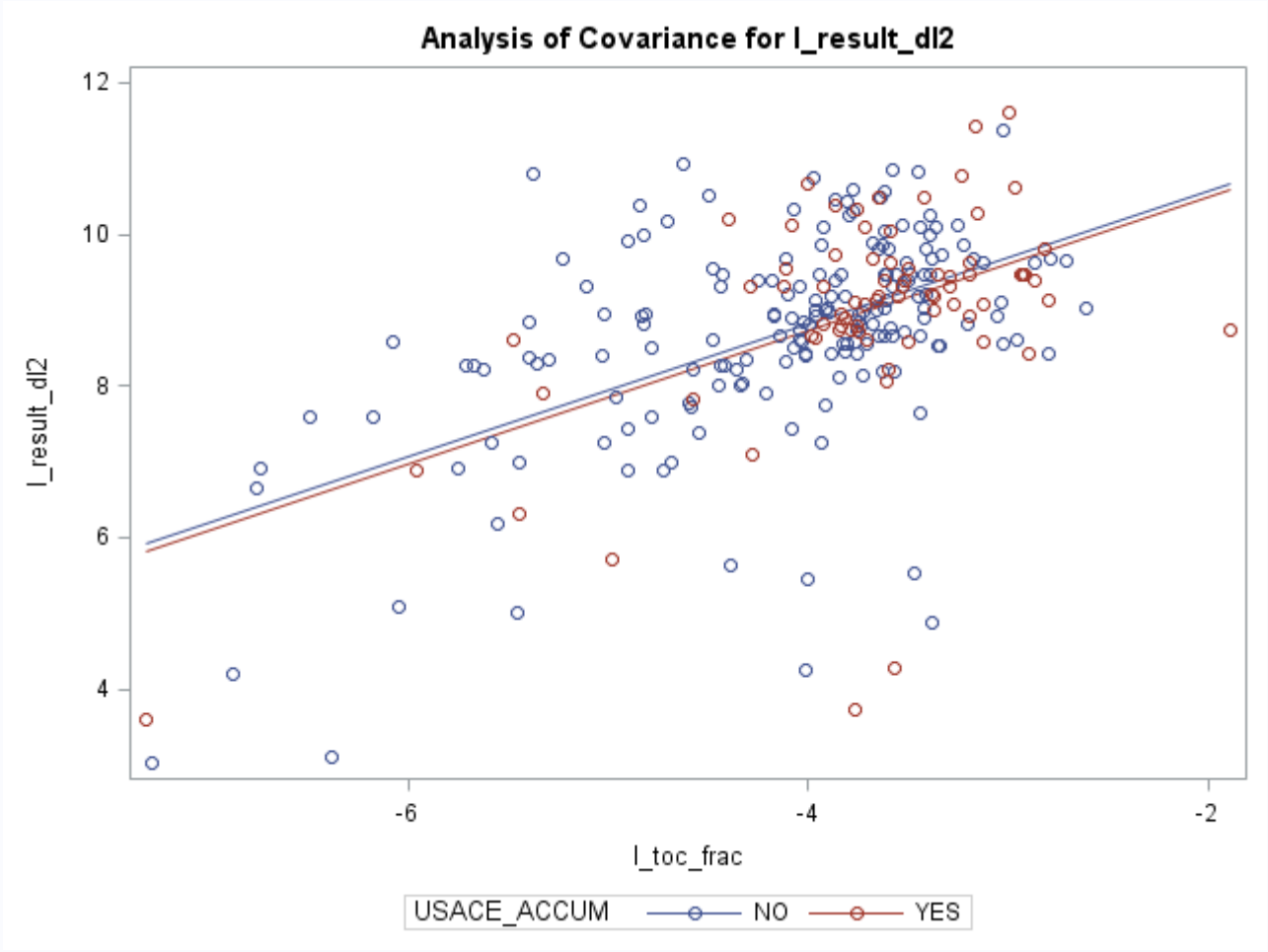
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	141.1768823	70.5884412	49.56	<.0001
Error	251	357.5148827	1.4243621		
Corrected Total	253	498.6917650			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.283094	13.58773	1.193466	8.783410

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	140.7289287	140.7289287	98.80	<.0001
USACE_ACCUM	1	0.4479536	0.4479536	0.31	0.5754

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	137.0530752	137.0530752	96.22	<.0001
USACE_ACCUM	1	0.4479536	0.4479536	0.31	0.5754


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.4244
R-Square 0.2831
Adj R-Square 0.2774


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	8.81105286	0.5754
YES	8.71617171	

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

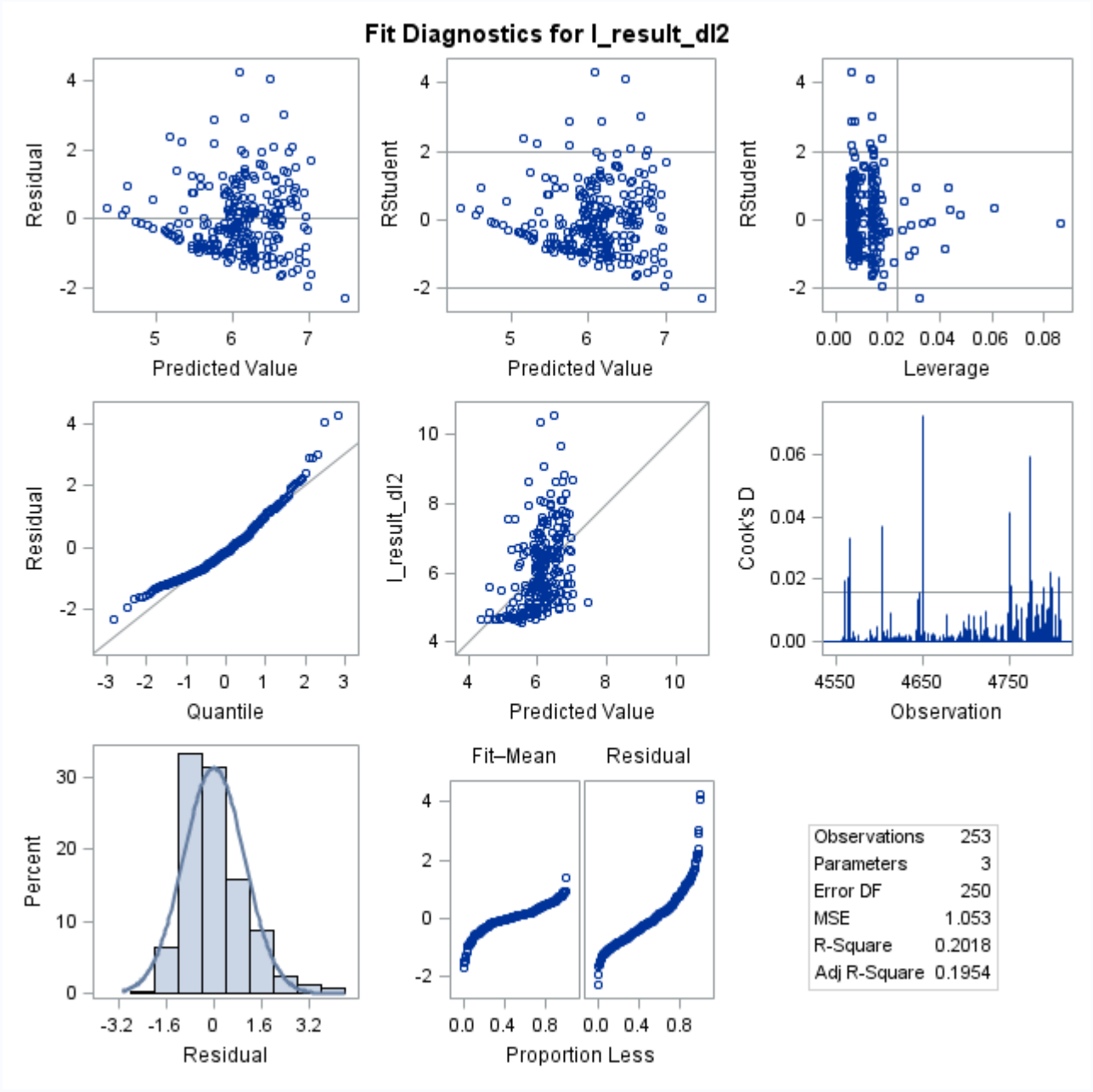
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

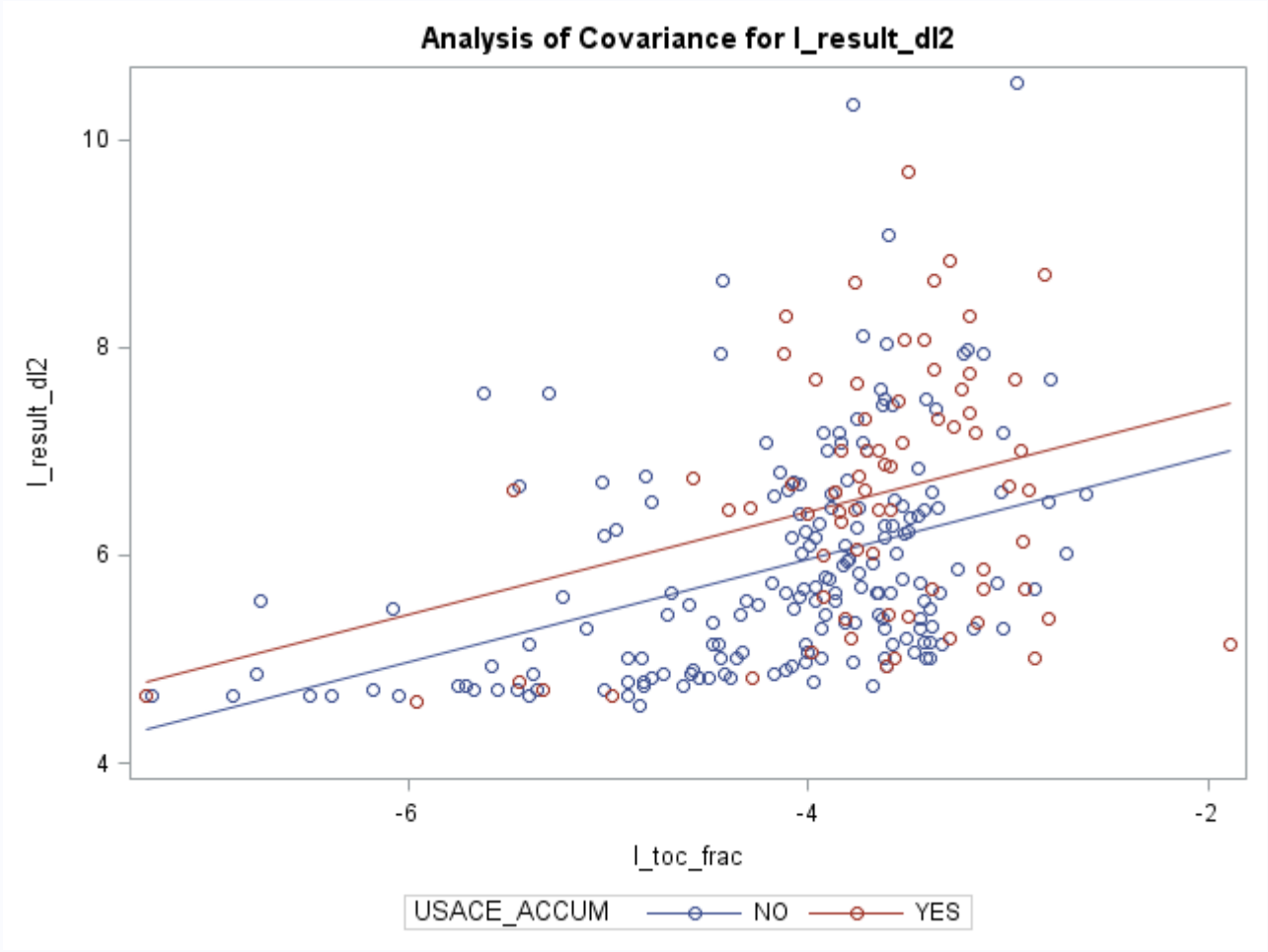
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	66.5507629	33.2753814	31.60	<.0001
Error	250	263.2463084	1.0529852		
Corrected Total	252	329.7970713			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.201793	16.86740	1.026151	6.083634

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	56.24700629	56.24700629	53.42	<.0001
USACE_ACCUM	1	10.30375659	10.30375659	9.79	0.0020

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	43.38268938	43.38268938	41.20	<.0001
USACE_ACCUM	1	10.30375659	10.30375659	9.79	0.0020


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 1.053
R-Square 0.2018
Adj R-Square 0.1954


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.95174213	0.0020
YES	6.40884559	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by usace_accum

The GLM Procedure

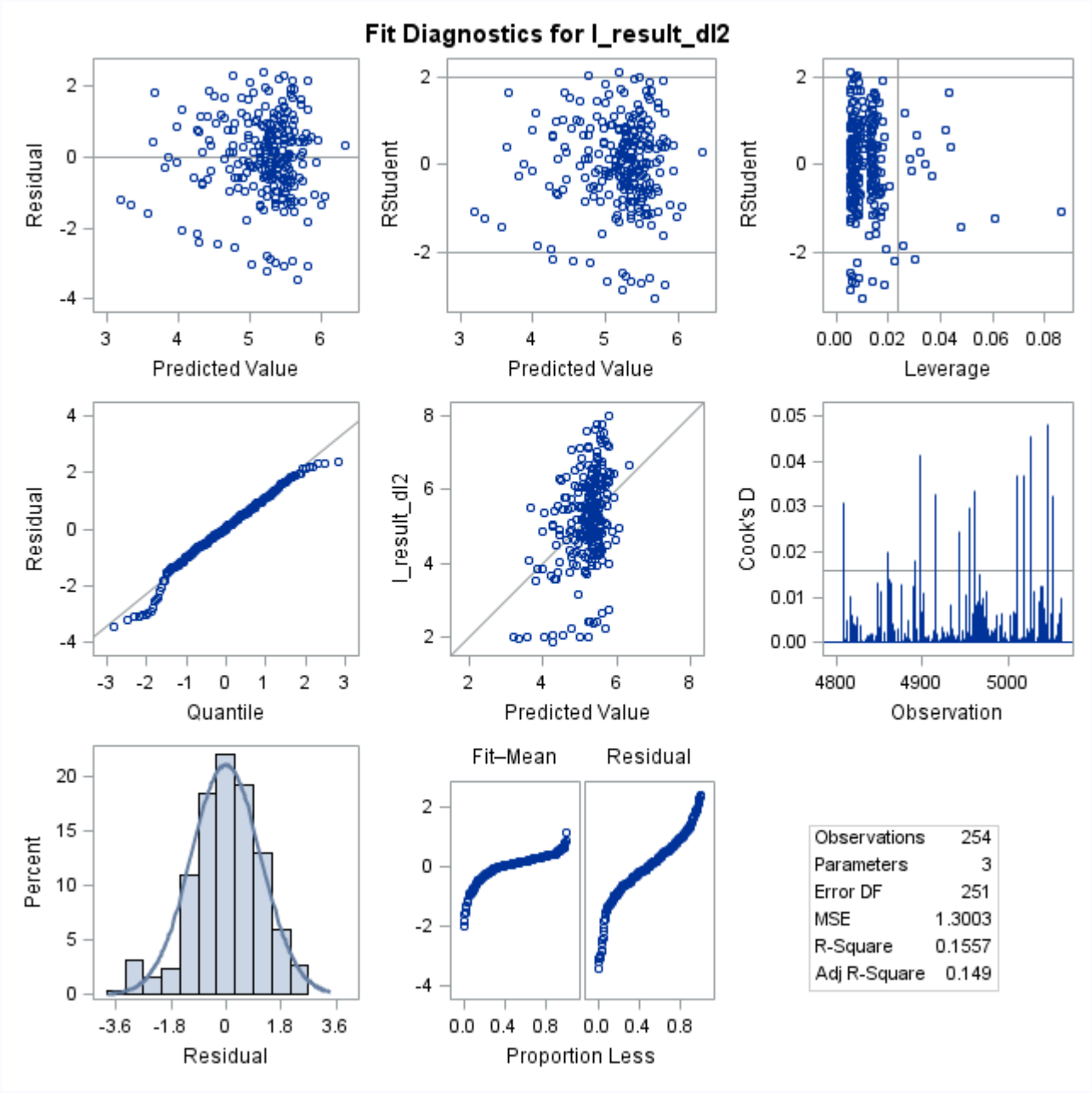
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

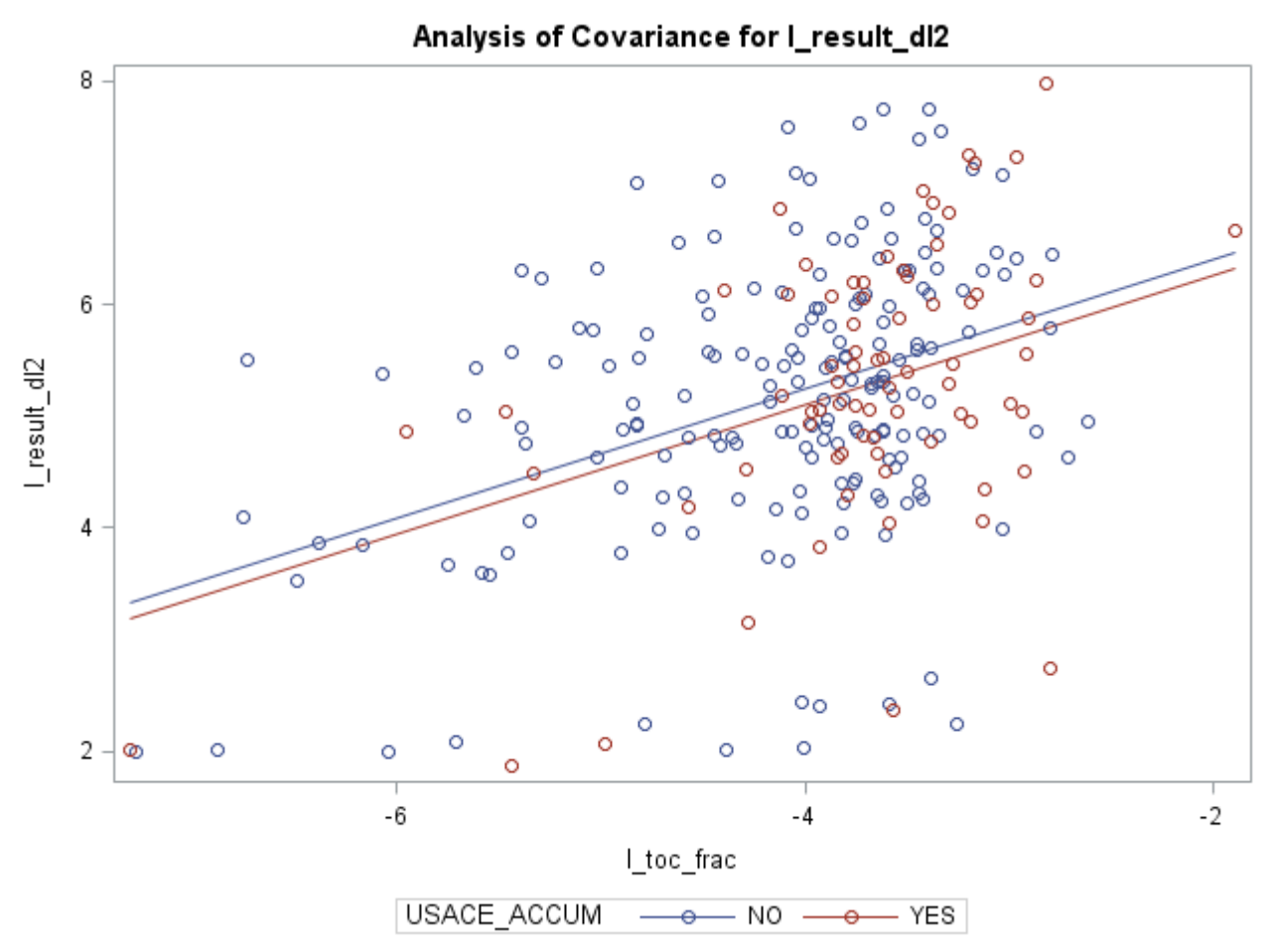
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	60.1926563	30.0963281	23.14	<.0001
Error	251	326.3865464	1.3003448		
Corrected Total	253	386.5792027			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.155706	21.95535	1.140327	5.193845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	59.32561859	59.32561859	45.62	<.0001
USACE_ACCUM	1	0.86703771	0.86703771	0.67	0.4150

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	59.49581994	59.49581994	45.75	<.0001
USACE_ACCUM	1	0.86703771	0.86703771	0.67	0.4150


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.3003
R-Square 0.1557
Adj R-Square 0.149


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.23230207	0.4150
YES	5.10029949	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

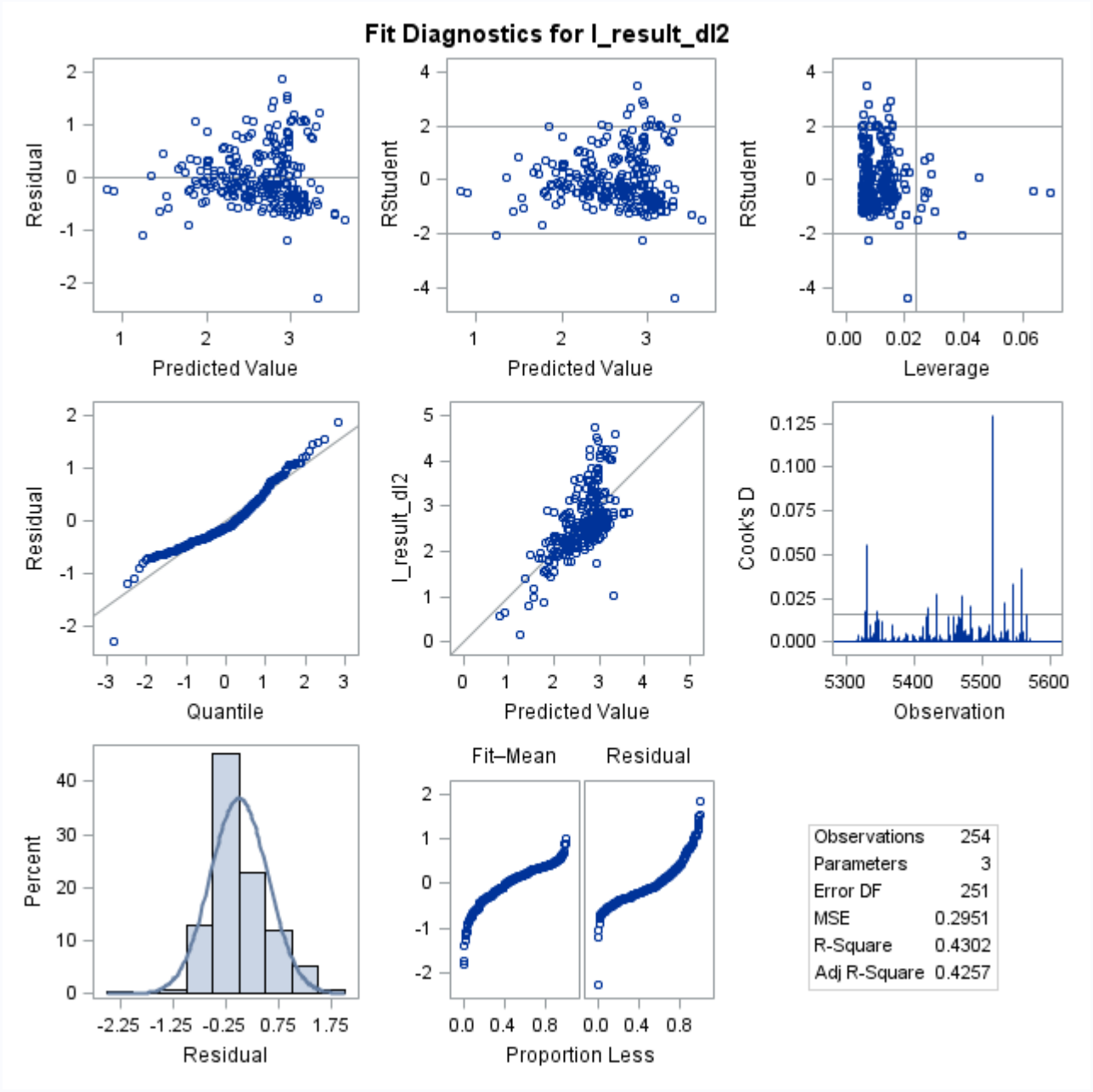
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

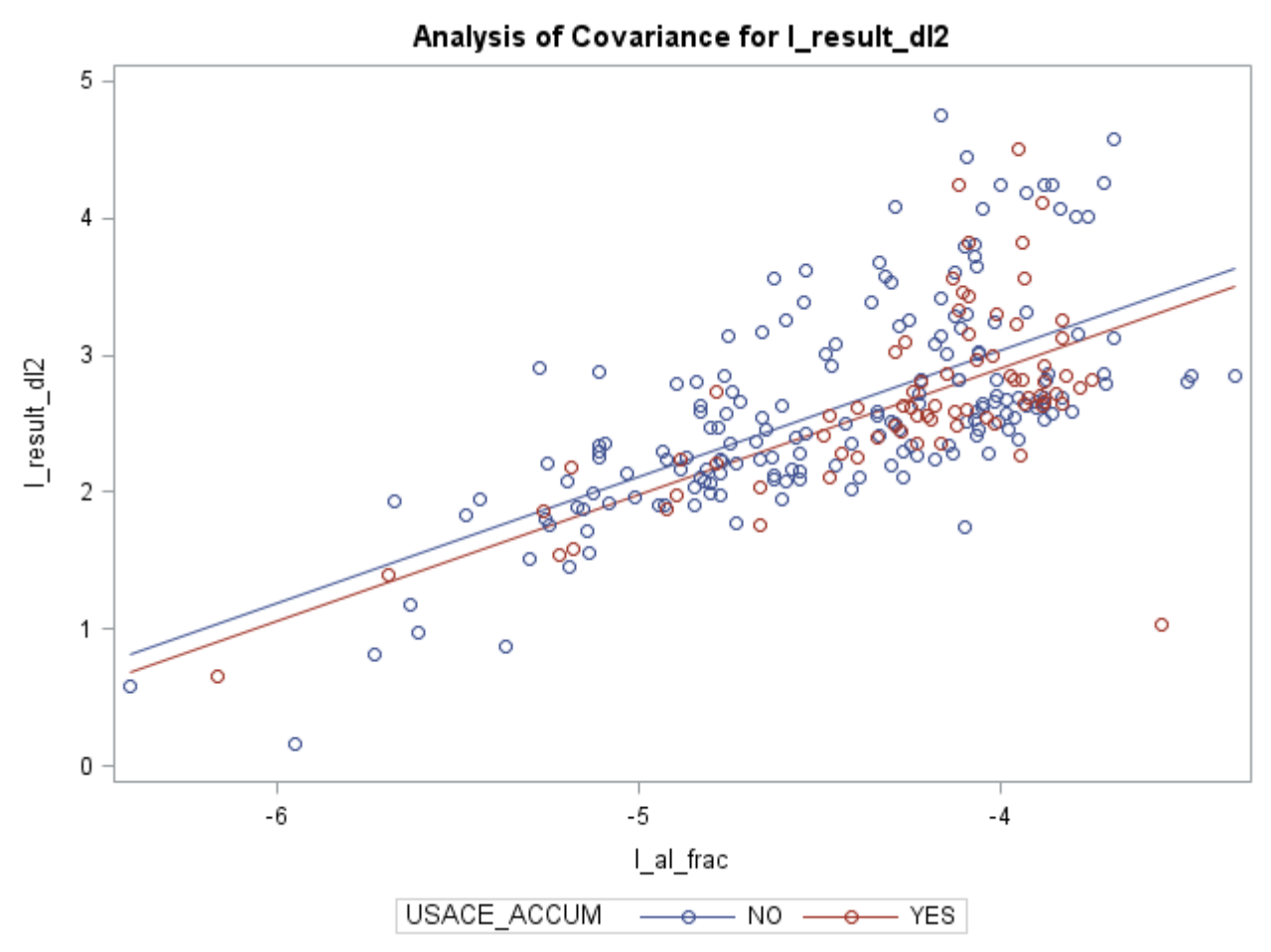
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	55.9255935	27.9627968	94.76	<.0001
Error	251	74.0694070	0.2950972		
Corrected Total	253	129.9950005			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.430213	20.65552	0.543229	2.629944

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	55.04718823	55.04718823	186.54	<.0001
USACE_ACCUM	1	0.87840531	0.87840531	2.98	0.0857

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	55.75161454	55.75161454	188.93	<.0001
USACE_ACCUM	1	0.87840531	0.87840531	2.98	0.0857


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.2951
R-Square 0.4302
Adj R-Square 0.4257


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
1
0
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	2.66827944	0.0857
YES	2.53669575	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

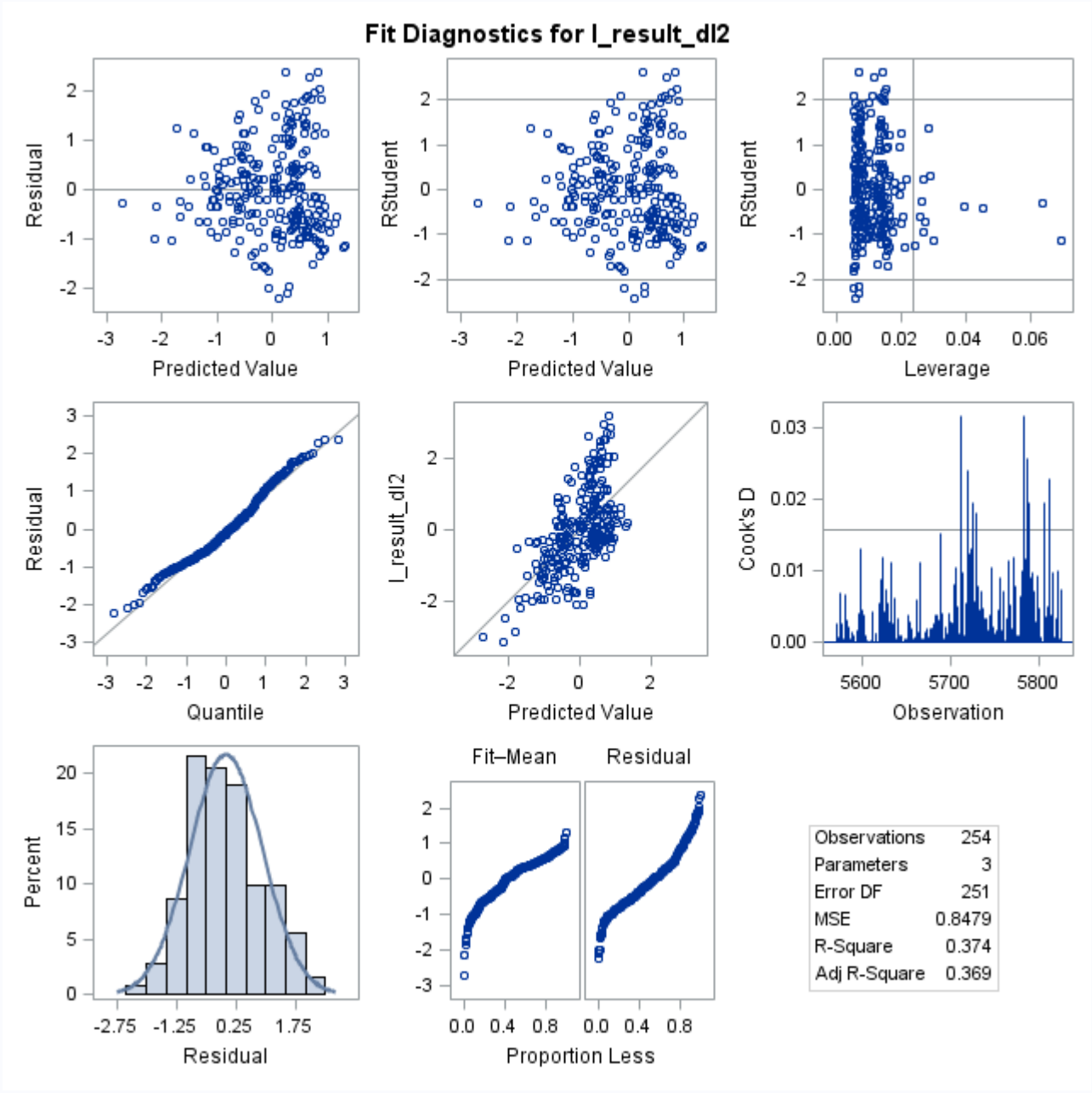
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

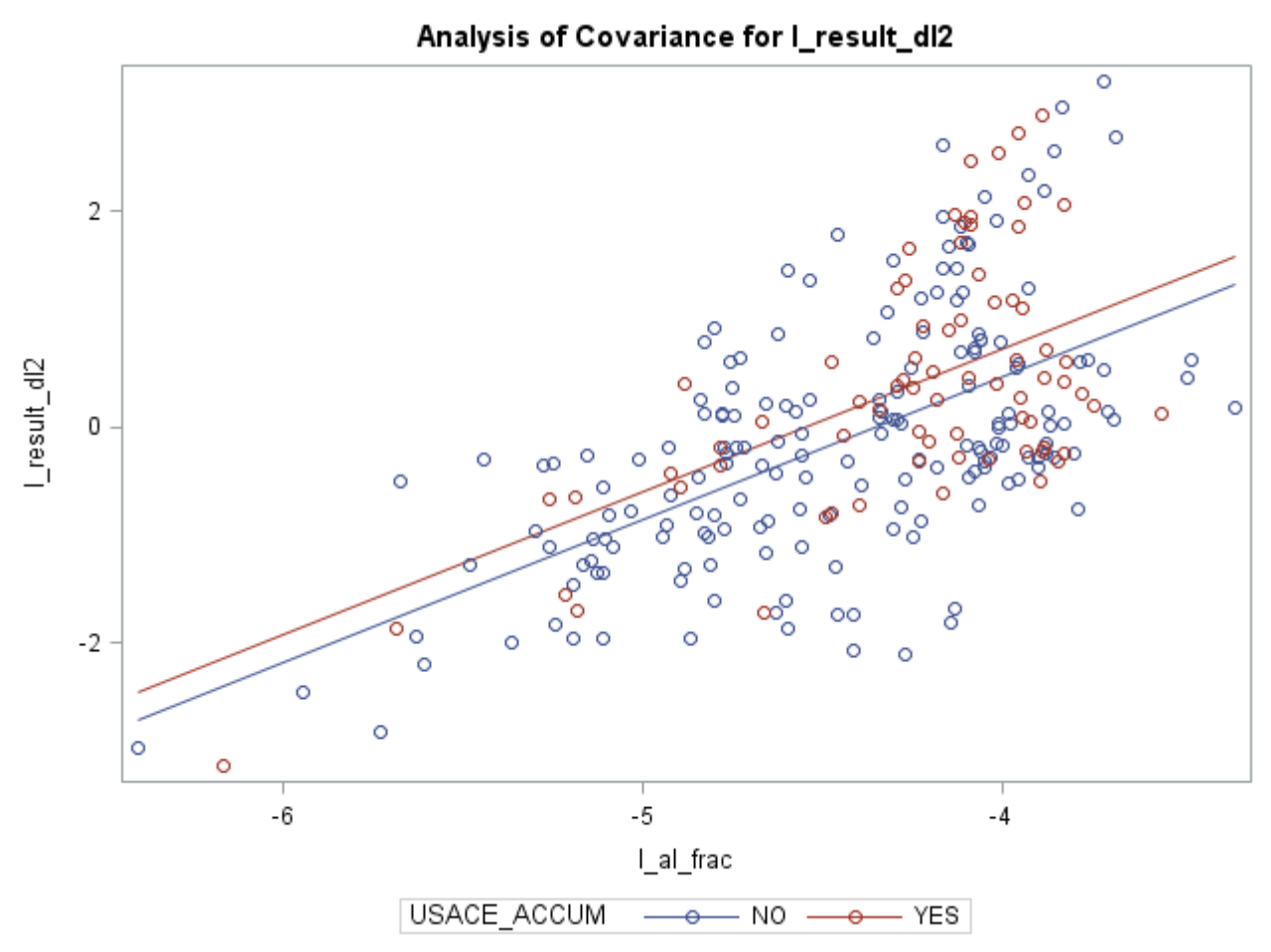
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	127.1645209	63.5822604	74.99	<.0001
Error	251	212.8135419	0.8478627		
Corrected Total	253	339.9780628			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.374037	7900.820	0.920795	0.011654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	124.0189771	124.0189771	146.27	<.0001
USACE_ACCUM	1	3.1455438	3.1455438	3.71	0.0552

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	113.0705330	113.0705330	133.36	<.0001
USACE_ACCUM	1	3.1455438	3.1455438	3.71	0.0552


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.8479
R-Square 0.374
Adj R-Square 0.369


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.06088941	0.0552
YES	0.18811237	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

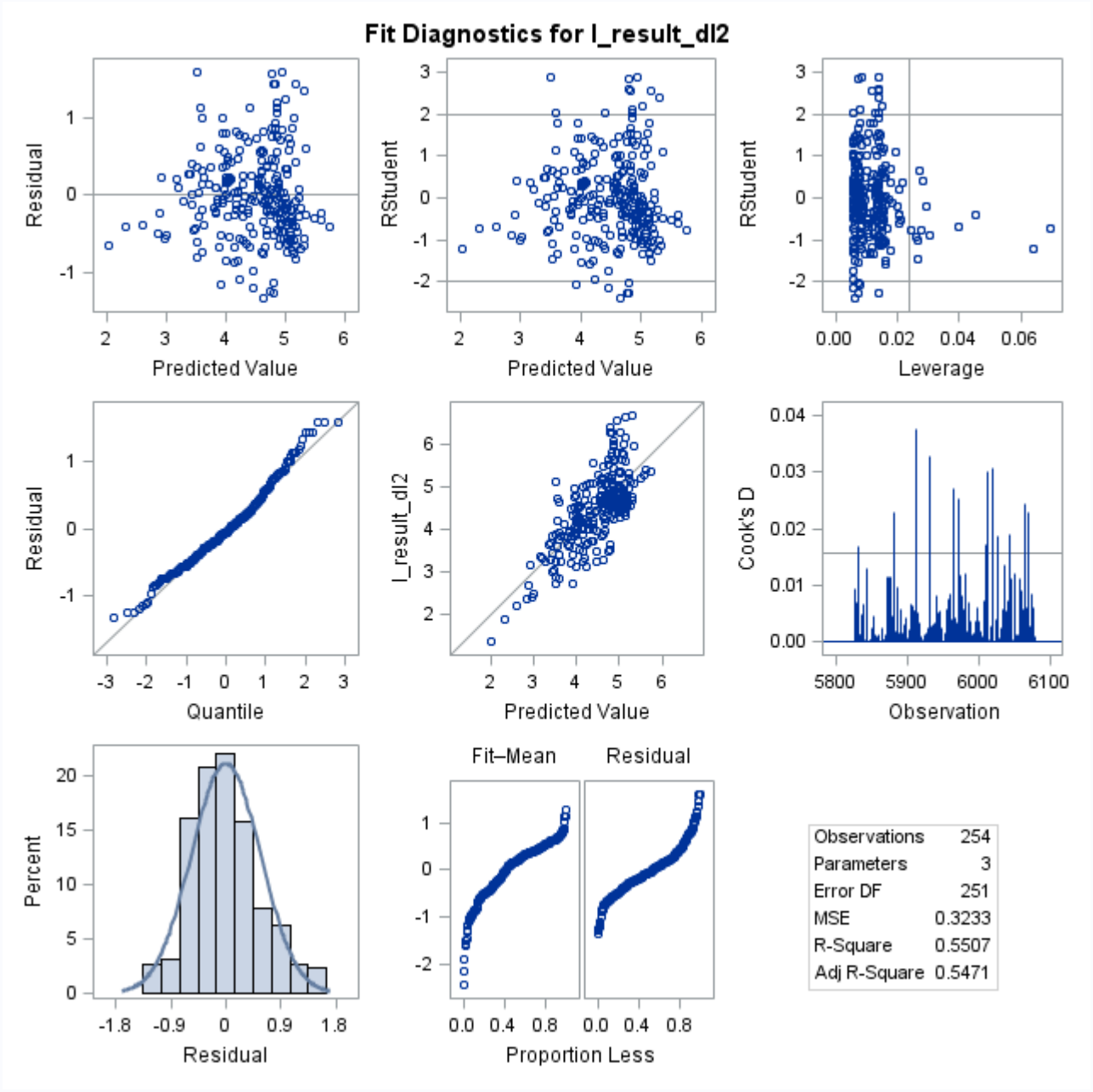
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

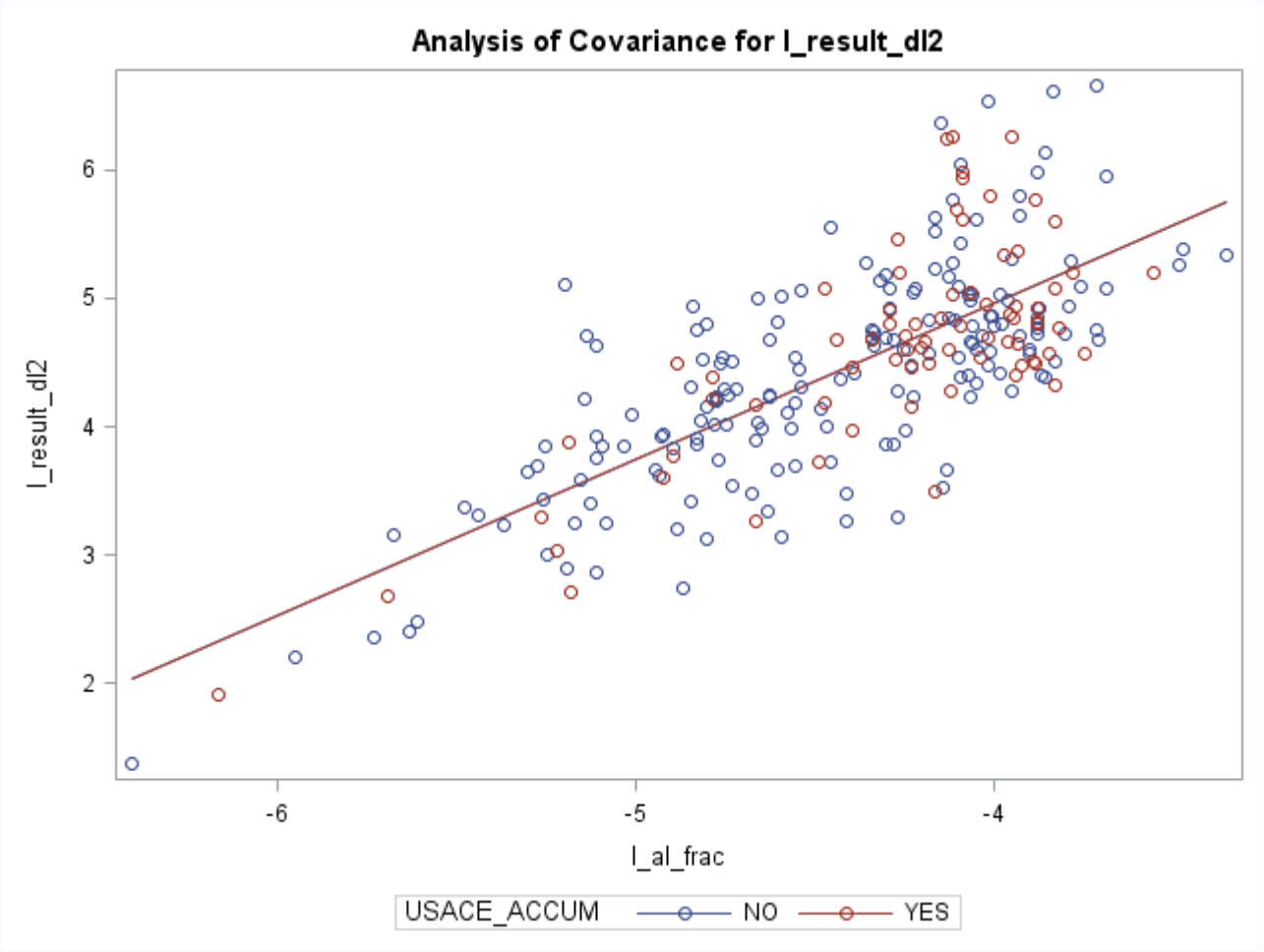
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	99.4403518	49.7201759	153.80	<.0001
Error	251	81.1412388	0.3232719		
Corrected Total	253	180.5815906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.550667	12.71165	0.568570	4.472828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	99.43794574	99.43794574	307.60	<.0001
USACE_ACCUM	1	0.00240608	0.00240608	0.01	0.9313

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	96.37314703	96.37314703	298.12	<.0001
USACE_ACCUM	1	0.00240608	0.00240608	0.01	0.9313


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.3233
R-Square 0.5507
Adj R-Square 0.5471


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Chromium

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.47483394	0.9313
YES	4.46794725	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

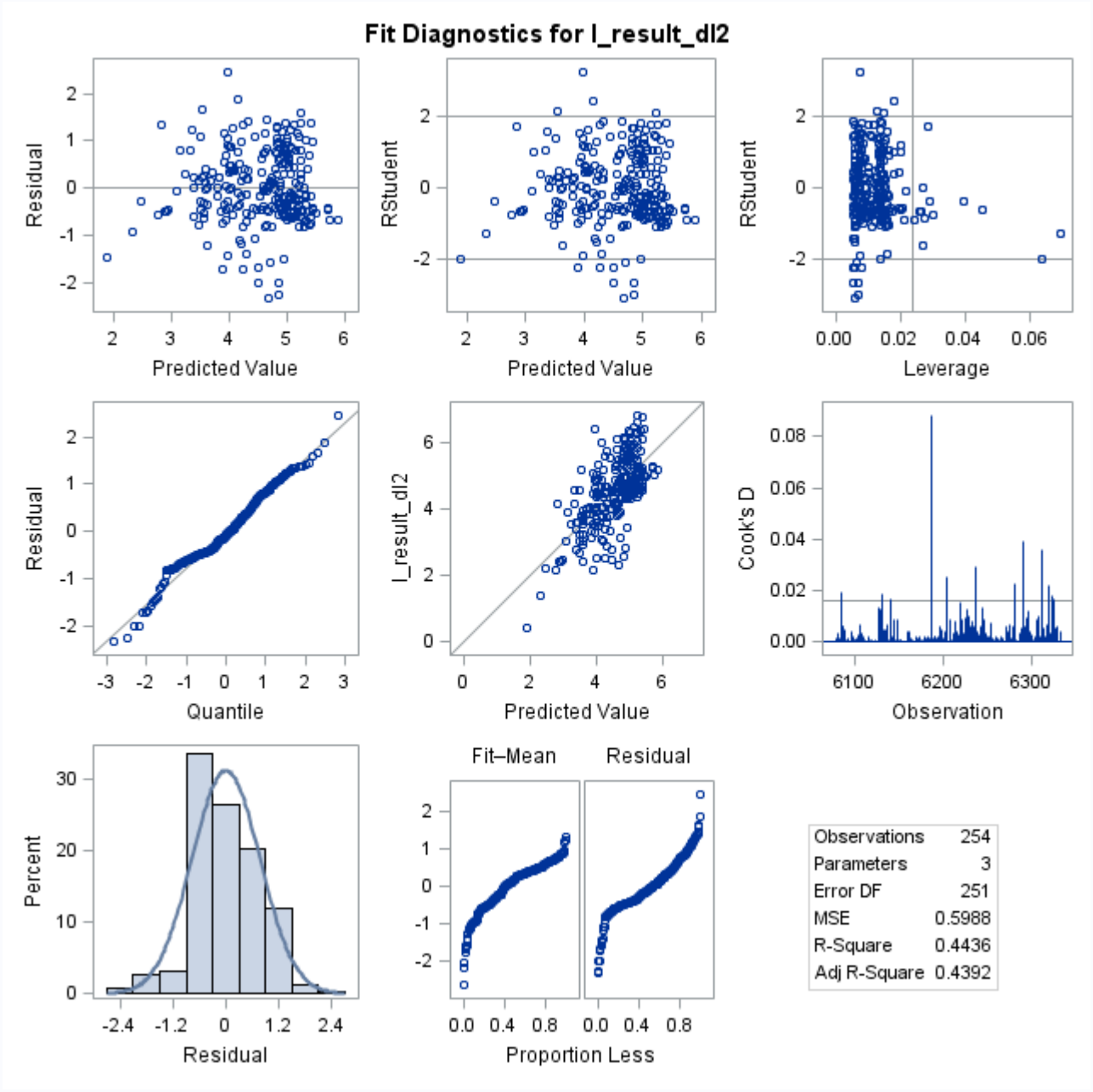
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

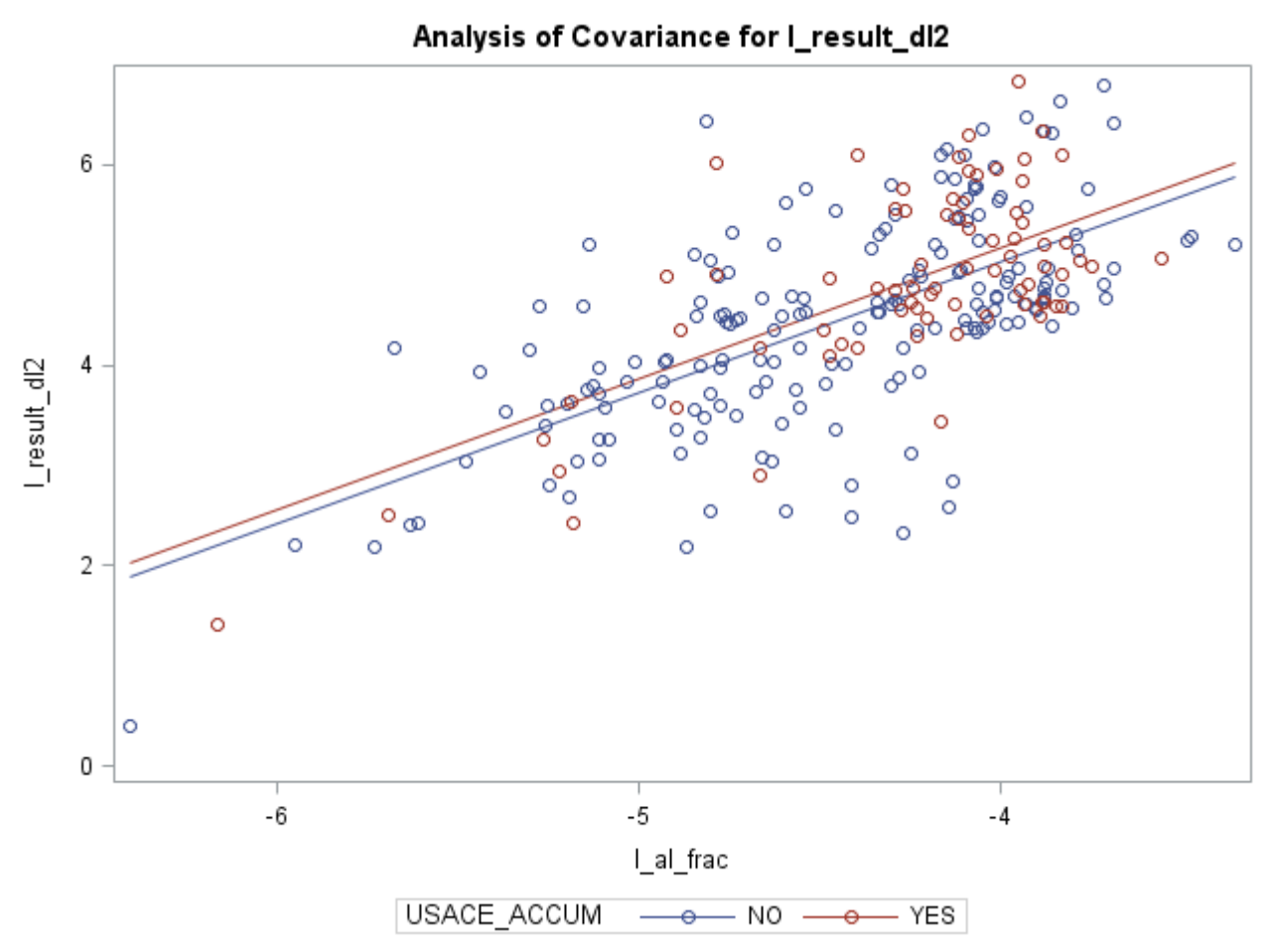
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	119.8446228	59.9223114	100.06	<.0001
Error	251	150.3098004	0.5988438		
Corrected Total	253	270.1544232			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.443615	17.03009	0.773850	4.544017

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	118.8756914	118.8756914	198.51	<.0001
USACE_ACCUM	1	0.9689314	0.9689314	1.62	0.2045

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	111.2256182	111.2256182	185.73	<.0001
USACE_ACCUM	1	0.9689314	0.9689314	1.62	0.2045


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.5988
R-Square 0.4436
Adj R-Square 0.4392


Analysis of Covariance for l_result_dl2
l_result_dl2
6
4
2
0
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.50375454	0.2045
YES	4.64195233	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

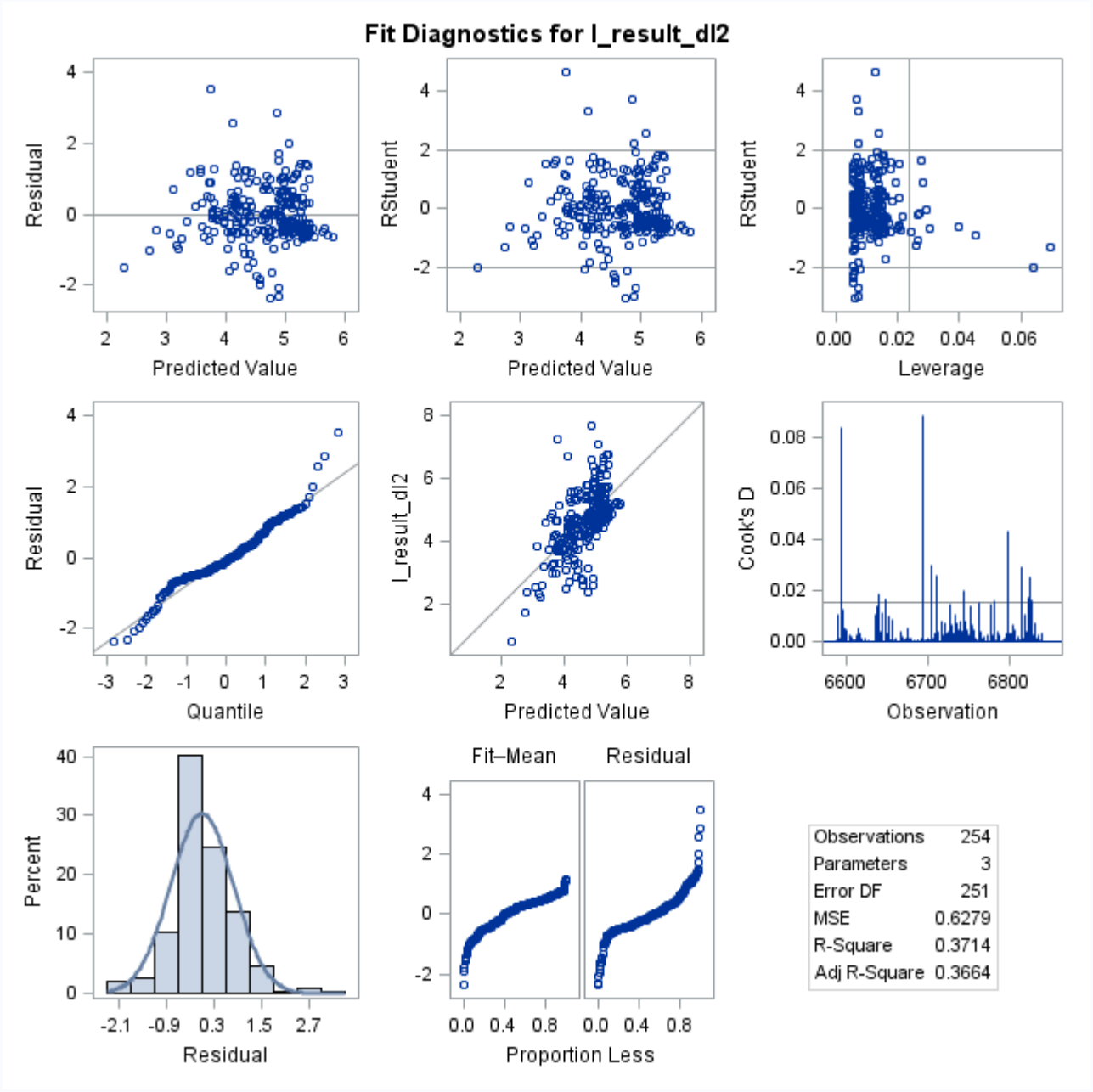
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

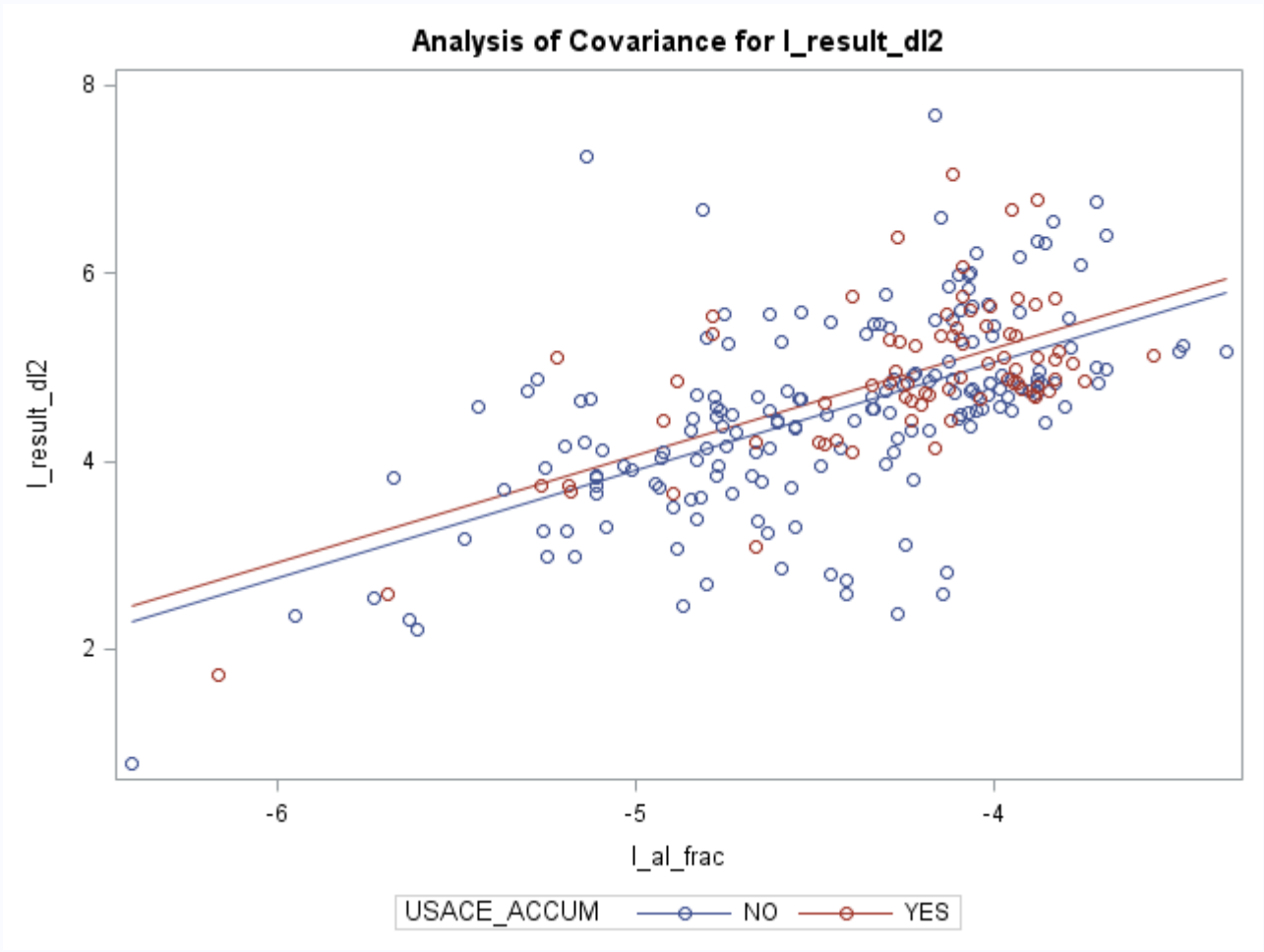
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	93.1254227	46.5627114	74.15	<.0001
Error	251	157.6130536	0.6279405		
Corrected Total	253	250.7384763			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.371405	17.09981	0.792427	4.634128

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	91.88237672	91.88237672	146.32	<.0001
USACE_ACCUM	1	1.24304599	1.24304599	1.98	0.1607

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	85.13640715	85.13640715	135.58	<.0001
USACE_ACCUM	1	1.24304599	1.24304599	1.98	0.1607


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.6279
R-Square 0.3714
Adj R-Square 0.3664


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	4.58852495	0.1607
YES	4.74505517	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

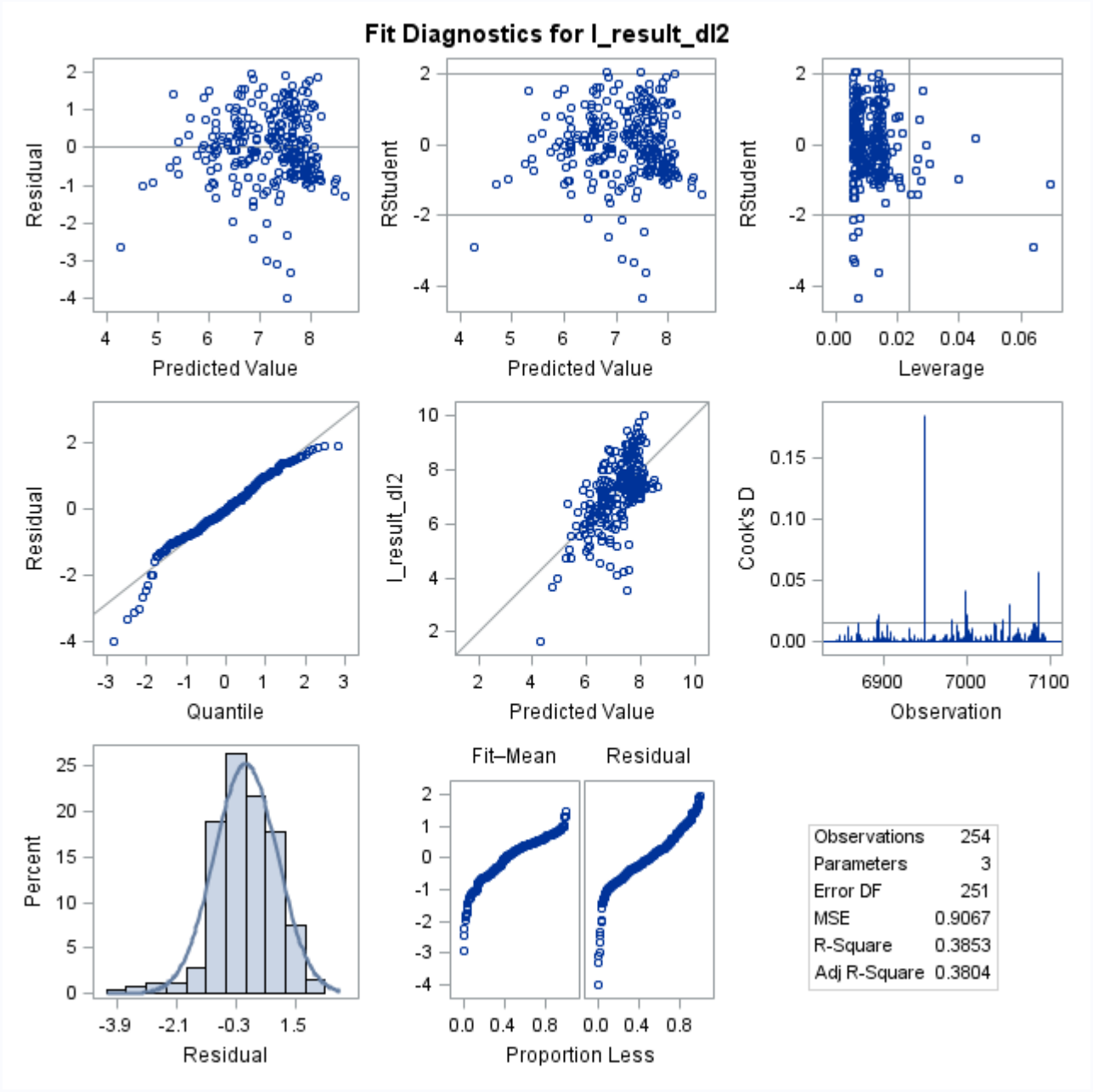
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

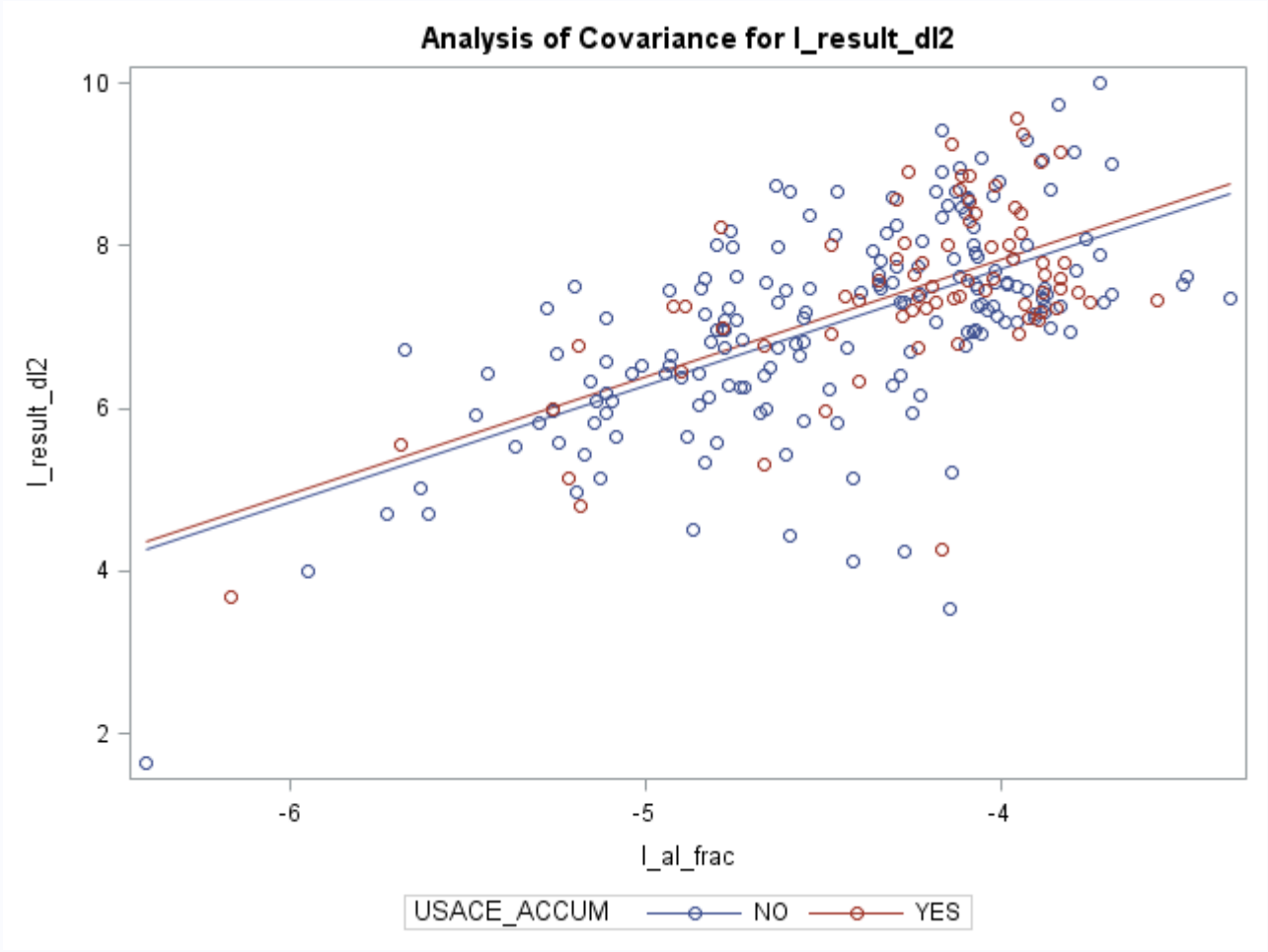
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	142.6355090	71.3177545	78.65	<.0001
Error	251	227.5905384	0.9067352		
Corrected Total	253	370.2260474			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.385266	13.27953	0.952226	7.170631

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	142.0979414	142.0979414	156.71	<.0001
USACE_ACCUM	1	0.5375677	0.5375677	0.59	0.4420

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	134.3848008	134.3848008	148.21	<.0001
USACE_ACCUM	1	0.5375677	0.5375677	0.59	0.4420


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.9067
R-Square 0.3853
Adj R-Square 0.3804


Analysis of Covariance for l_result_dl2
10
8
6
4
2
l_result_dl2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	7.14064173	0.4420
YES	7.24357865	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

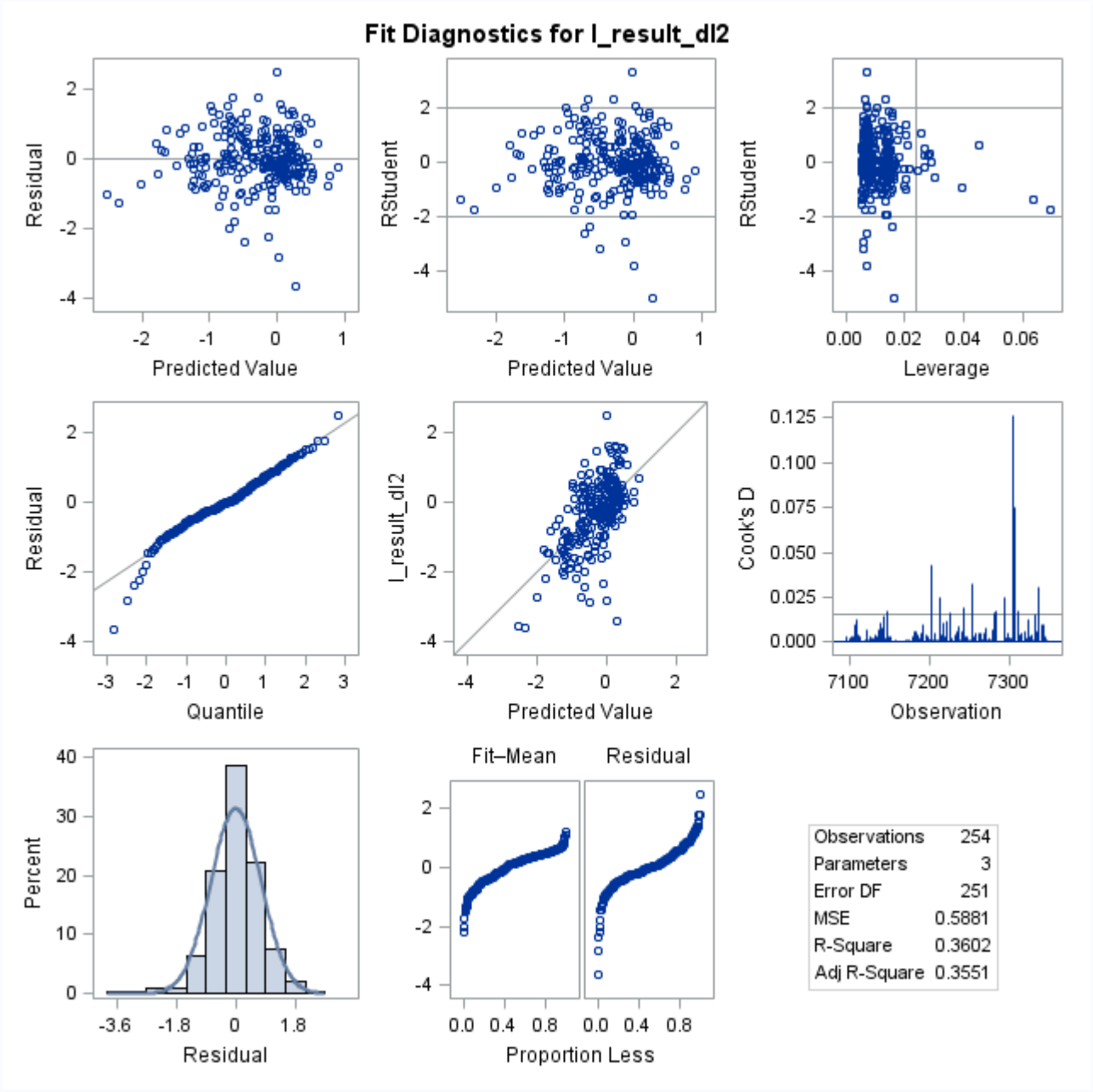
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

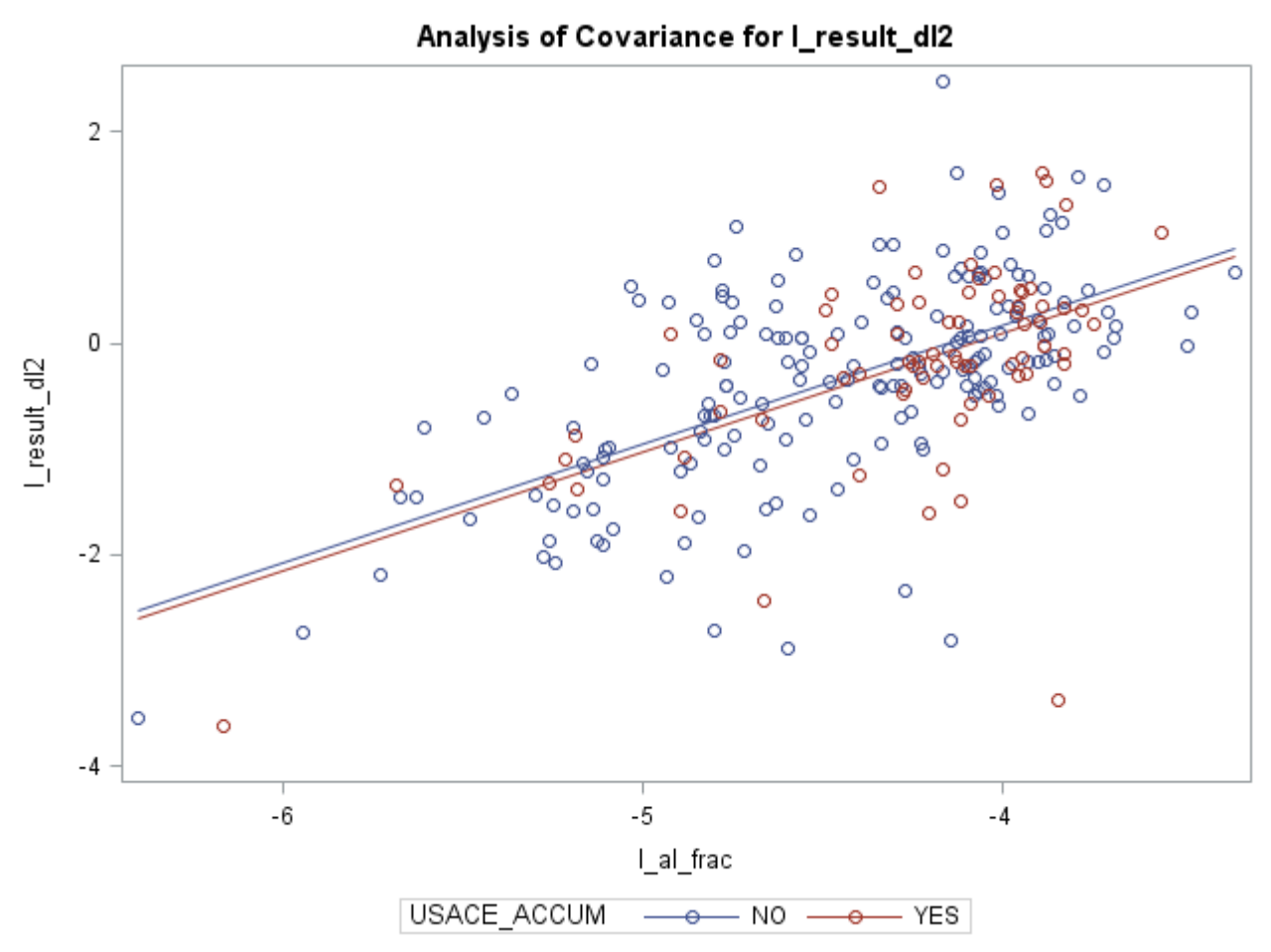
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	83.1068820	41.5534410	70.65	<.0001
Error	251	147.6238794	0.5881429		
Corrected Total	253	230.7307614			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.360190	-258.7934	0.766905	-0.296339

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	82.81120868	82.81120868	140.80	<.0001
USACE_ACCUM	1	0.29567334	0.29567334	0.50	0.4790

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	81.88048053	81.88048053	139.22	<.0001
USACE_ACCUM	1	0.29567334	0.29567334	0.50	0.4790


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.5881
R-Square 0.3602
Adj R-Square 0.3551


Analysis of Covariance for l_result_dl2
2
0
-2
-4
l_result_dl2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.27409741	0.4790
YES	-0.35043891	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

The GLM Procedure

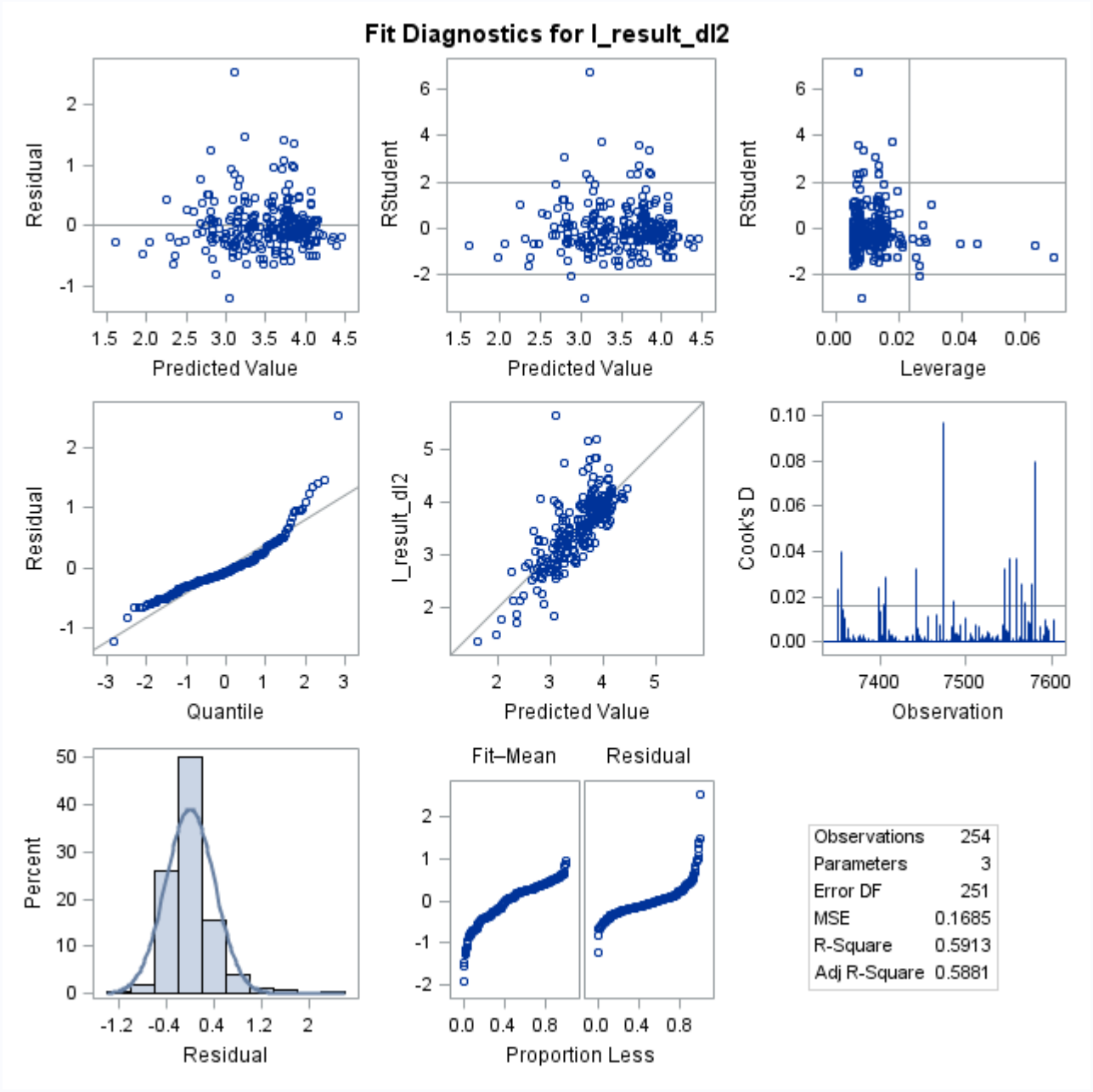
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

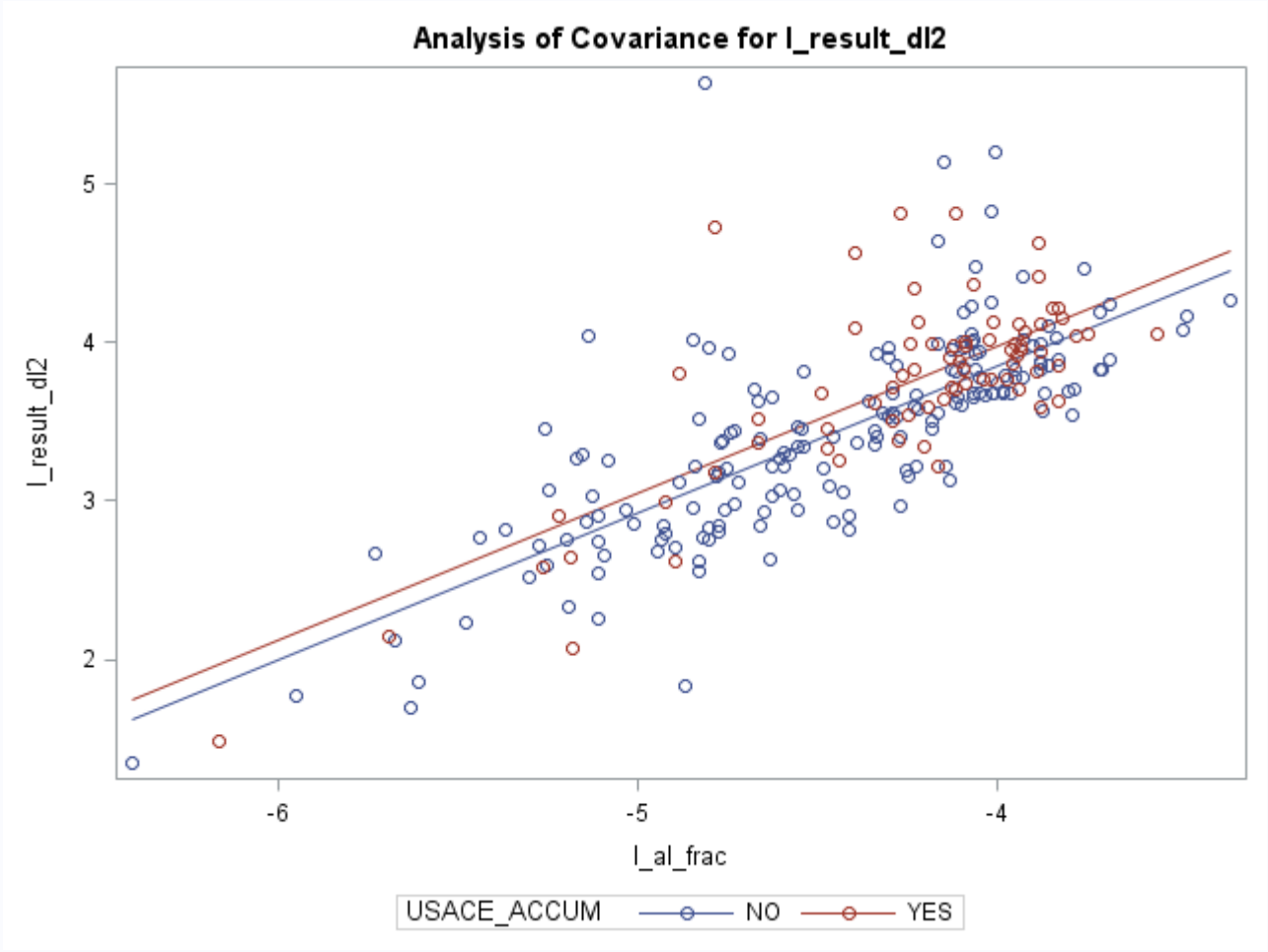
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	61.1825502	30.5912751	181.59	<.0001
Error	251	42.2840366	0.1684623		
Corrected Total	253	103.4665868			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.591327	11.66758	0.410442	3.517795

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	60.45392188	60.45392188	358.86	<.0001
USACE_ACCUM	1	0.72862833	0.72862833	4.33	0.0386

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	56.15262047	56.15262047	333.32	<.0001
USACE_ACCUM	1	0.72862833	0.72862833	4.33	0.0386


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.1685
R-Square 0.5913
Adj R-Square 0.5881


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	3.48288095	0.0386
YES	3.60272255	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	253
Number of Observations Used	253

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

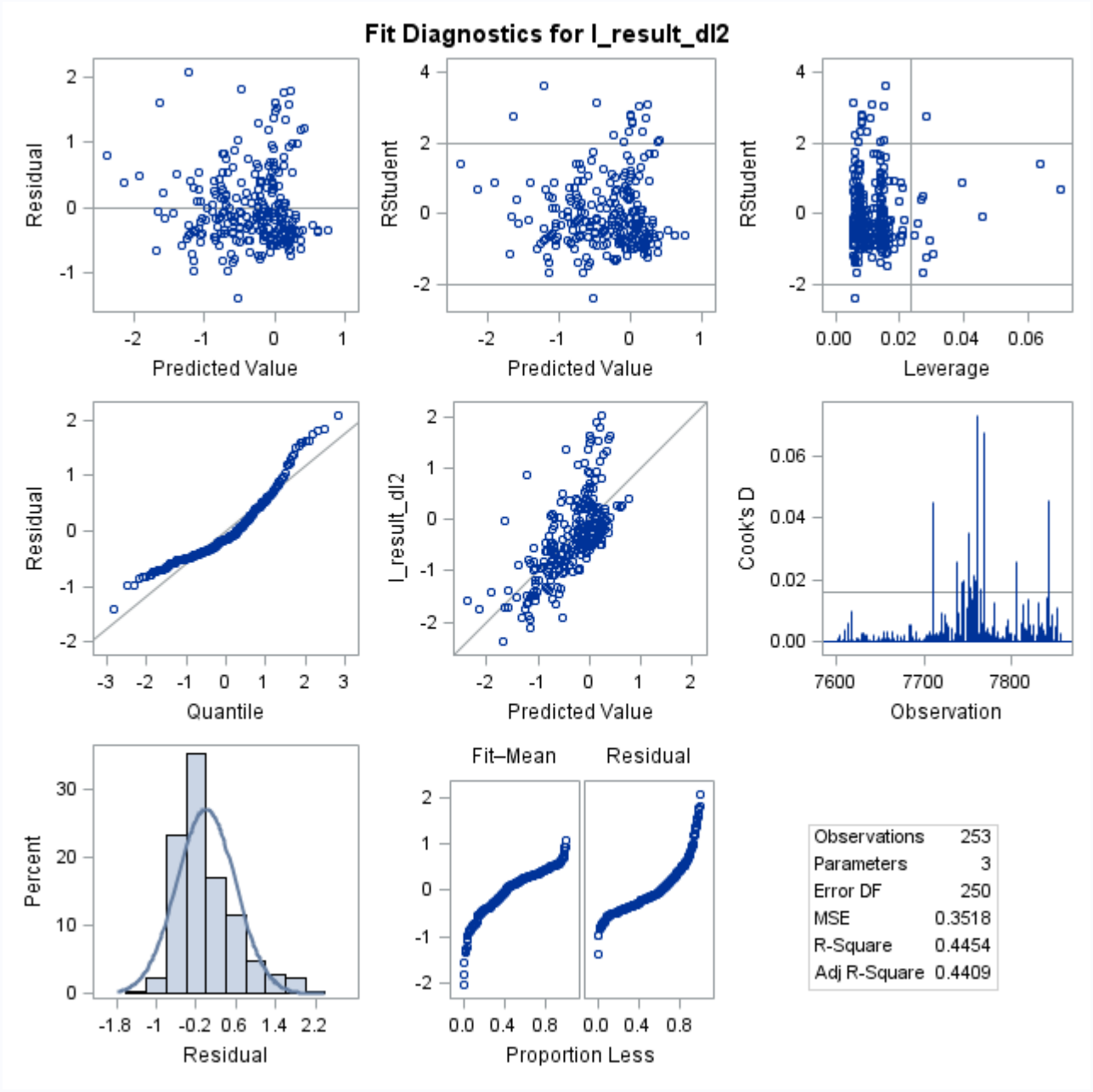
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

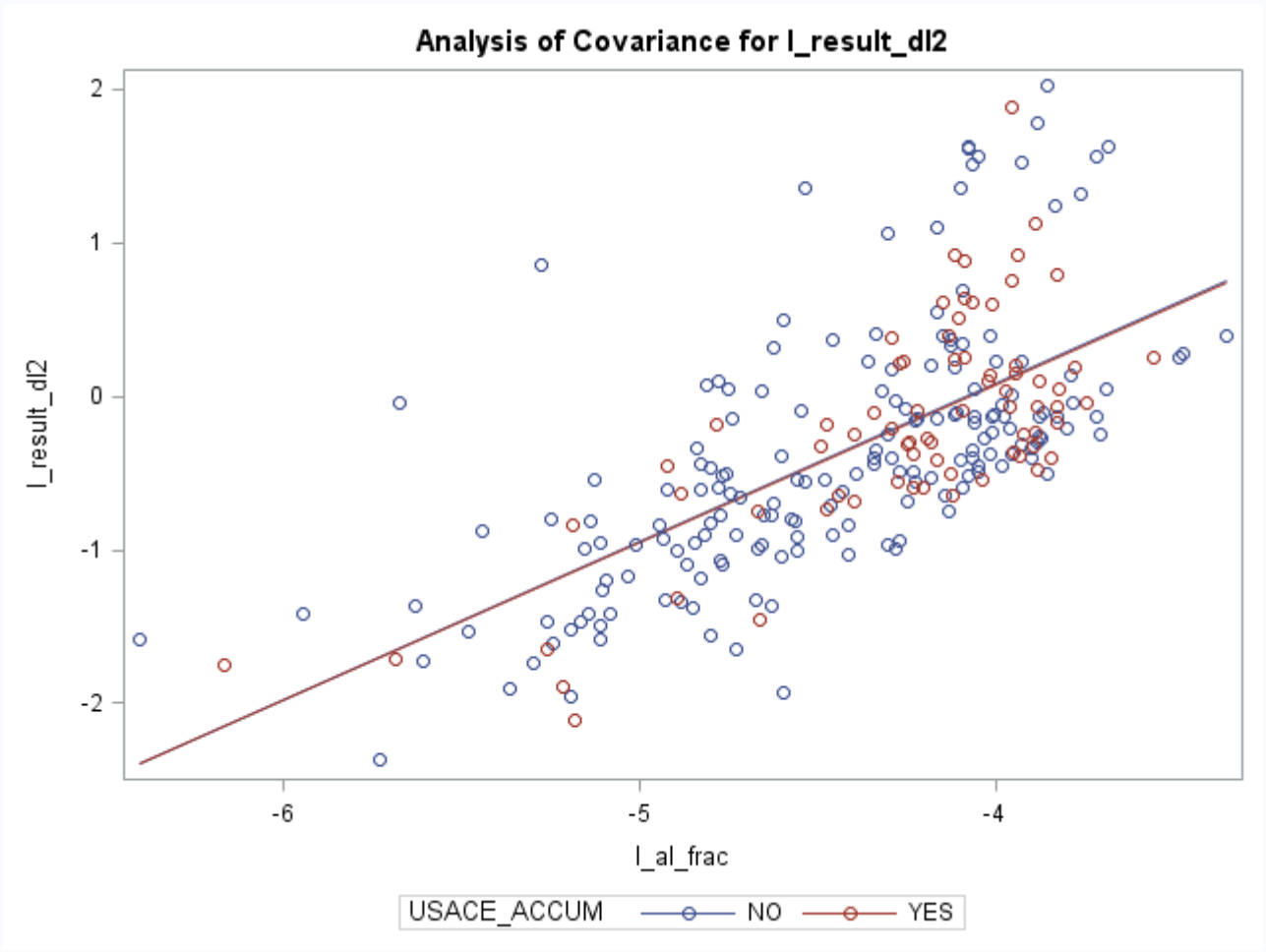
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	70.6274814	35.3137407	100.38	<.0001
Error	250	87.9517189	0.3518069		
Corrected Total	252	158.5792003			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.445377	-180.0161	0.593133	-0.329489

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	70.62459757	70.62459757	200.75	<.0001
USACE_ACCUM	1	0.00288383	0.00288383	0.01	0.9279

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	68.34274115	68.34274115	194.26	<.0001
USACE_ACCUM	1	0.00288383	0.00288383	0.01	0.9279


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 0.3518
R-Square 0.4454
Adj R-Square 0.4409


Analysis of Covariance for l_result_dl2
l_result_dl2
2
1
0
-1
-2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Selenium

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	-0.32730059	0.9279
YES	-0.33488469	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

The GLM Procedure

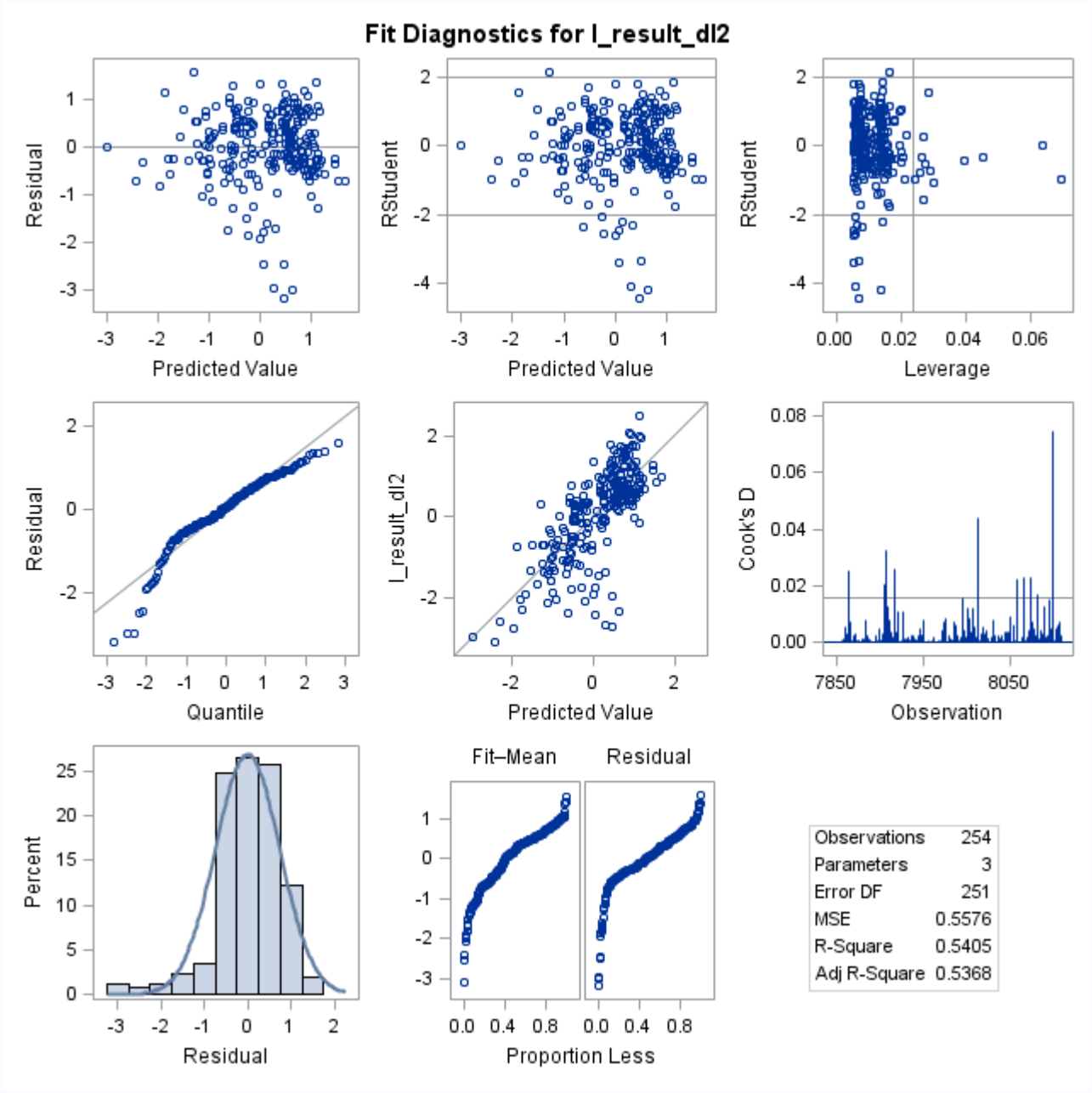
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

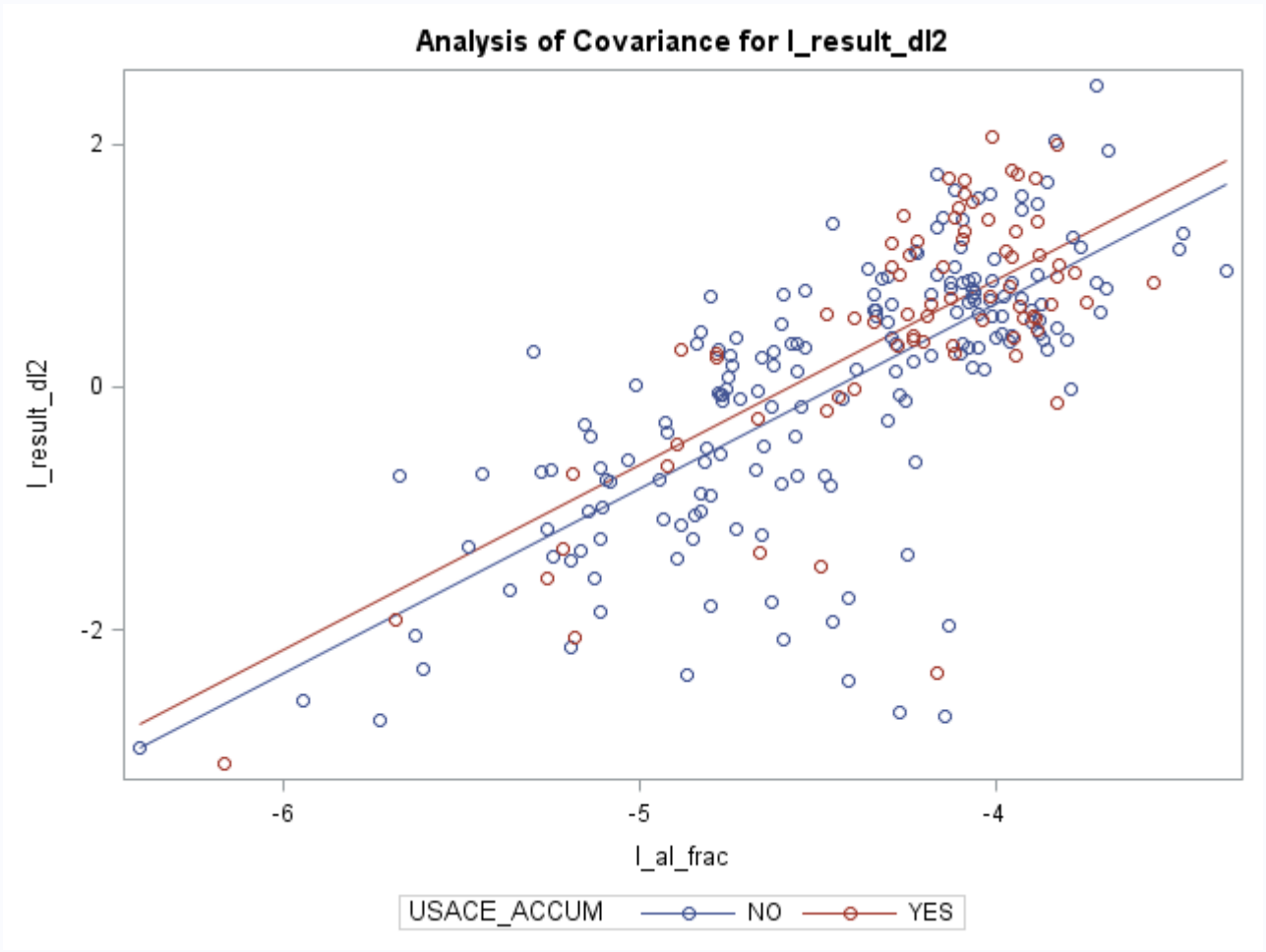
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	164.6177856	82.3088928	147.60	<.0001
Error	251	139.9658777	0.5576330		
Corrected Total	253	304.5836633			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.540468	549.6776	0.746748	0.135852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	162.7217846	162.7217846	291.81	<.0001
USACE_ACCUM	1	1.8960010	1.8960010	3.40	0.0664

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	151.2483396	151.2483396	271.23	<.0001
USACE_ACCUM	1	1.8960010	1.8960010	3.40	0.0664


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.5576
R-Square 0.5405
Adj R-Square 0.5368


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	0.07953085	0.0664
YES	0.27284956	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
USACE_ACCUM	2	NO YES

Number of Observations Read	254
Number of Observations Used	254

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by usace_accum

The GLM Procedure

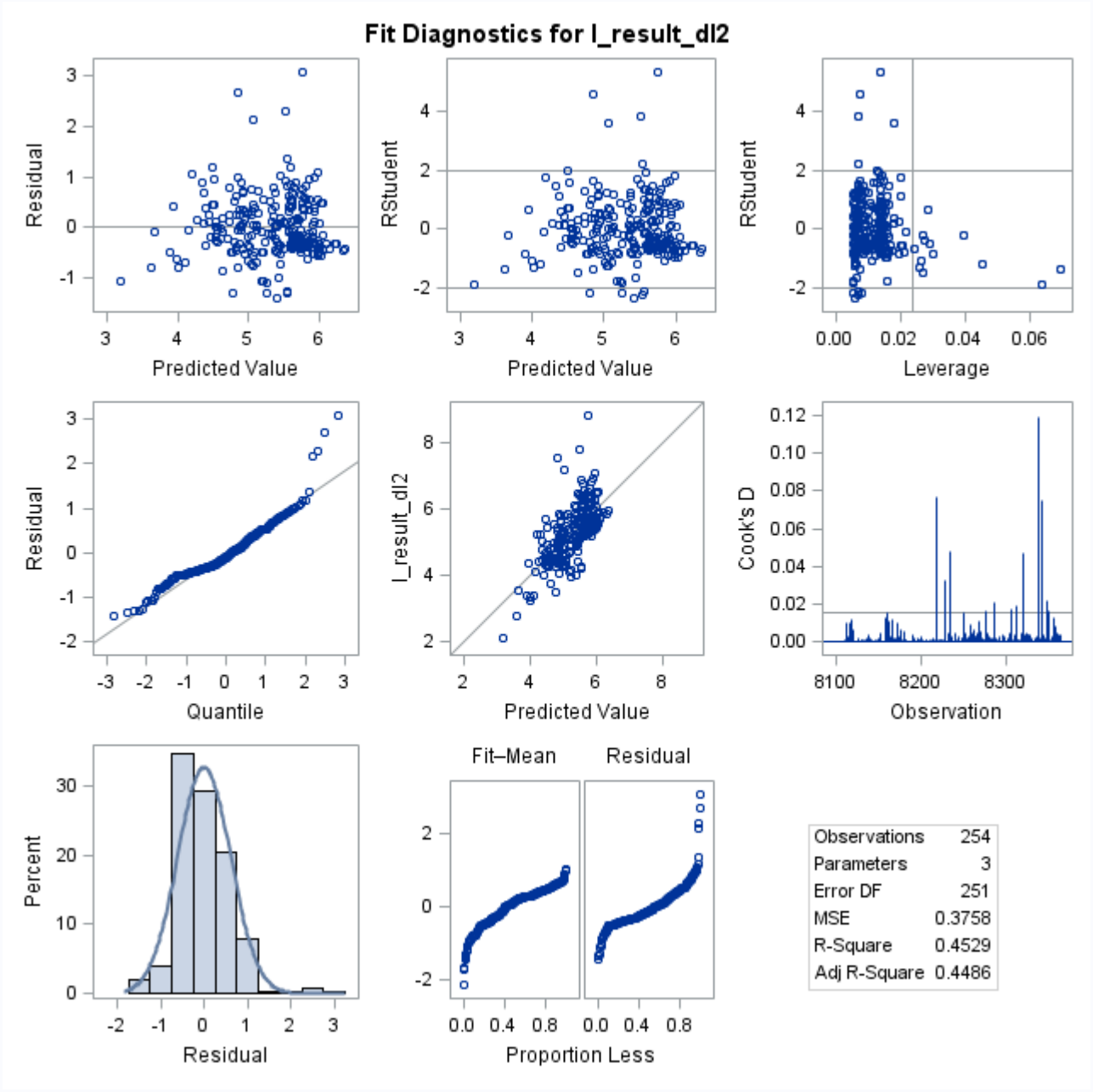
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

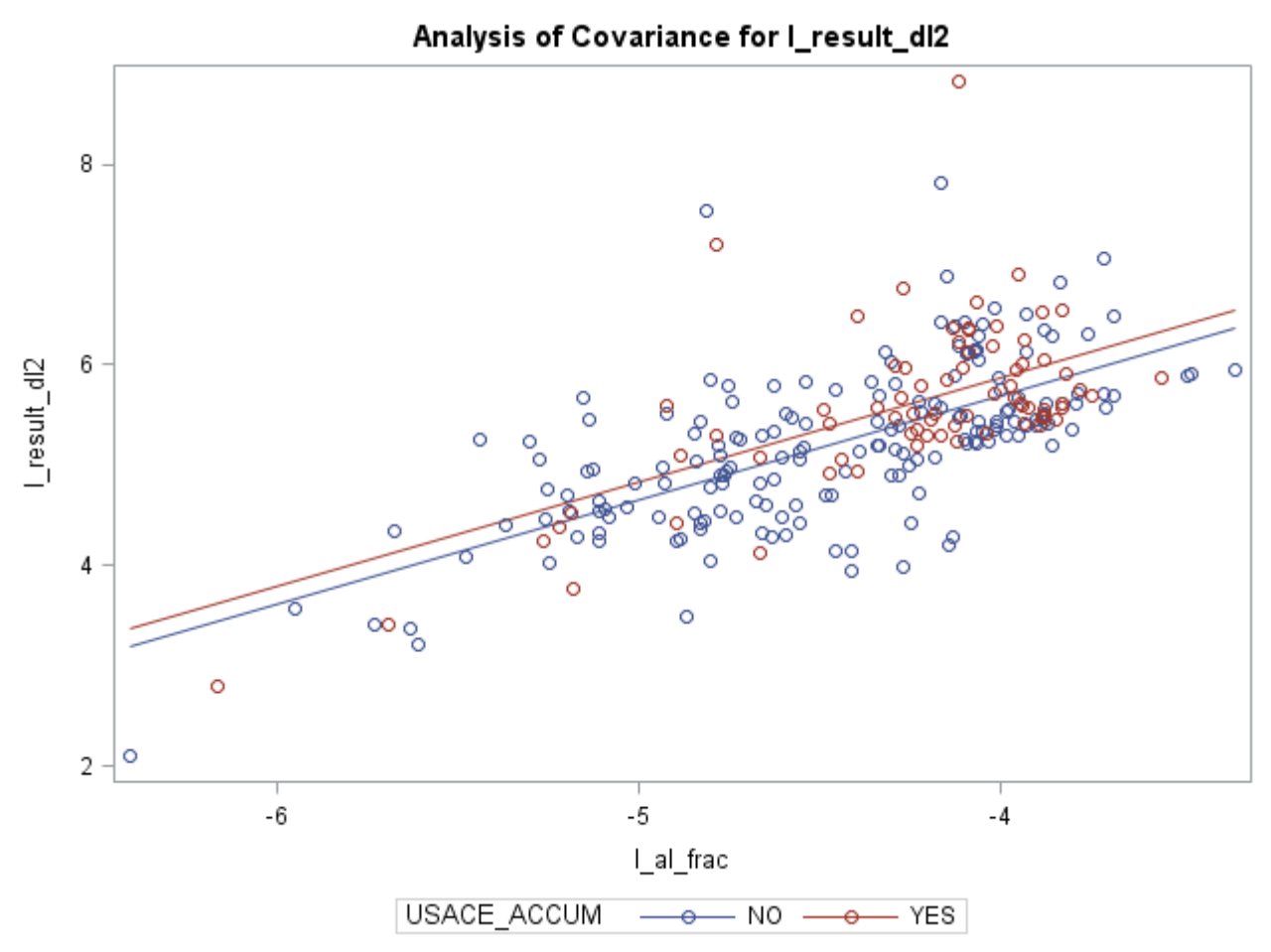
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	78.0897333	39.0448666	103.90	<.0001
Error	251	94.3236389	0.3757914		
Corrected Total	253	172.4133722			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.452922	11.51741	0.613018	5.322537

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	76.42736816	76.42736816	203.38	<.0001
USACE_ACCUM	1	1.66236514	1.66236514	4.42	0.0364

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	69.99087574	69.99087574	186.25	<.0001
USACE_ACCUM	1	1.66236514	1.66236514	4.42	0.0364


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.3758
R-Square 0.4529
Adj R-Square 0.4486


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
-6
-5
-4
l_al_frac
USACE_ACCUM
NO
YES

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

USACE_ACCUM	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
NO	5.26979965	0.0364
YES	5.45081600	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	107

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

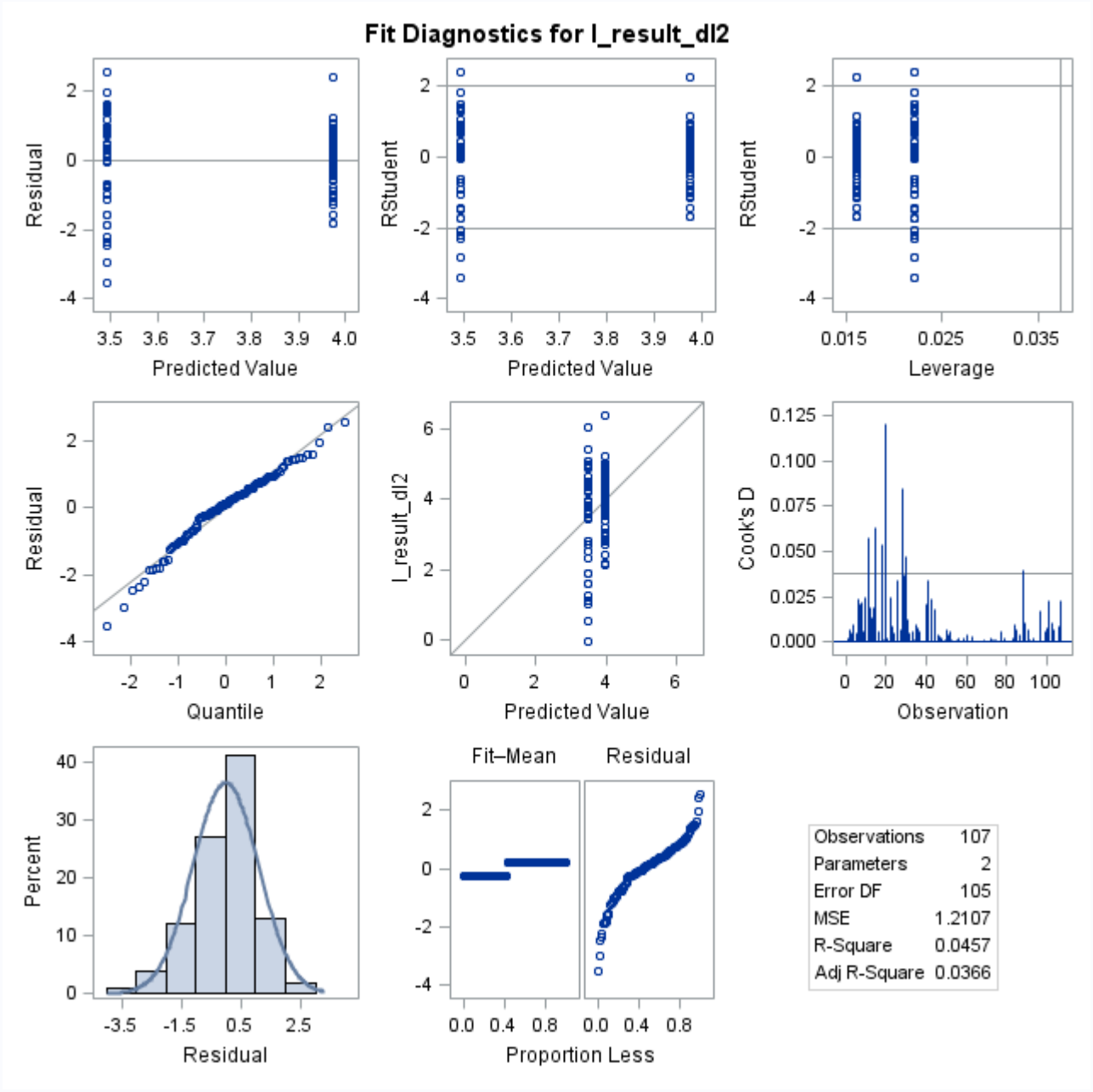
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

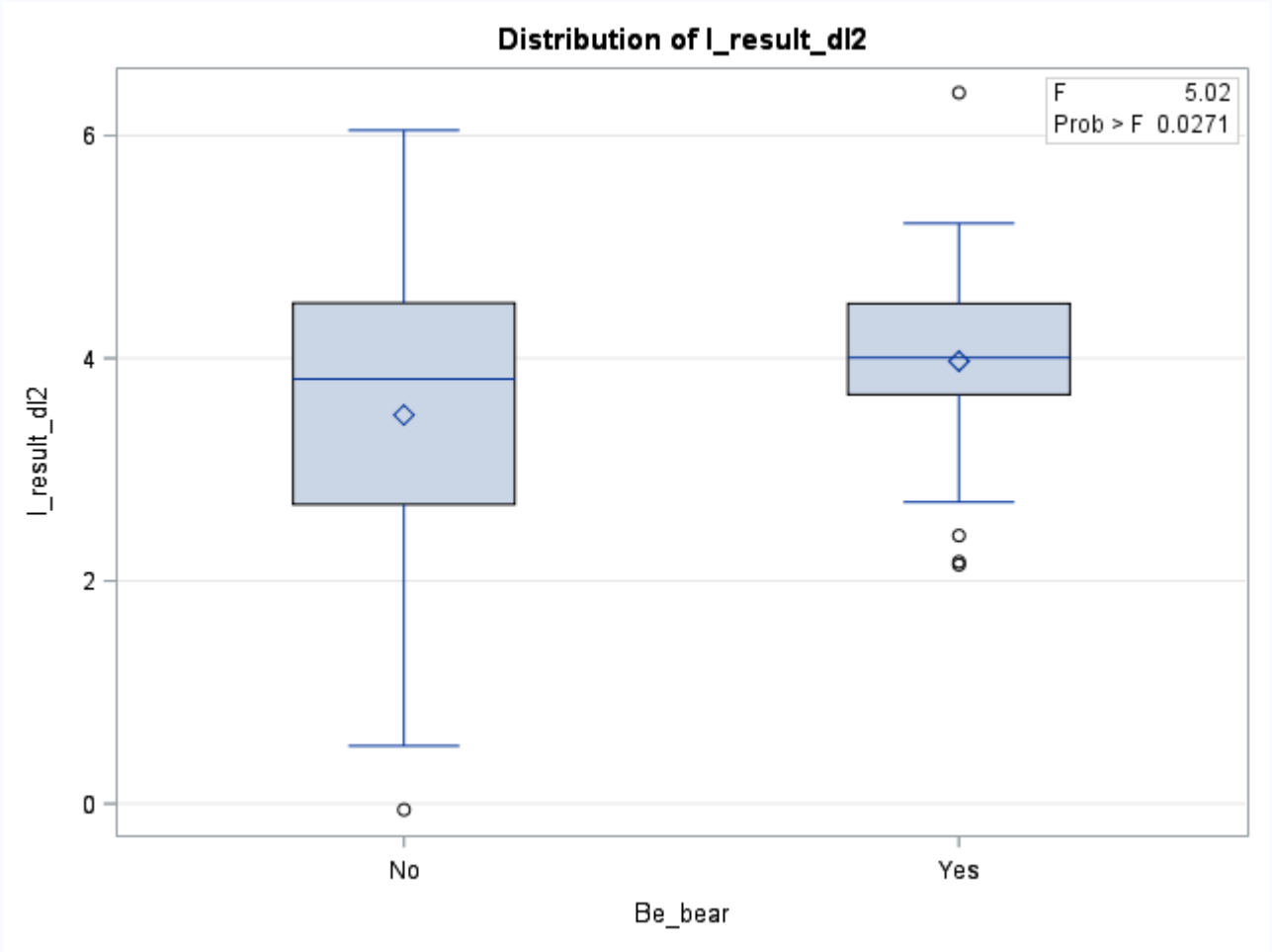
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.0829864	6.0829864	5.02	0.0271
Error	105	127.1237795	1.2107027		
Corrected Total	106	133.2067659			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.045666	29.18216	1.100319	3.770521

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	6.08298643	6.08298643	5.02	0.0271

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	6.08298643	6.08298643	5.02	0.0271

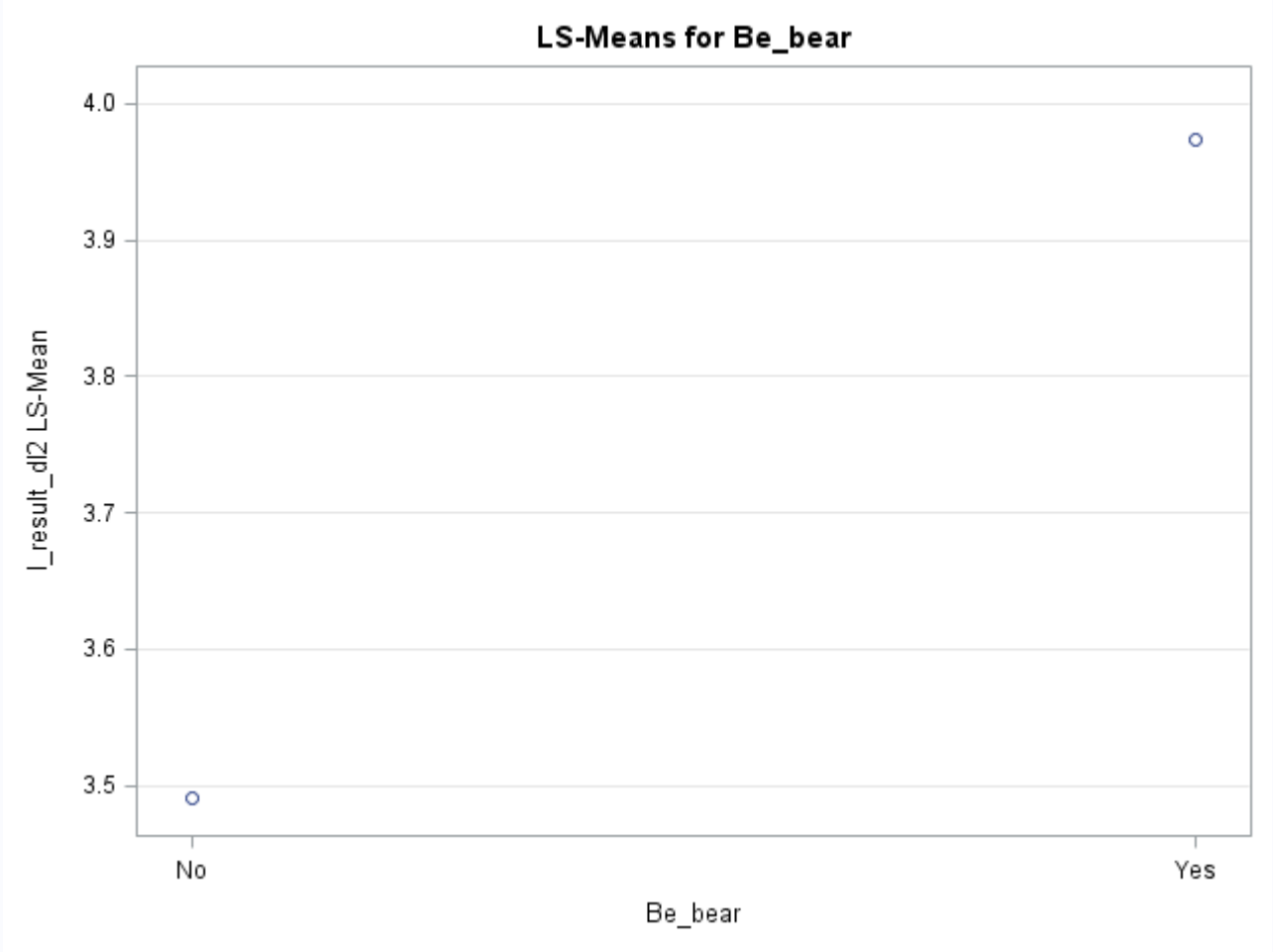

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 1.2107
R-Square 0.0457
Adj R-Square 0.0366

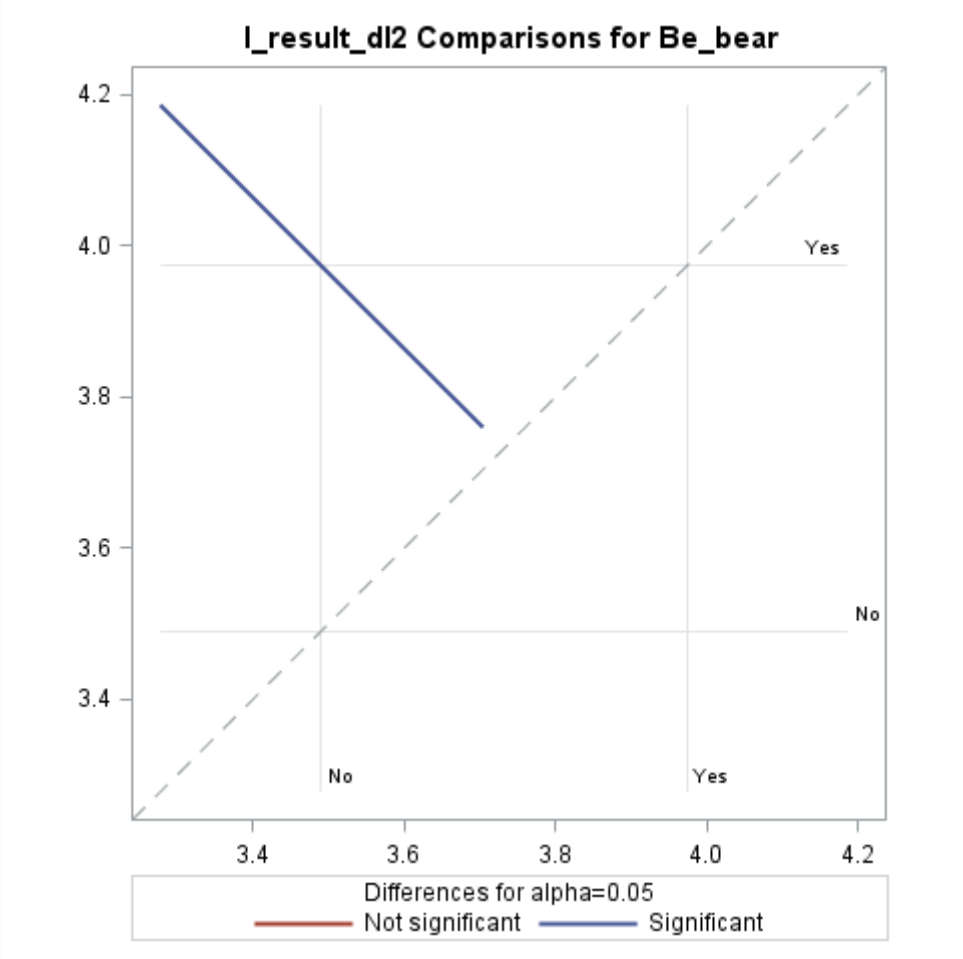

Distribution of l_result_dl2
F 5.02
Prob > F 0.0271
6
4
2
0
l_result_dl2
No
Yes
Be_bear

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.49065104	0.0271
Yes	3.97365224	




l_result_dl2 Comparisons for Be_bear
4.2
4.0
3.8
3.6
3.4
Yes
No
No
Yes
3.4
3.6
3.8
4.0
4.2
Differences for alpha=0.05
Not significant
Significant

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

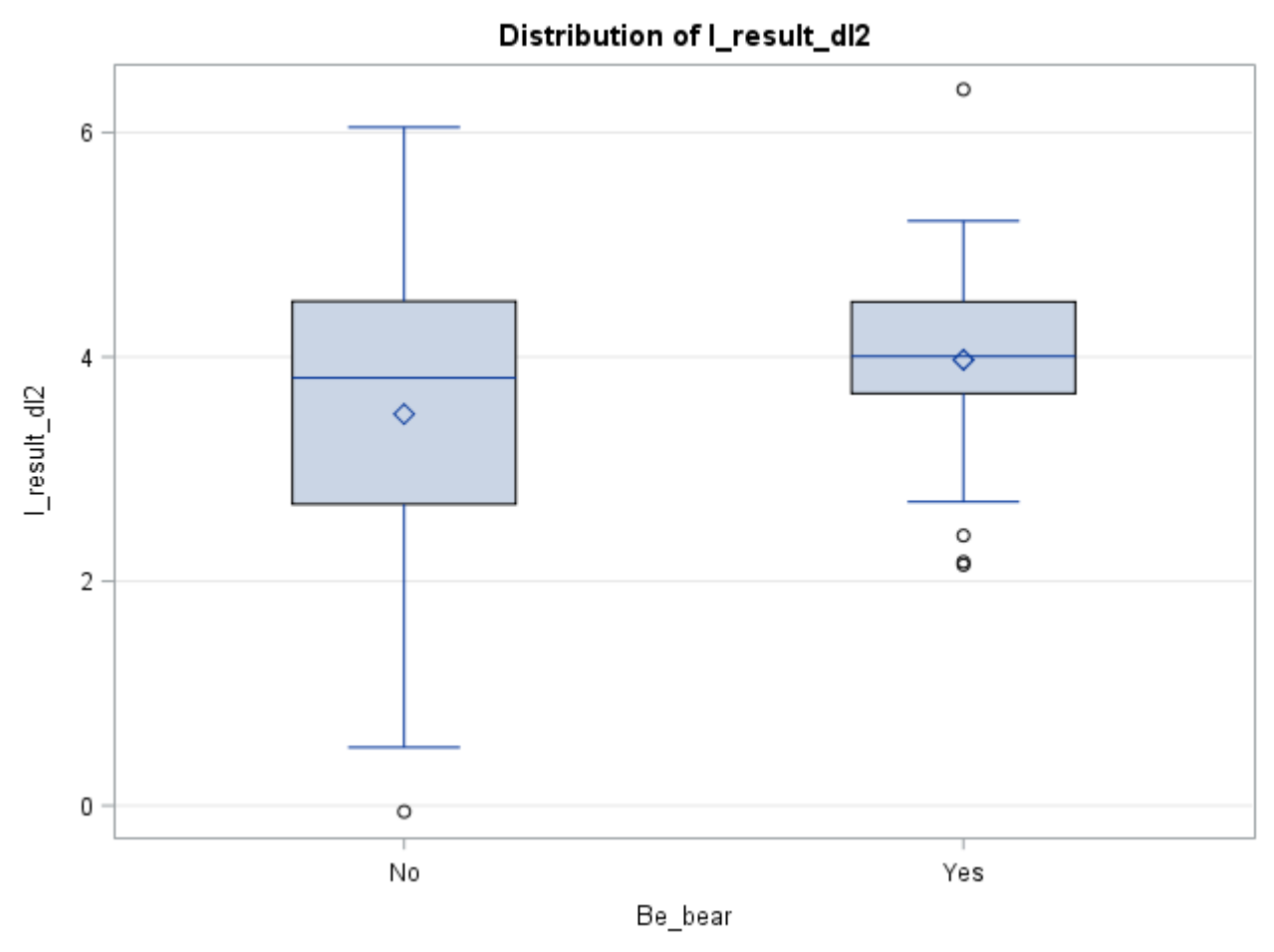
The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	53.6968	53.6968	16.23	0.0001
Error	105	347.4	3.3083		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	3.49065104	1.43718150
Yes	**62**	3.97365224	0.77080105

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	107

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

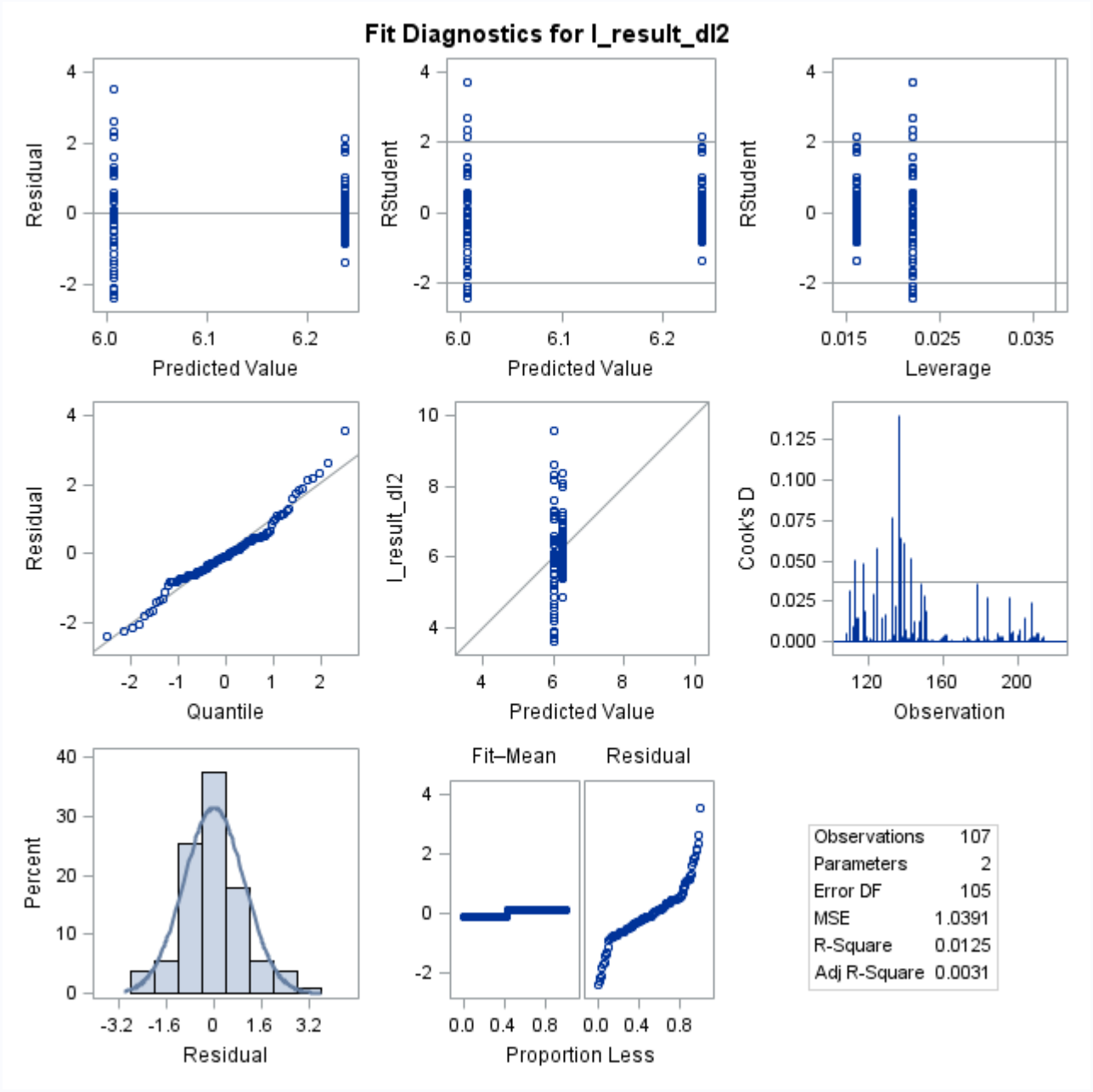
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

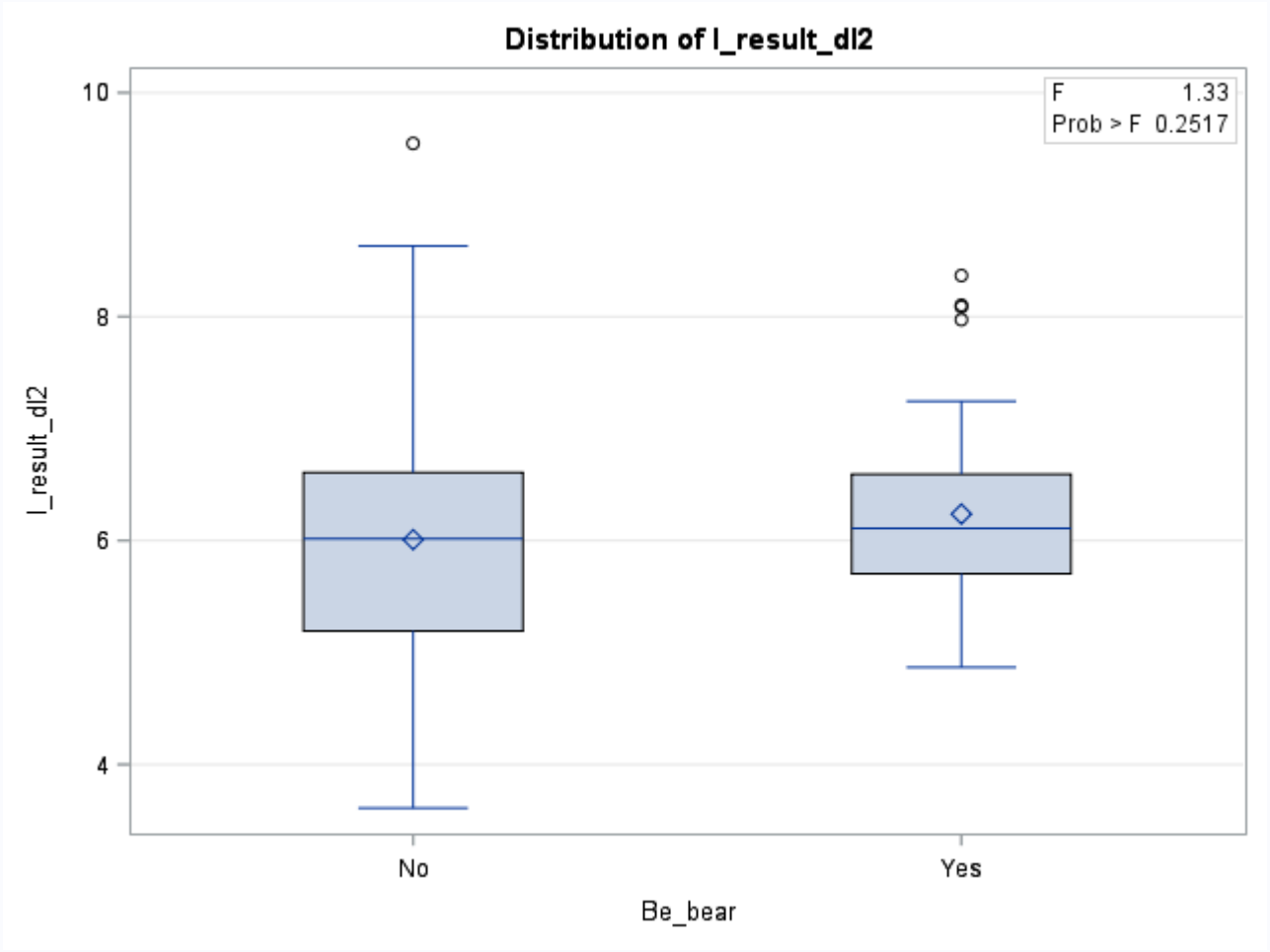
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.3805950	1.3805950	1.33	0.2517
Error	105	109.1096689	1.0391397		
Corrected Total	106	110.4902639			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.012495	16.59986	1.019382	6.140909

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.38059499	1.38059499	1.33	0.2517

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.38059499	1.38059499	1.33	0.2517

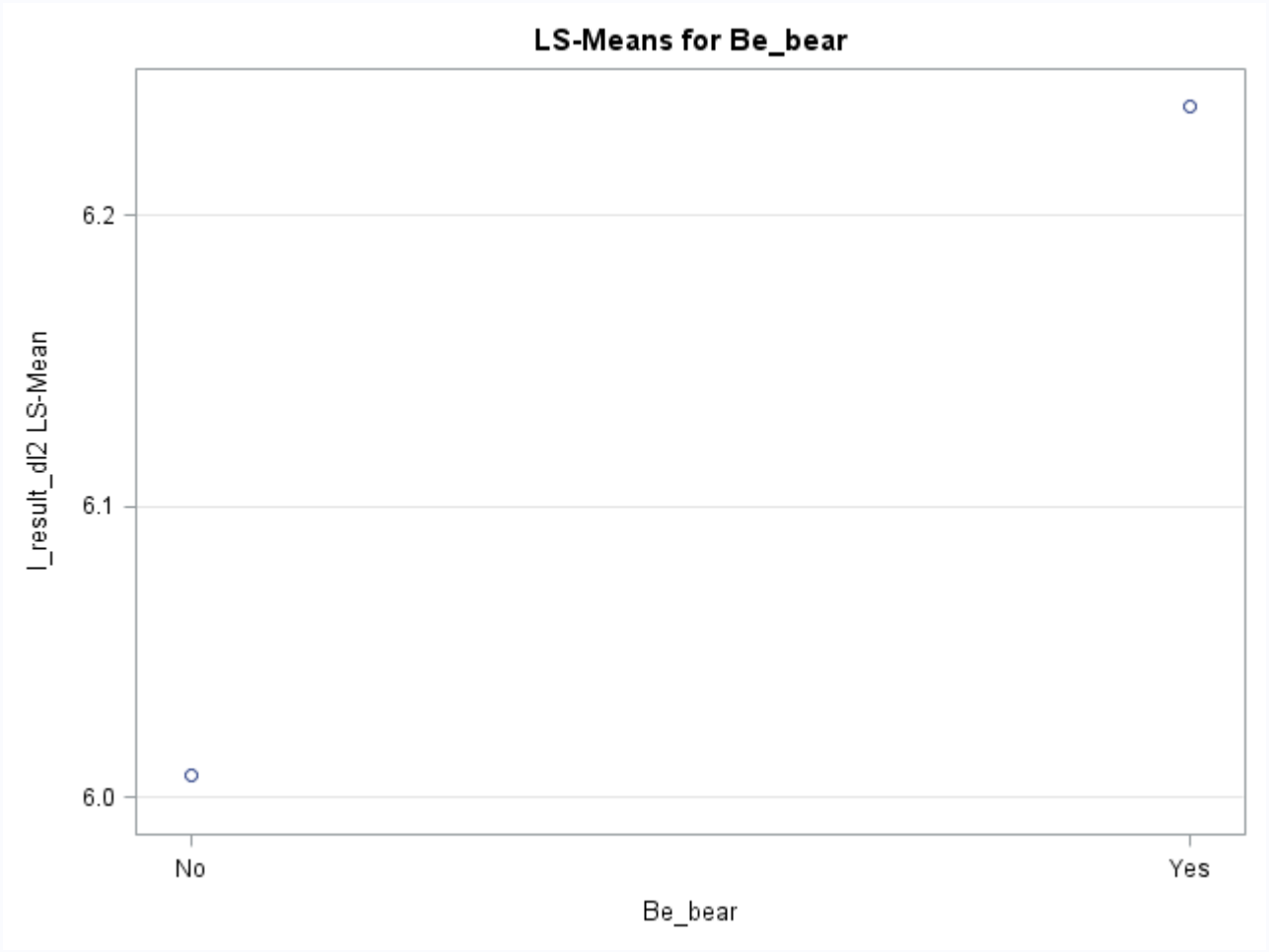

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 1.0391
R-Square 0.0125
Adj R-Square 0.0031

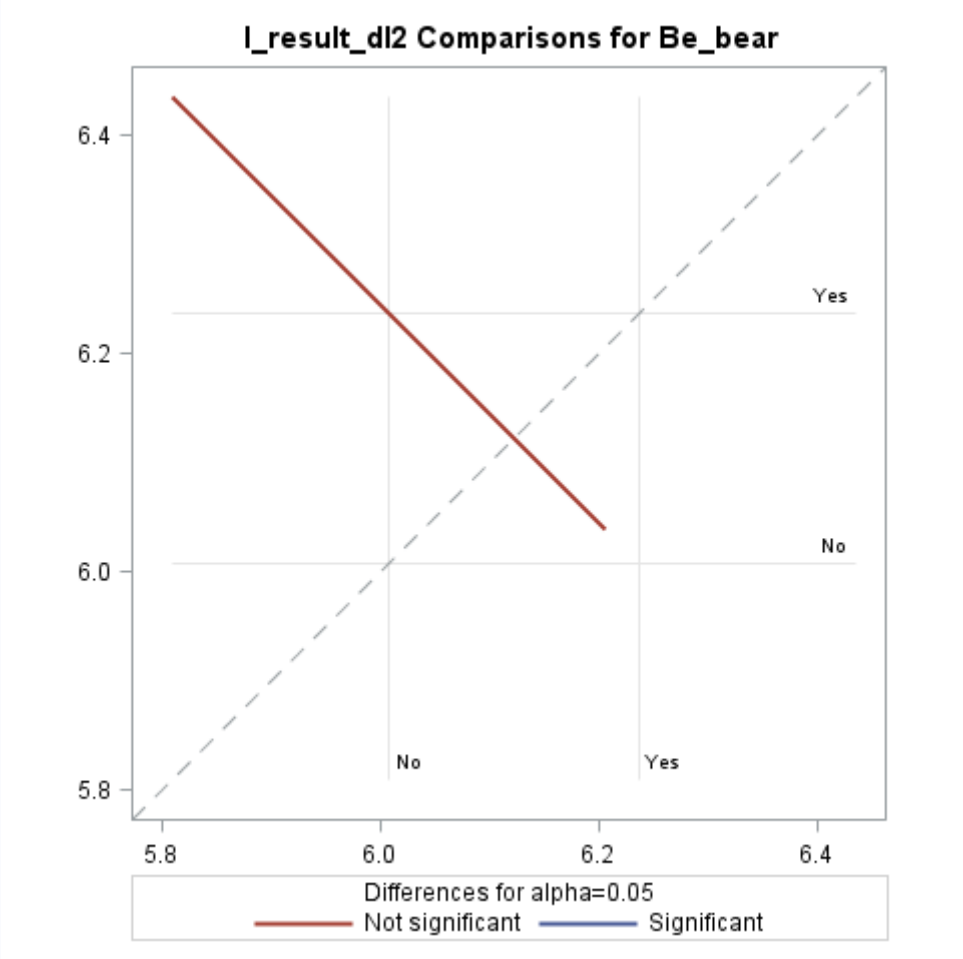

Distribution of l_result_dl2
F 1.33
Prob > F 0.2517
10
8
6
4
l_result_dl2
No
Yes
Be_bear

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.00757786	0.2517
Yes	6.23768120	




l_result_dl2 Comparisons for Be_bear
6.4
6.2
6.0
5.8
Yes
No
No
Yes
5.8
6.0
6.2
6.4
Differences for alpha=0.05
Not significant
Significant

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

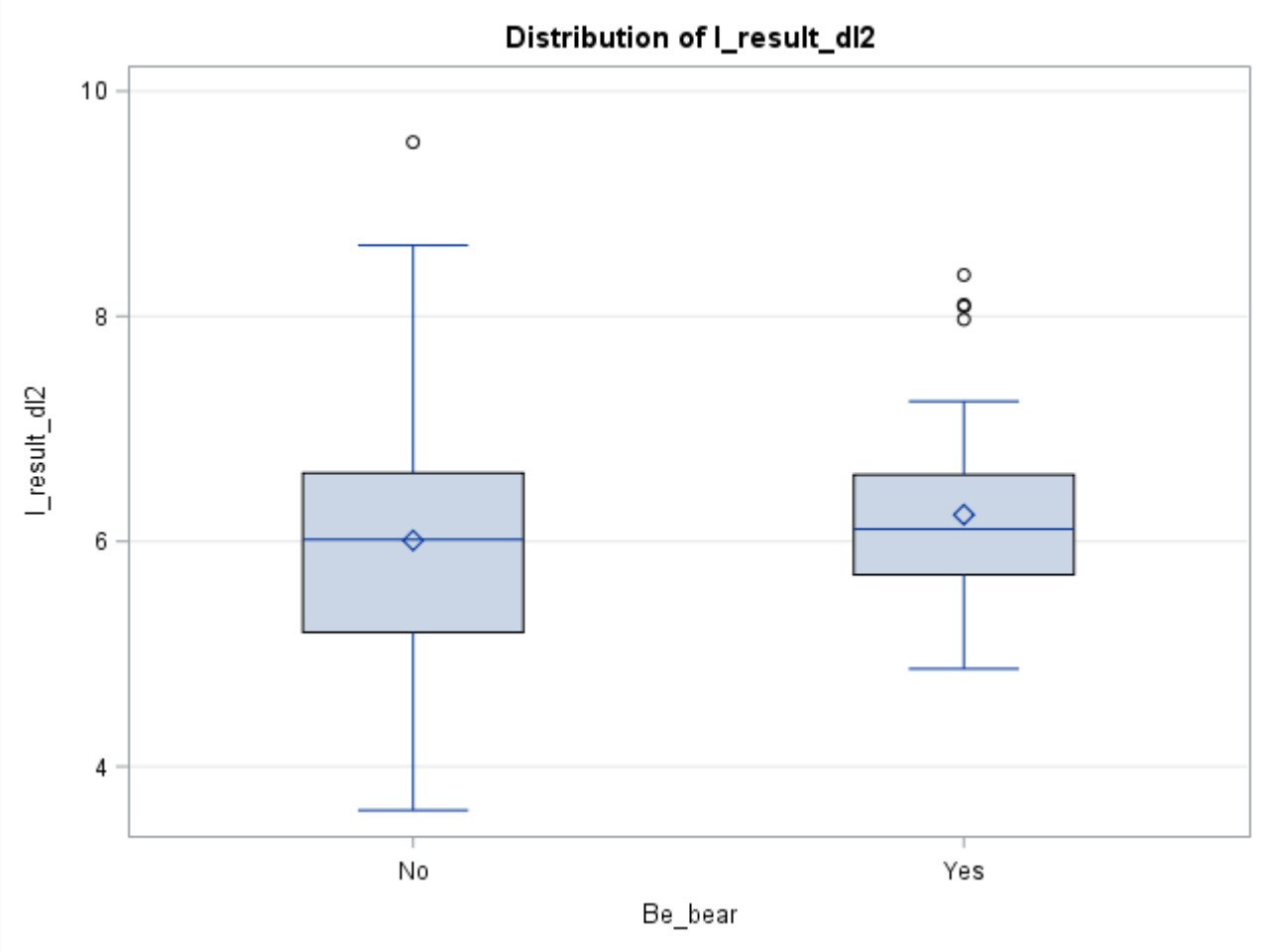
The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	41.4642	41.4642	13.60	0.0004
Error	105	320.0	3.0480		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	6.00757786	1.33798013
Yes	**62**	6.23768120	0.70526442

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 107

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

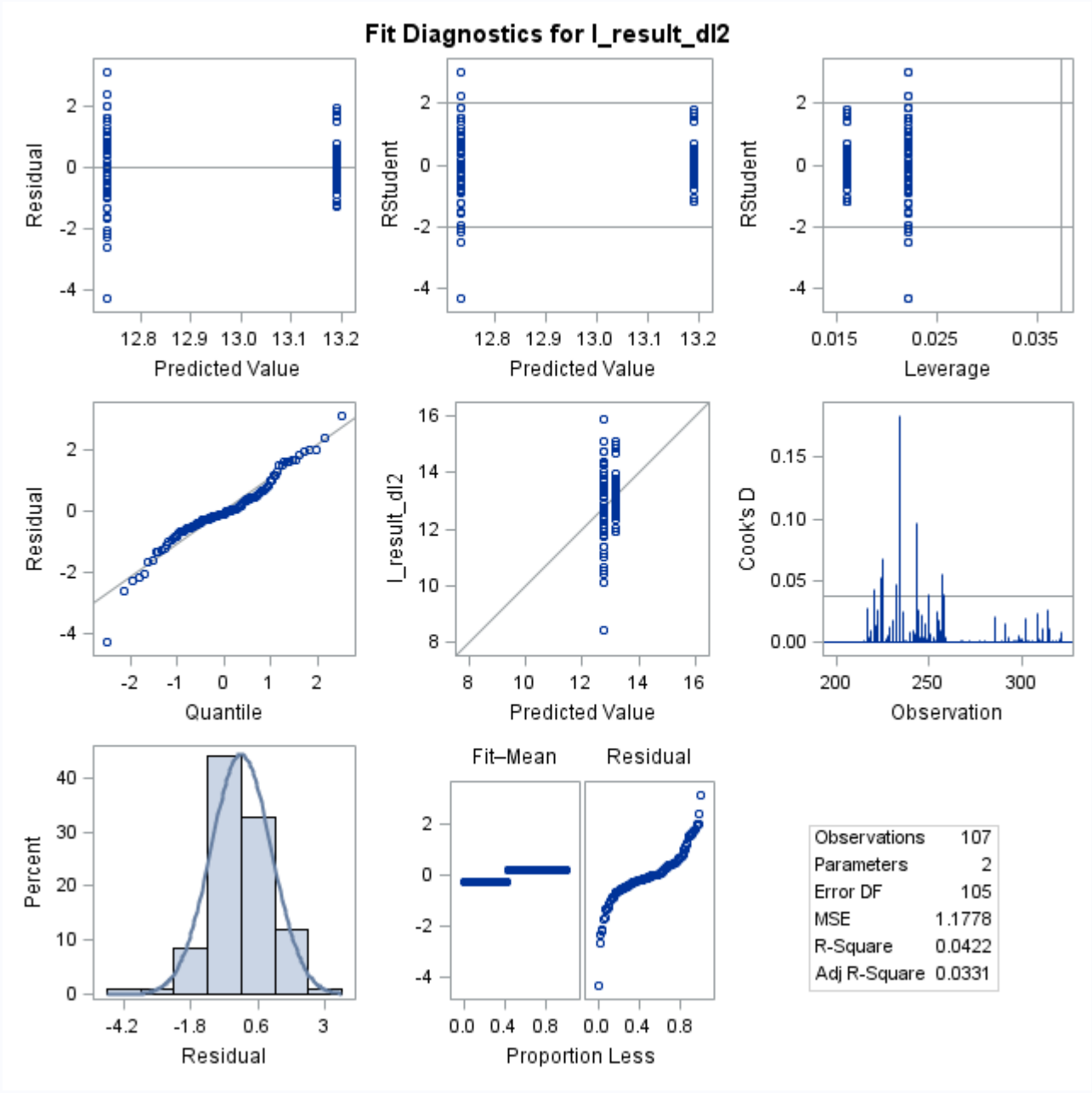
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

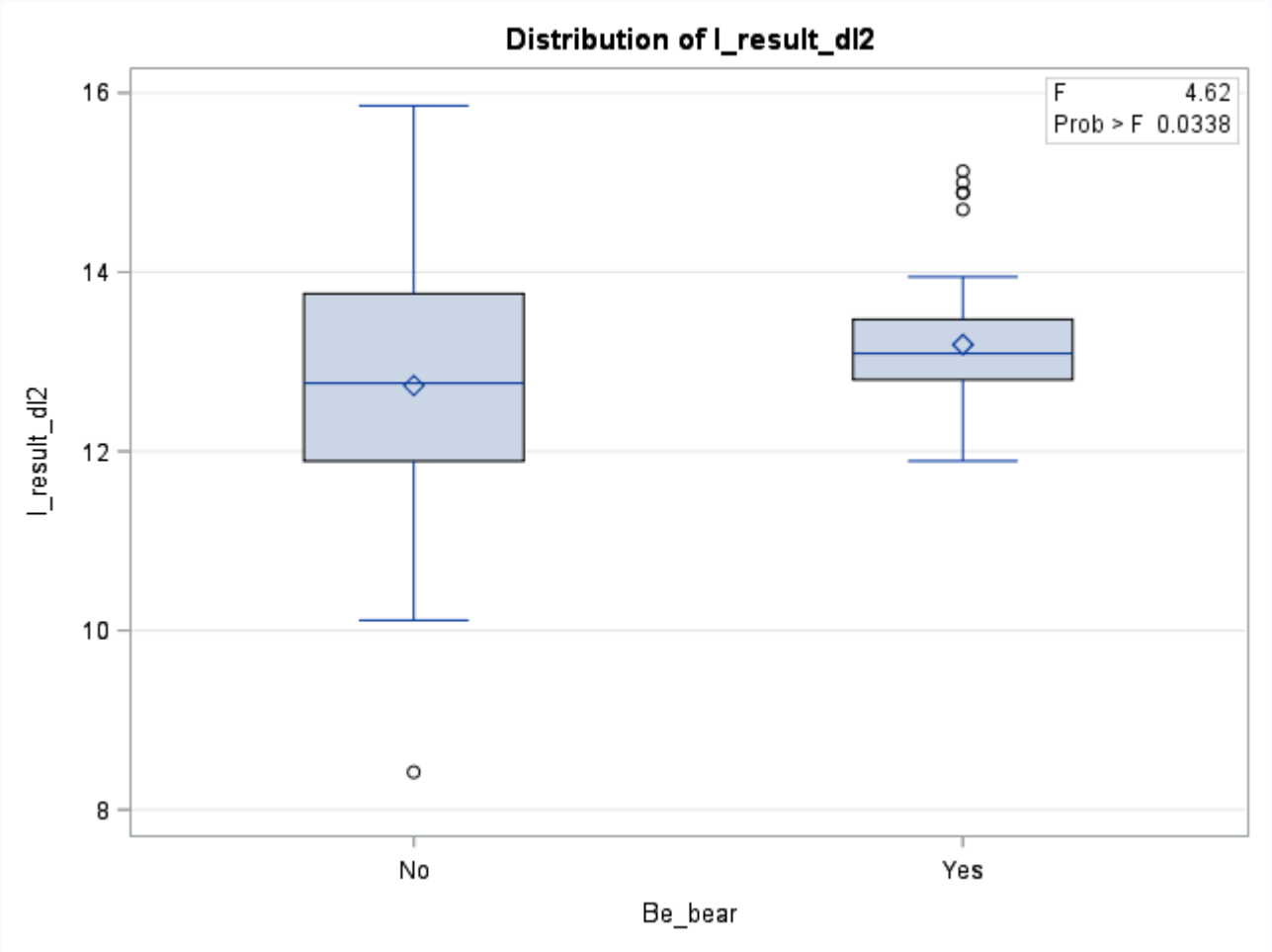
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.4457251	5.4457251	4.62	0.0338
Error	105	123.6643174	1.1777554		
Corrected Total	106	129.1100425			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.042179	8.349253	1.085244	12.99810

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	5.44572509	5.44572509	4.62	0.0338

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	5.44572509	5.44572509	4.62	0.0338

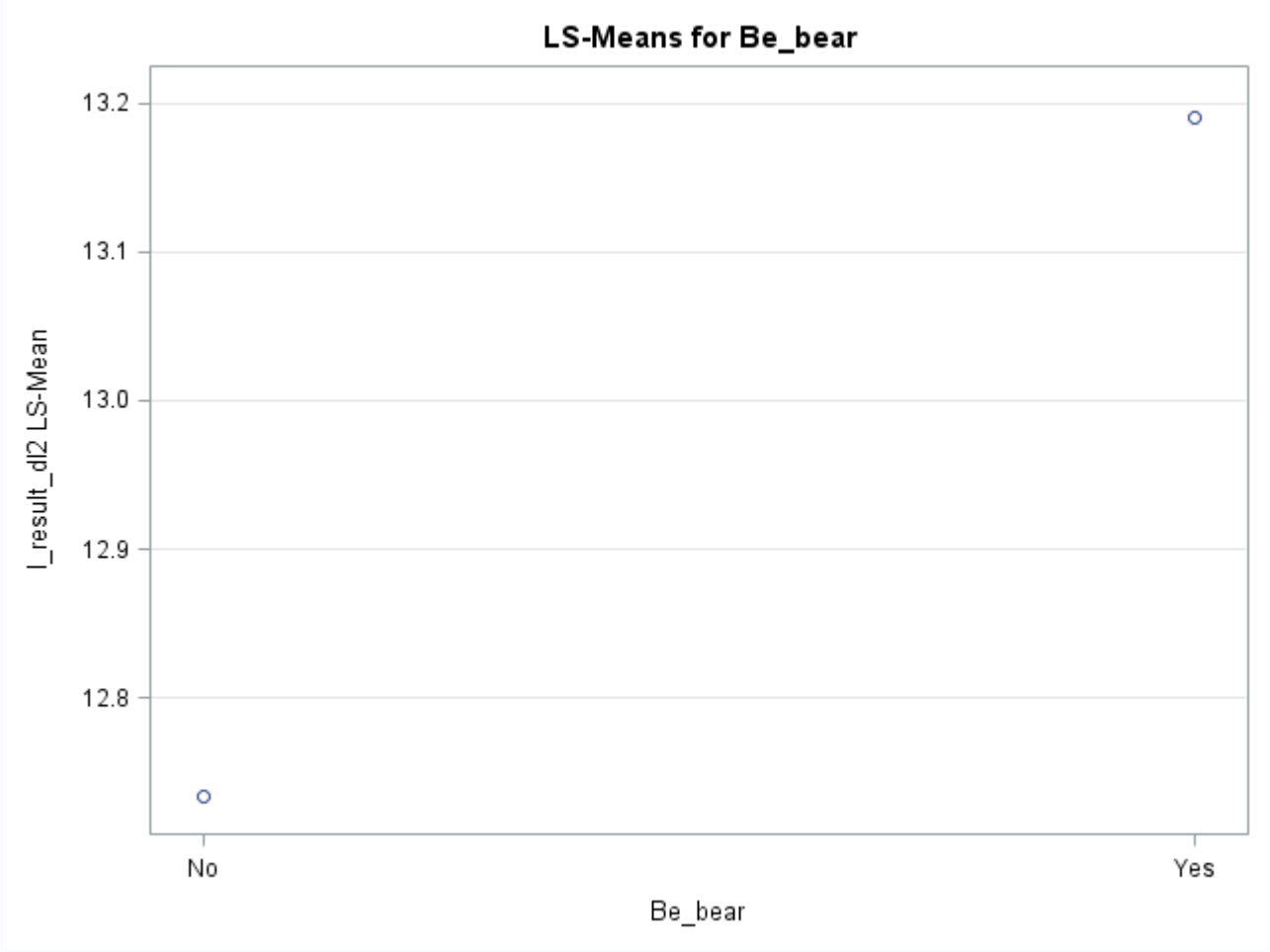

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 1.1778
R-Square 0.0422
Adj R-Square 0.0331

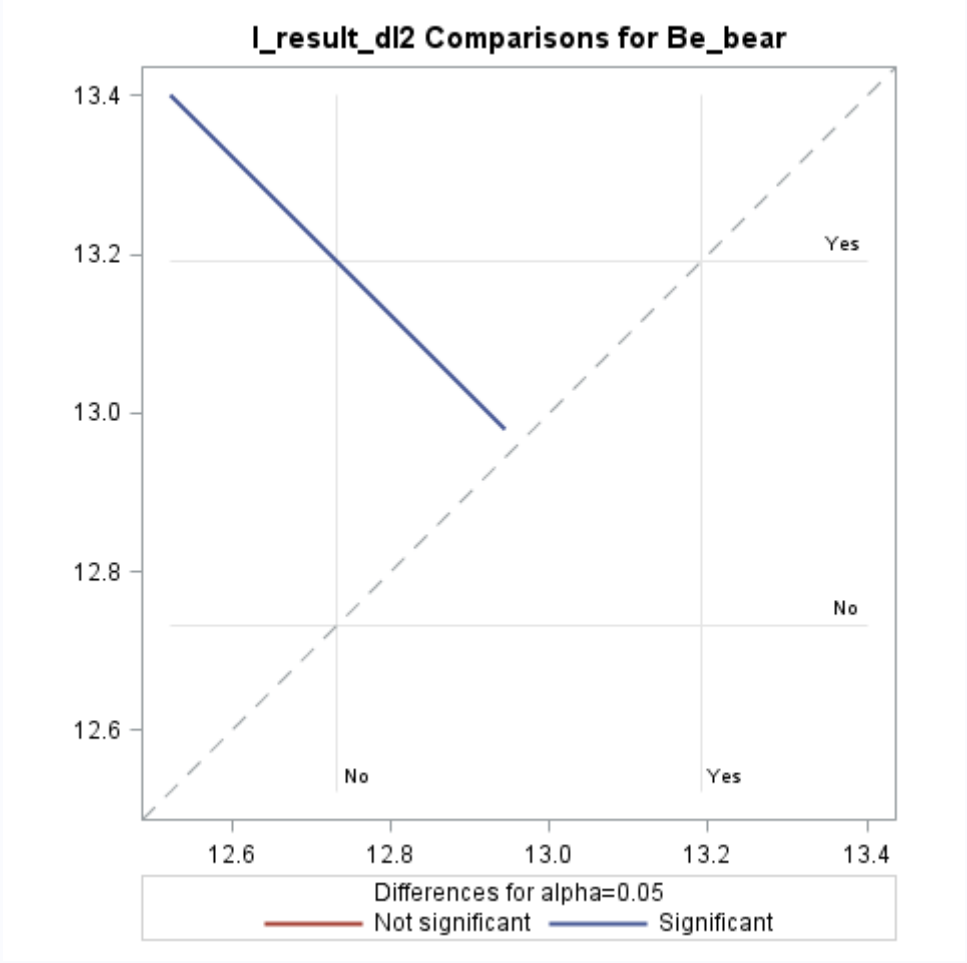

Distribution of l_result_dl2
F 4.62
Prob > F 0.0338
16
14
12
10
8
l_result_dl2
No
Yes
Be_bear

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	12.7332976	0.0338
Yes	13.1902991	




l_result_dl2 Comparisons for Be_bear
13.4
13.2
13.0
12.8
12.6
Yes
No
No
Yes
12.6
12.8
13.0
13.2
13.4
Differences for alpha=0.05
Not significant
Significant

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

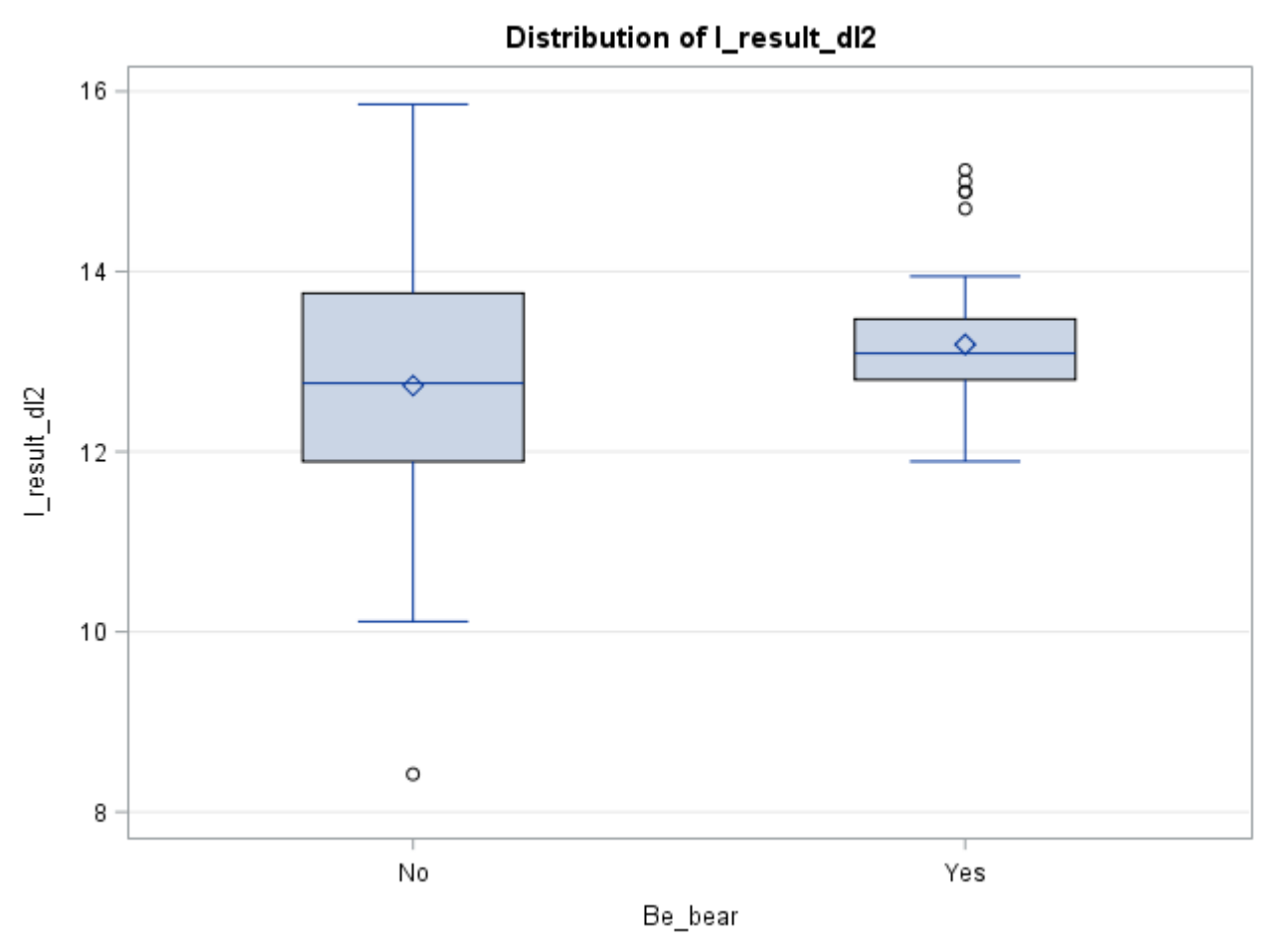
The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	75.7976	75.7976	15.32	0.0002
Error	105	519.6	4.9488		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	45	12.7332976	1.48067198
Yes	62	13.1902991	0.66774859

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 107

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

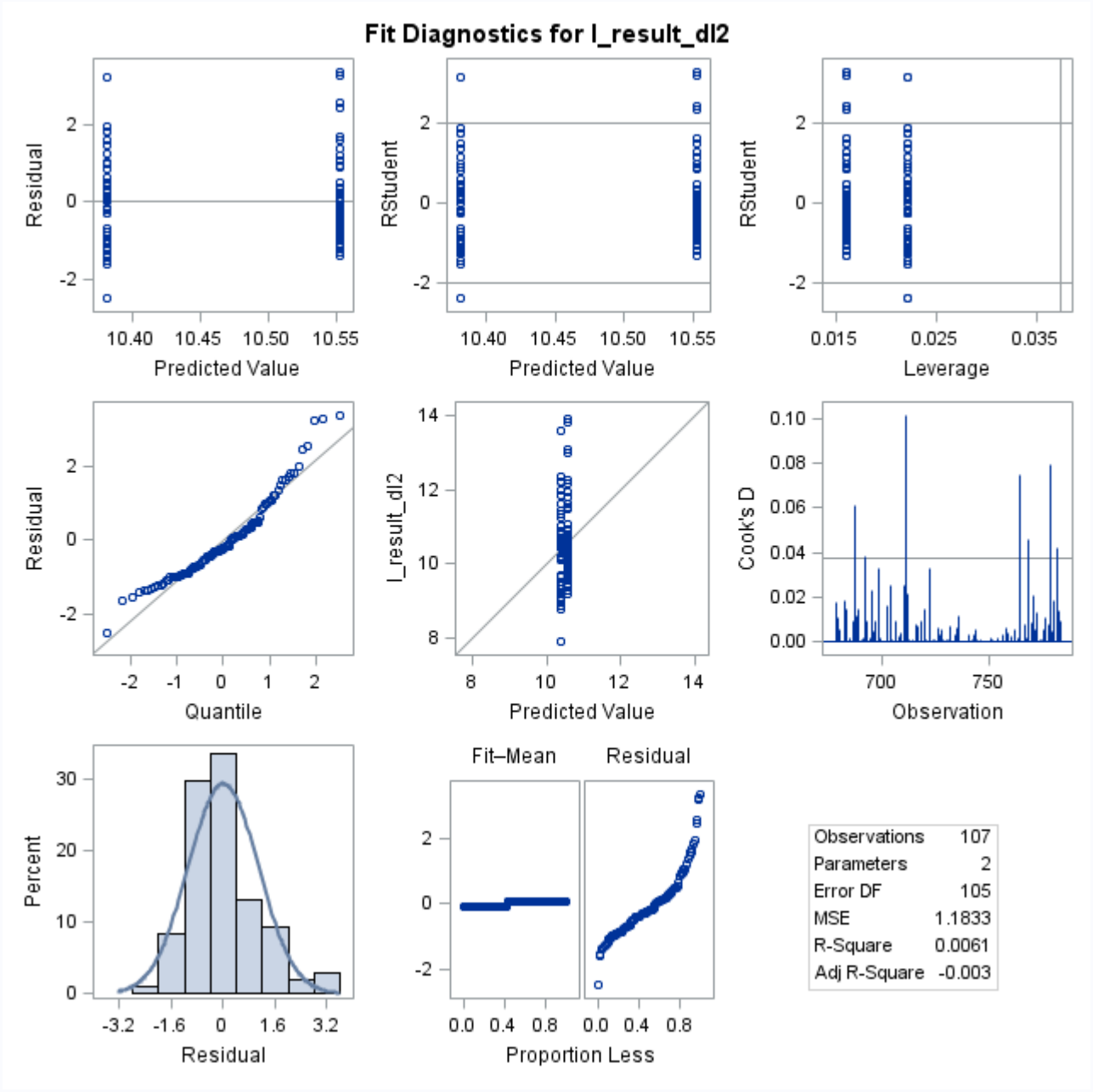
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

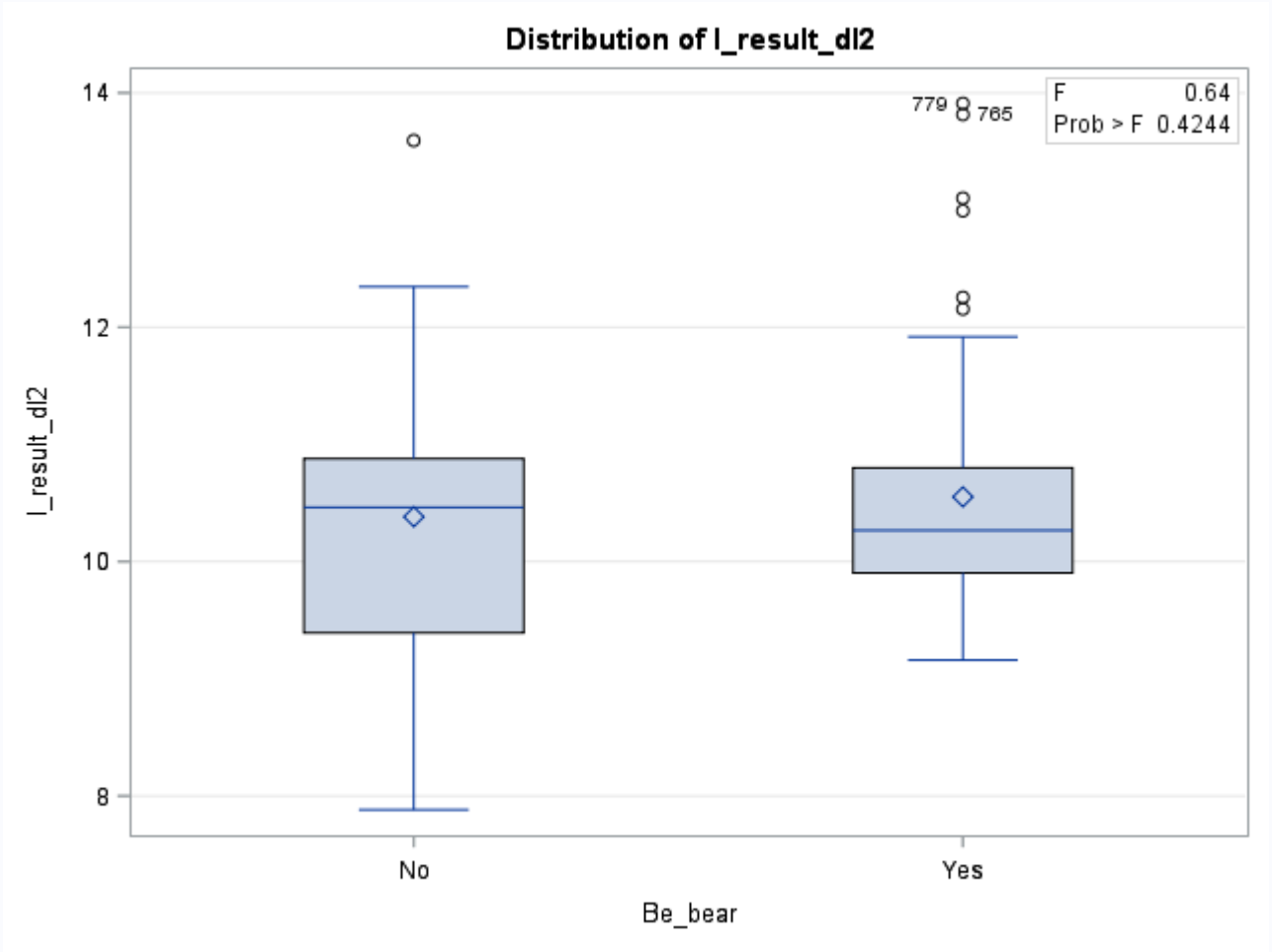
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.7608125	0.7608125	0.64	0.4244
Error	105	124.2450363	1.1832861		
Corrected Total	106	125.0058489			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.006086	10.37918	1.087790	10.48050

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.76081255	0.76081255	0.64	0.4244

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.76081255	0.76081255	0.64	0.4244

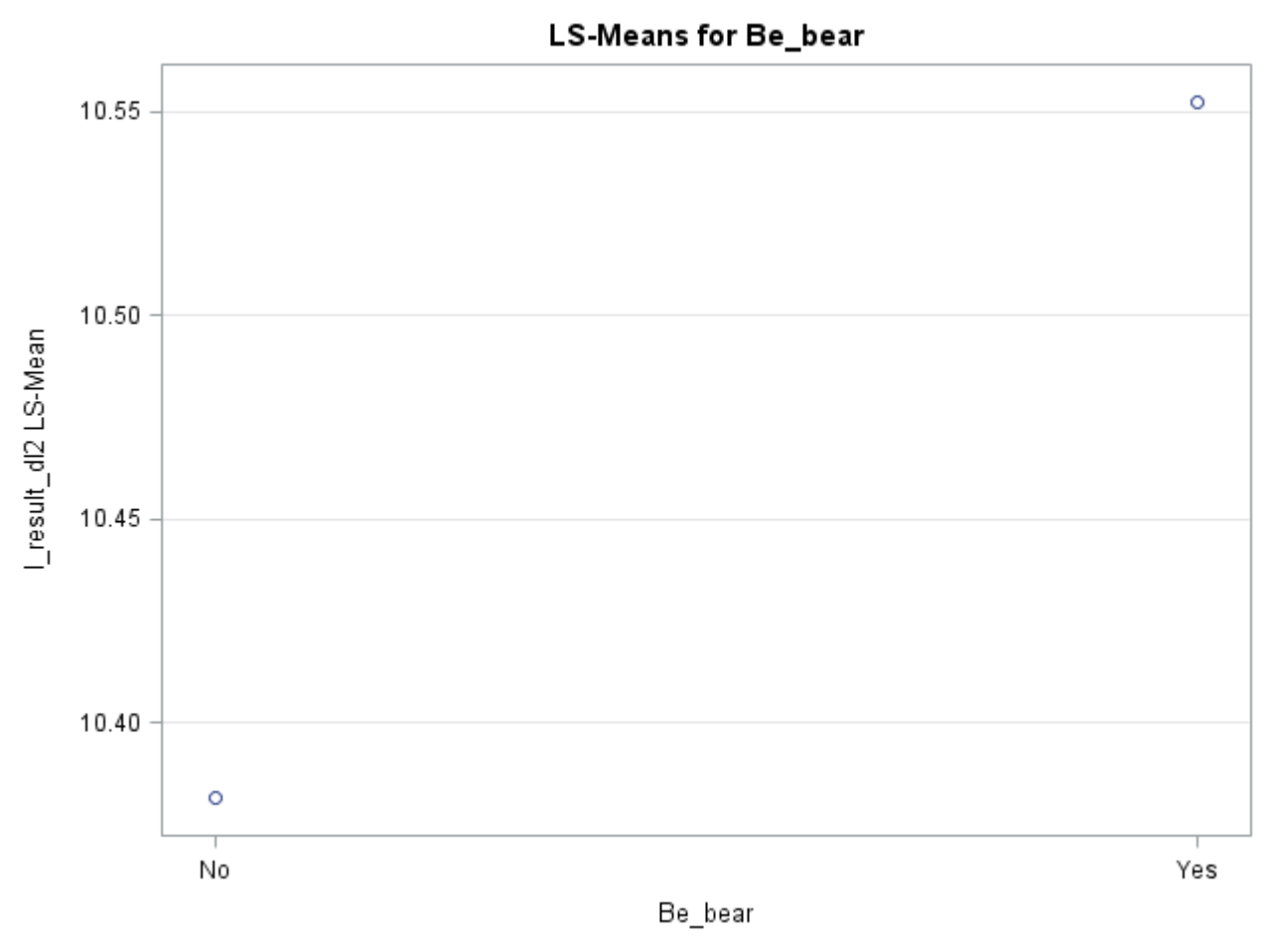

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 1.1833
R-Square 0.0061
Adj R-Square -0.003

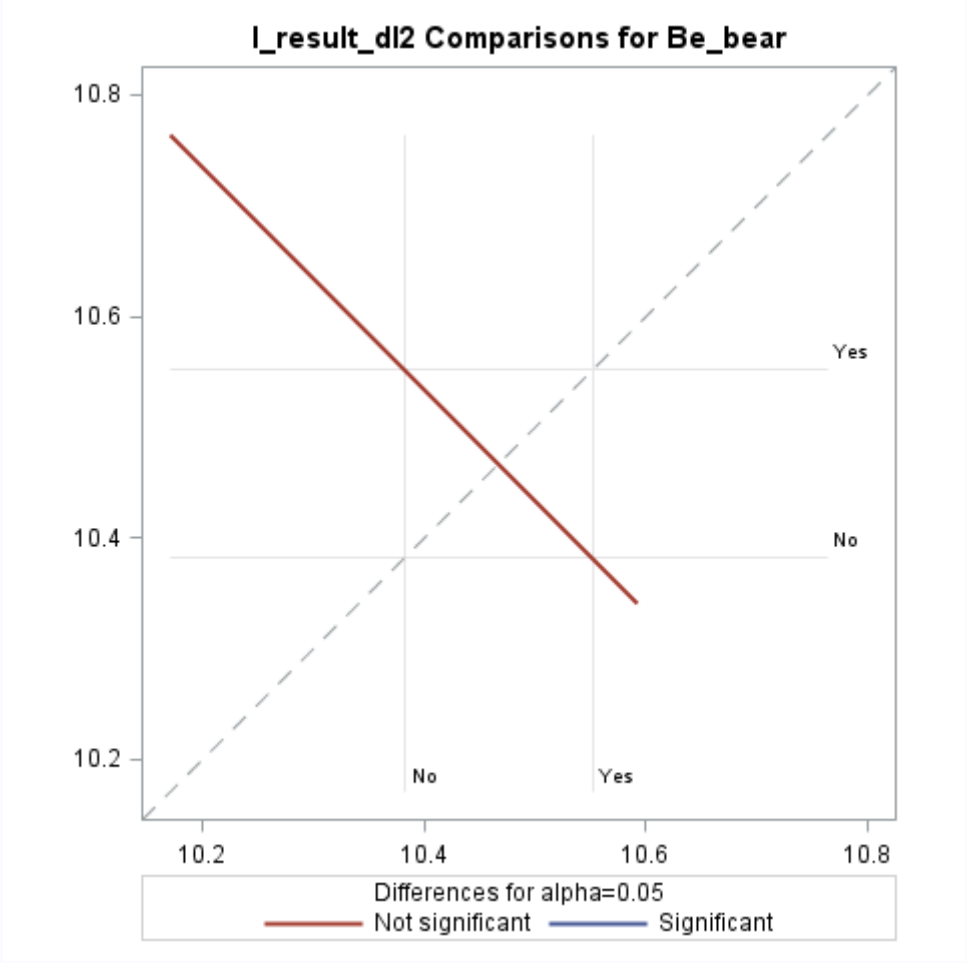

Distribution of l_result_dl2
F 0.64
Prob > F 0.4244
779
765
14
12
10
8
l_result_dl2
No
Yes
Be_bear

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	10.3815190	0.4244
Yes	10.5523351	




l_result_dl2 Comparisons for Be_bear
10.8
10.6
10.4
10.2
Yes
No
No
Yes
10.2
10.4
10.6
10.8
Differences for alpha=0.05
Not significant
Significant

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

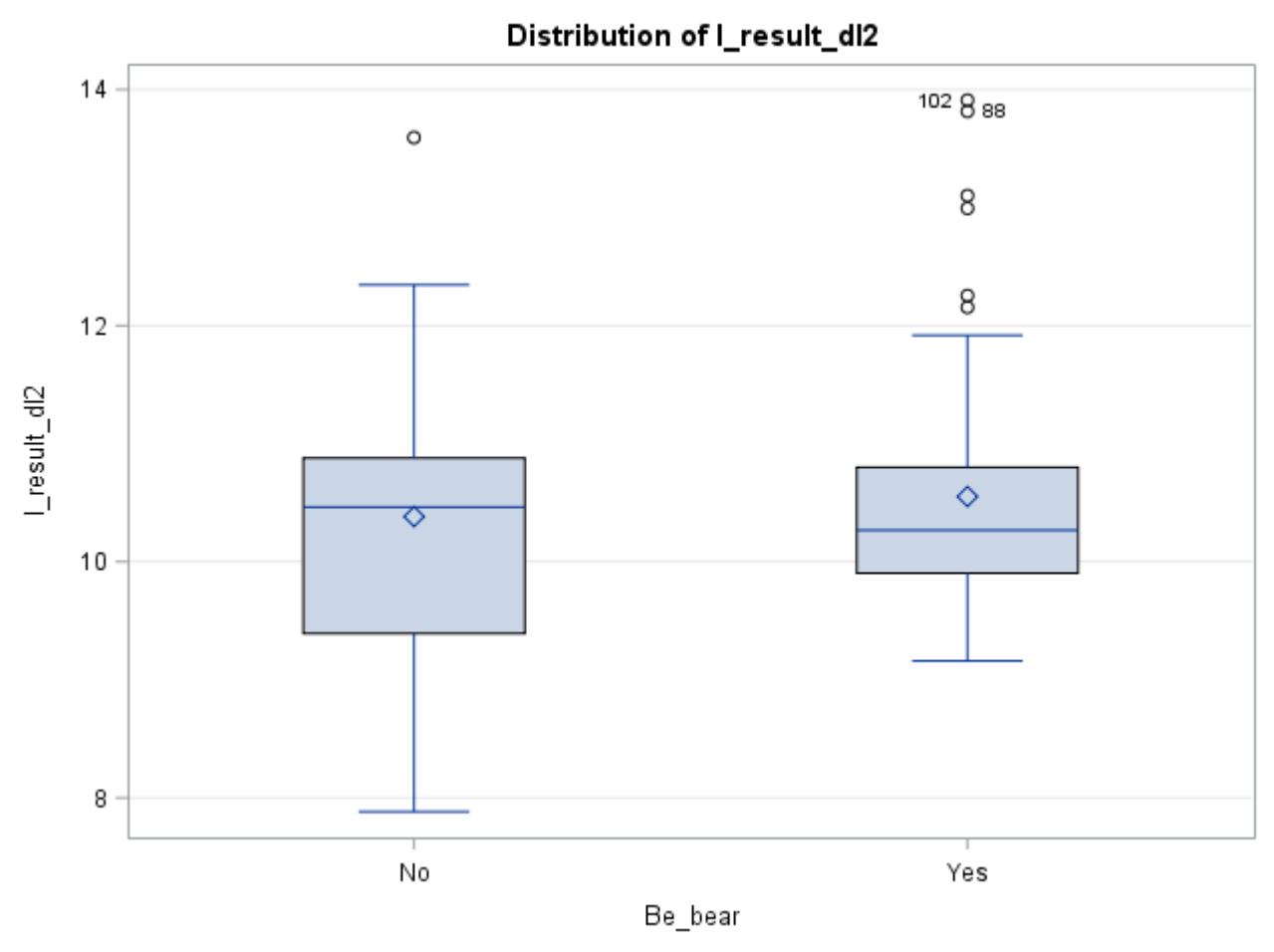
The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.3405	1.3405	0.32	0.5753
Error	105	445.7	4.2447		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	45	10.3815190	1.14975036
Yes	62	10.5523351	1.04080909

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

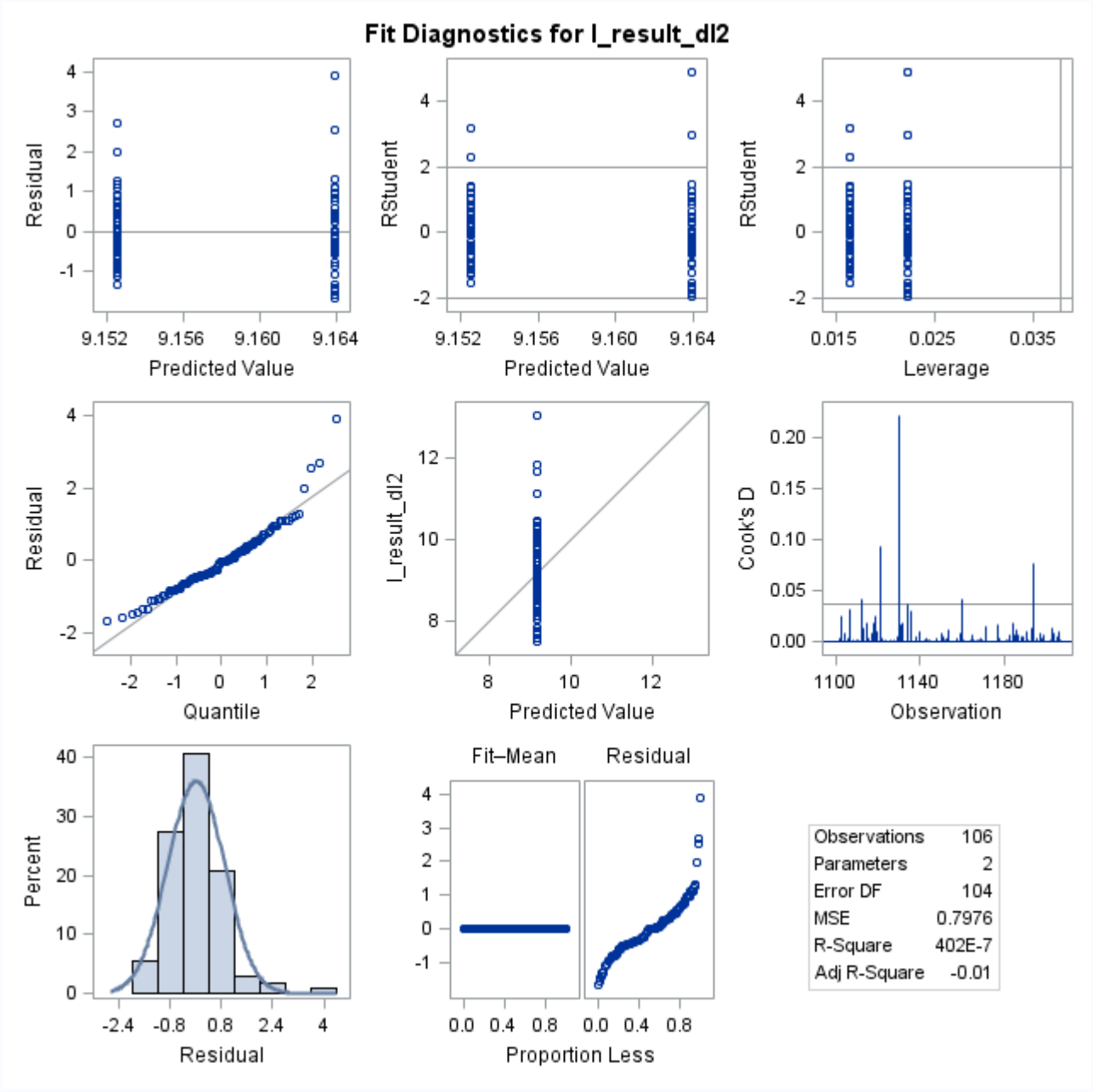
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

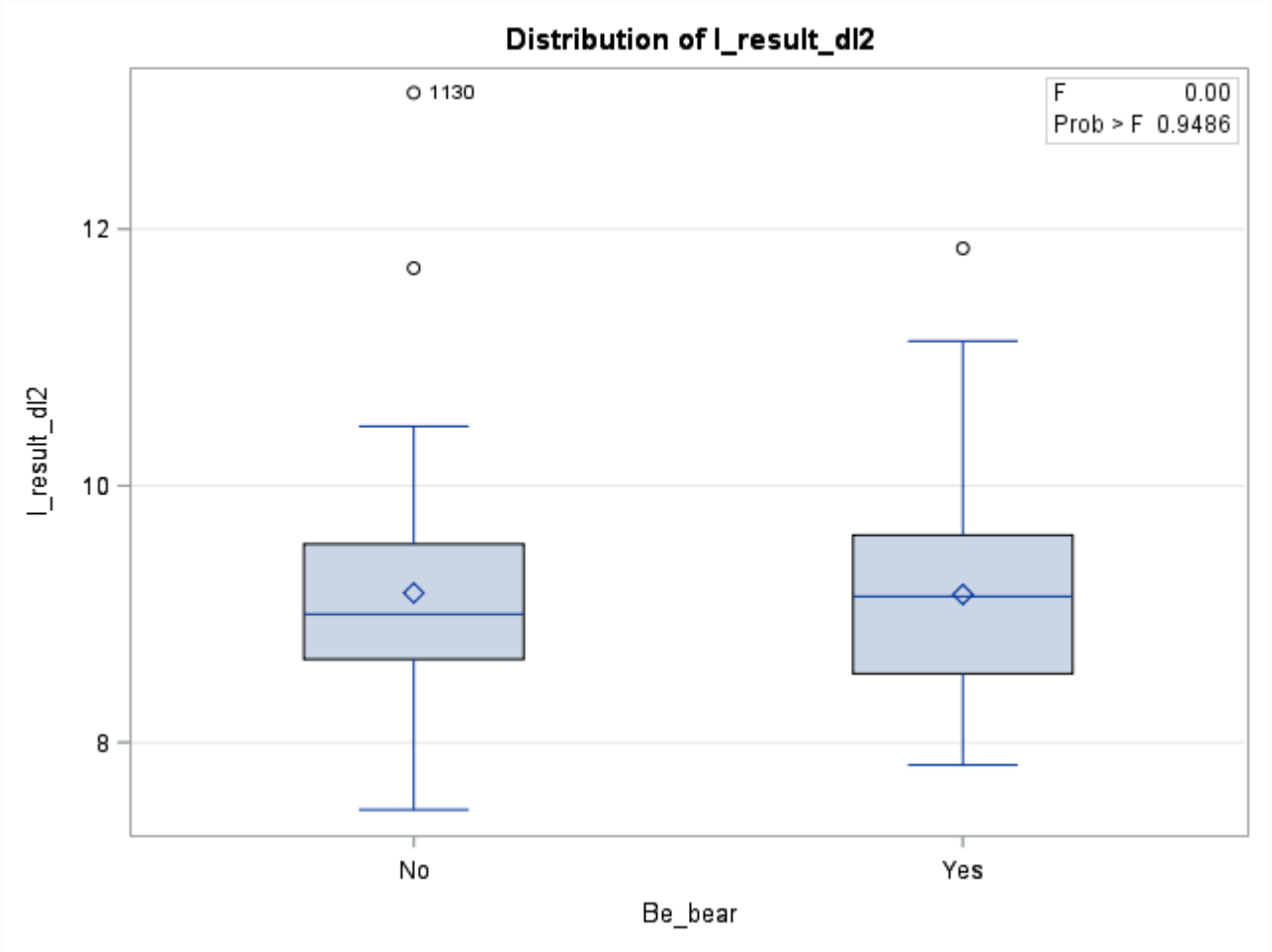
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00333292	0.00333292	0.00	0.9486
Error	104	82.95078363	0.79760369		
Corrected Total	105	82.95411655			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000040	9.752686	0.893087	9.157340

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00333292	0.00333292	0.00	0.9486

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00333292	0.00333292	0.00	0.9486

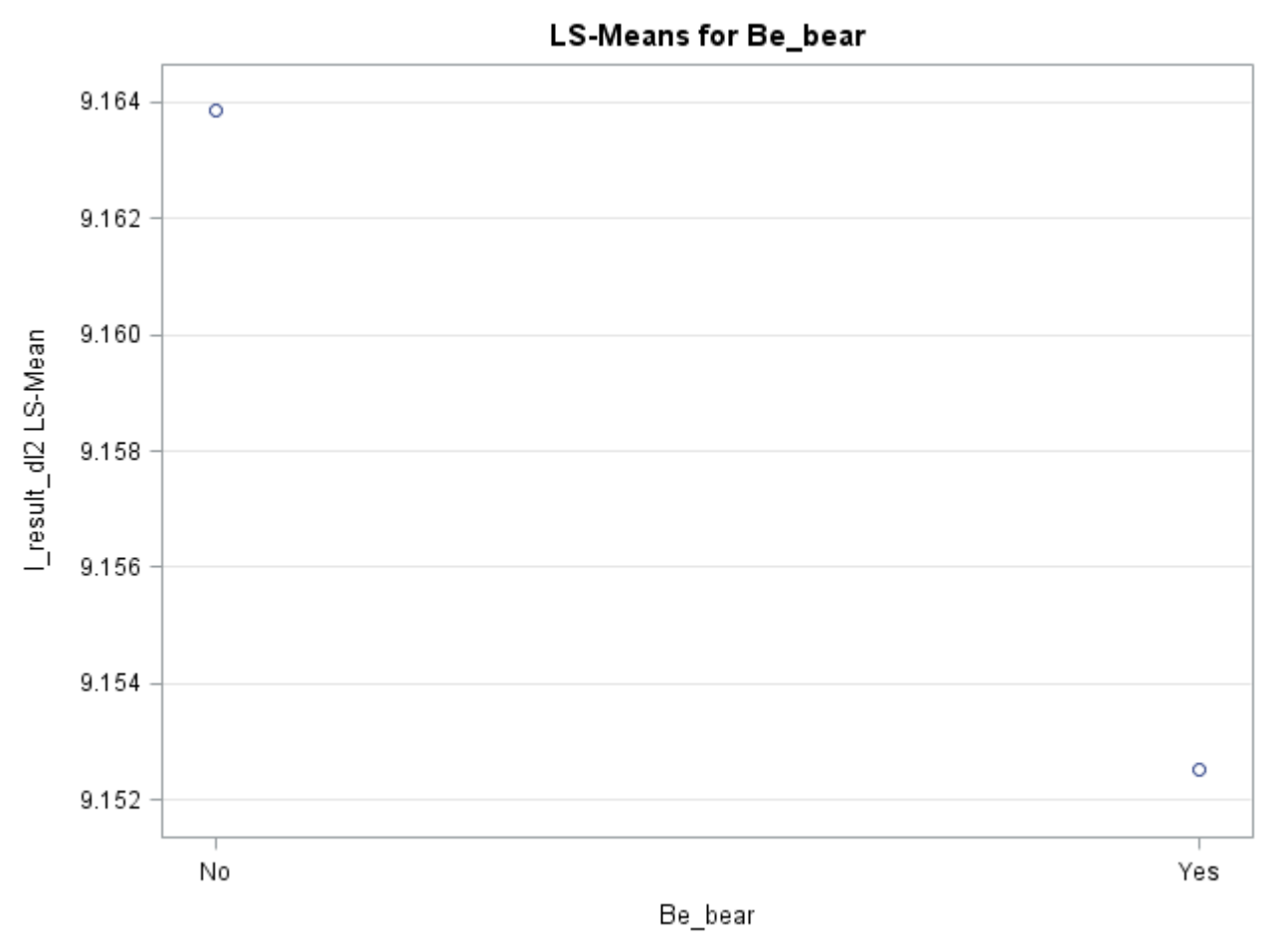

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.7976
R-Square 402E-7
Adj R-Square -0.01

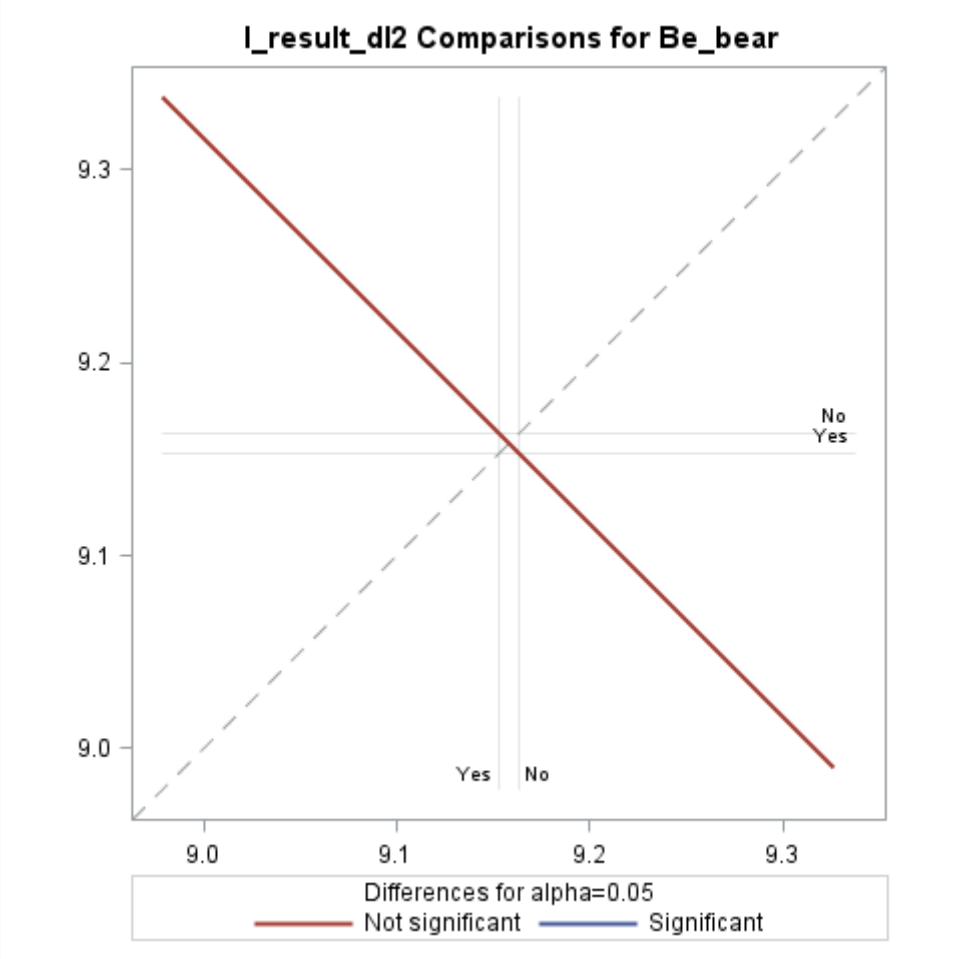

Distribution of l_result_dl2
F 0.00
Prob > F 0.9486
1130
12
10
8
l_result_dl2
No
Yes
Be_bear

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	9.16386827	0.9486
Yes	9.15252353	




l_result_dl2 Comparisons for Be_bear
9.3
9.2
9.1
9.0
No
Yes
Yes
No
9.0
9.1
9.2
9.3
Differences for alpha=0.05
Not significant
Significant

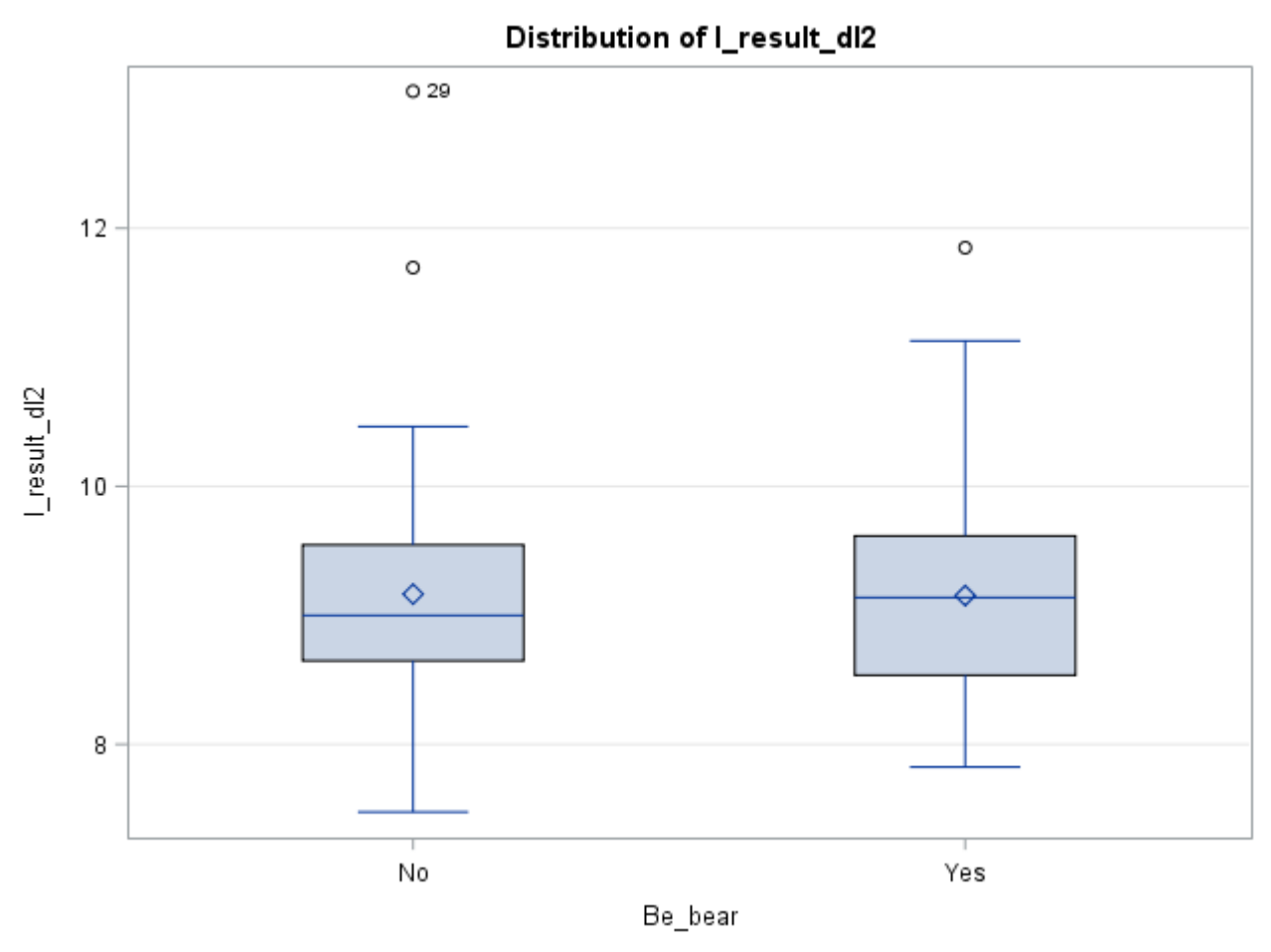
The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	4.9347	4.9347	1.55	0.2156
Error	104	330.6	3.1792		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	9.16386827	1.02823102
Yes	**61**	9.15252353	0.77922383

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 107

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

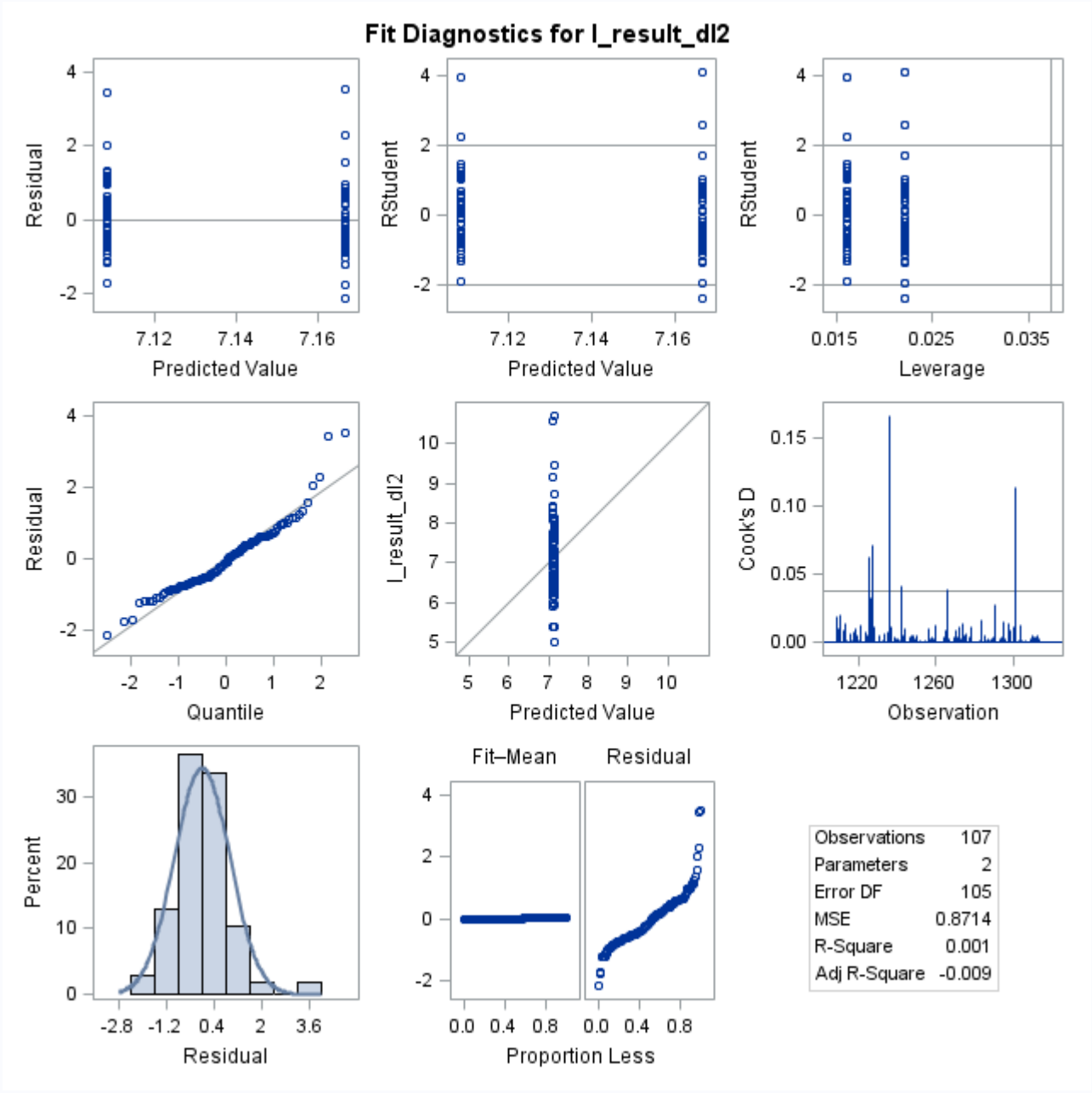
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

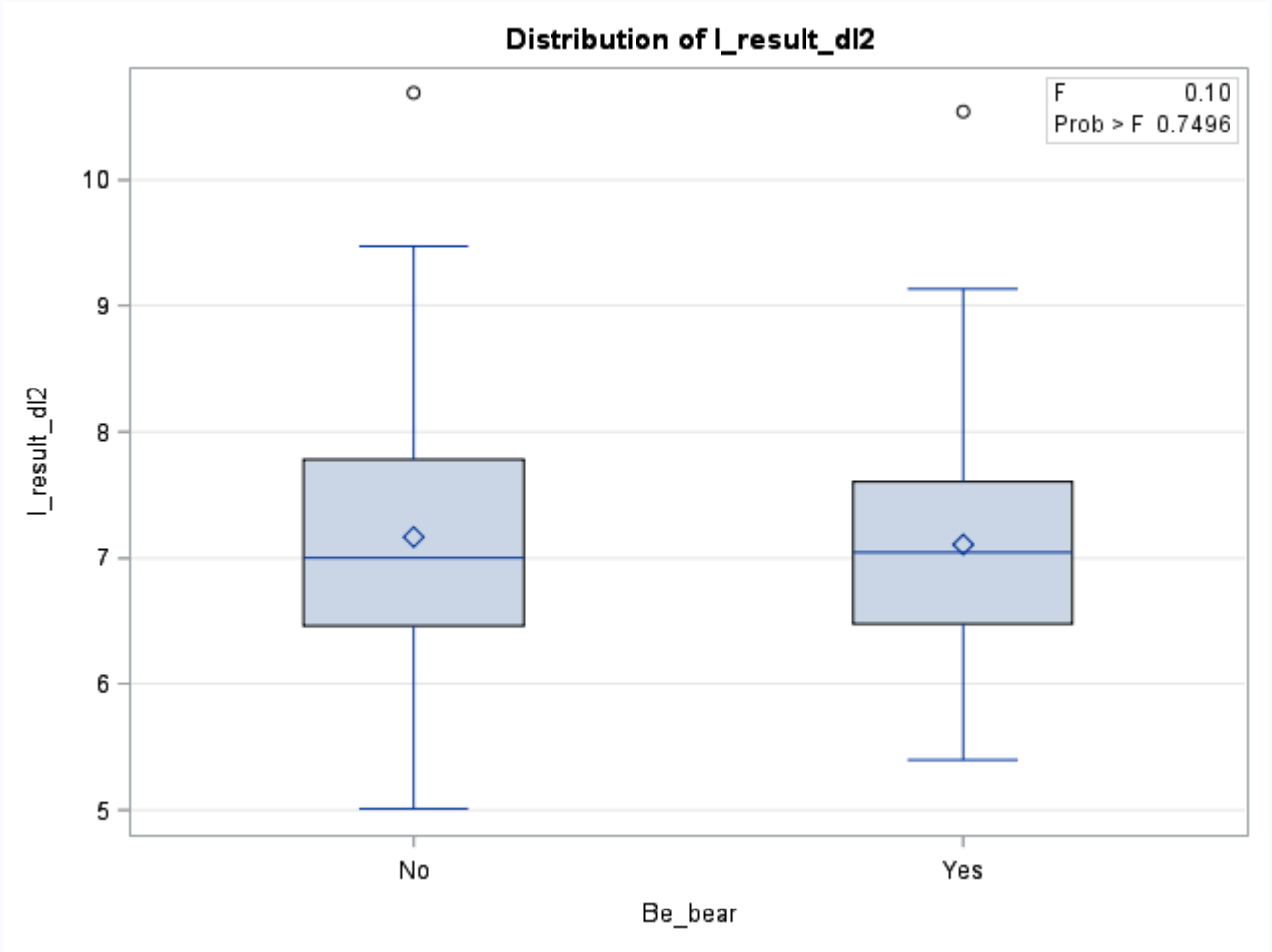
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.08921714	0.08921714	0.10	0.7496
Error	105	91.49884966	0.87141762		
Corrected Total	106	91.58806680			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000974	13.08741	0.933498	7.132791

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.08921714	0.08921714	0.10	0.7496

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.08921714	0.08921714	0.10	0.7496

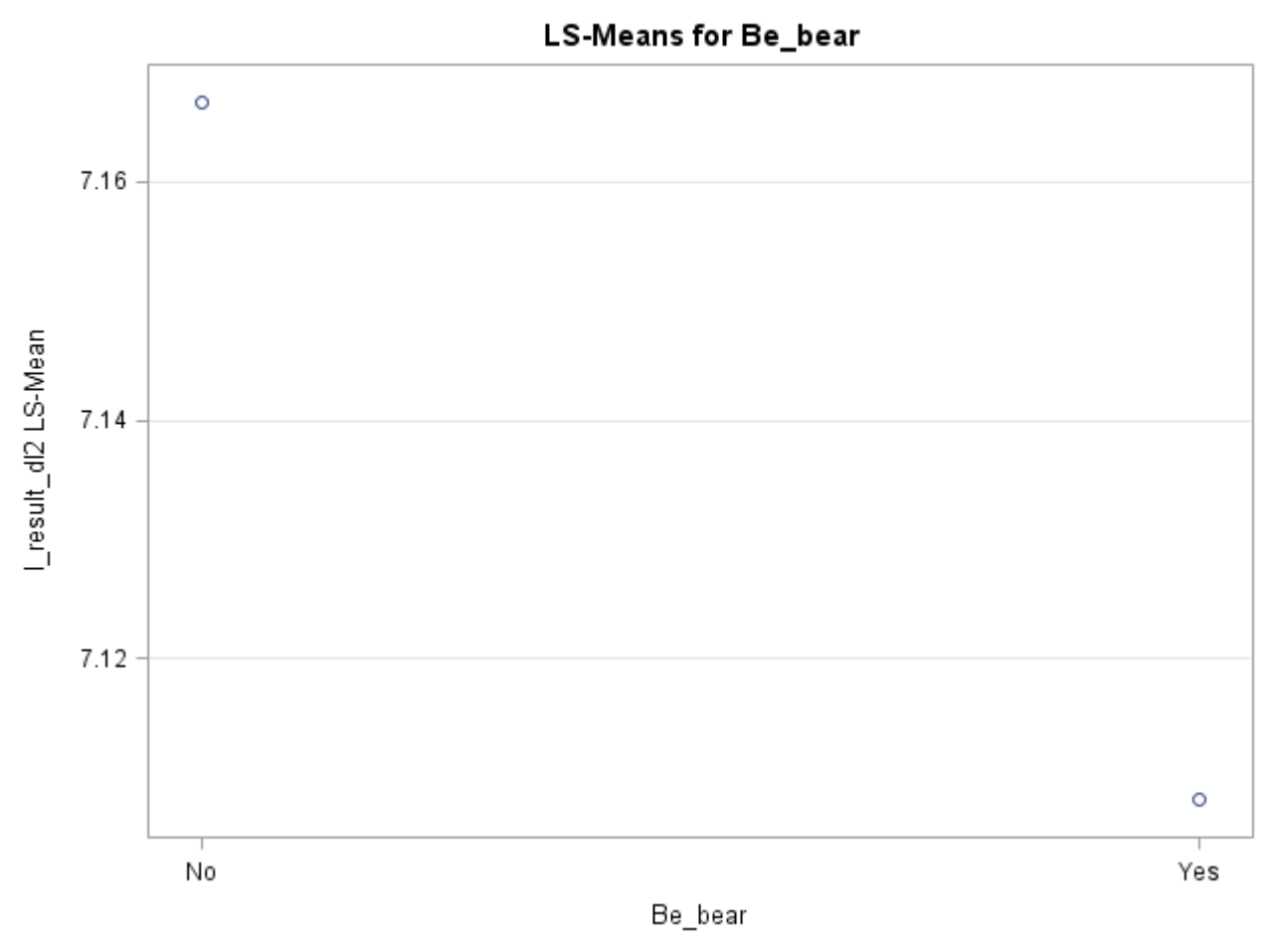

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 0.8714
R-Square 0.001
Adj R-Square -0.009

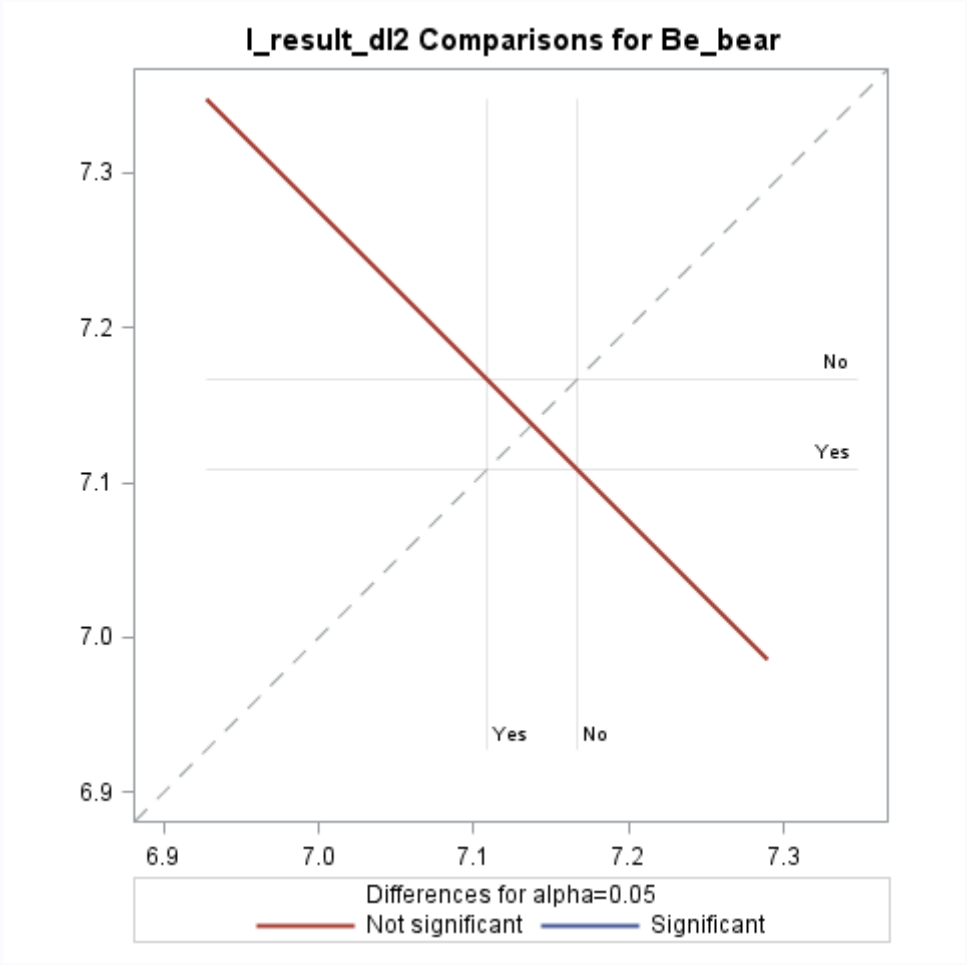

Distribution of l_result_dl2
F 0.10
Prob > F 0.7496
10
9
8
7
6
5
l_result_dl2
No
Yes
Be_bear

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	7.16668467	0.7496
Yes	7.10819032	




l_result_dl2 Comparisons for Be_bear
7.3
7.2
7.1
7.0
6.9
No
Yes
Yes
No
6.9
7.0
7.1
7.2
7.3
Differences for alpha=0.05
Not significant
Significant

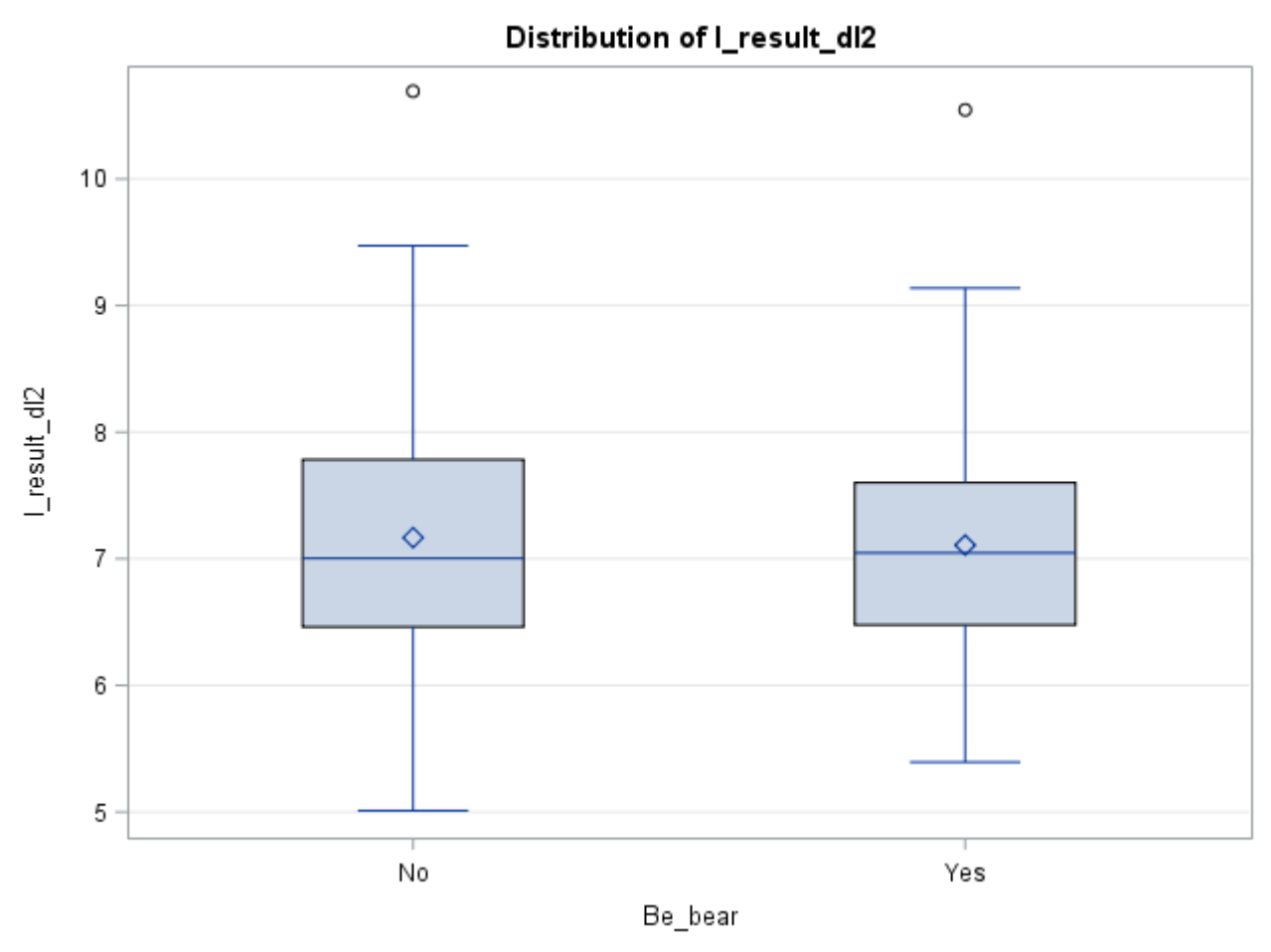
The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.7343	1.7343	0.53	0.4687
Error	105	344.3	3.2788		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	7.16668467	1.01360687
Yes	**62**	7.10819032	0.87115242

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	107

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

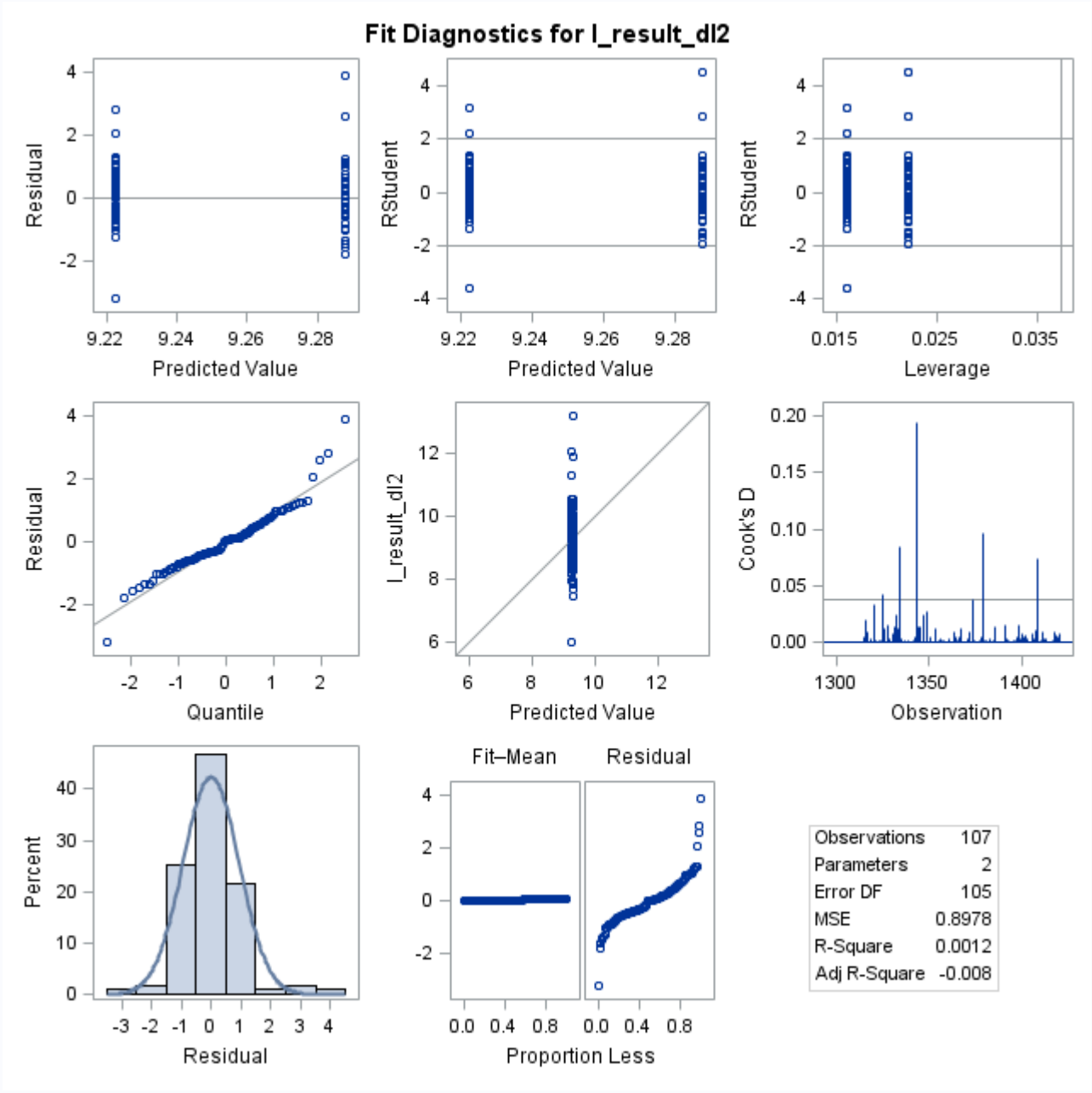
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

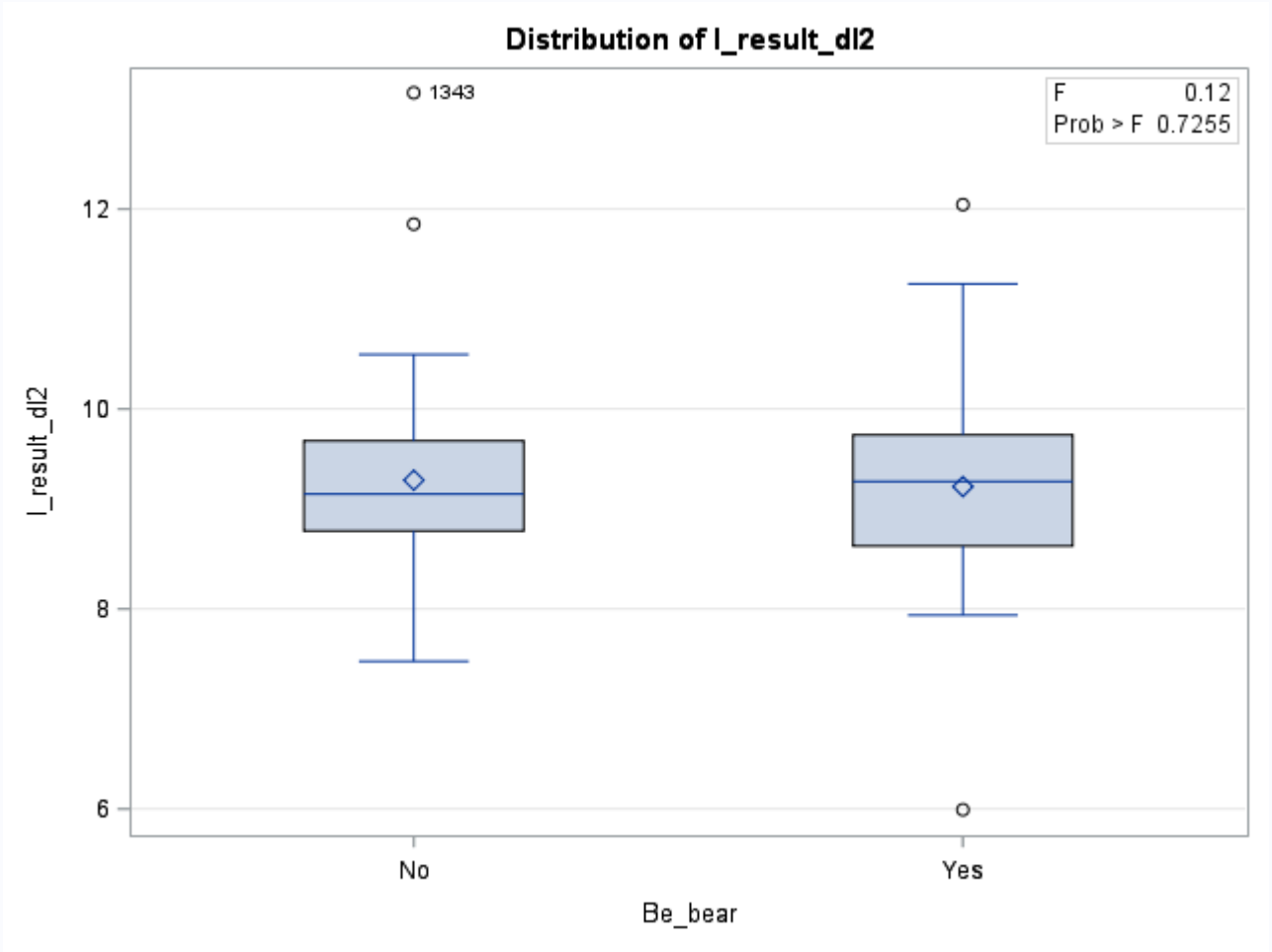
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.11125858	0.11125858	0.12	0.7255
Error	105	94.26476612	0.89775968		
Corrected Total	106	94.37602469			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001179	10.24324	0.947502	9.250019

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.11125858	0.11125858	0.12	0.7255

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.11125858	0.11125858	0.12	0.7255

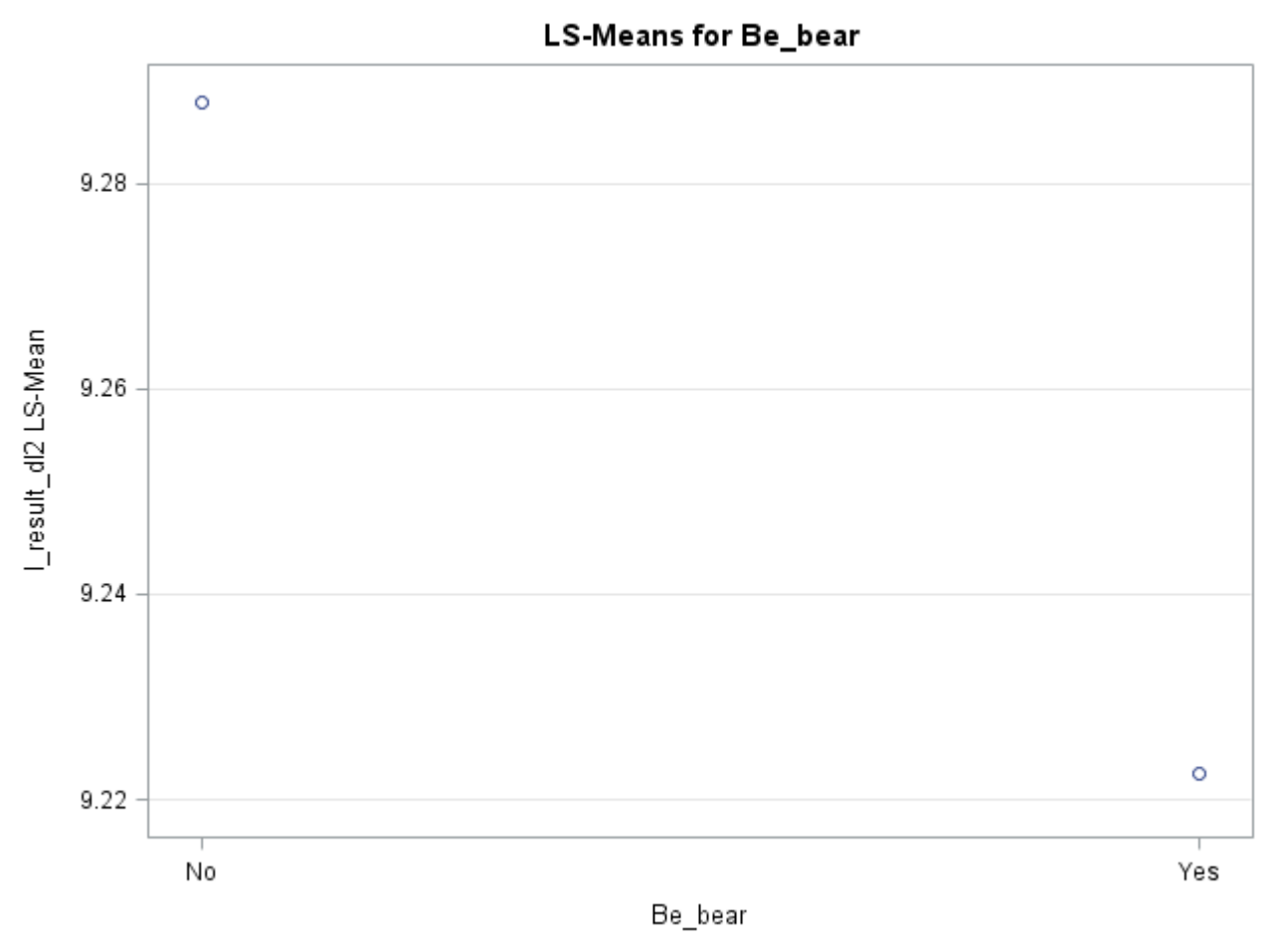

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 0.8978
R-Square 0.0012
Adj R-Square -0.008

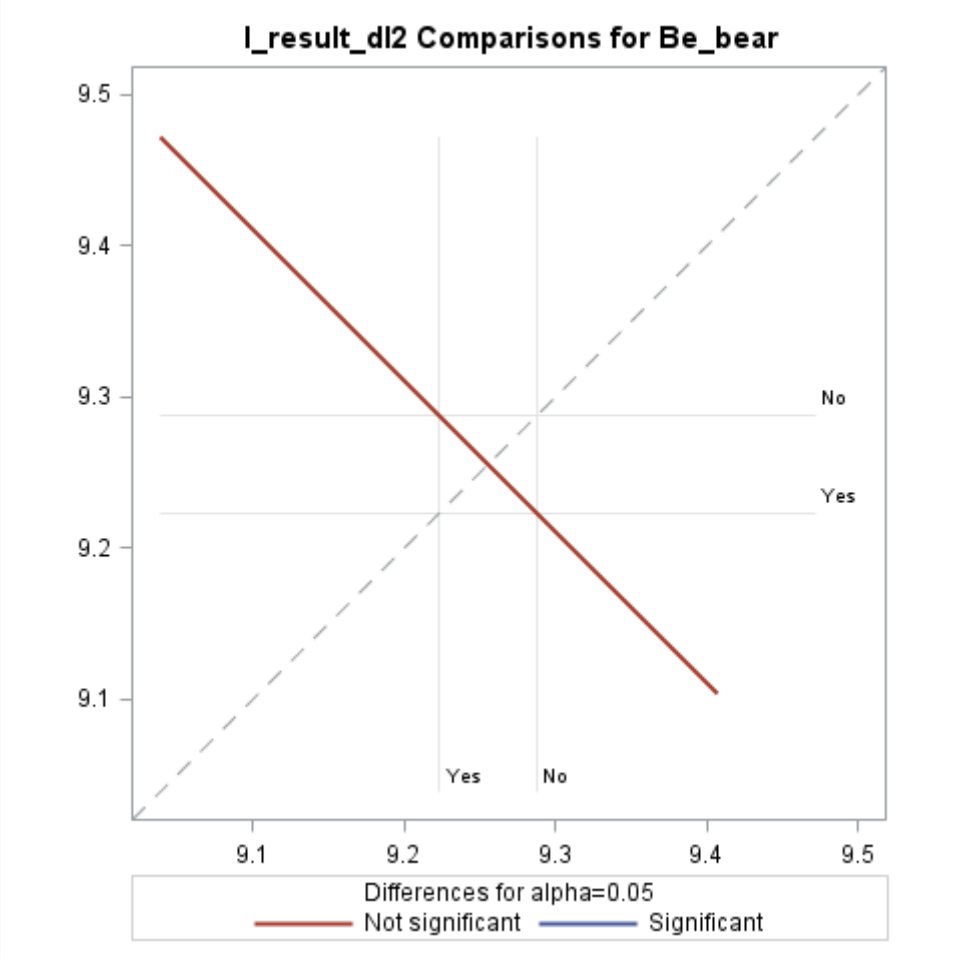

Distribution of l_result_dl2
F 0.12
Prob > F 0.7255
1343
12
10
8
6
l_result_dl2
No
Yes
Be_bear

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.28786853	0.7255
Yes	9.22254698	




l_result_dl2 Comparisons for Be_bear
9.5
9.4
9.3
9.2
9.1
No
Yes
Yes
No
9.1
9.2
9.3
9.4
9.5
Differences for alpha=0.05
Not significant
Significant

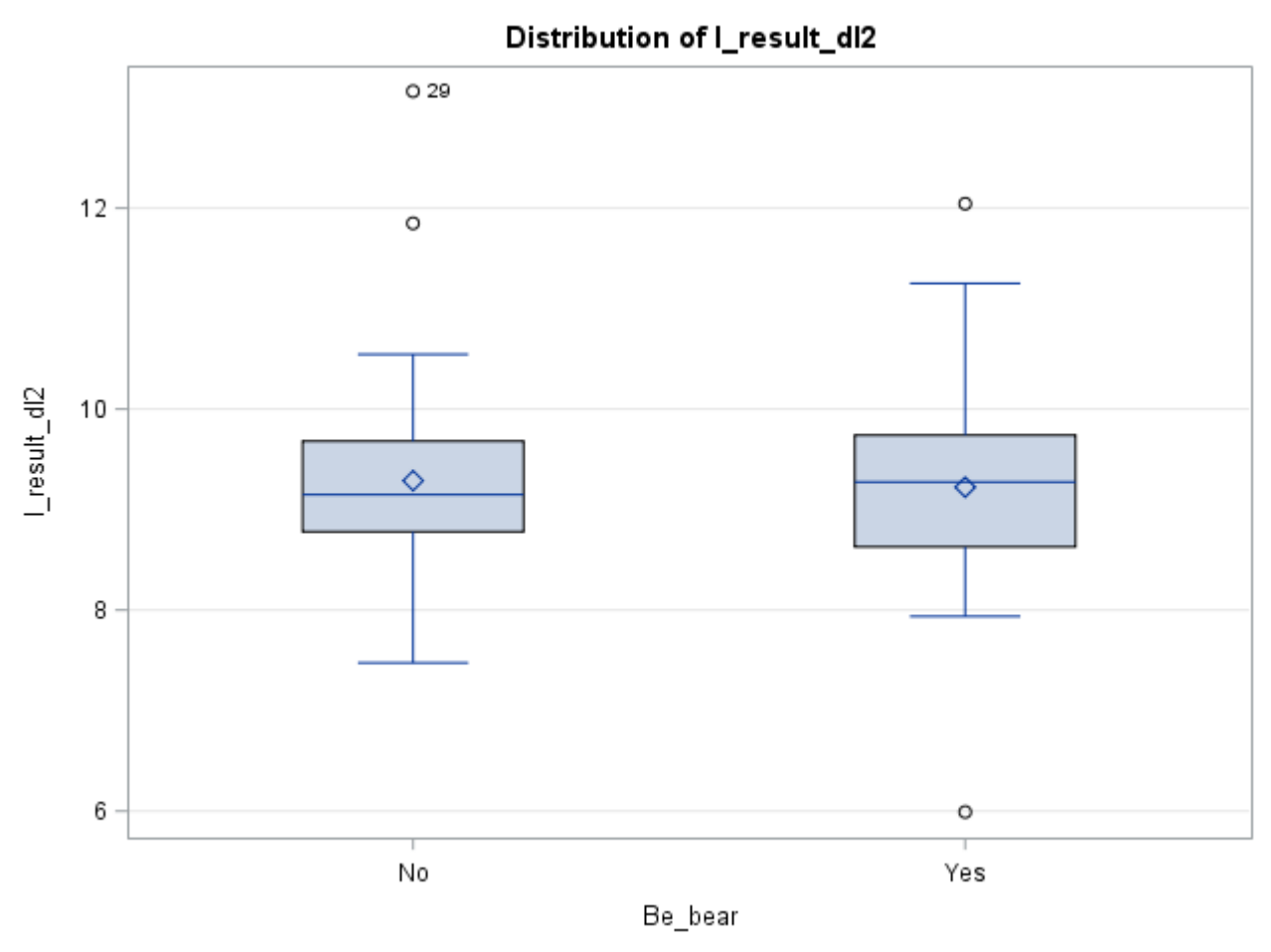
The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	2.1875	2.1875	0.53	0.4688
Error	105	434.5	4.1381		

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	9.28786853	1.03568735
Yes	**62**	9.22254698	0.87841363

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 106

Number of Observations Used 106

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

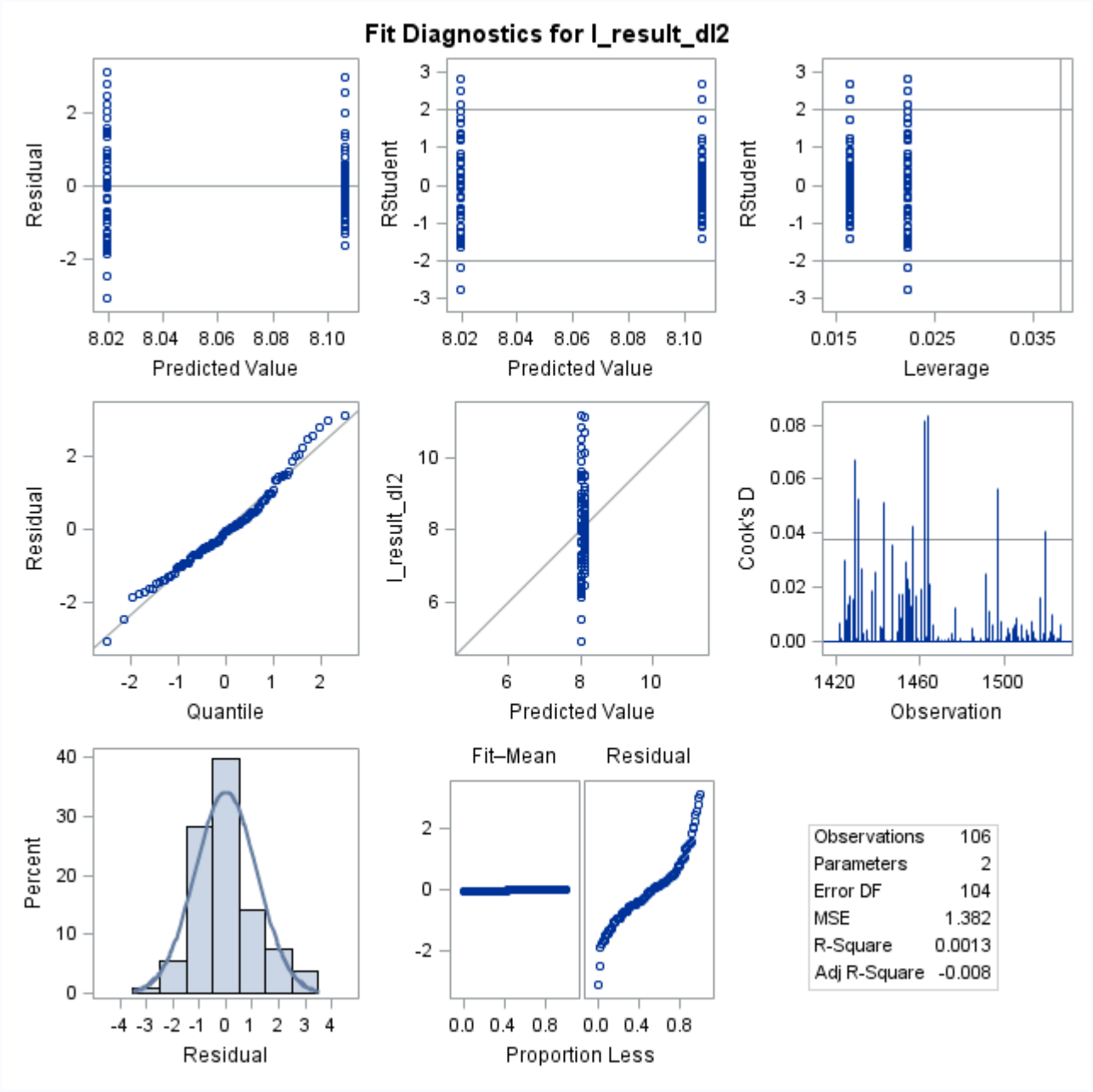
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

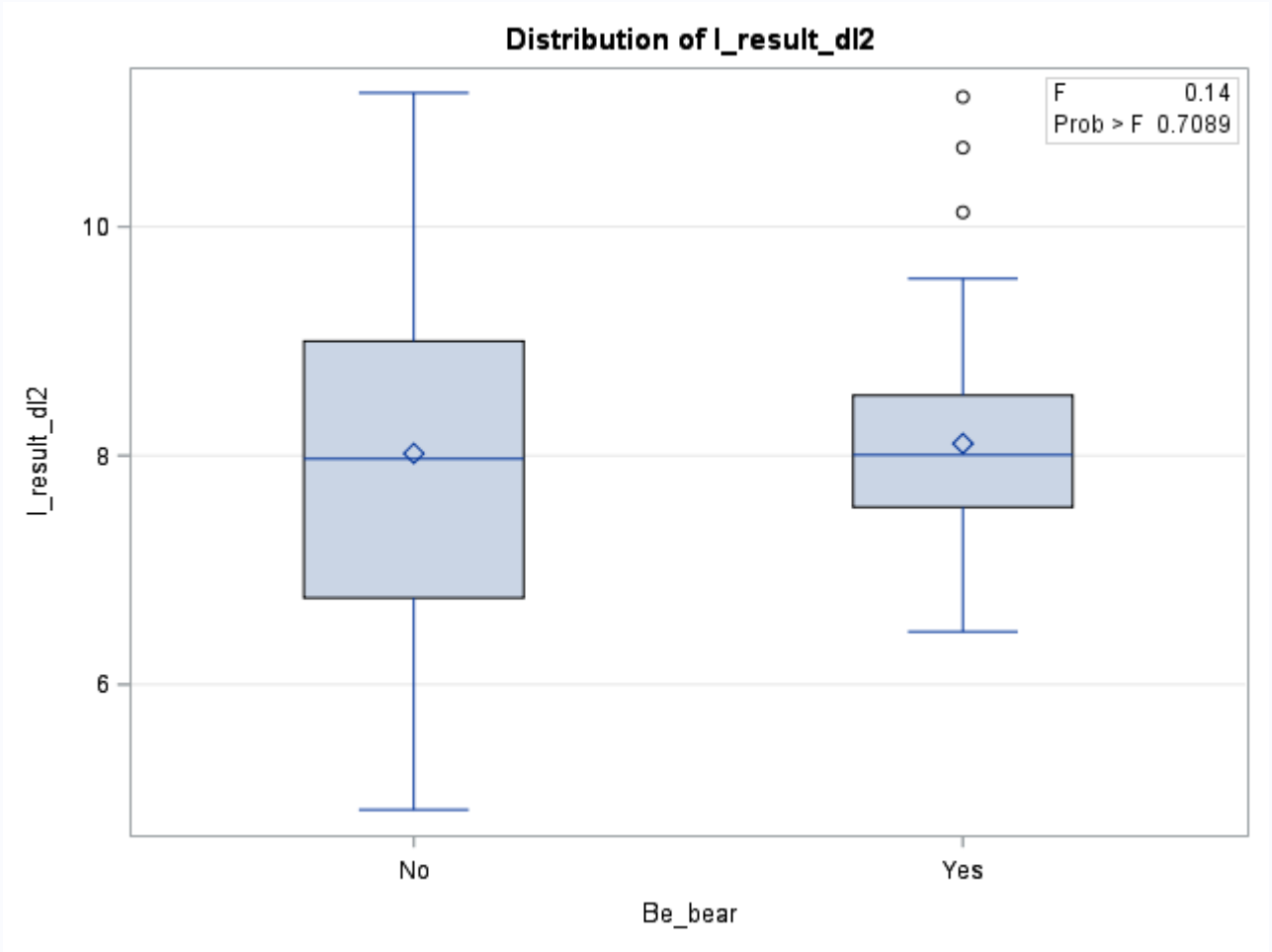
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.1936376	0.1936376	0.14	0.7089
Error	104	143.7268908	1.3819893		
Corrected Total	105	143.9205283			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001345	14.56859	1.175580	8.069281

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.19363757	0.19363757	0.14	0.7089

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.19363757	0.19363757	0.14	0.7089

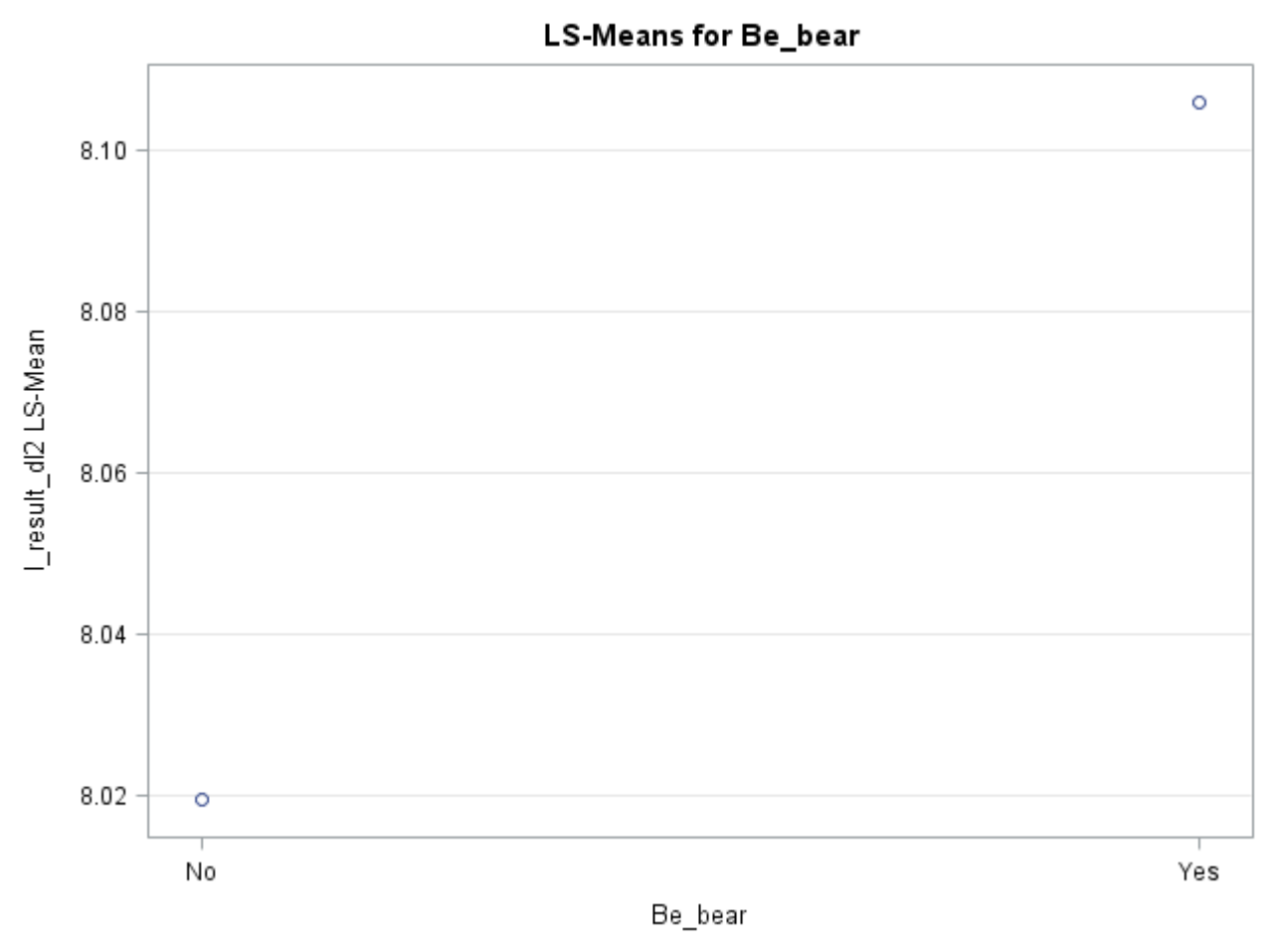

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 1.382
R-Square 0.0013
Adj R-Square -0.008

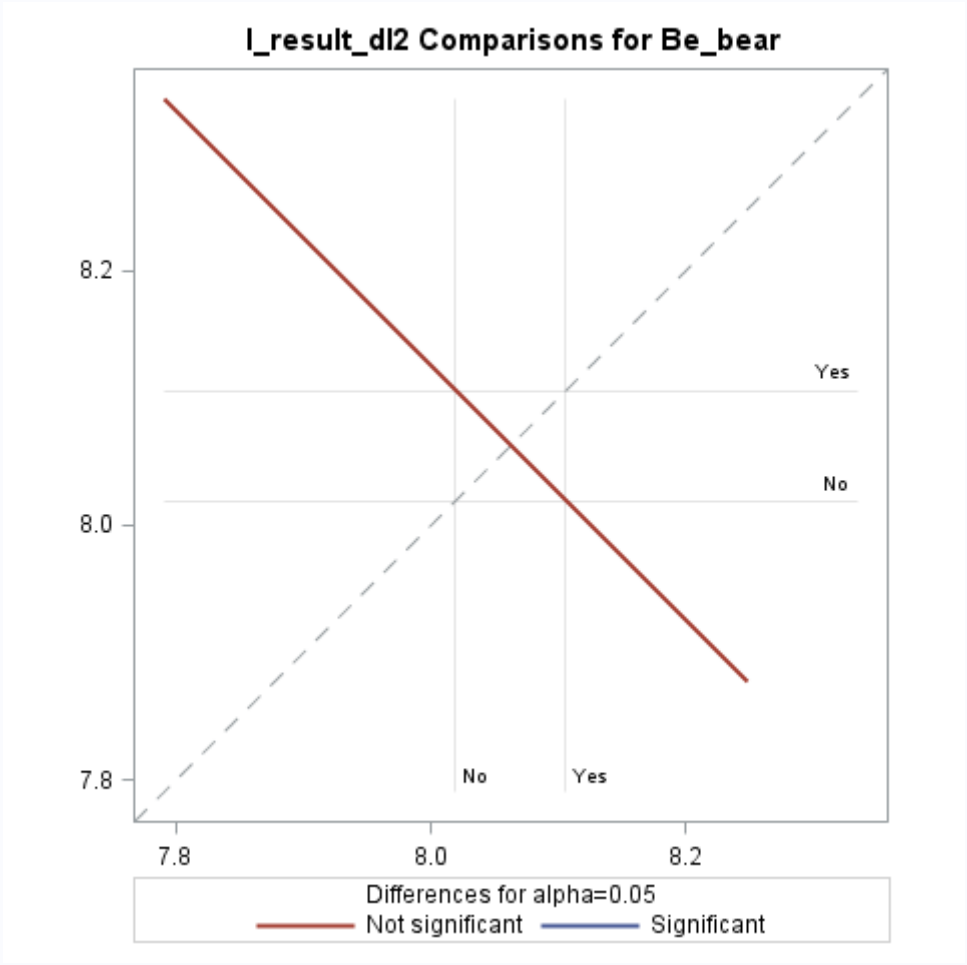

Distribution of l_result_dl2
F 0.14
Prob > F 0.7089
10
8
6
l_result_dl2
No
Yes
Be_bear

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	8.01951895	0.7089
Yes	8.10599116	




l_result_dl2 Comparisons for Be_bear
8.2
8.0
7.8
Yes
No
No
Yes
7.8
8.0
8.2
Differences for alpha=0.05
Not significant
Significant

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

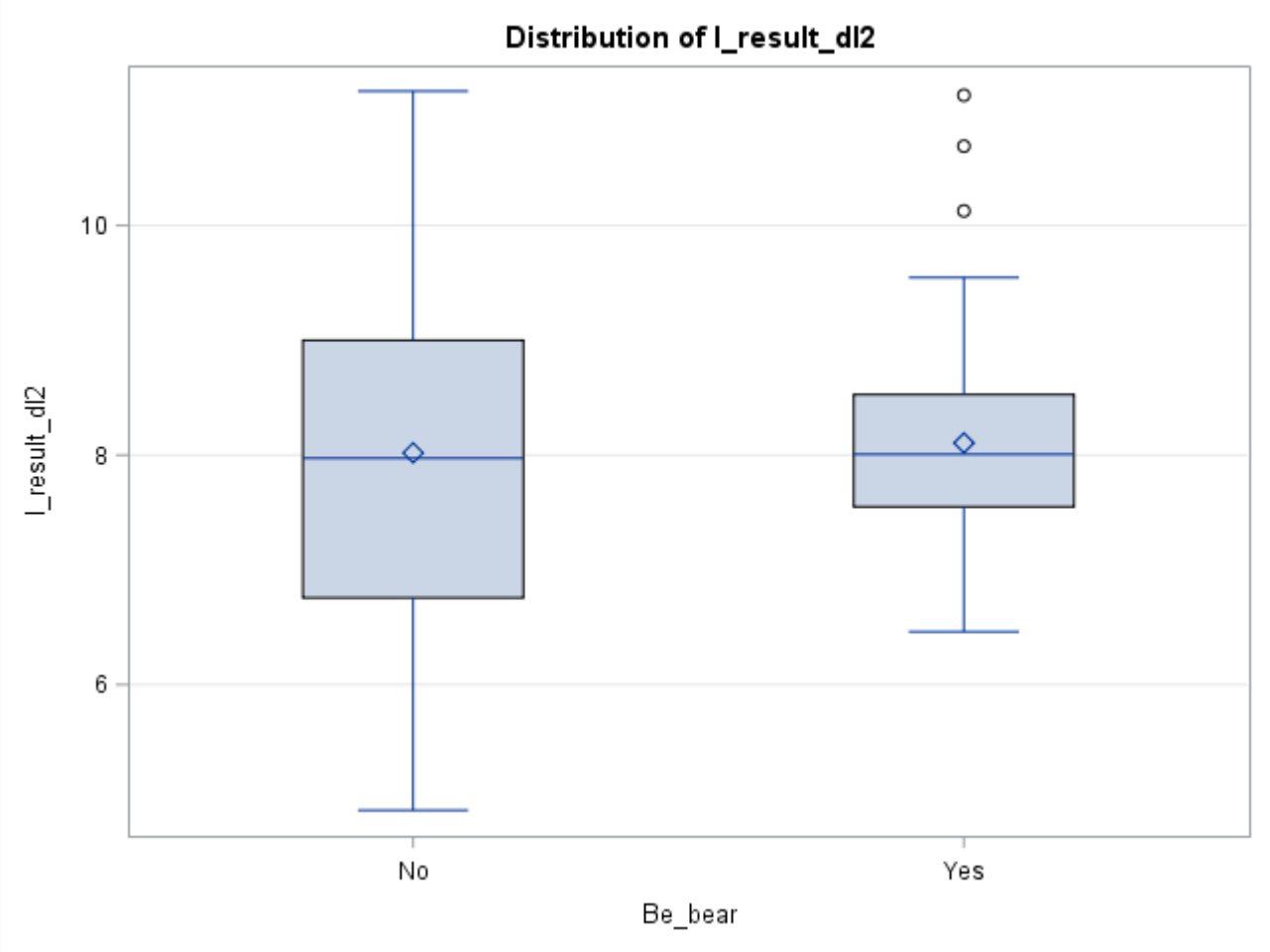
The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	46.1055	46.1055	11.42	0.0010
Error	104	419.8	4.0361		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	45	8.01951895	1.47378495
Yes	61	8.10599116	0.89588913

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 107

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

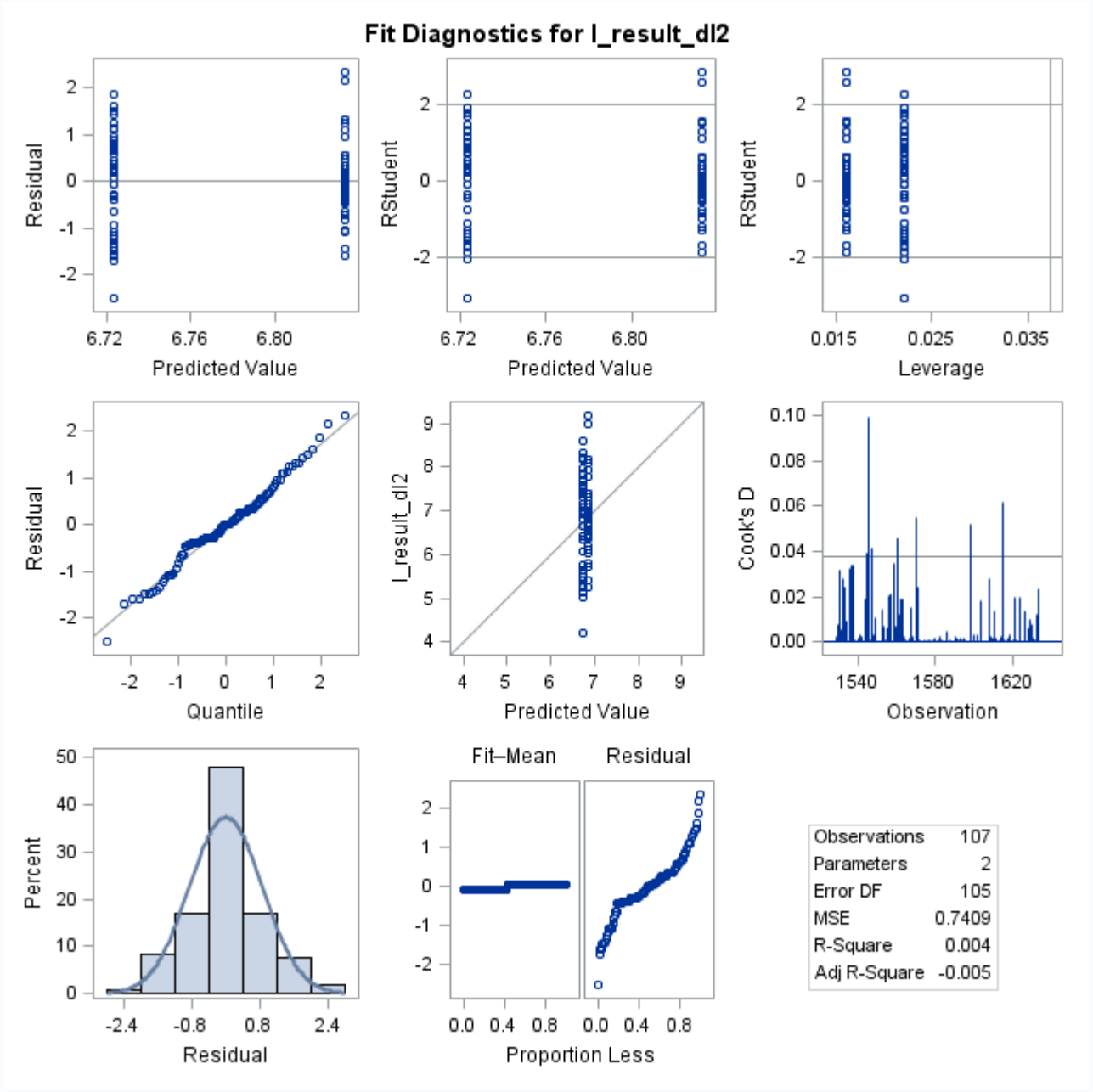
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

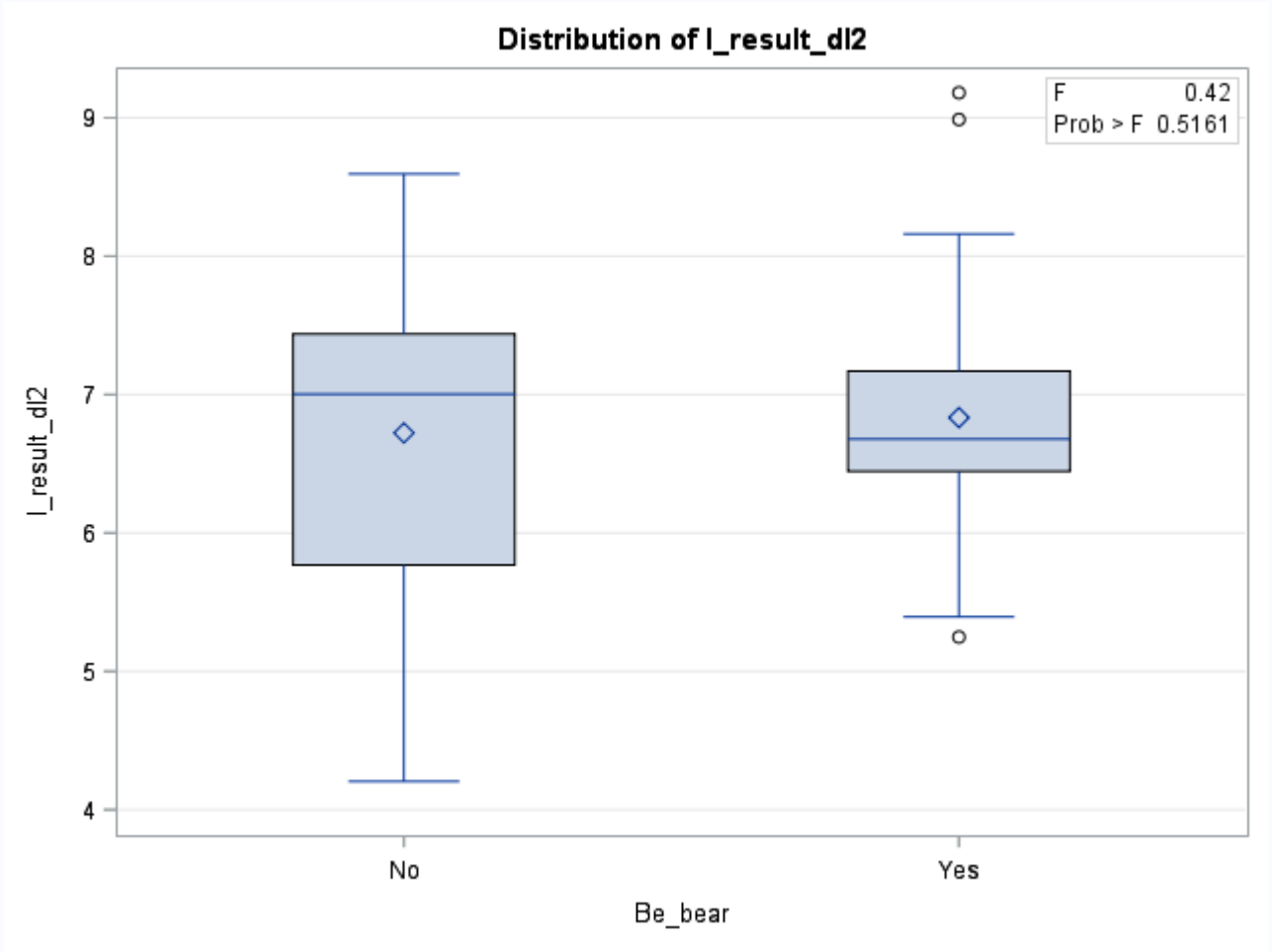
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.31456025	0.31456025	0.42	0.5161
Error	105	77.79091285	0.74086584		
Corrected Total	106	78.10547311			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.004027	12.68270	0.860736	6.786693

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.31456025	0.31456025	0.42	0.5161

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.31456025	0.31456025	0.42	0.5161

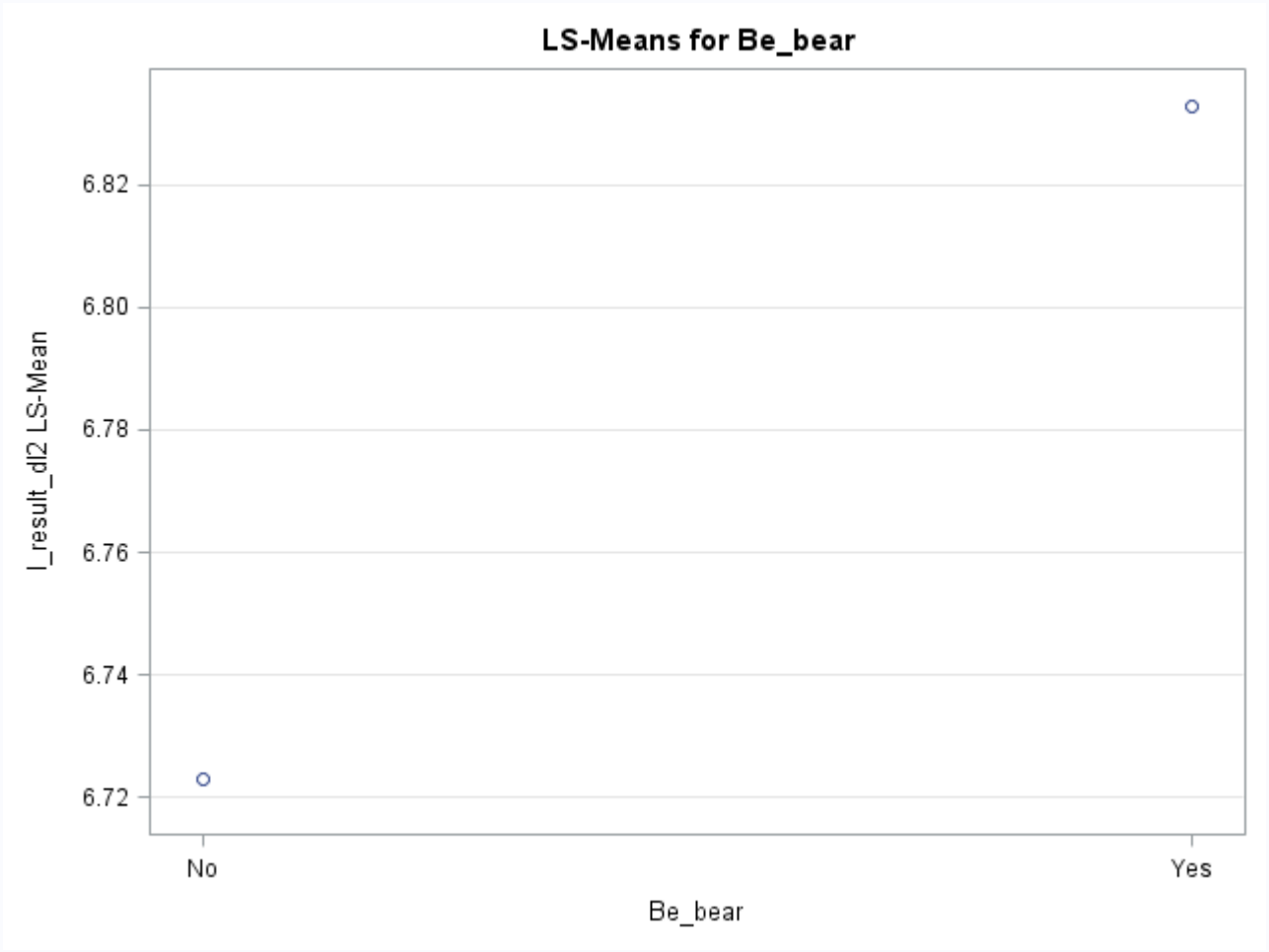

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 107
Parameters 2
Error DF 105
MSE 0.7409
R-Square 0.004
Adj R-Square -0.005

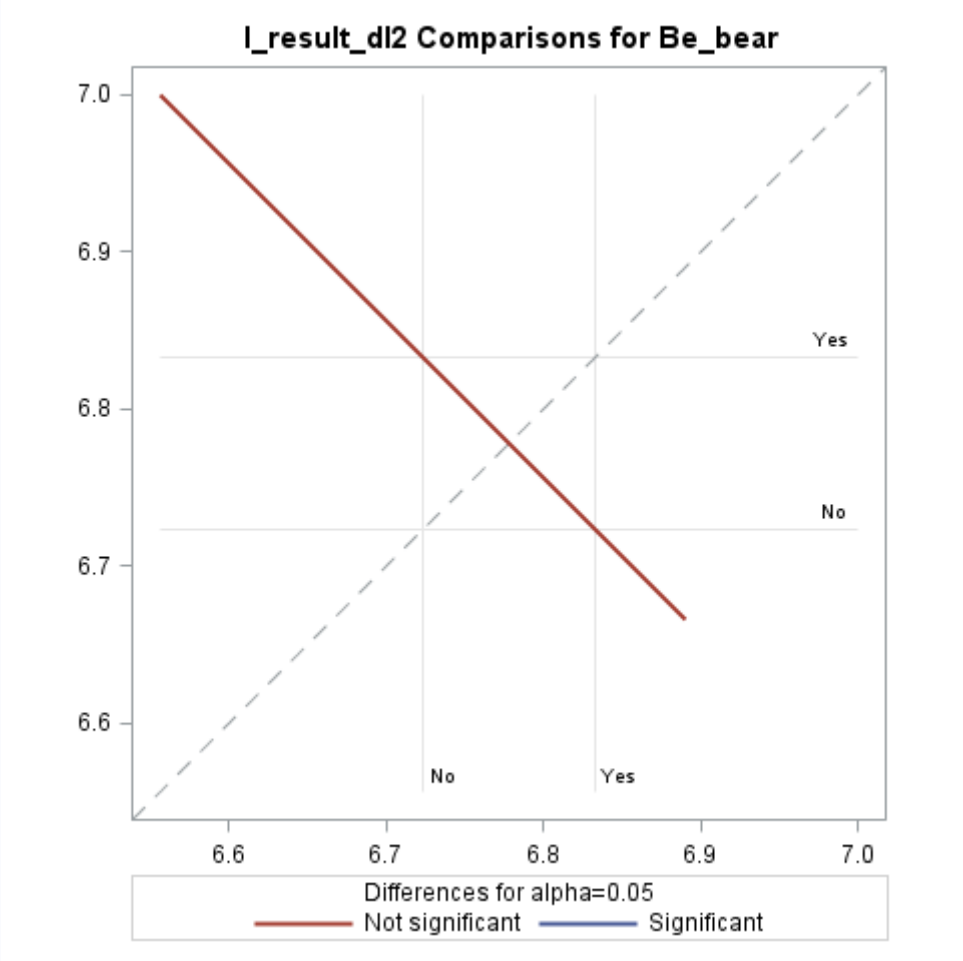

Distribution of l_result_dl2
F 0.42
Prob > F 0.5161
l_result_dl2
9
8
7
6
5
4
No
Yes
Be_bear

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.72305015	0.5161
Yes	6.83288539	




l_result_dl2 Comparisons for Be_bear
7.0
6.9
6.8
6.7
6.6
Yes
No
No
Yes
6.6
6.7
6.8
6.9
7.0
Differences for alpha=0.05
Not significant
Significant

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

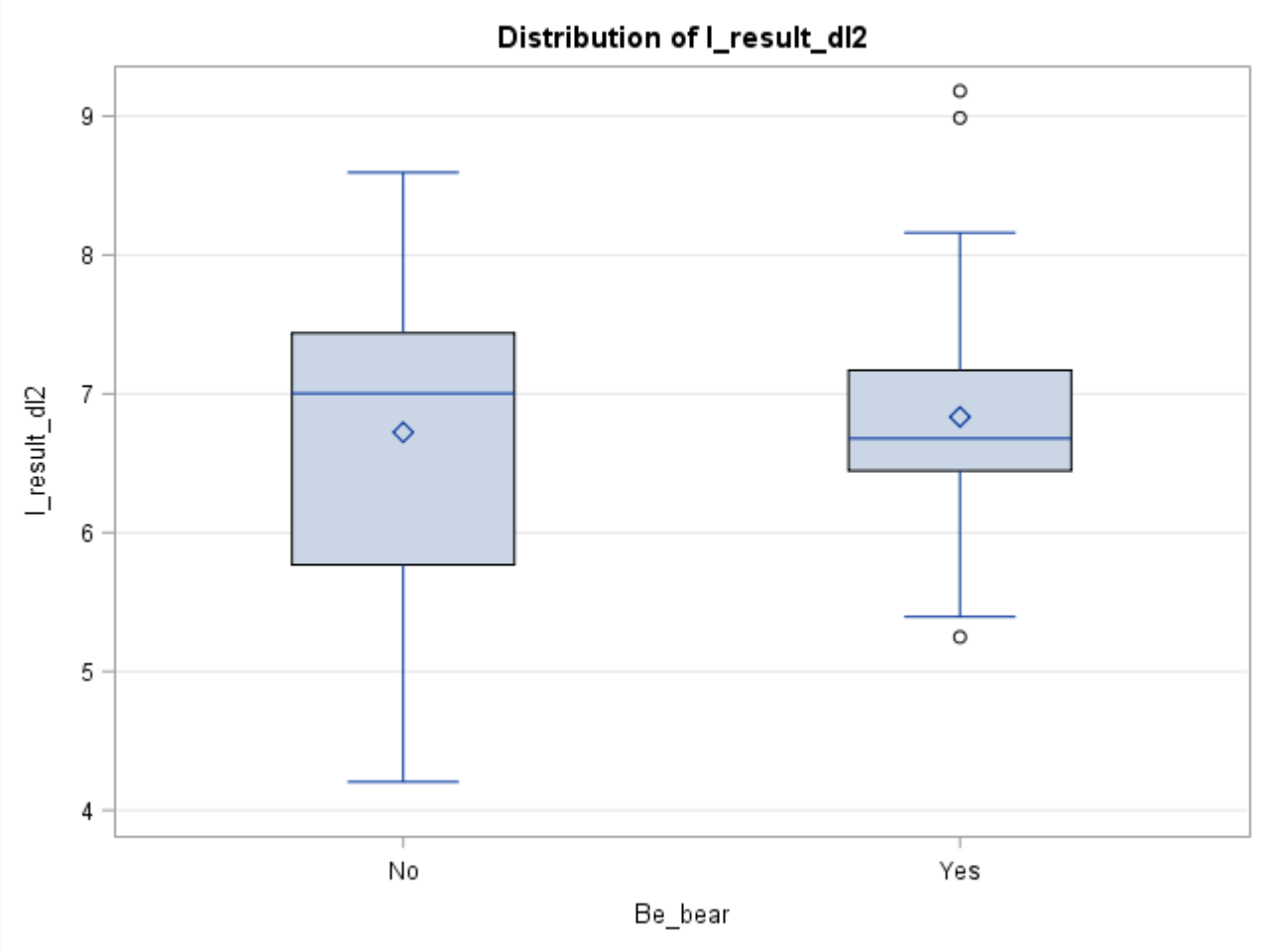
The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	8.2055	8.2055	6.61	0.0115
Error	105	130.3	1.2414		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	6.72305015	1.03729428
Yes	**62**	6.83288539	0.70650164

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 106

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

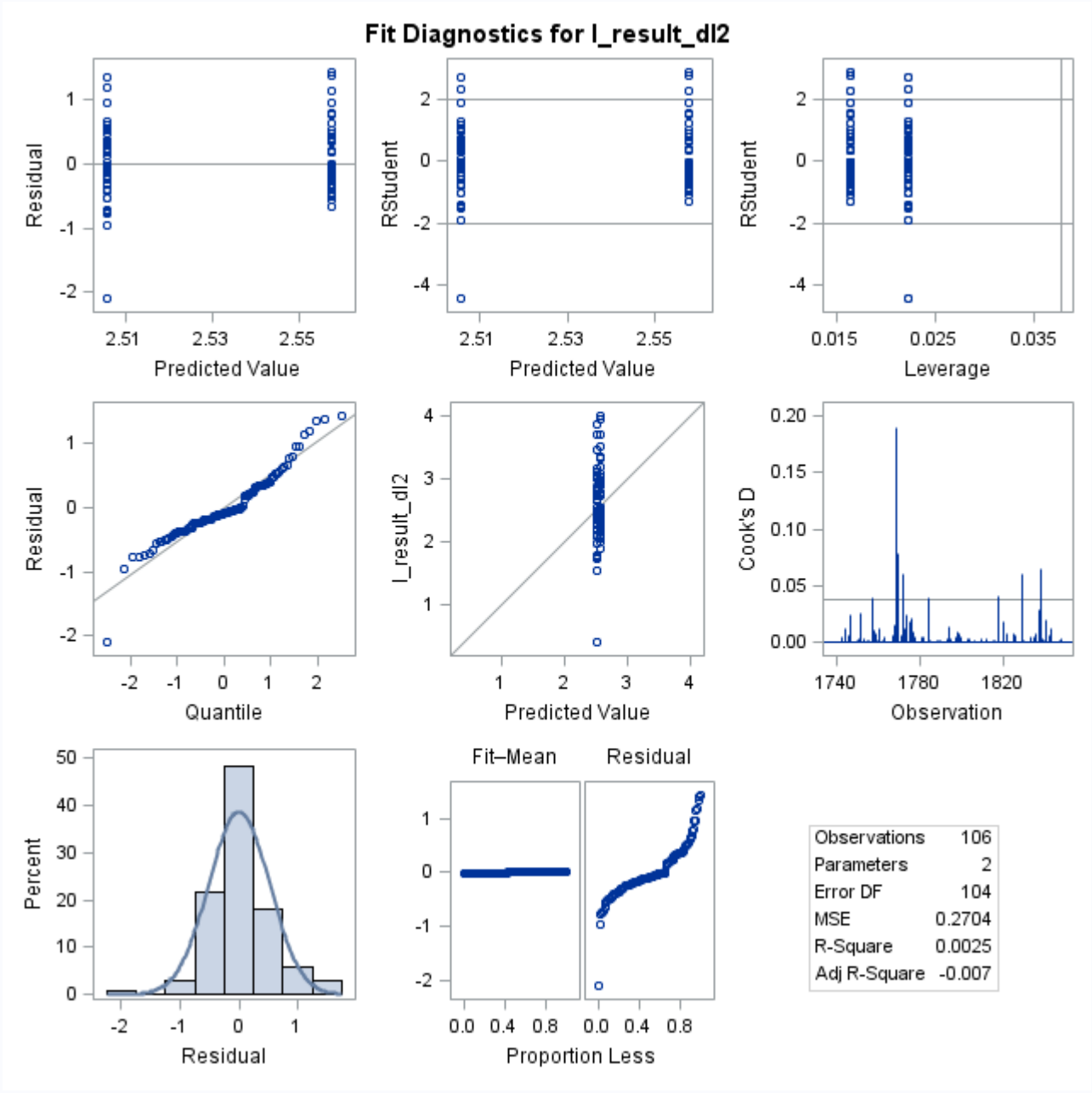
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

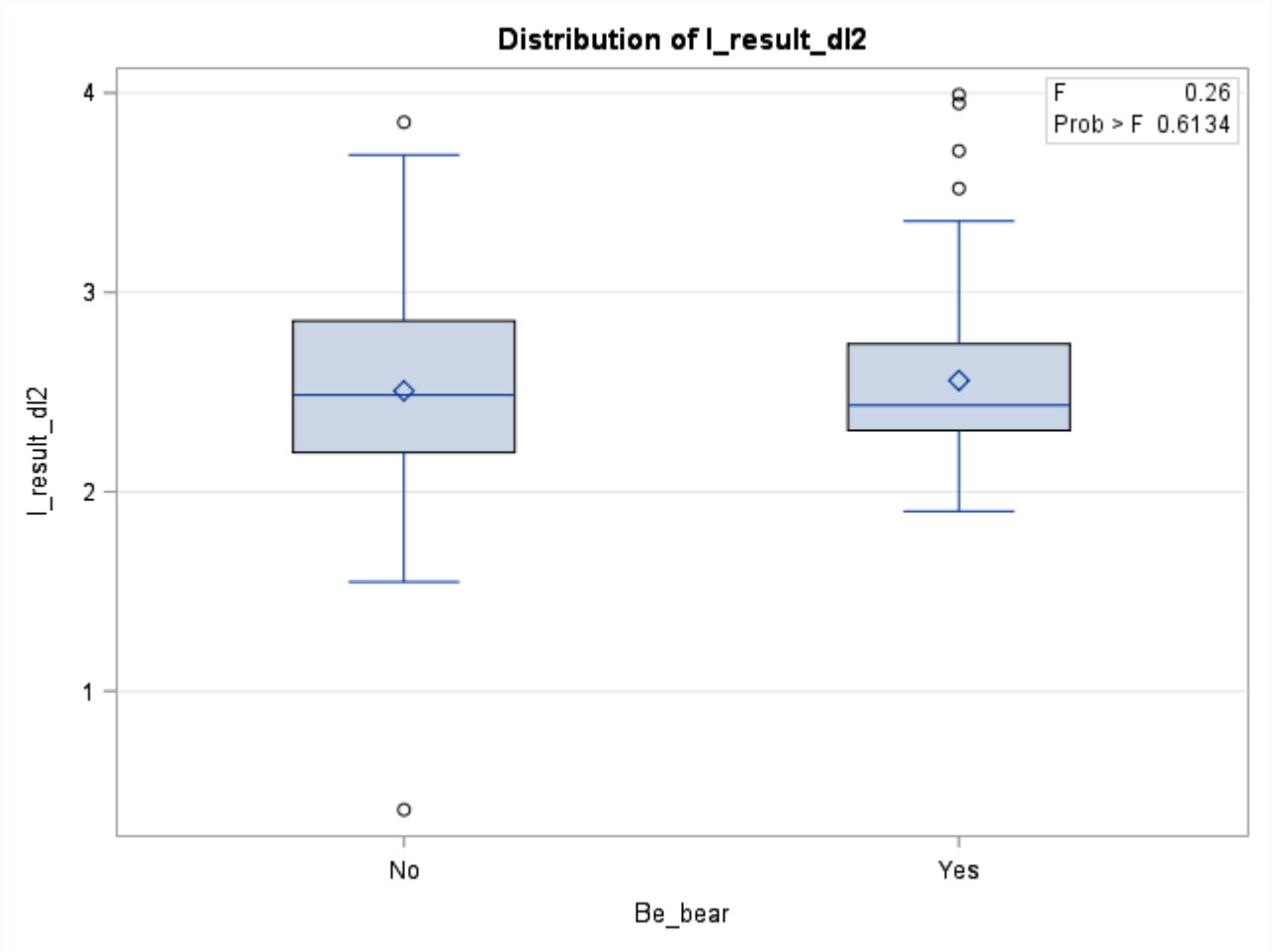
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.06944736	0.06944736	0.26	0.6134
Error	104	28.12588764	0.27044123		
Corrected Total	105	28.19533500			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.002463	20.51022	0.520040	2.535515

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.06944736	0.06944736	0.26	0.6134

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.06944736	0.06944736	0.26	0.6134

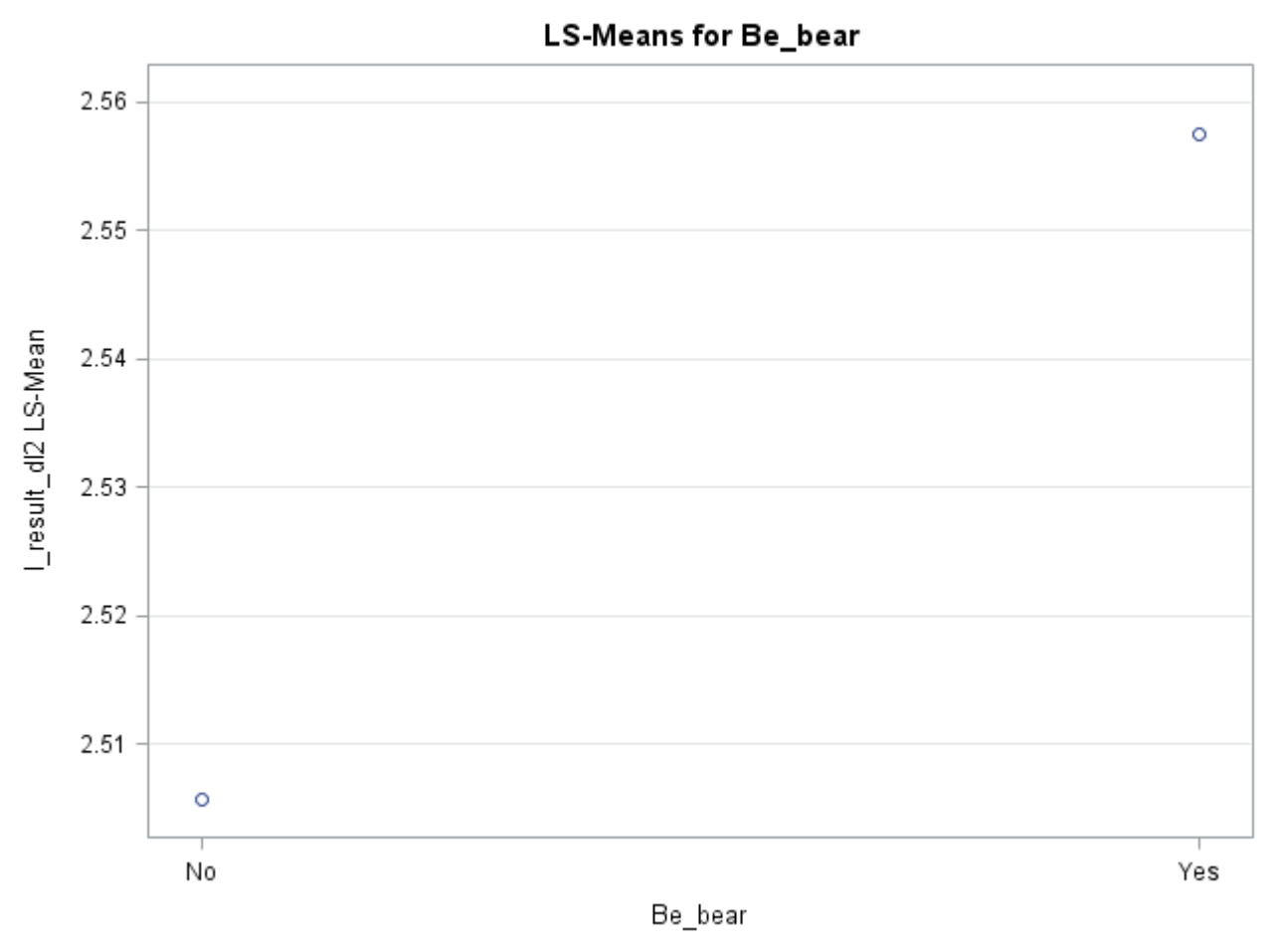

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.2704
R-Square 0.0025
Adj R-Square -0.007

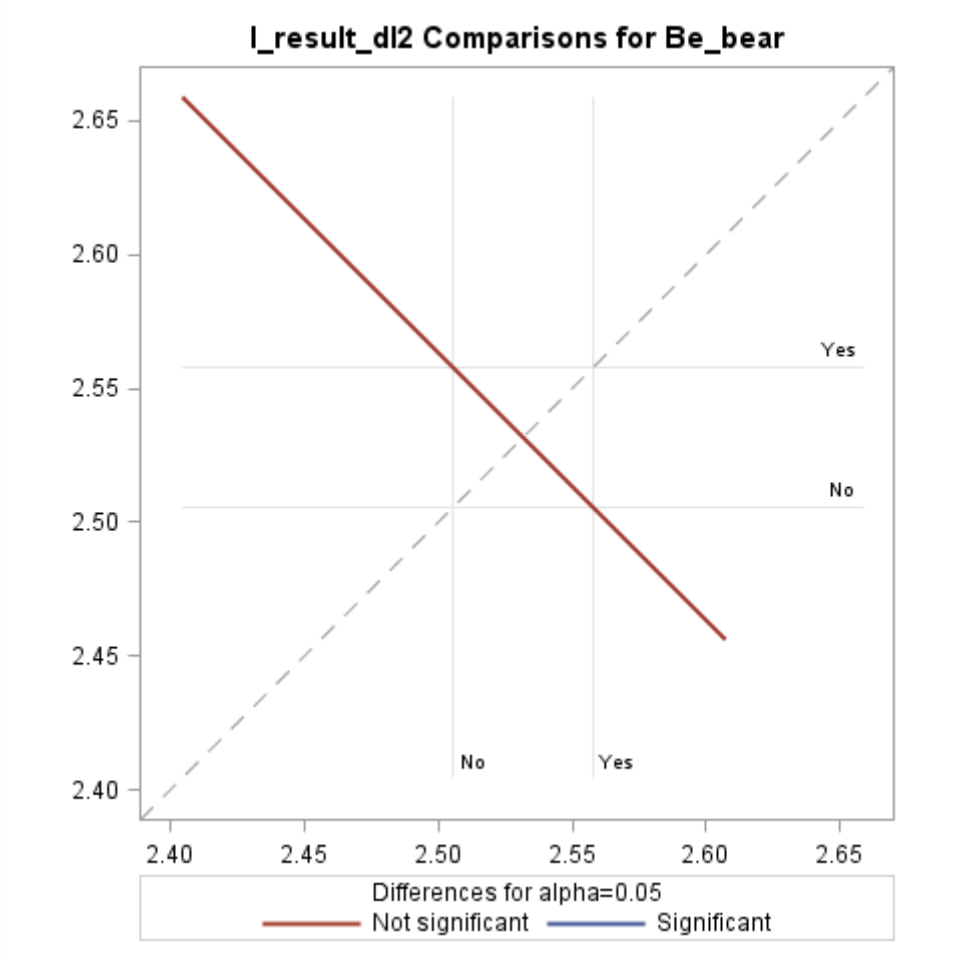

Distribution of l_result_dl2
F 0.26
Prob > F 0.6134
4
3
2
1
l_result_dl2
No
Yes
Be_bear

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	2.50571383	0.6134
Yes	2.55749950	




l_result_dl2 Comparisons for Be_bear
2.65
2.60
2.55
2.50
2.45
2.40
Yes
No
No
Yes
2.40
2.45
2.50
2.55
2.60
2.65
Differences for alpha=0.05
Not significant
Significant

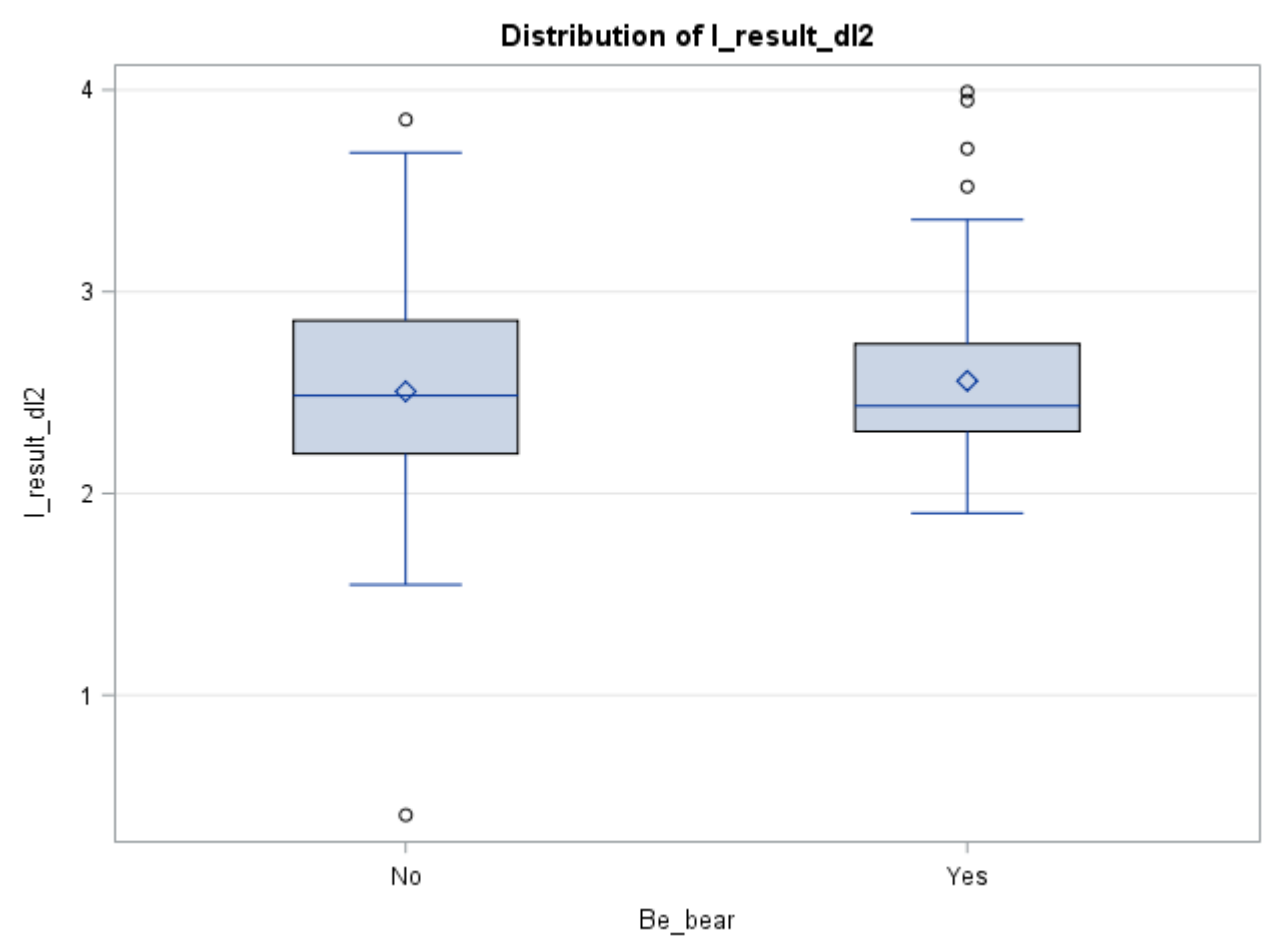
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.5292	0.5292	1.67	0.1988
Error	104	32.9097	0.3164		

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	2.50571383	0.59624095
Yes	**61**	2.55749950	0.45613857

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 106

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

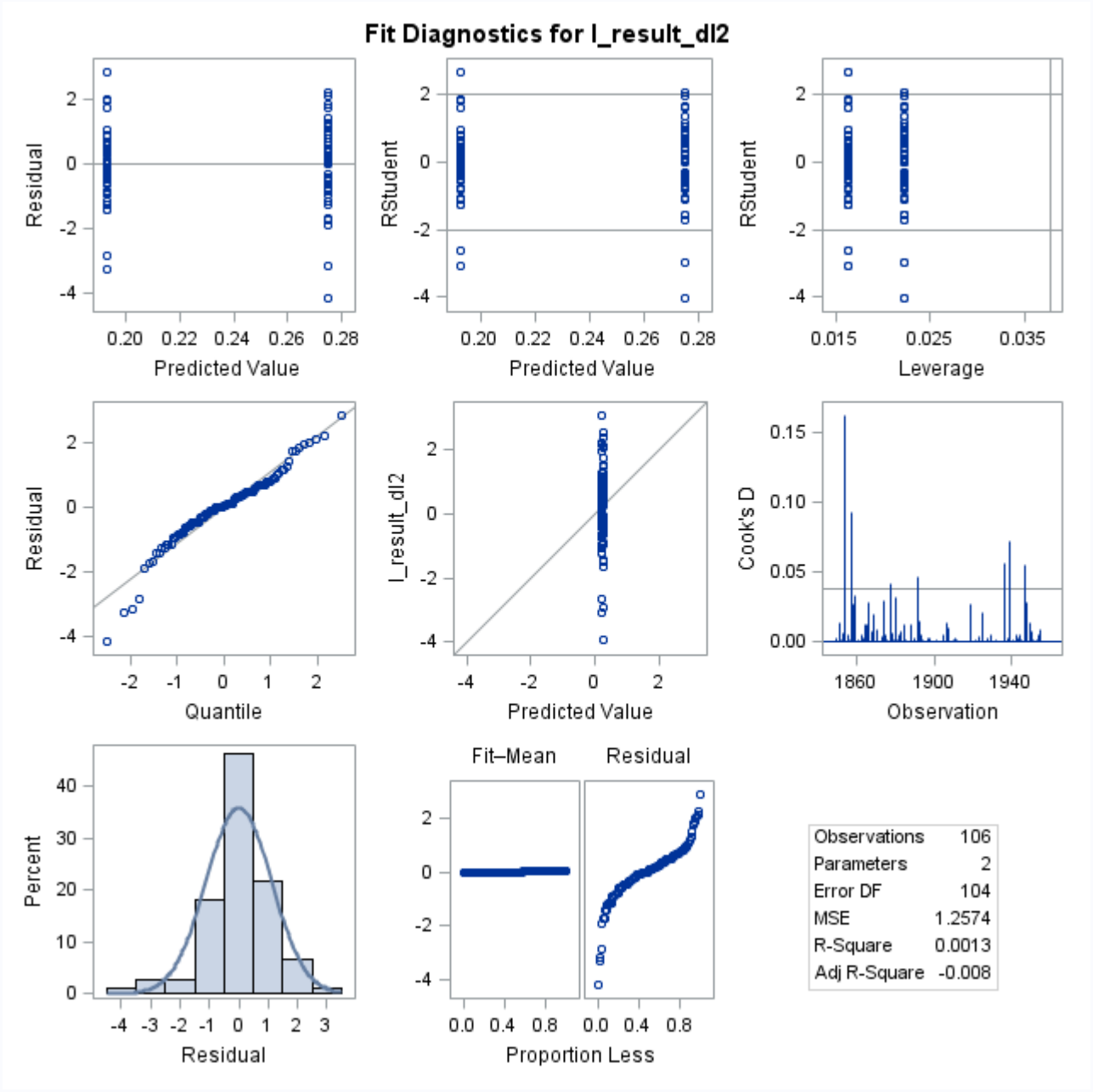
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

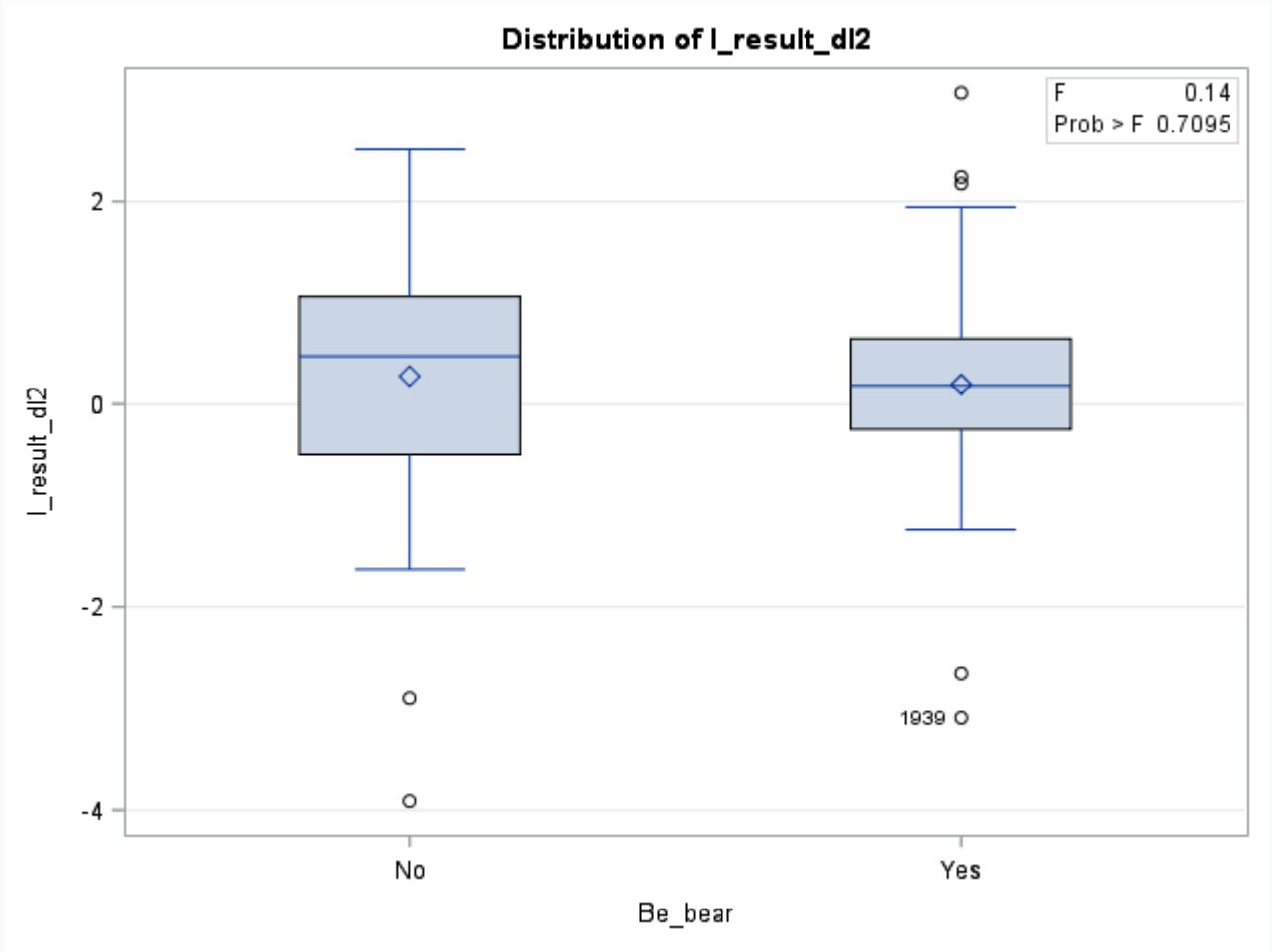
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.1753937	0.1753937	0.14	0.7095
Error	104	130.7653528	1.2573592		
Corrected Total	105	130.9407464			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001339	492.6789	1.121320	0.227597

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.17539366	0.17539366	0.14	0.7095

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.17539366	0.17539366	0.14	0.7095

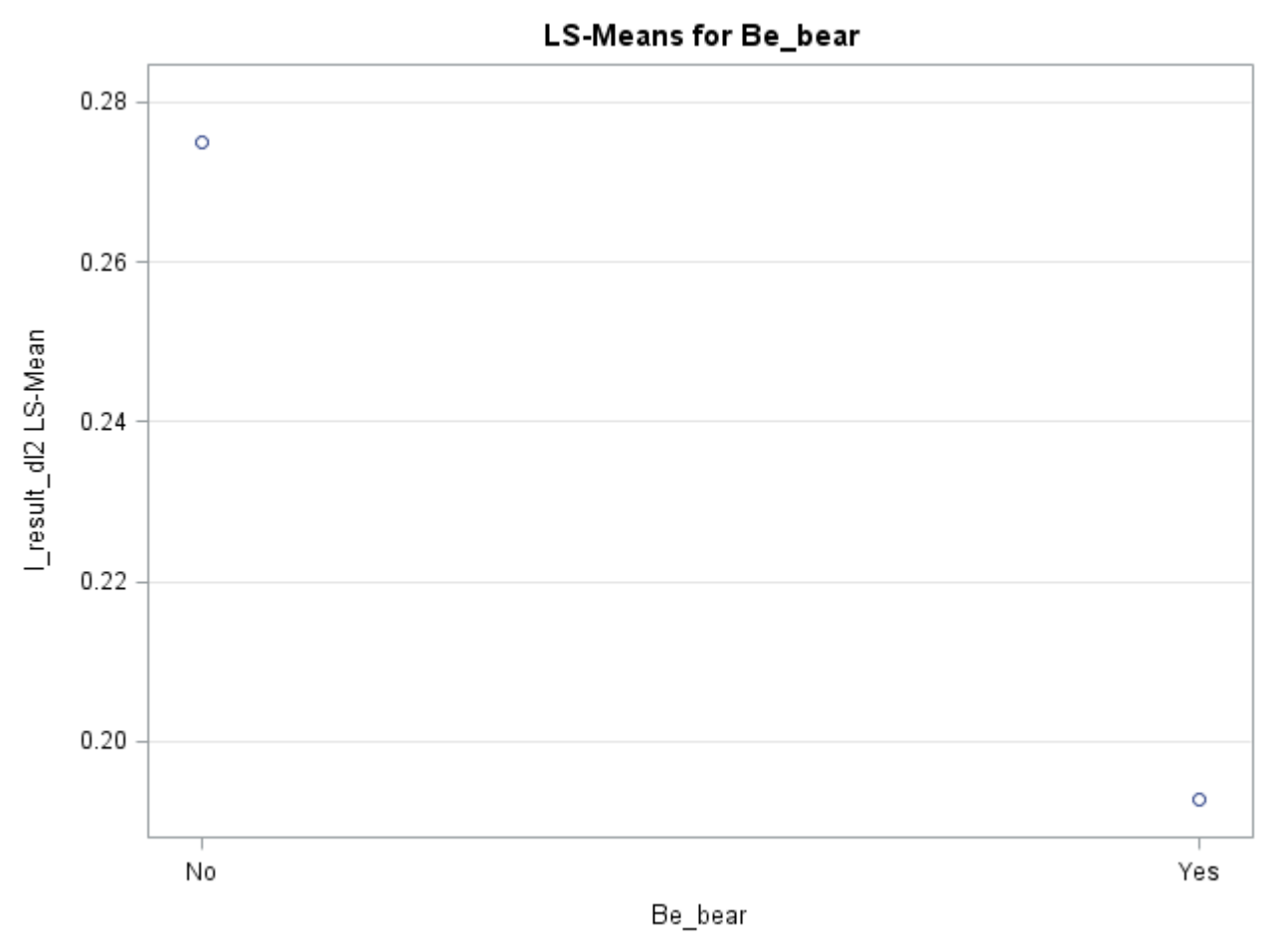

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 1.2574
R-Square 0.0013
Adj R-Square -0.008

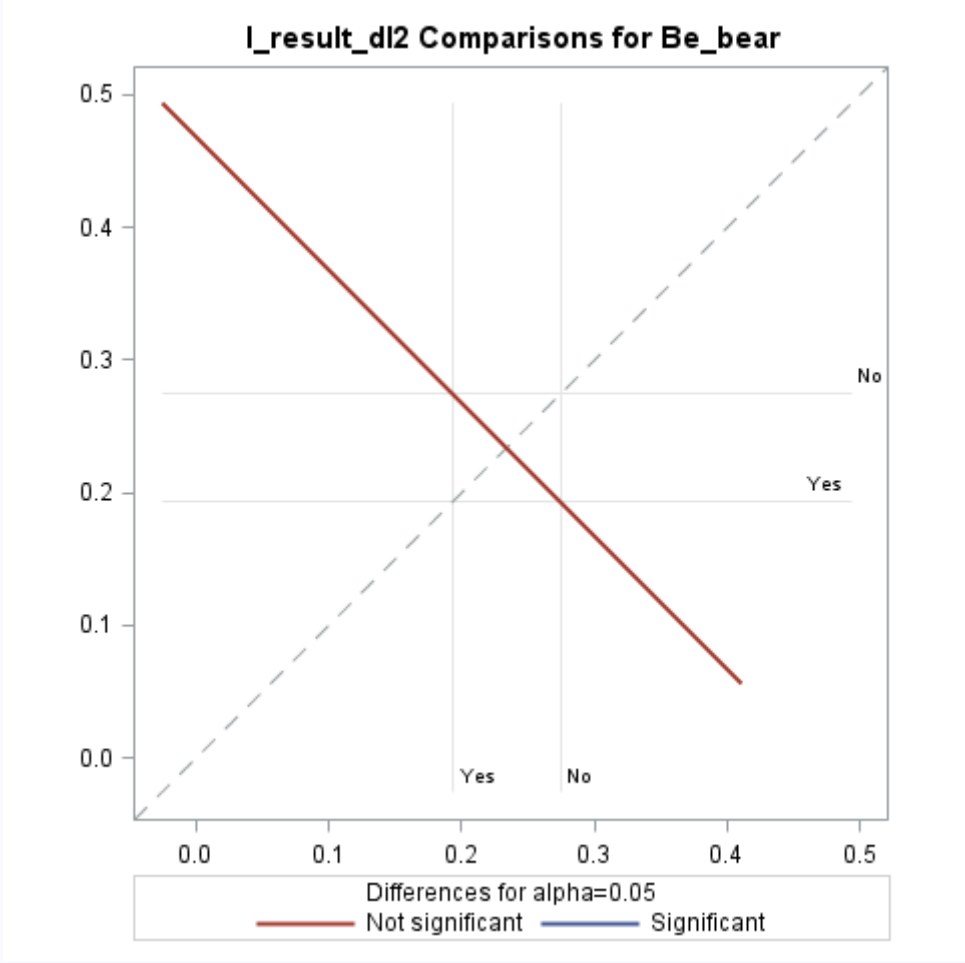

Distribution of l_result_dl2
F 0.14
Prob > F 0.7095
2
0
-2
-4
l_result_dl2
1939
No
Yes
Be_bear

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.27495666	0.7095
Yes	0.19265877	




l_result_dl2 Comparisons for Be_bear
0.5
0.4
0.3
0.2
0.1
0.0
No
Yes
Yes
No
0.0
0.1
0.2
0.3
0.4
0.5
Differences for alpha=0.05
Not significant
Significant

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

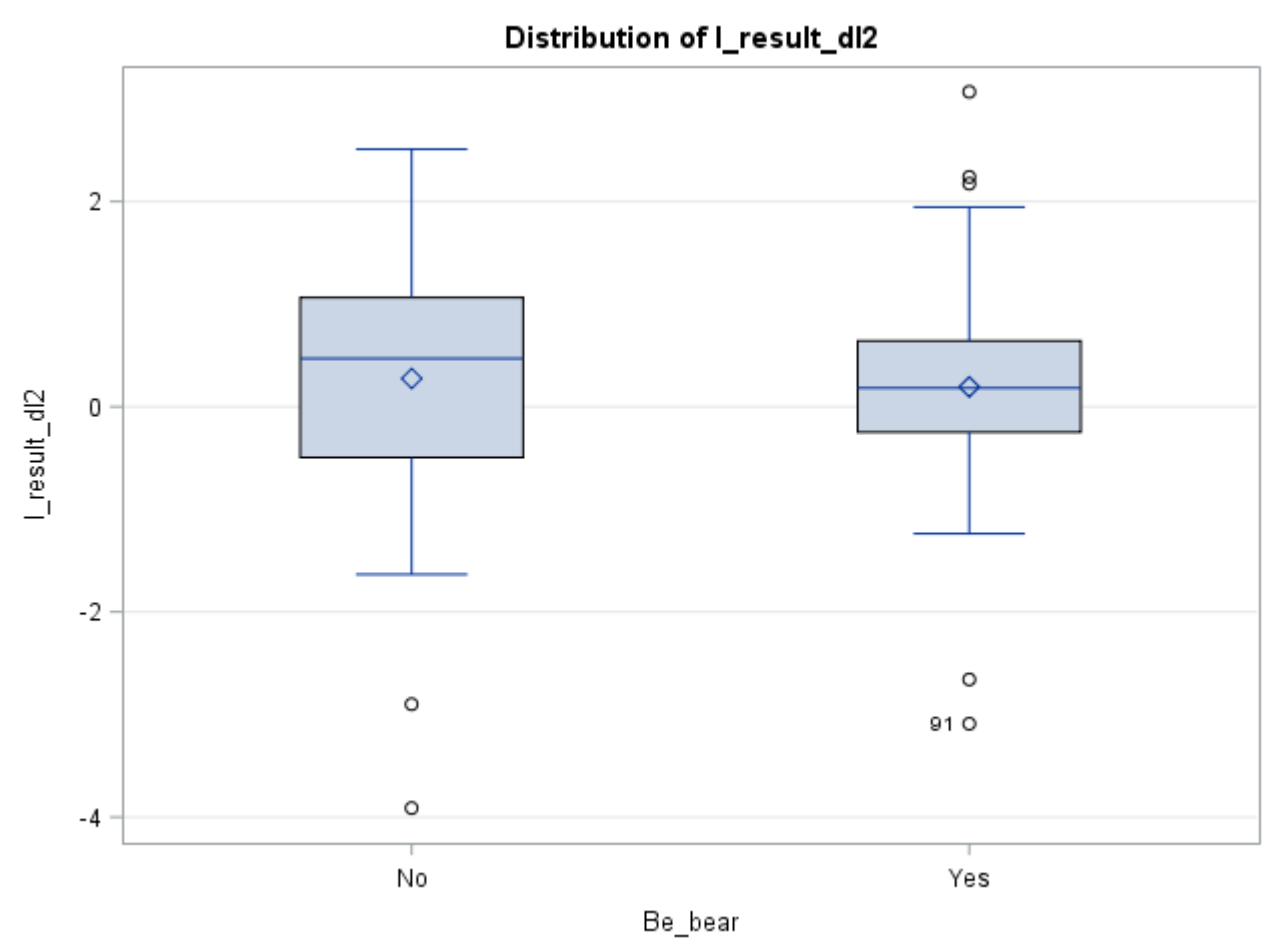
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	13.0815	13.0815	2.04	0.1563
Error	104	667.1	6.4144		

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	0.27495666	1.29614011
Yes	**61**	0.19265877	0.97336418

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 106

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

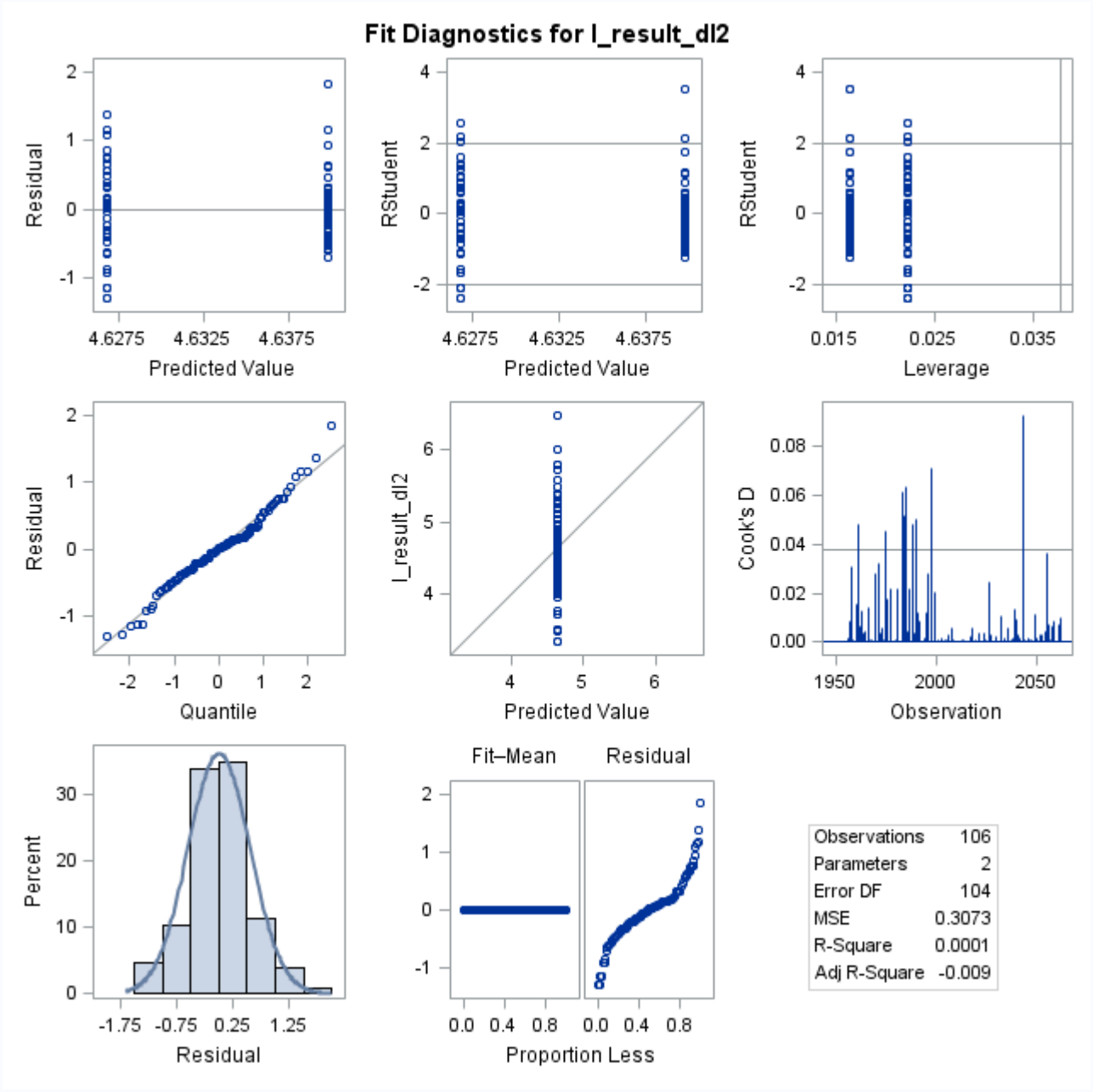
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

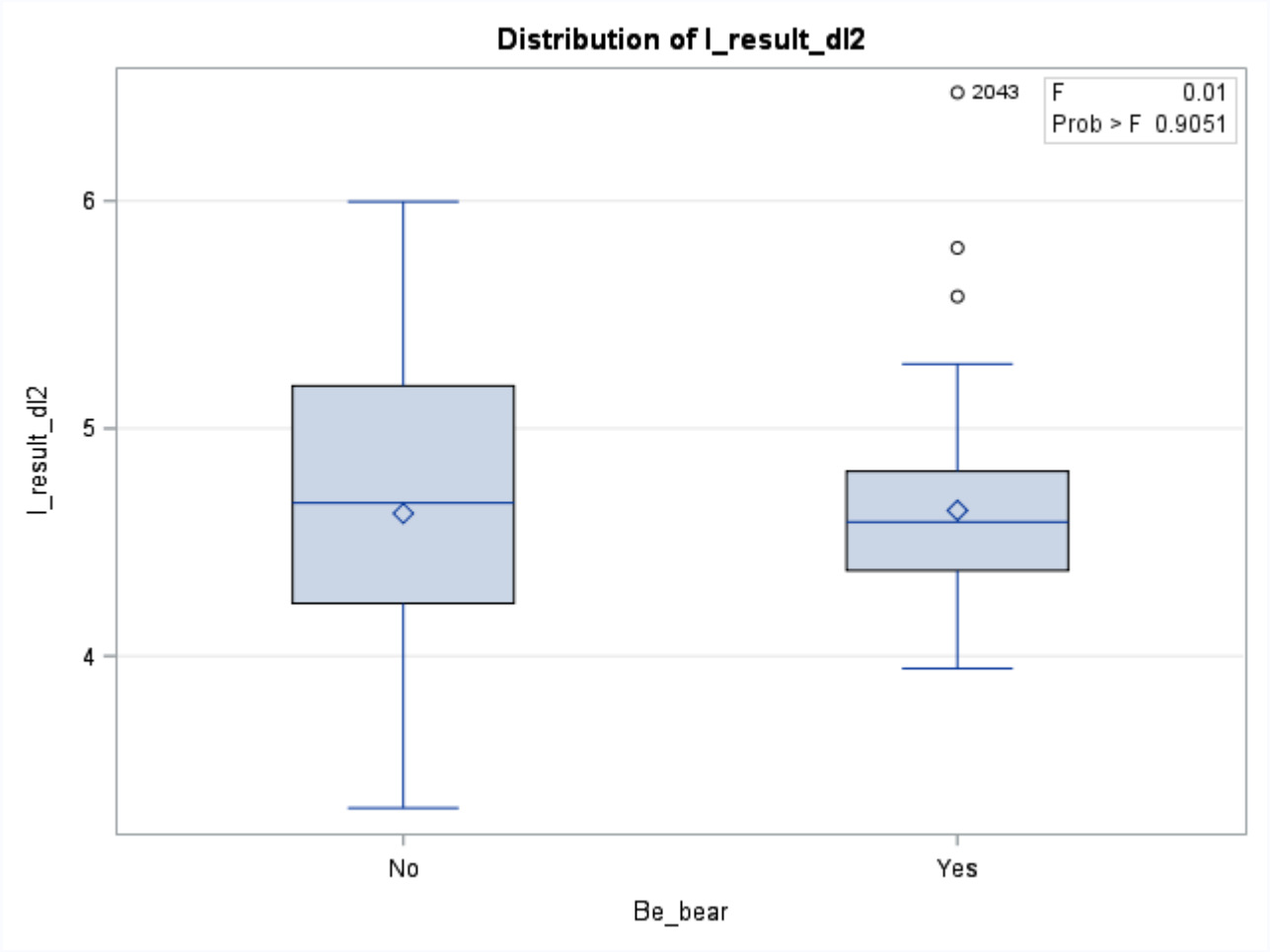
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00439146	0.00439146	0.01	0.9051
Error	104	31.95487191	0.30725838		
Corrected Total	105	31.95926336			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000137	11.96097	0.554309	4.634313

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00439146	0.00439146	0.01	0.9051

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00439146	0.00439146	0.01	0.9051

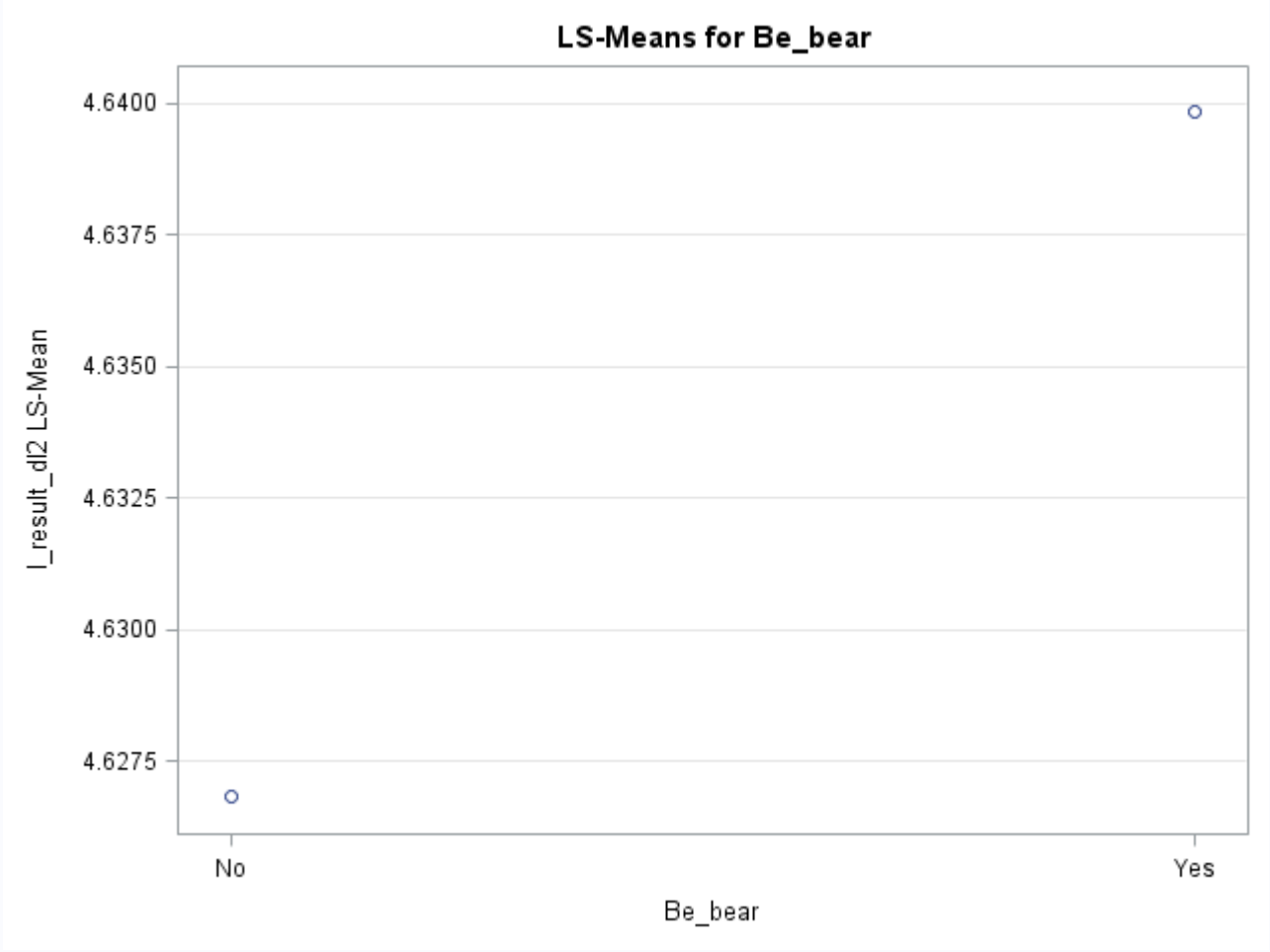

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.3073
R-Square 0.0001
Adj R-Square -0.009

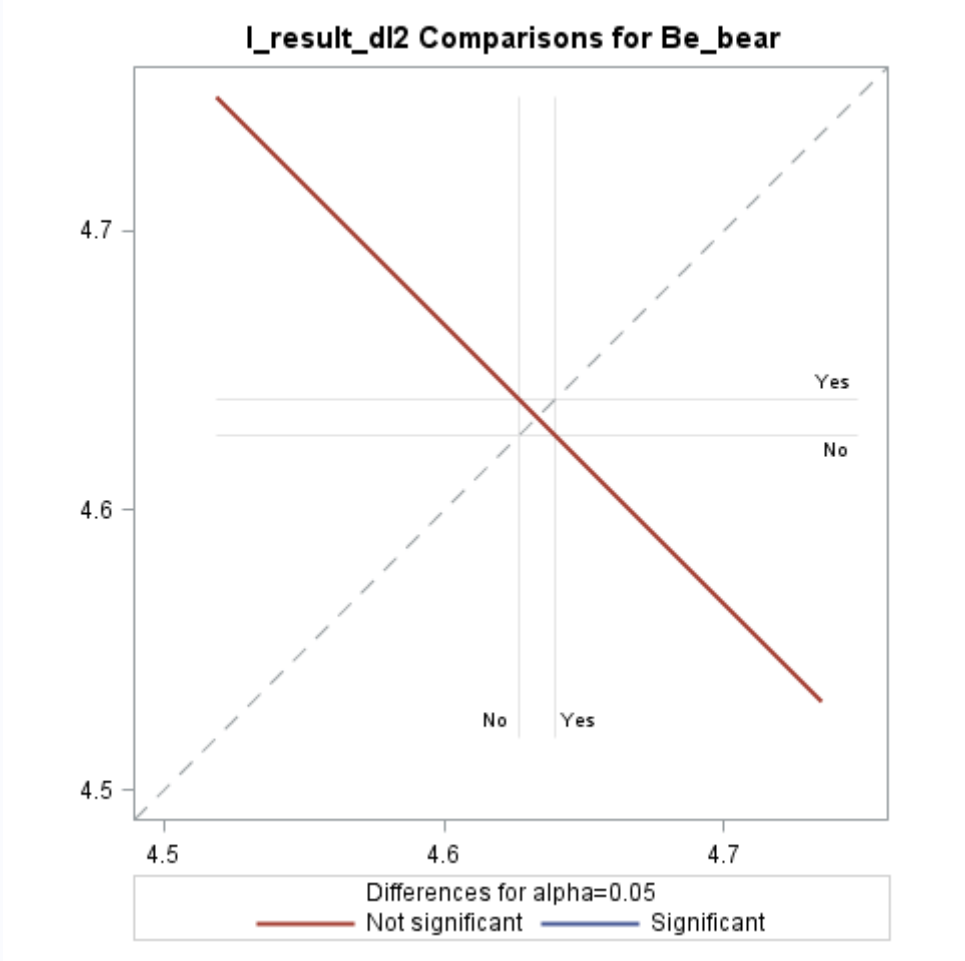

Distribution of l_result_dl2
2043
F 0.01
Prob > F 0.9051
6
5
4
l_result_dl2
No
Yes
Be_bear

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Chromium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.62681931	0.9051
Yes	4.63984157	




l_result_dl2 Comparisons for Be_bear
4.7
4.6
4.5
Yes
No
No
Yes
4.5
4.6
4.7
Differences for alpha=0.05
Not significant
Significant

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

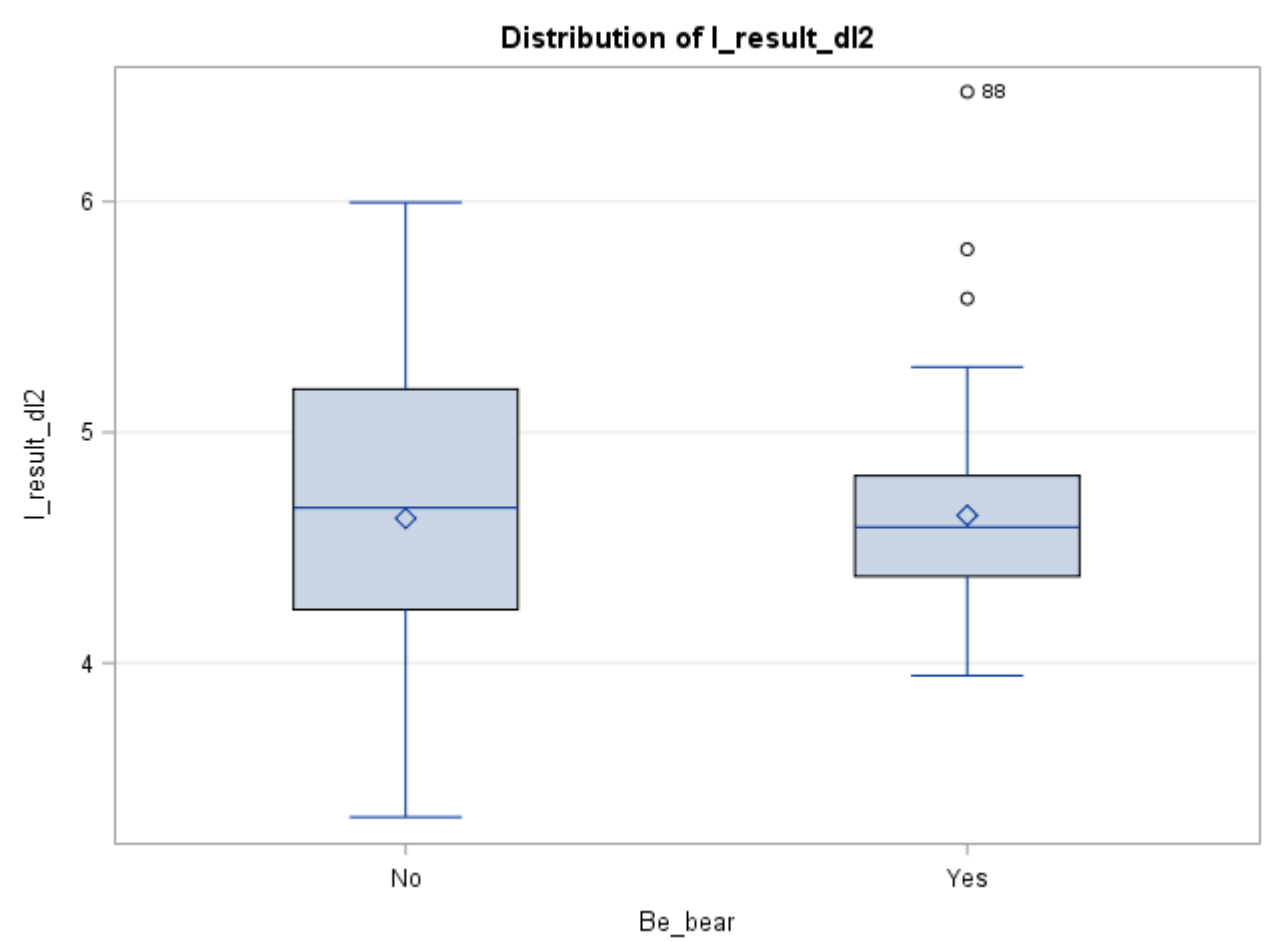
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.9925	1.9925	8.04	0.0055
Error	104	25.7817	0.2479		

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	4.62681931	0.68670829
Yes	**61**	4.63984157	0.43216254

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 105

Number of Observations Used 104

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

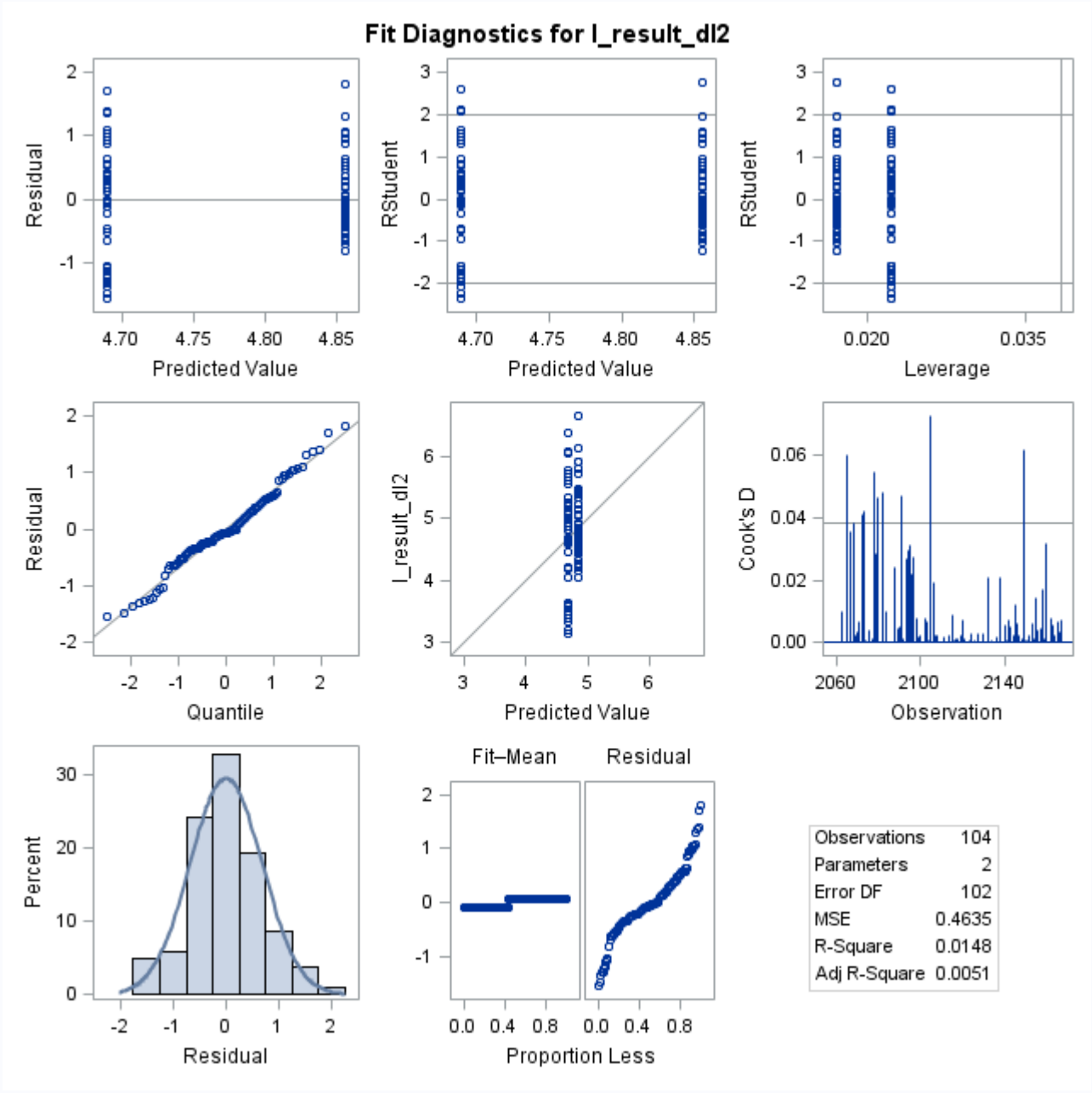
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

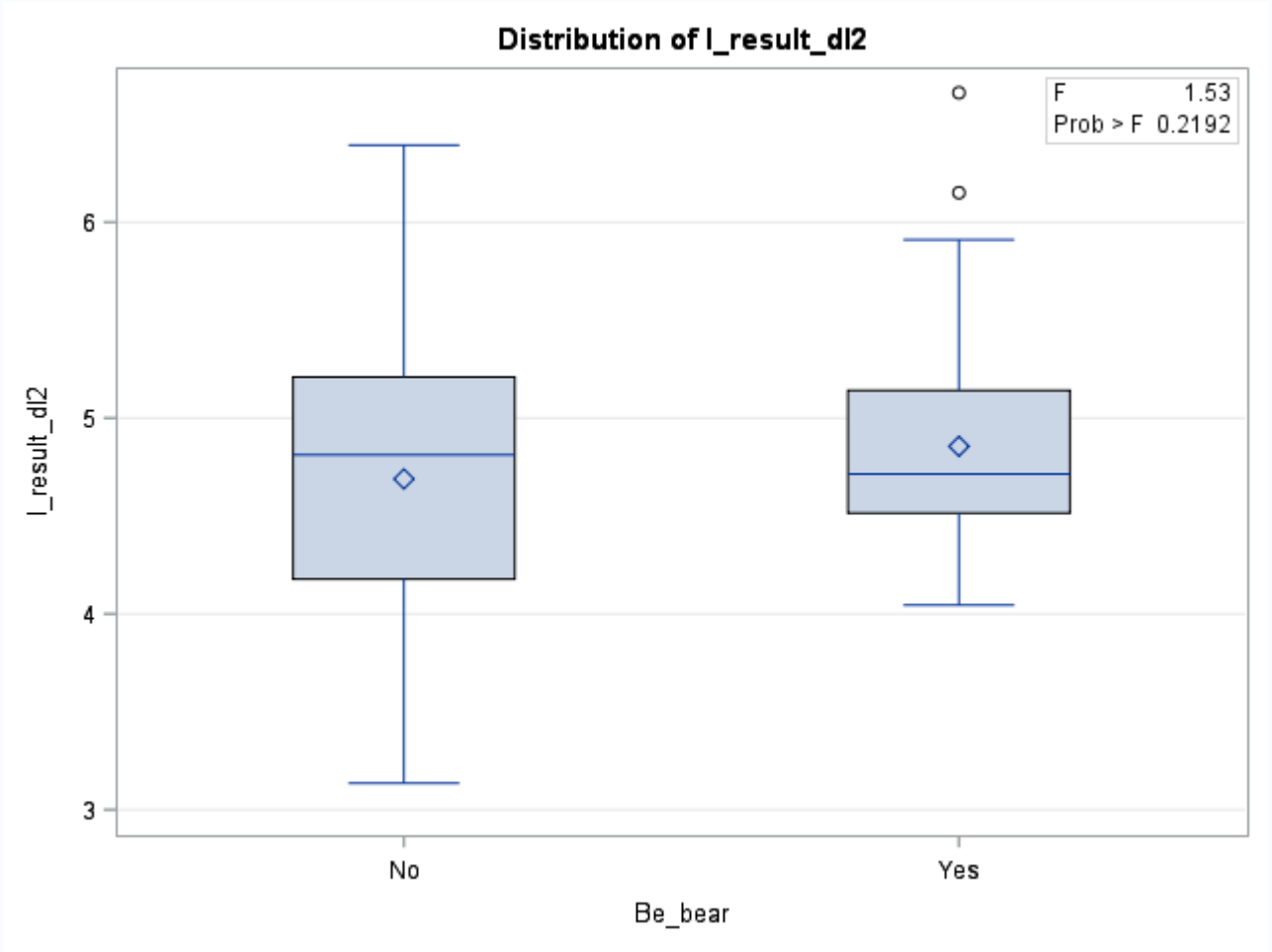
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.70828685	0.70828685	1.53	0.2192
Error	102	47.27842207	0.46351394		
Corrected Total	103	47.98670893			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.014760	14.23247	0.680819	4.783561

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.70828685	0.70828685	1.53	0.2192

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.70828685	0.70828685	1.53	0.2192

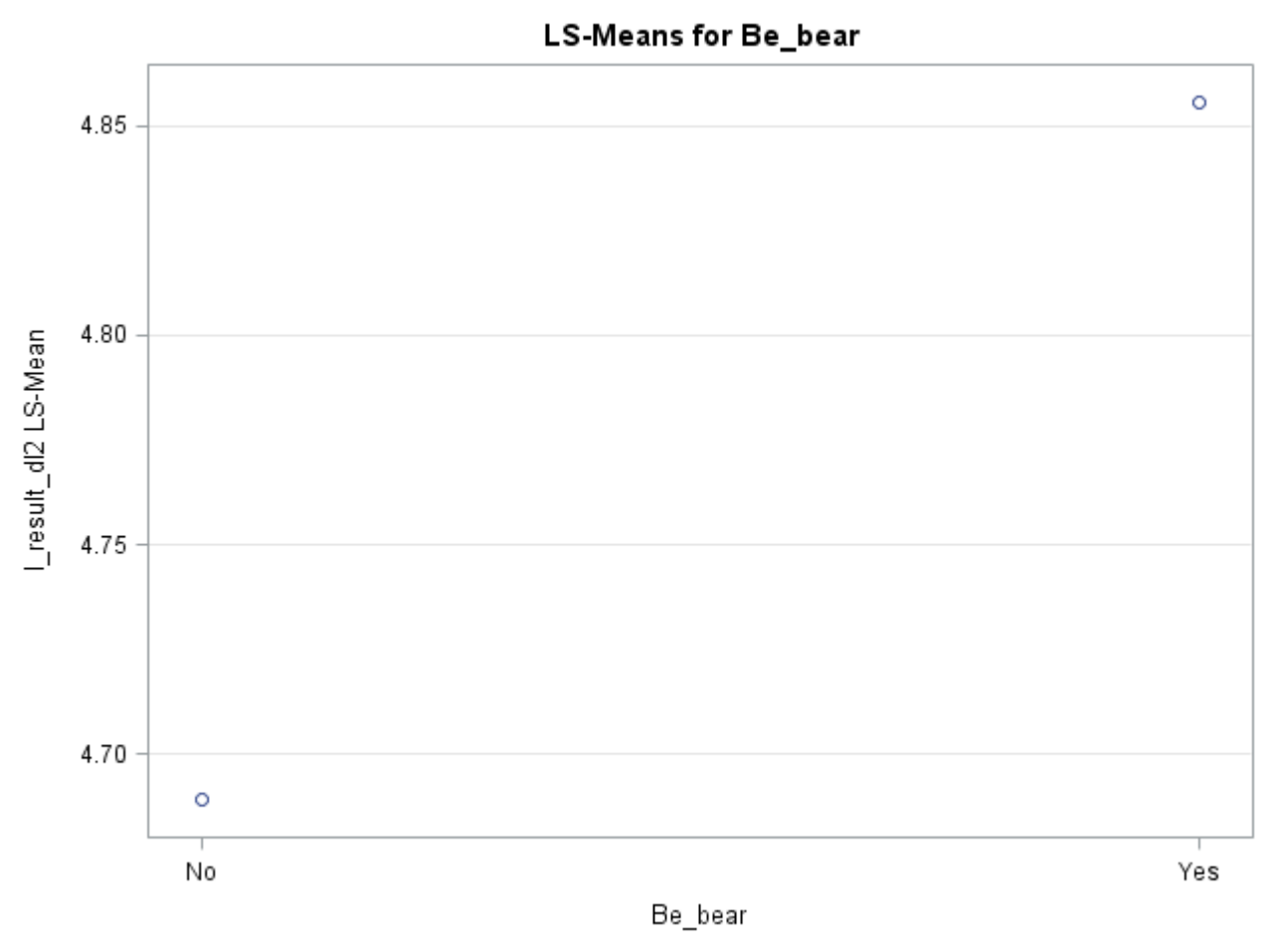

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 2
Error DF 102
MSE 0.4635
R-Square 0.0148
Adj R-Square 0.0051

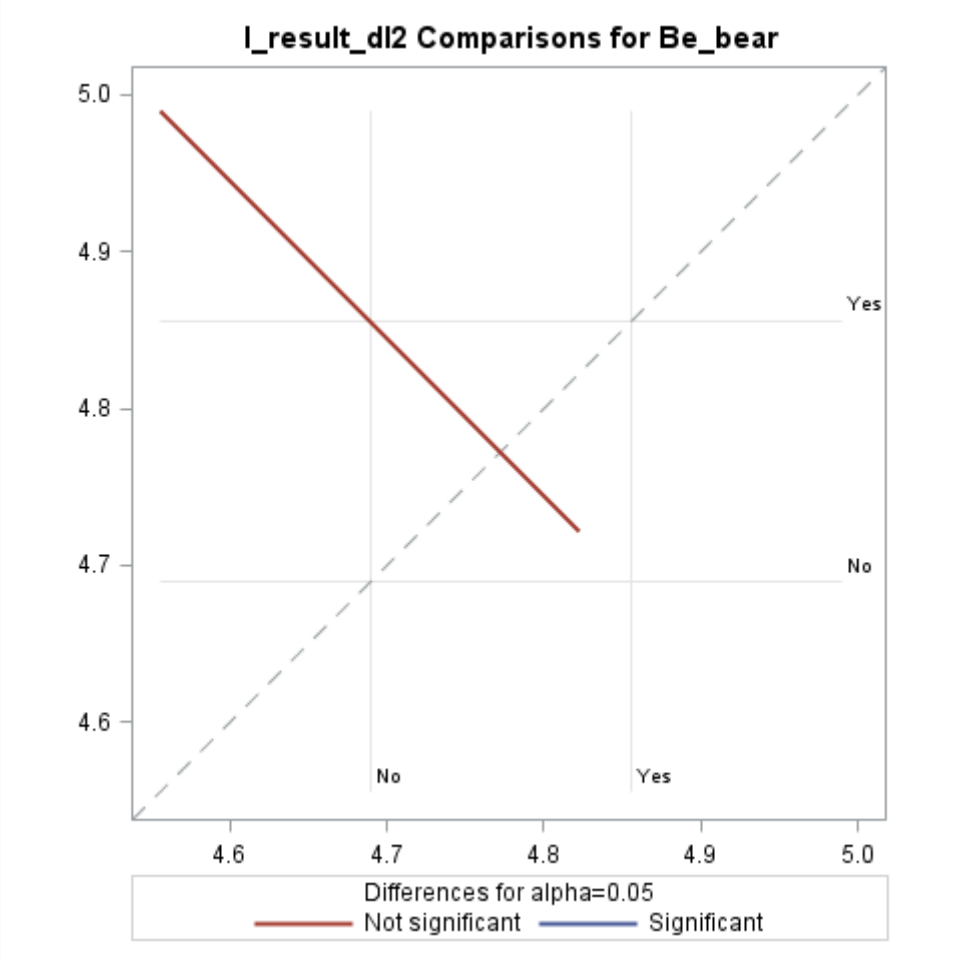

Distribution of l_result_dl2
F 1.53
Prob > F 0.2192
l_result_dl2
6
5
4
3
No
Yes
Be_bear

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.68906577	0.2192
Yes	4.85563278	




l_result_dl2 Comparisons for Be_bear
5.0
4.9
4.8
4.7
4.6
Yes
No
No
Yes
4.6
4.7
4.8
4.9
5.0
Differences for alpha=0.05
Not significant
Significant

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

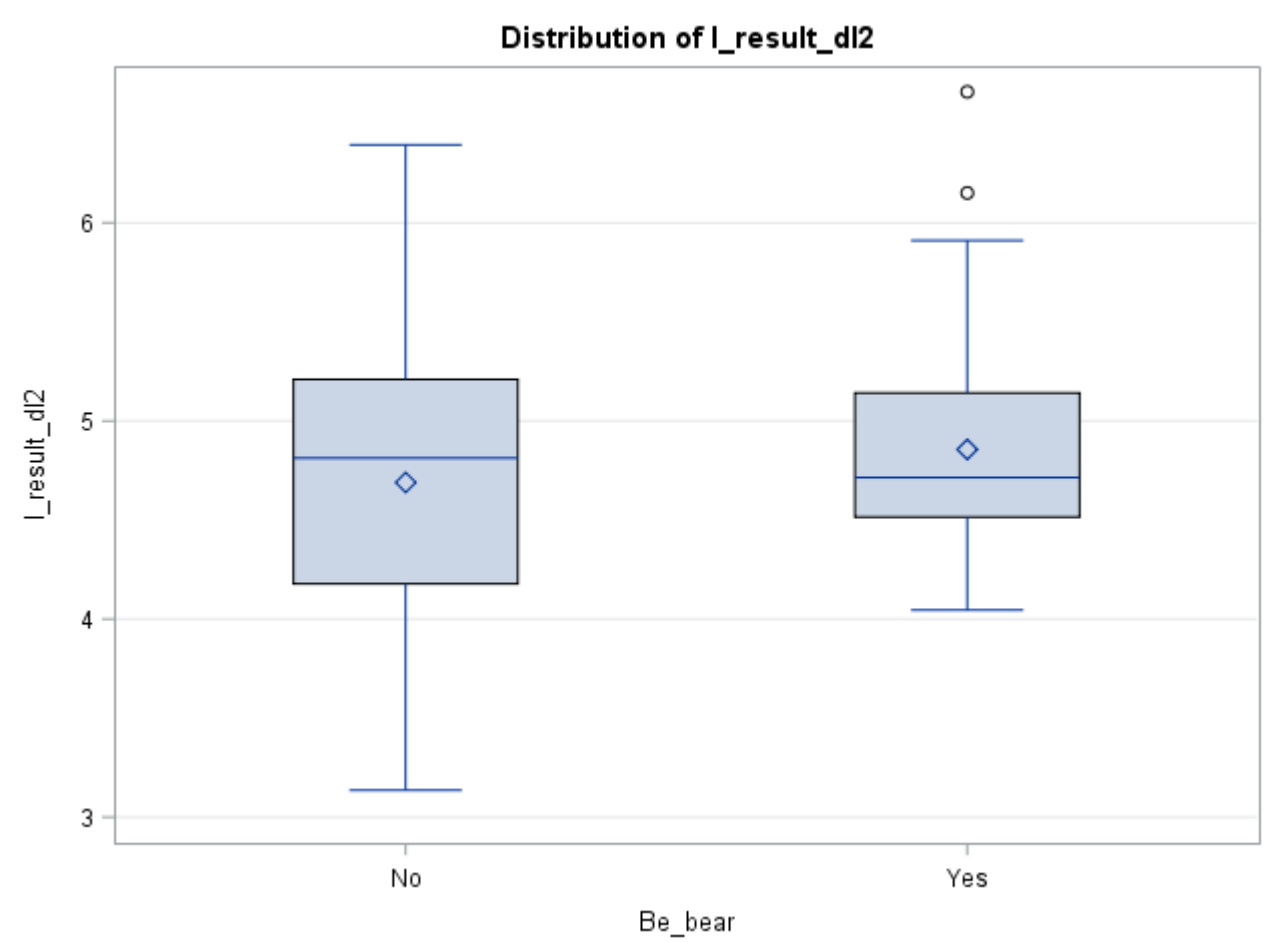
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	4.3836	4.3836	10.39	0.0017
Error	102	43.0419	0.4220		

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	4.68906577	0.83985453
Yes	**59**	4.85563278	0.52919546

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 106

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

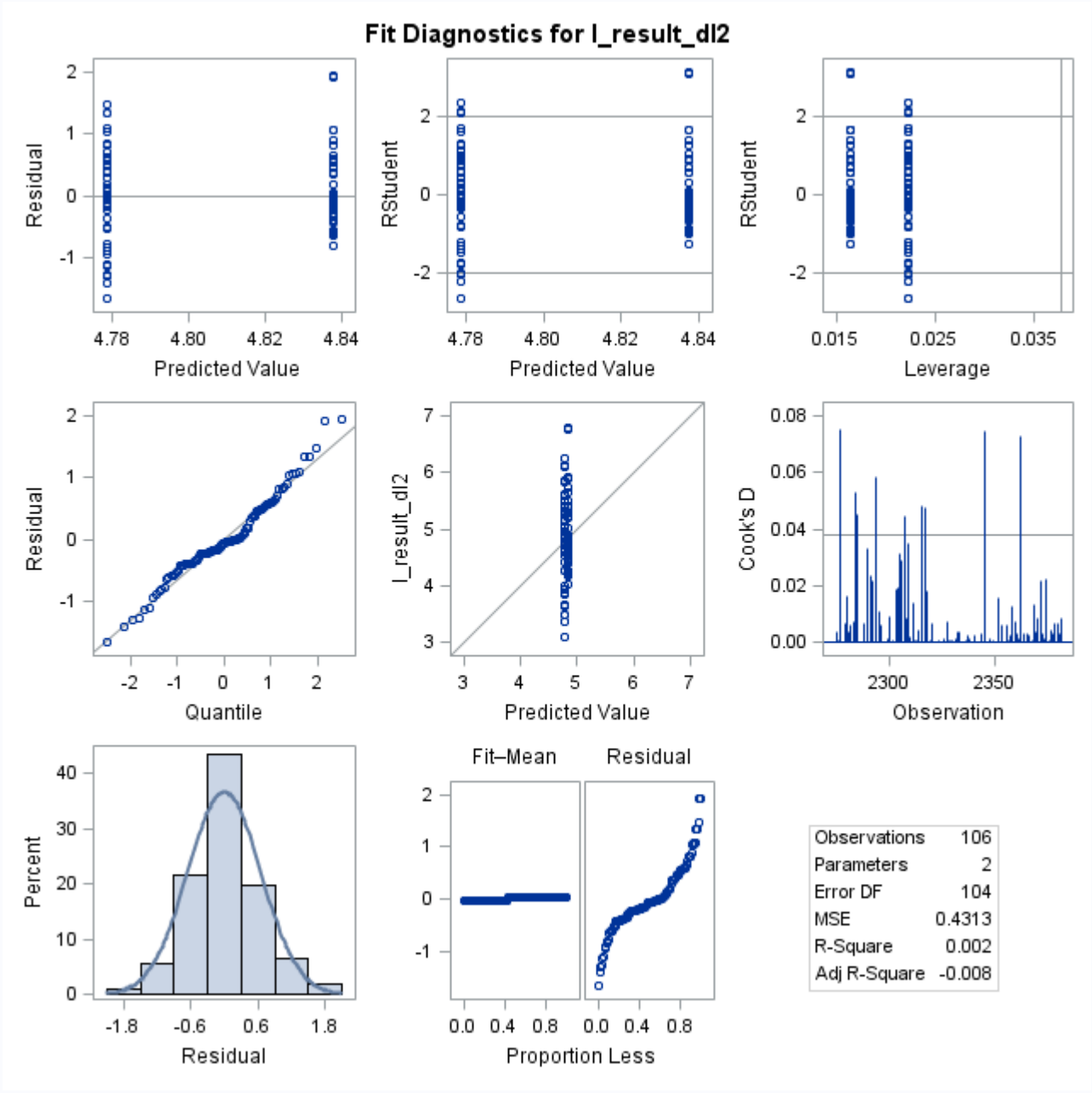
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

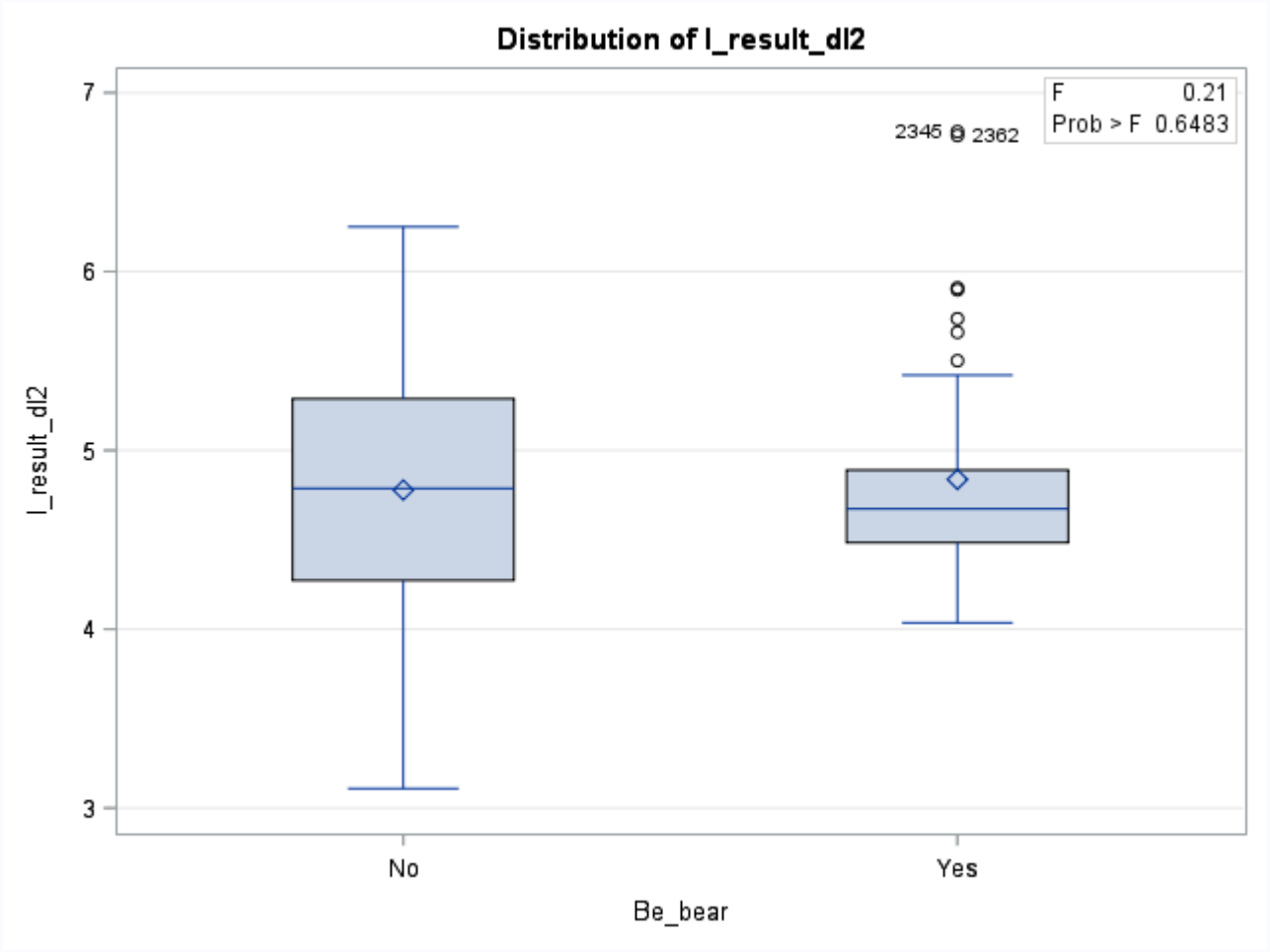
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.09023388	0.09023388	0.21	0.6483
Error	104	44.85146323	0.43126407		
Corrected Total	105	44.94169711			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.002008	13.64590	0.656707	4.812485

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.09023388	0.09023388	0.21	0.6483

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.09023388	0.09023388	0.21	0.6483

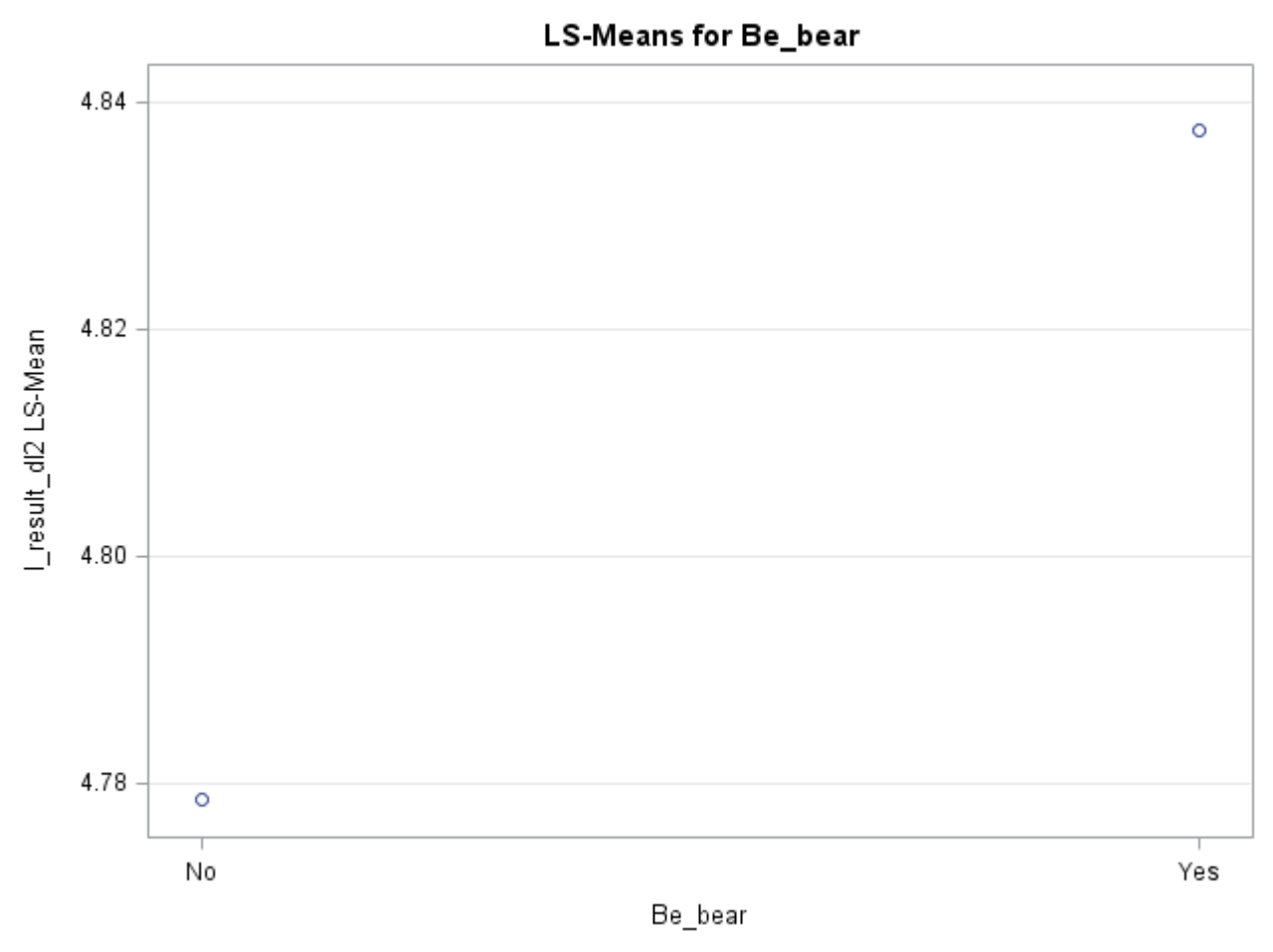

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.4313
R-Square 0.002
Adj R-Square -0.008

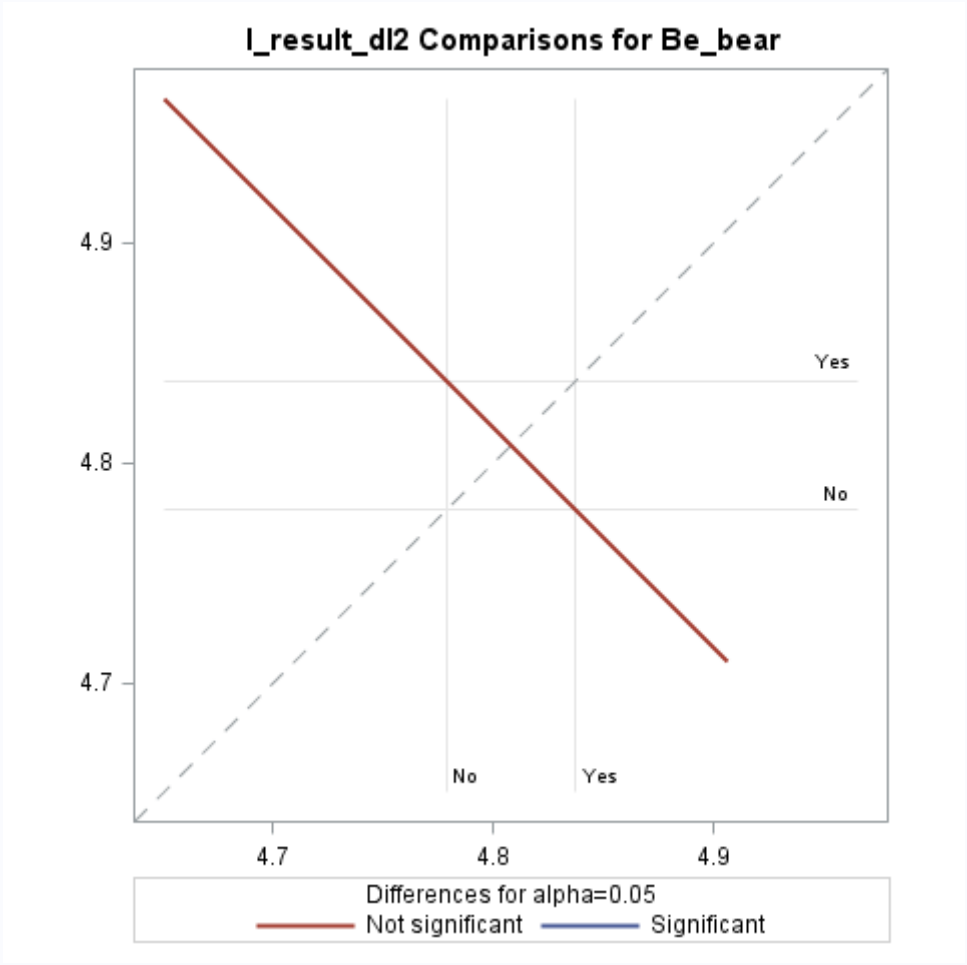

Distribution of l_result_dl2
F 0.21
Prob > F 0.6483
2345
2362
7
6
5
4
3
l_result_dl2
No
Yes
Be_bear

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.77851526	0.6483
Yes	4.83754442	




l_result_dl2 Comparisons for Be_bear
4.9
4.8
4.7
Yes
No
No
Yes
4.7
4.8
4.9
Differences for alpha=0.05
Not significant
Significant

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

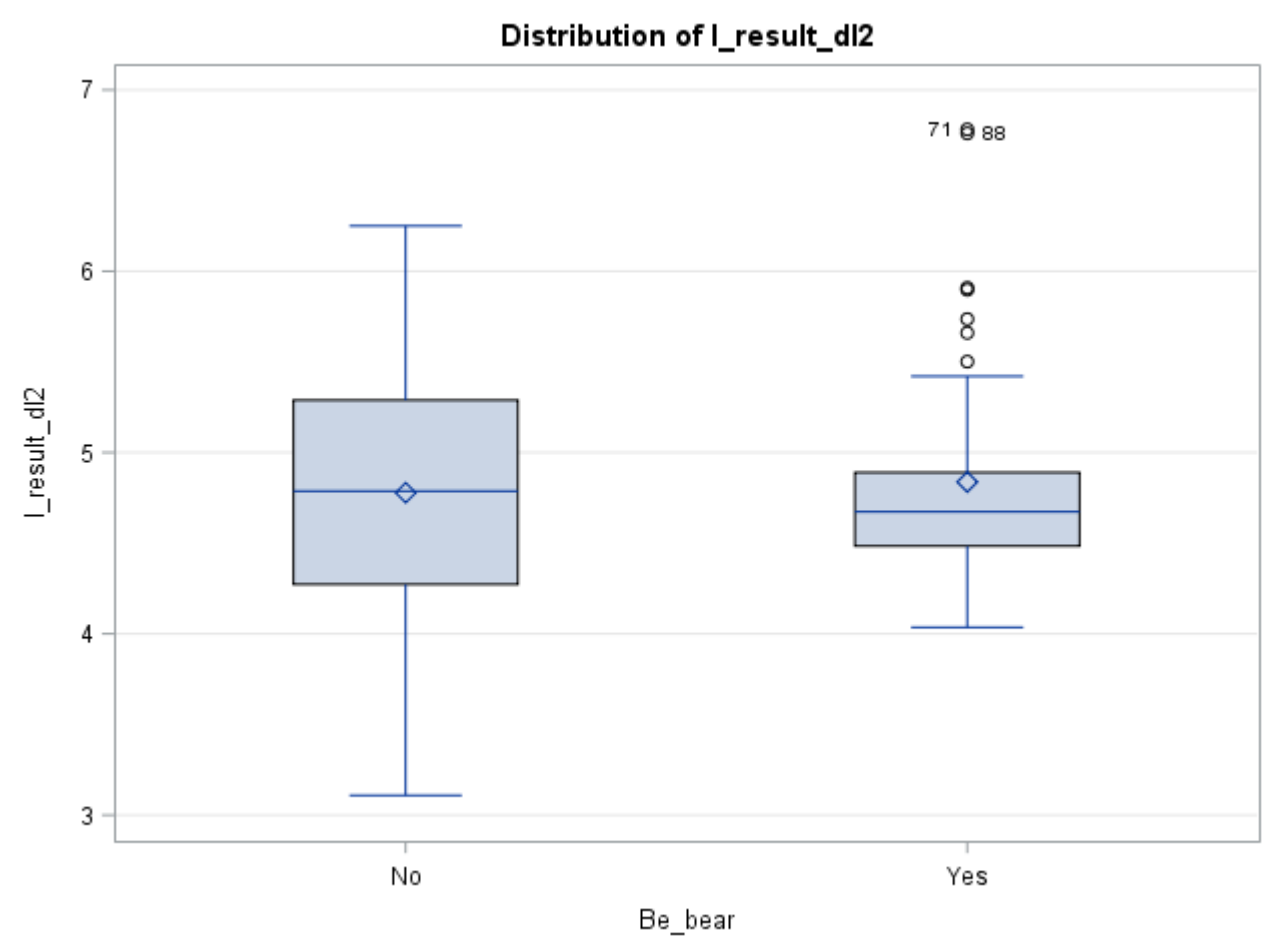
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	2.1475	2.1475	4.41	0.0382
Error	104	50.6882	0.4874		

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	4.77851526	0.77603435
Yes	**61**	4.83754442	0.55307284

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 106

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

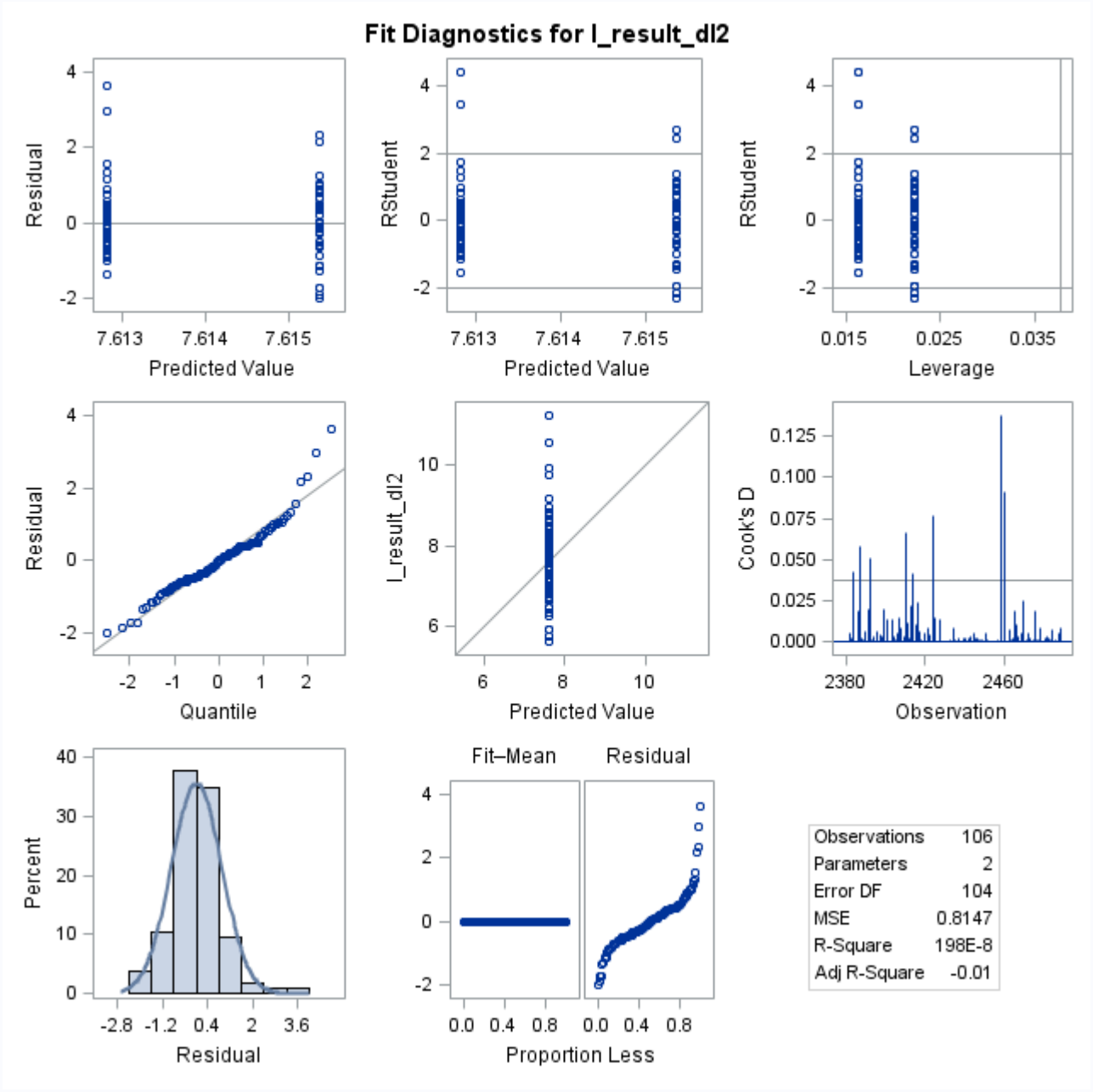
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

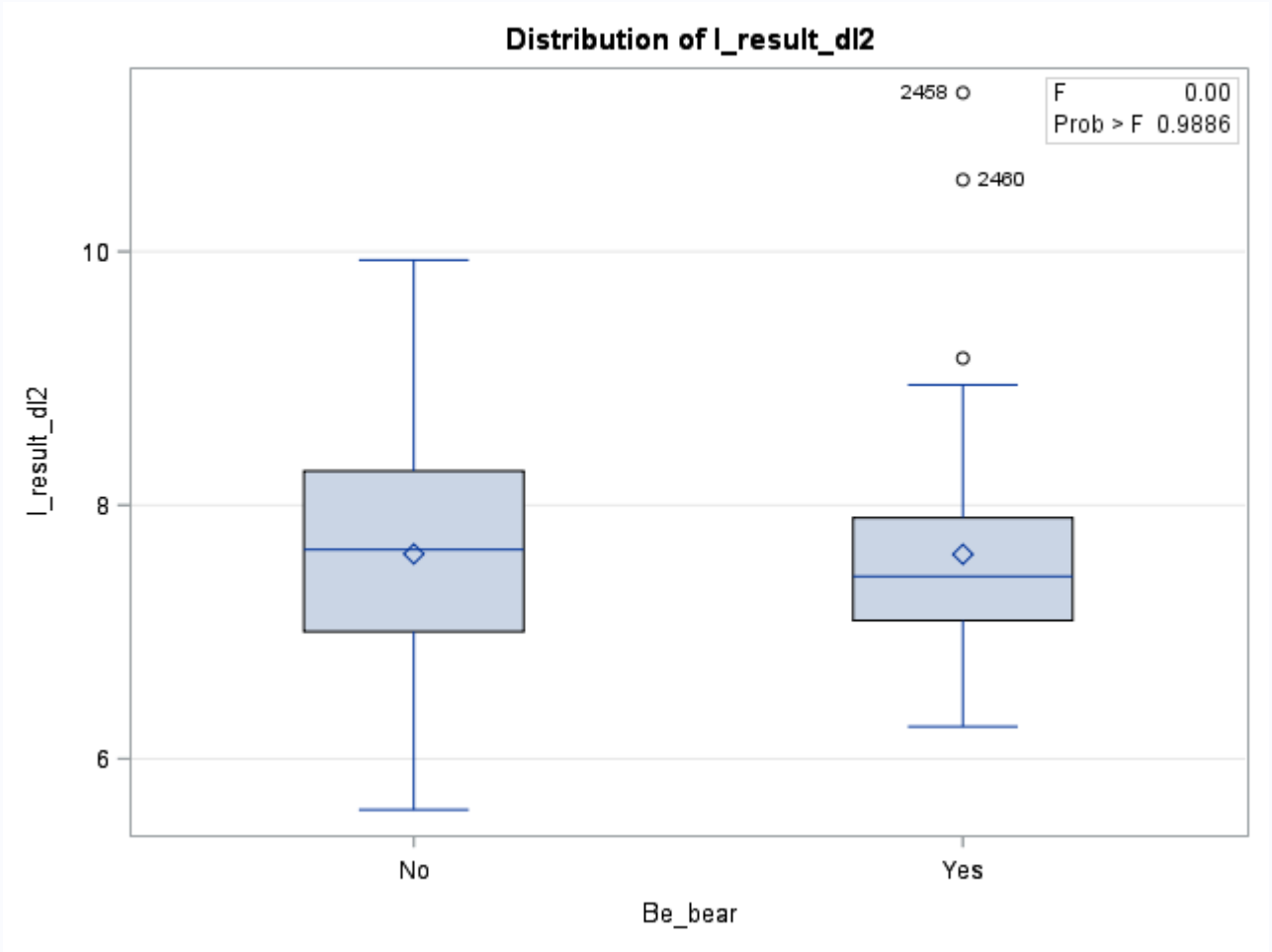
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00016762	0.00016762	0.00	0.9886
Error	104	84.72757126	0.81468819		
Corrected Total	105	84.72773889			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000002	11.85465	0.902601	7.613898

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00016762	0.00016762	0.00	0.9886

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00016762	0.00016762	0.00	0.9886

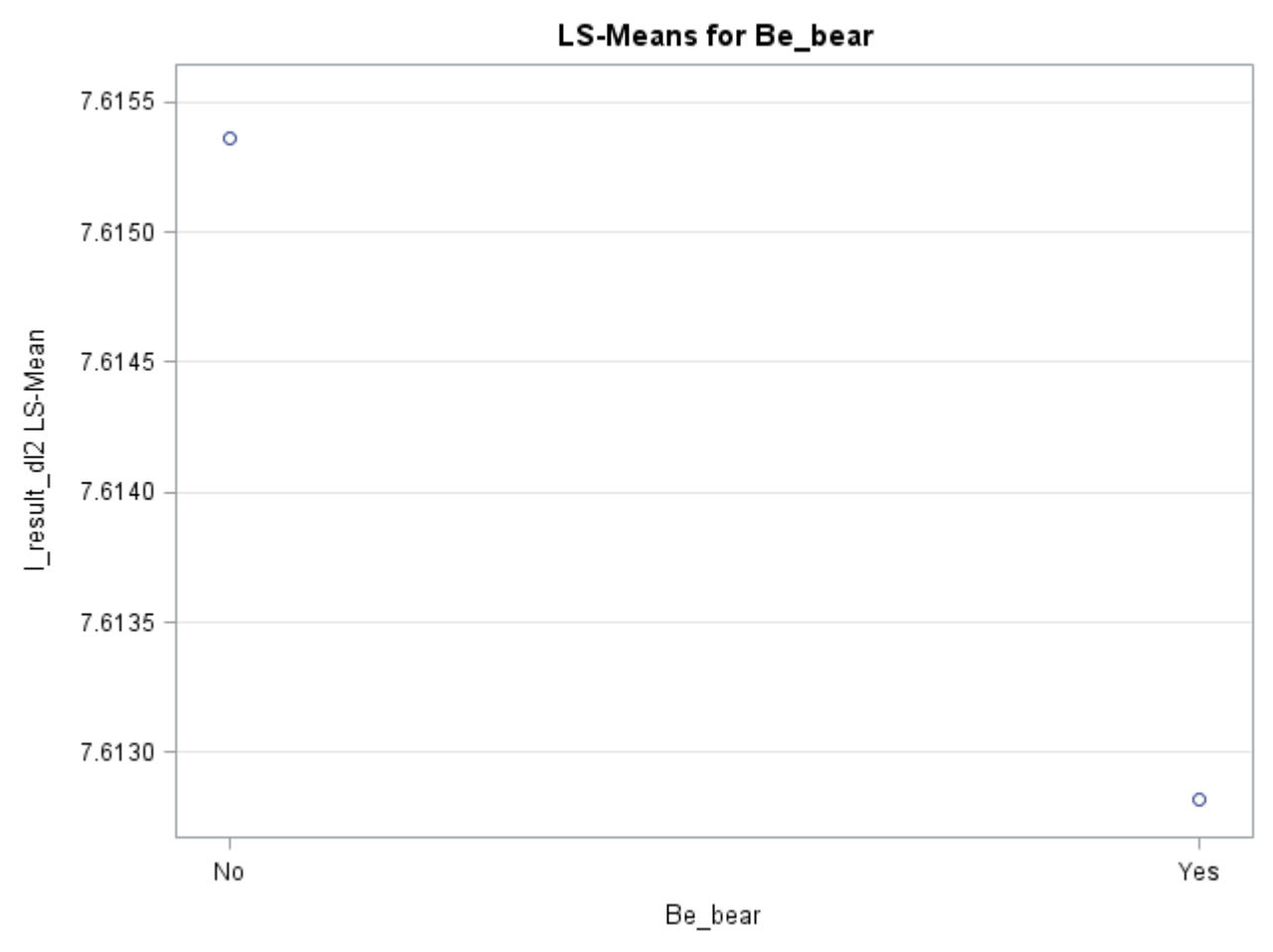

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.8147
R-Square 198E-8
Adj R-Square -0.01

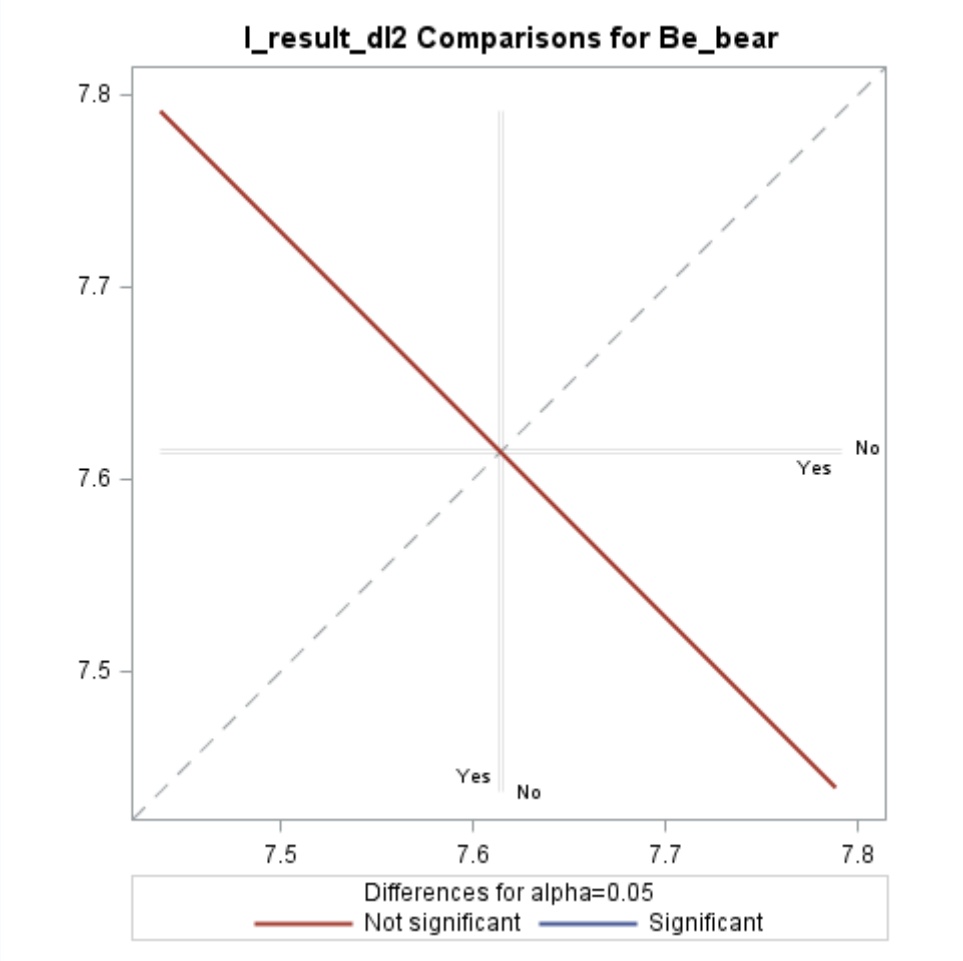

Distribution of l_result_dl2
F 0.00
Prob > F 0.9886
2458
2460
10
8
6
l_result_dl2
No
Yes
Be_bear

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	7.61536169	0.9886
Yes	7.61281751	




l_result_dl2 Comparisons for Be_bear
7.8
7.7
7.6
7.5
No
Yes
Yes
No
7.5
7.6
7.7
7.8
Differences for alpha=0.05
Not significant
Significant

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

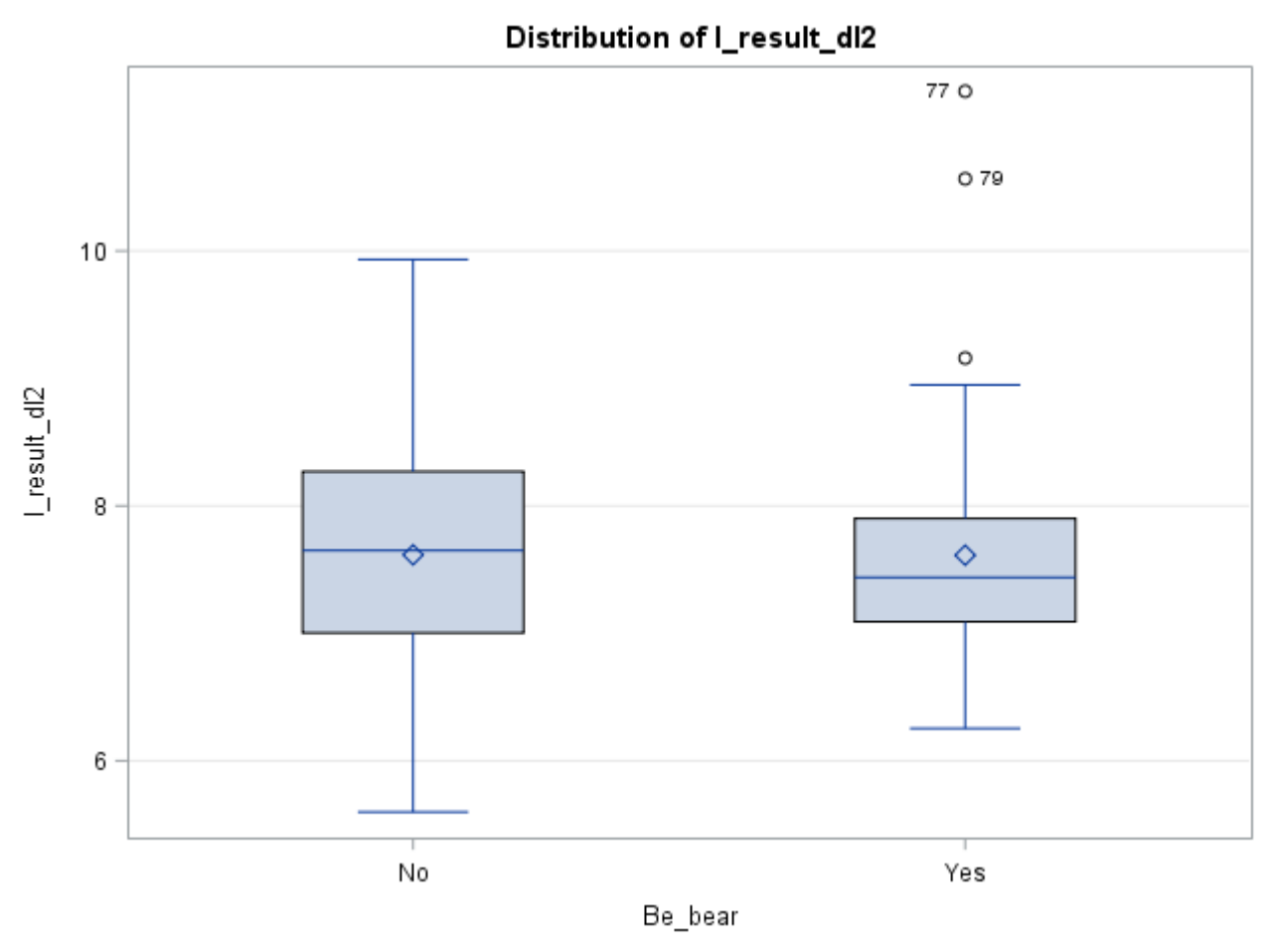
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.6763	1.6763	0.55	0.4606
Error	104	317.8	3.0558		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	7.61536169	0.98347583
Yes	**61**	7.61281751	0.83834842

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	106

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

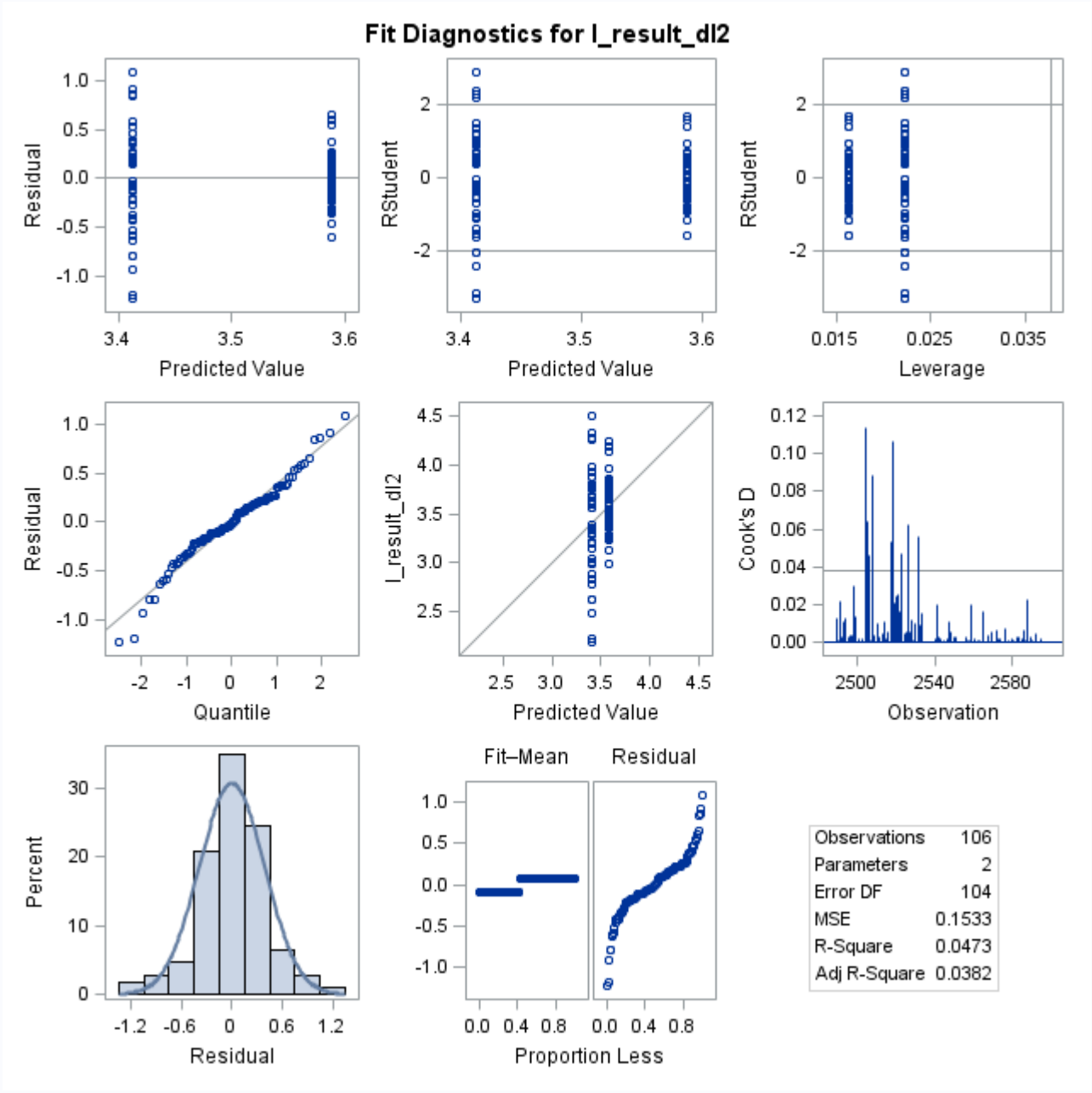
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

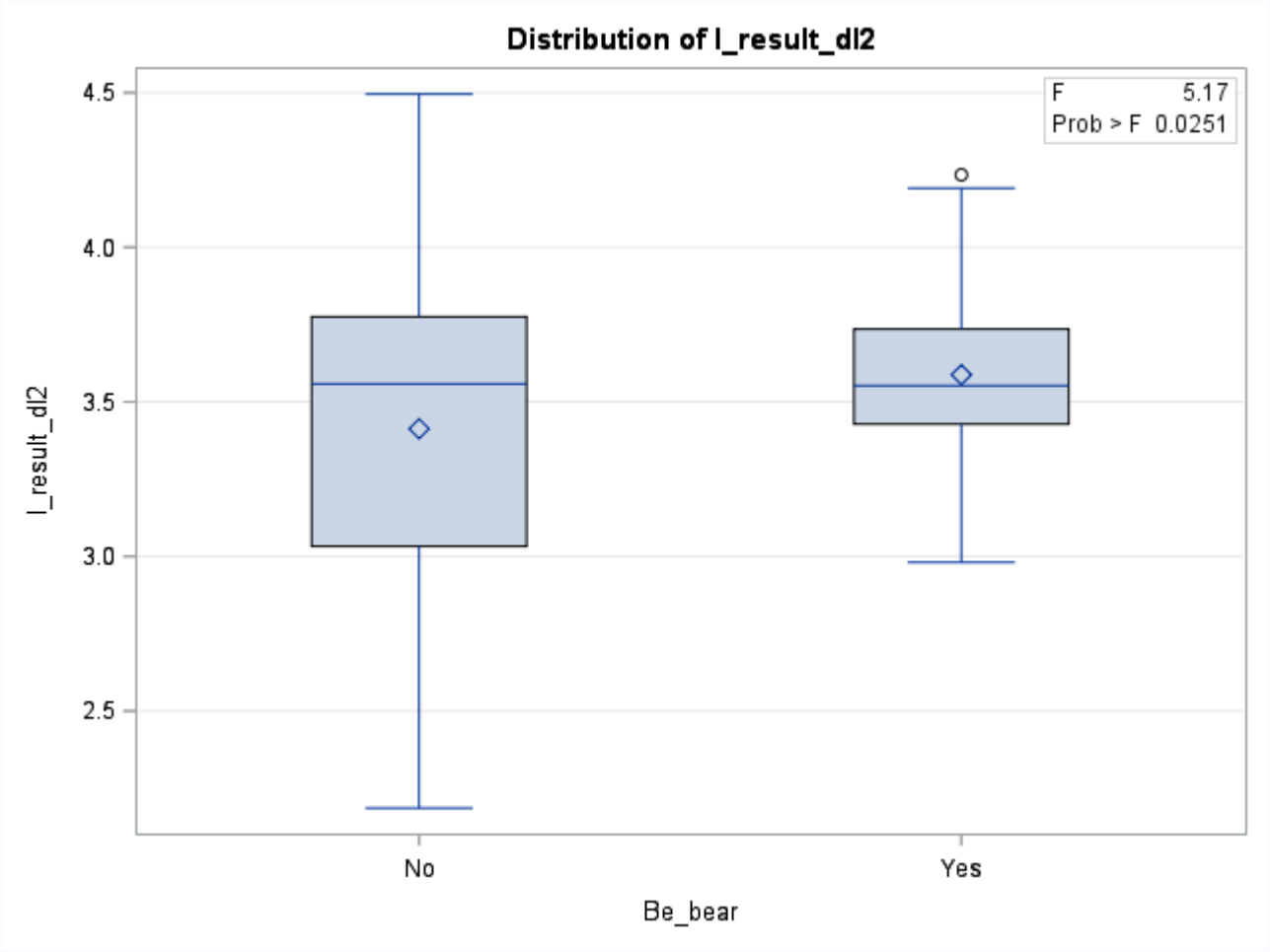
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.79230463	0.79230463	5.17	0.0251
Error	104	15.94288346	0.15329696		
Corrected Total	105	16.73518809			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.047344	11.14385	0.391532	3.513430

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.79230463	0.79230463	5.17	0.0251

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.79230463	0.79230463	5.17	0.0251

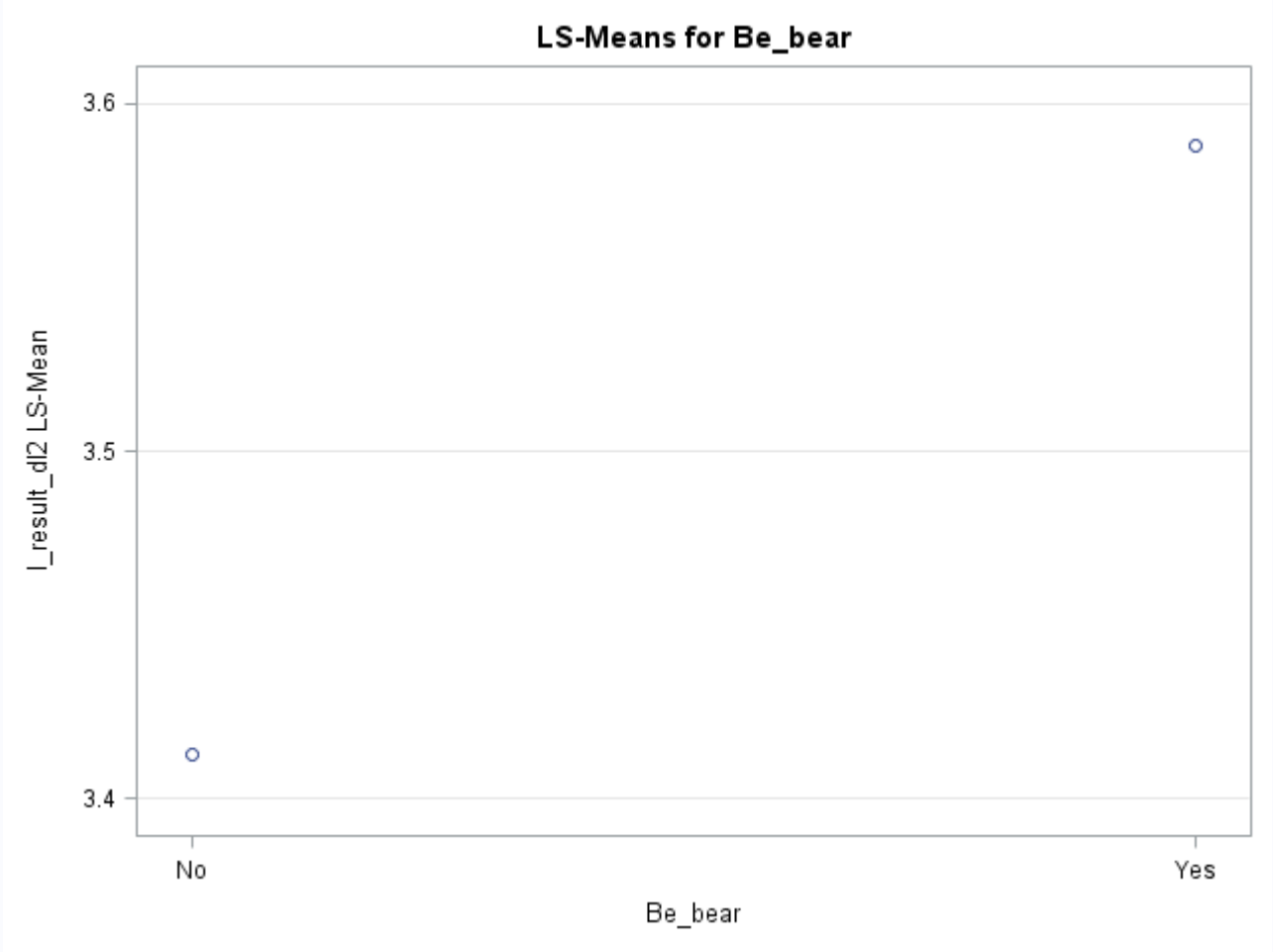

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.1533
R-Square 0.0473
Adj R-Square 0.0382

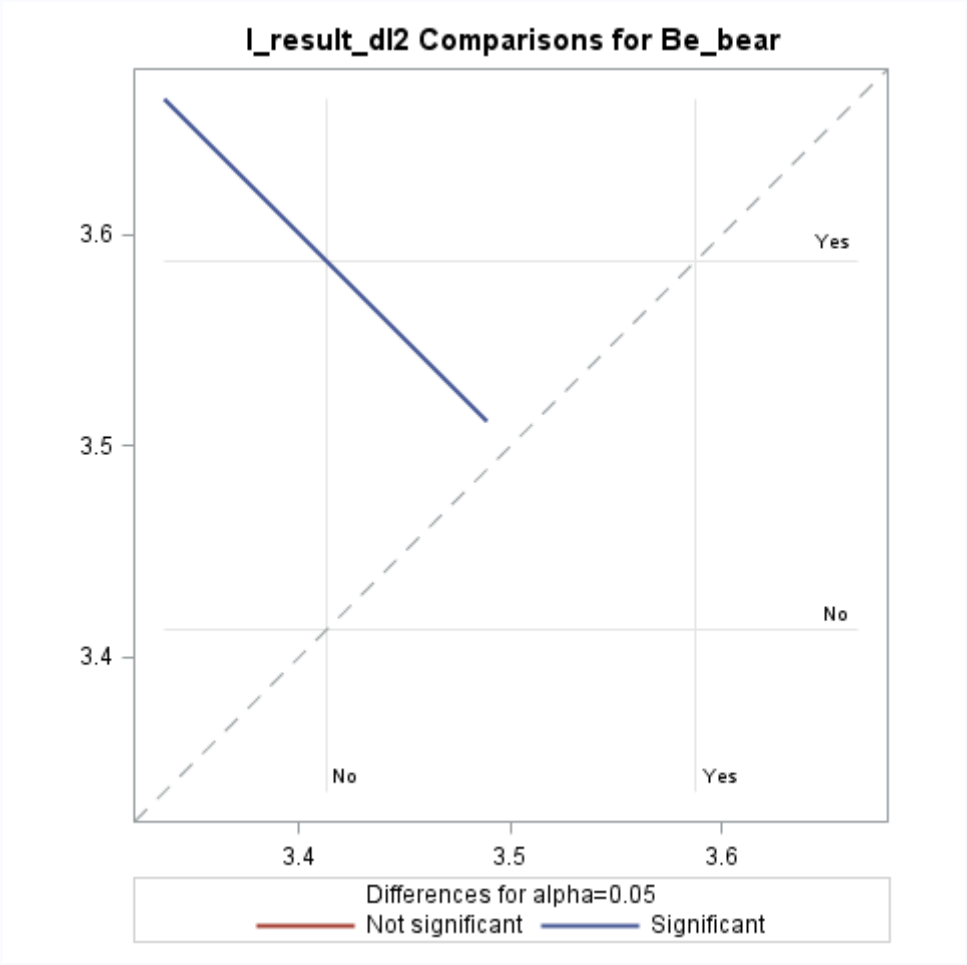

Distribution of l_result_dl2
F 5.17
Prob > F 0.0251
4.5
4.0
3.5
3.0
2.5
l_result_dl2
No
Yes
Be_bear

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.41277156	0.0251
Yes	3.58768688	




l_result_dl2 Comparisons for Be_bear
3.6
3.5
3.4
Yes
No
No
Yes
3.4
3.5
3.6
Differences for alpha=0.05
Not significant
Significant

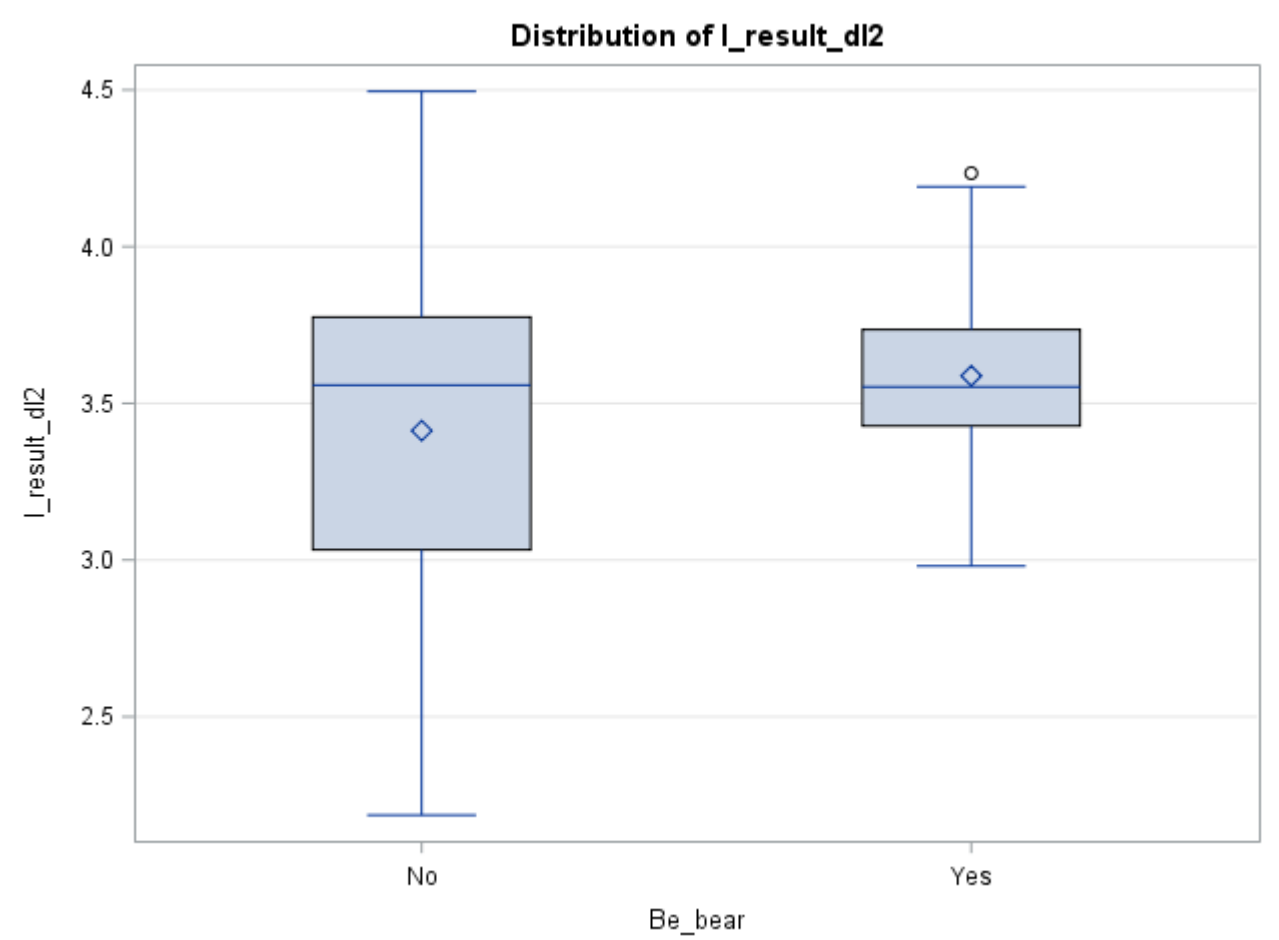
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.2933	1.2933	20.19	<.0001
Error	104	6.6616	0.0641		

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	3.41277156	0.53418327
Yes	**61**	3.58768688	0.23760632

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 98

Number of Observations Used 97

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

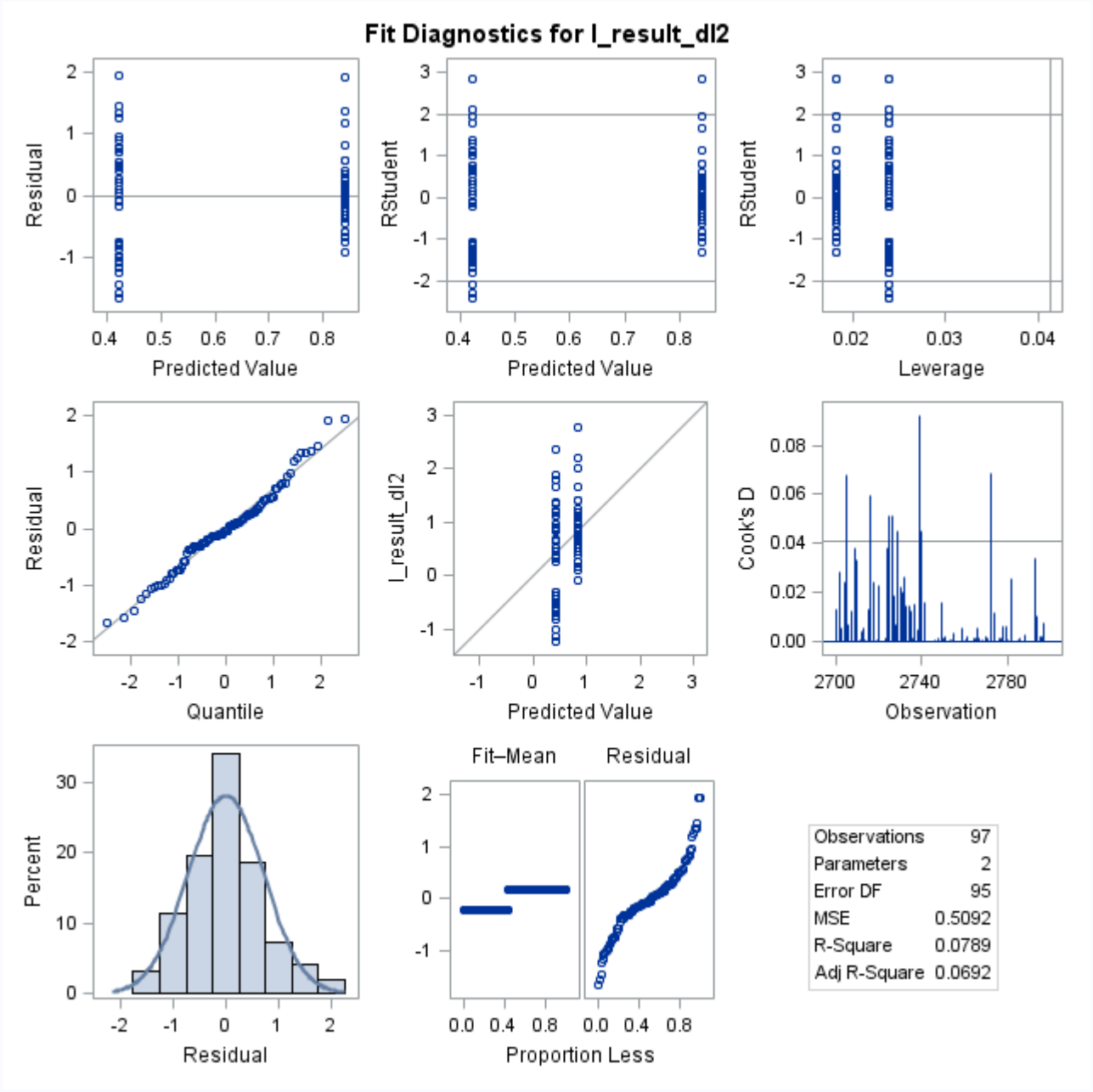
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

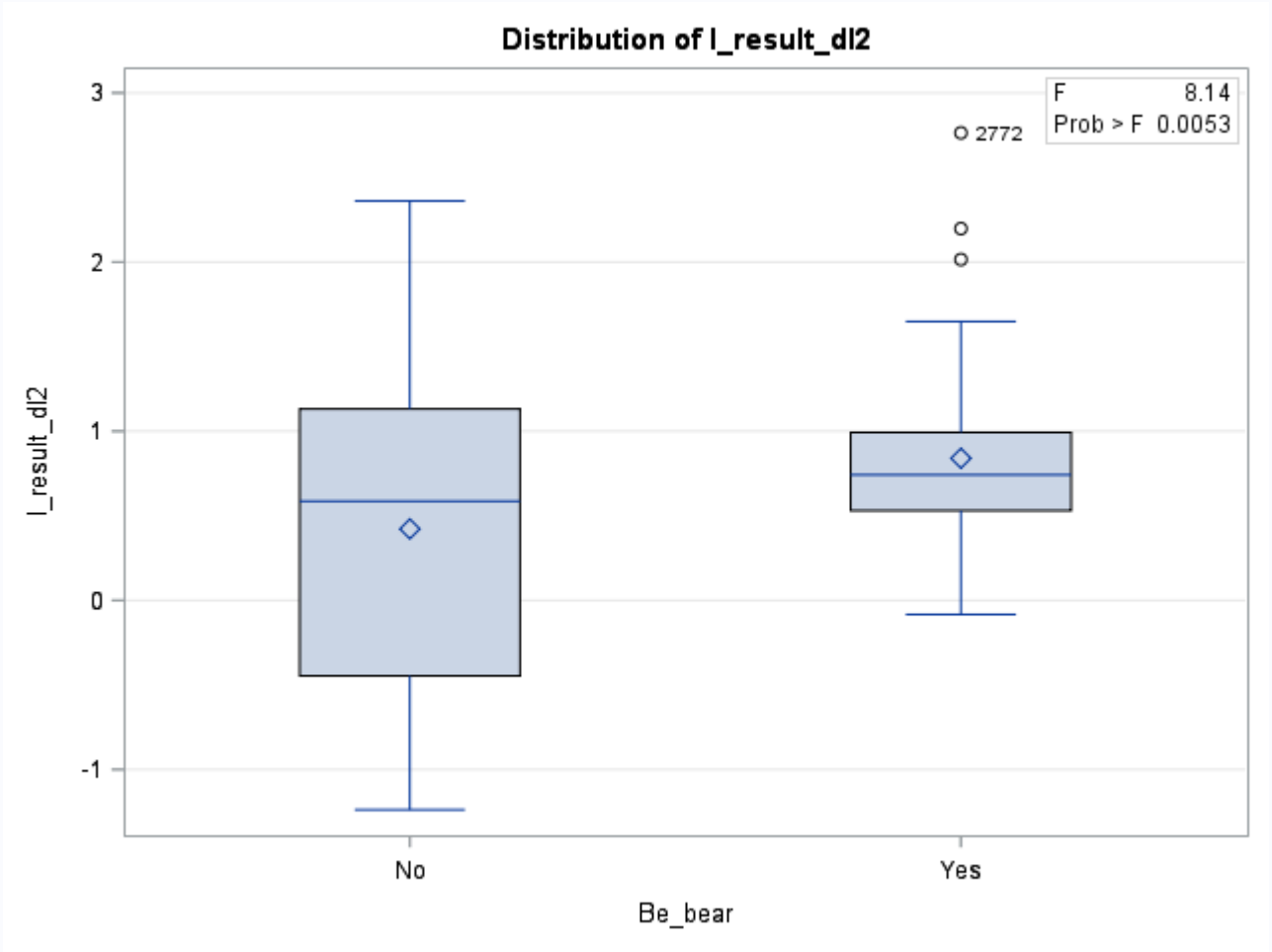
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.14431170	4.14431170	8.14	0.0053
Error	95	48.37584342	0.50921940		
Corrected Total	96	52.52015512			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.078909	108.2906	0.713596	0.658964

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	4.14431170	4.14431170	8.14	0.0053

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	4.14431170	4.14431170	8.14	0.0053

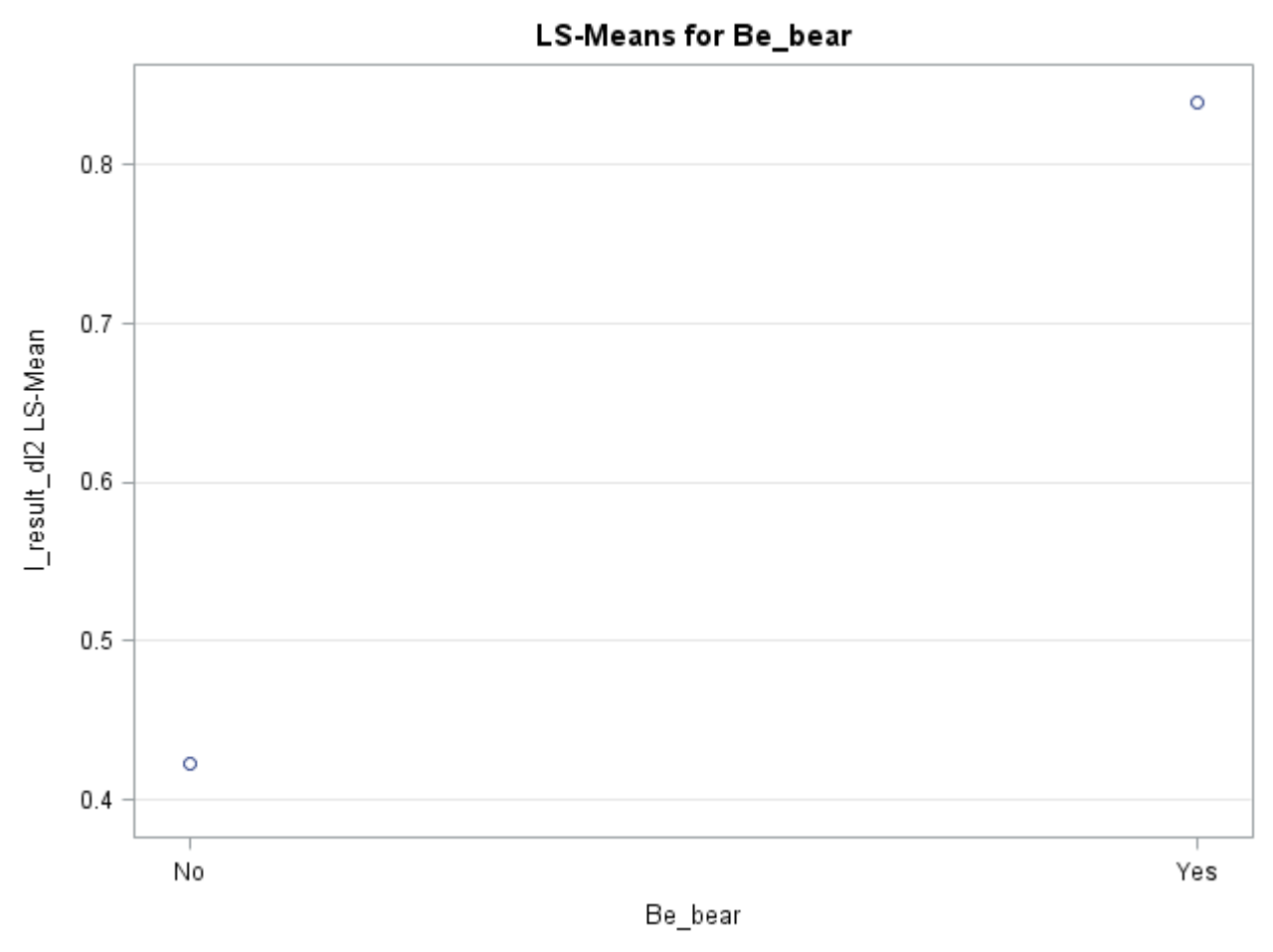

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 97
Parameters 2
Error DF 95
MSE 0.5092
R-Square 0.0789
Adj R-Square 0.0692

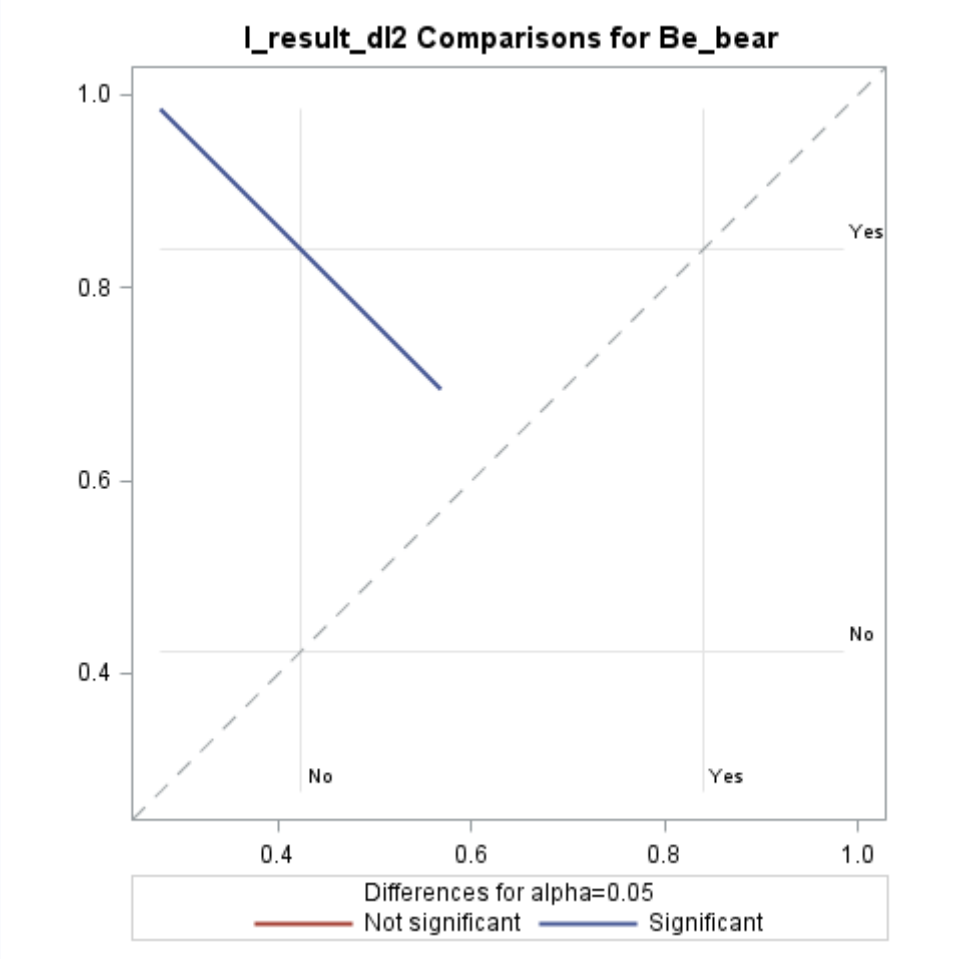

Distribution of l_result_dl2
F 8.14
Prob > F 0.0053
2772
3
2
1
0
-1
l_result_dl2
No
Yes
Be_bear

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.42242830	0.0053
Yes	0.83959159	




l_result_dl2 Comparisons for Be_bear
1.0
0.8
0.6
0.4
Yes
No
No
Yes
0.4
0.6
0.8
1.0
Differences for alpha=0.05
Not significant
Significant

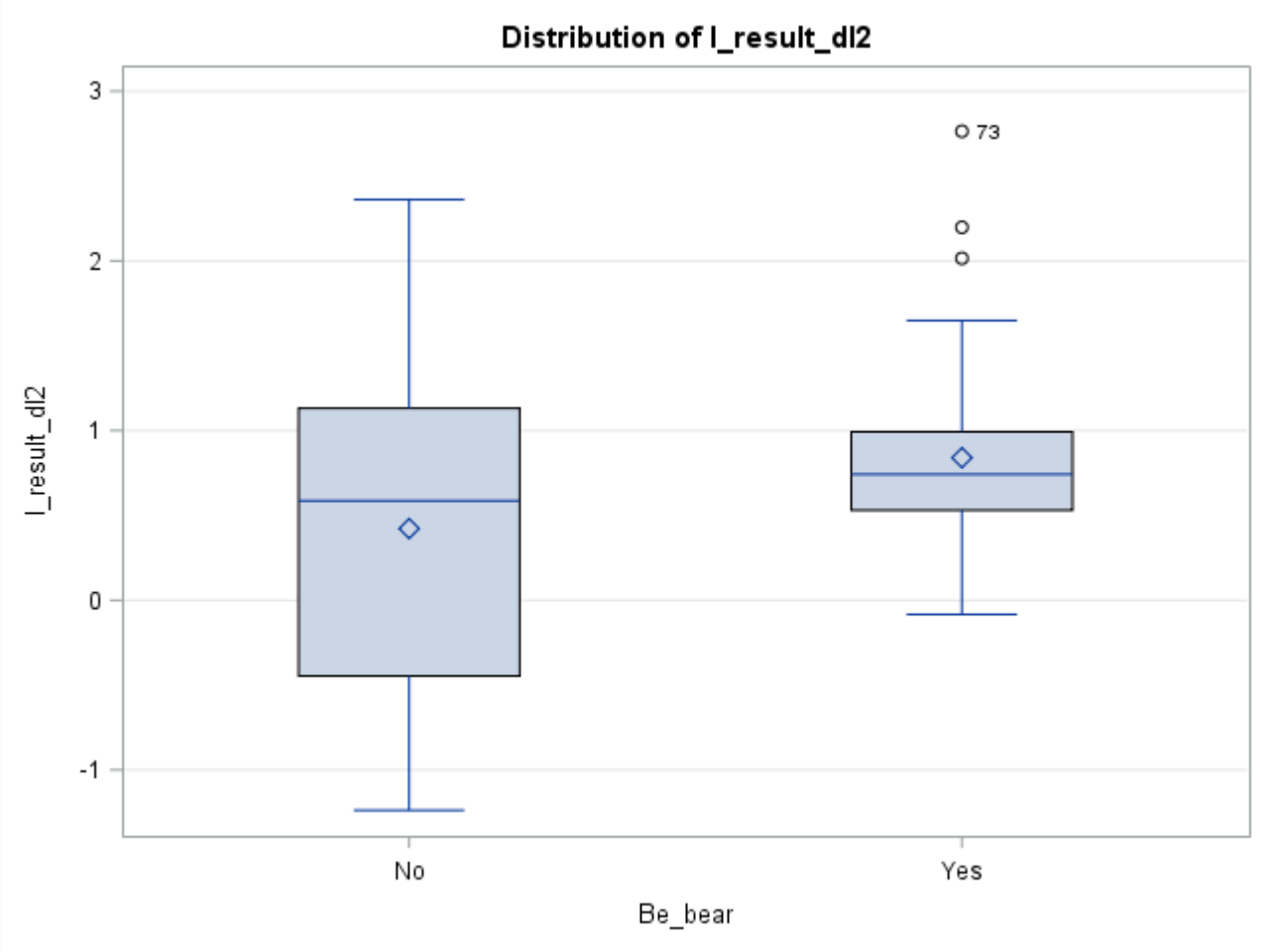
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	8.5772	8.5772	16.67	<.0001
Error	95	48.8833	0.5146		

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**42**	0.42242830	0.92707583
Yes	**55**	0.83959159	0.49324305

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 106

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure

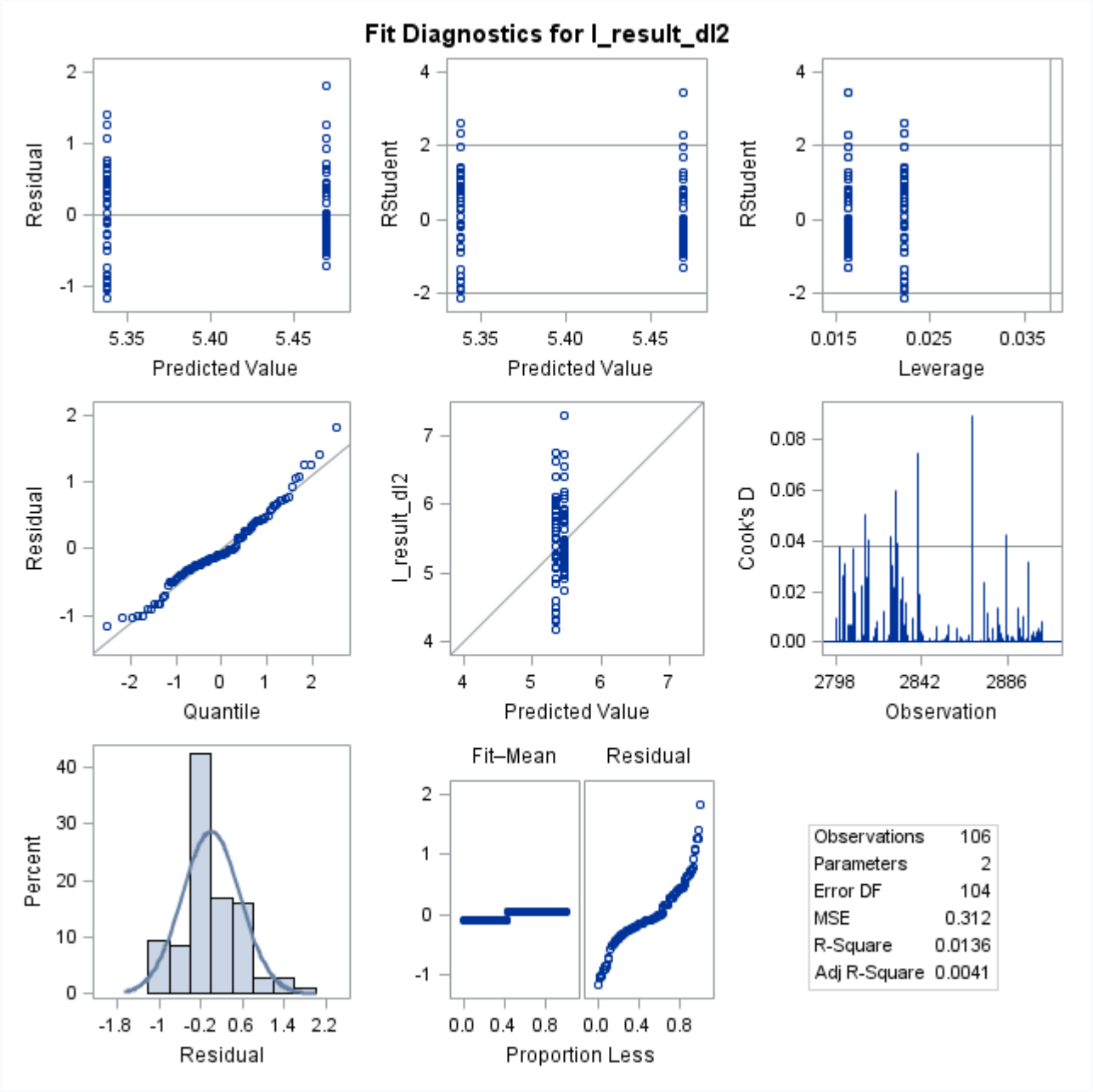
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

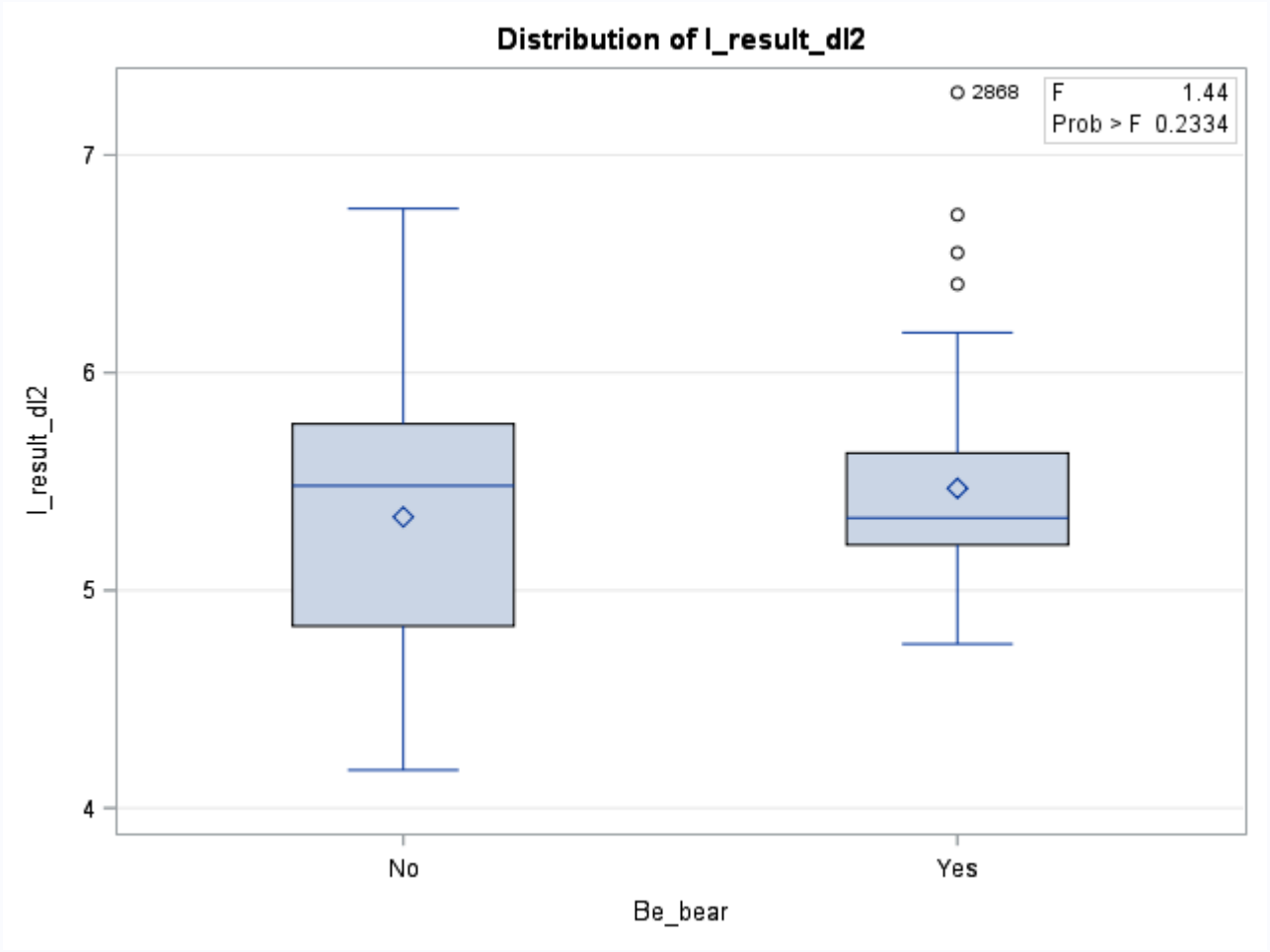
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.44825811	0.44825811	1.44	0.2334
Error	104	32.44461908	0.31196749		
Corrected Total	105	32.89287719			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.013628	10.31811	0.558541	5.413203

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.44825811	0.44825811	1.44	0.2334

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.44825811	0.44825811	1.44	0.2334

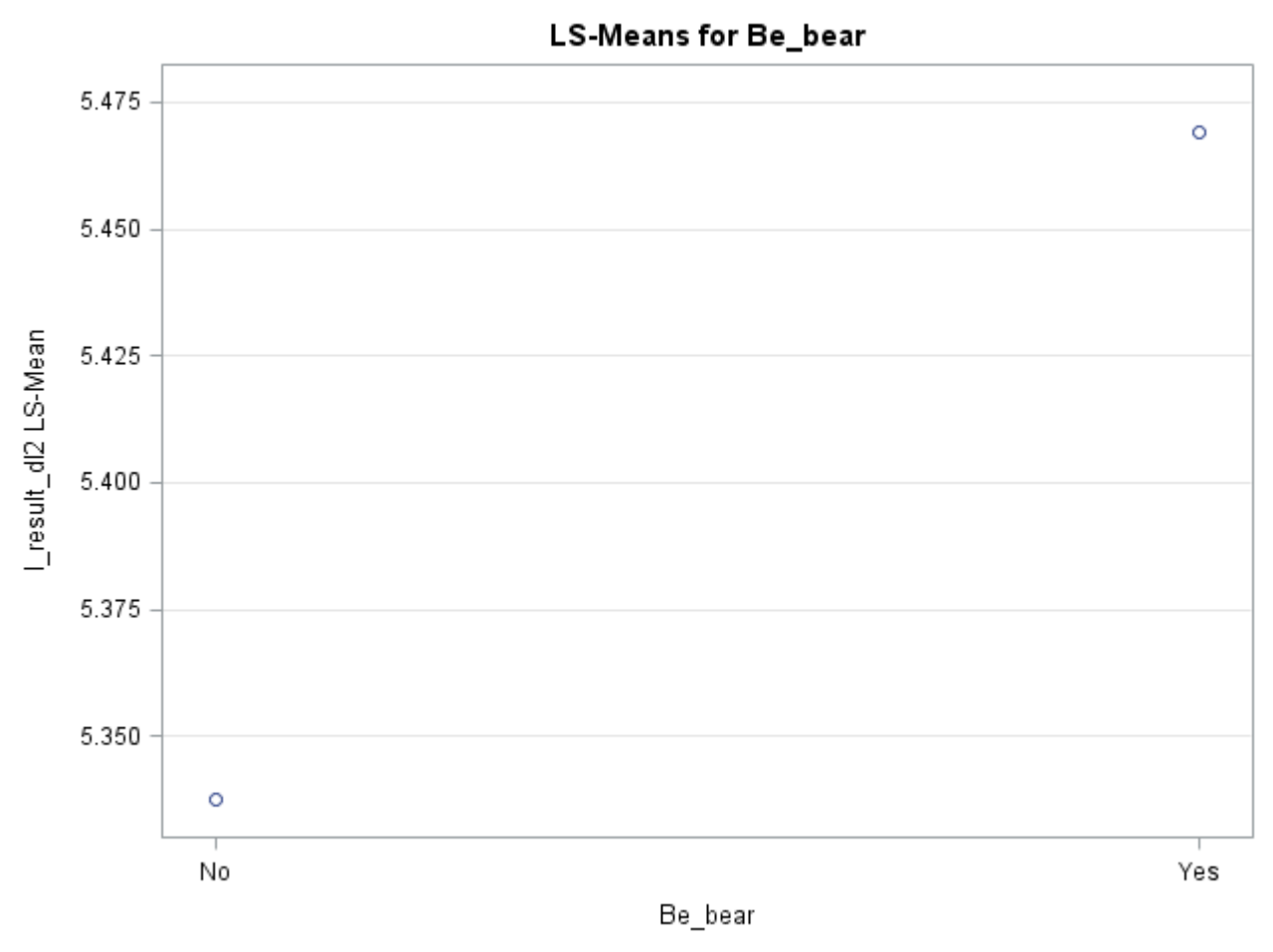

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 2
Error DF 104
MSE 0.312
R-Square 0.0136
Adj R-Square 0.0041

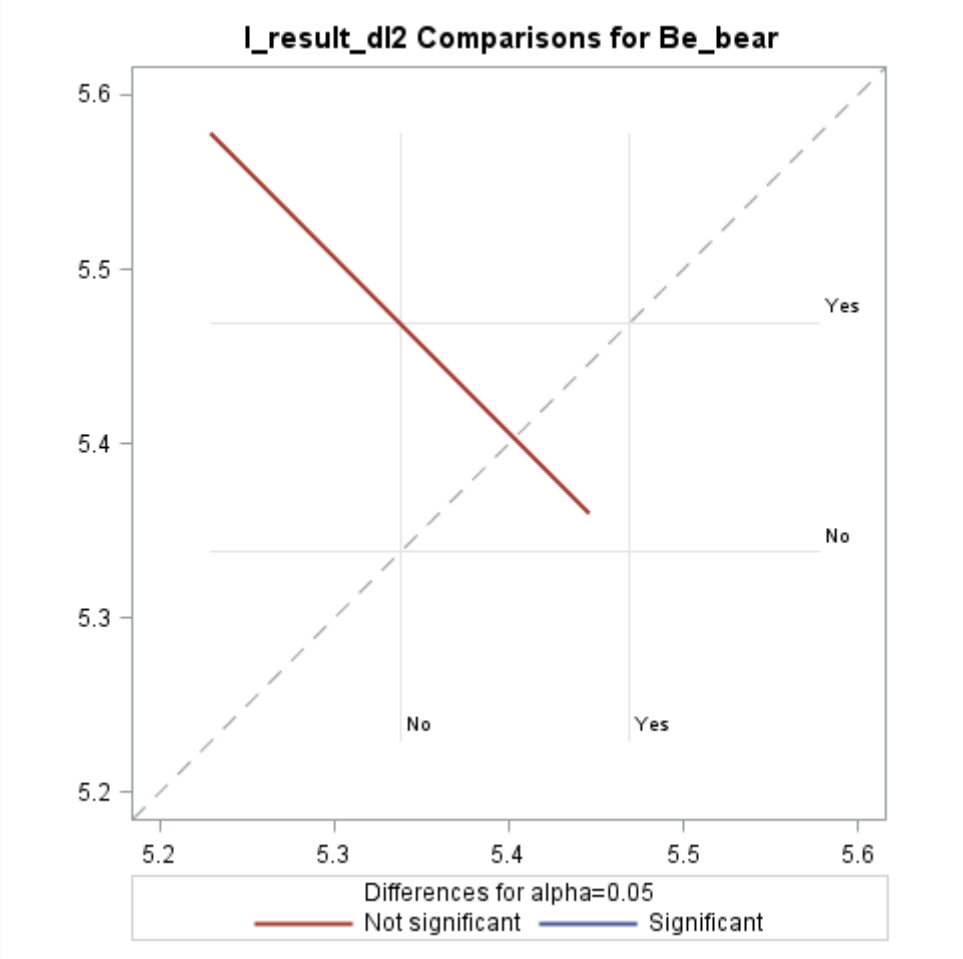

Distribution of l_result_dl2
2868
F 1.44
Prob > F 0.2334
7
6
5
4
l_result_dl2
No
Yes
Be_bear

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	5.33749016	0.2334
Yes	5.46905682	




l_result_dl2 Comparisons for Be_bear
5.6
5.5
5.4
5.3
5.2
Yes
No
No
Yes
5.2
5.3
5.4
5.5
5.6
Differences for alpha=0.05
Not significant
Significant

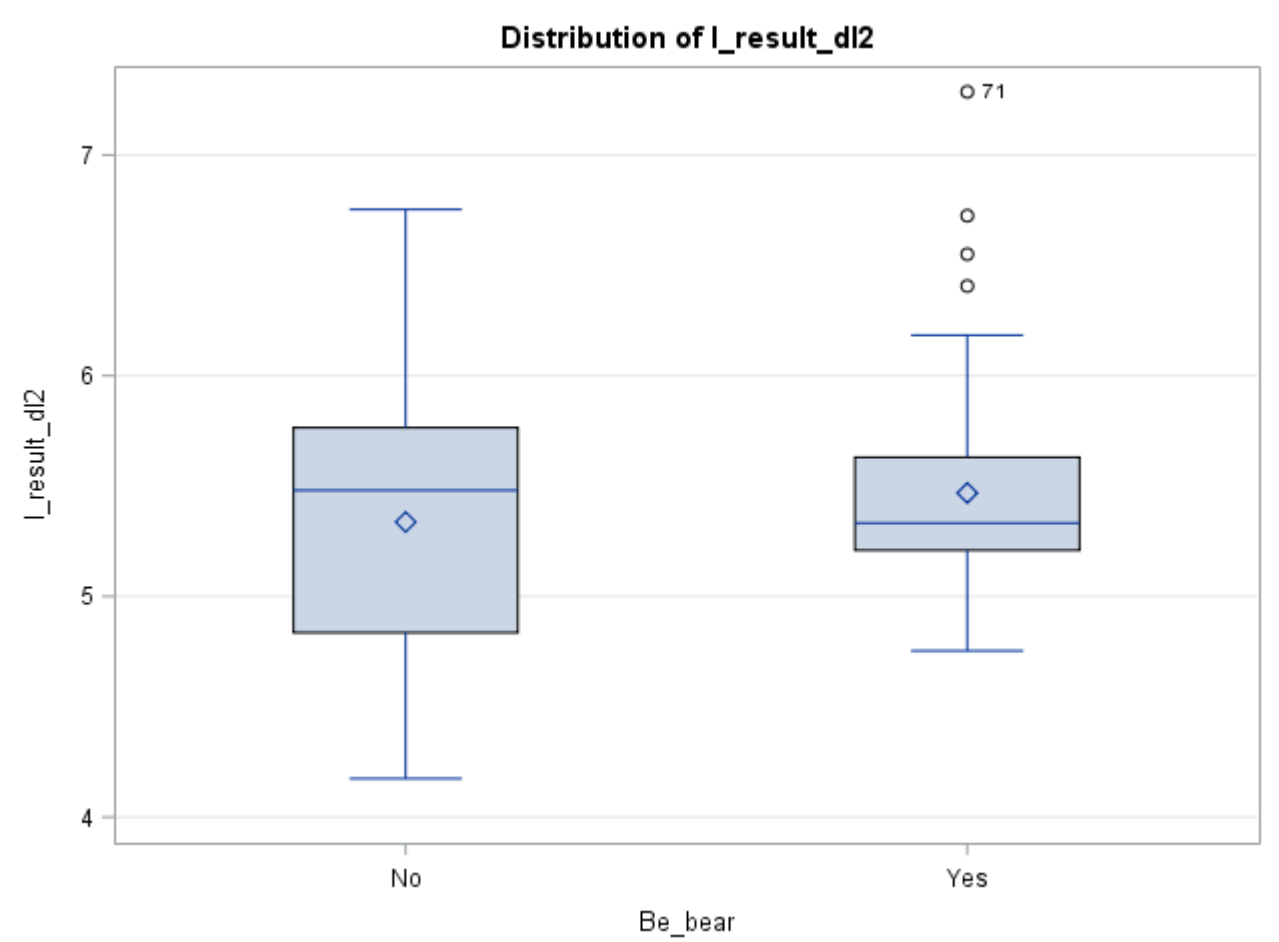
The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.3122	1.3122	5.51	0.0208
Error	104	24.7491	0.2380		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc



Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**45**	5.33749016	0.66747495
Yes	**61**	5.46905682	0.46263045

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	104

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

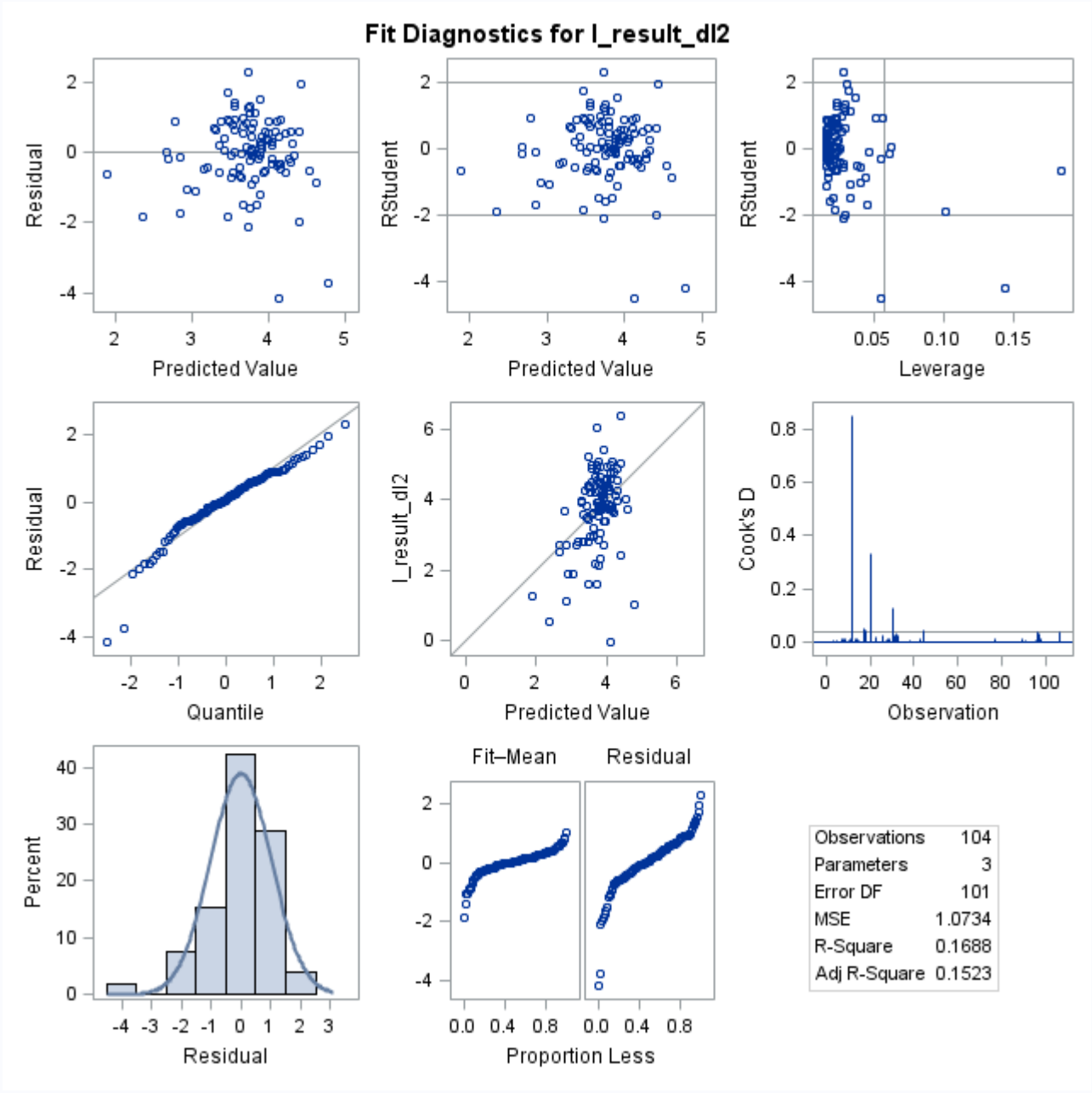
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

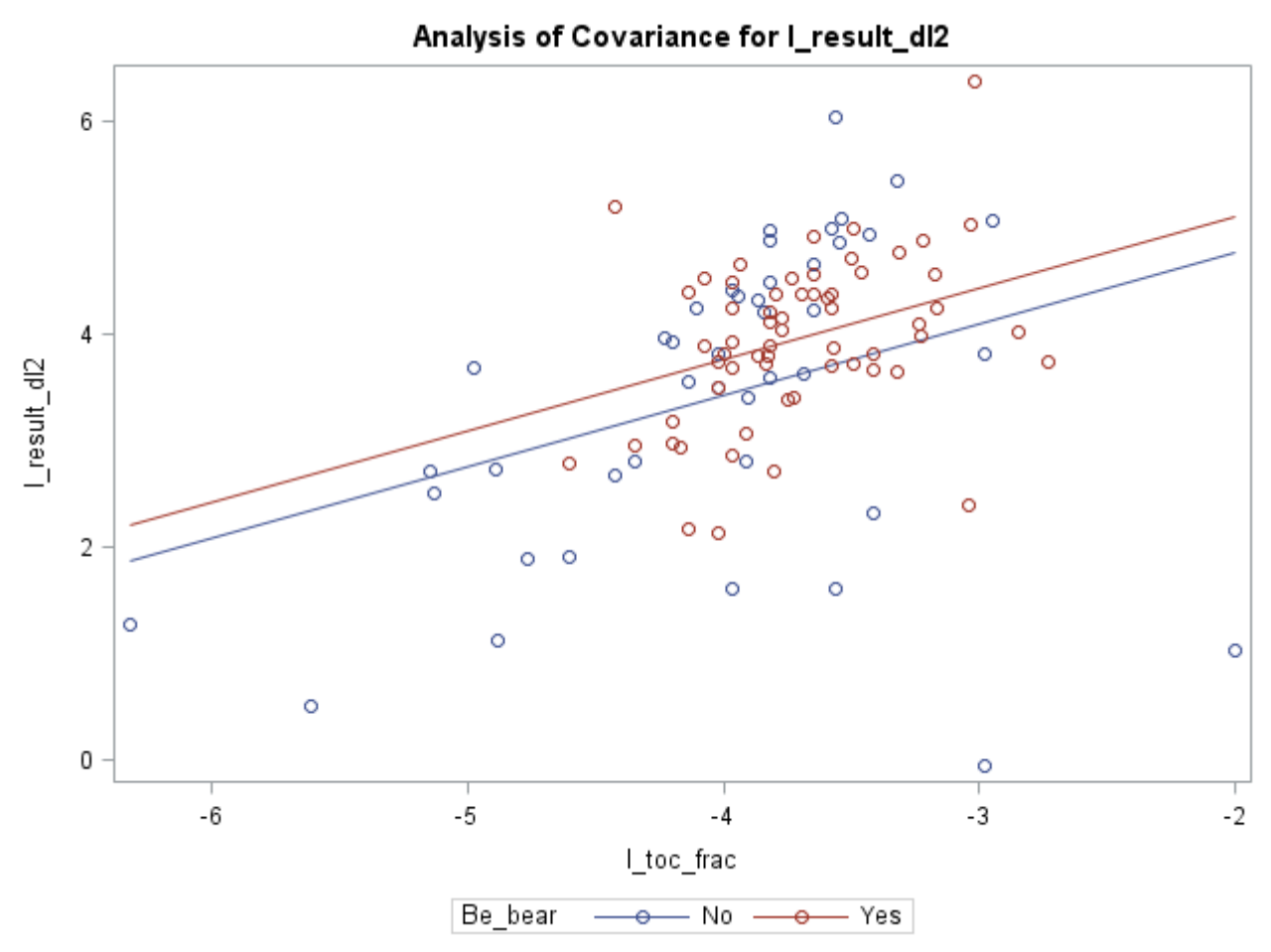
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	22.0100911	11.0050455	10.25	<.0001
Error	101	108.4092021	1.0733584		
Corrected Total	103	130.4192931			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.168764	27.67370	1.036030	3.743735

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	19.55750293	19.55750293	18.22	<.0001
Be_bear	1	2.45258812	2.45258812	2.28	0.1338

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	15.06343051	15.06343051	14.03	0.0003
Be_bear	1	2.45258812	2.45258812	2.28	0.1338


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 1.0734
R-Square 0.1688
Adj R-Square 0.1523


Analysis of Covariance for l_result_dl2
l_result_dl2
6
4
2
0
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.55465795	0.1338
Yes	3.87701913	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	104

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

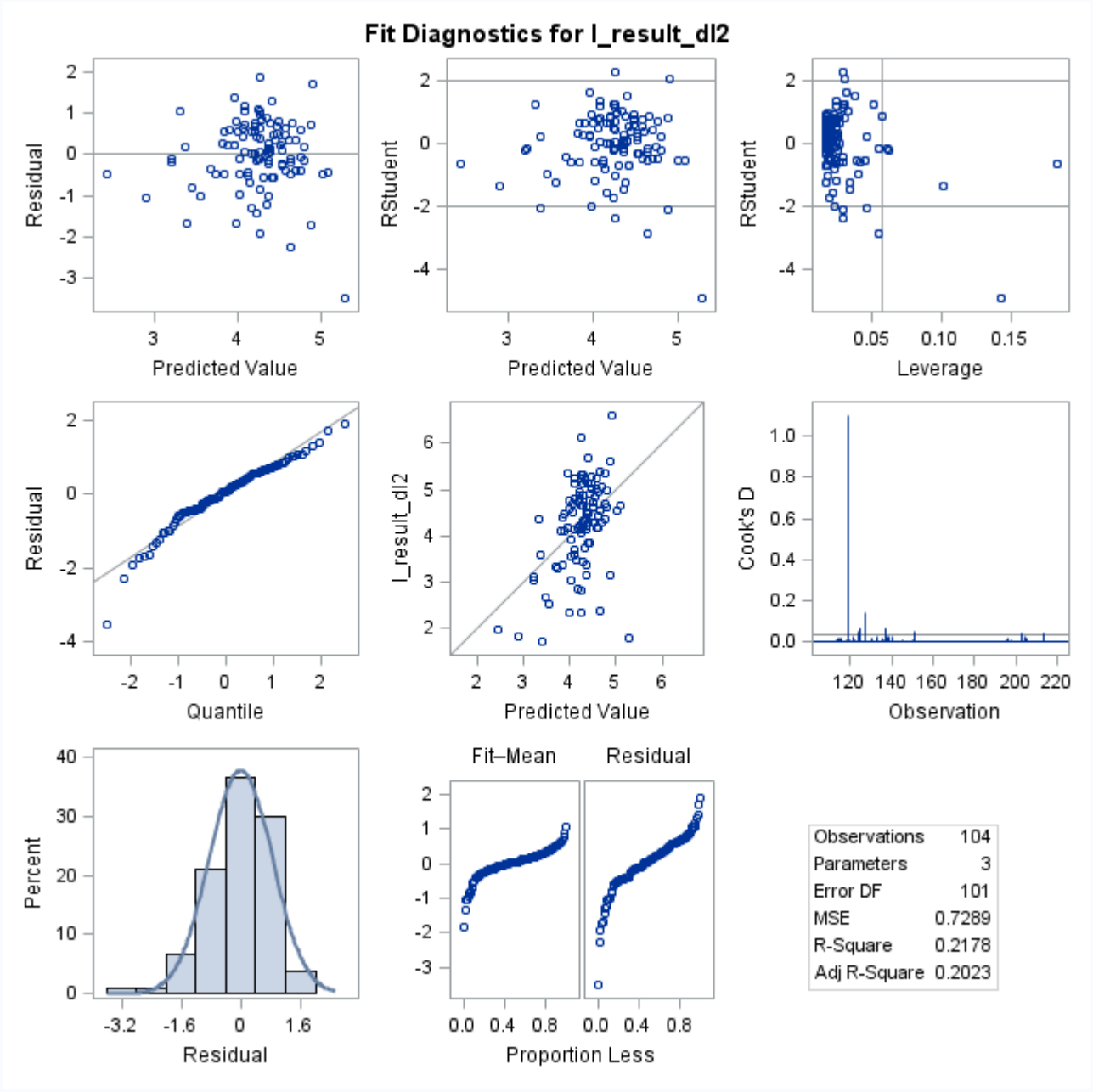
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

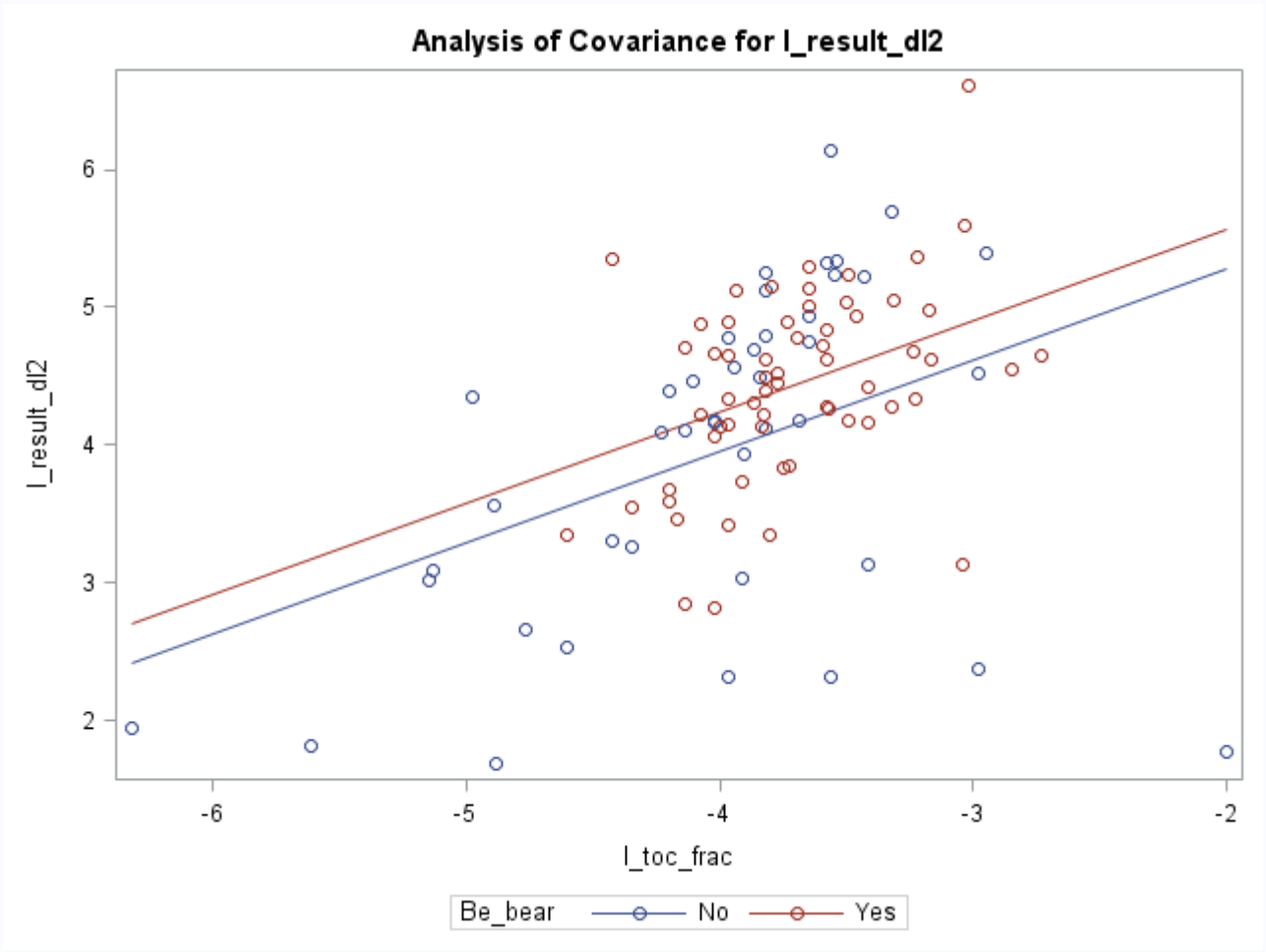
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	20.49617441	10.24808721	14.06	<.0001
Error	101	73.62099133	0.72892071		
Corrected Total	103	94.11716575			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.217773	20.15259	0.853769	4.236520

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	18.61151076	18.61151076	25.53	<.0001
Be_bear	1	1.88466365	1.88466365	2.59	0.1110

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	14.63359566	14.63359566	20.08	<.0001
Be_bear	1	1.88466365	1.88466365	2.59	0.1110


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 0.7289
R-Square 0.2178
Adj R-Square 0.2023


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
2
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.07077383	0.1110
Yes	4.35335768	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	104

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

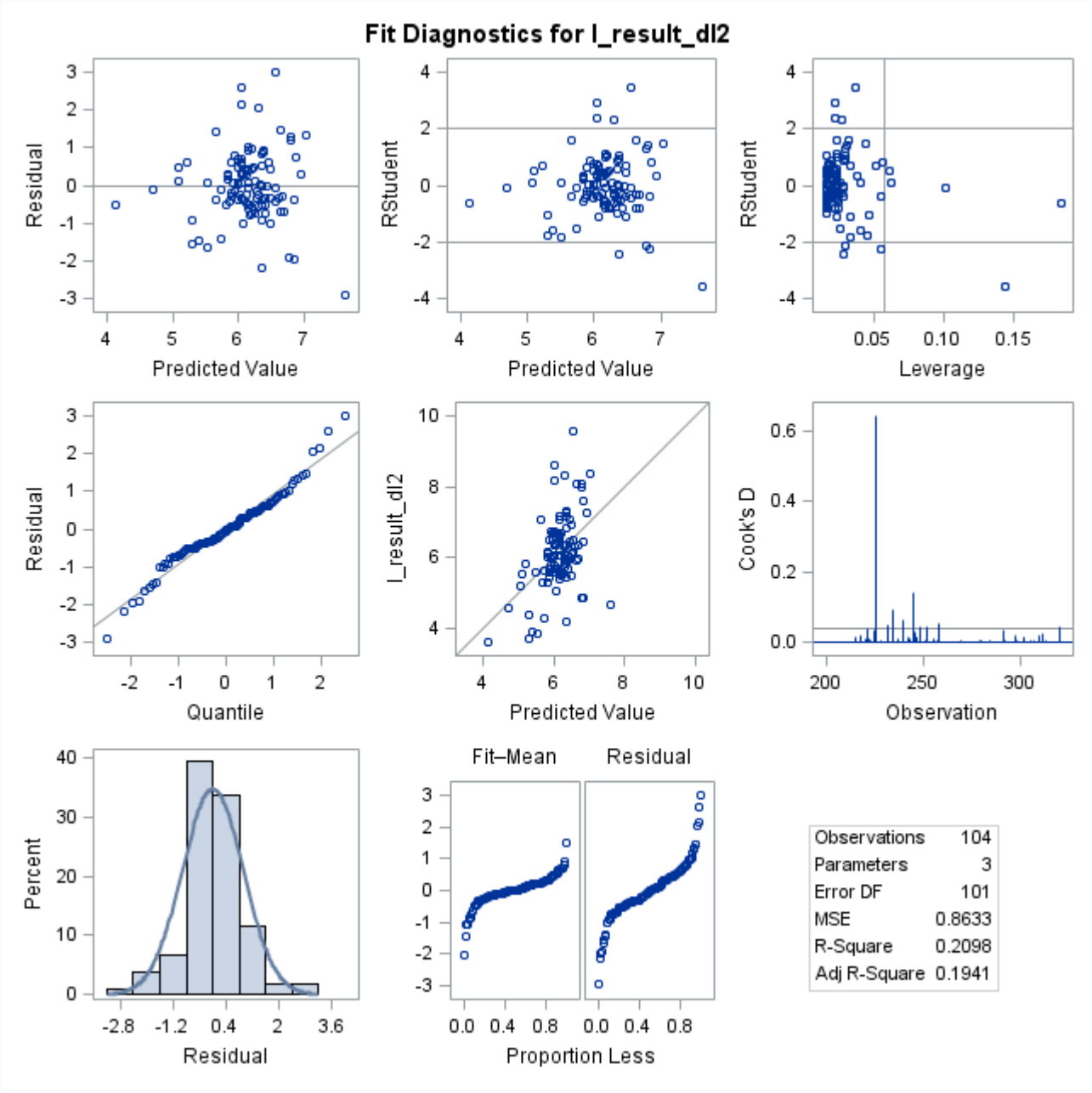
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

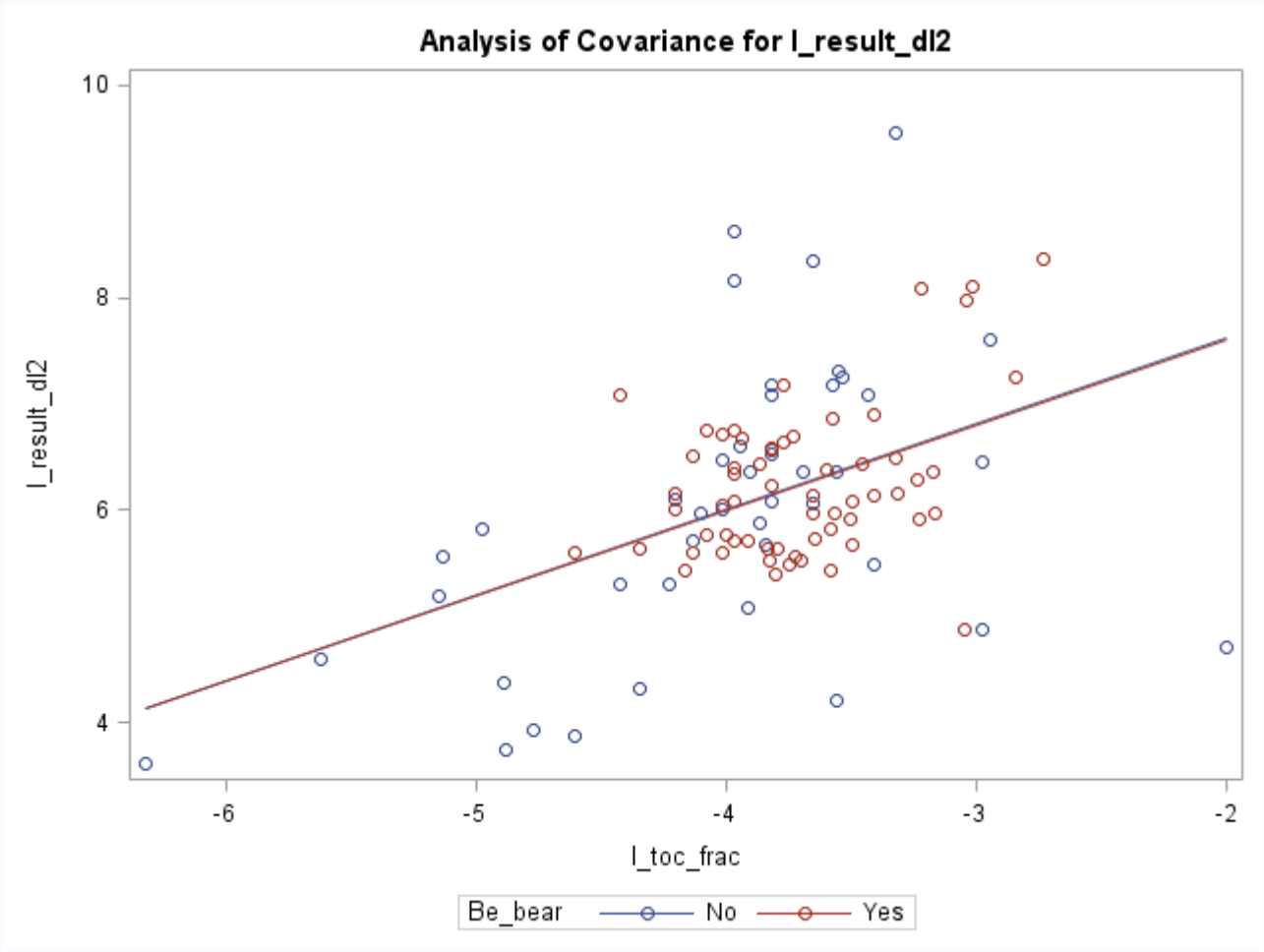
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	23.1479107	11.5739553	13.41	<.0001
Error	101	87.1917821	0.8632850		
Corrected Total	103	110.3396927			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.209788	15.13020	0.929131	6.140906

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	23.14782142	23.14782142	26.81	<.0001
Be_bear	1	0.00008924	0.00008924	0.00	0.9919

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	21.68357979	21.68357979	25.12	<.0001
Be_bear	1	0.00008924	0.00008924	0.00	0.9919


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 0.8633
R-Square 0.2098
Adj R-Square 0.1941


Analysis of Covariance for l_result_dl2
10
8
6
4
l_result_dl2
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.14204657	0.9919
Yes	6.14010209	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 107

Number of Observations Used 104

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

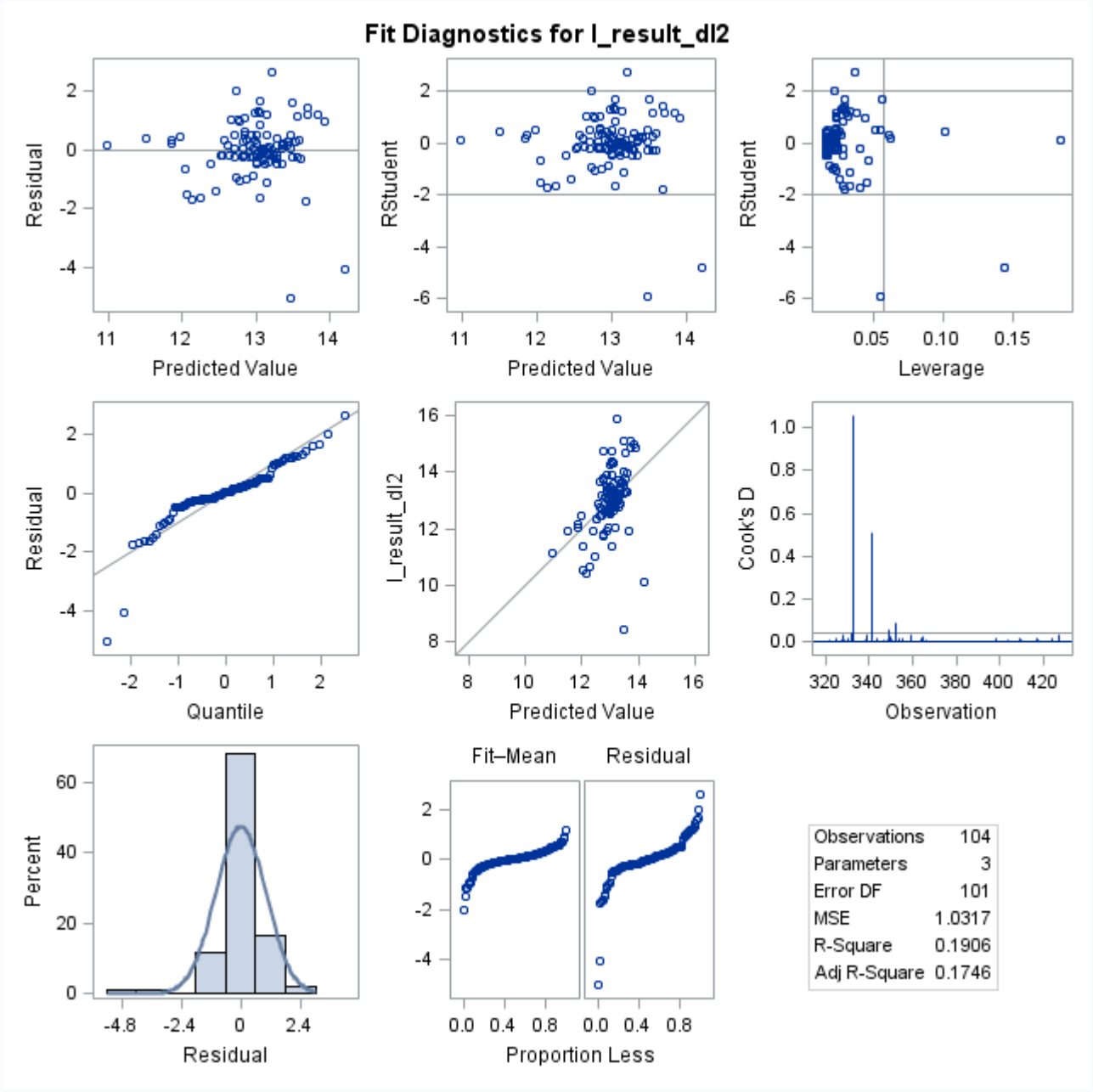
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

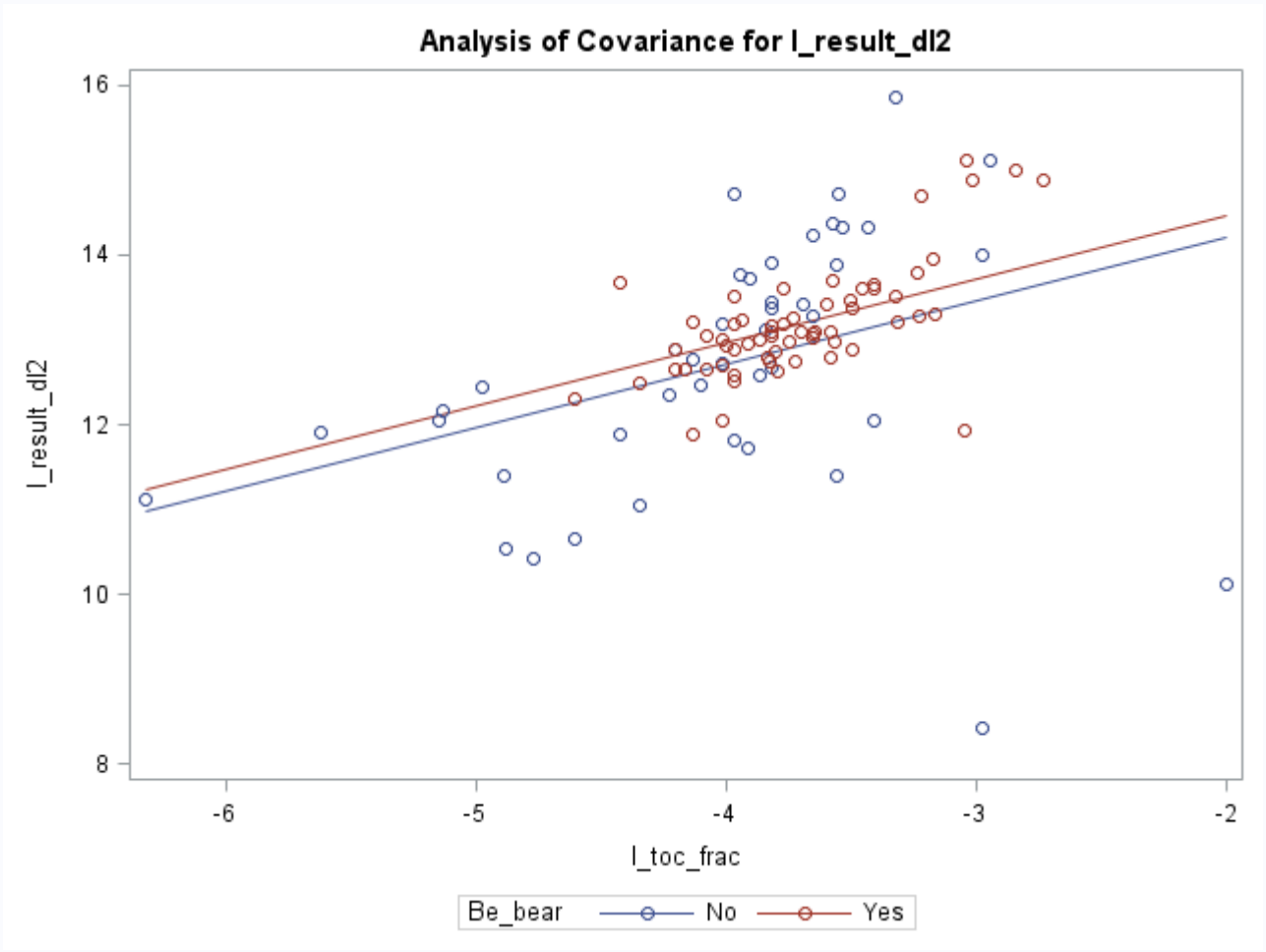
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	24.5419543	12.2709772	11.89	<.0001
Error	101	104.2051814	1.0317345		
Corrected Total	103	128.7471357			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.190621	7.819570	1.015743	12.98976

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	22.96265870	22.96265870	22.26	<.0001
Be_bear	1	1.57929564	1.57929564	1.53	0.2189

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	18.63692718	18.63692718	18.06	<.0001
Be_bear	1	1.57929564	1.57929564	1.53	0.2189


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 1.0317
R-Square 0.1906
Adj R-Square 0.1746


Analysis of Covariance for l_result_dl2
16
14
12
10
8
l_result_dl2
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	12.8380335	0.2189
Yes	13.0967131	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	104

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

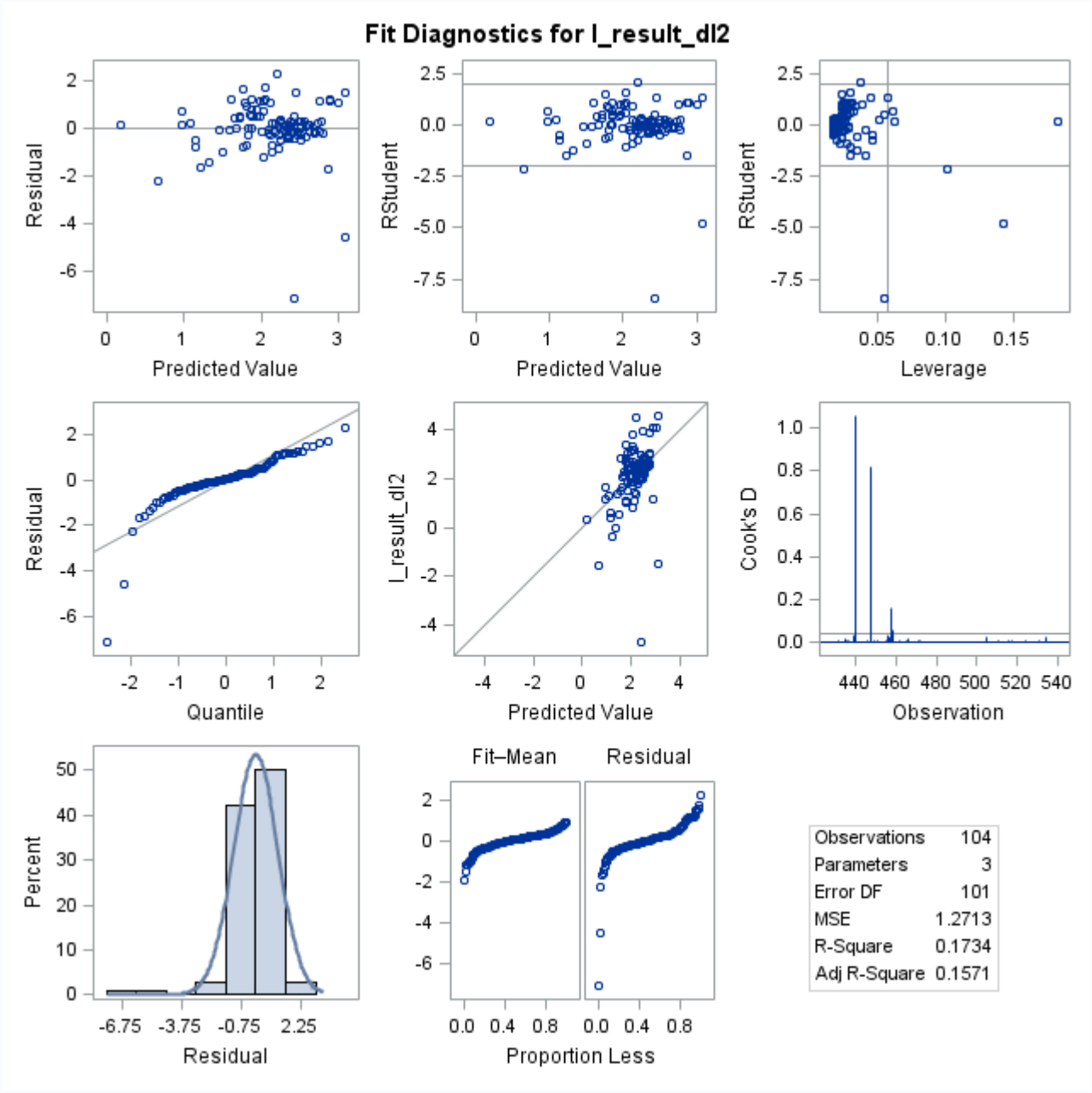
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

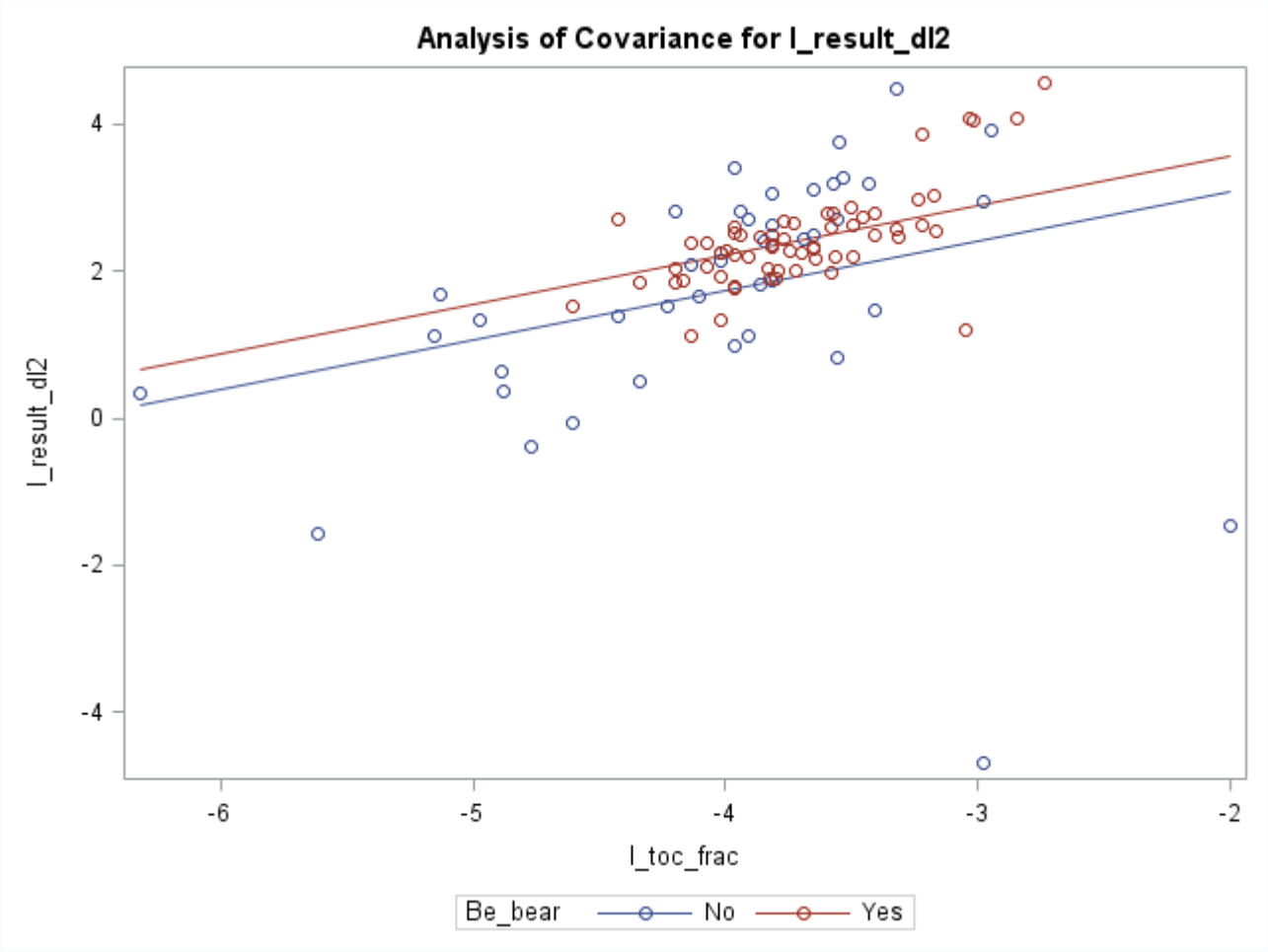
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	26.9398993	13.4699497	10.60	<.0001
Error	101	128.4032255	1.2713191		
Corrected Total	103	155.3431248			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.173422	52.77350	1.127528	2.136542

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	21.40045117	21.40045117	16.83	<.0001
Be_bear	1	5.53944813	5.53944813	4.36	0.0394

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	15.04368716	15.04368716	11.83	0.0008
Be_bear	1	5.53944813	5.53944813	4.36	0.0394


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 1.2713
R-Square 0.1734
Adj R-Square 0.1571


Analysis of Covariance for l_result_dl2
l_result_dl2
4
2
0
-2
-4
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	1.85238362	0.0394
Yes	2.33685003	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	104

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

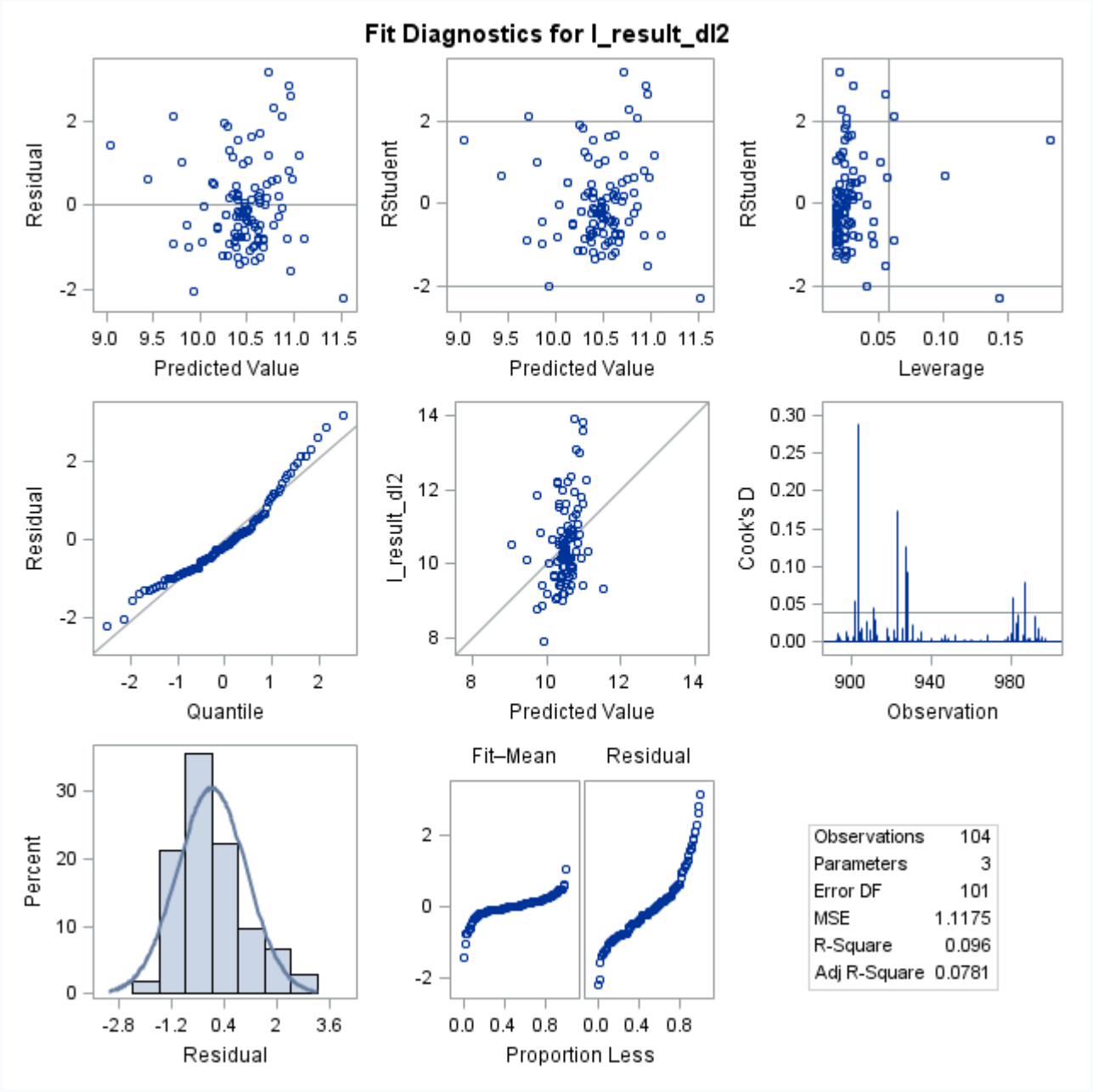
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

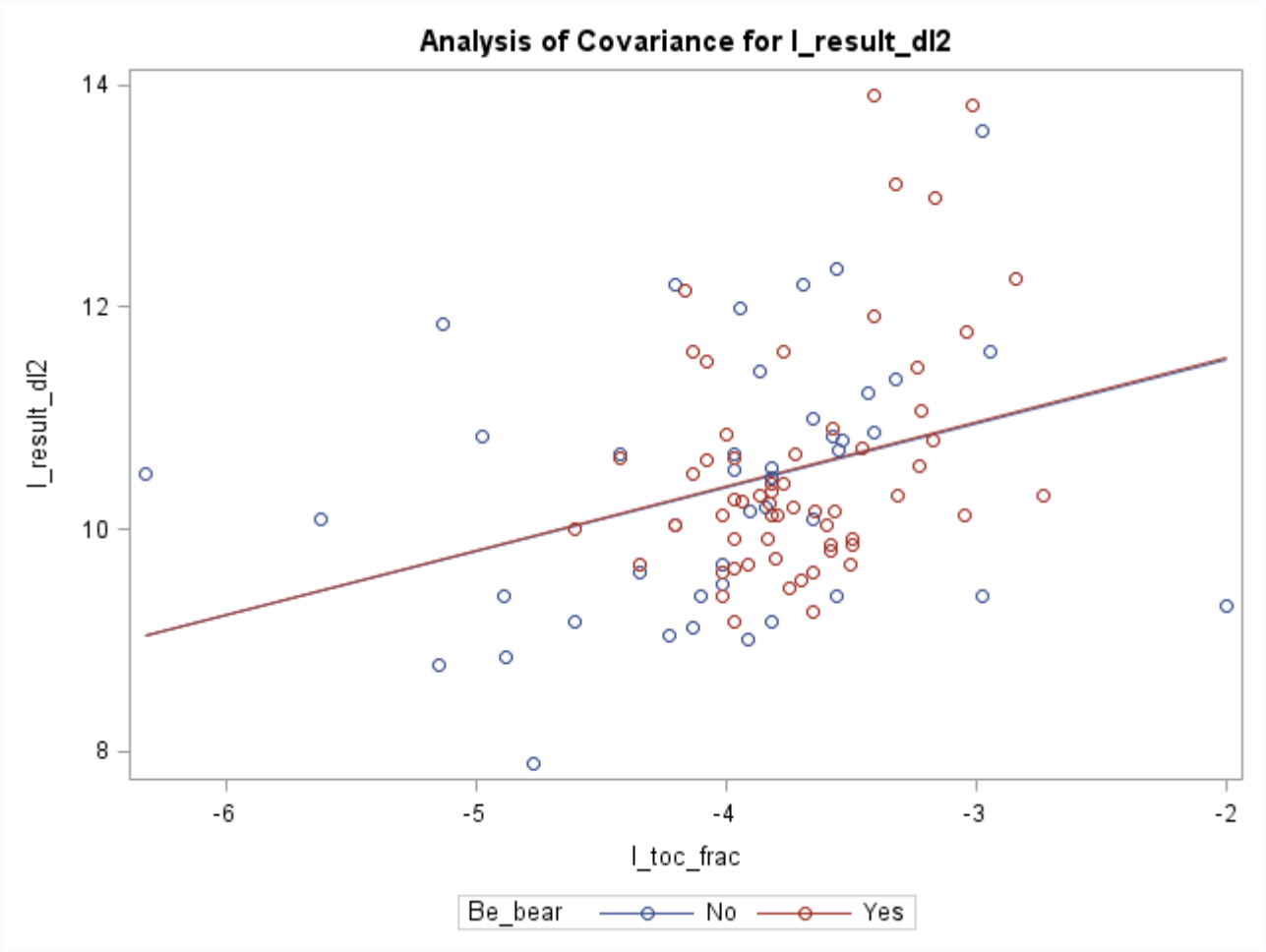
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	11.9917571	5.9958785	5.37	0.0061
Error	101	112.8675911	1.1175009		
Corrected Total	103	124.8593482			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.096042	10.08816	1.057119	10.47881

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	11.98894722	11.98894722	10.73	0.0014
Be_bear	1	0.00280987	0.00280987	0.00	0.9601

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	11.12922158	11.12922158	9.96	0.0021
Be_bear	1	0.00280987	0.00280987	0.00	0.9601


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 1.1175
R-Square 0.096
Adj R-Square 0.0781


Analysis of Covariance for l_result_dl2
14
12
10
8
l_result_dl2
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	10.4724059	0.9601
Yes	10.4833171	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	104

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

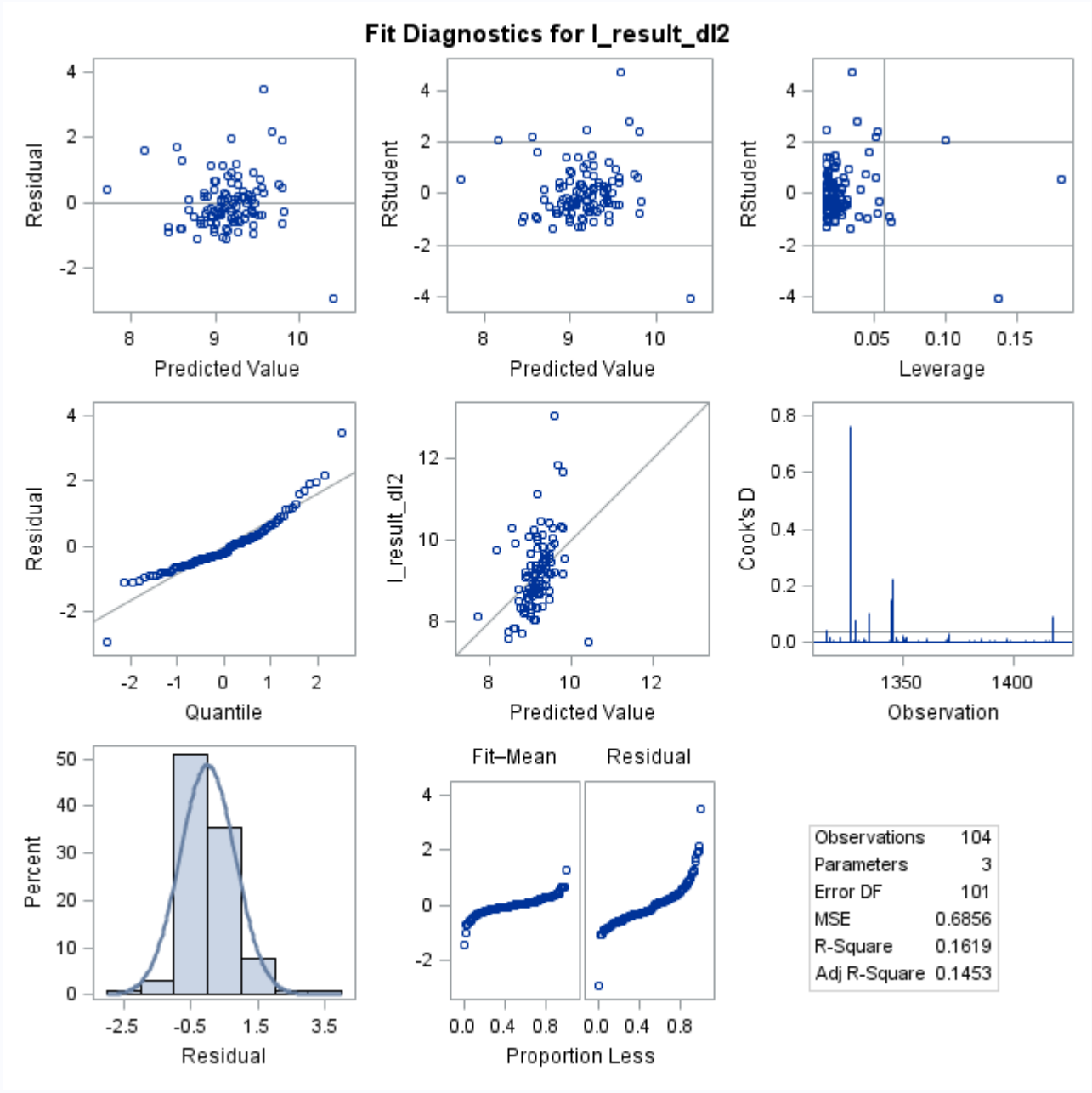
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

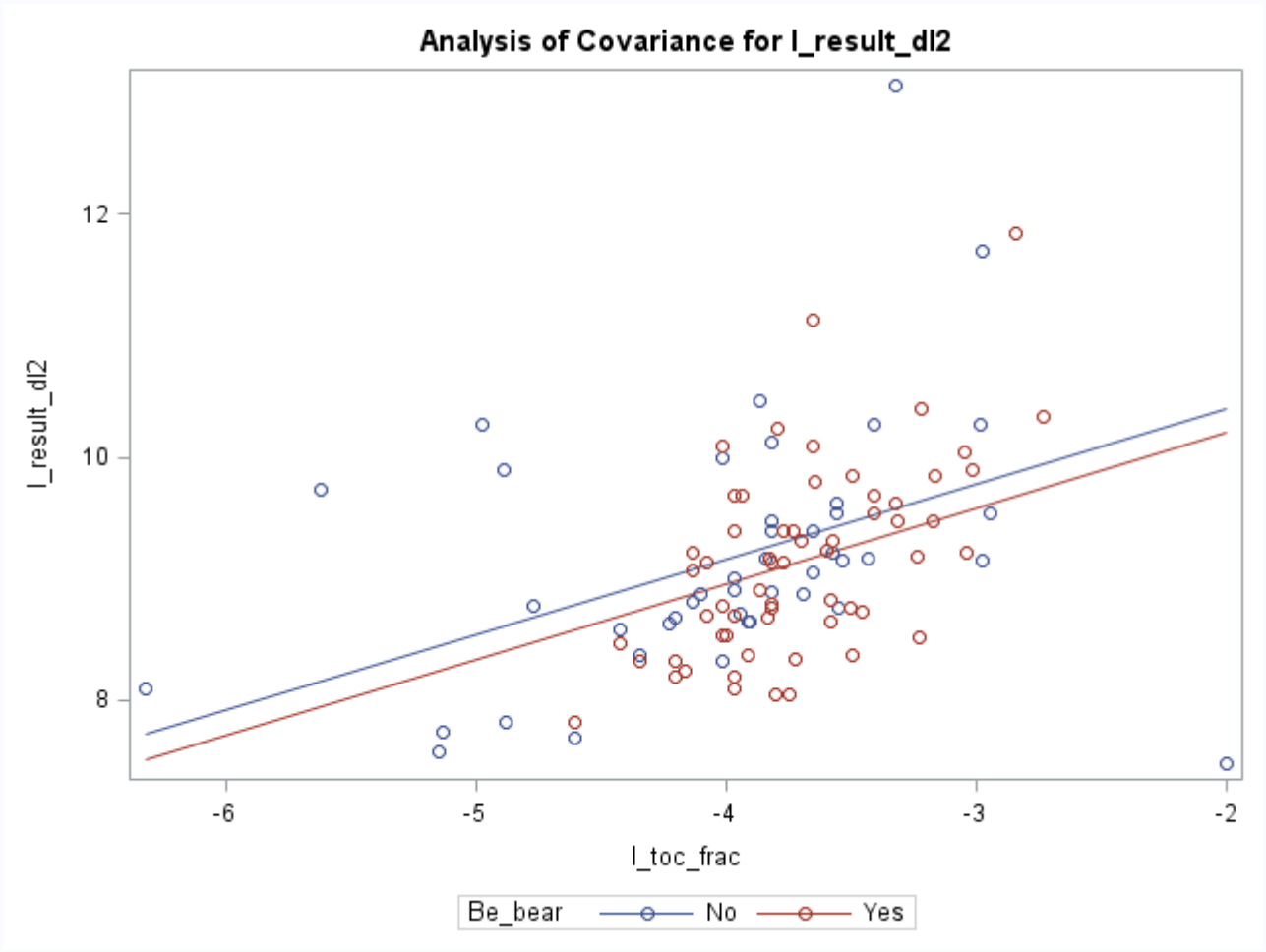
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	13.37859584	6.68929792	9.76	0.0001
Error	101	69.24447120	0.68558882		
Corrected Total	103	82.62306704			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.161923	9.043013	0.828003	9.156272

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	12.42582690	12.42582690	18.12	<.0001
Be_bear	1	0.95276894	0.95276894	1.39	0.2412

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	13.35993705	13.35993705	19.49	<.0001
Be_bear	1	0.95276894	0.95276894	1.39	0.2412


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 0.6856
R-Square 0.1619
Adj R-Square 0.1453


Analysis of Covariance for l_result_dl2
l_result_dl2
12
10
8
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.27114099	0.2412
Yes	9.07203559	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	105

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

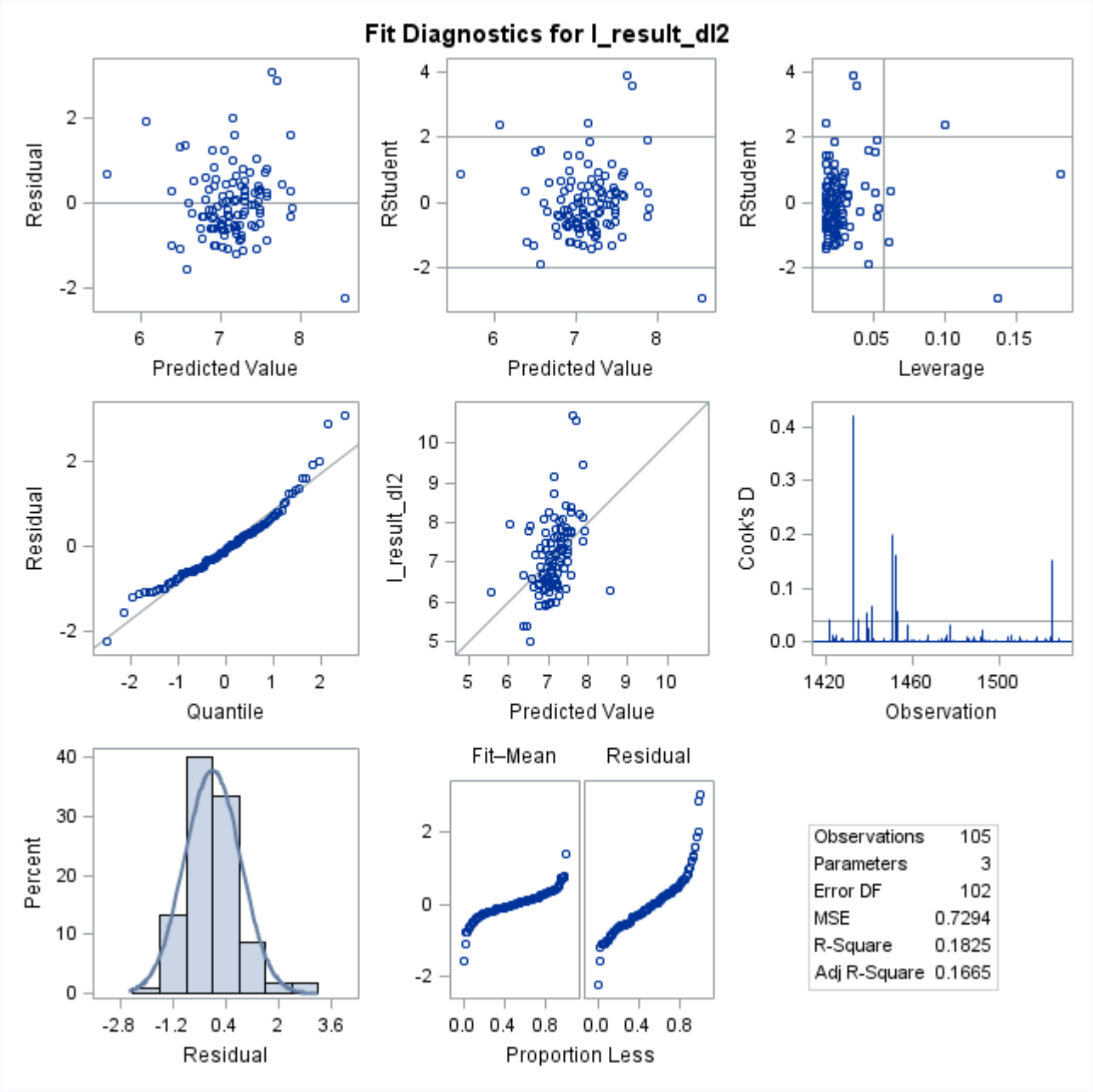
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

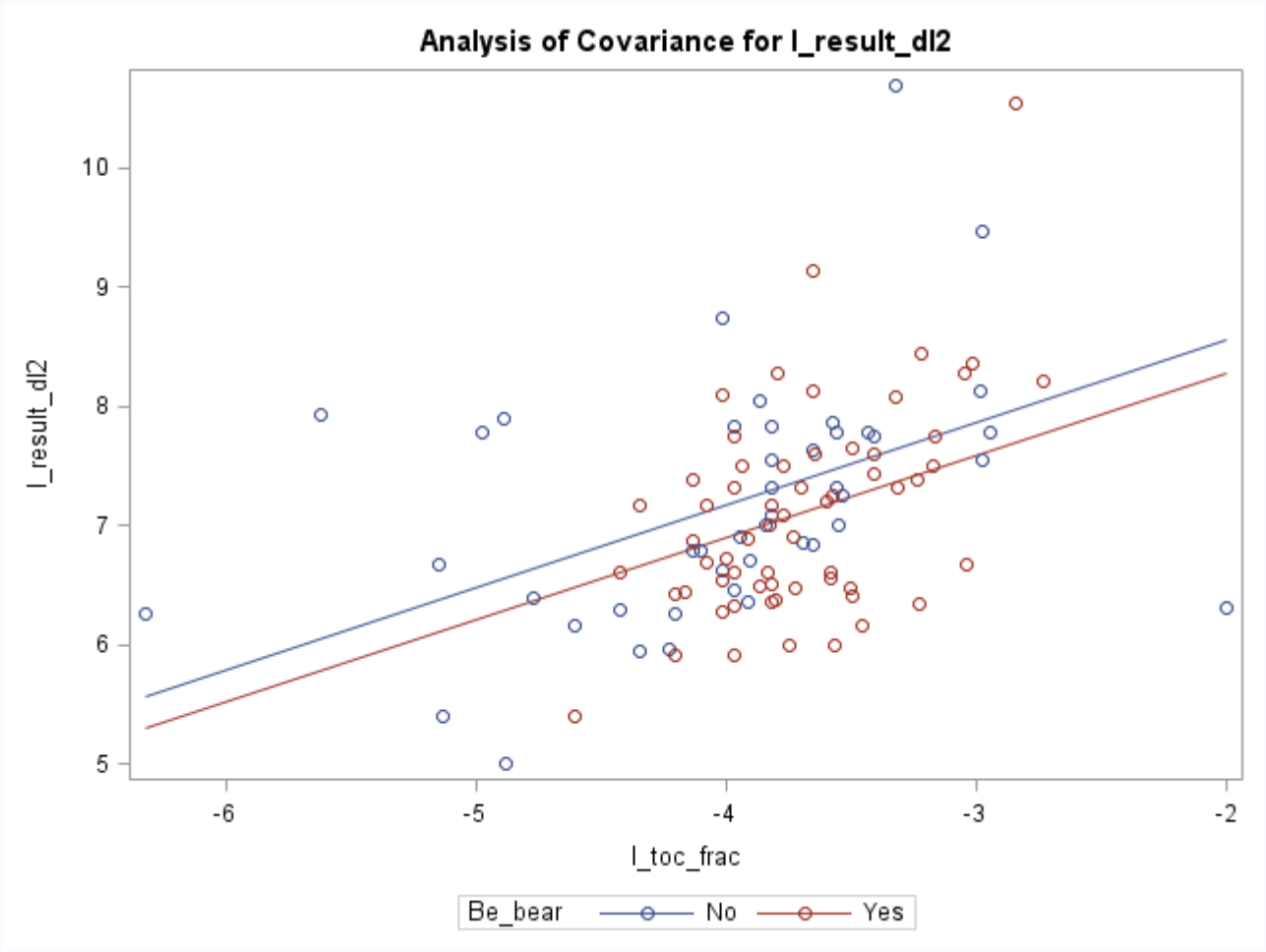
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	16.61146004	8.30573002	11.39	<.0001
Error	102	74.40198798	0.72943125		
Corrected Total	104	91.01344802			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.182517	11.97177	0.854067	7.134010

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	14.80692523	14.80692523	20.30	<.0001
Be_bear	1	1.80453482	1.80453482	2.47	0.1188

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	16.44420515	16.44420515	22.54	<.0001
Be_bear	1	1.80453482	1.80453482	2.47	0.1188


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 105
Parameters 3
Error DF 102
MSE 0.7294
R-Square 0.1825
Adj R-Square 0.1665


Analysis of Covariance for l_result_dl2
l_result_dl2
10
9
8
7
6
5
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	7.29274301	0.1188
Yes	7.01951350	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	105

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

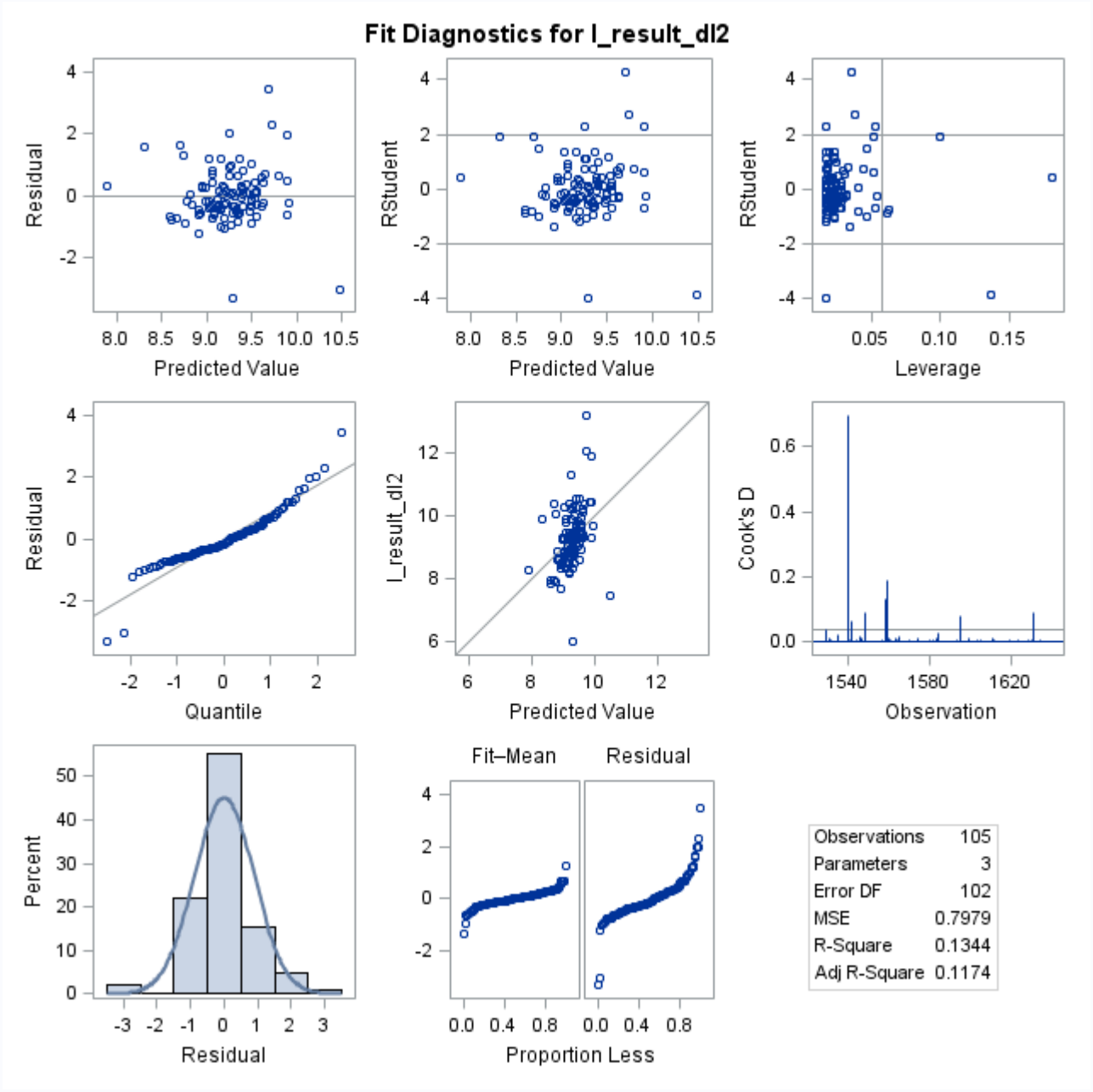
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

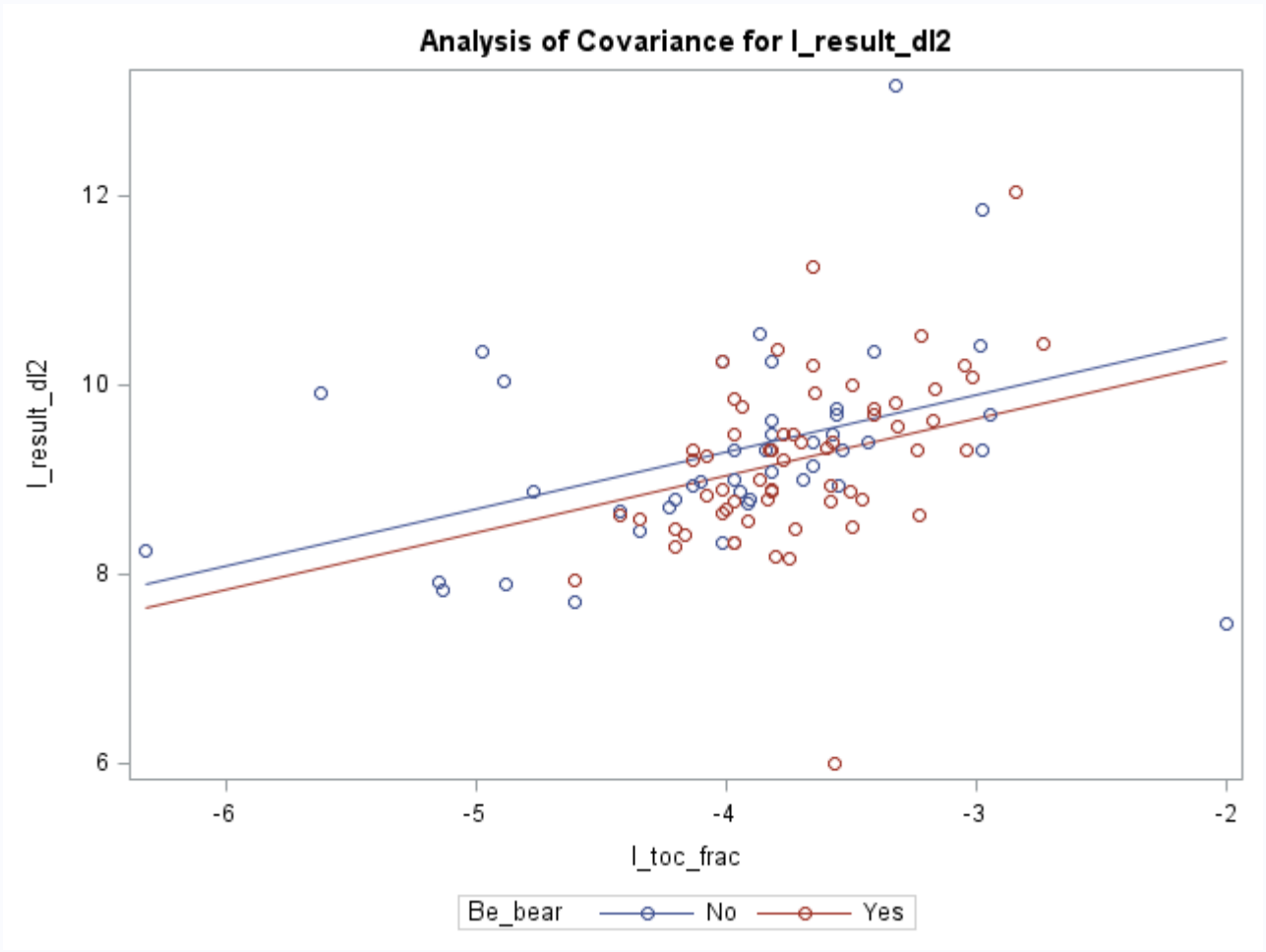
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	12.63598309	6.31799155	7.92	0.0006
Error	102	81.38266166	0.79786923		
Corrected Total	104	94.01864475			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.134399	9.658071	0.893235	9.248589

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	11.12685176	11.12685176	13.95	0.0003
Be_bear	1	1.50913134	1.50913134	1.89	0.1721

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	12.46231614	12.46231614	15.62	0.0001
Be_bear	1	1.50913134	1.50913134	1.89	0.1721


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 105
Parameters 3
Error DF 102
MSE 0.7979
R-Square 0.1344
Adj R-Square 0.1174


Analysis of Covariance for l_result_dl2
l_result_dl2
12
10
8
6
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.39374919	0.1721
Yes	9.14388243	

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	104

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

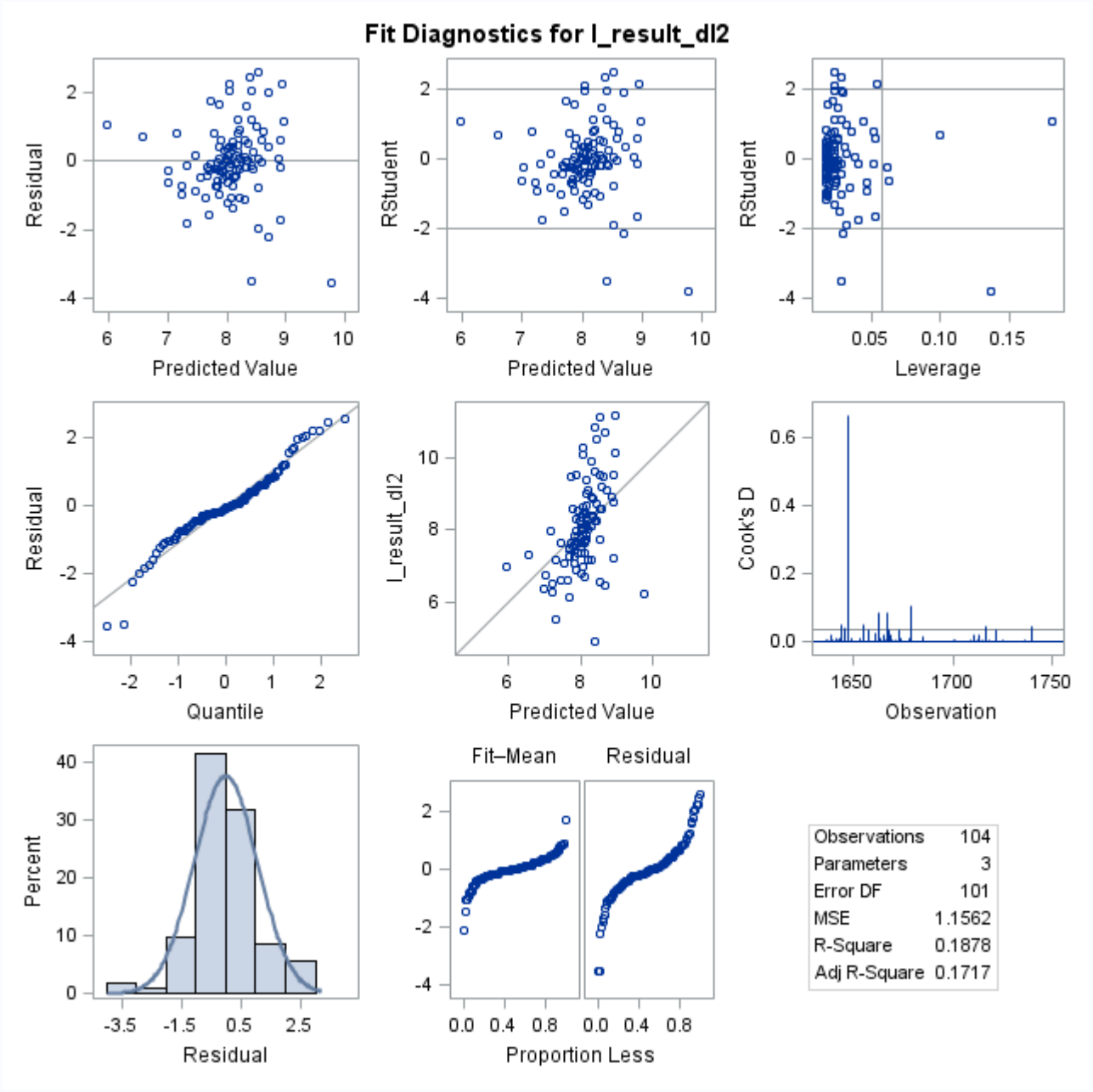
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

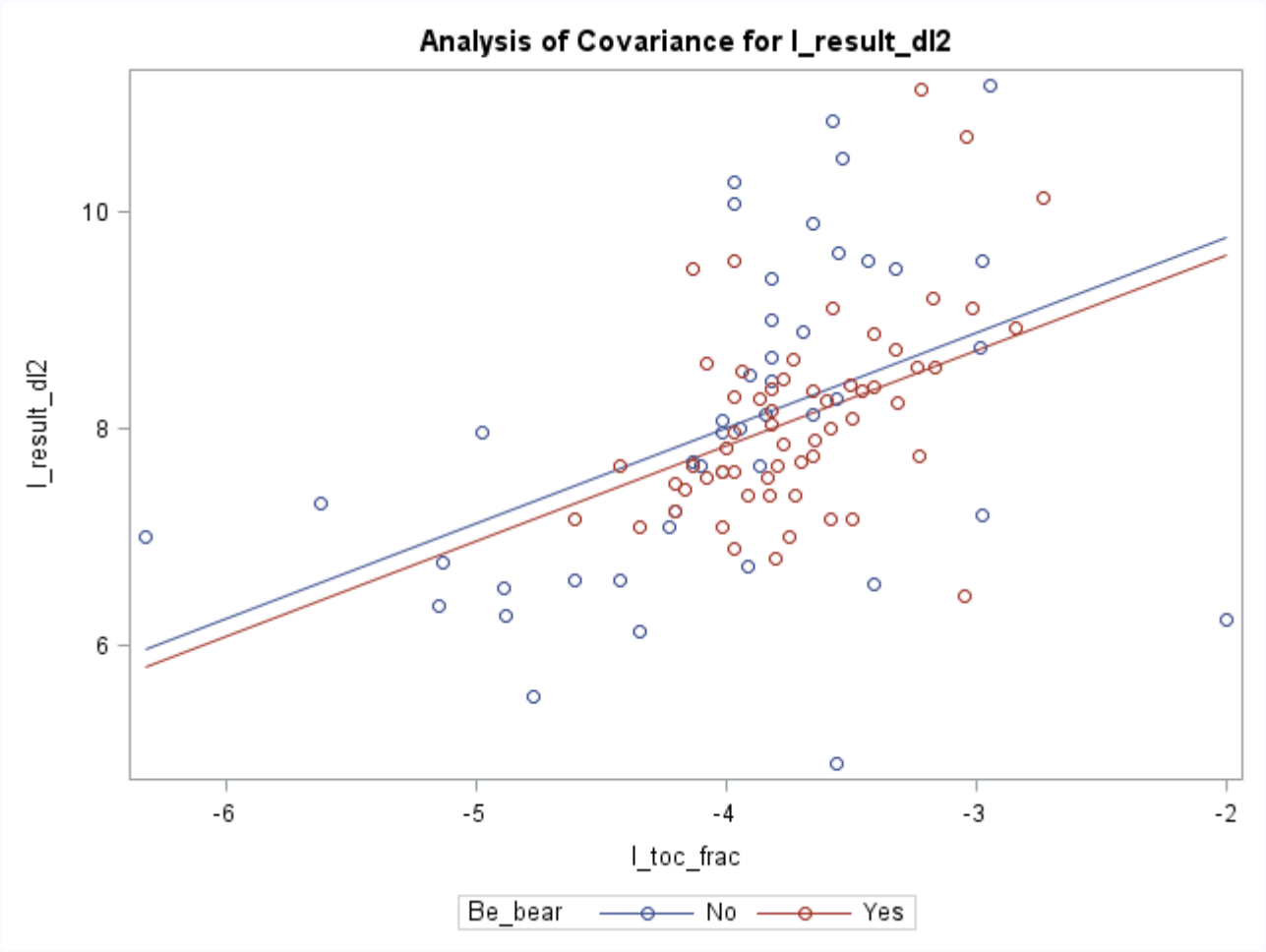
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	26.9999327	13.4999663	11.68	<.0001
Error	101	116.7723275	1.1561617		
Corrected Total	103	143.7722602			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.187797	13.32075	1.075250	8.071991

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	26.34094598	26.34094598	22.78	<.0001
Be_bear	1	0.65898669	0.65898669	0.57	0.4520

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	26.84463789	26.84463789	23.22	<.0001
Be_bear	1	0.65898669	0.65898669	0.57	0.4520


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 1.1562
R-Square 0.1878
Adj R-Square 0.1717


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	8.16752243	0.4520
Yes	8.00193492	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	107
Number of Observations Used	106

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure

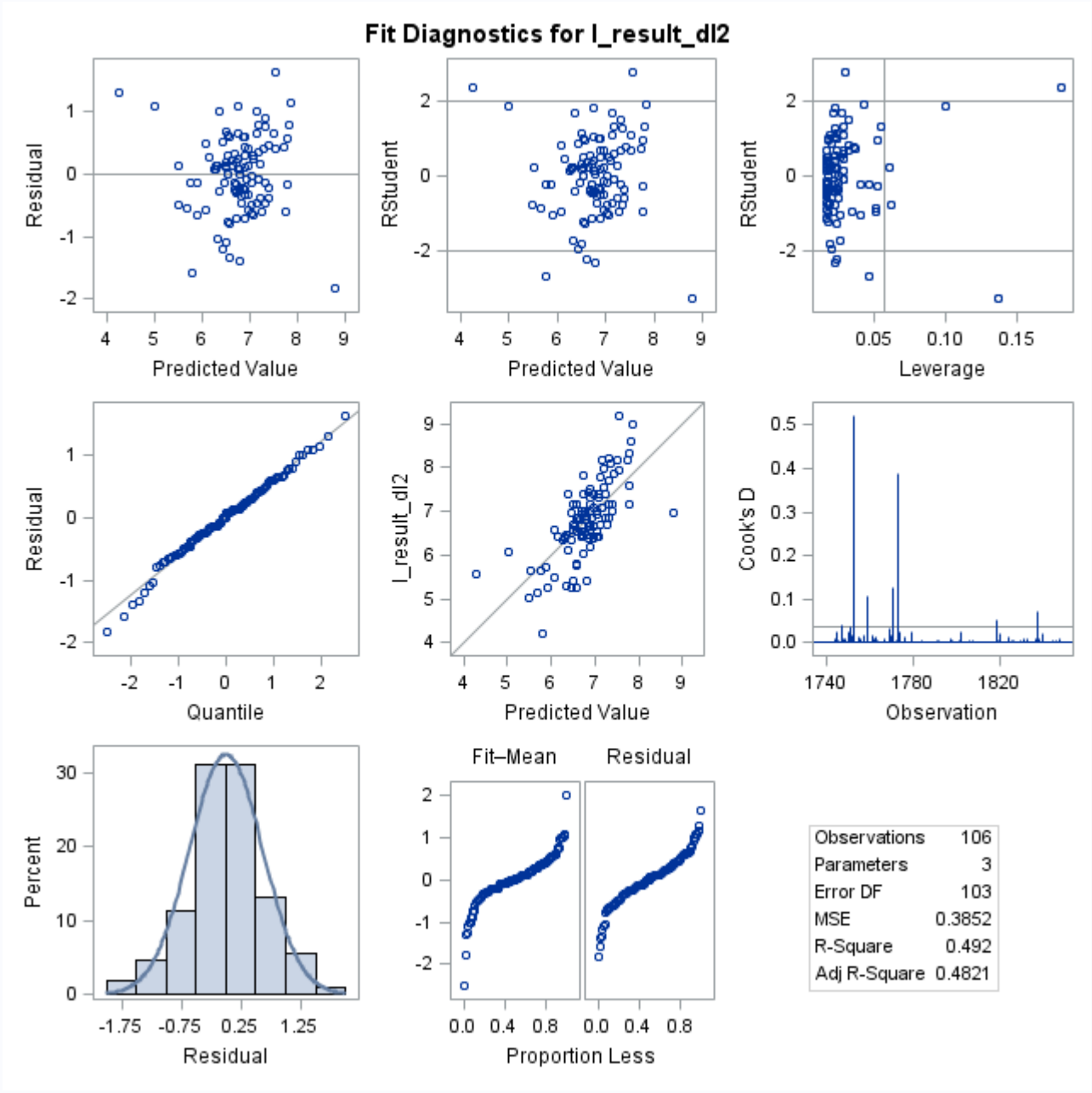
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

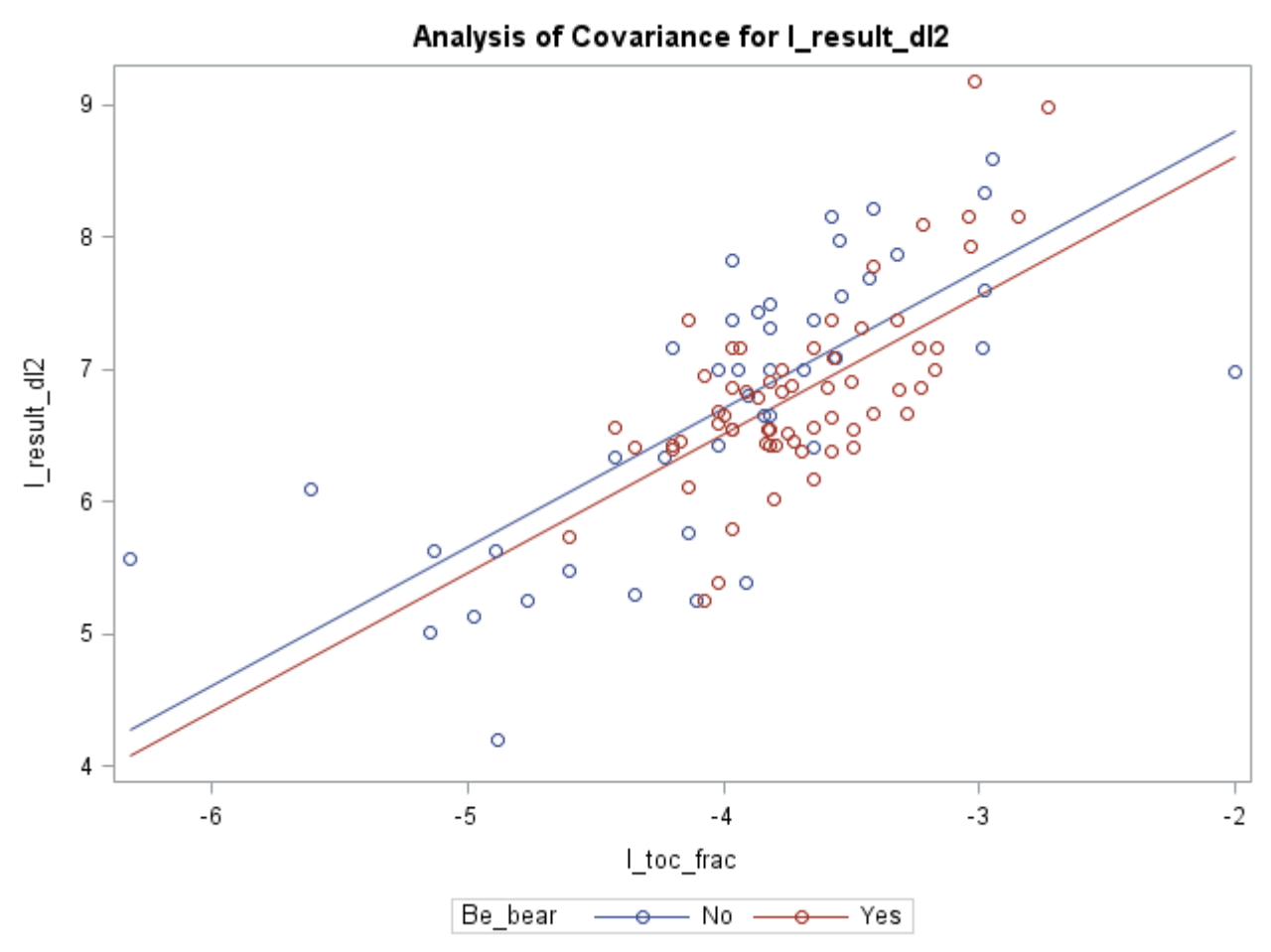
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	38.41887304	19.20943652	49.87	<.0001
Error	103	39.67180572	0.38516316		
Corrected Total	105	78.09067877			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.491978	9.146128	0.620615	6.785551

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	37.58763636	37.58763636	97.59	<.0001
Be_bear	1	0.83123668	0.83123668	2.16	0.1449

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	38.08421578	38.08421578	98.88	<.0001
Be_bear	1	0.83123668	0.83123668	2.16	0.1449


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.3852
R-Square 0.492
Adj R-Square 0.4821


Analysis of Covariance for l_result_dl2
l_result_dl2
9
8
7
6
5
4
-6
-5
-4
-3
-2
l_toc_frac
Be_bear
No
Yes

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.89380024	0.1449
Yes	6.70872879	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 106

Number of Observations Used 106

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

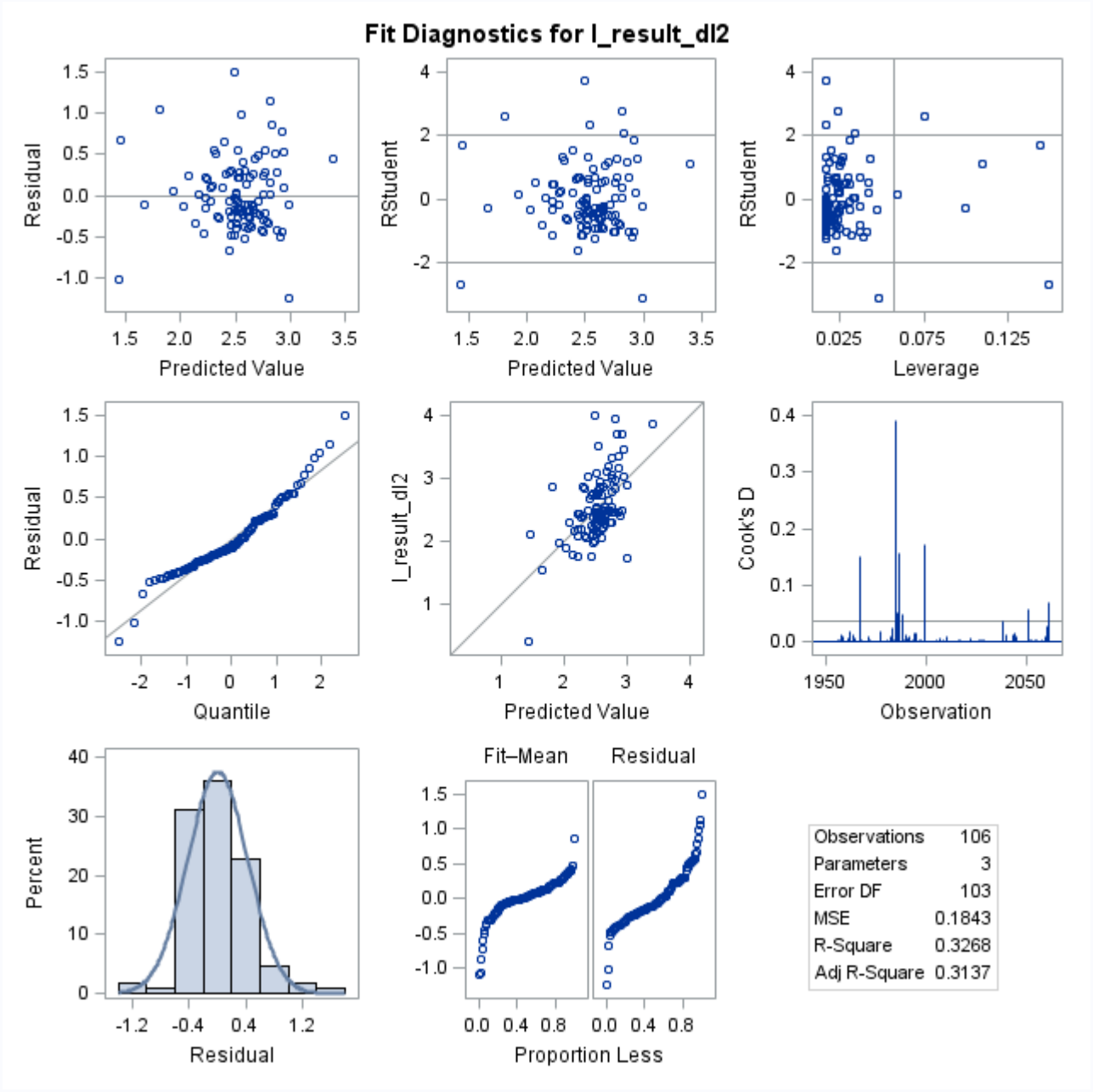
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

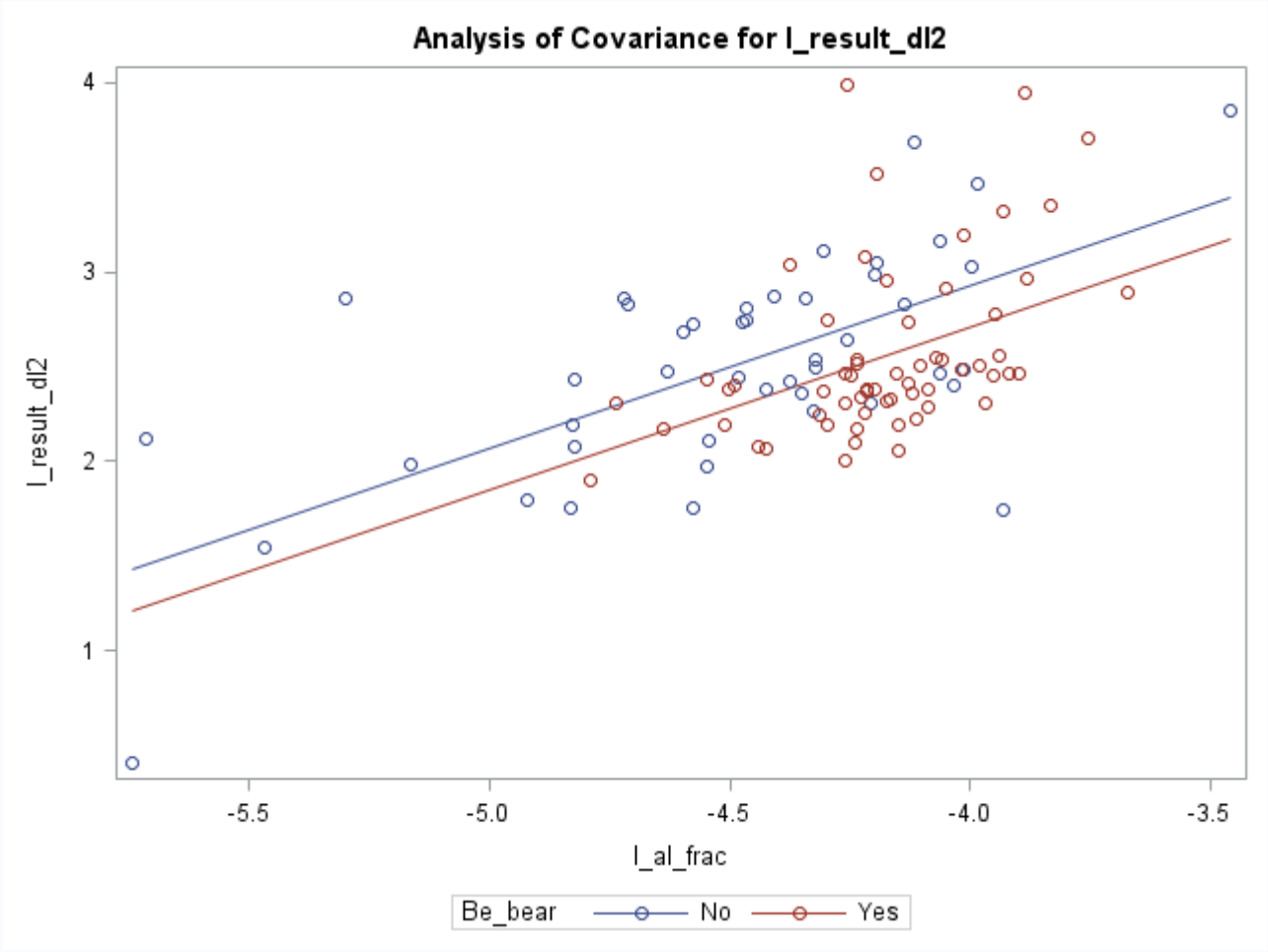
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.21353762	4.60676881	25.00	<.0001
Error	103	18.98179738	0.18428929		
Corrected Total	105	28.19533500			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.326775	16.93105	0.429289	2.535515

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	8.17632052	8.17632052	44.37	<.0001
Be_bear	1	1.03721710	1.03721710	5.63	0.0195

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	9.14409026	9.14409026	49.62	<.0001
Be_bear	1	1.03721710	1.03721710	5.63	0.0195


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.1843
R-Square 0.3268
Adj R-Square 0.3137


Analysis of Covariance for l_result_dl2
l_result_dl2
4
3
2
1
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	2.66216691	0.0195
Yes	2.44208330	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

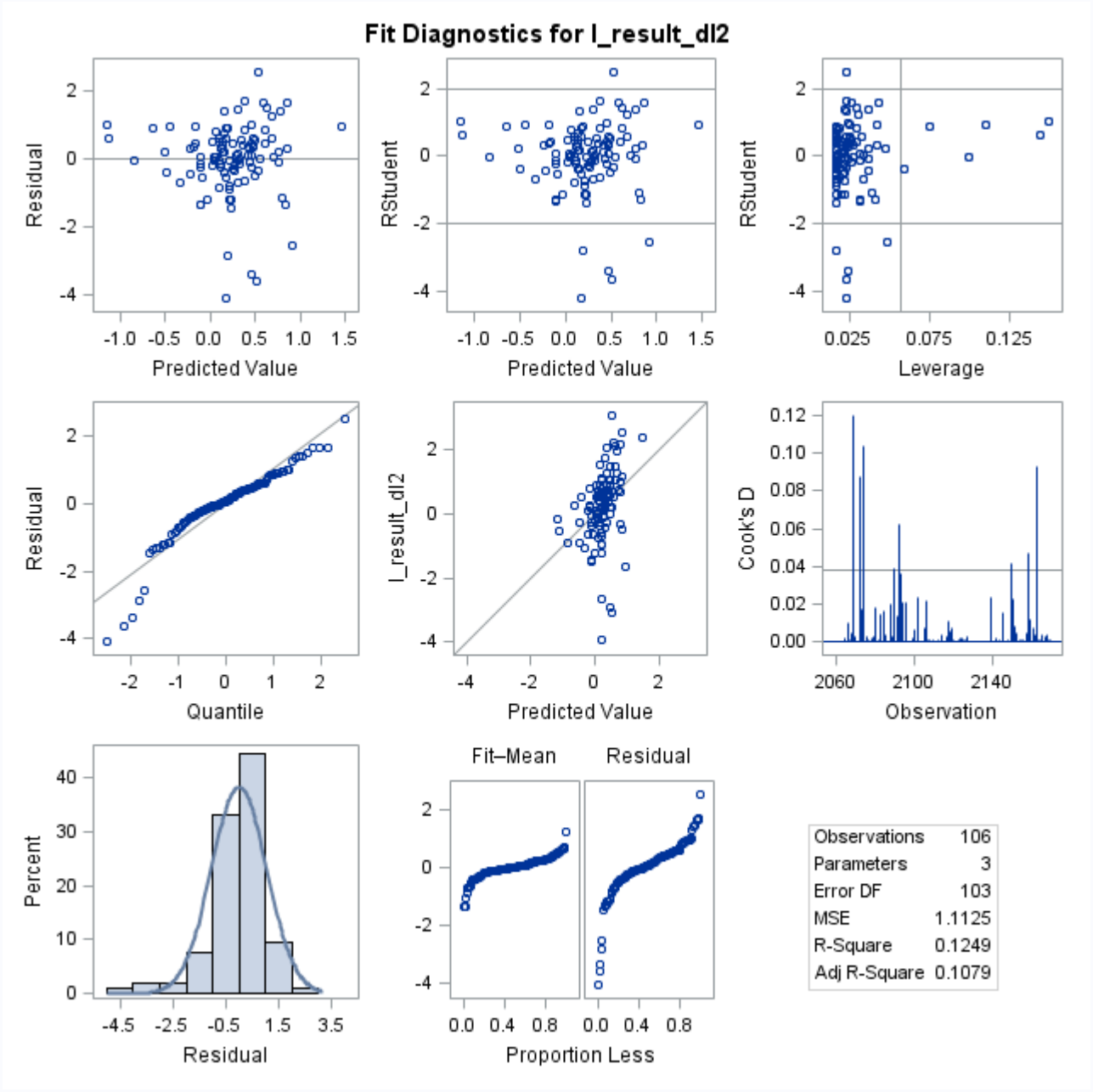
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

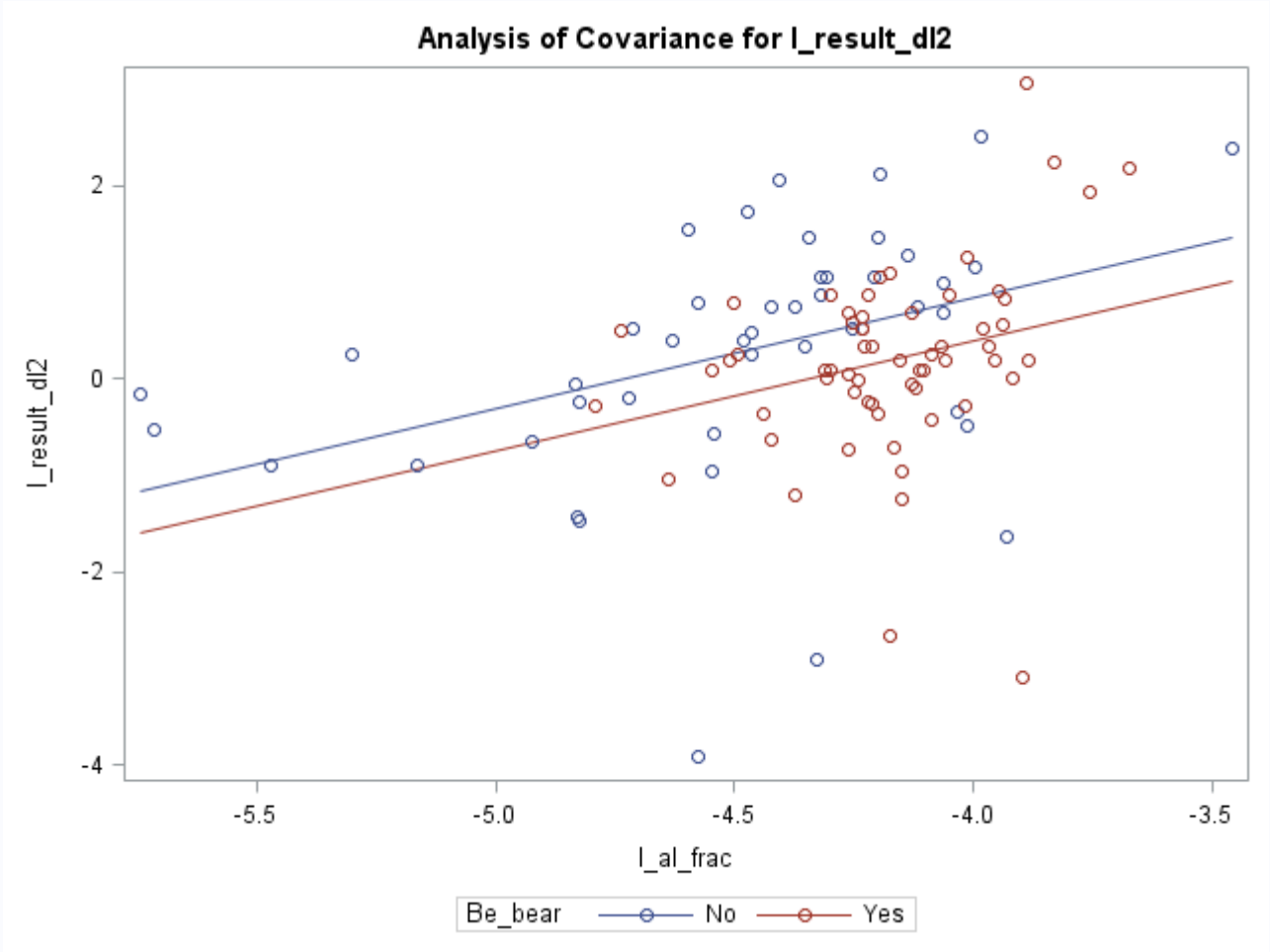
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	16.3534886	8.1767443	7.35	0.0010
Error	103	114.5872579	1.1124976		
Corrected Total	105	130.9407464			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.124892	463.4297	1.054750	0.227597

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	12.13359573	12.13359573	10.91	0.0013
Be_bear	1	4.21989284	4.21989284	3.79	0.0542

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	16.17809490	16.17809490	14.54	0.0002
Be_bear	1	4.21989284	4.21989284	3.79	0.0542


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 1.1125
R-Square 0.1249
Adj R-Square 0.1079


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-4
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.48305927	0.0542
Yes	0.03914045	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

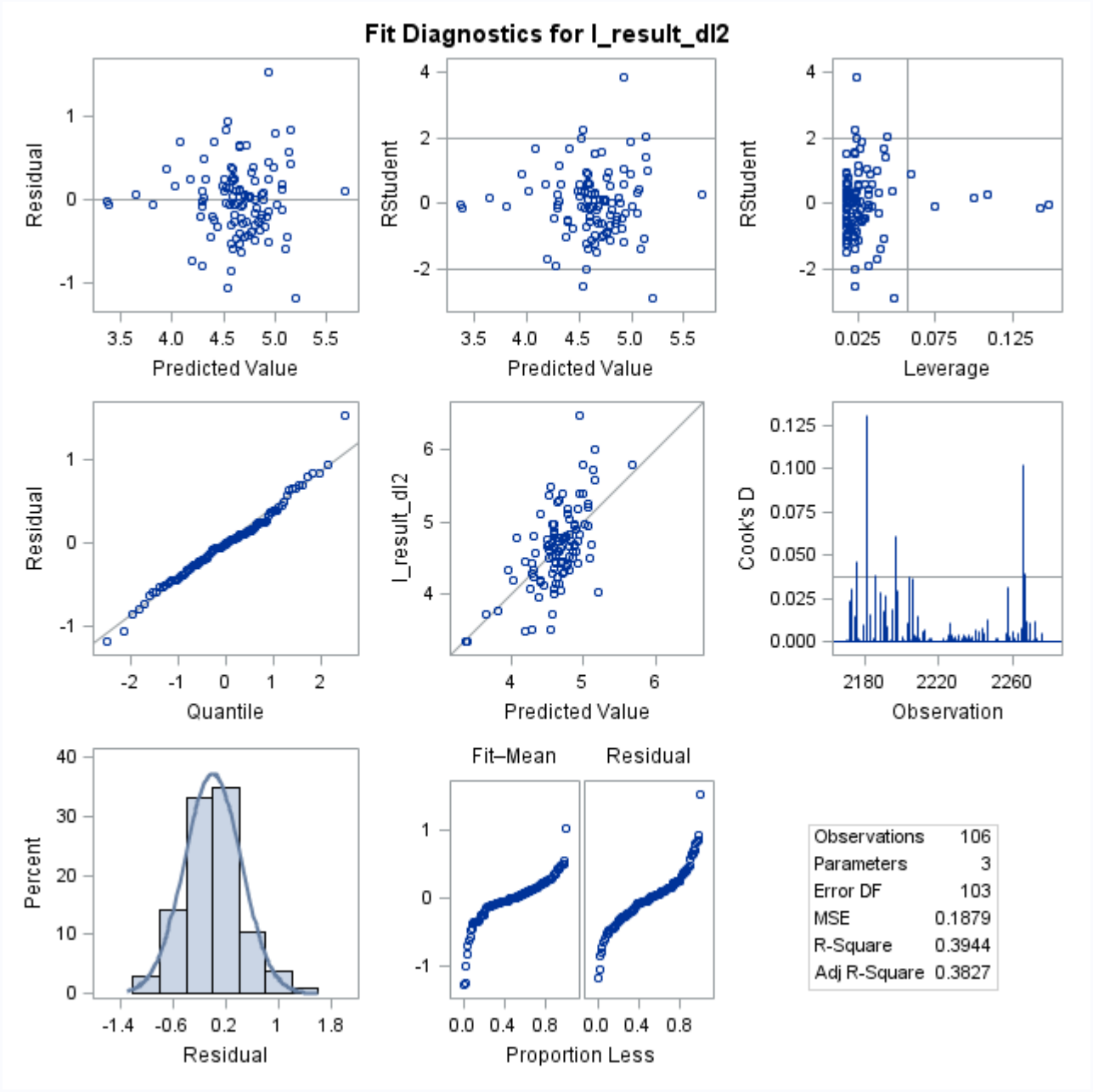
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

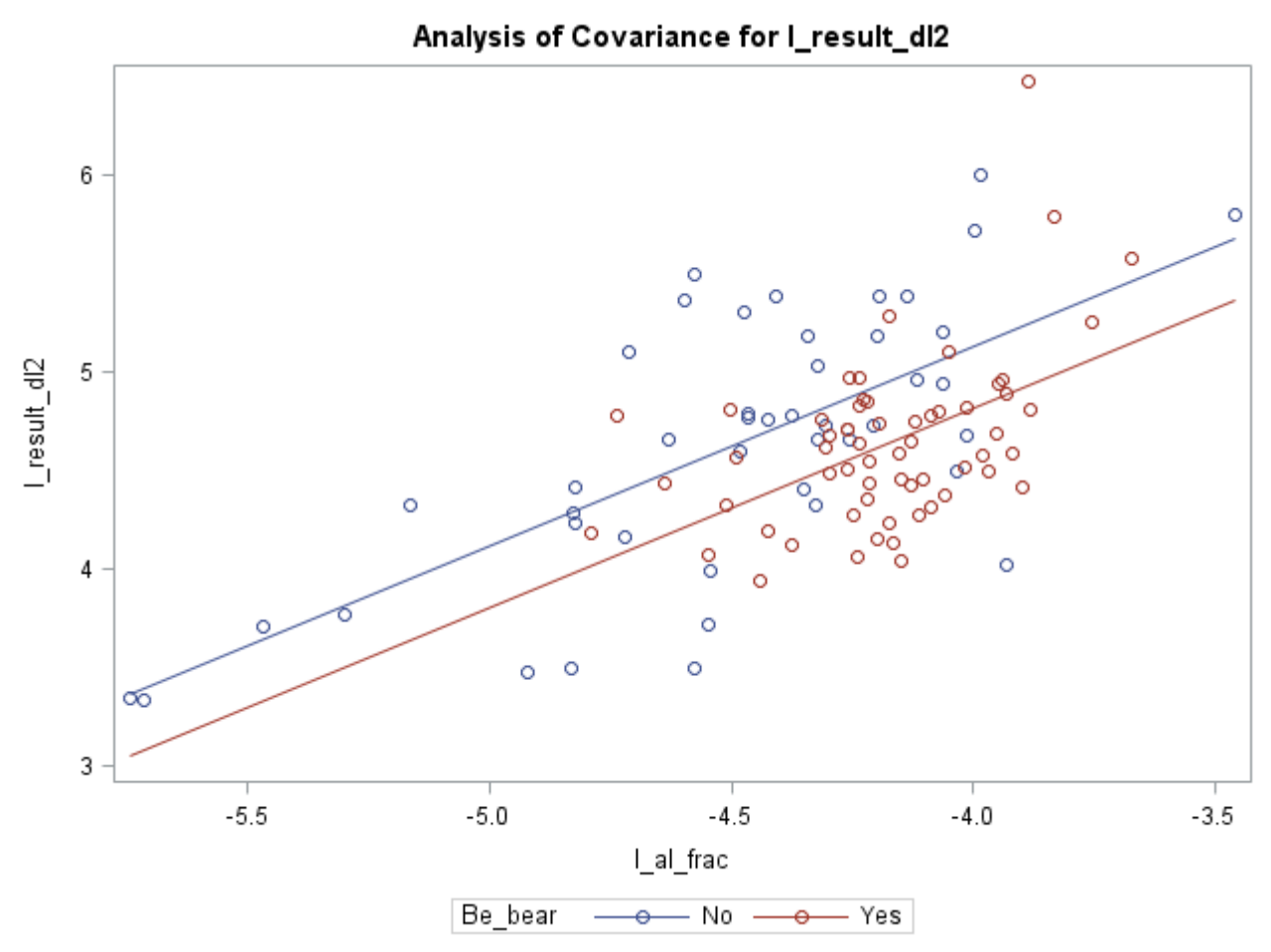
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	12.60555162	6.30277581	33.54	<.0001
Error	103	19.35371174	0.18790011		
Corrected Total	105	31.95926336			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.394426	9.353586	0.433474	4.634313

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	10.59876920	10.59876920	56.41	<.0001
Be_bear	1	2.00678243	2.00678243	10.68	0.0015

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	12.60116016	12.60116016	67.06	<.0001
Be_bear	1	2.00678243	2.00678243	10.68	0.0015


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.1879
R-Square 0.3944
Adj R-Square 0.3827


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	4.81048123	0.0015
Yes	4.50435327	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 104

Number of Observations Used 104

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

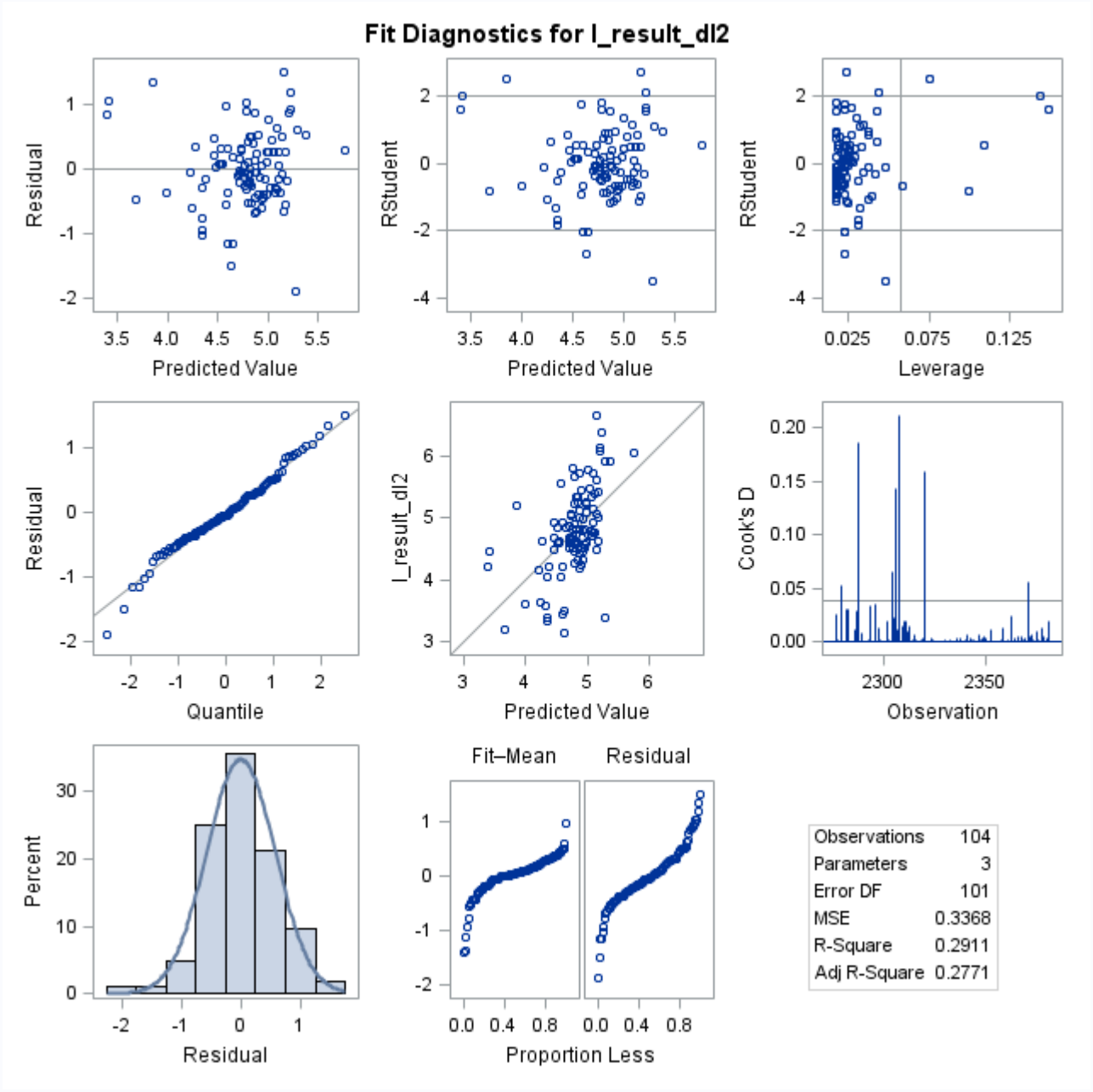
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

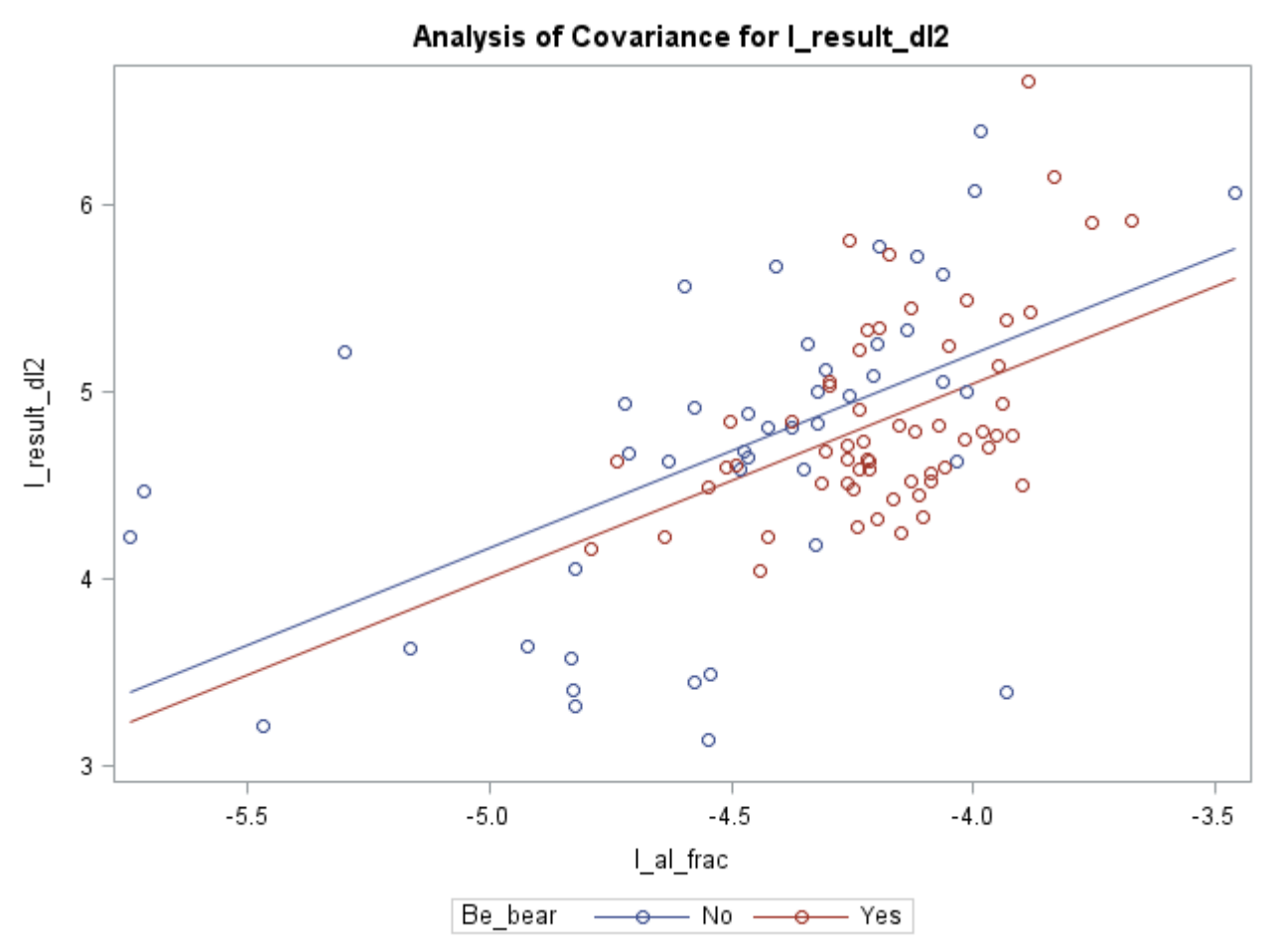
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	13.96918125	6.98459063	20.74	<.0001
Error	101	34.01752767	0.33680720		
Corrected Total	103	47.98670893			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.291105	12.13220	0.580351	4.783561

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	13.42558785	13.42558785	39.86	<.0001
Be_bear	1	0.54359340	0.54359340	1.61	0.2069

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	13.26089440	13.26089440	39.37	<.0001
Be_bear	1	0.54359340	0.54359340	1.61	0.2069


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 104
Parameters 3
Error DF 101
MSE 0.3368
R-Square 0.2911
Adj R-Square 0.2771


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.87445533	0.2069
Yes	4.71423397	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

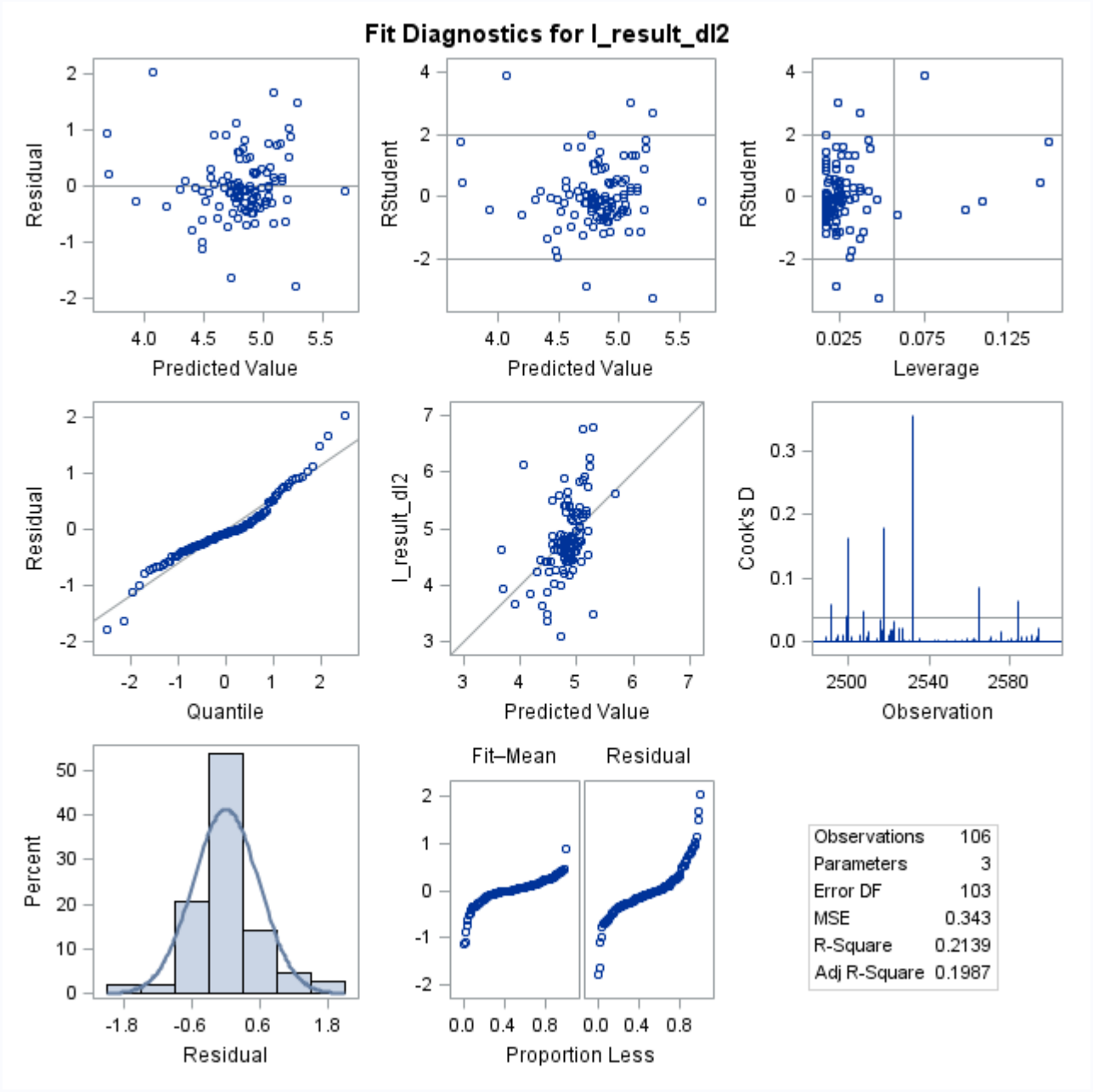
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

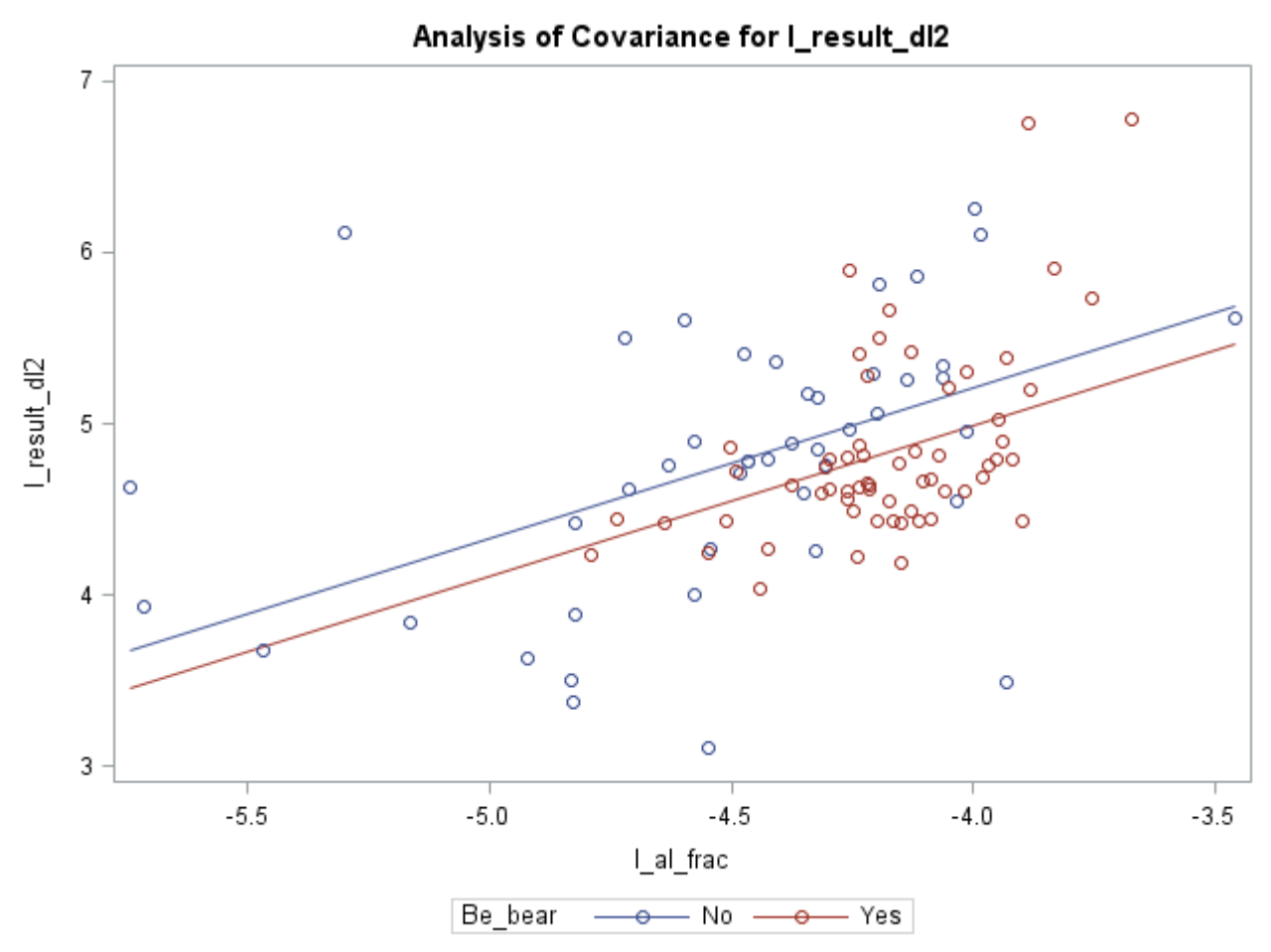
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.61451961	4.80725981	14.02	<.0001
Error	103	35.32717750	0.34298231		
Corrected Total	105	44.94169711			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.213933	12.16932	0.585647	4.812485

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	8.59278828	8.59278828	25.05	<.0001
Be_bear	1	1.02173133	1.02173133	2.98	0.0874

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	9.52428573	9.52428573	27.77	<.0001
Be_bear	1	1.02173133	1.02173133	2.98	0.0874


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.343
R-Square 0.2139
Adj R-Square 0.1987


Analysis of Covariance for l_result_dl2
7
6
5
4
3
l_result_dl2
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	4.93818774	0.0874
Yes	4.71975325	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

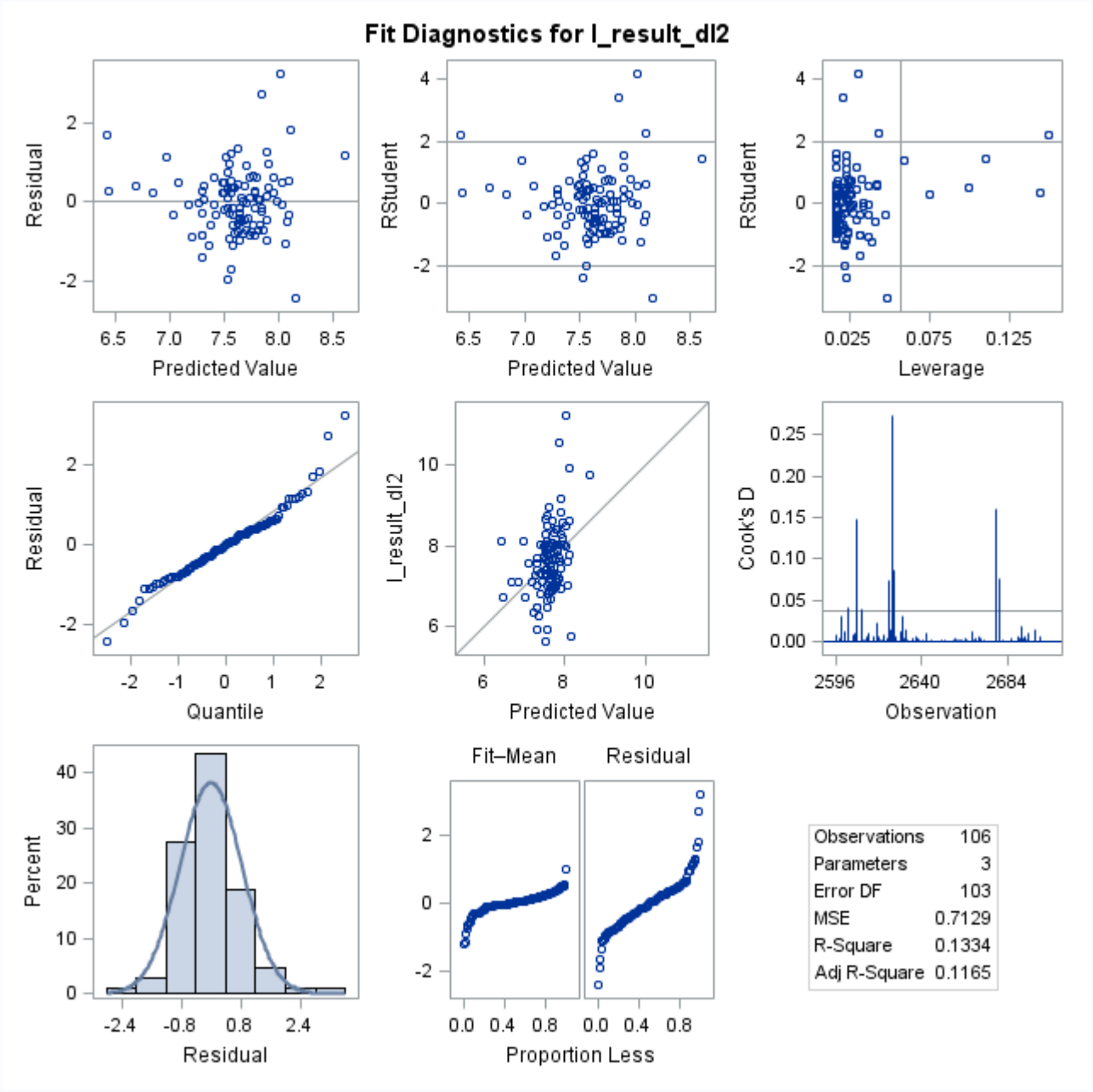
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

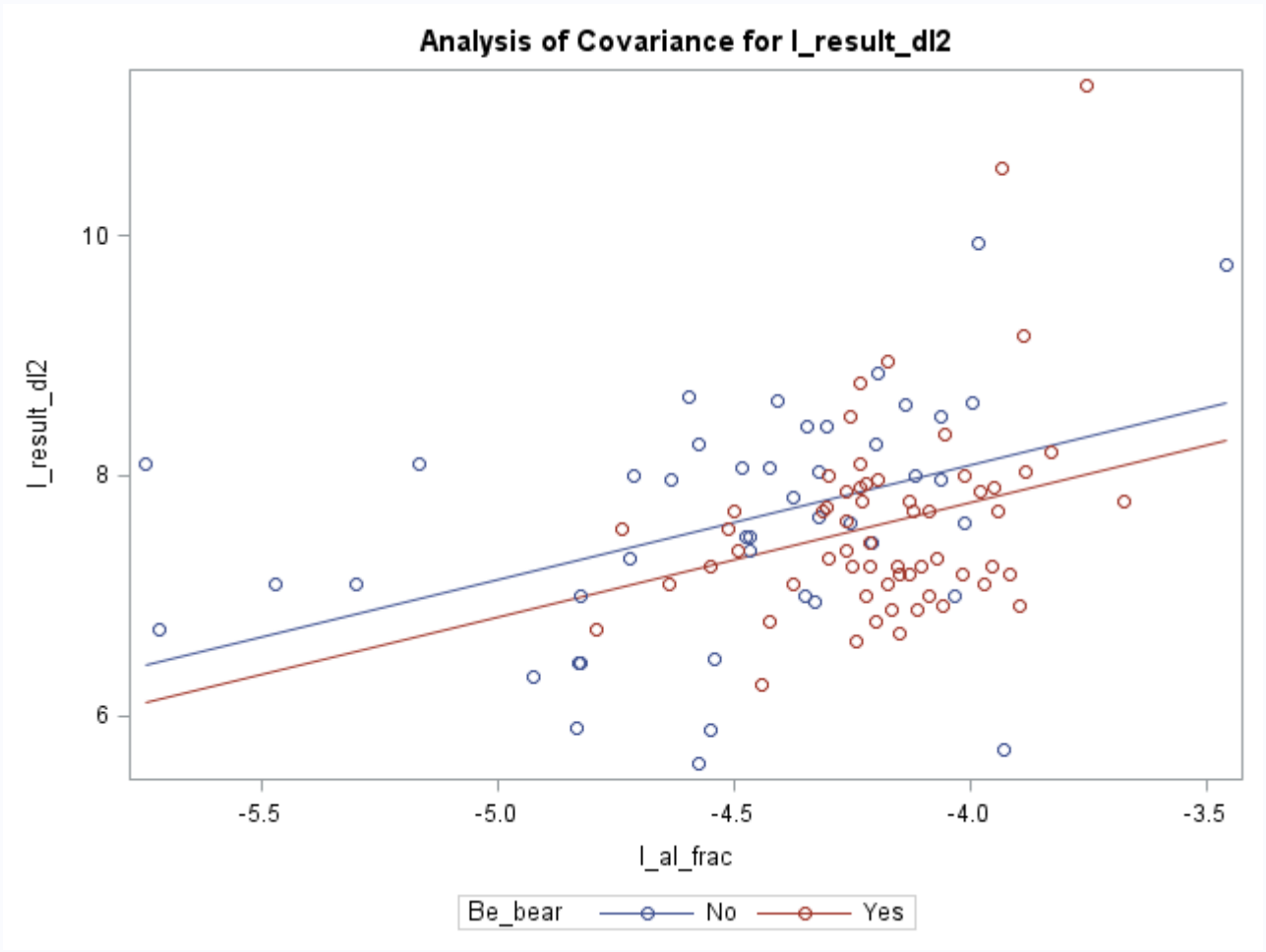
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	11.30048273	5.65024136	7.93	0.0006
Error	103	73.42725616	0.71288598		
Corrected Total	105	84.72773889			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.133374	11.08927	0.844326	7.613898

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	9.31143220	9.31143220	13.06	0.0005
Be_bear	1	1.98905052	1.98905052	2.79	0.0979

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	11.30031511	11.30031511	15.85	0.0001
Be_bear	1	1.98905052	1.98905052	2.79	0.0979


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.7129
R-Square 0.1334
Adj R-Square 0.1165


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	7.78928553	0.0979
Yes	7.48451304	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

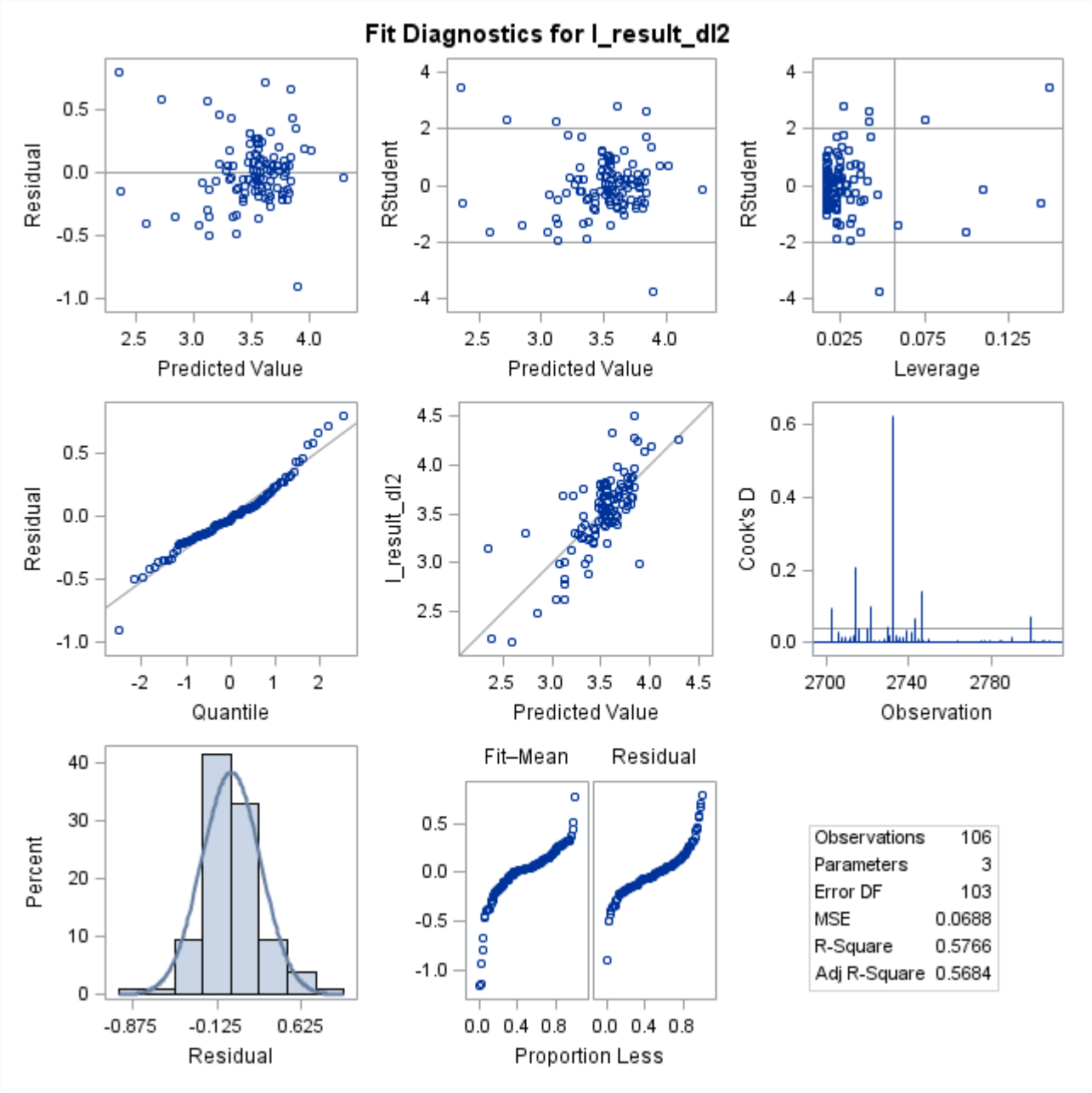
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

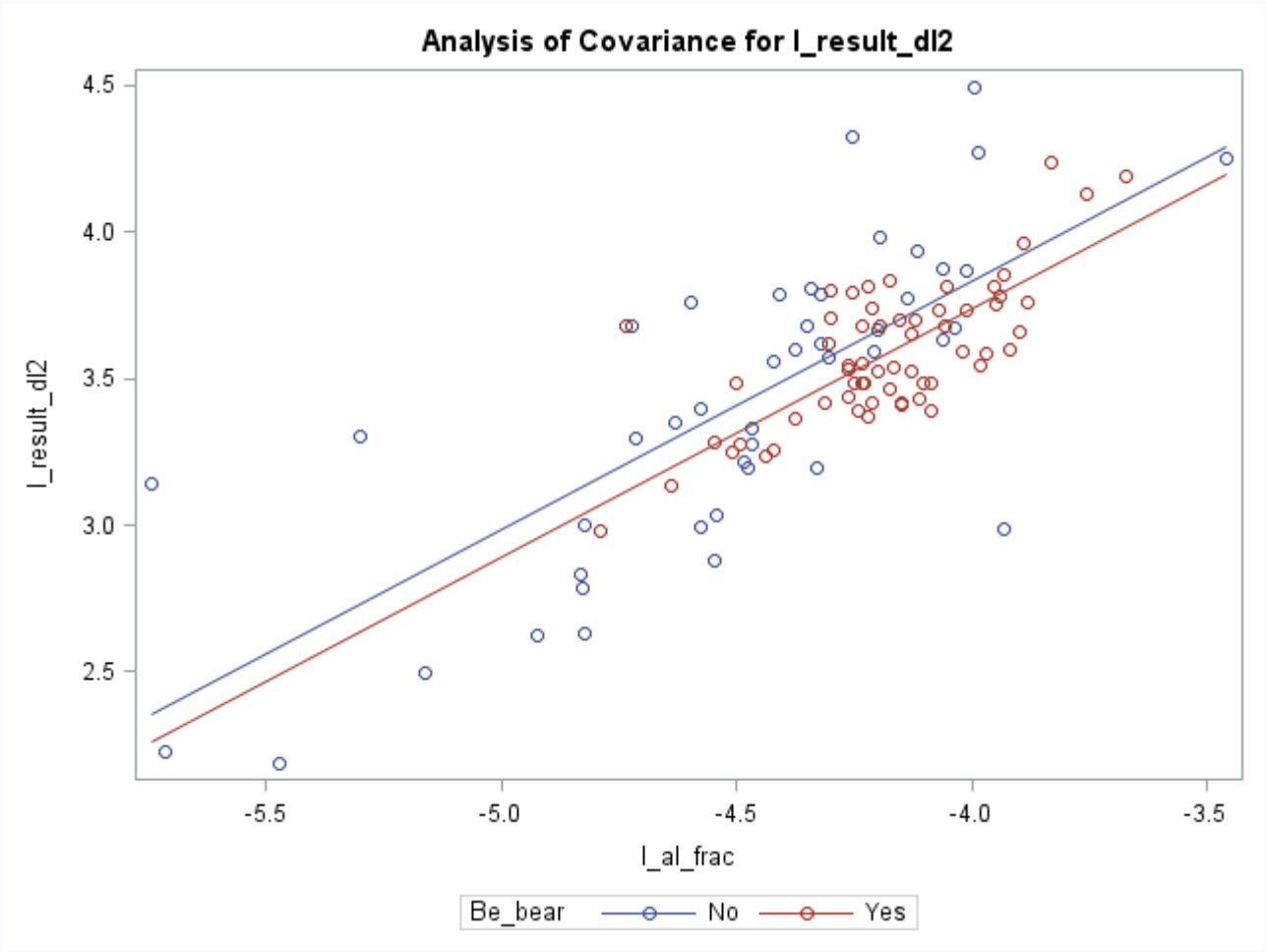
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.65010713	4.82505357	70.14	<.0001
Error	103	7.08508096	0.06878719		
Corrected Total	105	16.73518809			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.576636	7.464873	0.262273	3.513430

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	9.46623401	9.46623401	137.62	<.0001
Be_bear	1	0.18387312	0.18387312	2.67	0.1051

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	8.85780250	8.85780250	128.77	<.0001
Be_bear	1	0.18387312	0.18387312	2.67	0.1051


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.0688
R-Square 0.5766
Adj R-Square 0.5684


Analysis of Covariance for l_result_dl2
4.5
4.0
3.5
3.0
2.5
l_result_dl2
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.56675600	0.1051
Yes	3.47409180	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	97
Number of Observations Used	97

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

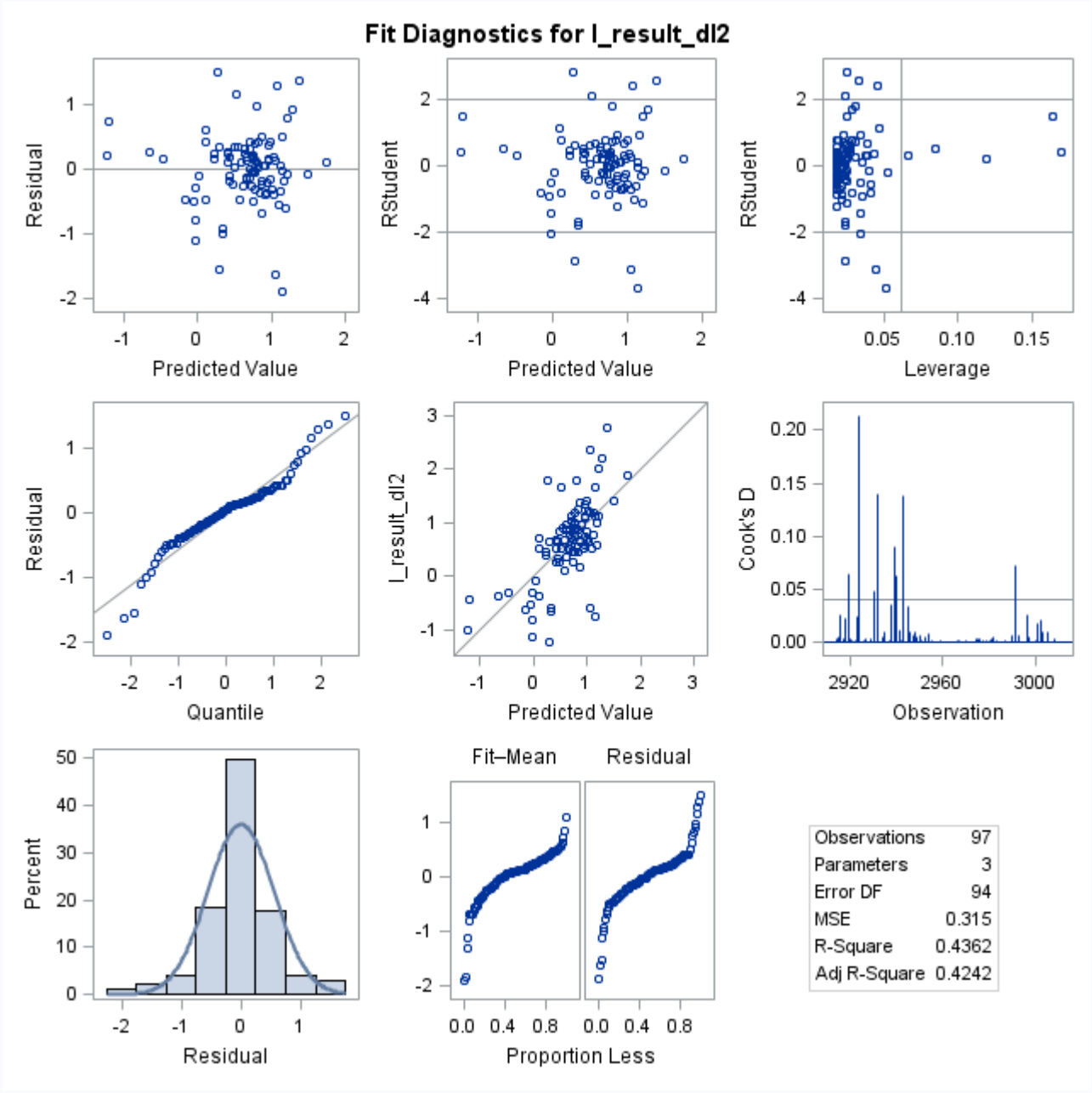
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

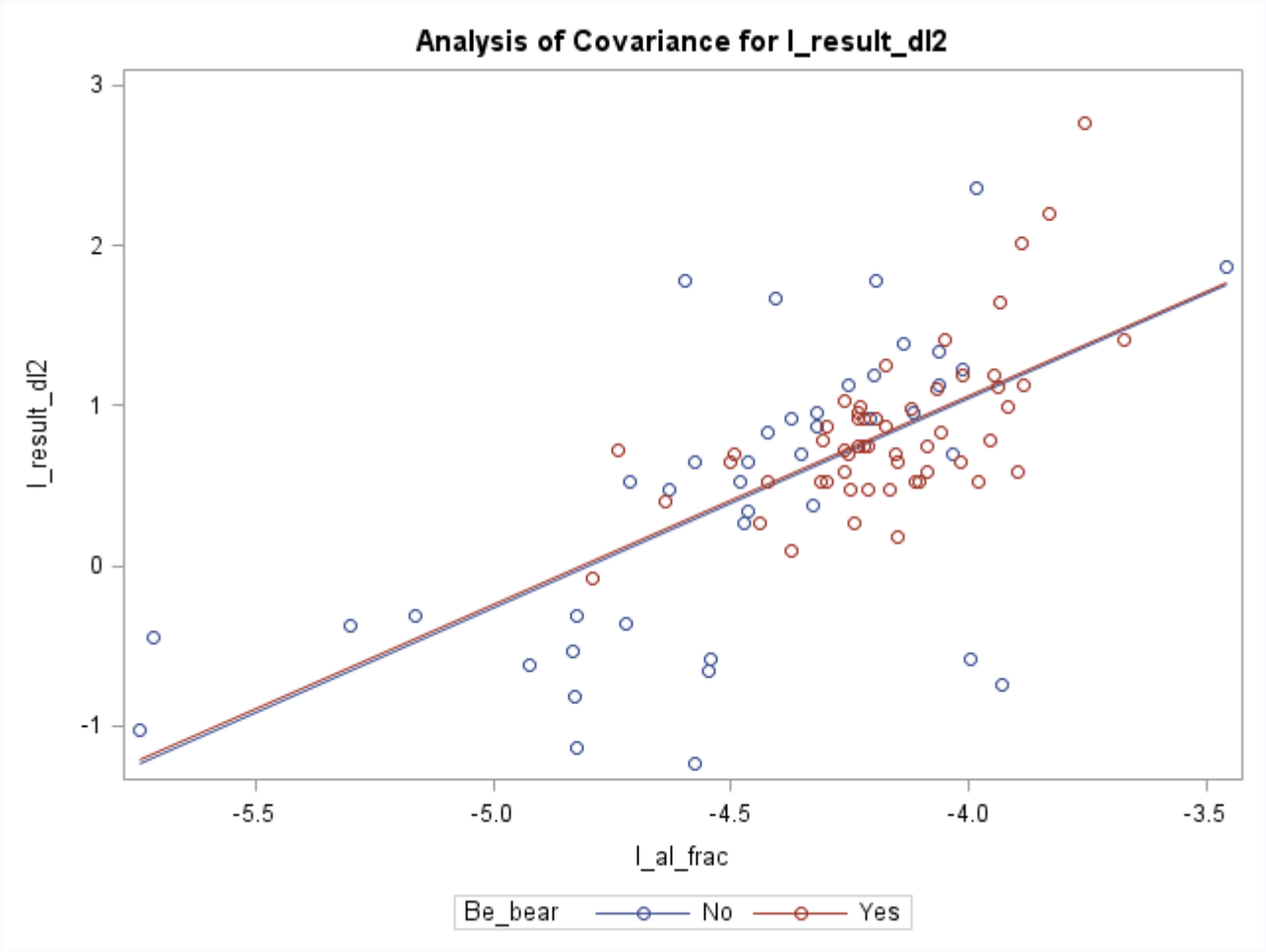
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	22.90778285	11.45389143	36.36	<.0001
Error	94	29.61237227	0.31502524		
Corrected Total	96	52.52015512			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.436171	85.17475	0.561271	0.658964

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	22.90333292	22.90333292	72.70	<.0001
Be_bear	1	0.00444993	0.00444993	0.01	0.9056

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	18.76347115	18.76347115	59.56	<.0001
Be_bear	1	0.00444993	0.00444993	0.01	0.9056


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 97
Parameters 3
Error DF 94
MSE 0.315
R-Square 0.4362
Adj R-Square 0.4242


Analysis of Covariance for l_result_dl2
l_result_dl2
3
2
1
0
-1
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.65045498	0.9056
Yes	0.66546213	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	106
Number of Observations Used	106

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by be_bear

The GLM Procedure

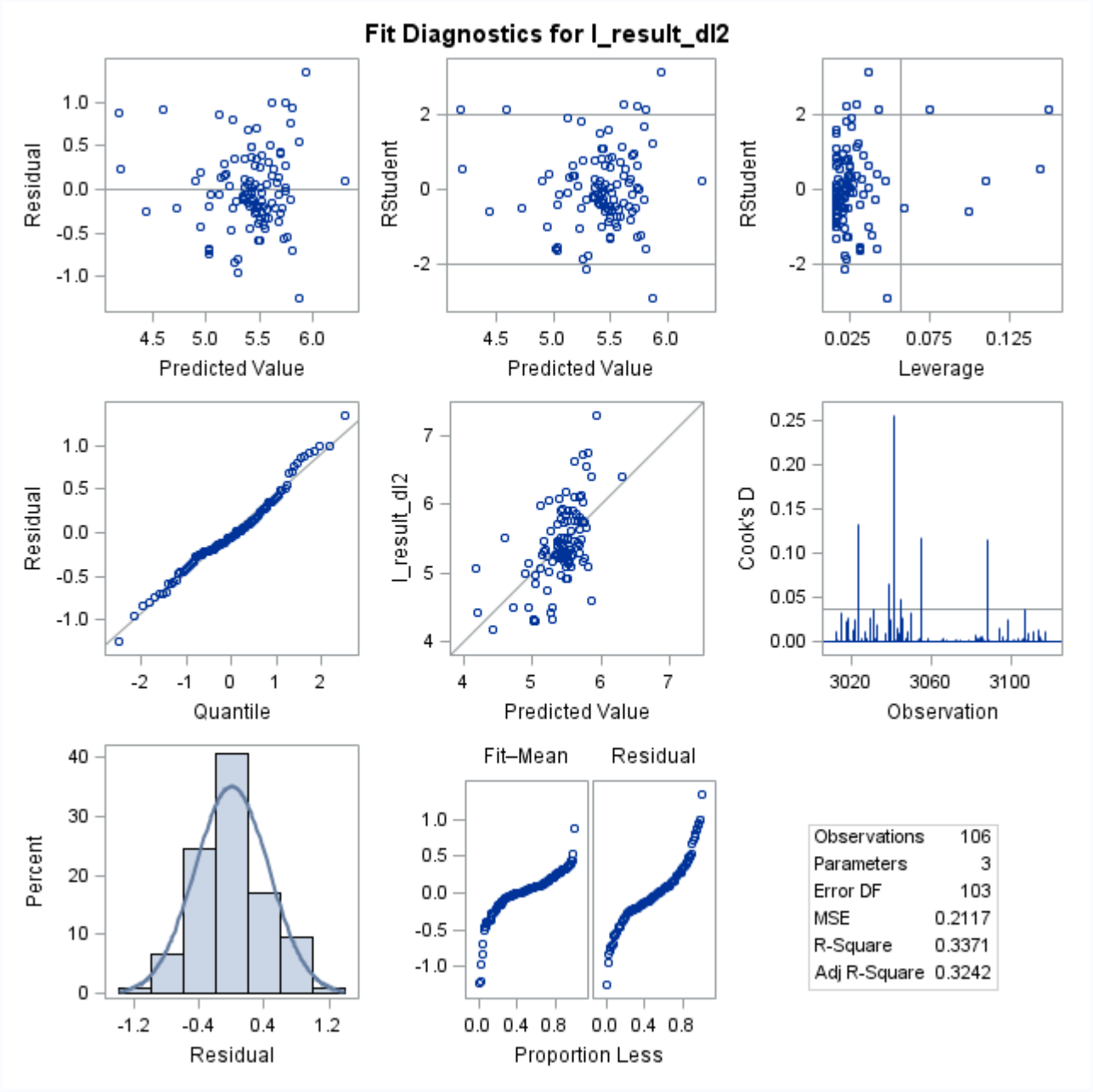
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

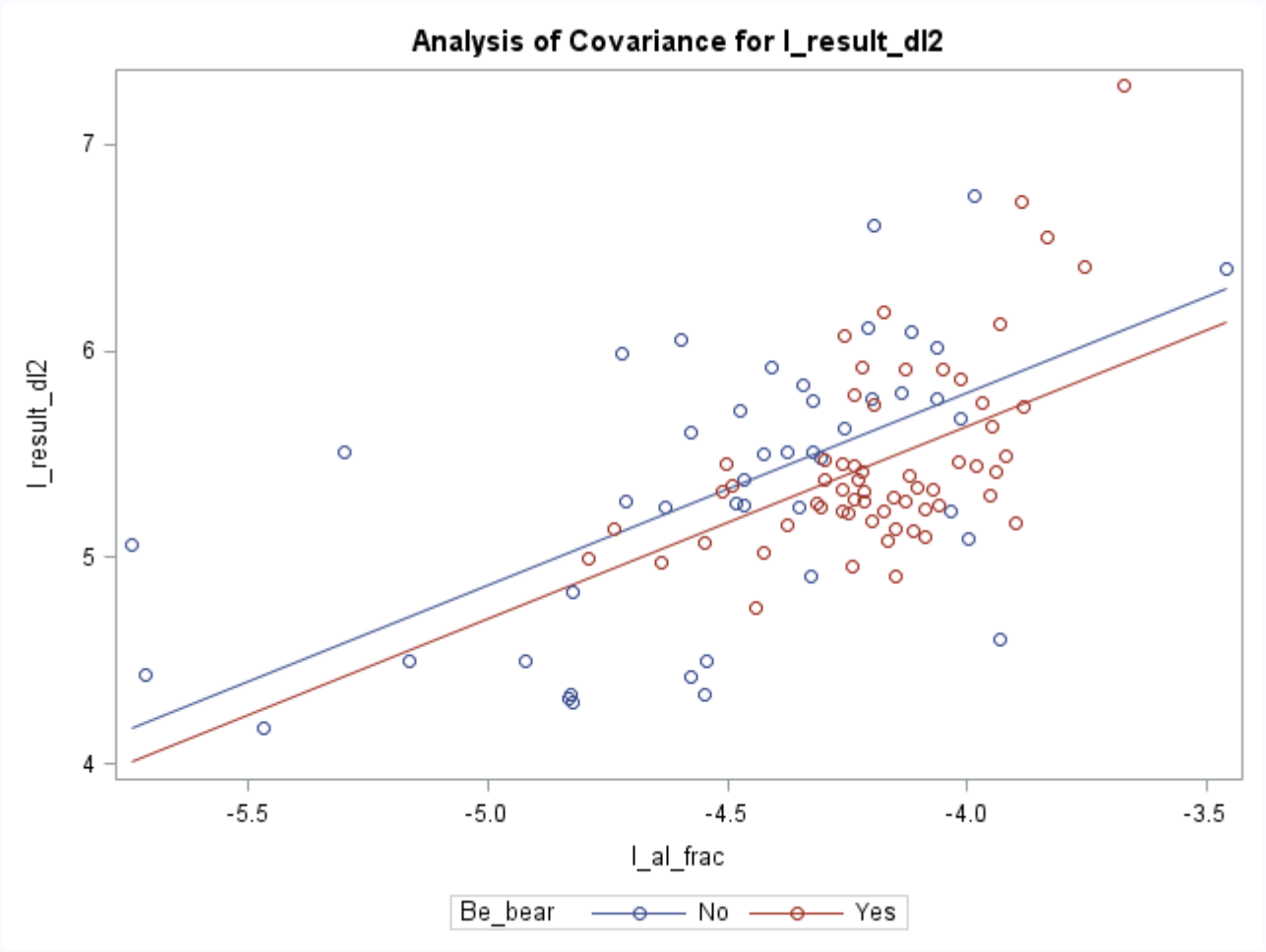
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	11.08864093	5.54432046	26.19	<.0001
Error	103	21.80423627	0.21169161		
Corrected Total	105	32.89287719			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.337114	8.499581	0.460100	5.413203

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	10.52870874	10.52870874	49.74	<.0001
Be_bear	1	0.55993218	0.55993218	2.65	0.1069

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	10.64038282	10.64038282	50.26	<.0001
Be_bear	1	0.55993218	0.55993218	2.65	0.1069


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 106
Parameters 3
Error DF 103
MSE 0.2117
R-Square 0.3371
Adj R-Square 0.3242


Analysis of Covariance for l_result_dl2
l_result_dl2
7
6
5
4
-5.5
-5.0
-4.5
-4.0
-3.5
l_al_frac
Be_bear
No
Yes

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	5.50625908	0.1069
Yes	5.34455516	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

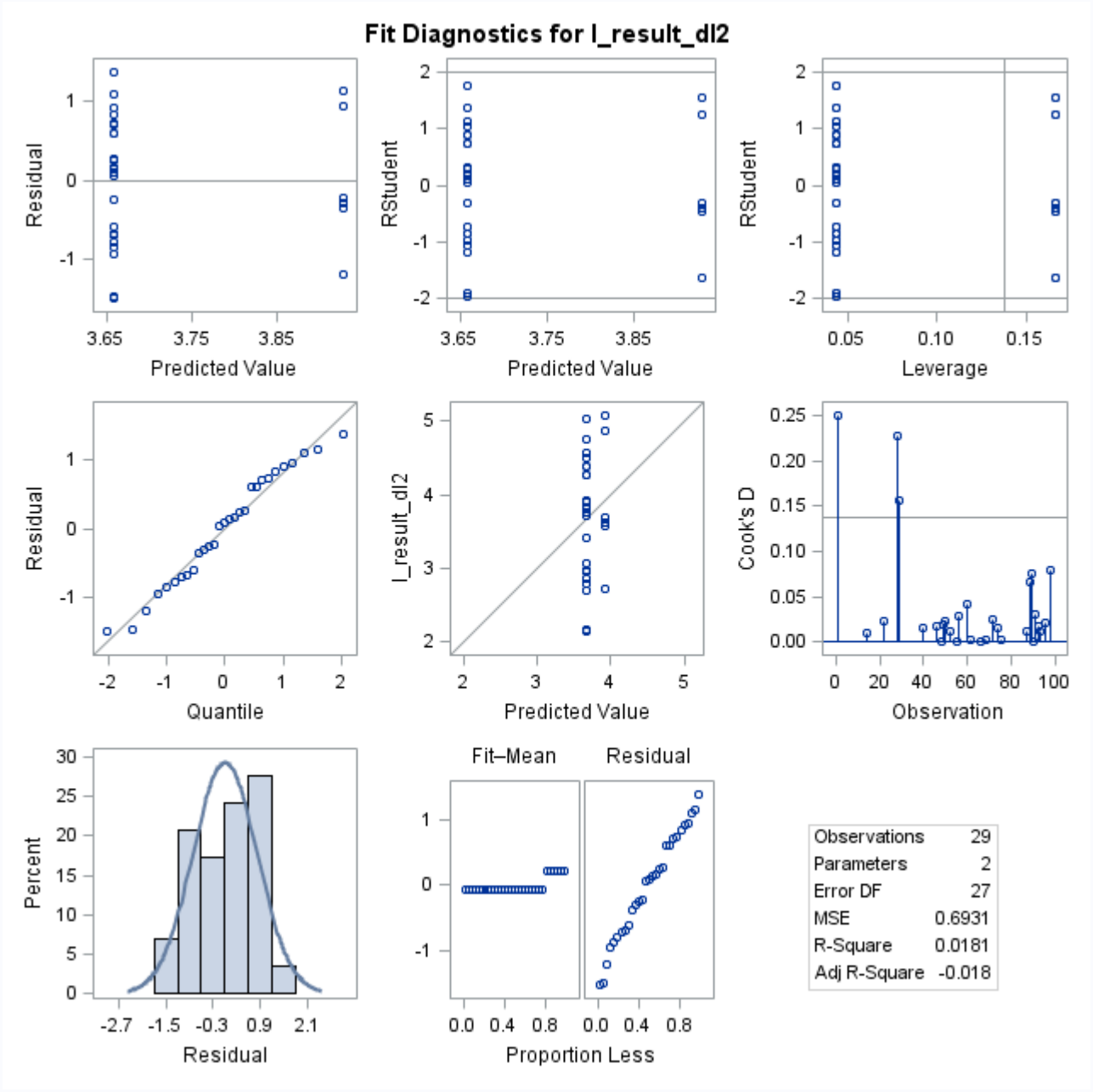
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.34587027	0.34587027	0.50	0.4860
Error	27	18.71276334	0.69306531		
Corrected Total	28	19.05863361			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.018148	22.41929	0.832505	3.713344

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.34587027	0.34587027	0.50	0.4860

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.34587027	0.34587027	0.50	0.4860


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.6931
R-Square 0.0181
Adj R-Square -0.018

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.92716300	0.4860
Yes	3.65756537	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.000755	0.000755	0.00	0.9677
Error	27	12.1684	0.4507		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	3.92716300	0.88673983
Yes	**23**	3.65756537	0.81967914

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

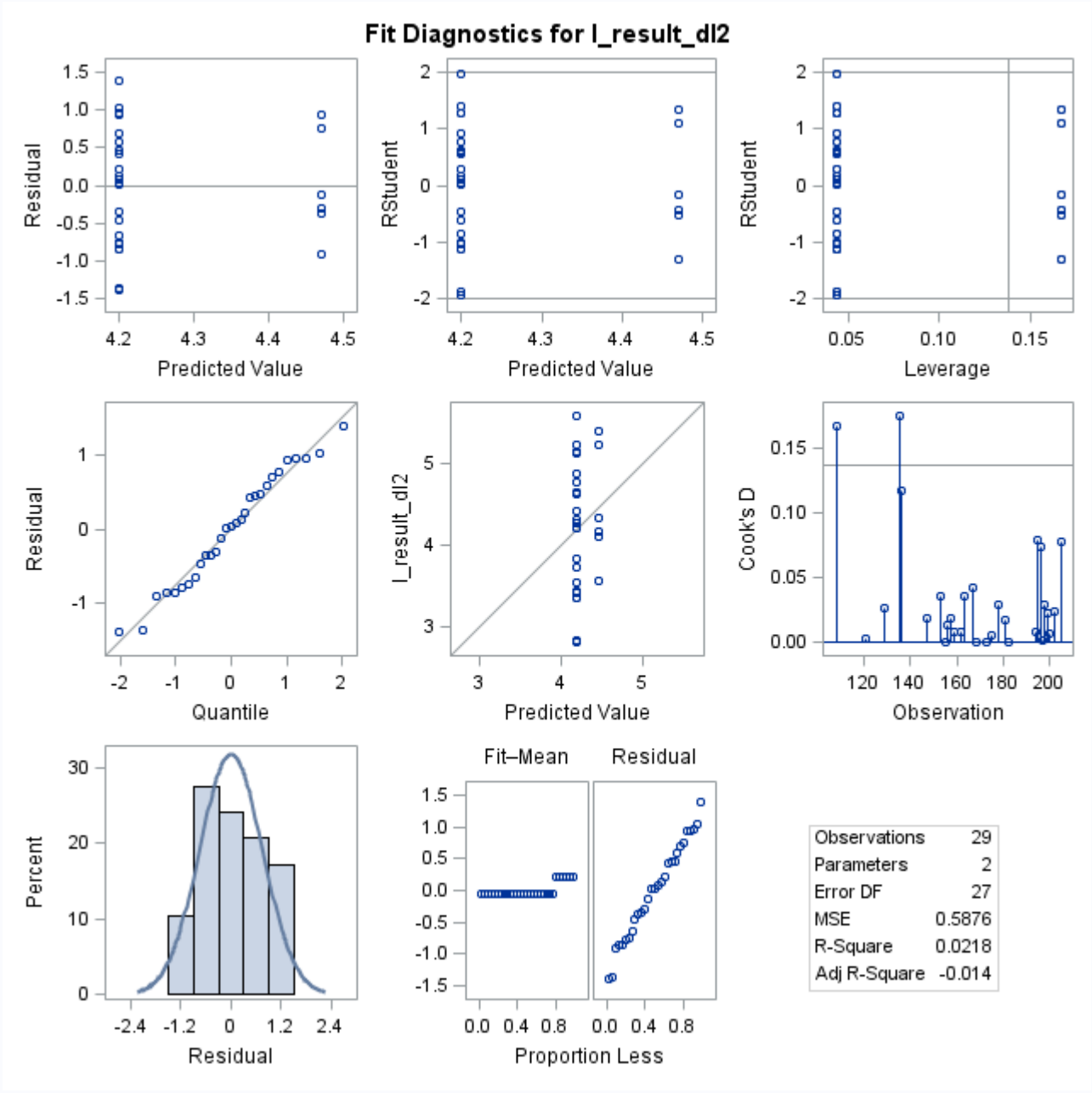
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.35280961	0.35280961	0.60	0.4451
Error	27	15.86444404	0.58757200		
Corrected Total	28	16.21725365			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.021755	18.01417	0.766532	4.255163

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.35280961	0.35280961	0.60	0.4451

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.35280961	0.35280961	0.60	0.4451


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.5876
R-Square 0.0218
Adj R-Square -0.014

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.47111641	0.4451
Yes	4.19882769	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.1317	0.1317	0.40	0.5316
Error	27	8.8546	0.3279		

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	4.47111641	0.70578587
Yes	23	4.19882769	0.77967871

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

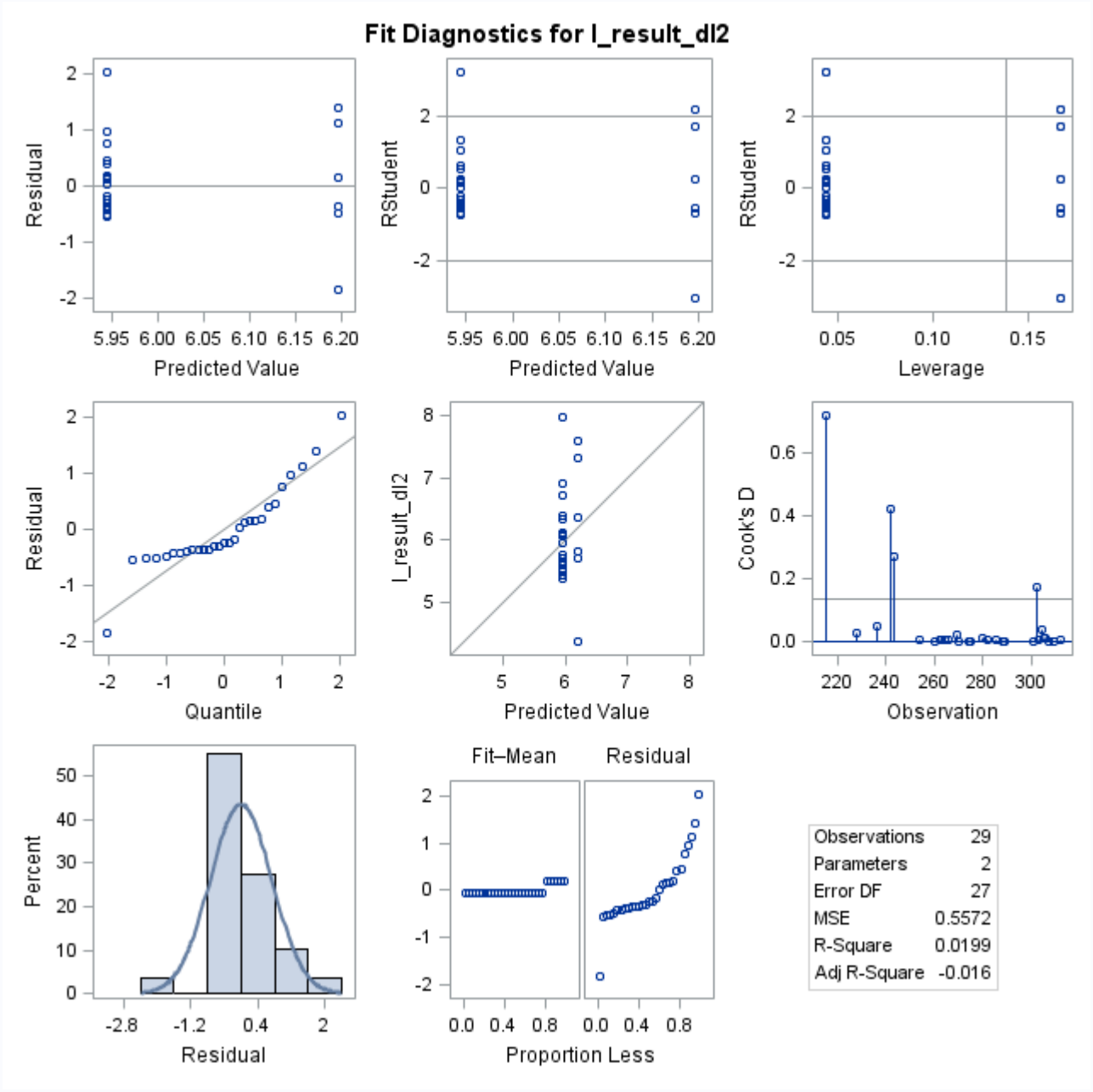
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.30539151	0.30539151	0.55	0.4655
Error	27	15.04363807	0.55717178		
Corrected Total	28	15.34902958			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.019896	12.44971	0.746439	5.995637

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.30539151	0.30539151	0.55	0.4655

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.30539151	0.30539151	0.55	0.4655


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.5572
R-Square 0.0199
Adj R-Square -0.016

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.19655448	0.4655
Yes	5.94322372	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	3.1159	3.1159	3.45	0.0740
Error	27	24.3581	0.9022		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	6.19655448	1.18009564
Yes	23	5.94322372	0.60604941

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

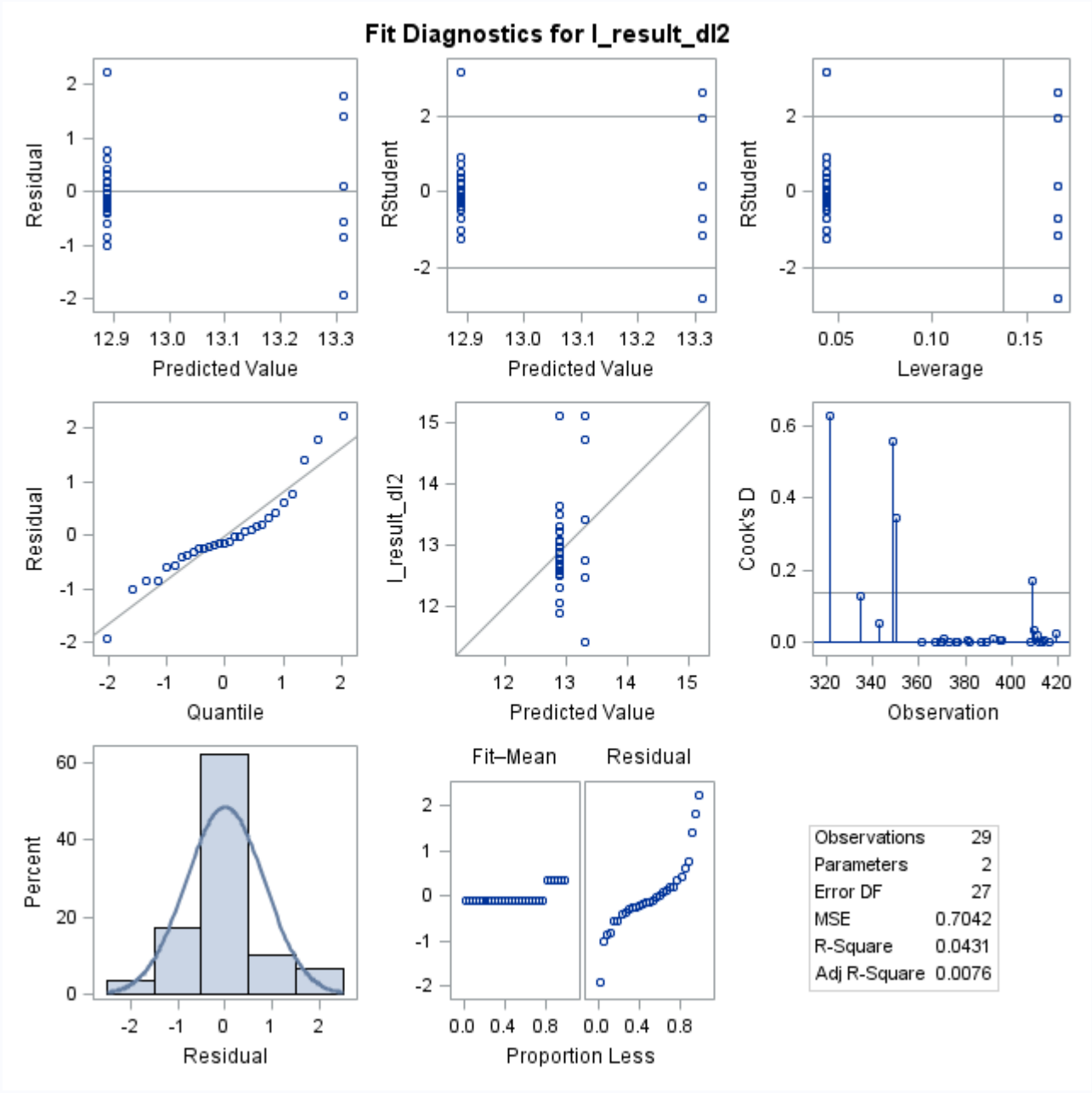
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.85544937	0.85544937	1.21	0.2801
Error	27	19.01400417	0.70422238		
Corrected Total	28	19.86945353			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.043053	6.467285	0.839180	12.97576

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.85544937	0.85544937	1.21	0.2801

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.85544937	0.85544937	1.21	0.2801


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.7042
R-Square 0.0431
Adj R-Square 0.0076

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	13.3120310	0.2801
Yes	12.8880400	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	7.7244	7.7244	5.81	0.0230
Error	27	35.8902	1.3293		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	13.3120310	1.41398117
Yes	**23**	12.8880400	0.64021624

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 29

Number of Observations Used 29

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

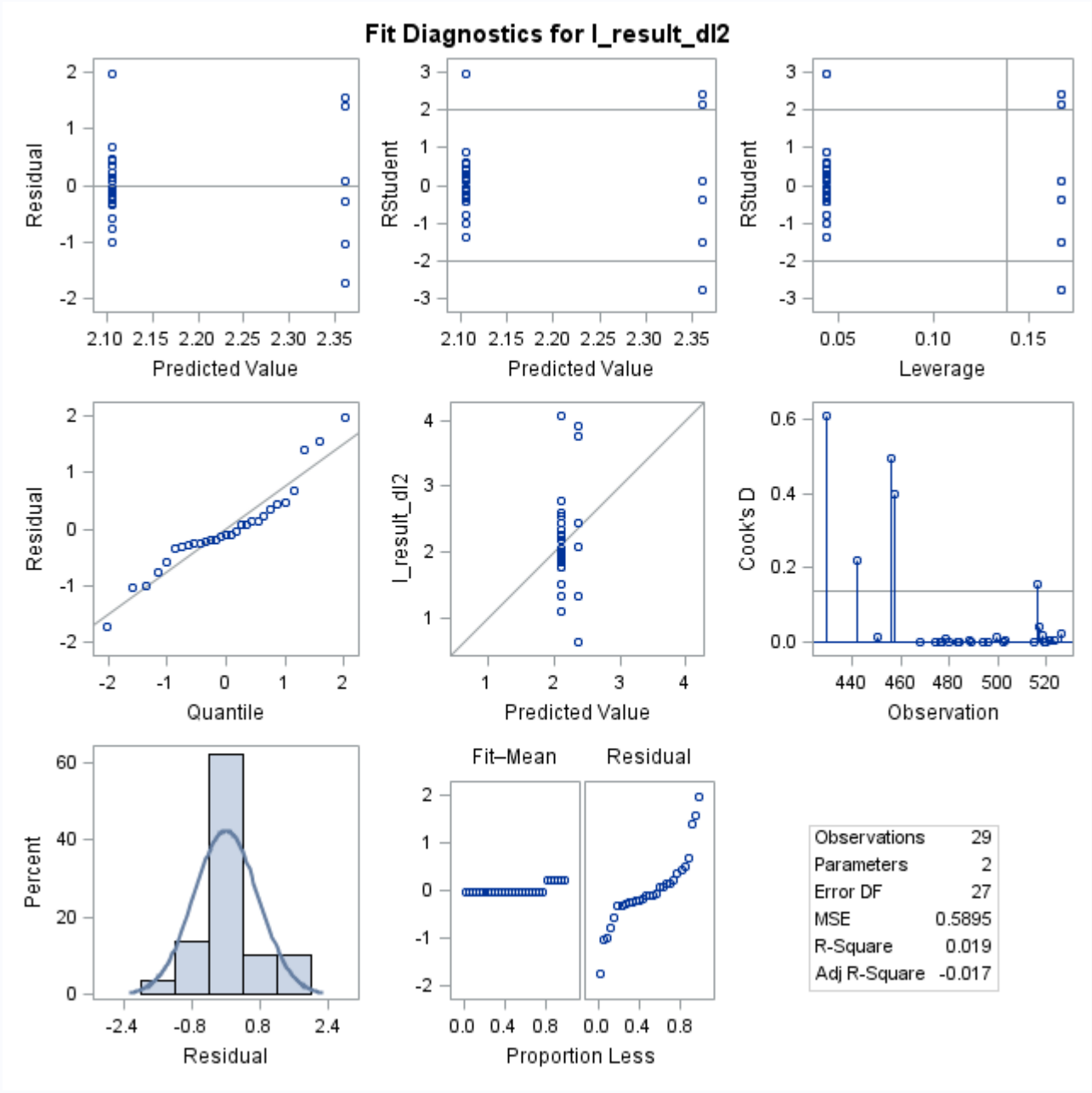
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.30850079	0.30850079	0.52	0.4757
Error	27	15.91766116	0.58954301		
Corrected Total	28	16.22616195			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.019013	35.56614	0.767817	2.158843

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.30850079	0.30850079	0.52	0.4757

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.30850079	0.30850079	0.52	0.4757


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.5895
R-Square 0.019
Adj R-Square -0.017

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	2.36078039	0.4757
Yes	2.10616327	

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	5.7885	5.7885	7.10	0.0129
Error	27	22.0163	0.8154		

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	2.36078039	1.30703411
Yes	23	2.10616327	0.57902623

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

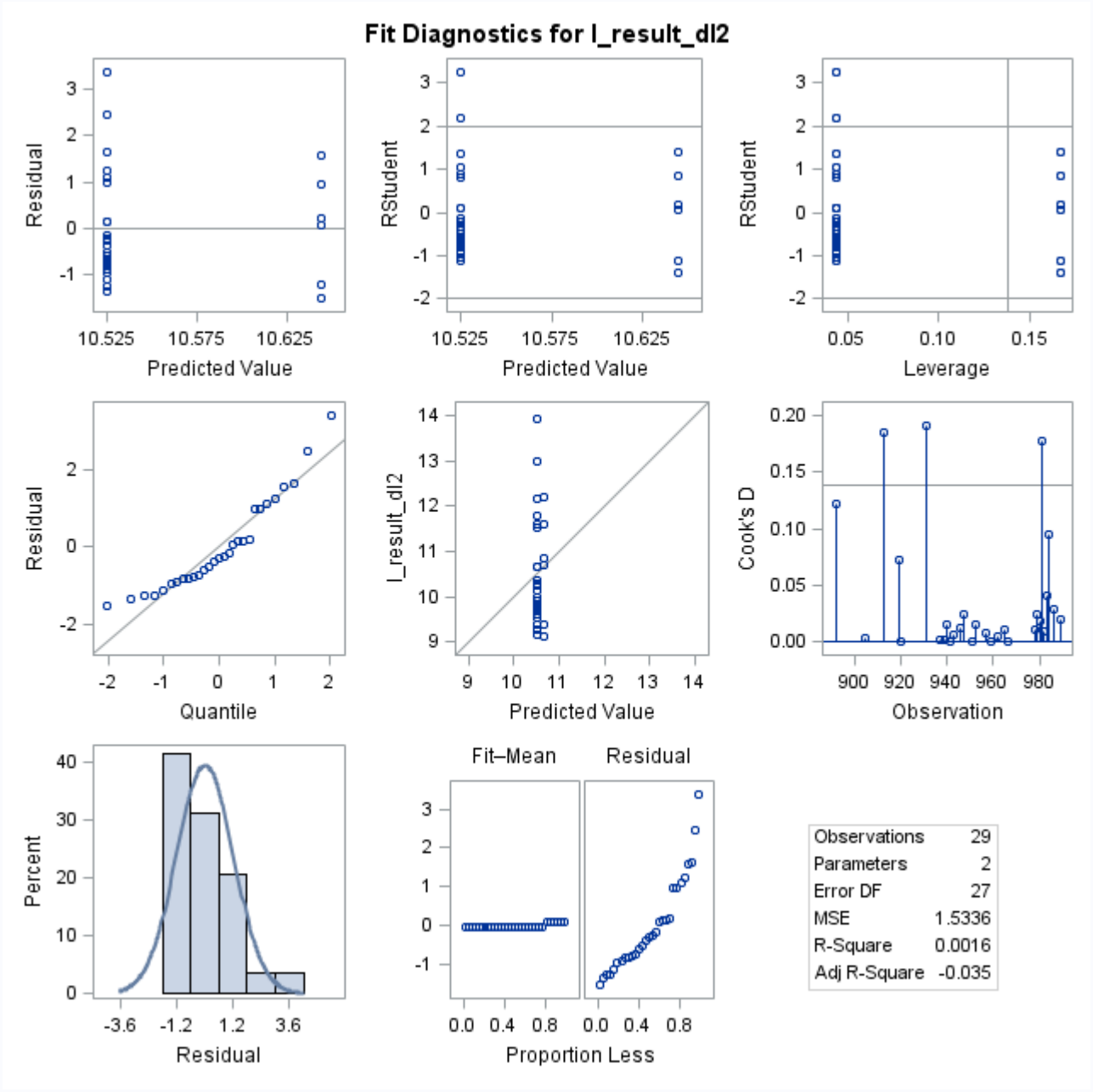
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.06841738	0.06841738	0.04	0.8343
Error	27	41.40624687	1.53356470		
Corrected Total	28	41.47466426			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001650	11.73898	1.238372	10.54923

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.06841738	0.06841738	0.04	0.8343

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.06841738	0.06841738	0.04	0.8343


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 1.5336
R-Square 0.0016
Adj R-Square -0.035

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	10.6443248	0.8343
Yes	10.5244183	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.3124	0.3124	0.06	0.8126
Error	27	147.2	5.4534		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	10.6443248	1.21222615
Yes	23	10.5244183	1.24423737

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

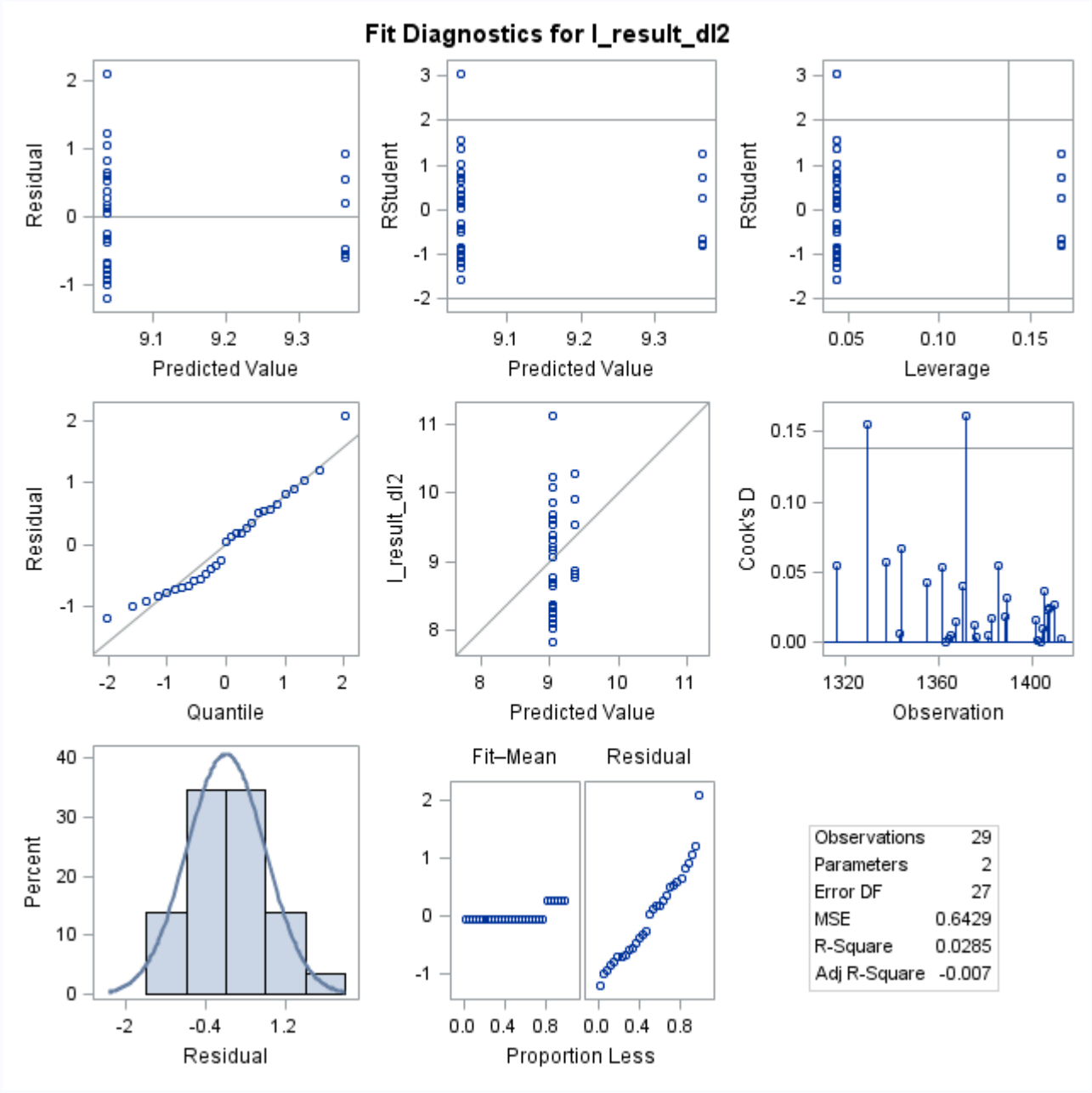
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.50901835	0.50901835	0.79	0.3814
Error	27	17.35944919	0.64294256		
Corrected Total	28	17.86846754			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.028487	8.807403	0.801837	9.104126

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.50901835	0.50901835	0.79	0.3814

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.50901835	0.50901835	0.79	0.3814


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.6429
R-Square 0.0285
Adj R-Square -0.007

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.36351727	0.3814
Yes	9.03645822	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.4969	0.4969	0.71	0.4077
Error	27	18.9683	0.7025		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	9.36351727	0.64093150
Yes	**23**	9.03645822	0.83408860

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 29

Number of Observations Used 29

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

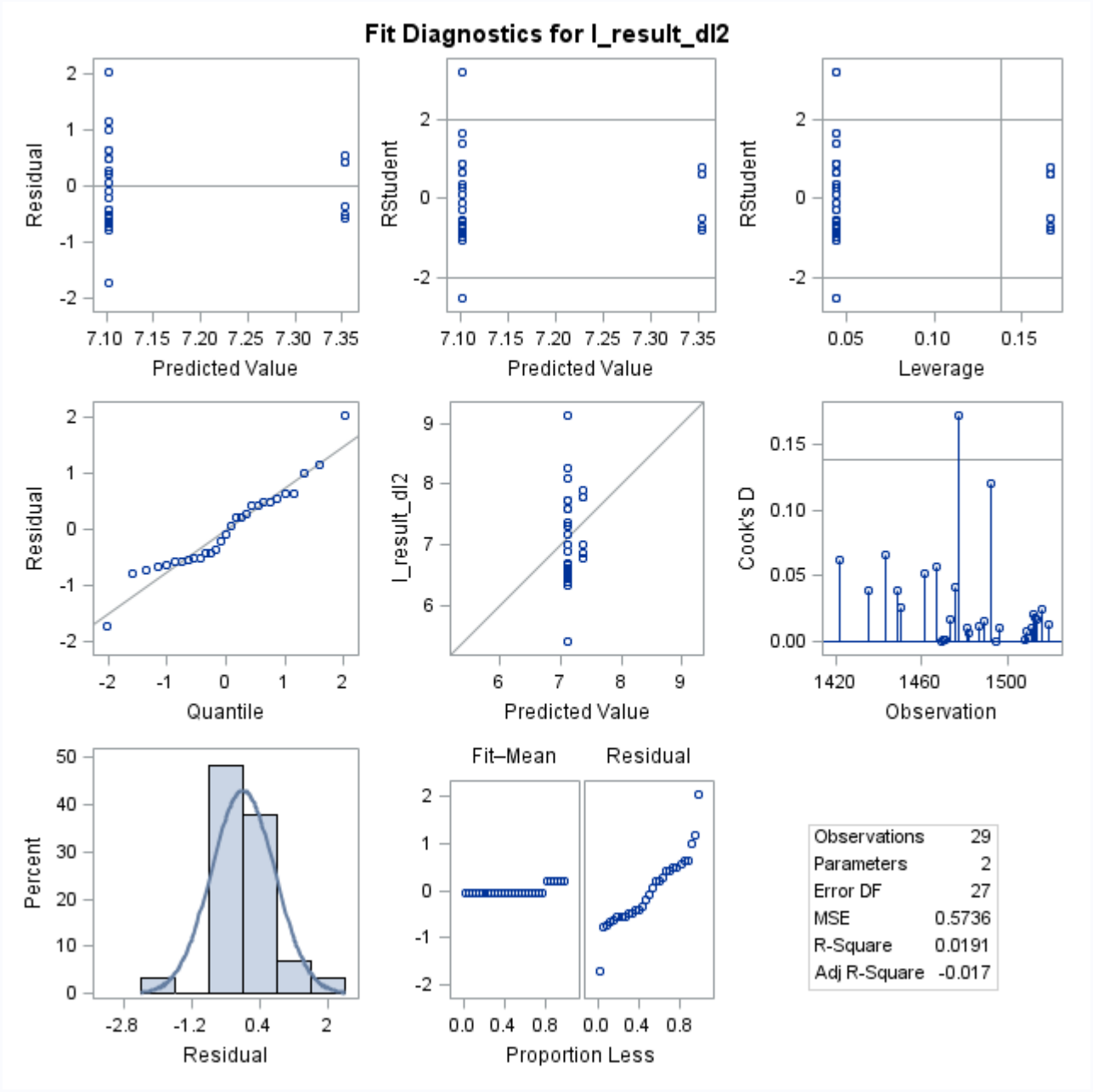
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.30136676	0.30136676	0.53	0.4748
Error	27	15.48706610	0.57359504		
Corrected Total	28	15.78843286			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.019088	10.58735	0.757361	7.153445

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.30136676	0.30136676	0.53	0.4748

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.30136676	0.30136676	0.53	0.4748


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.5736
R-Square 0.0191
Adj R-Square -0.017

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	7.35303400	0.4748
Yes	7.10137809	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.7185	0.7185	0.90	0.3523
Error	27	21.6586	0.8022		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	7.35303400	0.52059513
Yes	**23**	7.10137809	0.80147505

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

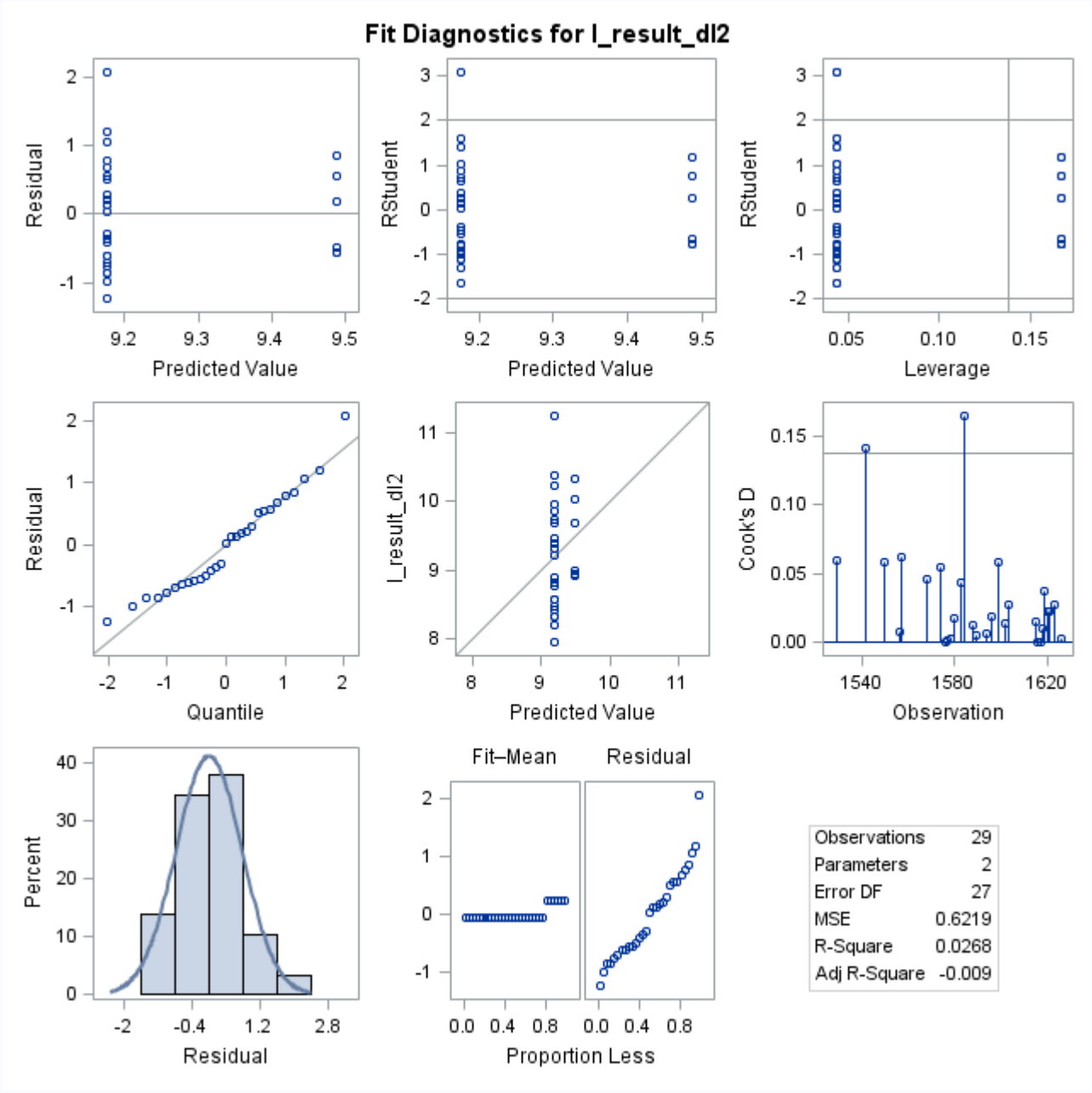
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.46307029	0.46307029	0.74	0.3958
Error	27	16.79059876	0.62187403		
Corrected Total	28	17.25366905			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.026839	8.534665	0.788590	9.239845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.46307029	0.46307029	0.74	0.3958

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.46307029	0.46307029	0.74	0.3958


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.6219
R-Square 0.0268
Adj R-Square -0.009

PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Be_bearing	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.48725286	0.3958
Yes	9.17530435	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.4963	0.4963	0.72	0.4037
Error	27	18.6228	0.6897		

PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	9.48725286	0.62243209
Yes	**23**	9.17530435	0.82168038

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

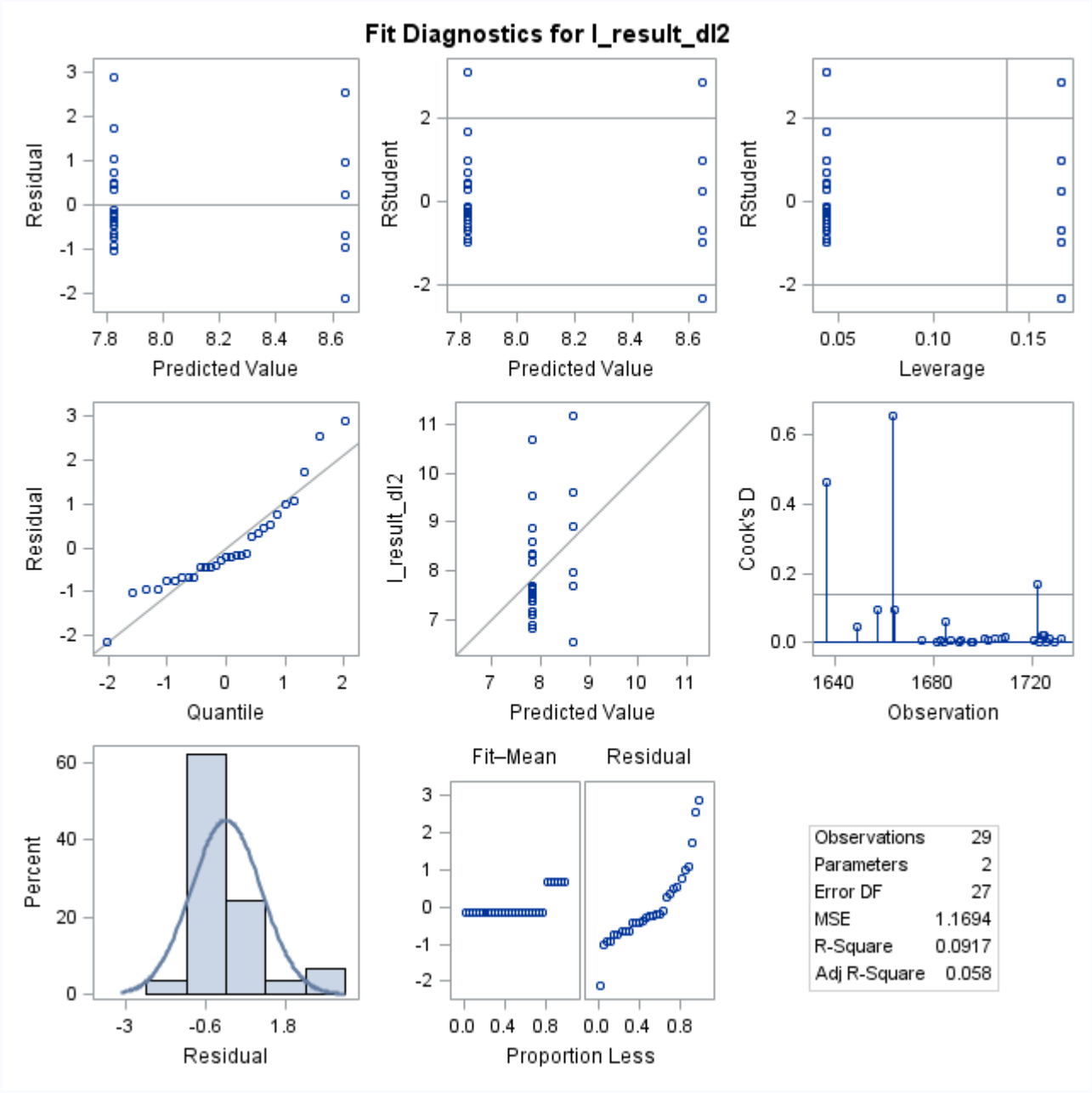
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.18703608	3.18703608	2.73	0.1103
Error	27	31.57344994	1.16938703		
Corrected Total	28	34.76048602			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.091686	13.52339	1.081382	7.996383

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	3.18703608	3.18703608	2.73	0.1103

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	3.18703608	3.18703608	2.73	0.1103


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 1.1694
R-Square 0.0917
Adj R-Square 0.058

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Be_bearing	result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	8.64544029	0.1103
Yes	7.82706417	

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	9.4613	9.4613	2.56	0.1213
Error	27	99.8422	3.6979		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	8.64544029	1.62741110
Yes	23	7.82706417	0.91281571

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

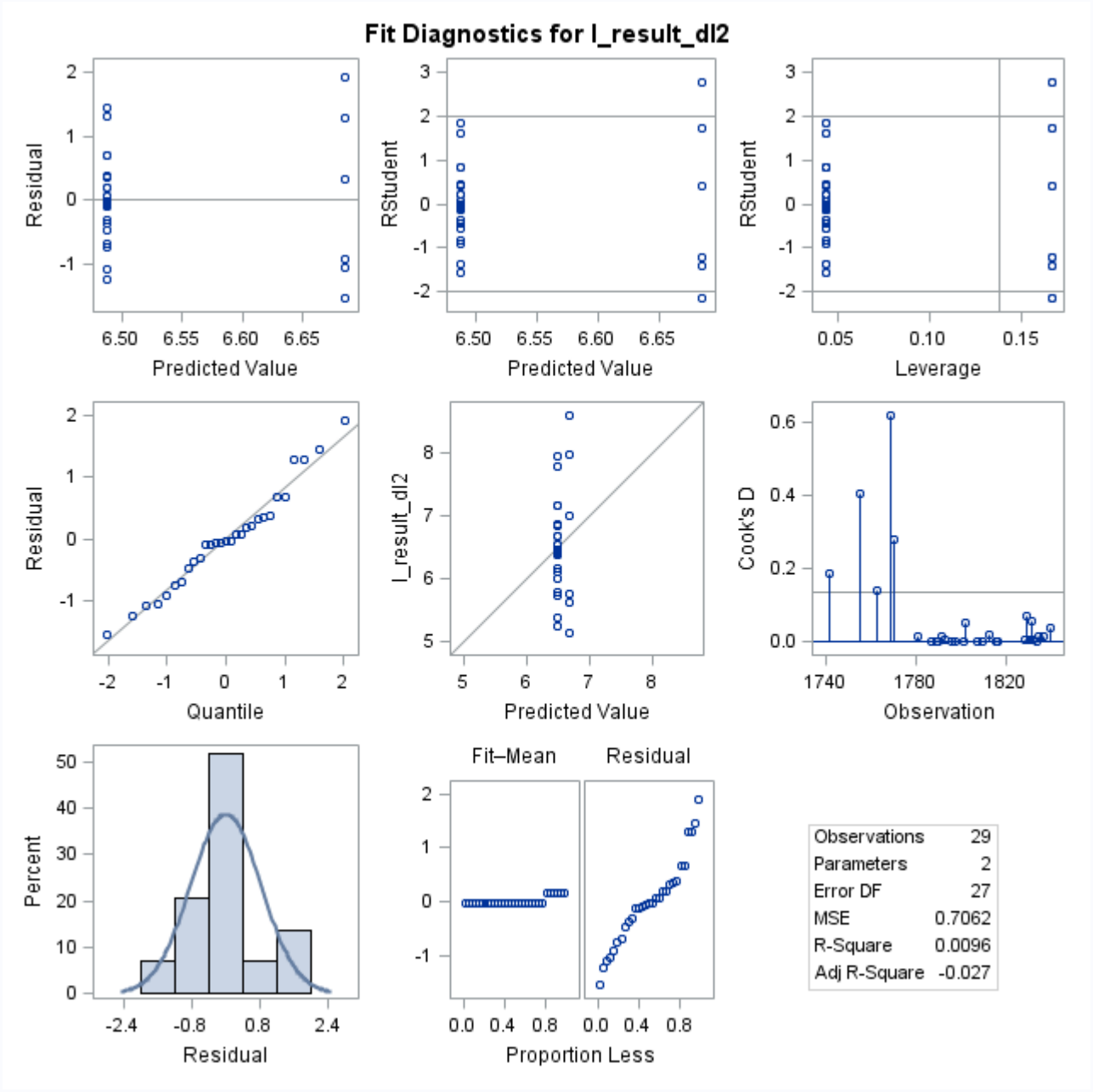
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.18512235	0.18512235	0.26	0.6128
Error	27	19.06788154	0.70621783		
Corrected Total	28	19.25300389			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.009615	12.87262	0.840368	6.528336

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.18512235	0.18512235	0.26	0.6128

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.18512235	0.18512235	0.26	0.6128


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.7062
R-Square 0.0096
Adj R-Square -0.027

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.68476579	0.6128
Yes	6.48752856	

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	7.0736	7.0736	11.76	0.0020
Error	27	16.2473	0.6018		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	6.68476579	1.39619996
Yes	23	6.48752856	0.65090880

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

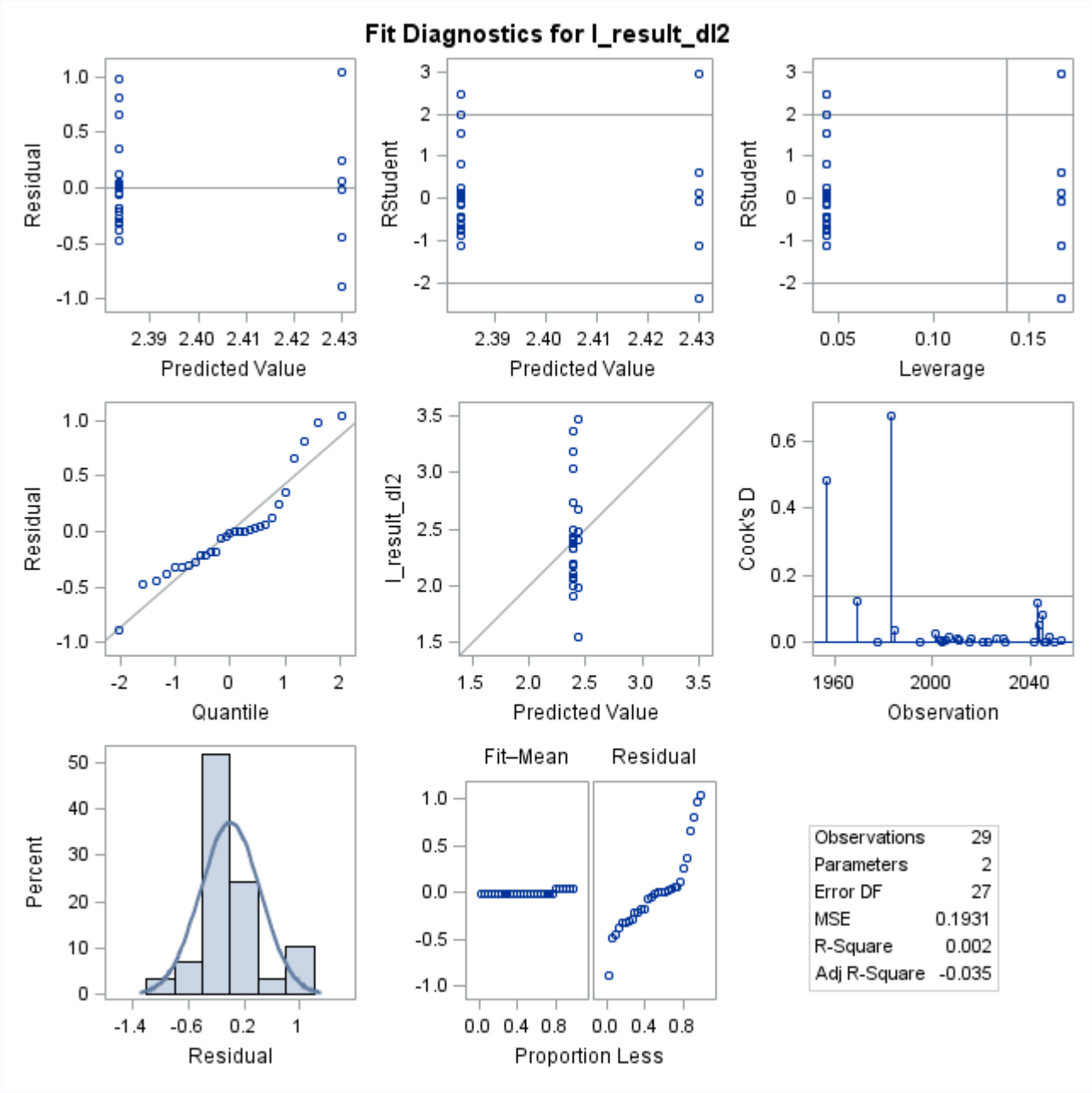
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.01037152	0.01037152	0.05	0.8185
Error	27	5.21478701	0.19314026		
Corrected Total	28	5.22515853			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.001985	18.36497	0.439477	2.393020

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.01037152	0.01037152	0.05	0.8185

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.01037152	0.01037152	0.05	0.8185


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.1931
R-Square 0.002
Adj R-Square -0.035

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	2.43004610	0.8185
Yes	2.38336075	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.2306	0.2306	2.71	0.1112
Error	27	2.2959	0.0850		

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	2.43004610	0.65213851
Yes	**23**	2.38336075	0.37467342

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

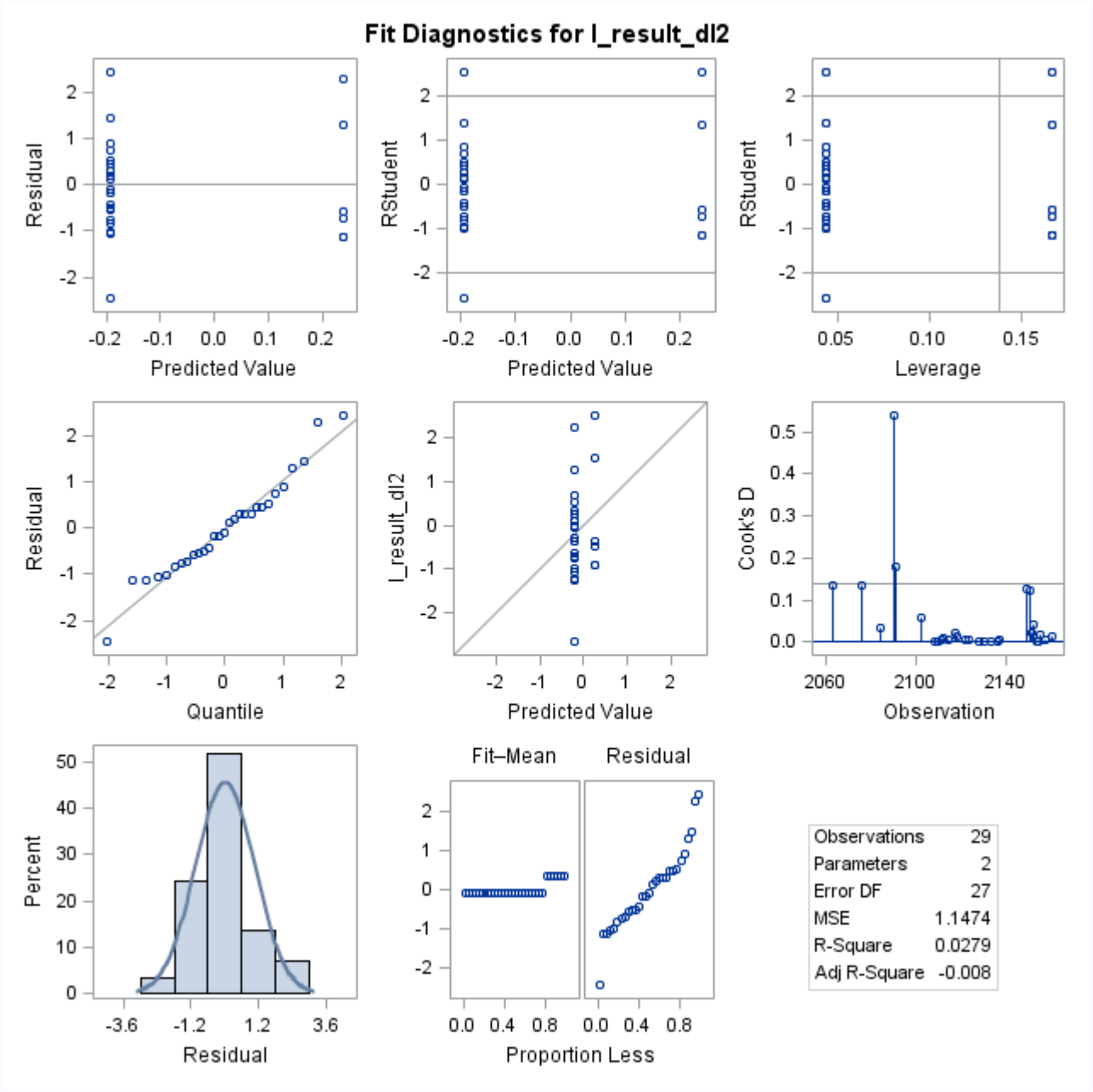
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.89008540	0.89008540	0.78	0.3862
Error	27	30.97890617	1.14736690		
Corrected Total	28	31.86899157			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.027930	-1035.141	1.071152	-0.103479

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.89008540	0.89008540	0.78	0.3862

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.89008540	0.89008540	0.78	0.3862


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 1.1474
R-Square 0.0279
Adj R-Square -0.008

Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.23952982	0.3862
Yes	-0.19295941	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	3.1814	3.1814	1.10	0.3025
Error	27	77.7460	2.8795		

Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	0.23952982	1.43529188
Yes	**23**	-0.19295941	0.96950297

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

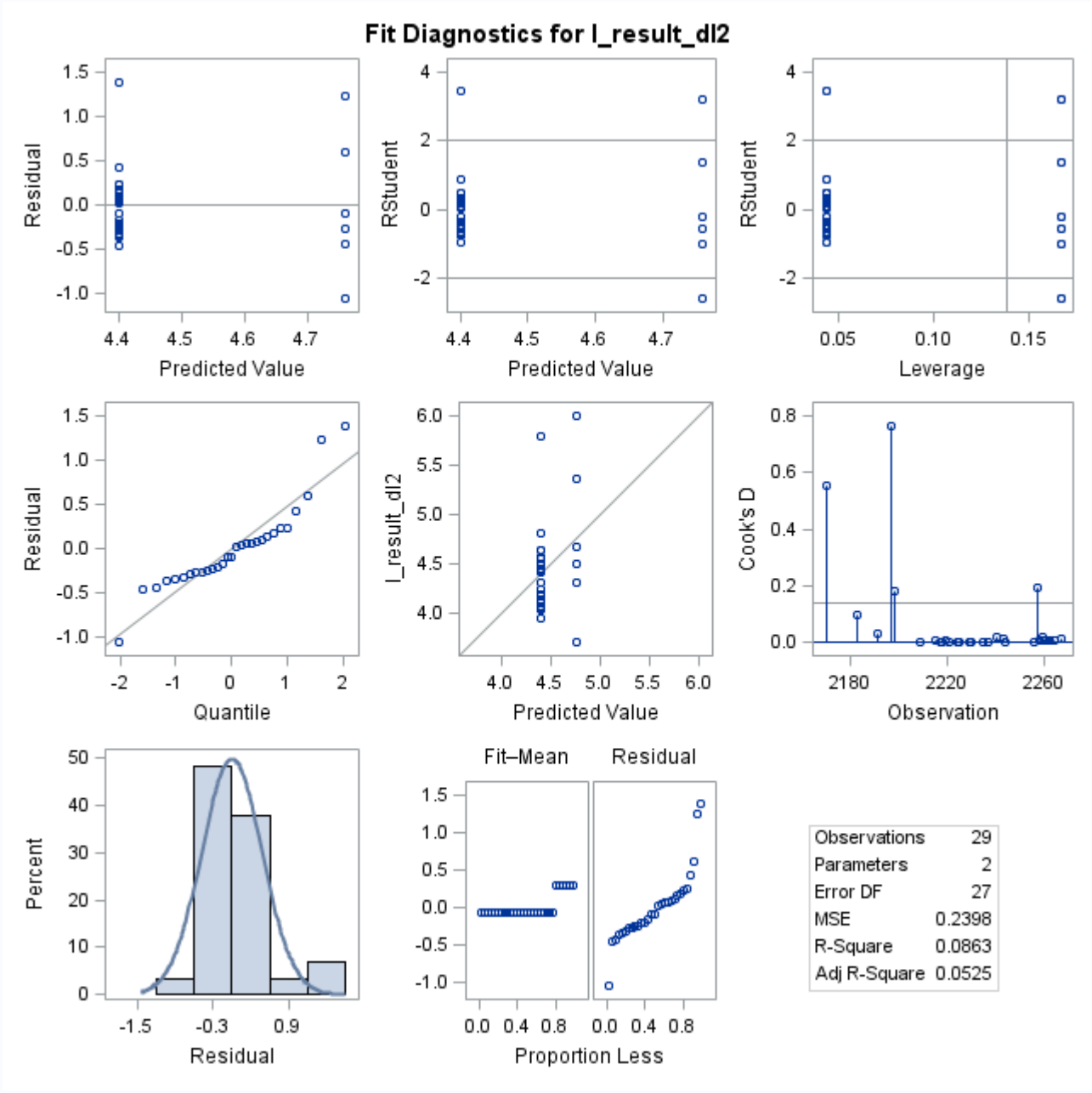
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.61185274	0.61185274	2.55	0.1218
Error	27	6.47455960	0.23979850		
Corrected Total	28	7.08641234			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.086342	10.94267	0.489692	4.475071

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.61185274	0.61185274	2.55	0.1218

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.61185274	0.61185274	2.55	0.1218


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.2398
R-Square 0.0863
Adj R-Square 0.0525

Metals Chromium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

Least Squares Means

sort=7 Parameter_group=Metals chemical_name=Chromium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.75946035	0.1218
Yes	4.40088295	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.7828	0.7828	3.90	0.0585
Error	27	5.4164	0.2006		

Metals Chromium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Chromium

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	4.75946035	0.80864878
Yes	**23**	4.40088295	0.38168260

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 27

Number of Observations Used 27

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

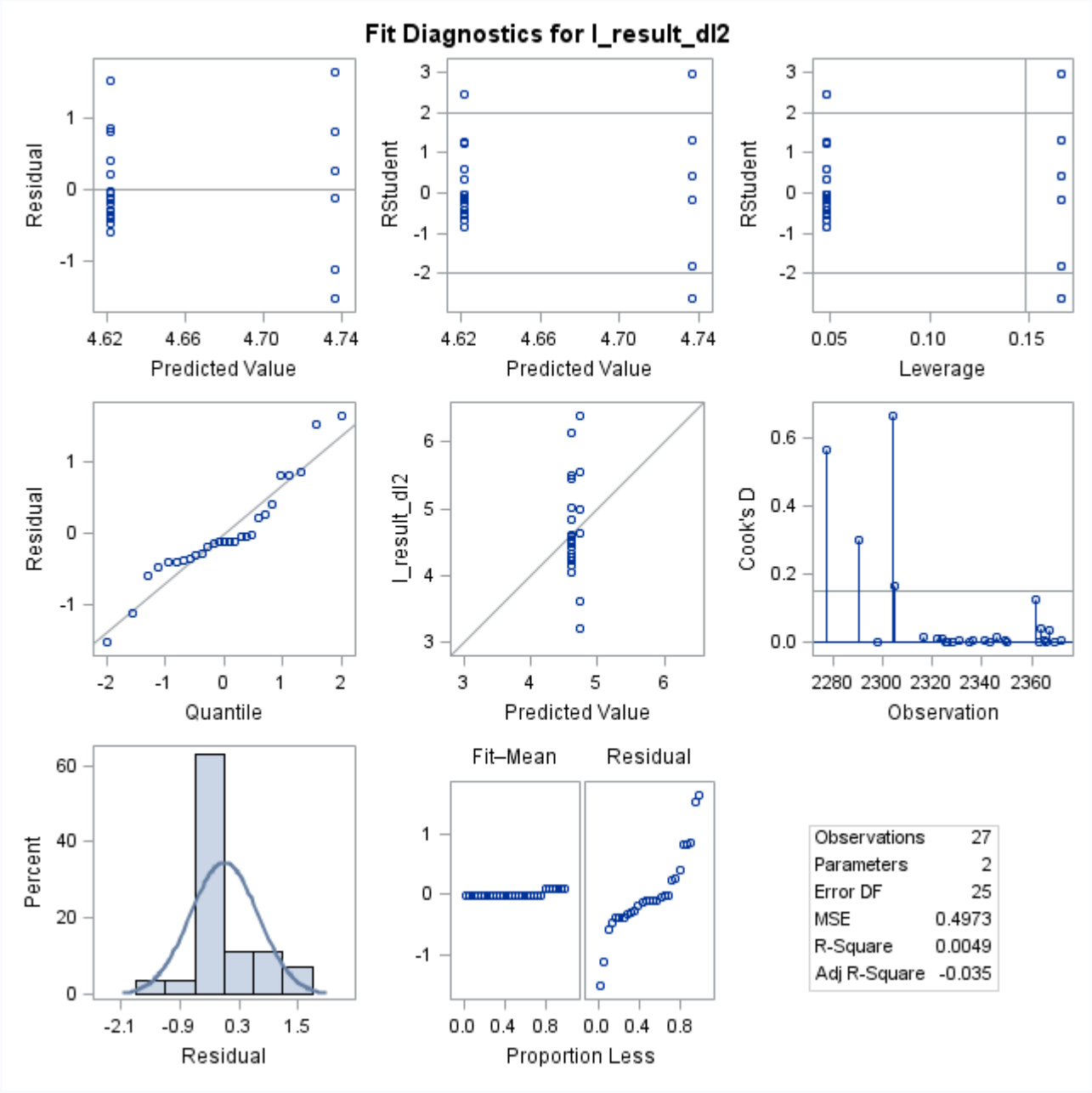
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.06156748	0.06156748	0.12	0.7279
Error	25	12.43239398	0.49729576		
Corrected Total	26	12.49396146			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.004928	15.17501	0.705192	4.647060

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.06156748	0.06156748	0.12	0.7279

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.06156748	0.06156748	0.12	0.7279


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 27
Parameters 2
Error DF 25
MSE 0.4973
R-Square 0.0049
Adj R-Square -0.035

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.73639602	0.7279
Yes	4.62153509	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	3.9824	3.9824	8.28	0.0081
Error	25	12.0202	0.4808		

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	4.73639602	1.18942978
Yes	21	4.62153509	0.51762332

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 29

Number of Observations Used 29

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

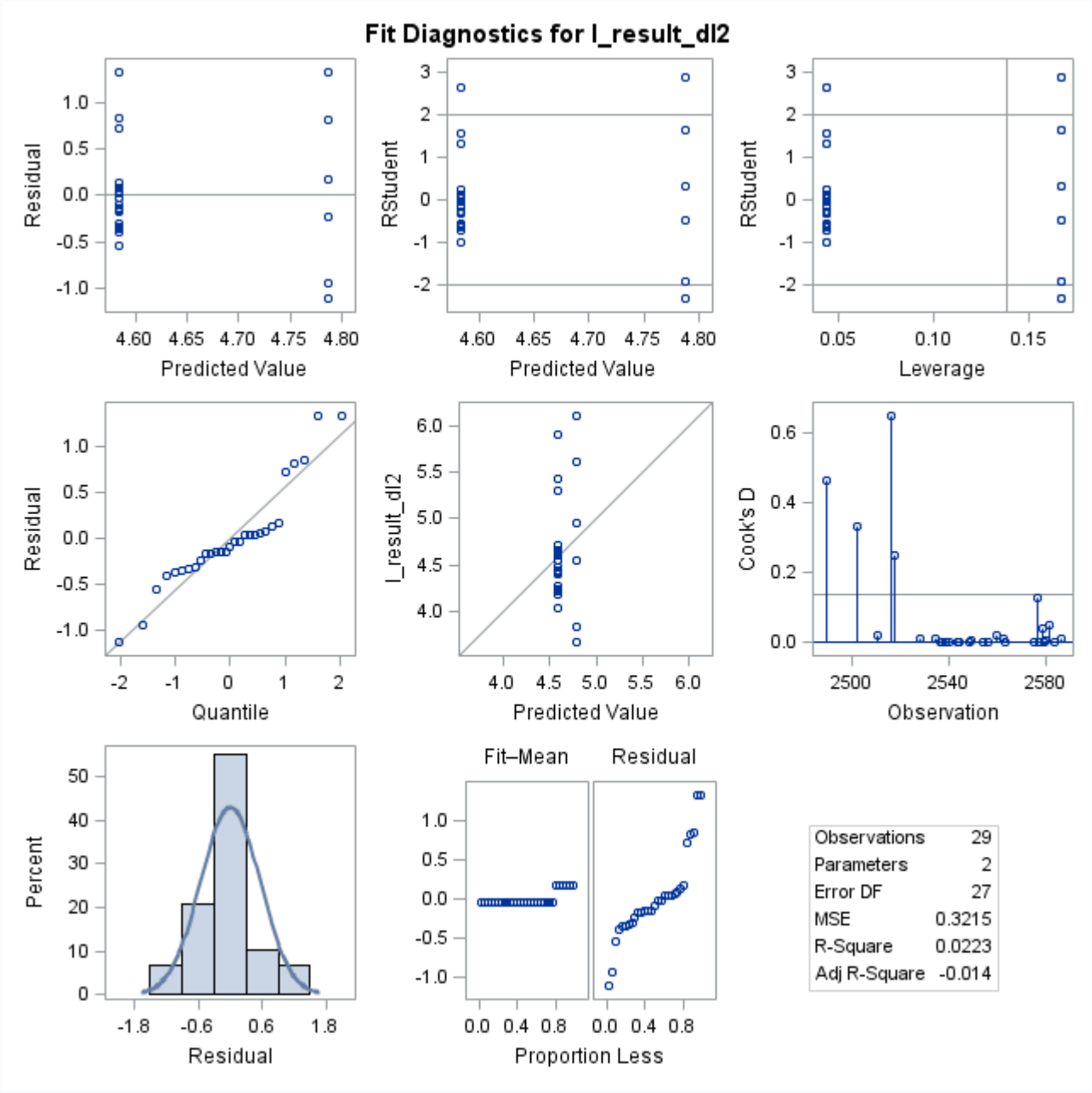
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.19778794	0.19778794	0.62	0.4397
Error	27	8.68165724	0.32154286		
Corrected Total	28	8.87944518			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.022275	12.25965	0.567047	4.625315

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.19778794	0.19778794	0.62	0.4397

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.19778794	0.19778794	0.62	0.4397


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.3215
R-Square 0.0223
Adj R-Square -0.014

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

Be_bearl_result_dl2	LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	4.78700756	0.4397
Yes	4.58313473	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.6829	1.6829	8.21	0.0080
Error	27	5.5357	0.2050		

Metals Lead

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Lead

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	4.78700756	0.96188197
Yes	**23**	4.58313473	0.42935325

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

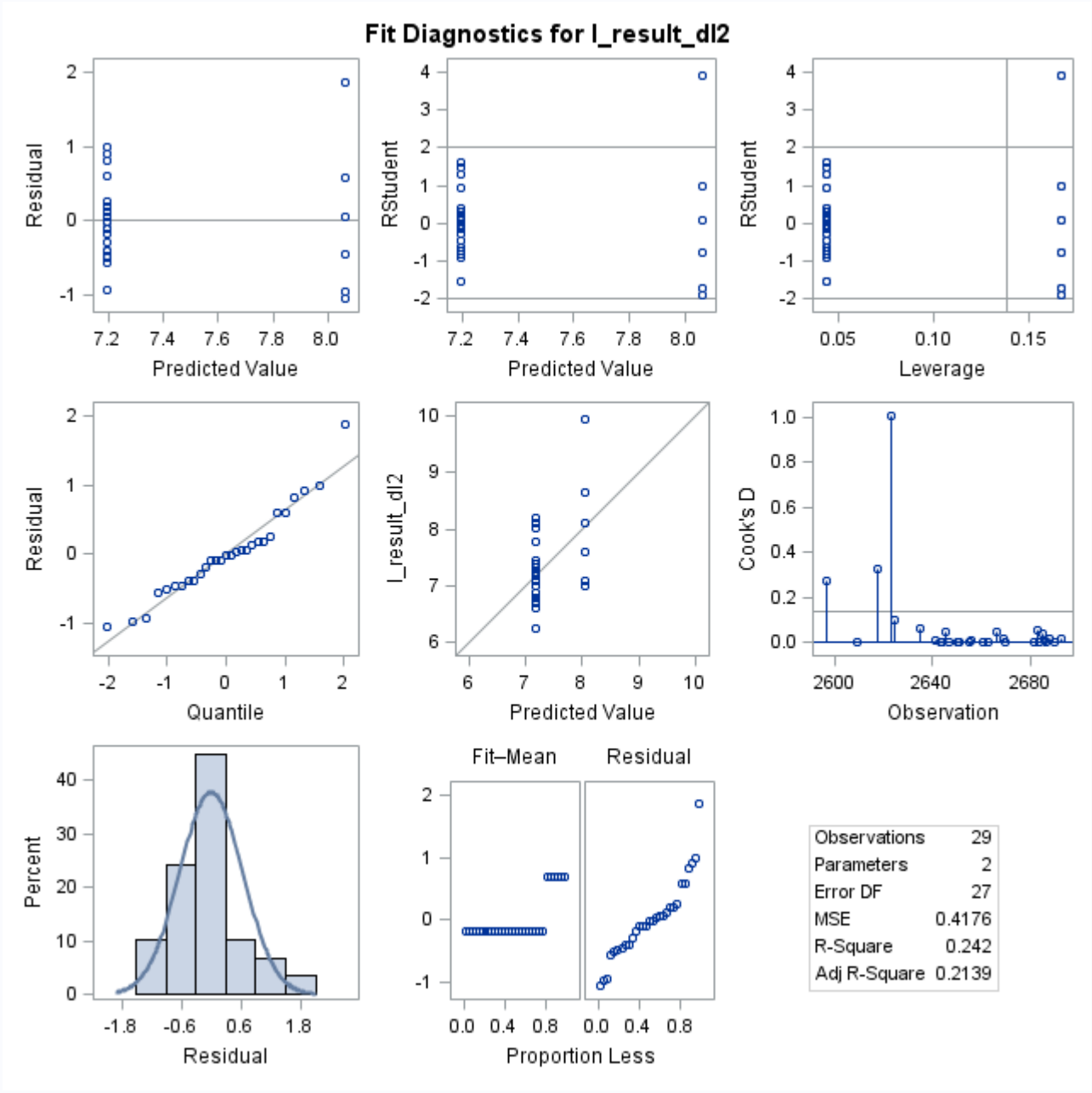
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.60040488	3.60040488	8.62	0.0067
Error	27	11.27601808	0.41763030		
Corrected Total	28	14.87642297			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.242021	8.765038	0.646243	7.372965

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	3.60040488	3.60040488	8.62	0.0067

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	3.60040488	3.60040488	8.62	0.0067


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.4176
R-Square 0.242
Adj R-Square 0.2139

Metals Mercury

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	8.06283172	0.0067
Yes	7.19300023	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	3.0212	3.0212	7.81	0.0094
Error	27	10.4423	0.3868		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	6	8.06283172	1.10676359
Yes	23	7.19300023	0.48389471

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read	29
Number of Observations Used	29

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

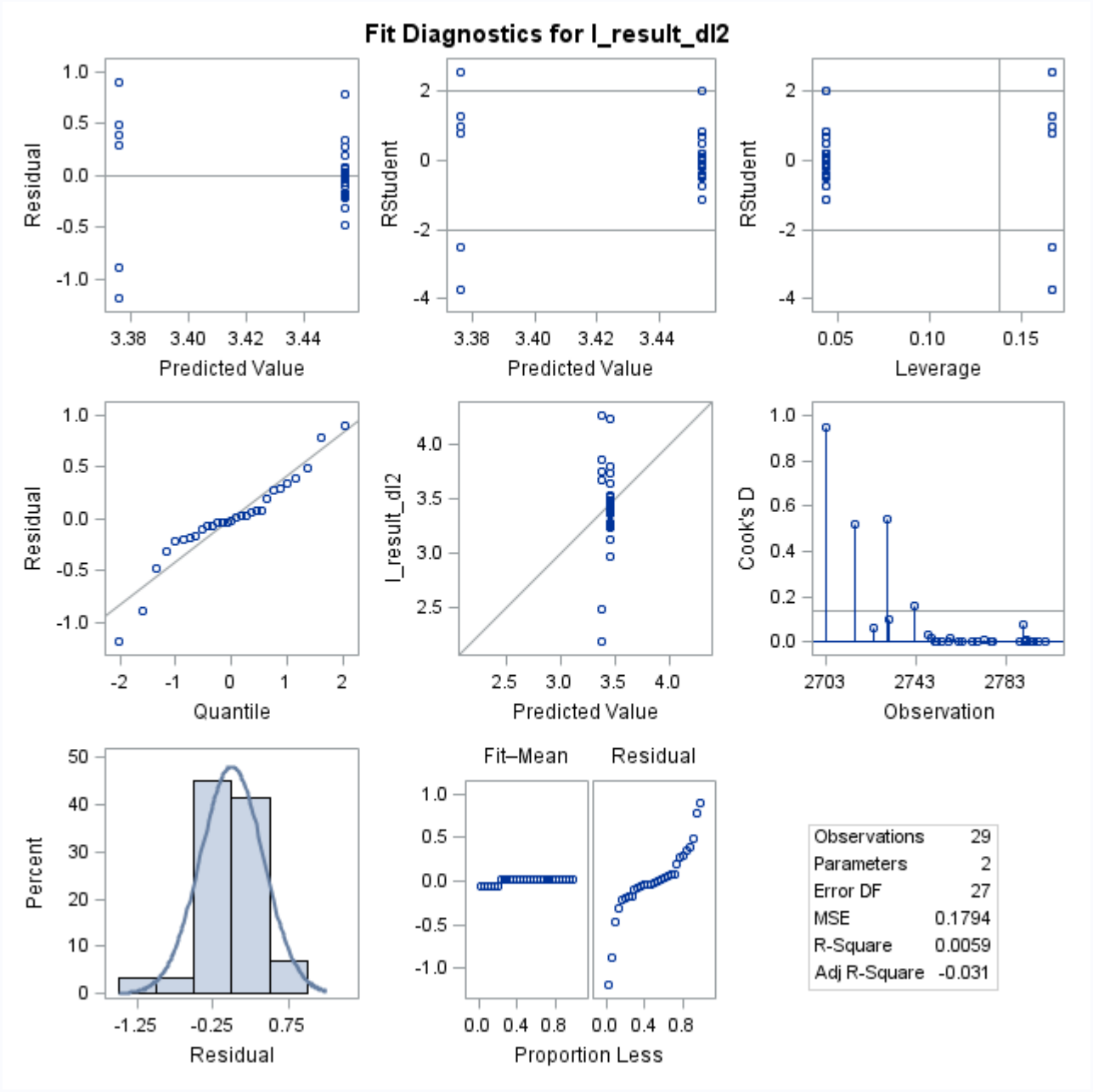
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.02896969	0.02896969	0.16	0.6909
Error	27	4.84261436	0.17935609		
Corrected Total	28	4.87158405			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.005947	12.31955	0.423505	3.437662

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.02896969	0.02896969	0.16	0.6909

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.02896969	0.02896969	0.16	0.6909


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.1794
R-Square 0.0059
Adj R-Square -0.031

Metals Nickel

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

Be_bearing	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.37578022	0.6909
Yes	3.45380479	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.2907	1.2907	20.38	0.0001
Error	27	1.7097	0.0633		

Metals Nickel

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Nickel

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	3.37578022	0.83429011
Yes	**23**	3.45380479	0.24885322

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 24

Number of Observations Used 24

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

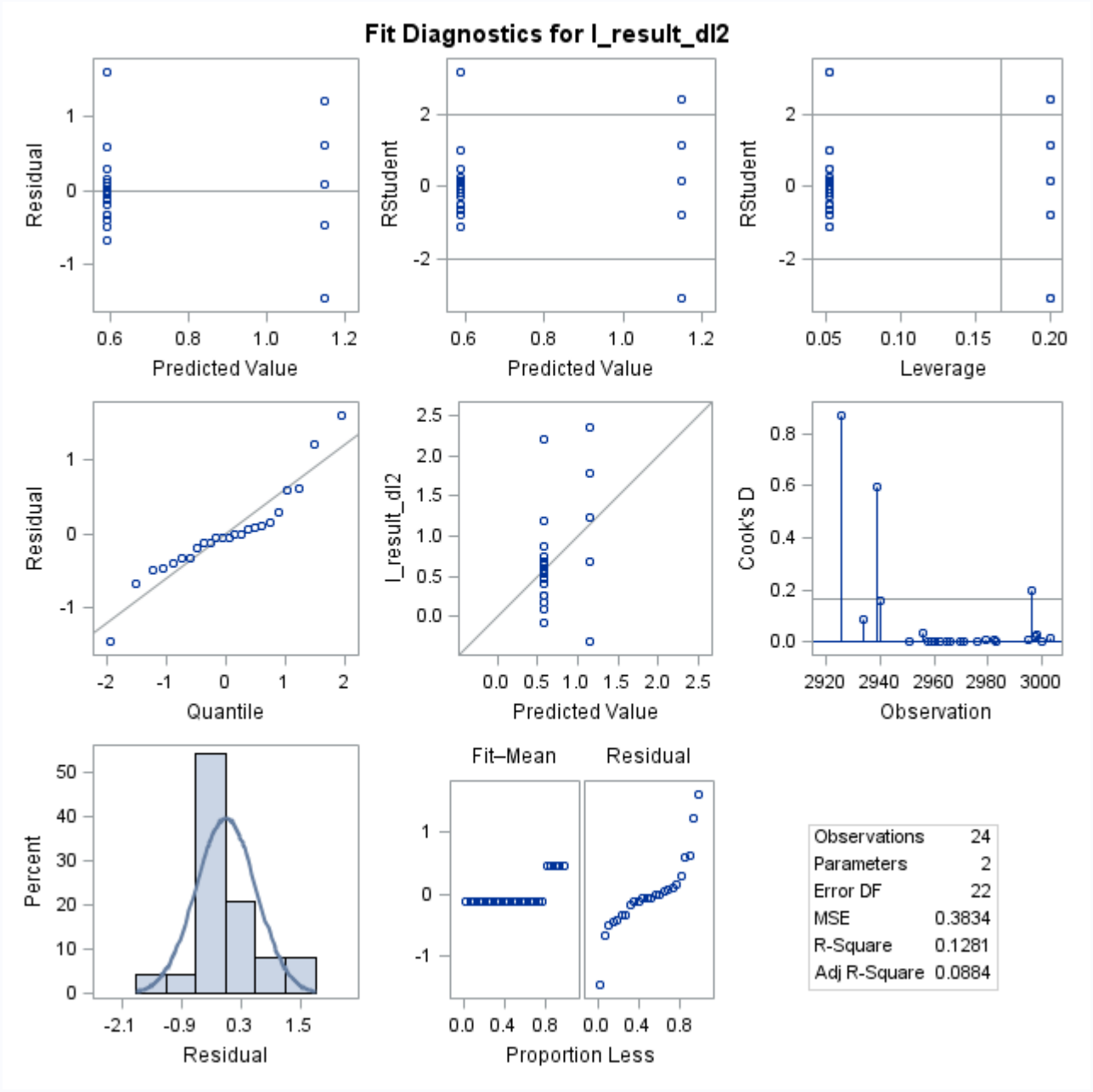
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.23876938	1.23876938	3.23	0.0860
Error	22	8.43446402	0.38338473		
Corrected Total	23	9.67323340			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.128062	87.86090	0.619181	0.704728

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.23876938	1.23876938	3.23	0.0860

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.23876938	1.23876938	3.23	0.0860


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 24
Parameters 2
Error DF 22
MSE 0.3834
R-Square 0.1281
Adj R-Square 0.0884

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

Be_bearl_result_dl2	LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	1.14760364	0.0860
Yes	0.58818228	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.5277	1.5277	3.50	0.0748
Error	22	9.6038	0.4365		

Metals Silver

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Silver

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	5	1.14760364	1.02667412
Yes	19	0.58818228	0.48409279

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 29

Number of Observations Used 29

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure

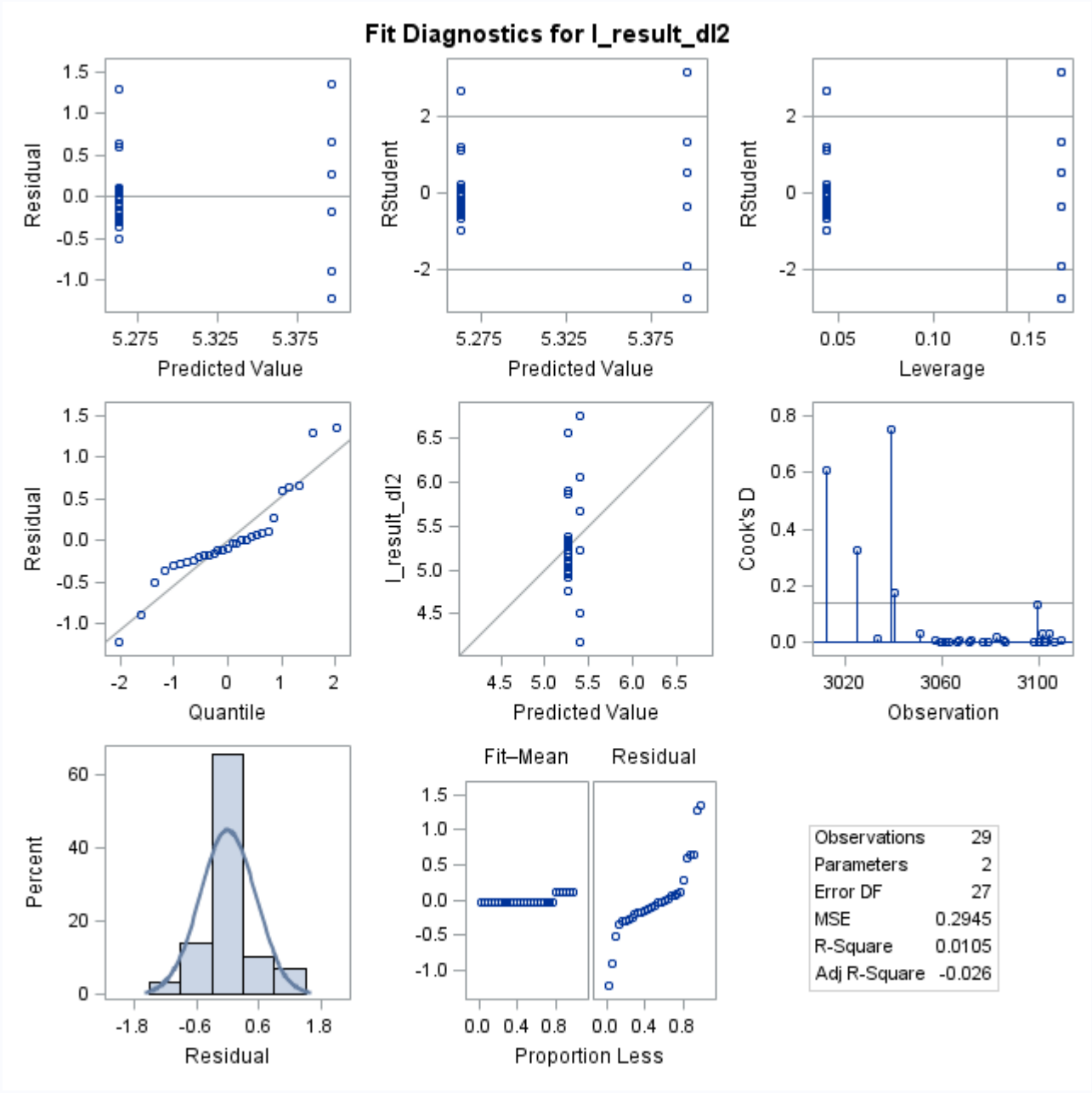
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.08443868	0.08443868	0.29	0.5967
Error	27	7.95264345	0.29454235		
Corrected Total	28	8.03708213			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.010506	10.25812	0.542718	5.290614

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.08443868	0.08443868	0.29	0.5967

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.08443868	0.08443868	0.29	0.5967


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 29
Parameters 2
Error DF 27
MSE 0.2945
R-Square 0.0105
Adj R-Square -0.026

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

Be_bearl_result_dl2	LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	5.39626190	0.5967
Yes	5.26305393	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.9207	1.9207	9.40	0.0049
Error	27	5.5171	0.2043		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Navigation Channel Samples

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**6**	5.39626190	0.96629274
Yes	**23**	5.26305393	0.38636036

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

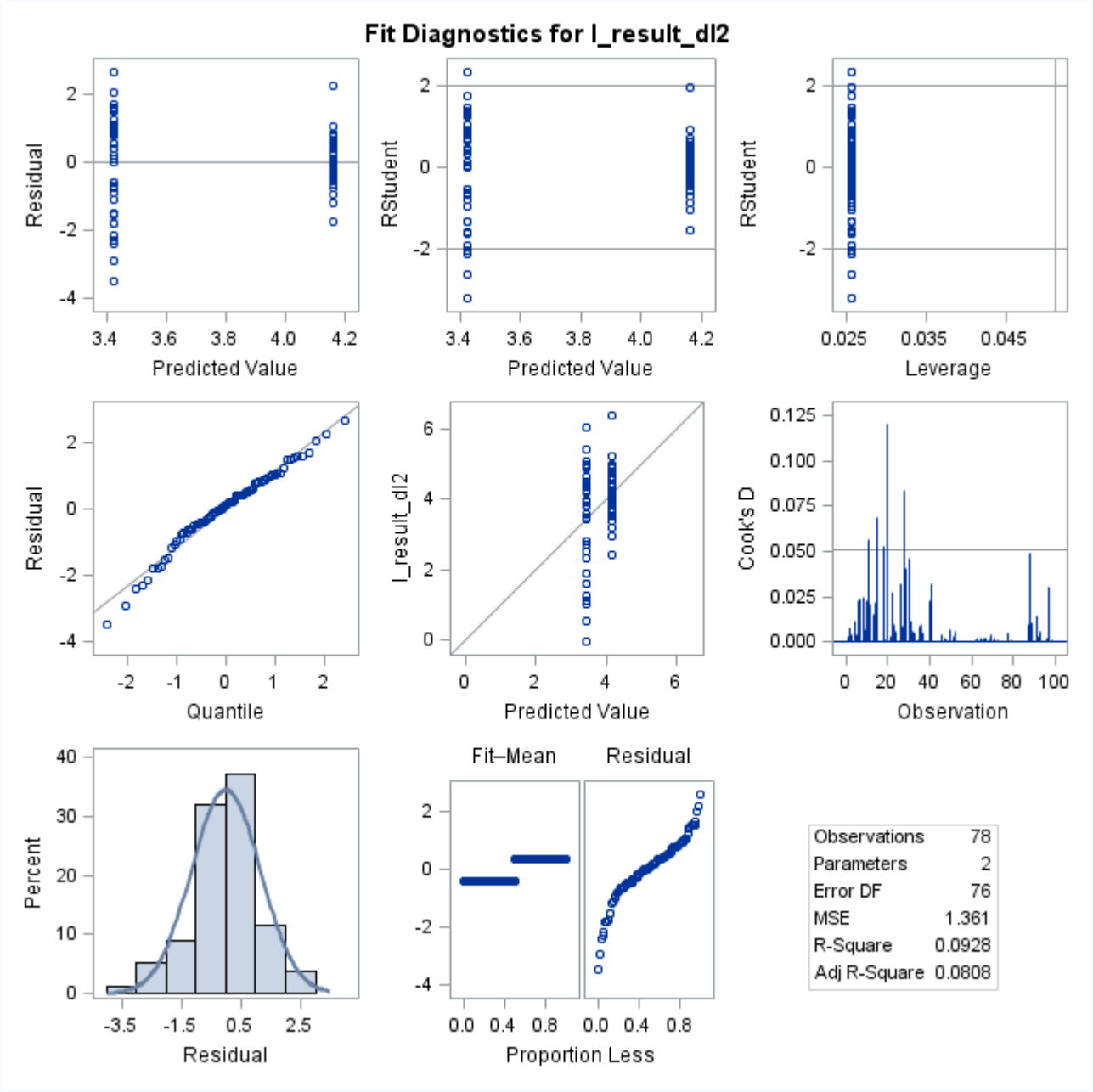
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10.5793562	10.5793562	7.77	0.0067
Error	76	103.4387216	1.3610358		
Corrected Total	77	114.0180778			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.092787	30.76747	1.166634	3.791779

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	10.57935623	10.57935623	7.77	0.0067

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	10.57935623	10.57935623	7.77	0.0067


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 1.361
R-Square 0.0928
Adj R-Square 0.0808

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	3.42349536	0.0067
Yes	4.16006246	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	58.9740	58.9740	15.71	0.0002
Error	76	285.2	3.7532		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	3.42349536	1.50114789
Yes	**39**	4.16006246	0.68456309

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

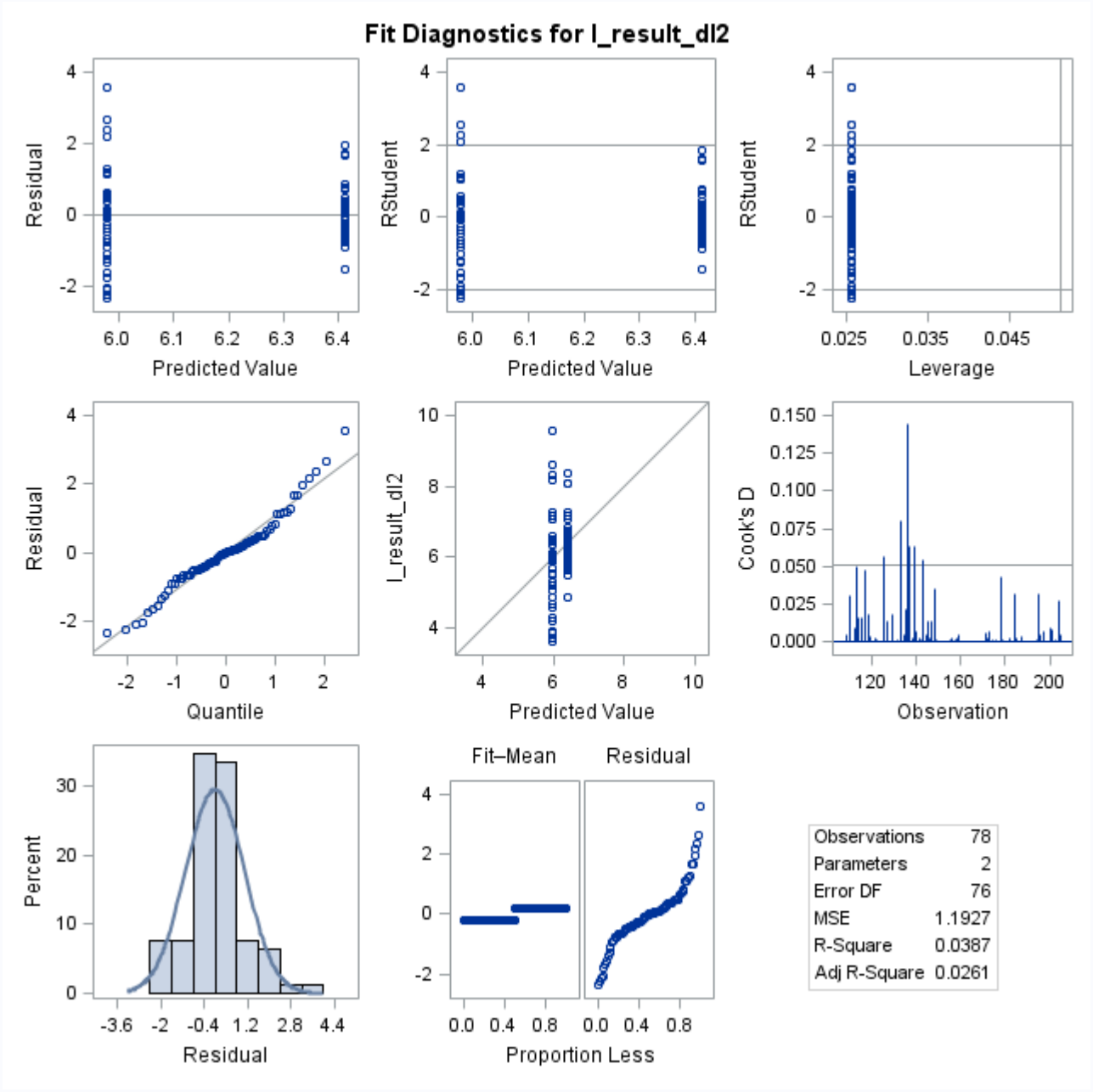
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.65318364	3.65318364	3.06	0.0841
Error	76	90.64849457	1.19274335		
Corrected Total	77	94.30167821			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.038739	17.62941	1.092128	6.194920

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	3.65318364	3.65318364	3.06	0.0841

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	3.65318364	3.65318364	3.06	0.0841


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 1.1927
R-Square 0.0387
Adj R-Square 0.0261

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	5.97850453	0.0841
Yes	6.41133562	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	35.2929	35.2929	9.08	0.0035
Error	76	295.3	3.8859		

PCBs Total PCBs (9)

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	5.97850453	1.37226312
Yes	**39**	6.41133562	0.70878815

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

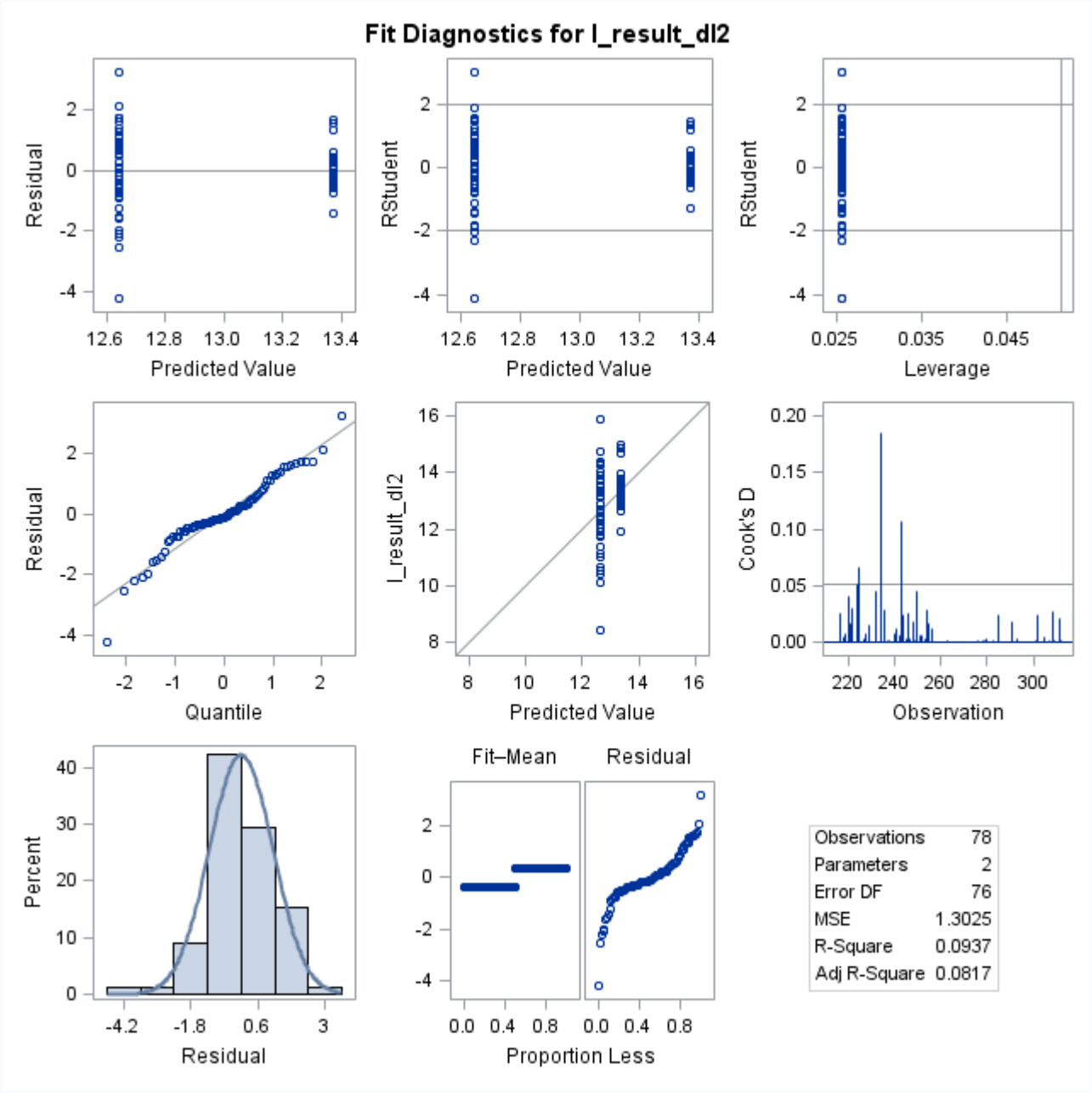
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10.2297008	10.2297008	7.85	0.0064
Error	76	98.9910341	1.3025136		
Corrected Total	77	109.2207349			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.093661	8.774730	1.141277	13.00641

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	10.22970081	10.22970081	7.85	0.0064

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	10.22970081	10.22970081	7.85	0.0064


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 1.3025
R-Square 0.0937
Adj R-Square 0.0817

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	12.6442617	0.0064
Yes	13.3685544	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	61.5851	61.5851	10.54	0.0017
Error	76	444.1	5.8431		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	12.6442617	1.48810779
Yes	**39**	13.3685544	0.62494994

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

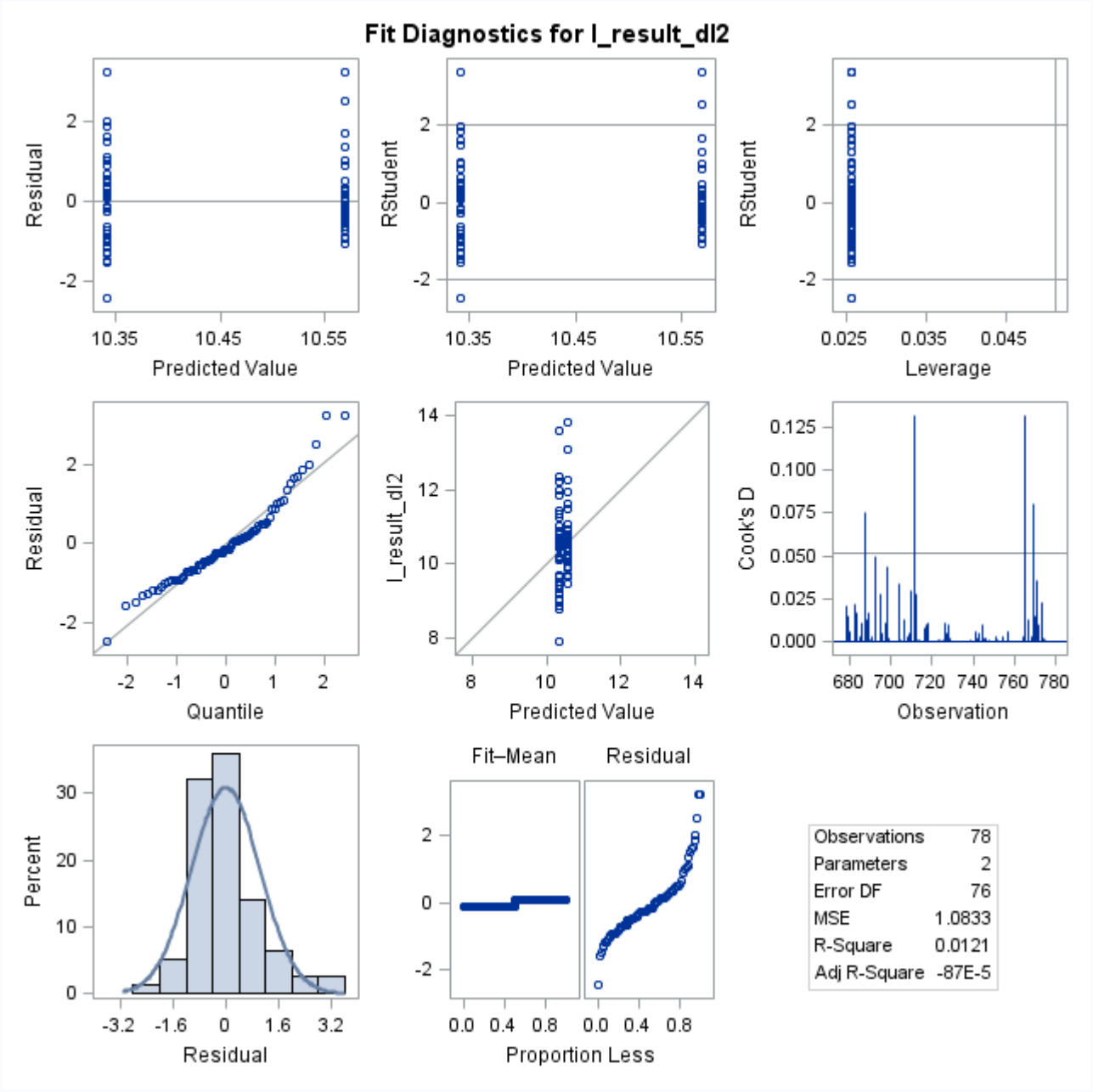
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.01112347	1.01112347	0.93	0.3371
Error	76	82.33213813	1.08331761		
Corrected Total	77	83.34326160			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.012132	9.955343	1.040825	10.45494

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.01112347	1.01112347	0.93	0.3371

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.01112347	1.01112347	0.93	0.3371


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 1.0833
R-Square 0.0121
Adj R-Square -87E-5

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	10.3410874	0.3371
Yes	10.5687988	

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	4.3151	4.3151	1.10	0.2967
Error	76	297.0	3.9085		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	10.3410874	1.15096210
Yes	**39**	10.5687988	0.91756278

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 77

Number of Observations Used 77

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

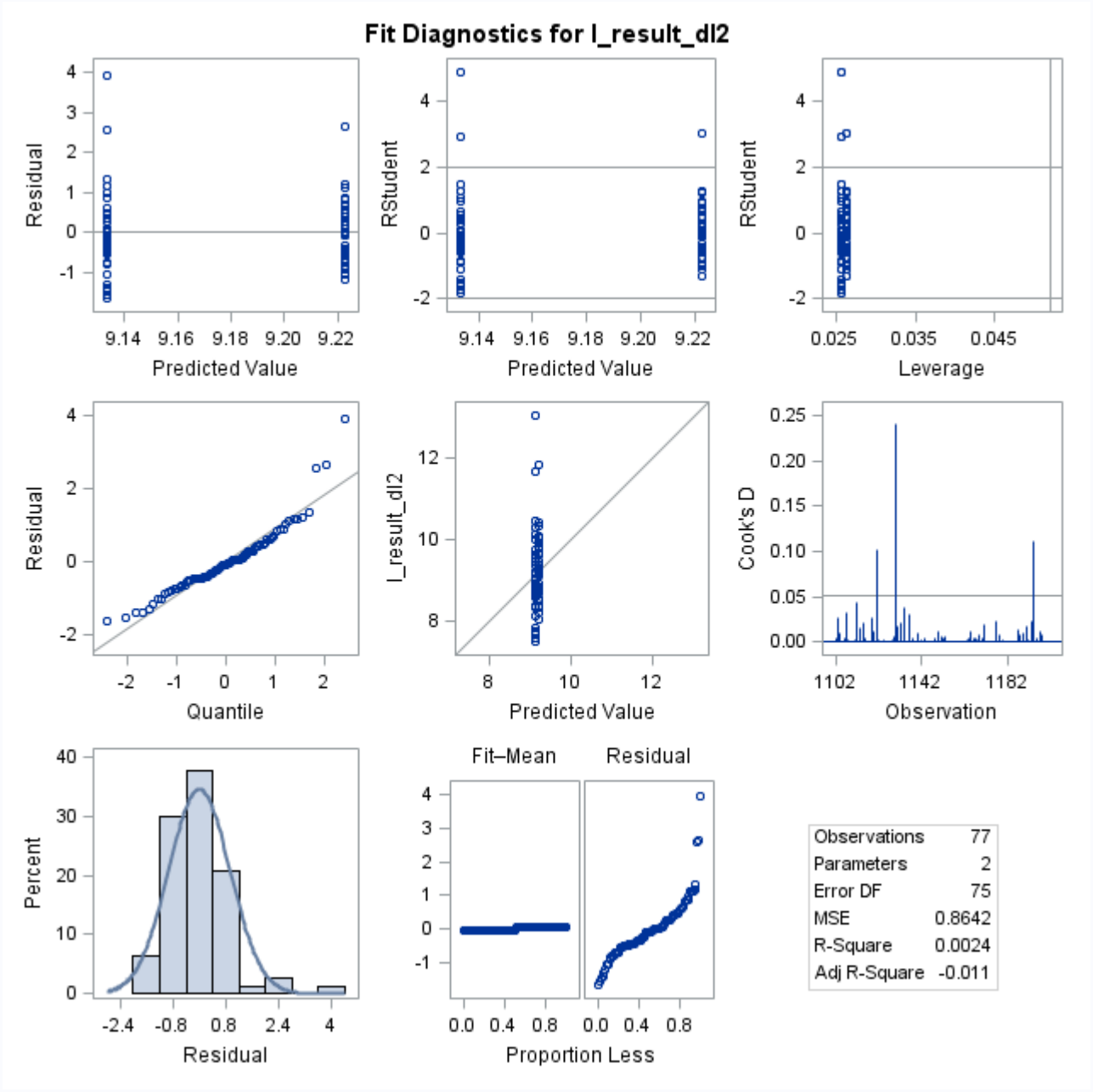
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.15458690	0.15458690	0.18	0.6736
Error	75	64.81801324	0.86424018		
Corrected Total	76	64.97260014			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.002379	10.12974	0.929645	9.177381

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.15458690	0.15458690	0.18	0.6736

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.15458690	0.15458690	0.18	0.6736


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.8642
R-Square 0.0024
Adj R-Square -0.011

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.13315303	0.6736
Yes	9.22277358	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	6.7045	6.7045	1.61	0.2090
Error	75	313.1	4.1751		

PAHs Total HMW PAHs

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	9.13315303	1.07836962
Yes	**38**	9.22277358	0.74667794

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

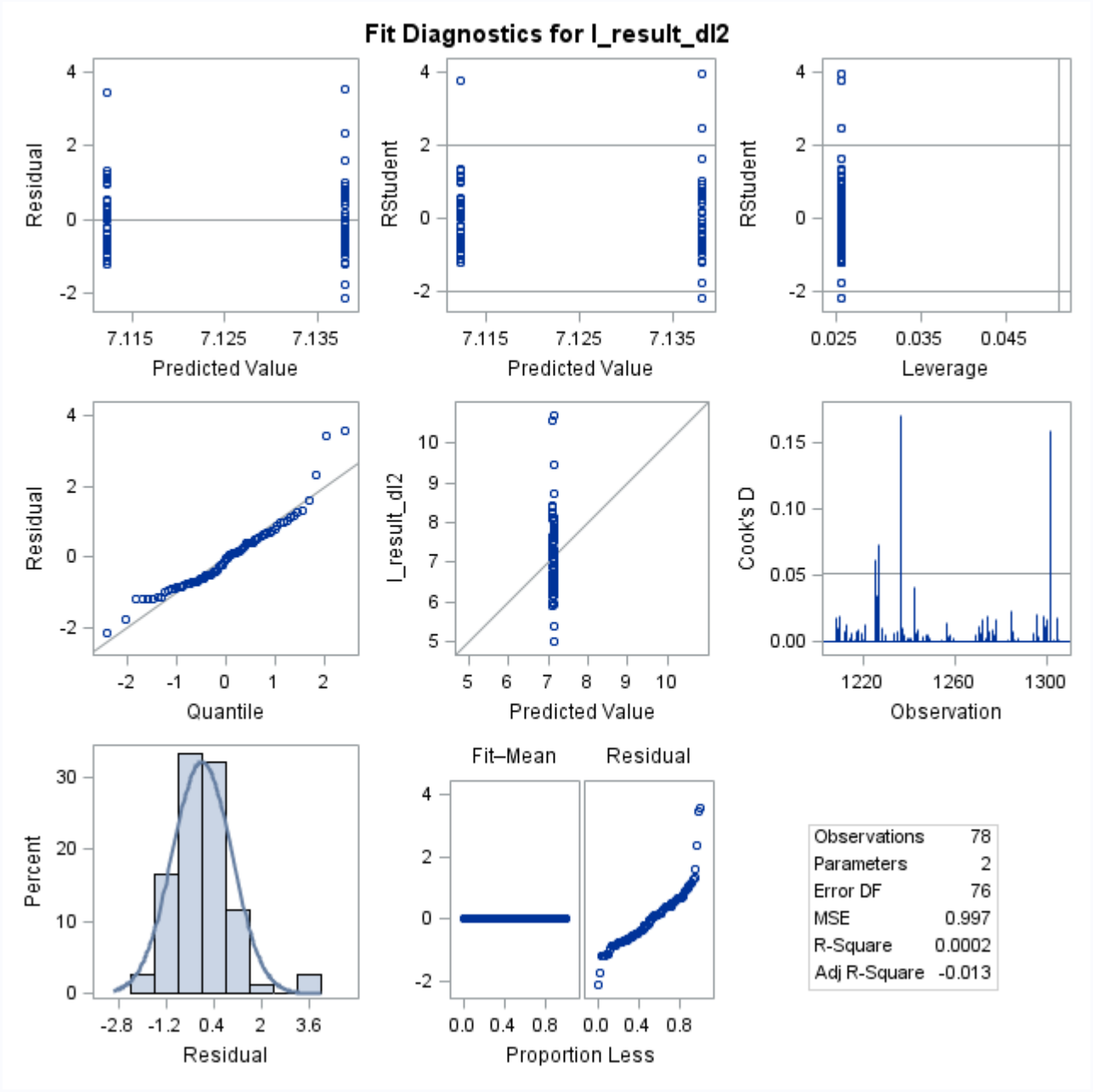
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.01298779	0.01298779	0.01	0.9094
Error	76	75.76967548	0.99696941		
Corrected Total	77	75.78266327			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000171	14.01358	0.998484	7.125112

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.01298779	0.01298779	0.01	0.9094

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.01298779	0.01298779	0.01	0.9094


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 0.997
R-Square 0.0002
Adj R-Square -0.013

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	7.13801554	0.9094
Yes	7.11220778	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.6809	1.6809	0.40	0.5308
Error	76	322.2	4.2391		

PAHs Total LMW PAHs

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	7.13801554	1.07127621
Yes	**39**	7.11220778	0.91994897

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

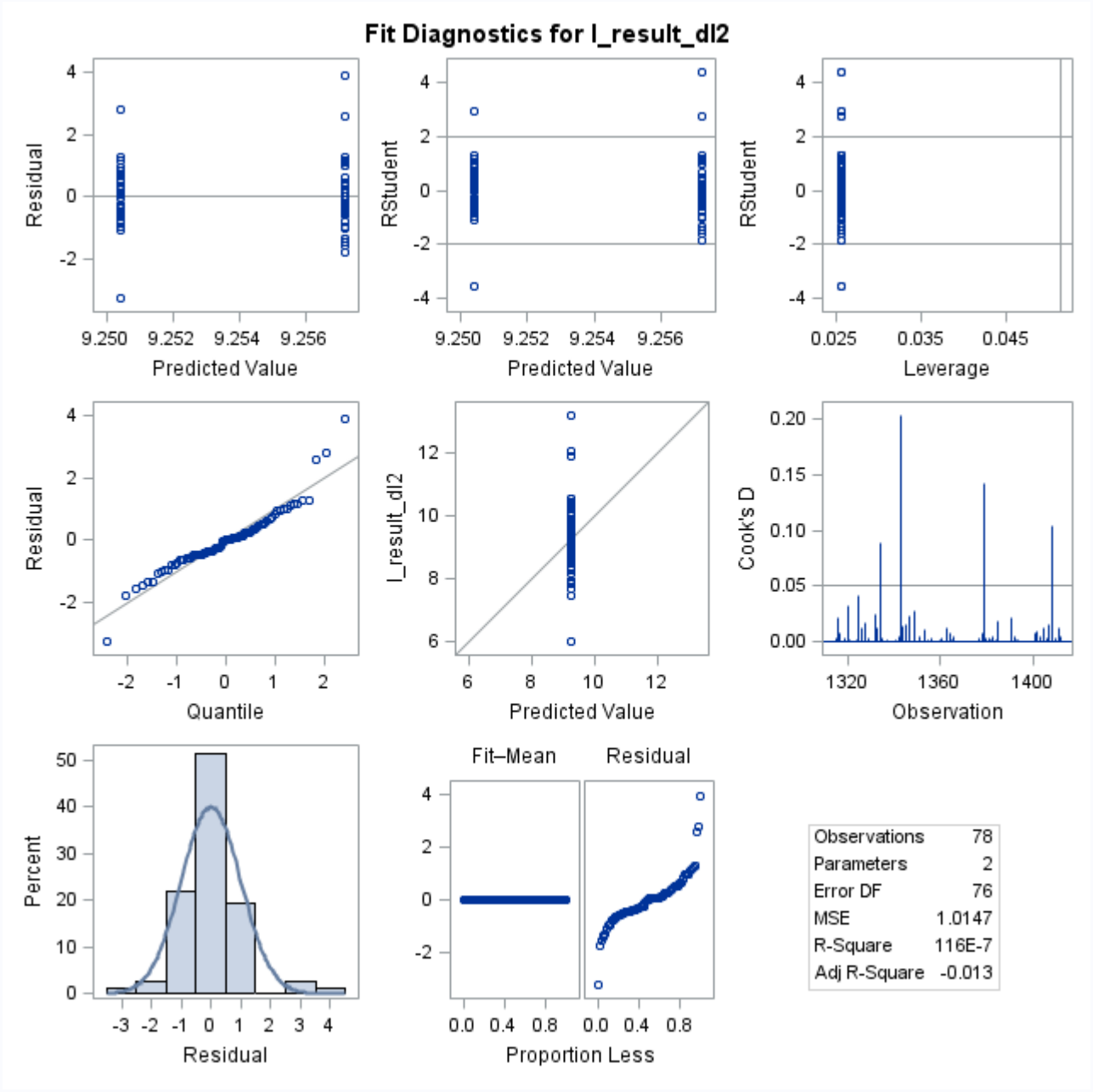
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00089797	0.00089797	0.00	0.9763
Error	76	77.11734043	1.01470185		
Corrected Total	77	77.11823841			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000012	10.88552	1.007324	9.253801

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00089797	0.00089797	0.00	0.9763

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.00089797	0.00089797	0.00	0.9763


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 1.0147
R-Square 116E-7
Adj R-Square -0.013

The GLM Procedure
Least Squares Means
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	9.25719402	0.9763
Yes	9.25040801	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	2.1173	2.1173	0.38	0.5385
Error	76	421.5	5.5467		

PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	9.25719402	1.08802326
Yes	**39**	9.25040801	0.91957005

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 77

Number of Observations Used 77

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

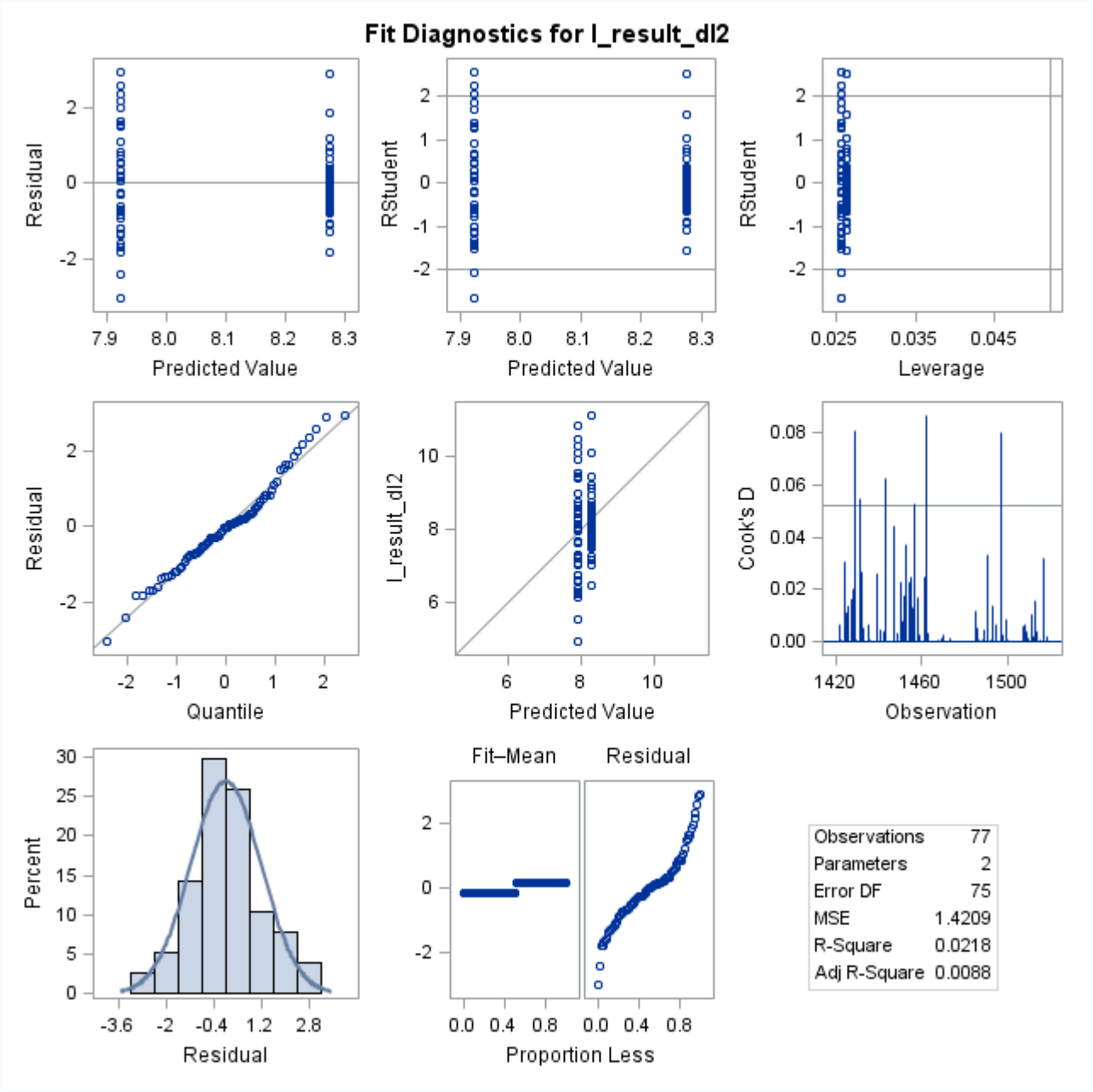
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.3792251	2.3792251	1.67	0.1996
Error	75	106.5686672	1.4209156		
Corrected Total	76	108.9478923			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.021838	14.72225	1.192022	8.096736

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	2.37922509	2.37922509	1.67	0.1996

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	2.37922509	2.37922509	1.67	0.1996


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 1.4209
R-Square 0.0218
Adj R-Square 0.0088

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	7.92322336	0.1996
Yes	8.27481539	

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	34.1539	34.1539	8.77	0.0041
Error	75	292.0	3.8937		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	7.92322336	1.44745885
Yes	**38**	8.27481539	0.85350560

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 78

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

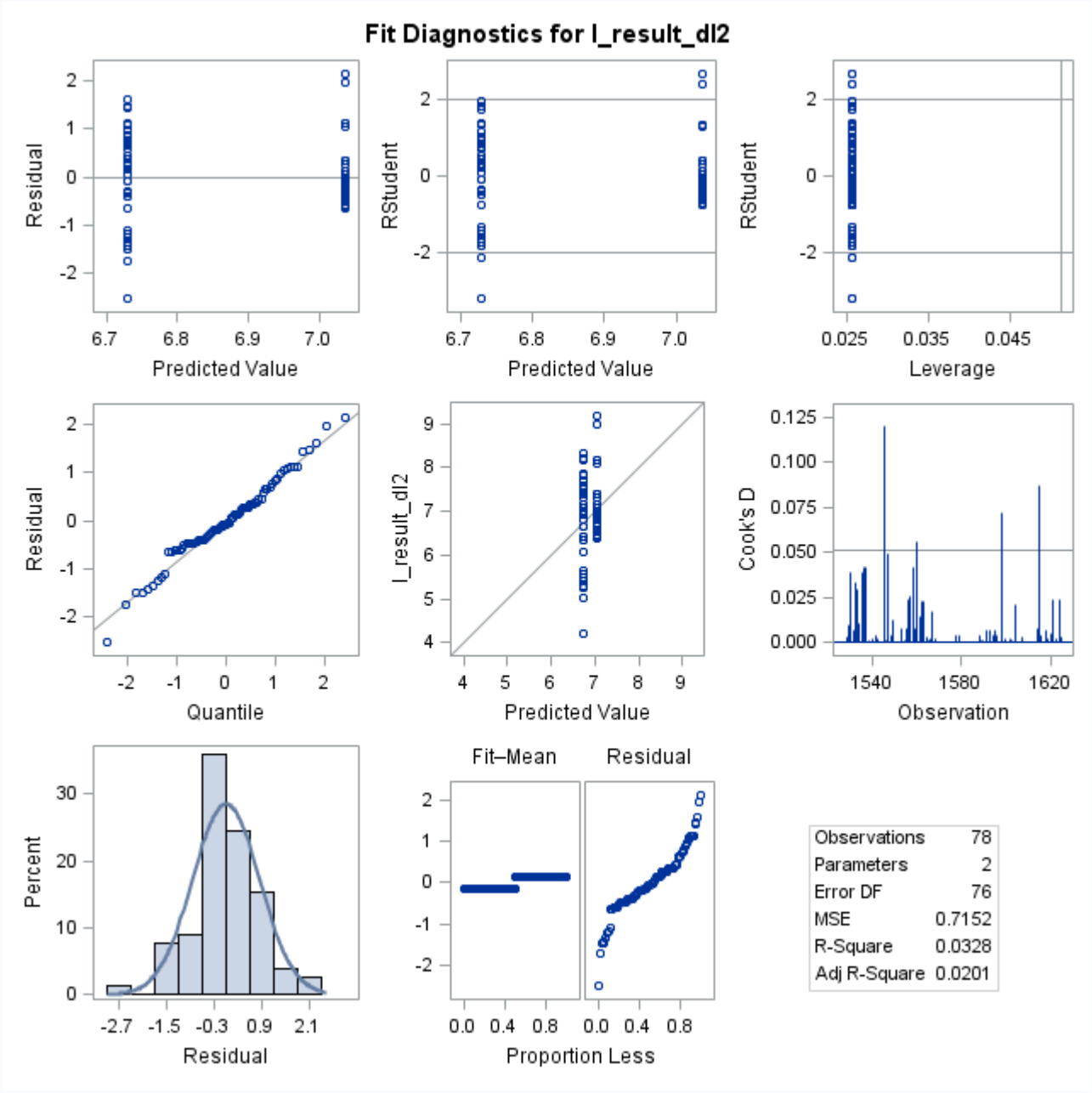
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.84525403	1.84525403	2.58	0.1124
Error	76	54.35183484	0.71515572		
Corrected Total	77	56.19708887			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.032835	12.28679	0.845669	6.882749

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.84525403	1.84525403	2.58	0.1124

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.84525403	1.84525403	2.58	0.1124


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 78
Parameters 2
Error DF 76
MSE 0.7152
R-Square 0.0328
Adj R-Square 0.0201

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	6.72894005	0.1124
Yes	7.03655736	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	5.5575	5.5575	4.58	0.0356
Error	76	92.2840	1.2143		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	6.72894005	0.99453871
Yes	**39**	7.03655736	0.66423203

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

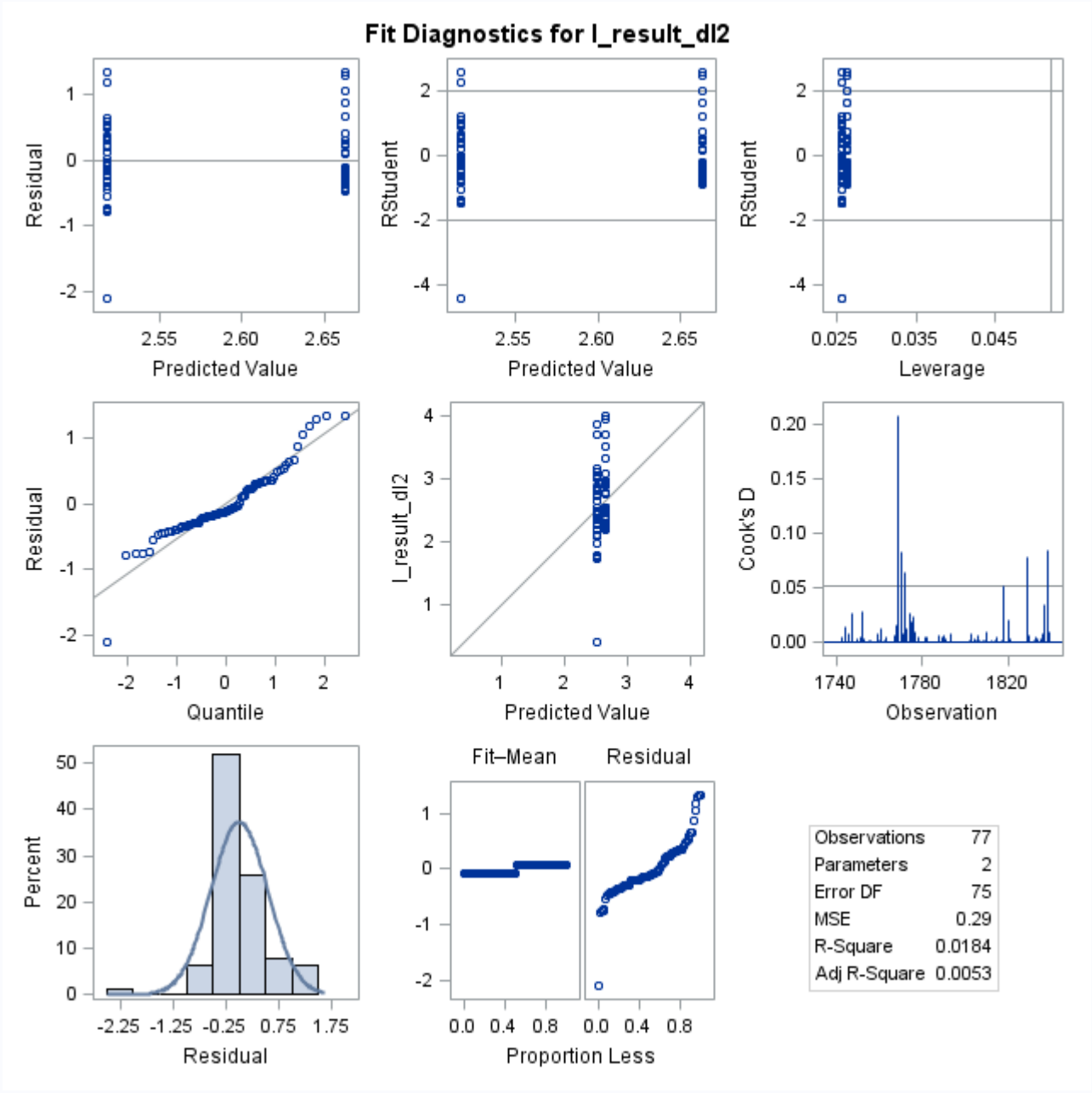
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.40770649	0.40770649	1.41	0.2395
Error	75	21.75185648	0.29002475		
Corrected Total	76	22.15956297			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.018399	20.79960	0.538539	2.589182

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.40770649	0.40770649	1.41	0.2395

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.40770649	0.40770649	1.41	0.2395


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.29
R-Square 0.0184
Adj R-Square 0.0053

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Arsenic

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	2.51735502	0.2395
Yes	2.66289928	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.3141	0.3141	0.82	0.3676
Error	75	28.6770	0.3824		

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	2.51735502	0.59551132
Yes	**38**	2.66289928	0.47293718

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

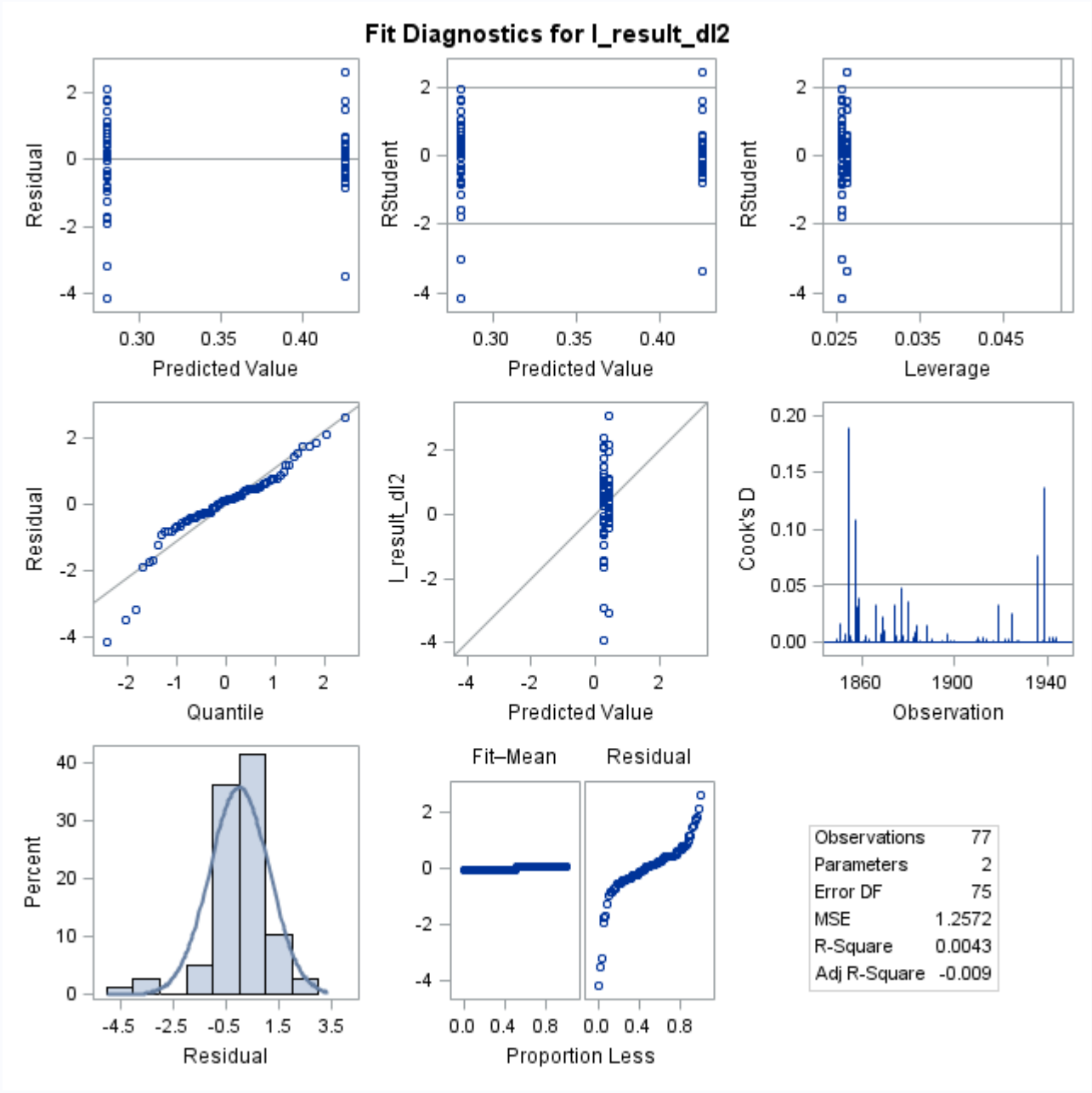
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.40831204	0.40831204	0.32	0.5704
Error	75	94.28754623	1.25716728		
Corrected Total	76	94.69585827			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.004312	318.2728	1.121235	0.352287

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.40831204	0.40831204	0.32	0.5704

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.40831204	0.40831204	0.32	0.5704


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 1.2572
R-Square 0.0043
Adj R-Square -0.009

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Cadmium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.28040694	0.5704
Yes	0.42605924	

Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	13.0594	13.0594	1.66	0.2015
Error	75	589.9	7.8655		

Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	0.28040694	1.29381200
Yes	**38**	0.42605924	0.91056064

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

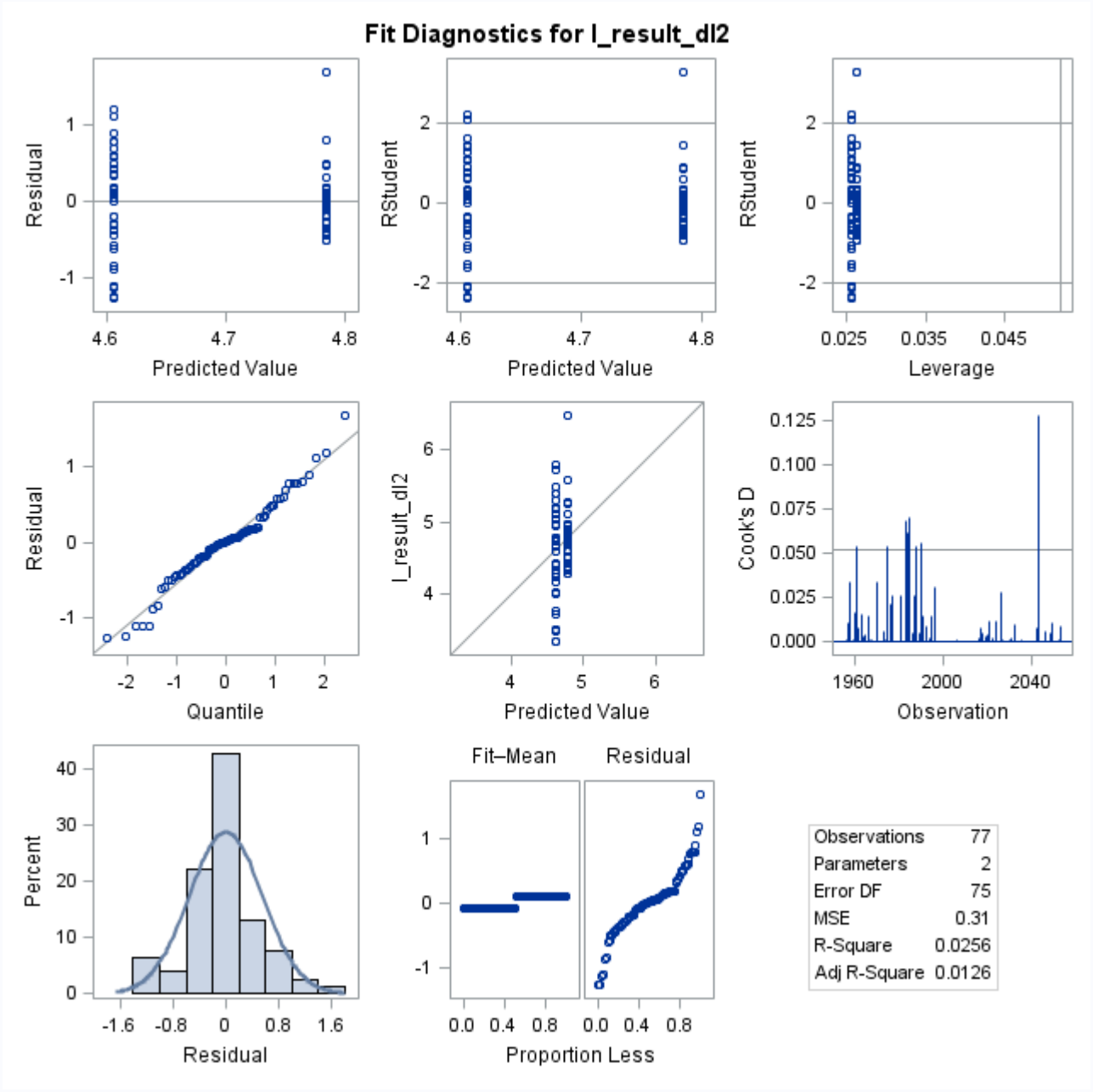
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.61023502	0.61023502	1.97	0.1647
Error	75	23.25027295	0.31000364		
Corrected Total	76	23.86050797			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.025575	11.86079	0.556780	4.694287

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.61023502	0.61023502	1.97	0.1647

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.61023502	0.61023502	1.97	0.1647


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.31
R-Square 0.0256
Adj R-Square 0.0126

Metals Chromium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Chromium

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	4.60641300	0.1647
Yes	4.78447442	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.6186	1.6186	6.90	0.0104
Error	75	17.5900	0.2345		

Metals Chromium

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Chromium

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	4.60641300	0.67585497
Yes	**38**	4.78447442	0.39907445

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

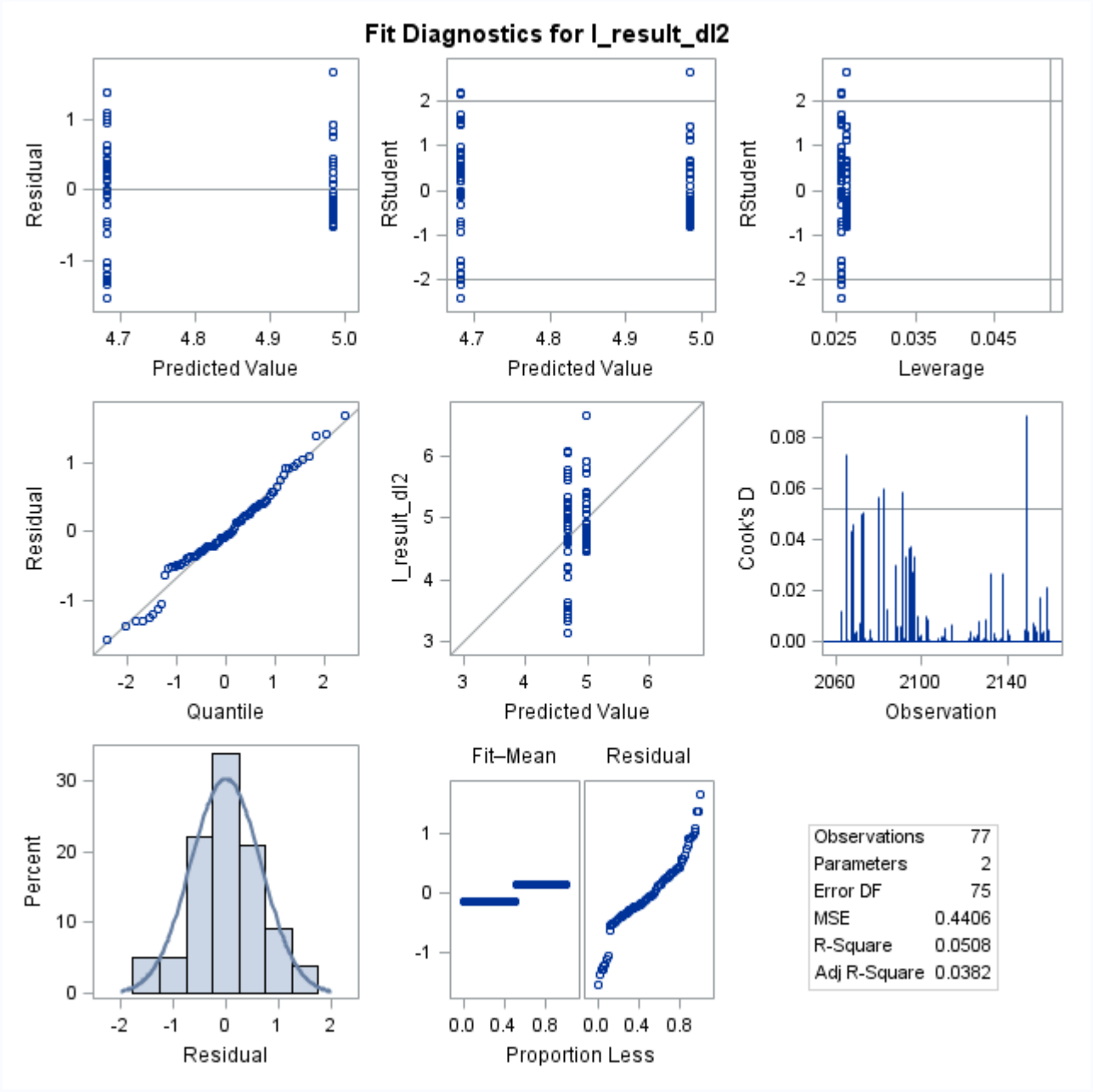
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.76957300	1.76957300	4.02	0.0487
Error	75	33.04369455	0.44058259		
Corrected Total	76	34.81326755			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.050830	13.73847	0.663764	4.831424

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.76957300	1.76957300	4.02	0.0487

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.76957300	1.76957300	4.02	0.0487


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.4406
R-Square 0.0508
Adj R-Square 0.0382

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Copper

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	4.68178419	0.0487
Yes	4.98500256	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	2.7009	2.7009	7.26	0.0087
Error	75	27.8833	0.3718		

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	4.68178419	0.79383186
Yes	**38**	4.98500256	0.49585502

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

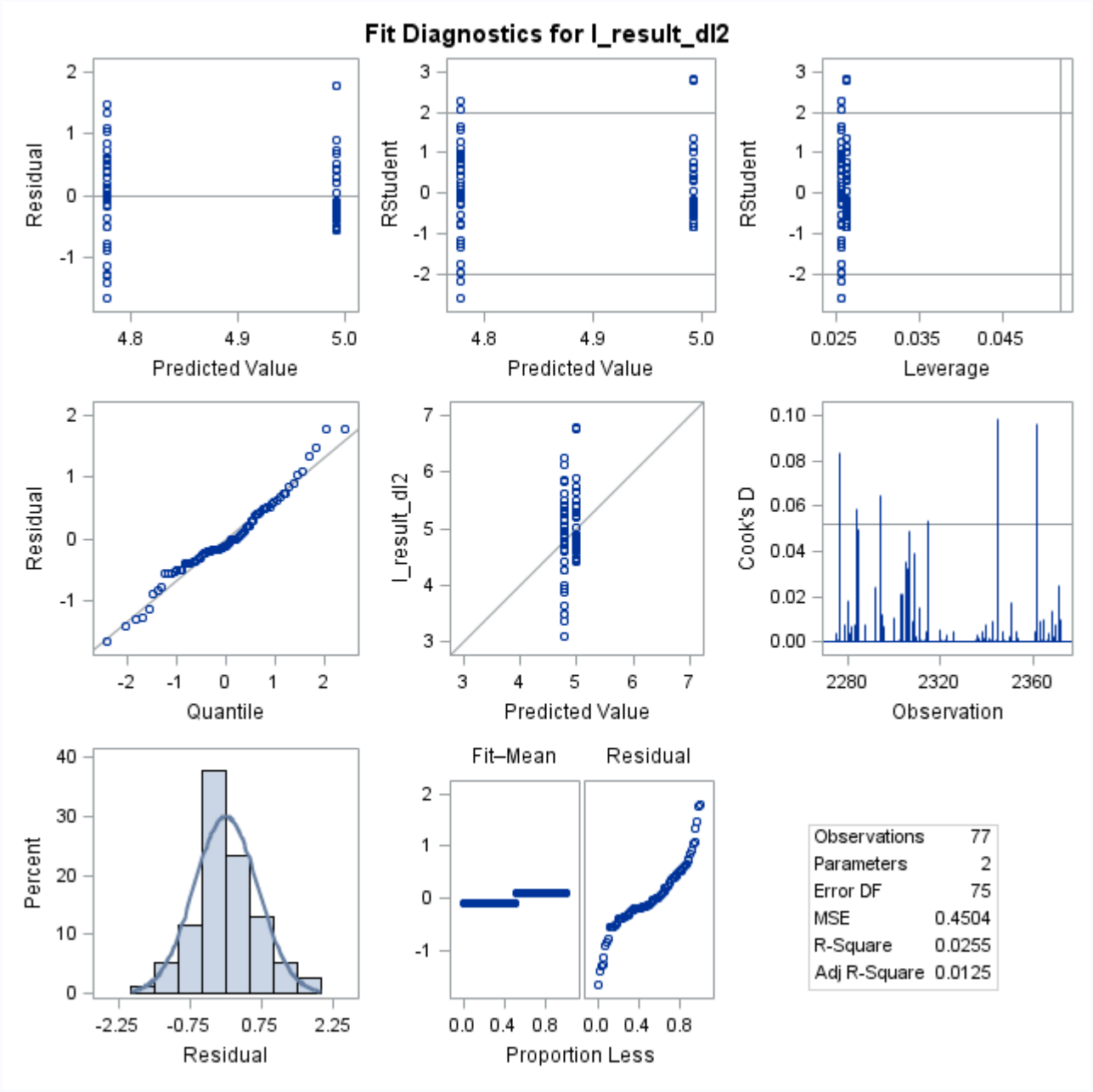
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.88406624	0.88406624	1.96	0.1653
Error	75	33.77961776	0.45039490		
Corrected Total	76	34.66368400			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.025504	13.74396	0.671115	4.882977

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	0.88406624	0.88406624	1.96	0.1653

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	0.88406624	0.88406624	1.96	0.1653


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.4504
R-Square 0.0255
Adj R-Square 0.0125

Metals Lead

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Lead

Be_bearing	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	4.77720876	0.1653
Yes	4.99152923	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	1.1784	1.1784	2.31	0.1327
Error	75	38.2475	0.5100		

Metals Lead

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Lead

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	4.77720876	0.75866062
Yes	**38**	4.99152923	0.56731021

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

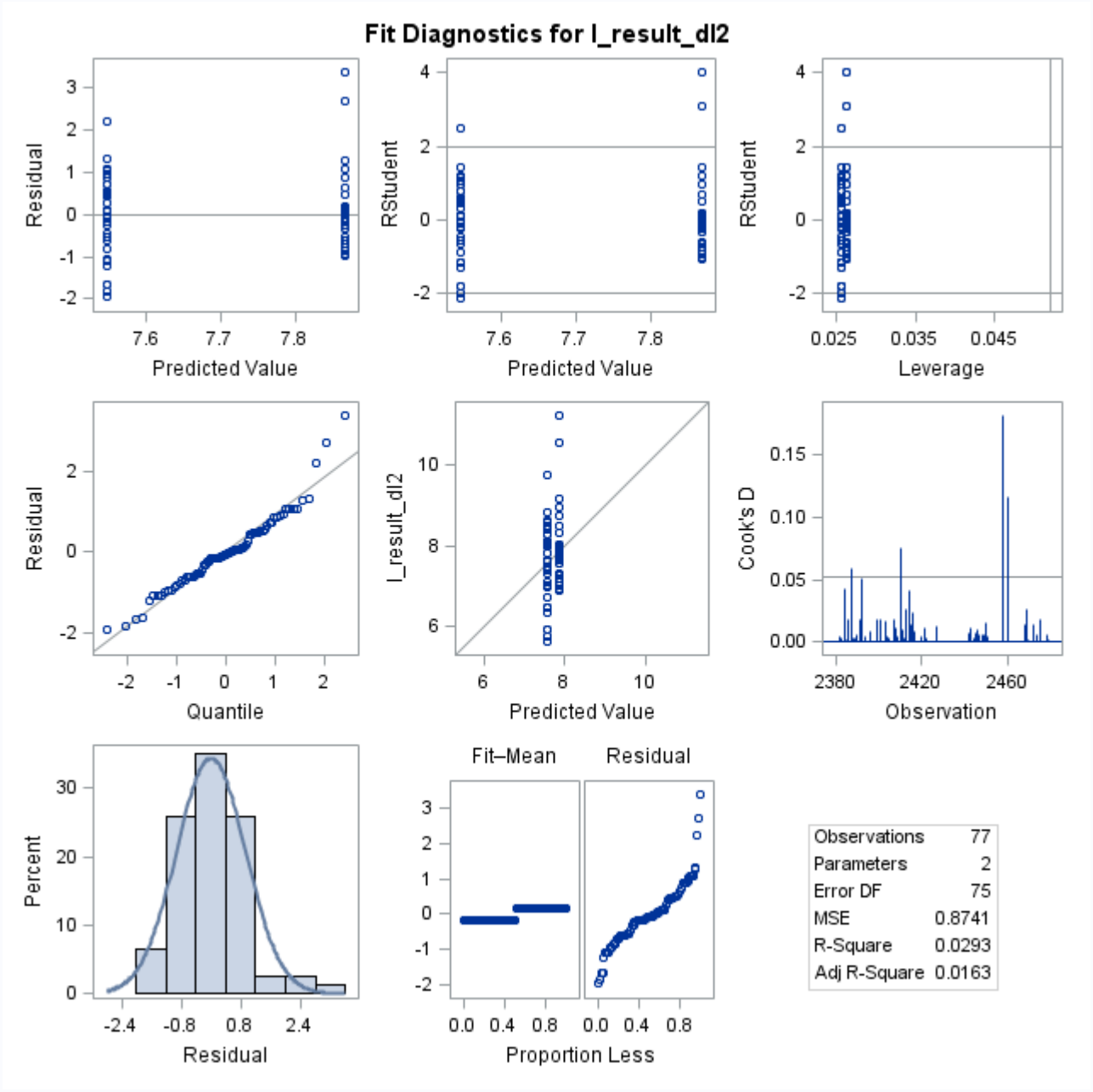
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.97576461	1.97576461	2.26	0.1369
Error	75	65.55814109	0.87410855		
Corrected Total	76	67.53390570			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.029256	12.13474	0.934938	7.704638

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.97576461	1.97576461	2.26	0.1369

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.97576461	1.97576461	2.26	0.1369


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.8741
R-Square 0.0293
Adj R-Square 0.0163

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Mercury

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	7.54652014	0.1369
Yes	7.86691745	

Metals Mercury

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.1763	0.1763	0.06	0.8069
Error	75	219.8	2.9305		

Metals Mercury

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Mercury

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	7.54652014	0.96035979
Yes	**38**	7.86691745	0.90808807

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

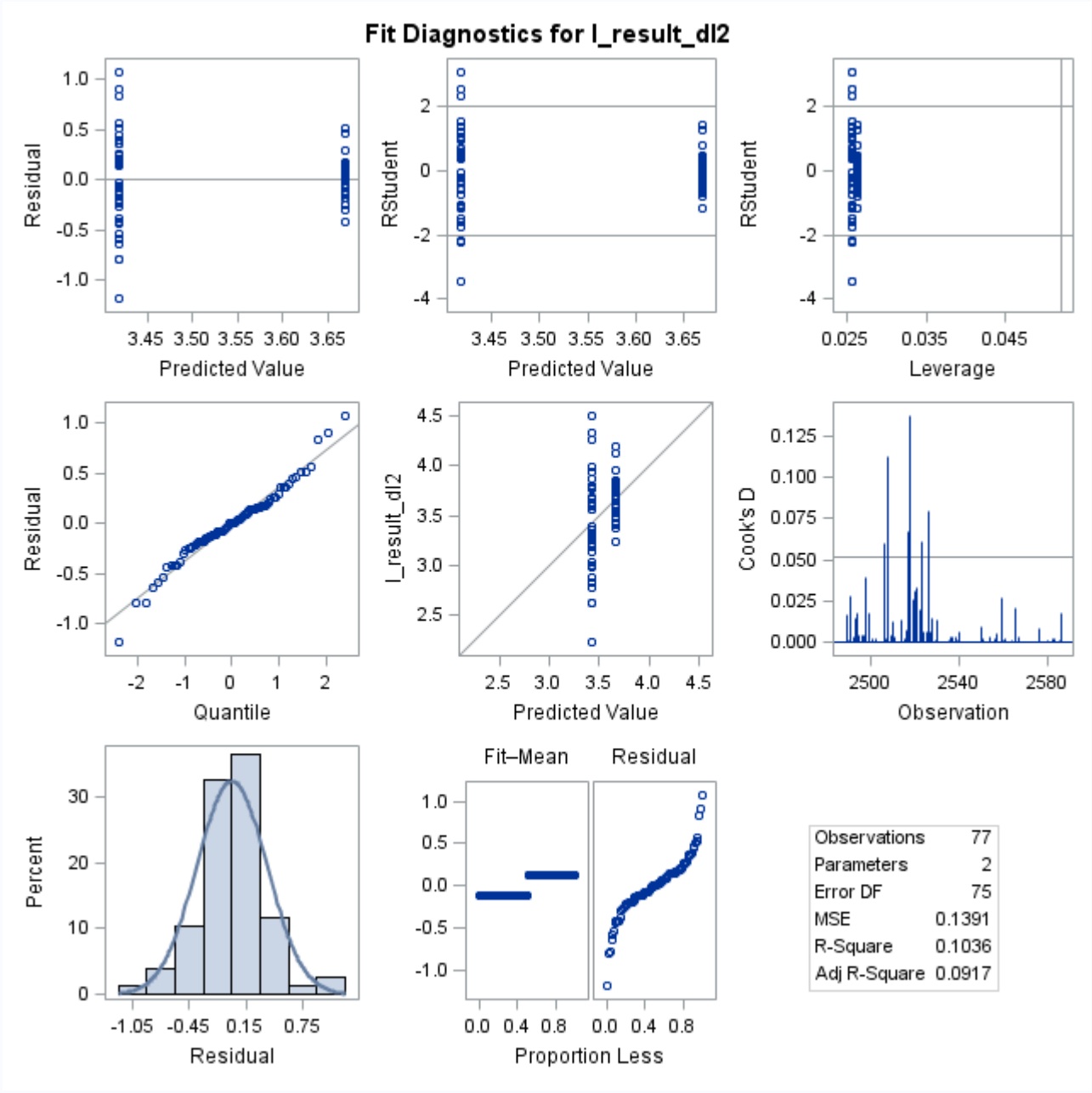
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.20540853	1.20540853	8.67	0.0043
Error	75	10.42900764	0.13905344		
Corrected Total	76	11.63441618			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.103607	10.52801	0.372899	3.541967

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.20540853	1.20540853	8.67	0.0043

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.20540853	1.20540853	8.67	0.0043


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.1391
R-Square 0.1036
Adj R-Square 0.0917

Metals Nickel

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Nickel

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2
		Pr > |t|
No	3.41846253	0.0043
Yes	3.66872077	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.7438	0.7438	13.59	0.0004
Error	75	4.1061	0.0547		

Metals Nickel

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Nickel

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	3.41846253	0.48844017
Yes	**38**	3.66872077	0.19194617

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 74

Number of Observations Used 73

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

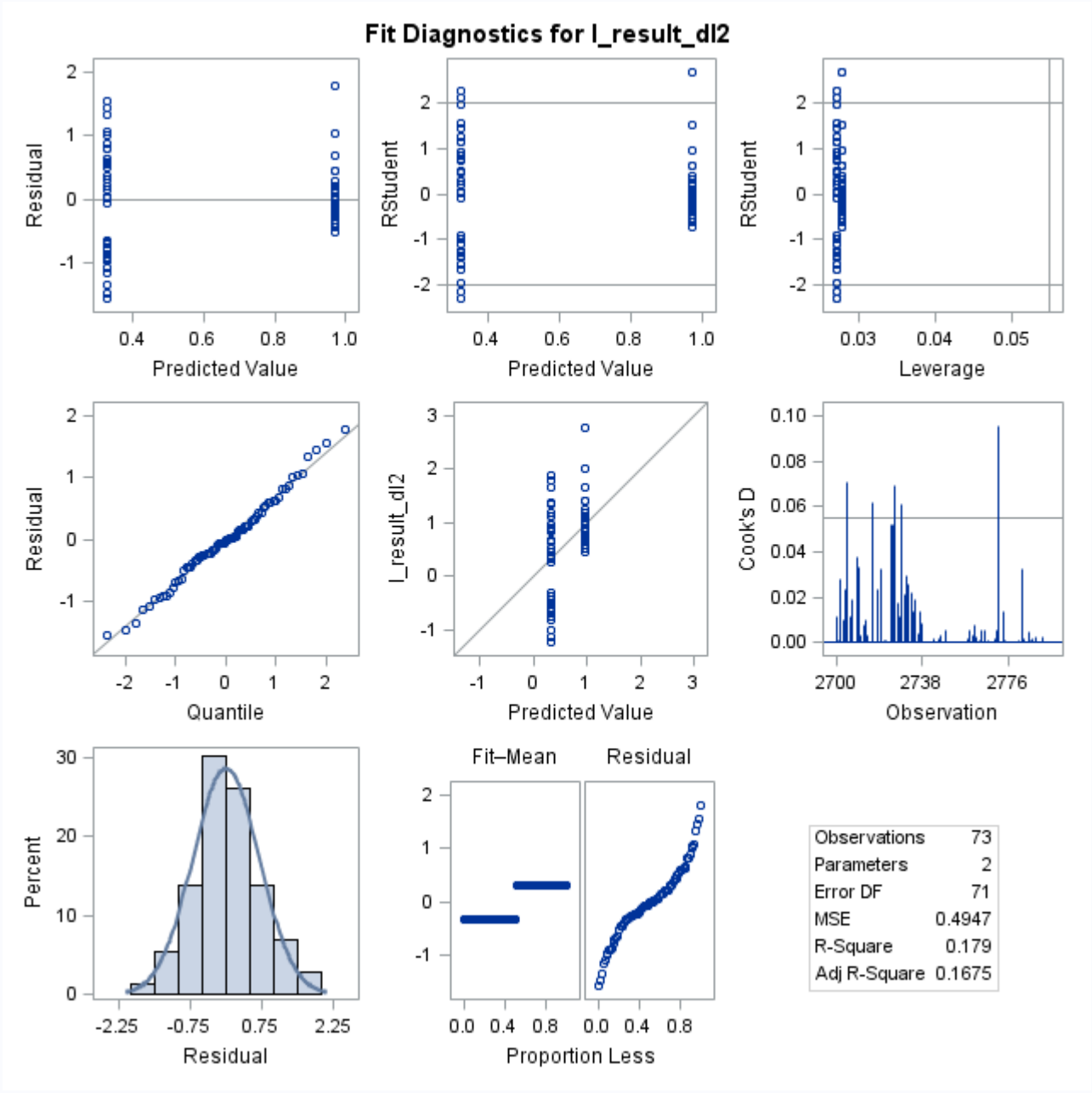
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.65822081	7.65822081	15.48	0.0002
Error	71	35.12191082	0.49467480		
Corrected Total	72	42.78013163			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.179013	109.2268	0.703331	0.643918

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	7.65822081	7.65822081	15.48	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	7.65822081	7.65822081	15.48	0.0002


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 73
Parameters 2
Error DF 71
MSE 0.4947
R-Square 0.179
Adj R-Square 0.1675

Metals Silver

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Silver

Be_bearing	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	0.32443163	0.0002
Yes	0.97227984	

Metals Silver

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	5.7420	5.7420	14.20	0.0003
Error	71	28.7040	0.4043		

Metals Silver

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Silver

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**37**	0.32443163	0.88250424
Yes	**36**	0.97227984	0.44990846

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
Be_bear	2	No Yes

Number of Observations Read 78

Number of Observations Used 77

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

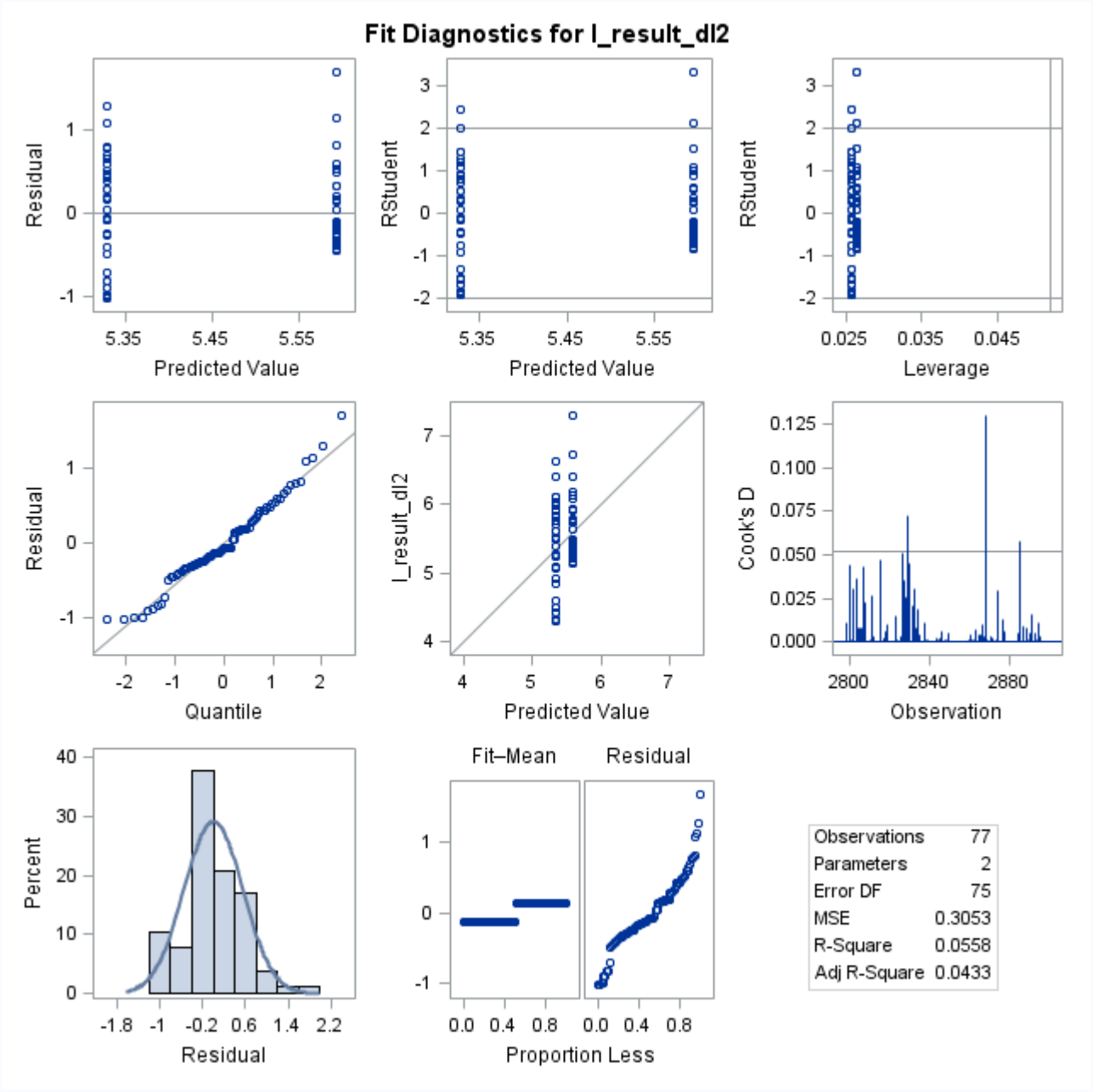
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.35460820	1.35460820	4.44	0.0385
Error	75	22.90123686	0.30534982		
Corrected Total	76	24.25584506			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.055847	10.12176	0.552585	5.459373

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Be_bear	1	1.35460820	1.35460820	4.44	0.0385

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Be_bear	1	1.35460820	1.35460820	4.44	0.0385


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 77
Parameters 2
Error DF 75
MSE 0.3053
R-Square 0.0558
Adj R-Square 0.0433

Metals Zinc

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure
Least Squares Means
sort=7 Parameter_group=Metals chemical_name=Zinc

Be_bear	l_result_dl2 LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
No	5.32844836	0.0385
Yes	5.59374277	

Metals Zinc

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Be_bear	1	0.5696	0.5696	2.72	0.1035
Error	75	15.7291	0.2097		

Metals Zinc

NBSA Phase III Surface Sediment ANOVA by Be-7 Bearing Status : Non-Navigation Channel Samples

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Zinc

Level of Be_bear	N	l_result_dl2	
		Mean	Std Dev
No	**39**	5.32844836	0.62640331
Yes	**38**	5.59374277	0.46472180

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

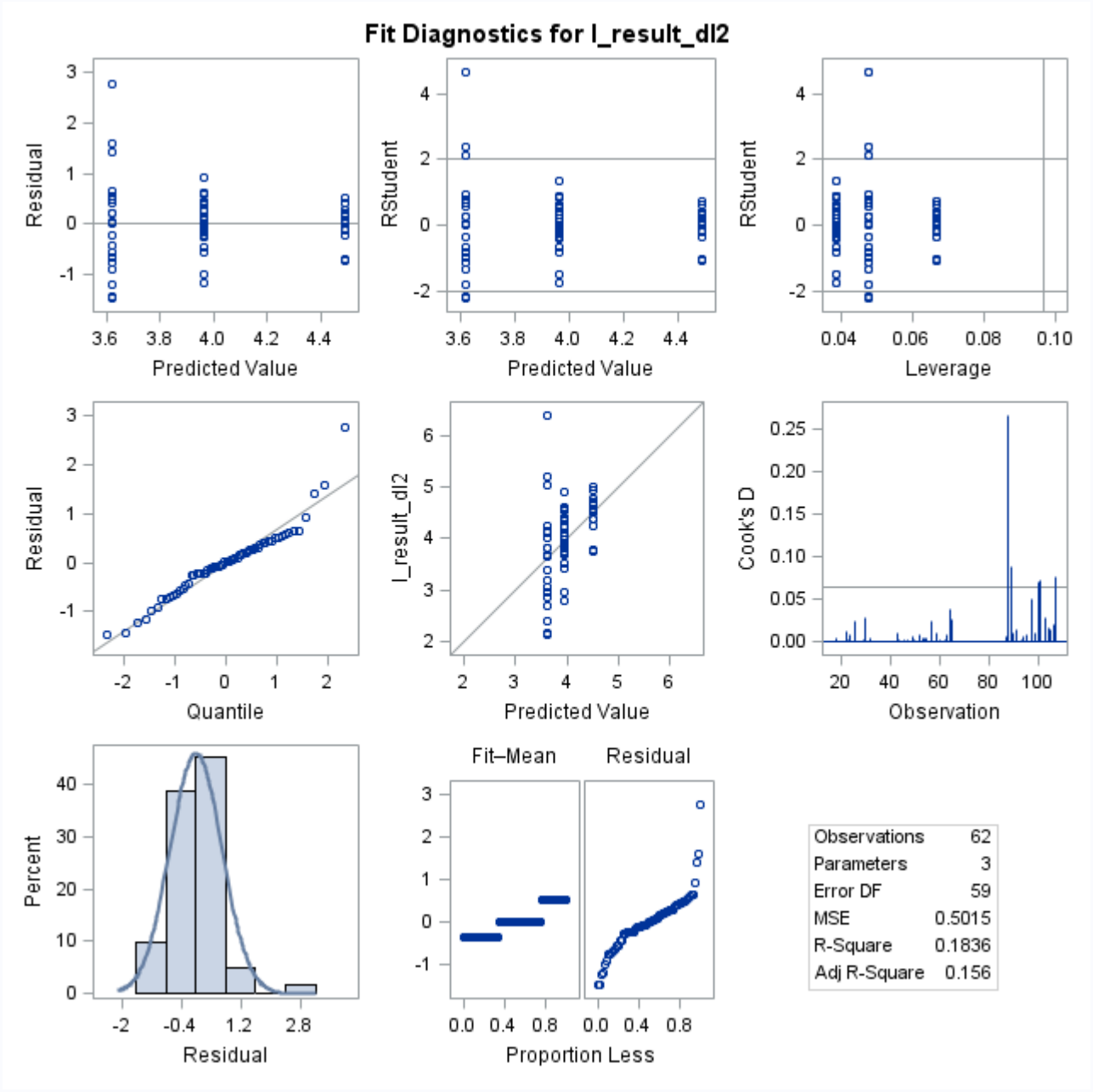
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.65560526	3.32780263	6.64	0.0025
Error	59	29.58658498	0.50146754		
Corrected Total	61	36.24219023			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.183642	17.82098	0.708144	3.973652

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	6.65560526	3.32780263	6.64	0.0025

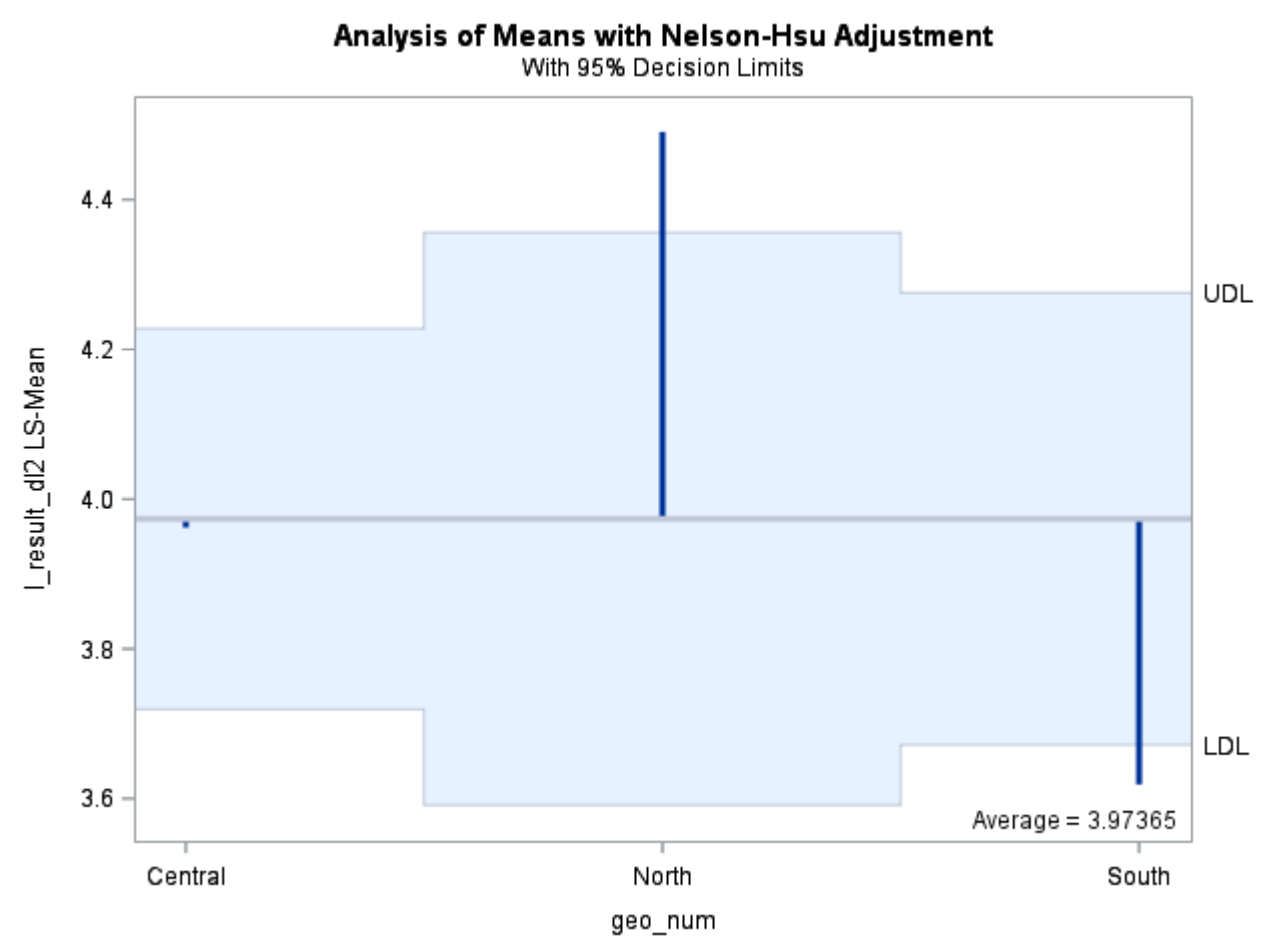
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	6.65560526	3.32780263	6.64	0.0025


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.5015
R-Square 0.1836
Adj R-Square 0.156

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.96202189	0.9933
North	4.49057289	0.0054
South	3.61882270	0.0174



Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.96202189	1
North	4.49057289	2
South	3.61882270	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.0633	0.2324
2	0.0633		0.0016
3	0.2324	0.0016	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	10.3043	5.1522	4.86	0.0111
Error	59	62.5306	1.0598		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	11.08	0.0002
Error	35.8017		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	3.96202189	0.48450847
North	**15**	4.49057289	0.35821262
South	**21**	3.61882270	1.04693471

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

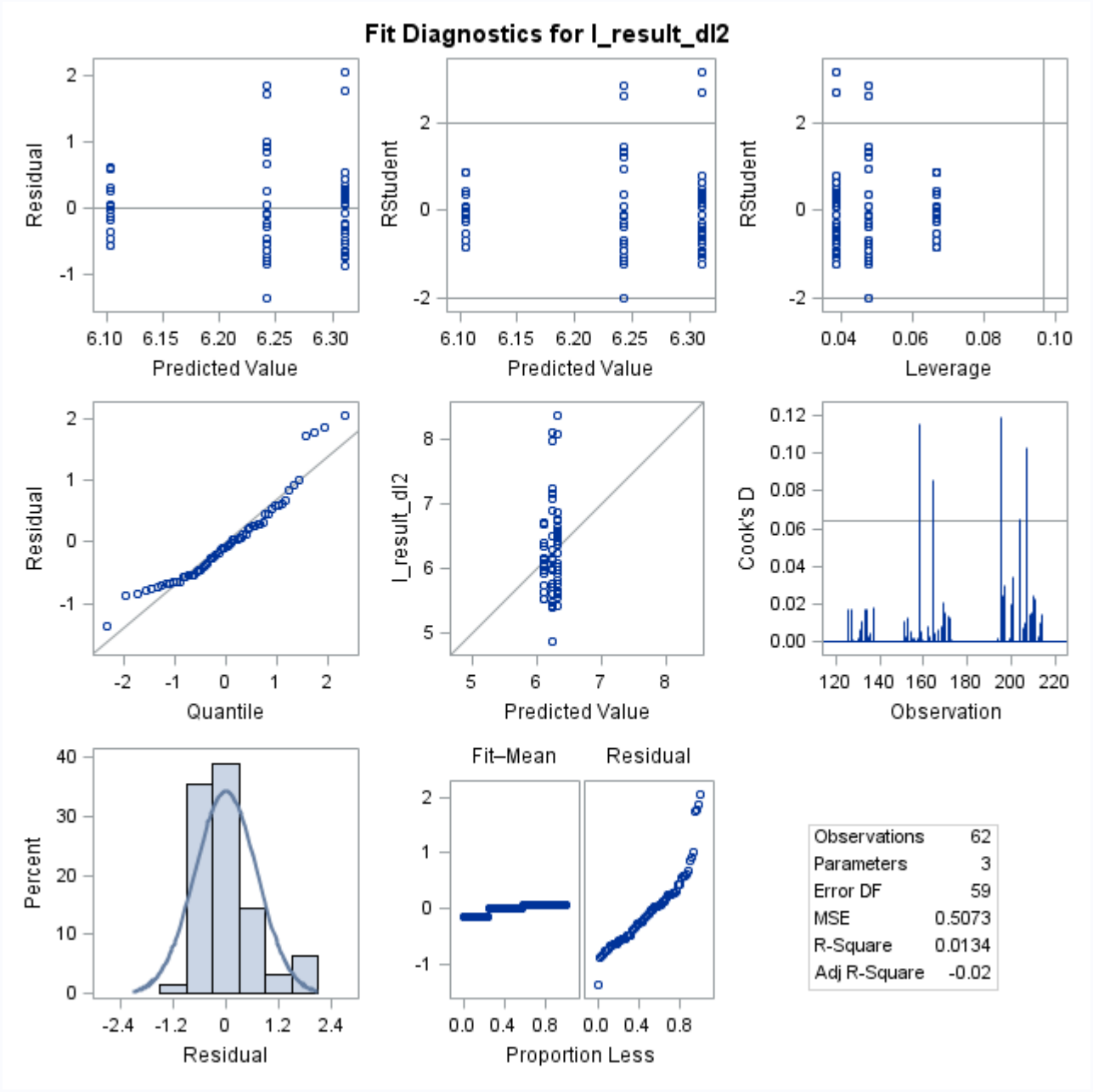
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.40764672	0.20382336	0.40	0.6710
Error	59	29.93362527	0.50734958		
Corrected Total	61	30.34127199			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.013435	11.41906	0.712285	6.237681

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.40764672	0.20382336	0.40	0.6710

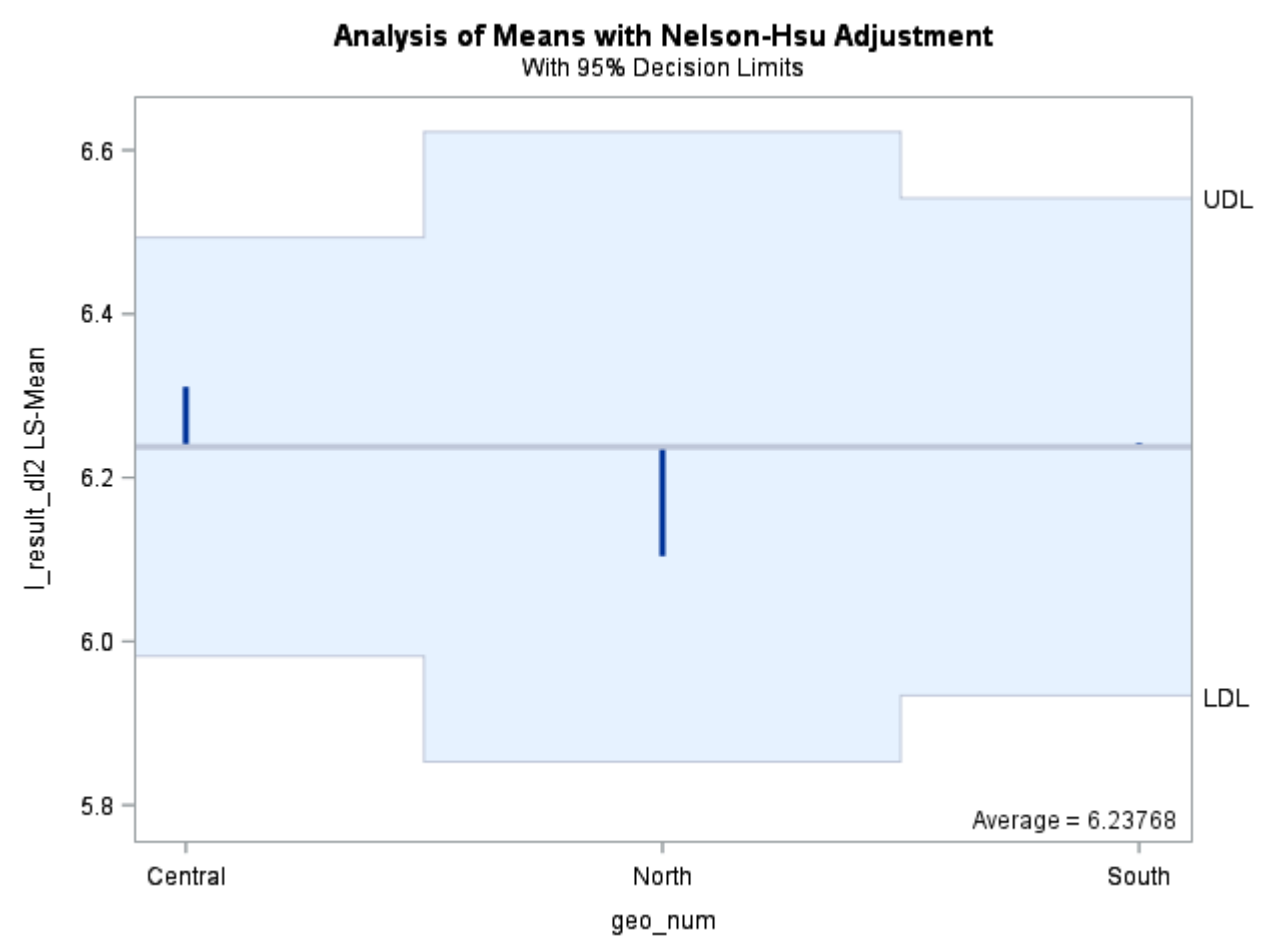
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.40764672	0.20382336	0.40	0.6710


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.5073
R-Square 0.0134
Adj R-Square -0.02

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.31097156	0.7705
North	6.10413126	0.6828
South	6.24233358	0.9993



PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.31097156	1
North	6.10413126	2
South	6.24233358	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6452	0.9423
2	0.6452		0.8345
3	0.9423	0.8345	

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	2.8336	1.4168	1.99	0.1463
Error	59	42.0929	0.7134		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.74	0.4822
Error	38.0924		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	6.31097156	0.70652464
North	**15**	6.10413126	0.40475534
South	**21**	6.24233358	0.87064982

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

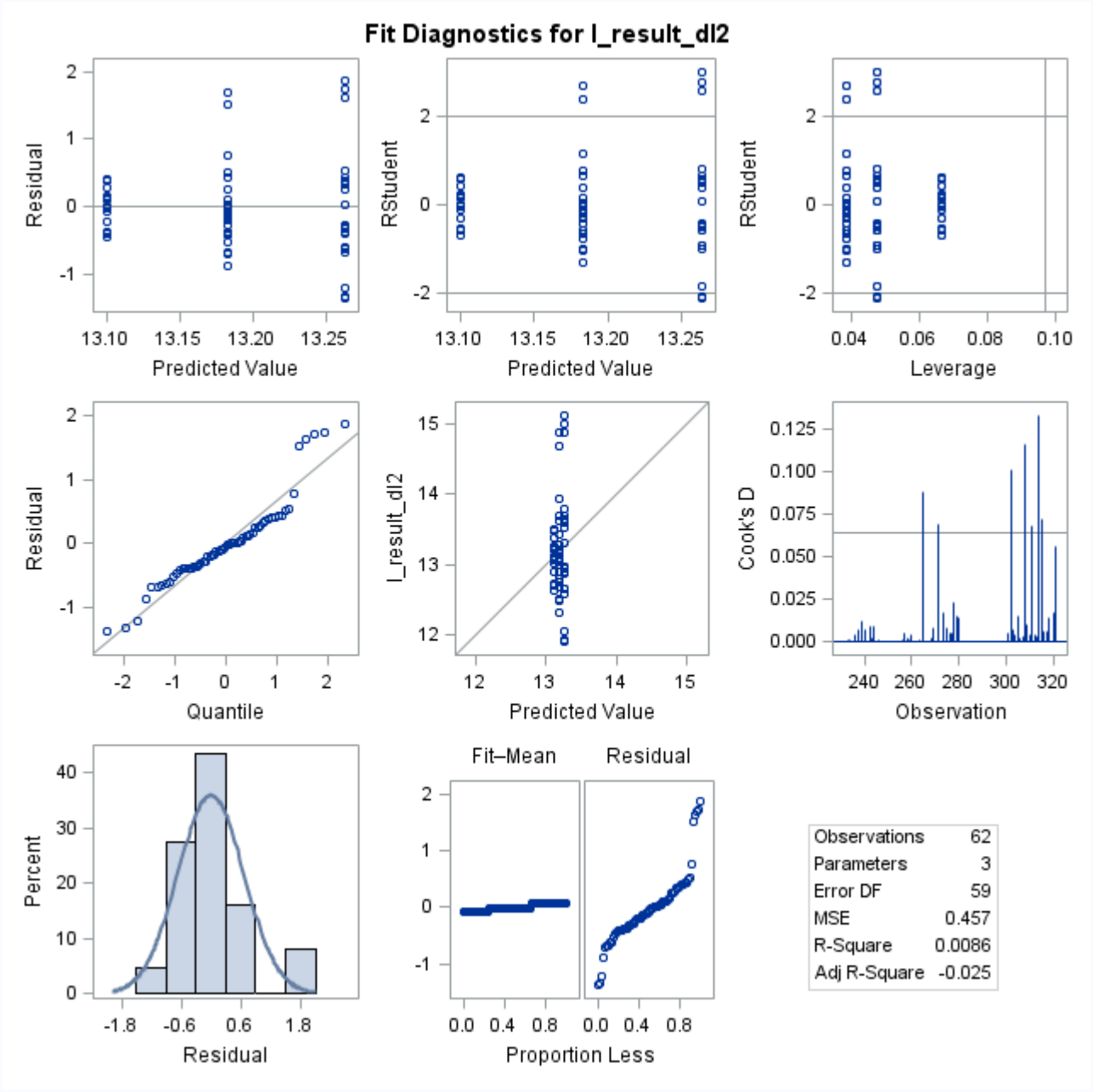
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.23398880	0.11699440	0.26	0.7750
Error	59	26.96519047	0.45703713		
Corrected Total	61	27.19917927			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.008603	5.125321	0.676045	13.19030

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.23398880	0.11699440	0.26	0.7750

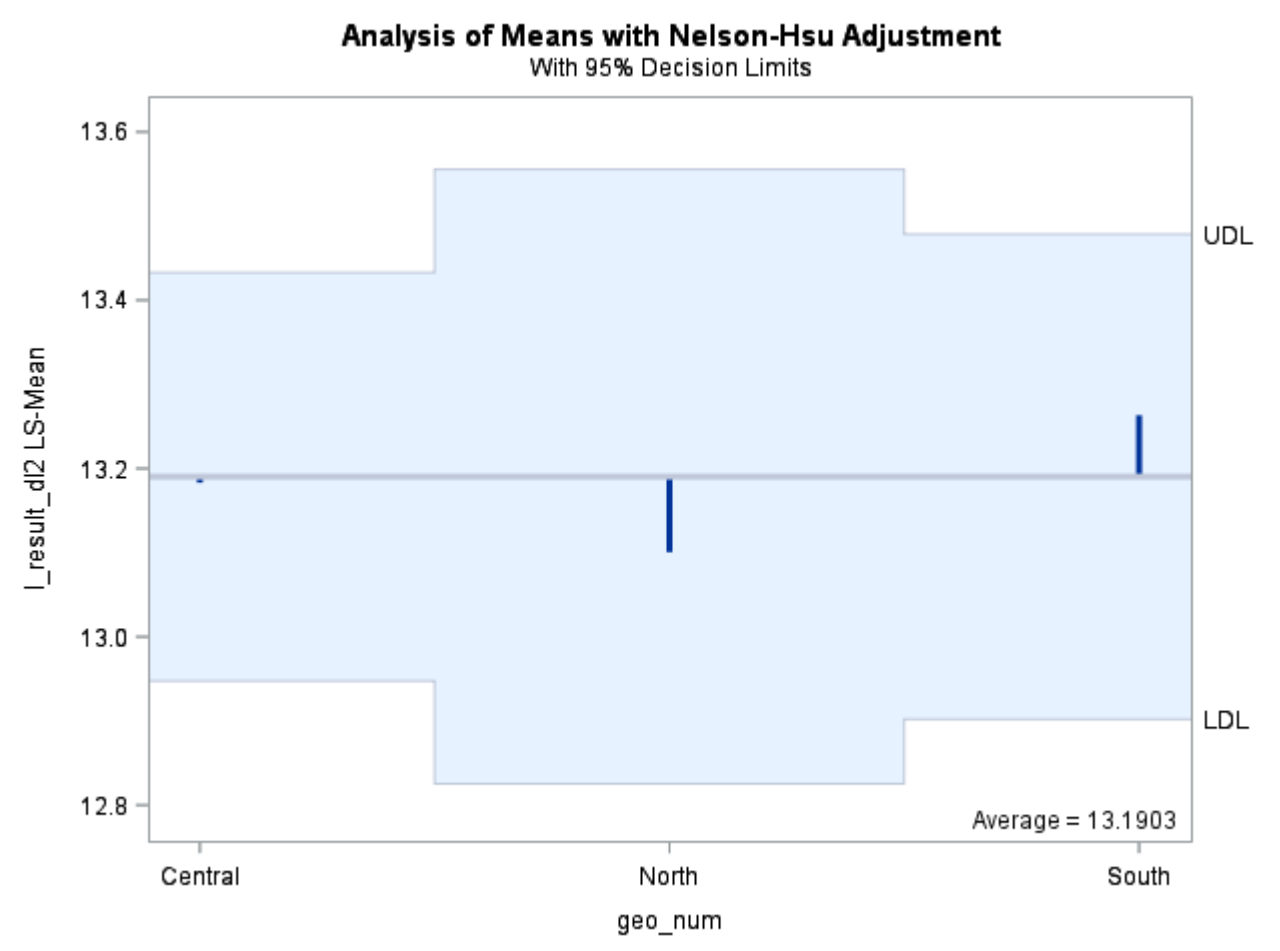
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.23398880	0.11699440	0.26	0.7750


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.457
R-Square 0.0086
Adj R-Square -0.025

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	13.1830685	0.9972
North	13.1006080	0.8254
South	13.2633164	0.8155



PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	13.1830685	1
North	13.1006080	2
South	13.2633164	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9251	0.9139
2	0.9251		0.7574
3	0.9139	0.7574	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	5.1473	2.5736	4.19	0.0199
Error	59	36.2337	0.6141		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.40	0.6713
Error	36.6570		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	13.1830685	0.60009708
North	**15**	13.1006080	0.26815304
South	**21**	13.2633164	0.92074951

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

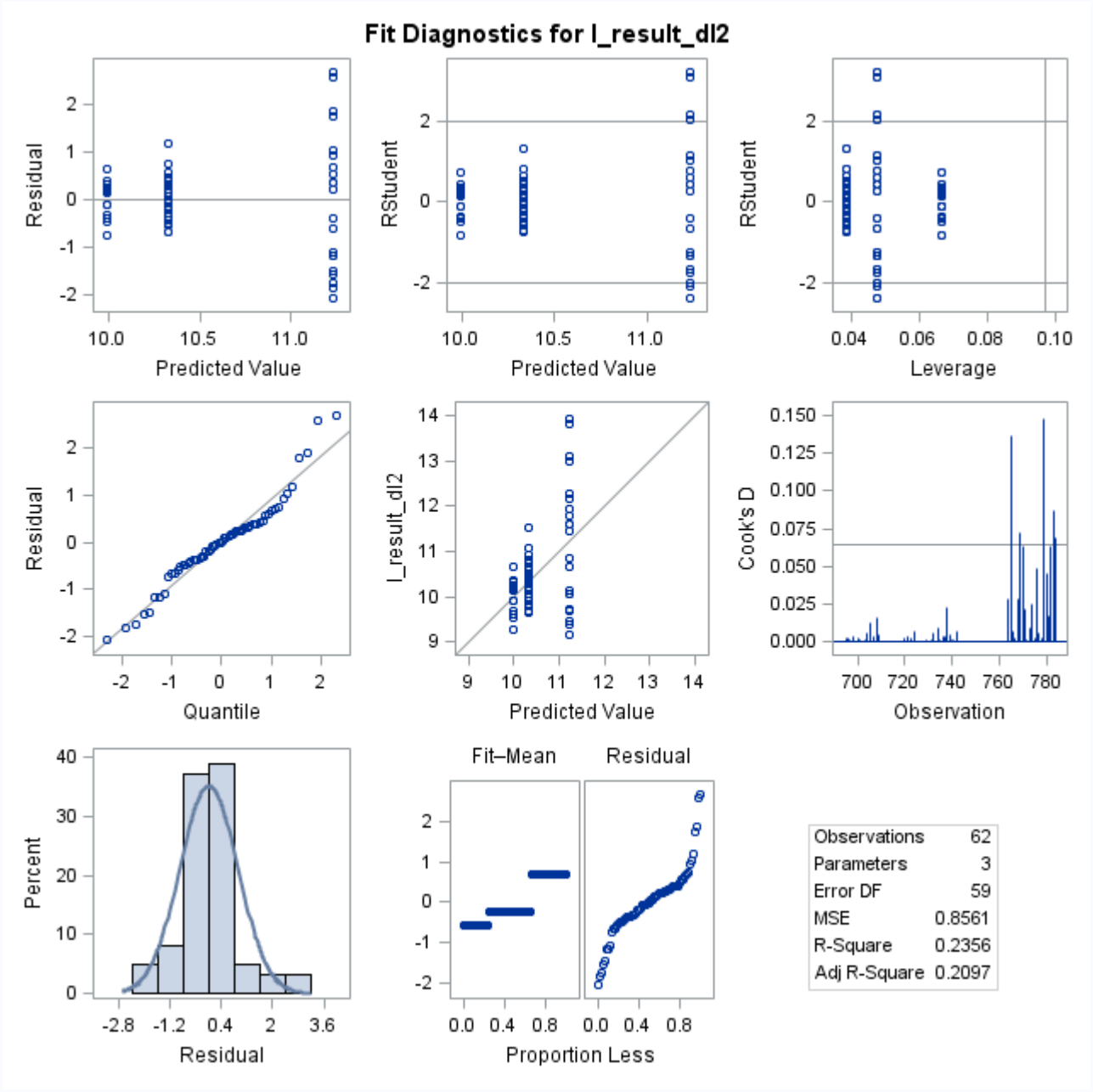
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	15.56977985	7.78488992	9.09	0.0004
Error	59	50.51051714	0.85611046		
Corrected Total	61	66.08029699			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.235619	8.768319	0.925262	10.55234

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	15.56977985	7.78488992	9.09	0.0004

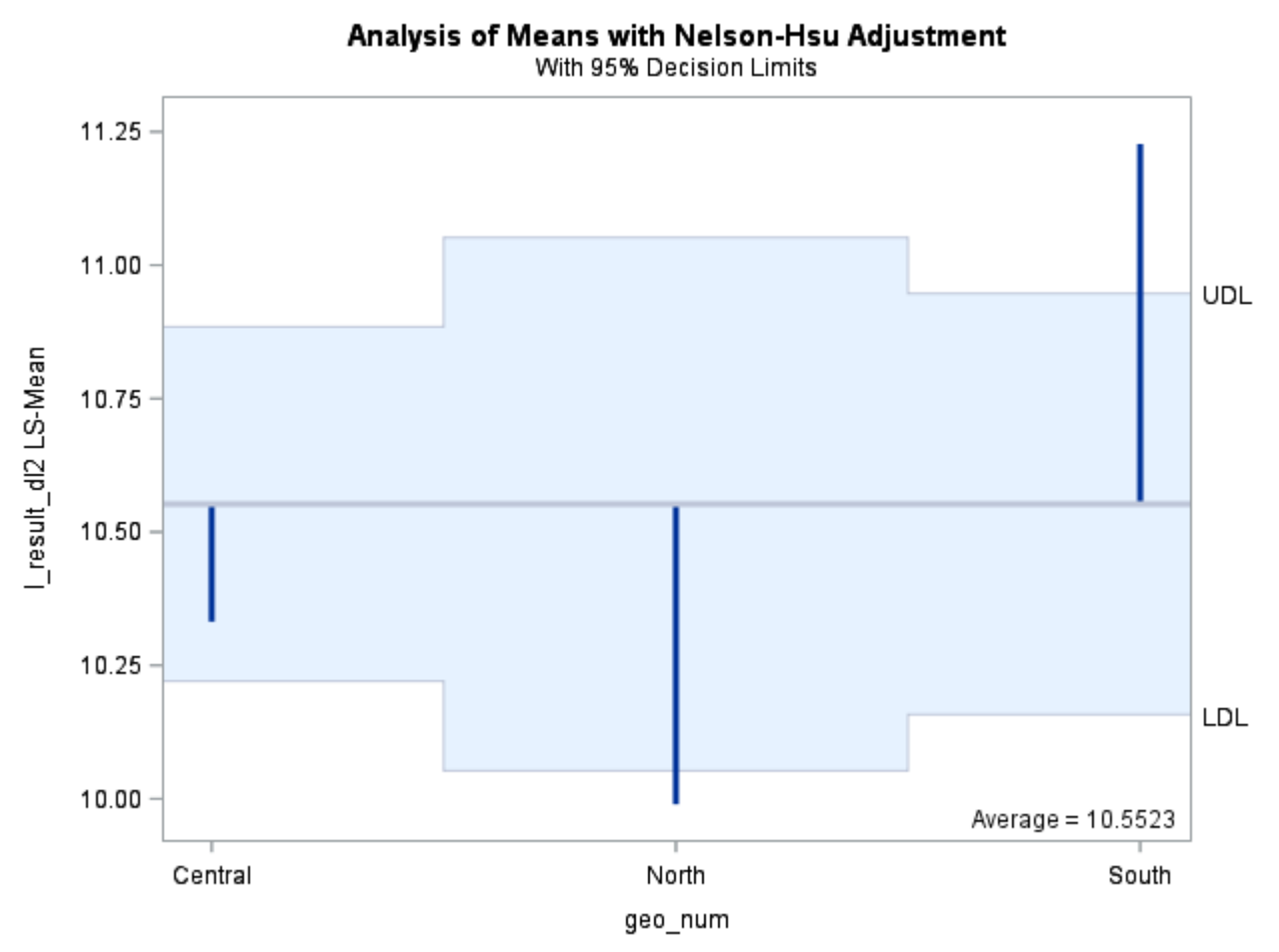
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	15.56977985	7.78488992	9.09	0.0004


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.8561
R-Square 0.2356
Adj R-Square 0.2097

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	10.3319465	0.2555
North	9.9897624	0.0238
South	11.2270347	0.0004



Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	10.3319465	1
North	9.9897624	2
South	11.2270347	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.4932	0.0047
2	0.4932		0.0006
3	0.0047	0.0006	

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	49.7790	24.8895	16.48	<.0001
Error	59	89.1036	1.5102		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	8.29	0.0012
Error	34.1319		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	10.3319465	0.45121125
North	**15**	9.9897624	0.38071325
South	**21**	11.2270347	1.47294826

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 61

Number of Observations Used 61

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

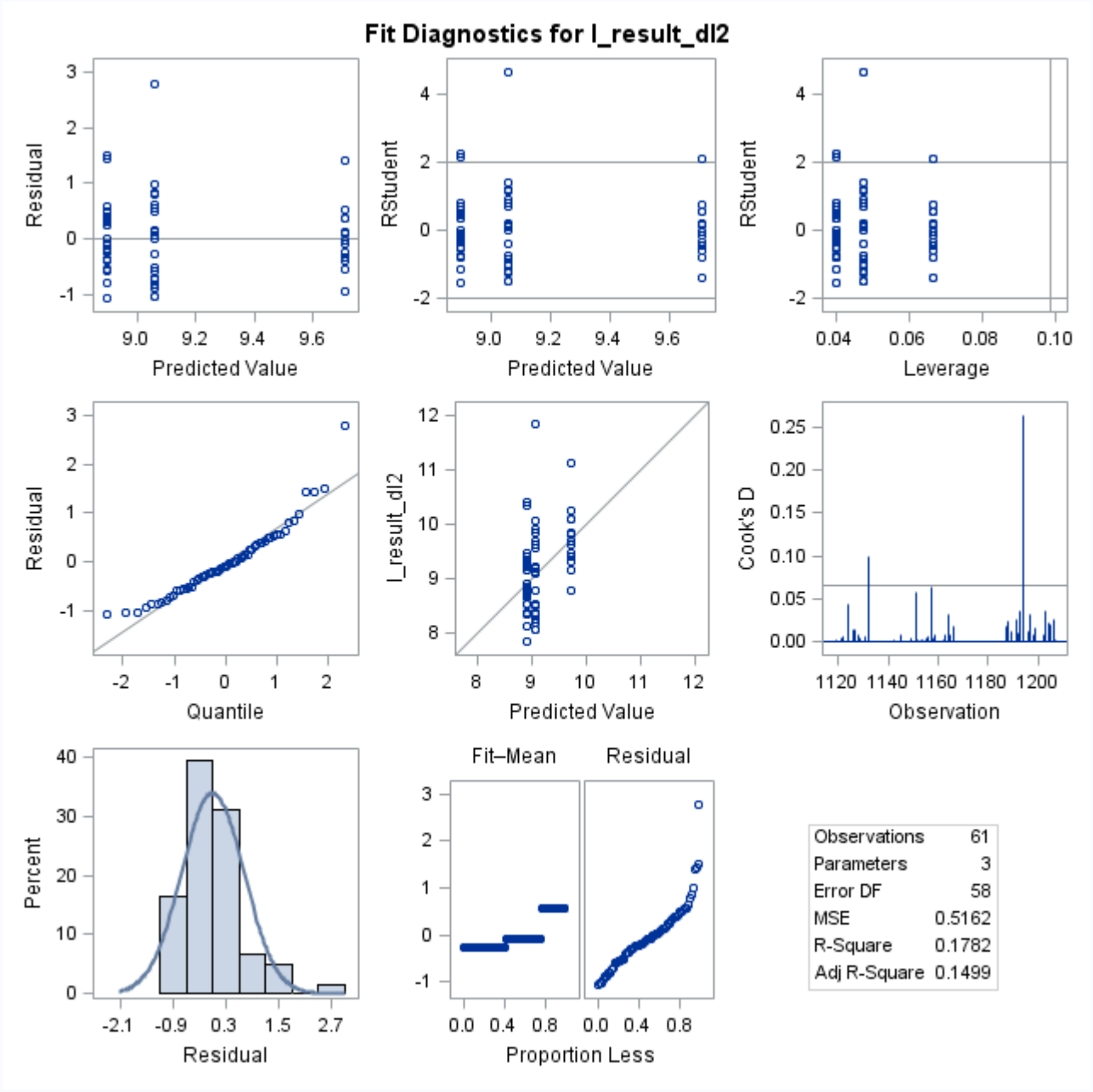
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.49235870	3.24617935	6.29	0.0034
Error	58	29.93902777	0.51619013		
Corrected Total	60	36.43138647			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.178208	7.849898	0.718464	9.152524

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	6.49235870	3.24617935	6.29	0.0034

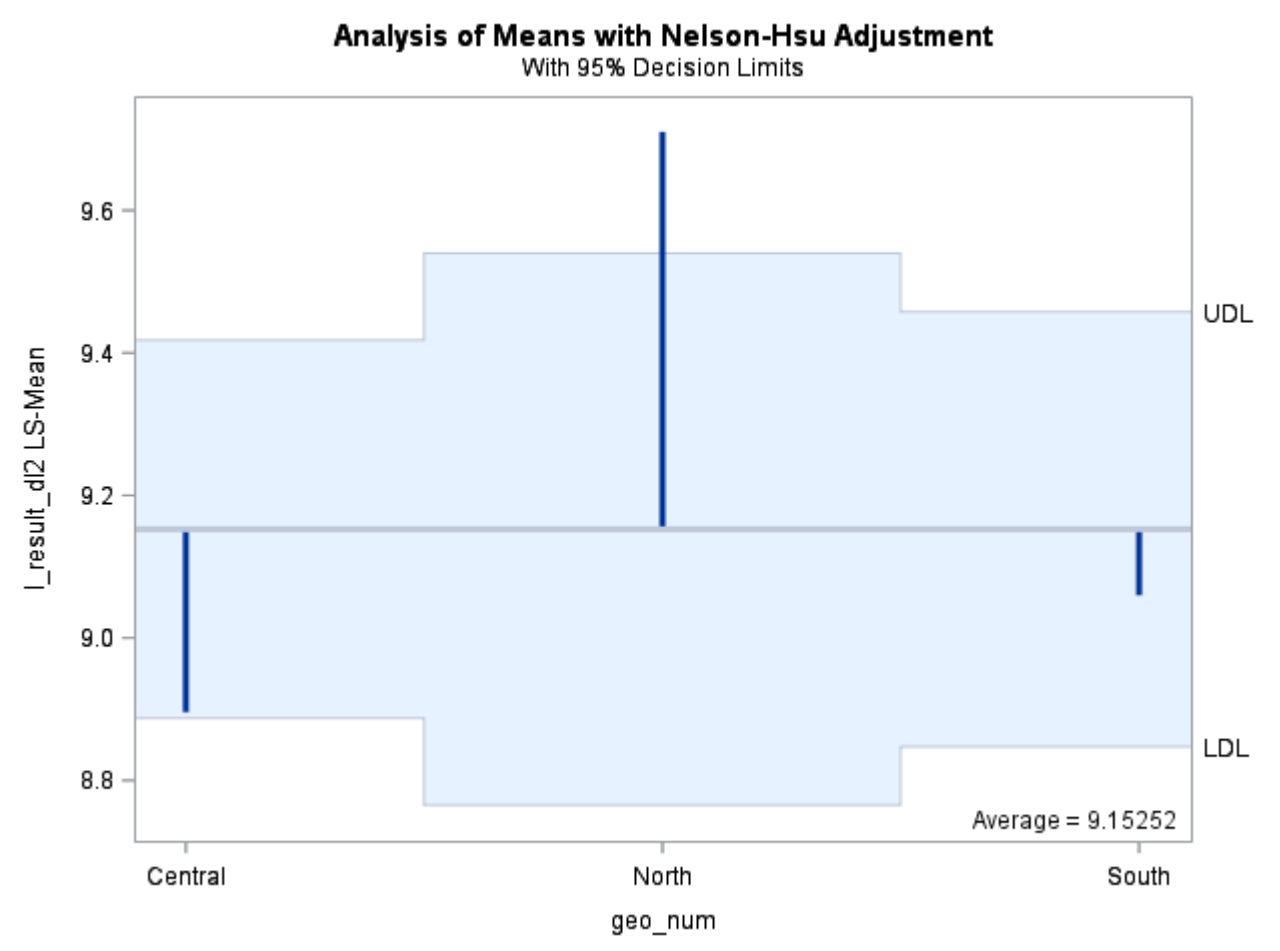
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	6.49235870	3.24617935	6.29	0.0034


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.5162
R-Square 0.1782
Adj R-Square 0.1499

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.89581856	0.0599
North	9.71016234	0.0029
South	9.05981124	0.7460



PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.89581856	1
North	9.71016234	2
South	9.05981124	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.0028	0.7221
2	0.0028		0.0257
3	0.7221	0.0257	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	3.3433	1.6717	1.47	0.2390
Error	58	66.0742	1.1392		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	9.72	0.0004
Error	35.0681		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	8.89581856	0.60055947
North	**15**	9.71016234	0.54968512
South	**21**	9.05981124	0.92338386

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

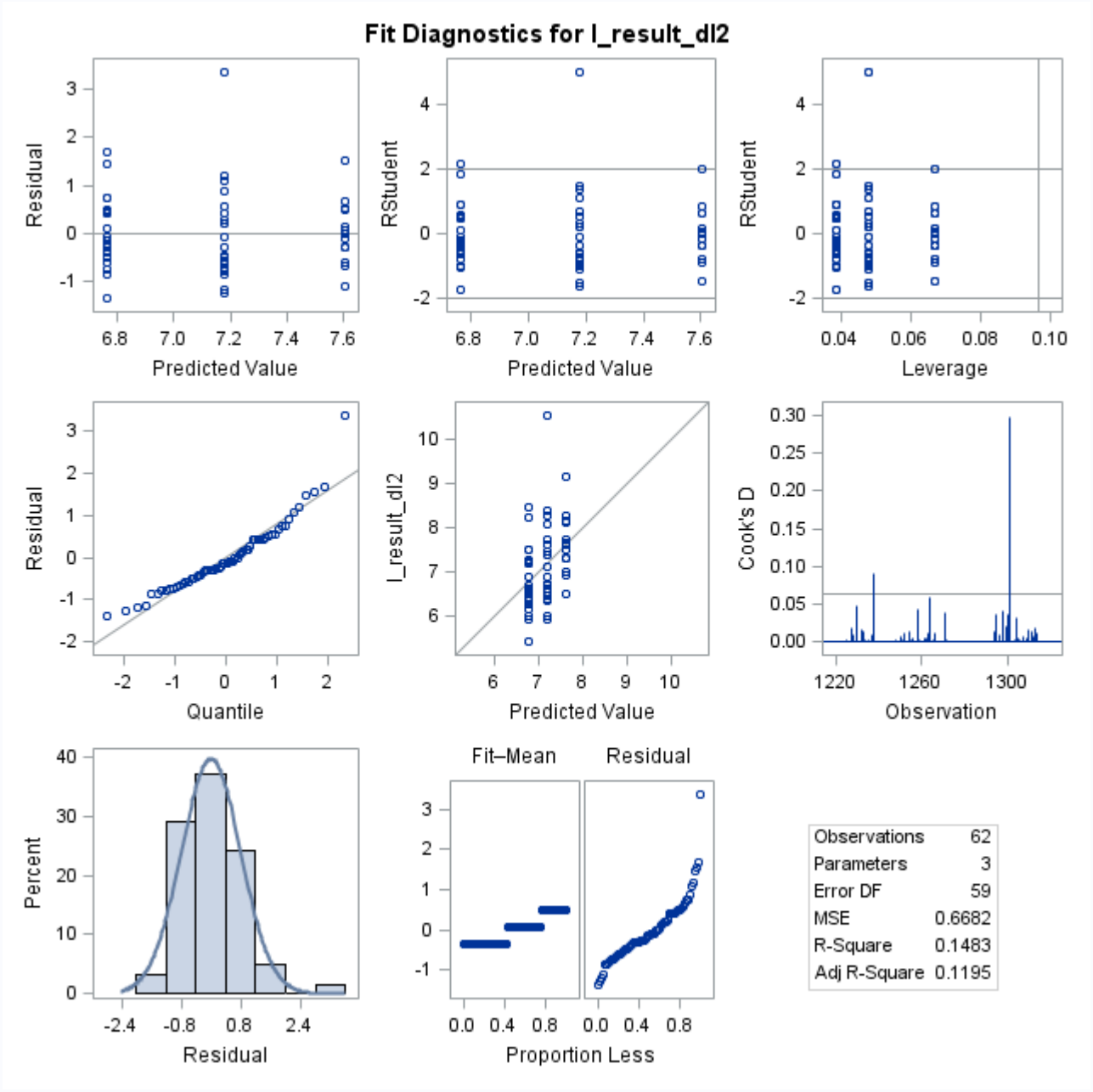
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.86704684	3.43352342	5.14	0.0088
Error	59	39.42625179	0.66824156		
Corrected Total	61	46.29329863			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.148338	11.50026	0.817460	7.108190

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	6.86704684	3.43352342	5.14	0.0088

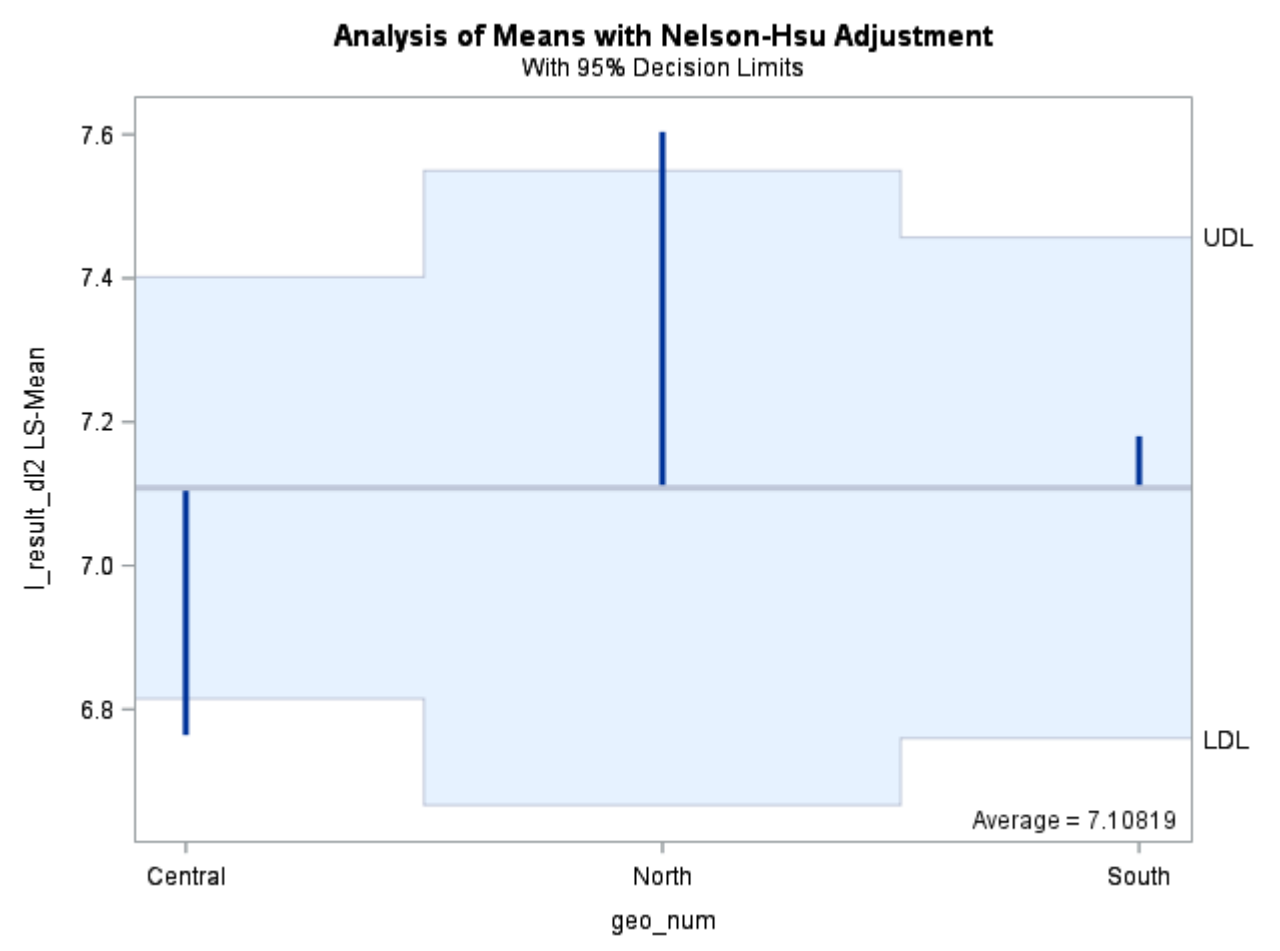
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	6.86704684	3.43352342	5.14	0.0088


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.6682
R-Square 0.1483
Adj R-Square 0.1195

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.76423067	0.0178
North	7.60365787	0.0243
South	7.18013972	0.8731



PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.76423067	1
North	7.60365787	2
South	7.18013972	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.0068	0.2012
2	0.0068		0.2833
3	0.2012	0.2833	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	5.6032	2.8016	1.23	0.2986
Error	59	134.0	2.2708		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	7.73	0.0017
Error	34.7918		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	6.76423067	0.67994982
North	**15**	7.60365787	0.63933916
South	**21**	7.18013972	1.05226884

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

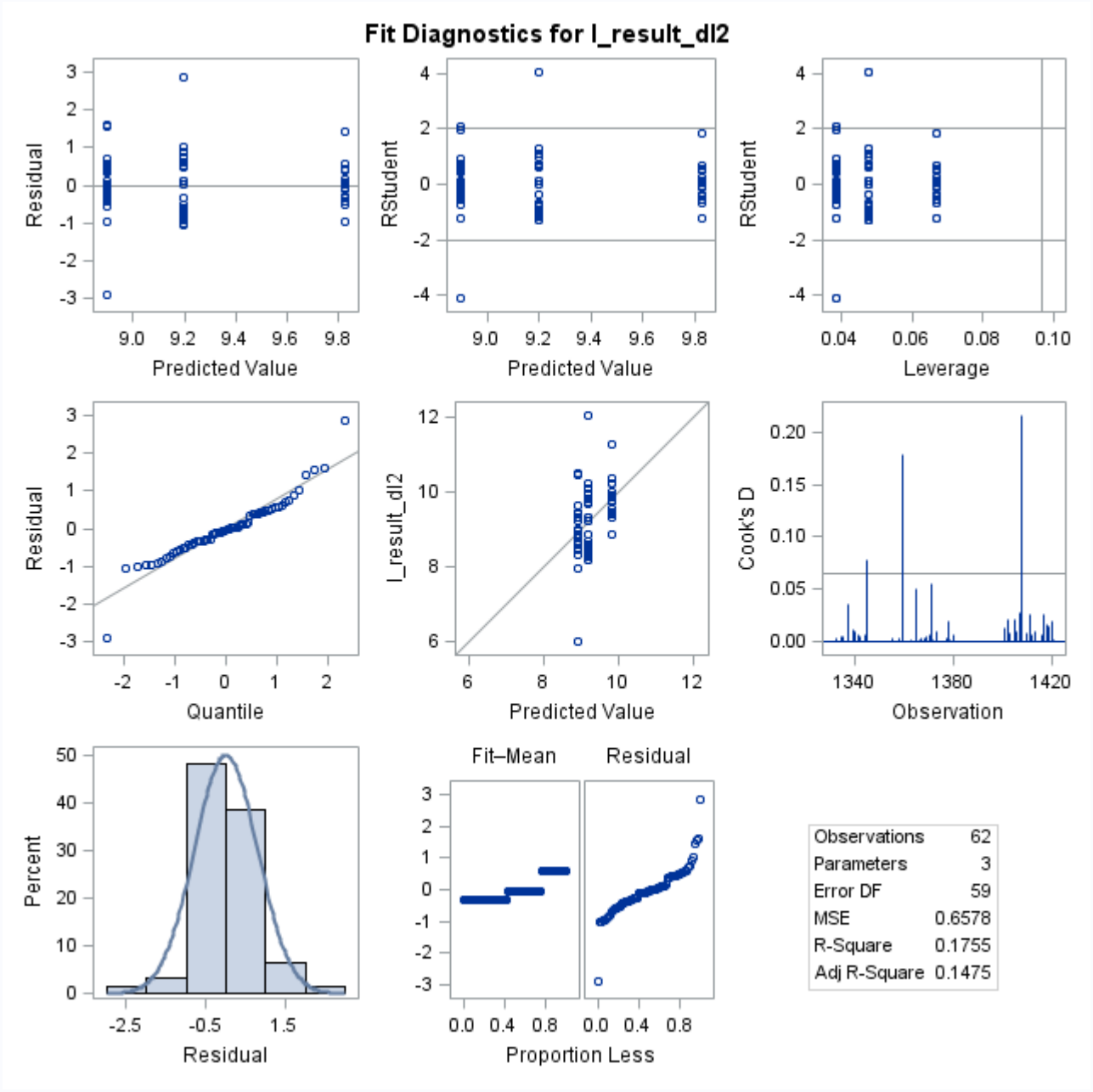
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	8.25930555	4.12965278	6.28	0.0034
Error	59	38.80893565	0.65777857		
Corrected Total	61	47.06824121			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.175475	8.794051	0.811035	9.222547

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	8.25930555	4.12965278	6.28	0.0034

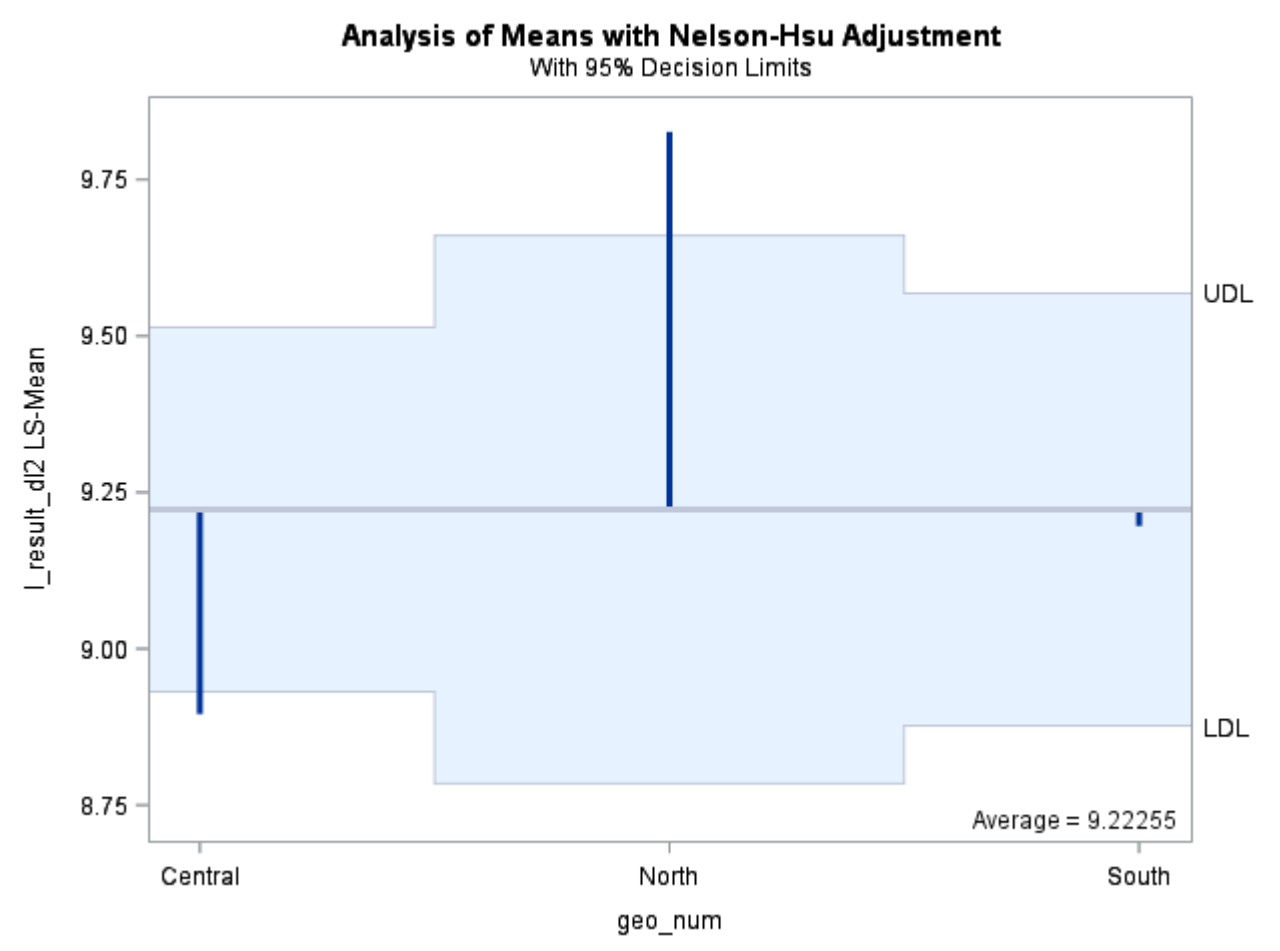
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	8.25930555	4.12965278	6.28	0.0034


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.6578
R-Square 0.1755
Adj R-Square 0.1475

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.89558467	0.0242
North	9.82615950	0.0045
South	9.19620564	0.9817



PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.89558467	1
North	9.82615950	2
South	9.19620564	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.0023	0.4214
2	0.0023		0.0640
3	0.4214	0.0640	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	2.5174	1.2587	0.55	0.5824
Error	59	136.1	2.3074		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	9.45	0.0005
Error	37.8781		

PAHs Total PAH

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	8.89558467	0.82683327
North	**15**	9.82615950	0.56042117
South	**21**	9.19620564	0.93060727

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 61

Number of Observations Used 61

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

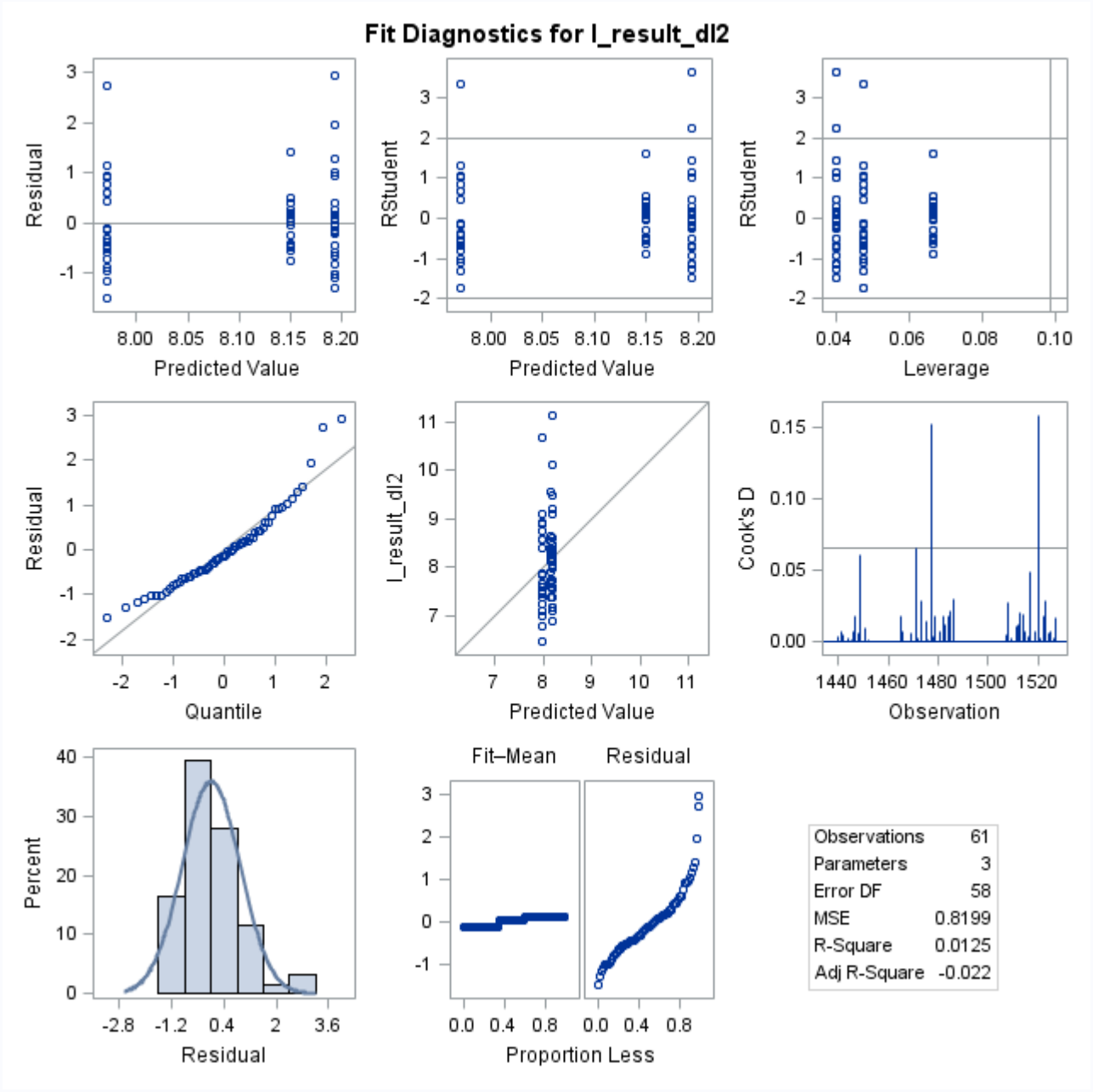
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.60399707	0.30199853	0.37	0.6935
Error	58	47.55304282	0.81988005		
Corrected Total	60	48.15703988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.012542	11.17041	0.905472	8.105991

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.60399707	0.30199853	0.37	0.6935

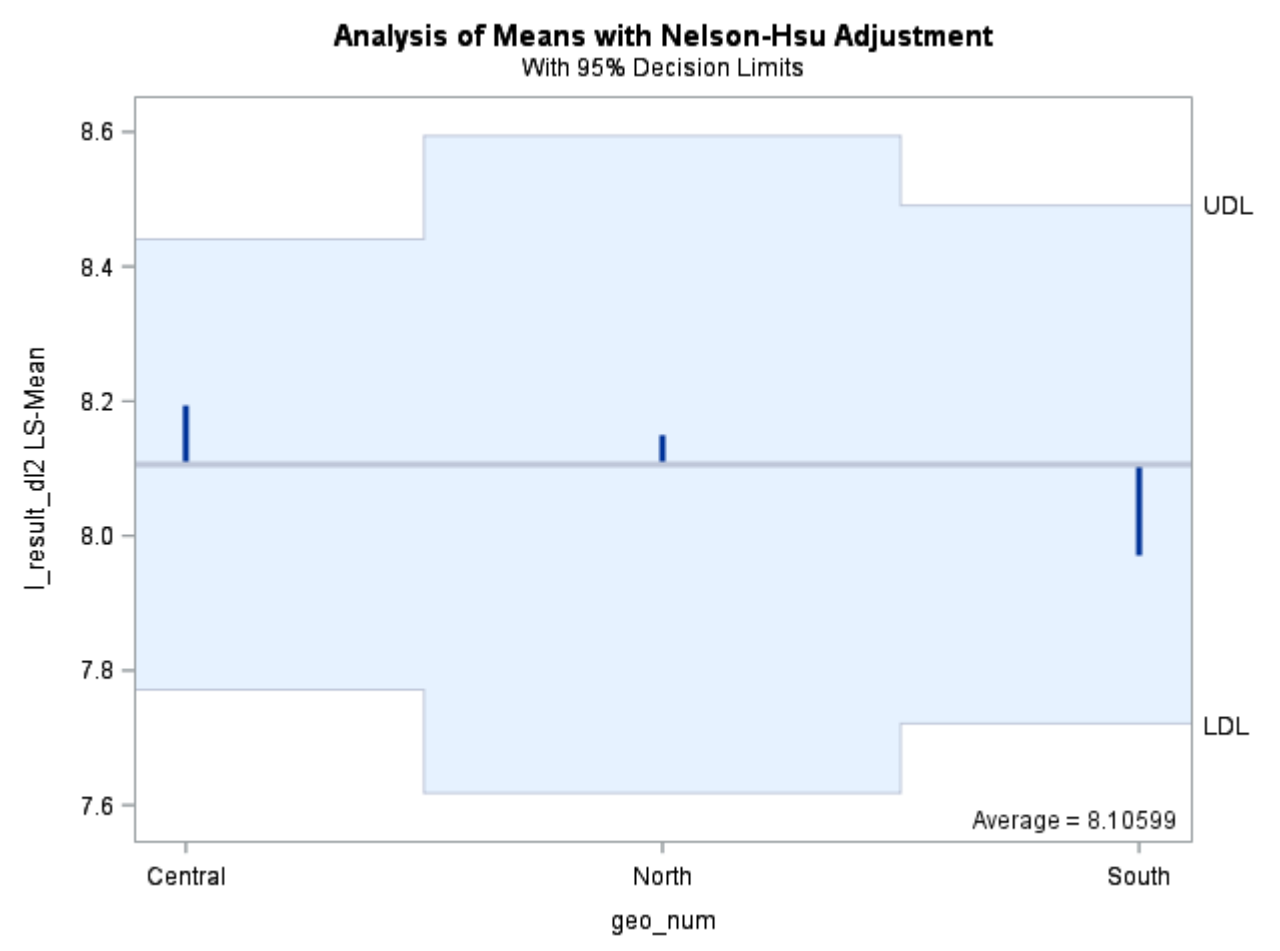
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.60399707	0.30199853	0.37	0.6935


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.8199
R-Square 0.0125
Adj R-Square -0.022

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.19351181	0.8043
North	8.14947268	0.9750
South	7.97074168	0.6759



Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.19351181	1
North	8.14947268	2
South	7.97074168	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9879	0.6853
2	0.9879		0.8293
3	0.6853	0.8293	

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	5.2030	2.6015	1.14	0.3258
Error	58	131.9	2.2749		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.33	0.7220
Error	38.3187		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	8.19351181	1.00894476
North	**15**	8.14947268	0.53869779
South	**21**	7.97074168	0.97619260

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 62

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

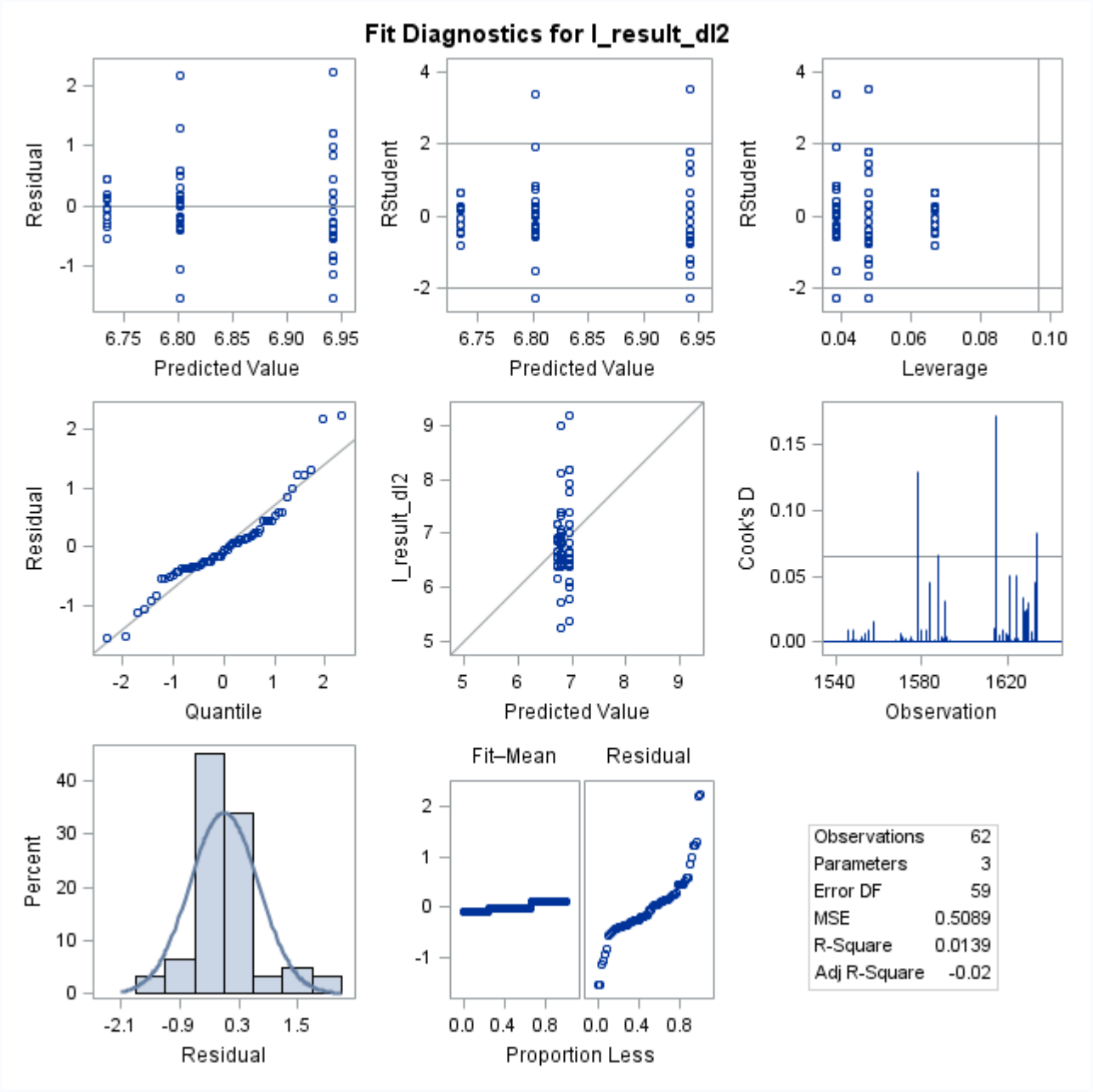
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.42263978	0.21131989	0.42	0.6621
Error	59	30.02517886	0.50890134		
Corrected Total	61	30.44781864			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.013881	10.44029	0.713373	6.832885

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.42263978	0.21131989	0.42	0.6621

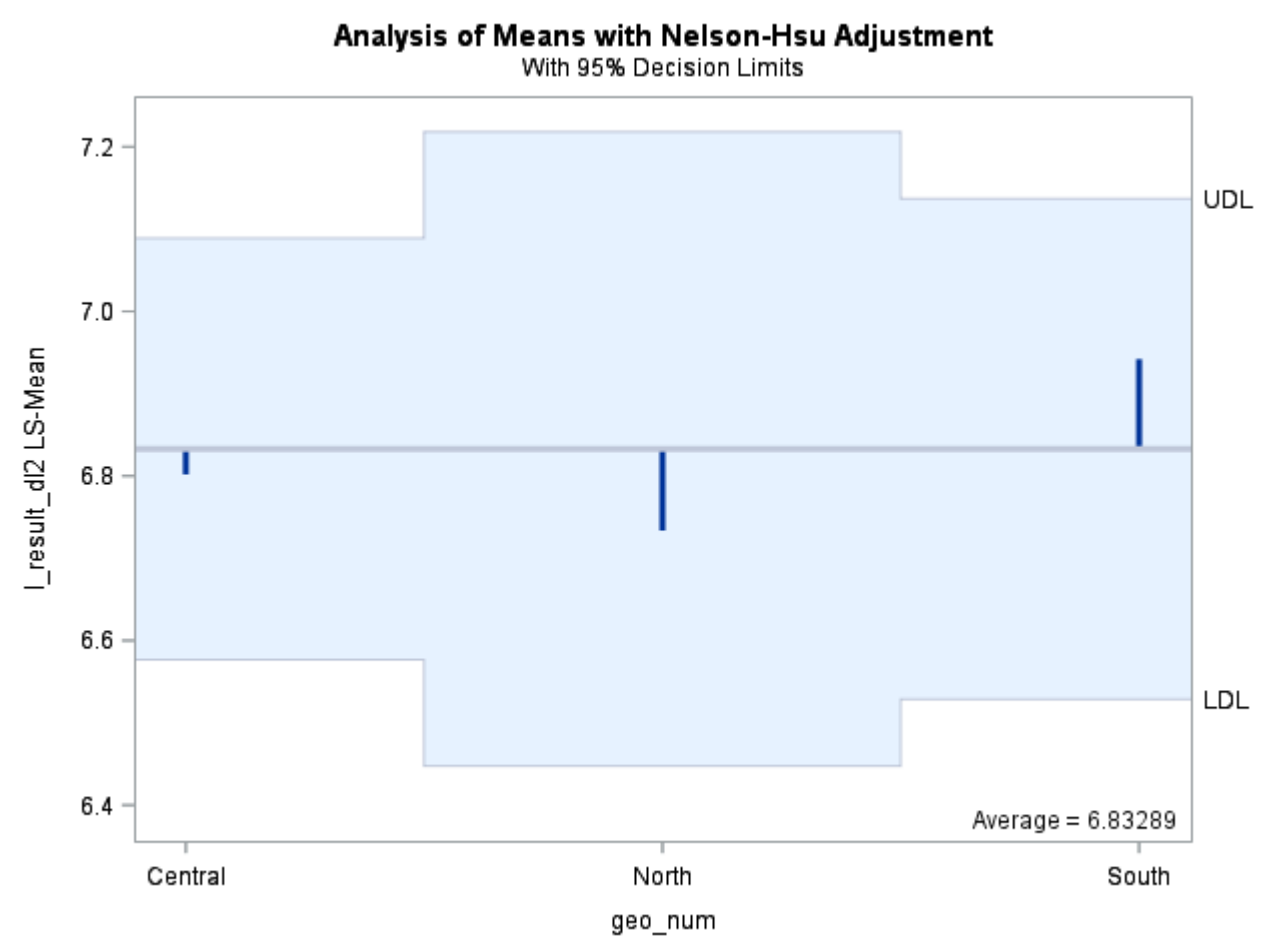
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.42263978	0.21131989	0.42	0.6621


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 62
Parameters 3
Error DF 59
MSE 0.5089
R-Square 0.0139
Adj R-Square -0.02

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.80195089	0.9545
North	6.73369668	0.8101
South	6.94203432	0.6653



TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.80195089	1
North	6.73369668	2
South	6.94203432	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9532	0.7822
2	0.9532		0.6650
3	0.7822	0.6650	

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	4.3072	2.1536	2.33	0.1064
Error	59	54.5766	0.9250		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.50	0.6092
Error	37.0649		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**26**	6.80195089	0.69940279
North	**15**	6.73369668	0.30262700
South	**21**	6.94203432	0.90867785

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

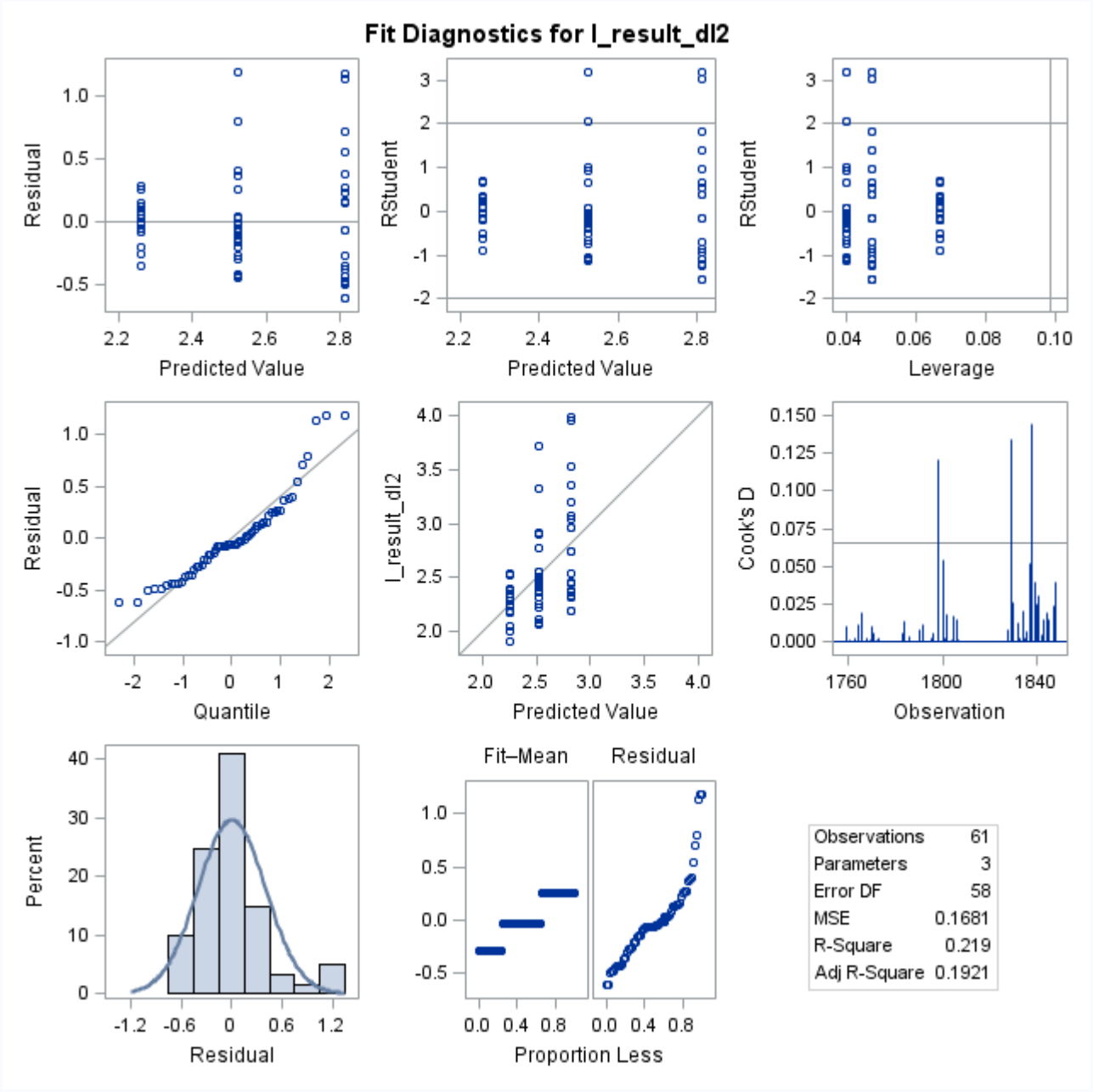
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.73419122	1.36709561	8.13	0.0008
Error	58	9.74955243	0.16809573		
Corrected Total	60	12.48374365			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.219020	16.03108	0.409995	2.557500

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	2.73419122	1.36709561	8.13	0.0008

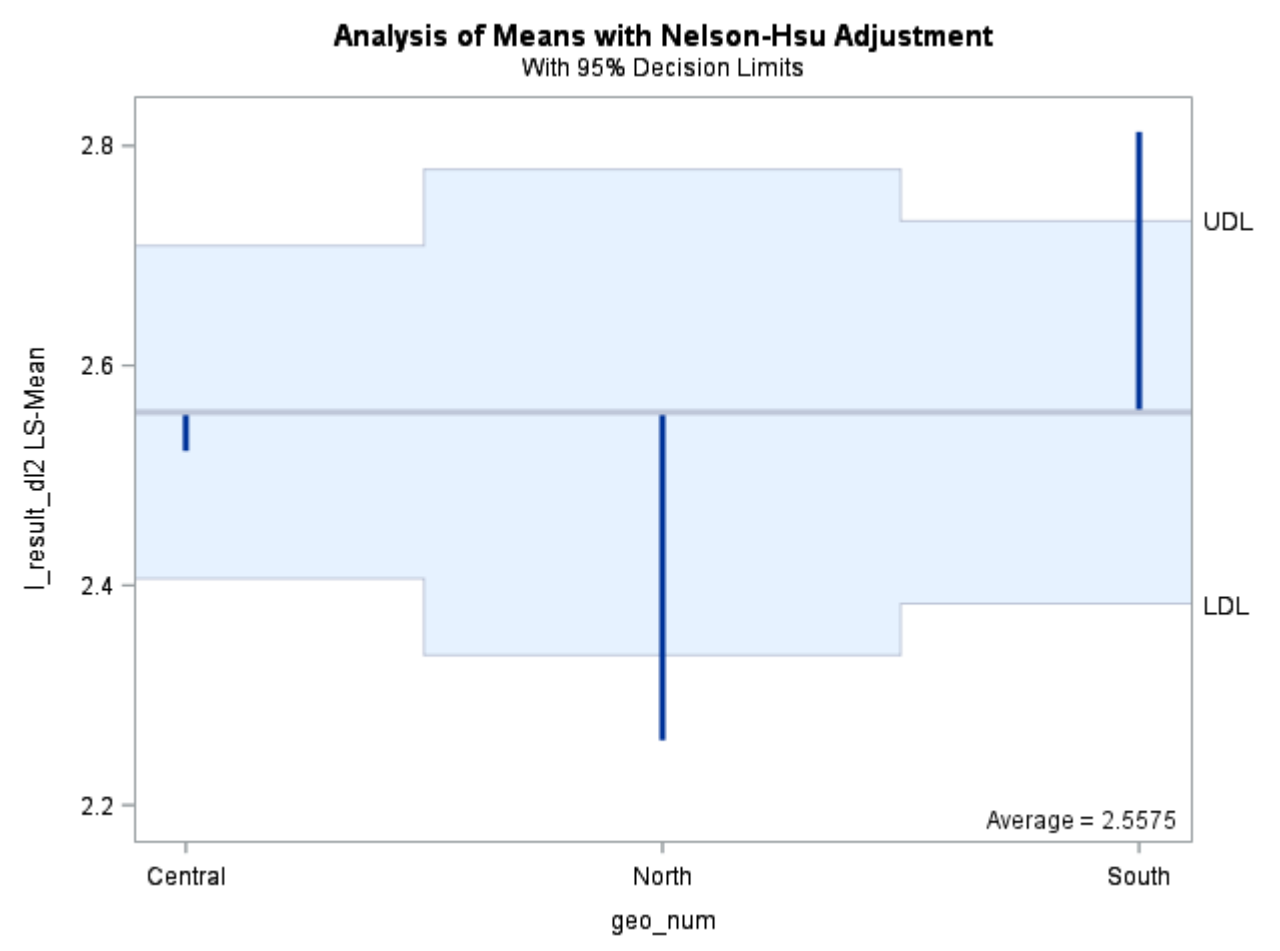
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	2.73419122	1.36709561	8.13	0.0008


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.1681
R-Square 0.219
Adj R-Square 0.1921

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	2.52228496	0.8419
North	2.25901937	0.0054
South	2.81262168	0.0024



Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	2.52228496	1
North	2.25901937	2
South	2.81262168	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.1298	0.0515
2	0.1298		0.0005
3	0.0515	0.0005	

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	0.6050	0.3025	3.54	0.0355
Error	58	4.9603	0.0855		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	11.56	0.0001
Error	36.6770		

Metals Arsenic

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	2.52228496	0.37036707
North	**15**	2.25901937	0.18018027
South	**21**	2.81262168	0.54785586

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

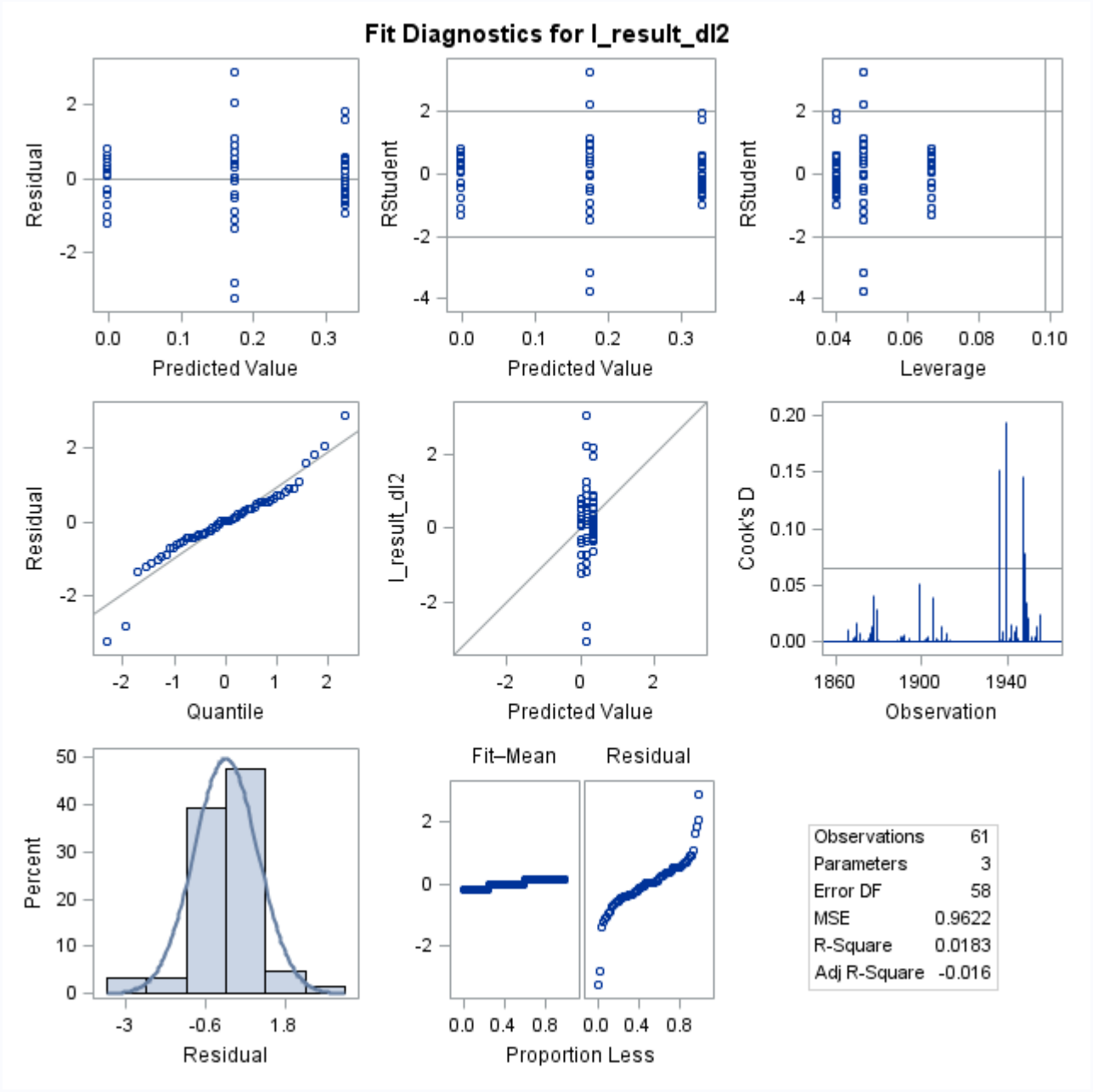
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.03956663	0.51978331	0.54	0.5855
Error	58	55.80670242	0.96218452		
Corrected Total	60	56.84626905			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.018287	509.1437	0.980910	0.192659

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	1.03956663	0.51978331	0.54	0.5855

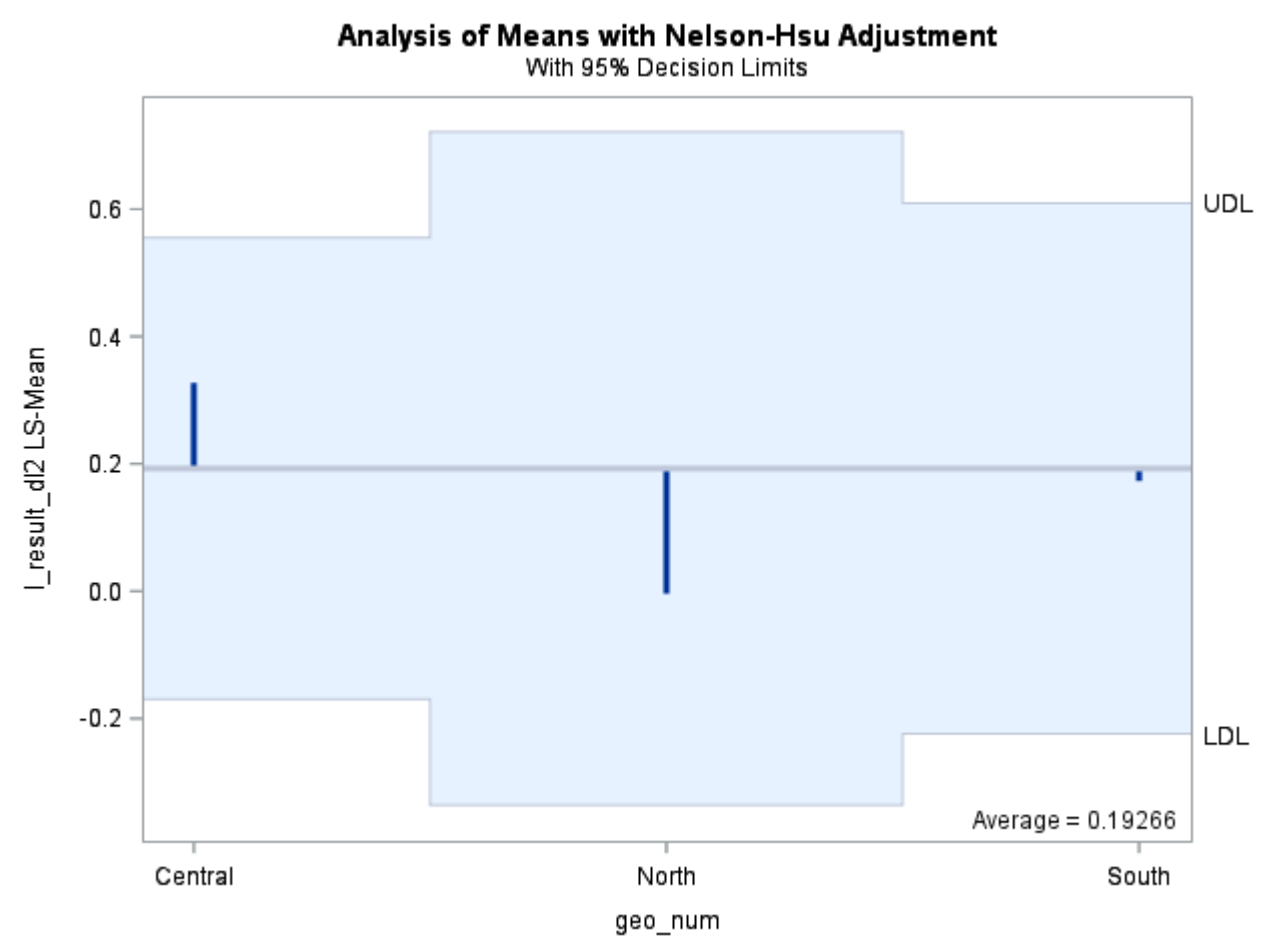
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	1.03956663	0.51978331	0.54	0.5855


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.9622
R-Square 0.0183
Adj R-Square -0.016

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	0.32710516	0.6467
North	-0.00390508	0.6457
South	0.17300628	0.9929



Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	0.32710516	1
North	-0.00390508	2
South	0.17300628	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5591	0.8566
2	0.5591		0.8552
3	0.8566	0.8552	

Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	31.8784	15.9392	4.25	0.0190
Error	58	217.6	3.7512		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	1.26	0.2958
Error	33.9638		

Metals Cadmium

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	0.32710516	0.65547463
North	**15**	-0.00390508	0.61765341
South	**21**	0.17300628	1.41693744

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

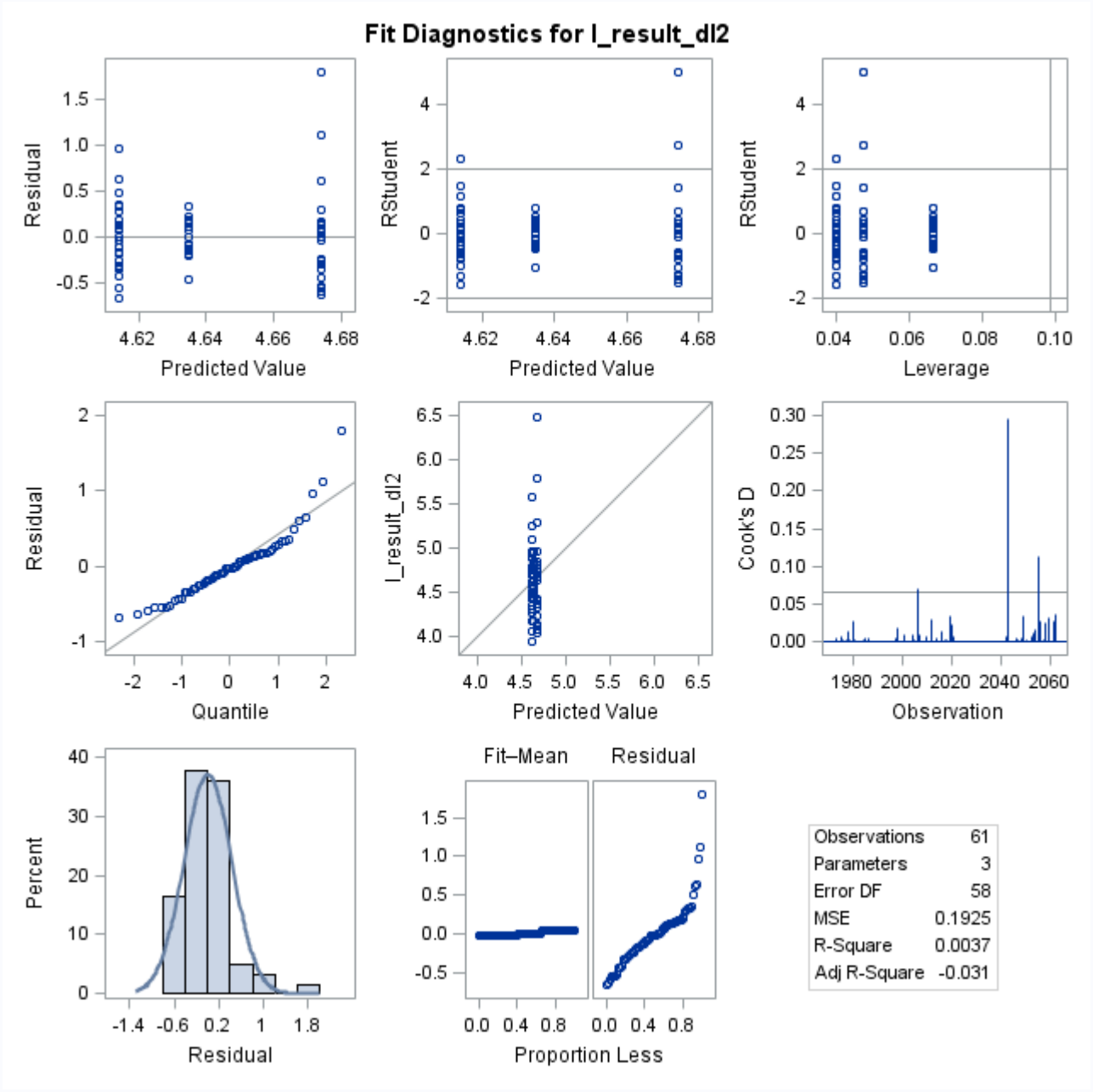
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.04183538	0.02091769	0.11	0.8972
Error	58	11.16403241	0.19248332		
Corrected Total	60	11.20586779			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.003733	9.455694	0.438729	4.639842

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.04183538	0.02091769	0.11	0.8972

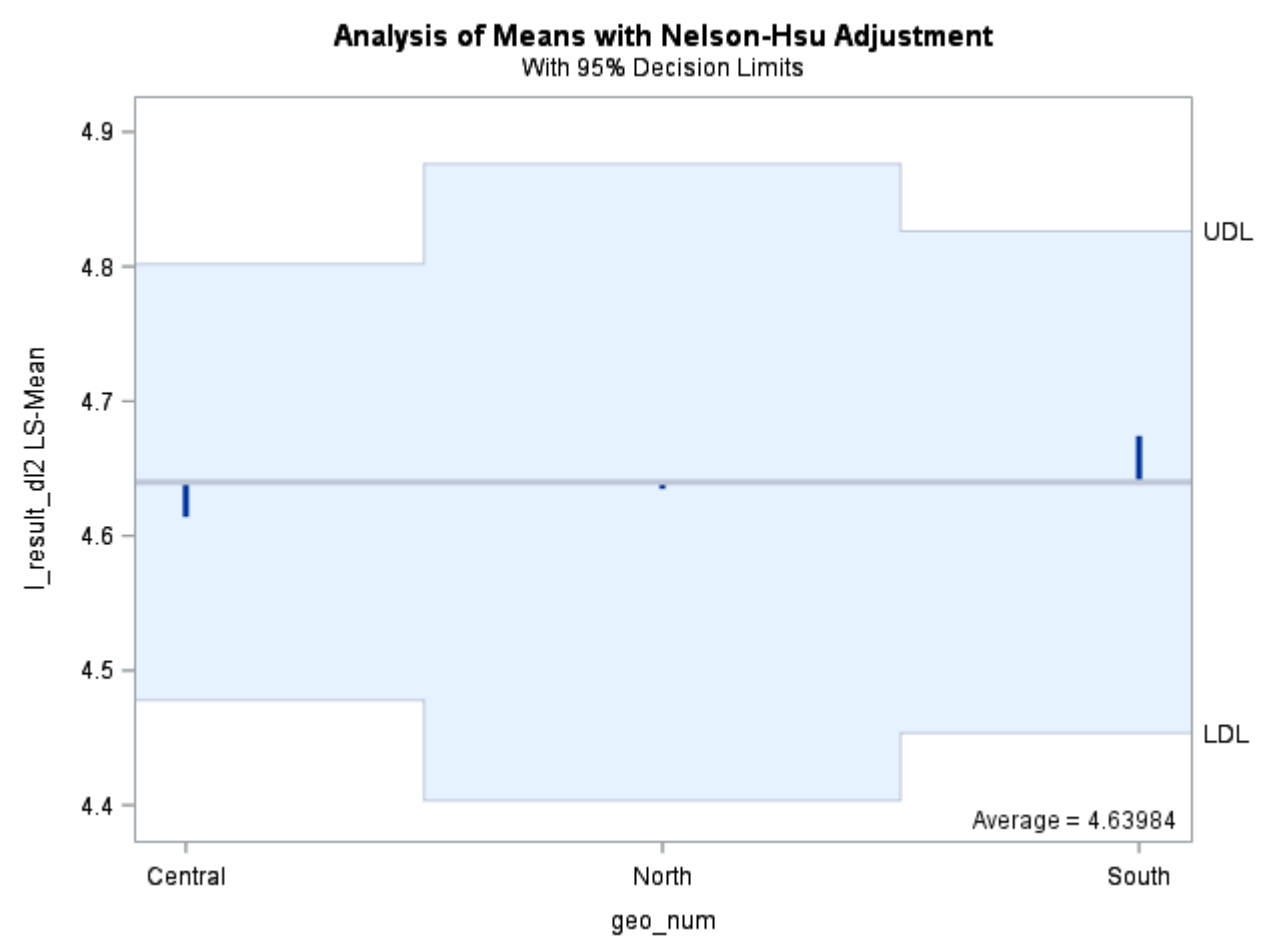
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.04183538	0.02091769	0.11	0.8972


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.1925
R-Square 0.0037
Adj R-Square -0.031

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.61400330	0.9221
North	4.63482579	0.9986
South	4.67418411	0.8974



Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.61400330	1
North	4.63482579	2
South	4.67418411	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9884	0.8886
2	0.9884		0.9620
3	0.8886	0.9620	

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	0.9045	0.4522	2.29	0.1106
Error	58	11.4676	0.1977		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.08	0.9227
Error	36.8410		

Metals Chromium

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Chromium

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	4.61400330	0.37457932
North	**15**	4.63482579	0.20591280
South	**21**	4.67418411	0.60012496

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 60

Number of Observations Used 59

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

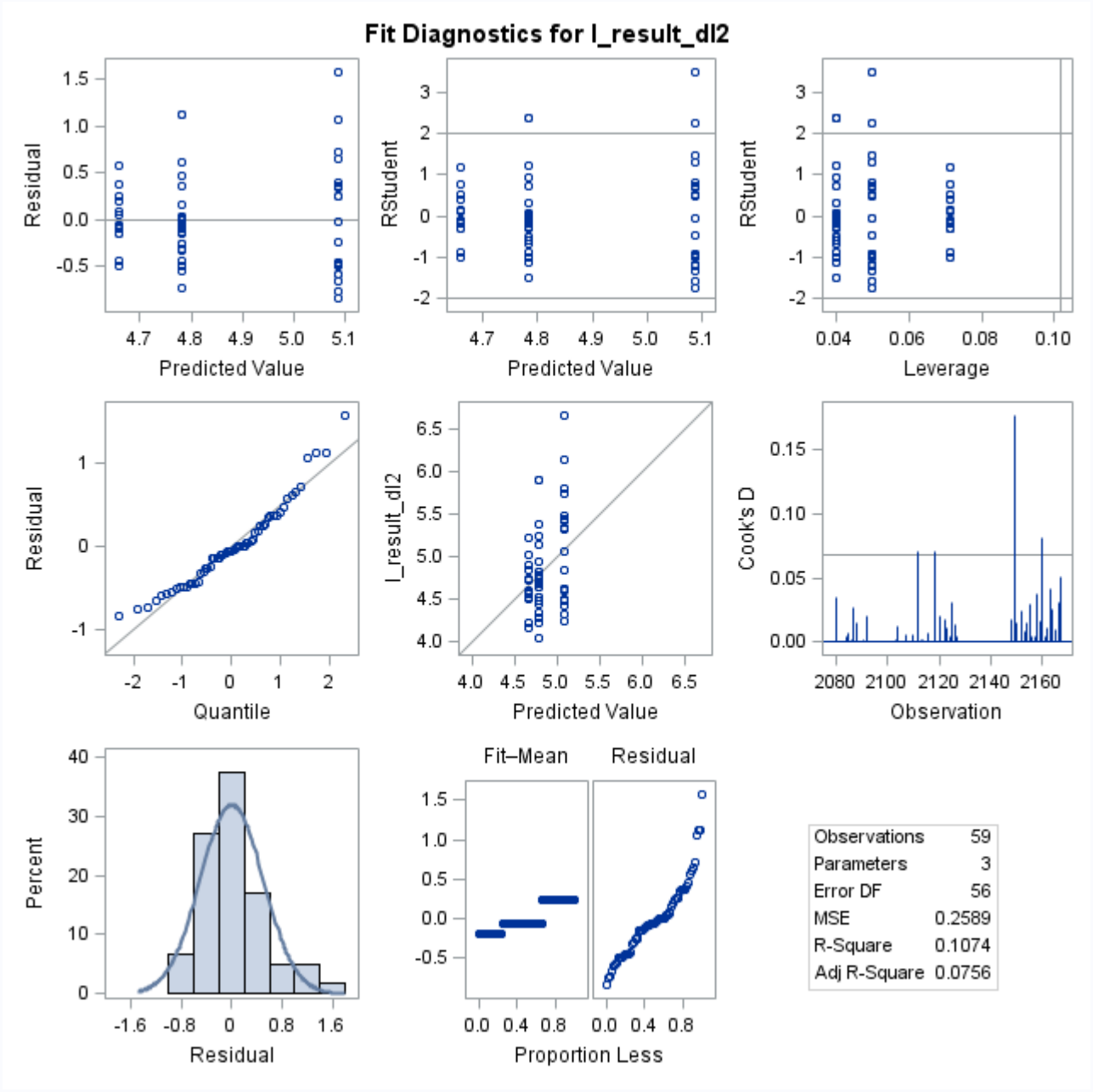
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.74498841	0.87249421	3.37	0.0415
Error	56	14.49778591	0.25888903		
Corrected Total	58	16.24277432			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.107432	10.47879	0.508811	4.855633

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	1.74498841	0.87249421	3.37	0.0415

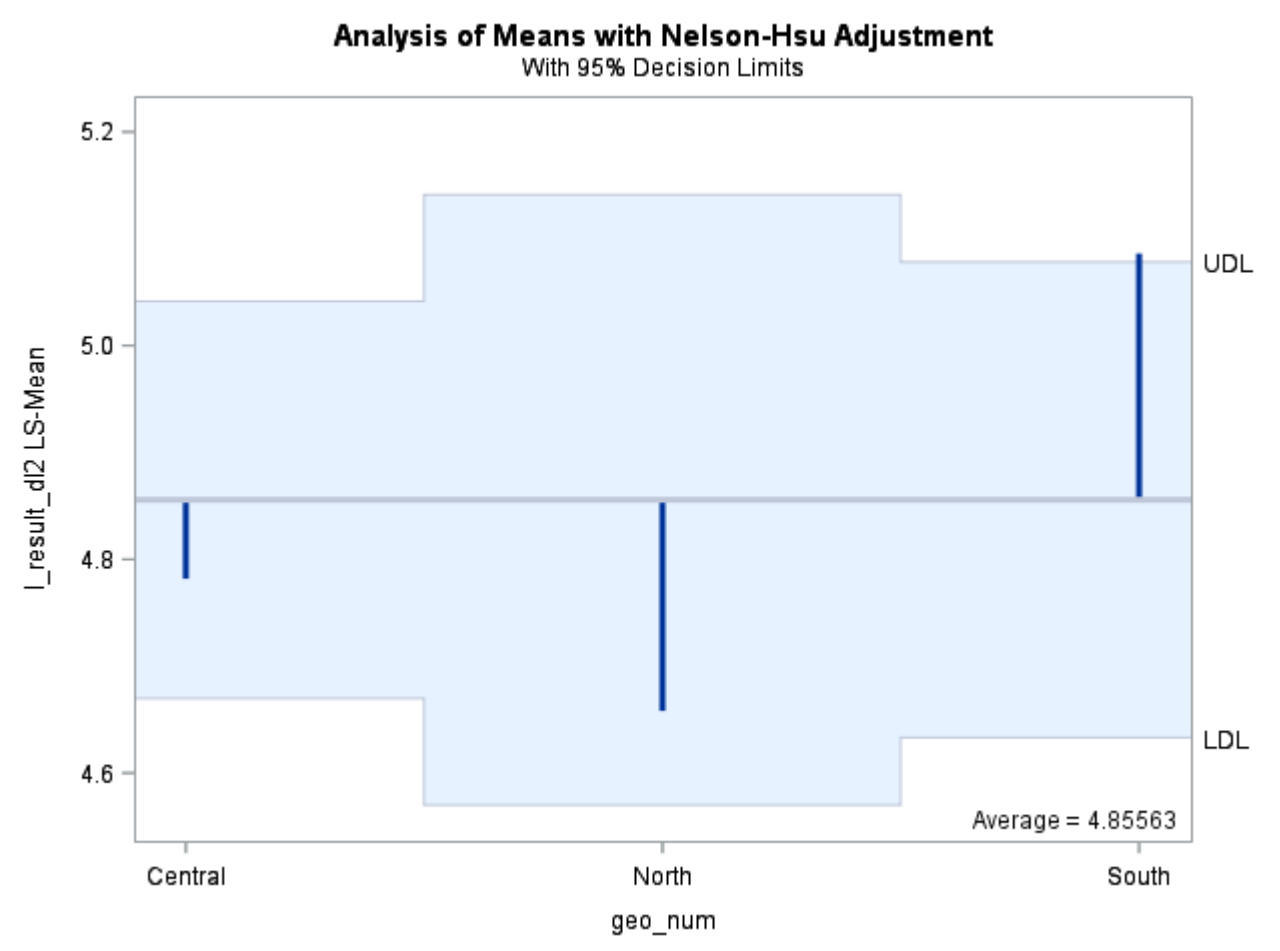
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	1.74498841	0.87249421	3.37	0.0415


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 59
Parameters 3
Error DF 56
MSE 0.2589
R-Square 0.1074
Adj R-Square 0.0756

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.78181822	0.6068
North	4.65814002	0.2276
South	5.08614593	0.0407



Metals Copper
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.78181822	1
North	4.65814002	2
South	5.08614593	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.7479	0.1231
2	0.7479		0.0493
3	0.1231	0.0493	

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	1.0847	0.5423	3.39	0.0406
Error	56	8.9504	0.1598		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	3.25	0.0507
Error	35.4281		

Metals Copper
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	4.78181822	0.45551851
North	**14**	4.65814002	0.28591037
South	**20**	5.08614593	0.66709005

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

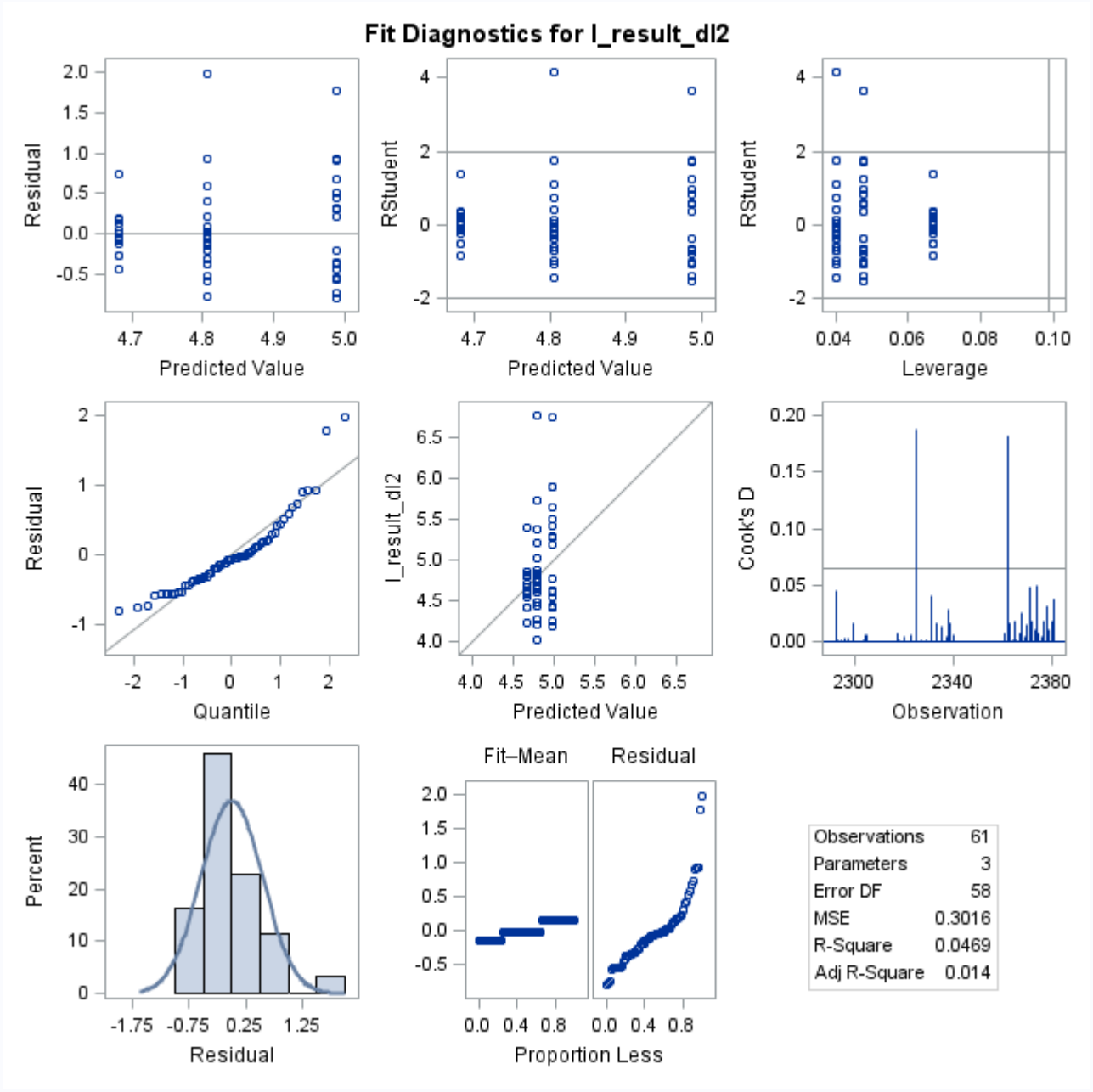
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.86064939	0.43032470	1.43	0.2484
Error	58	17.49272443	0.30159870		
Corrected Total	60	18.35337382			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.046893	11.35245	0.549180	4.837544

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.86064939	0.43032470	1.43	0.2484

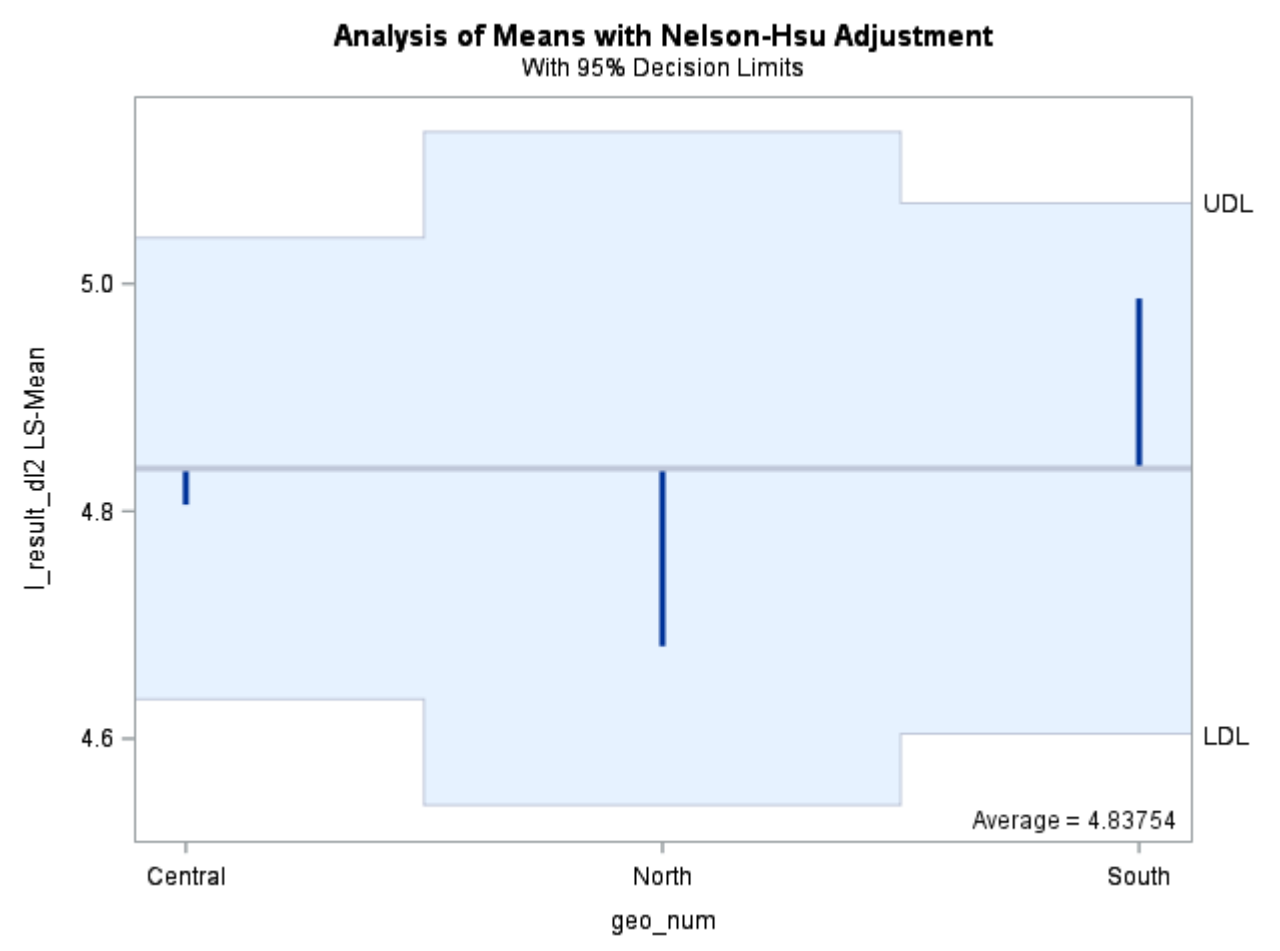
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.86064939	0.43032470	1.43	0.2484


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.3016
R-Square 0.0469
Adj R-Square 0.014

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.80572839	0.9245
North	4.68130737	0.4175
South	4.98701853	0.2791



Metals Lead

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.80572839	1
North	4.68130737	2
South	4.98701853	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.7681	0.5087
2	0.7681		0.2346
3	0.5087	0.2346	

Metals Lead

NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	1.2362	0.6181	1.51	0.2297
Error	58	23.7570	0.4096		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	1.85	0.1710
Error	37.3088		

Metals Lead
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	4.80572839	0.54667905
North	**15**	4.68130737	0.26874712
South	**21**	4.98701853	0.68223833

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

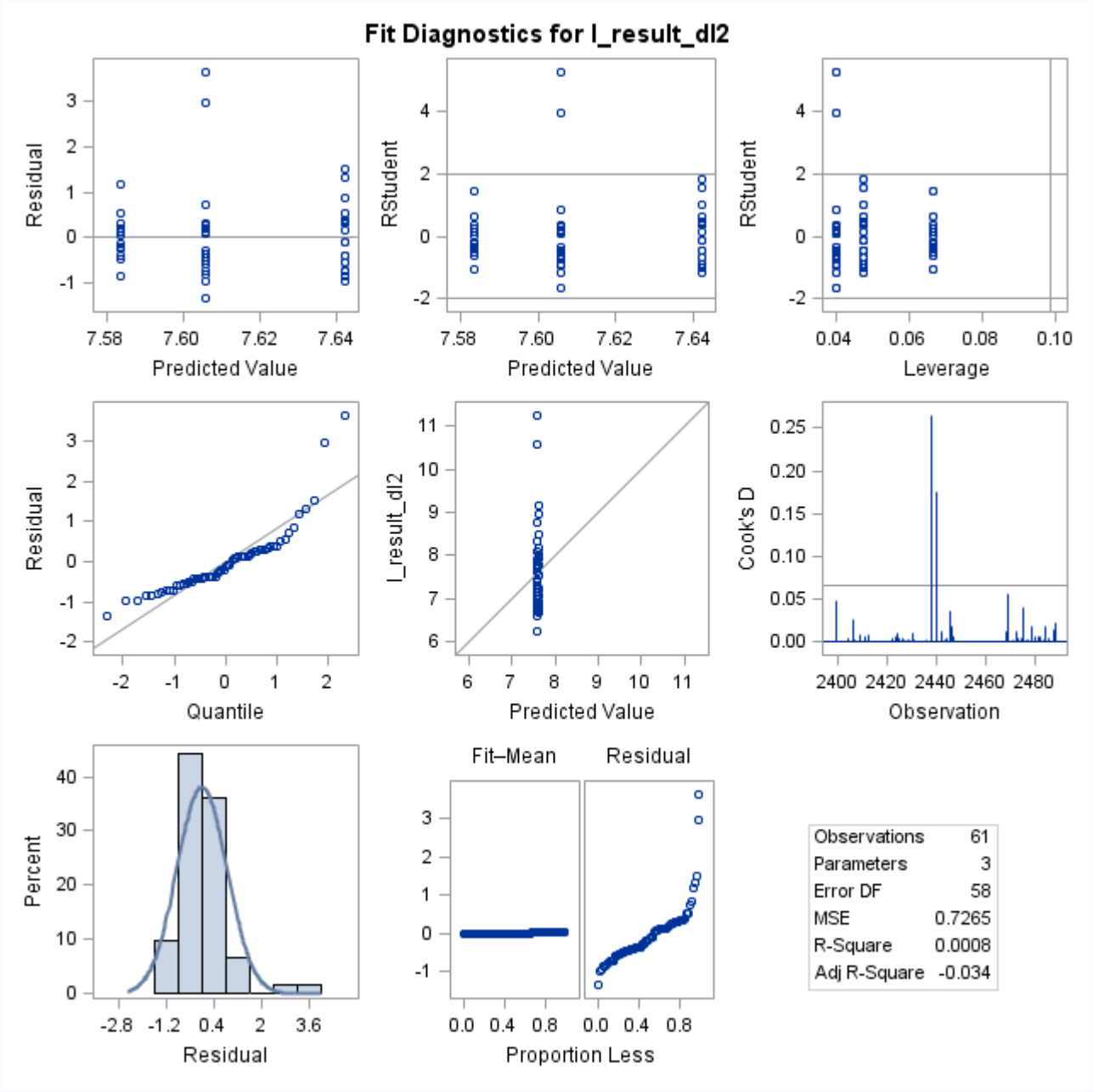
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.03220060	0.01610030	0.02	0.9781
Error	58	42.13748346	0.72650834		
Corrected Total	60	42.16968407			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000764	11.19631	0.852355	7.612818

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.03220060	0.01610030	0.02	0.9781

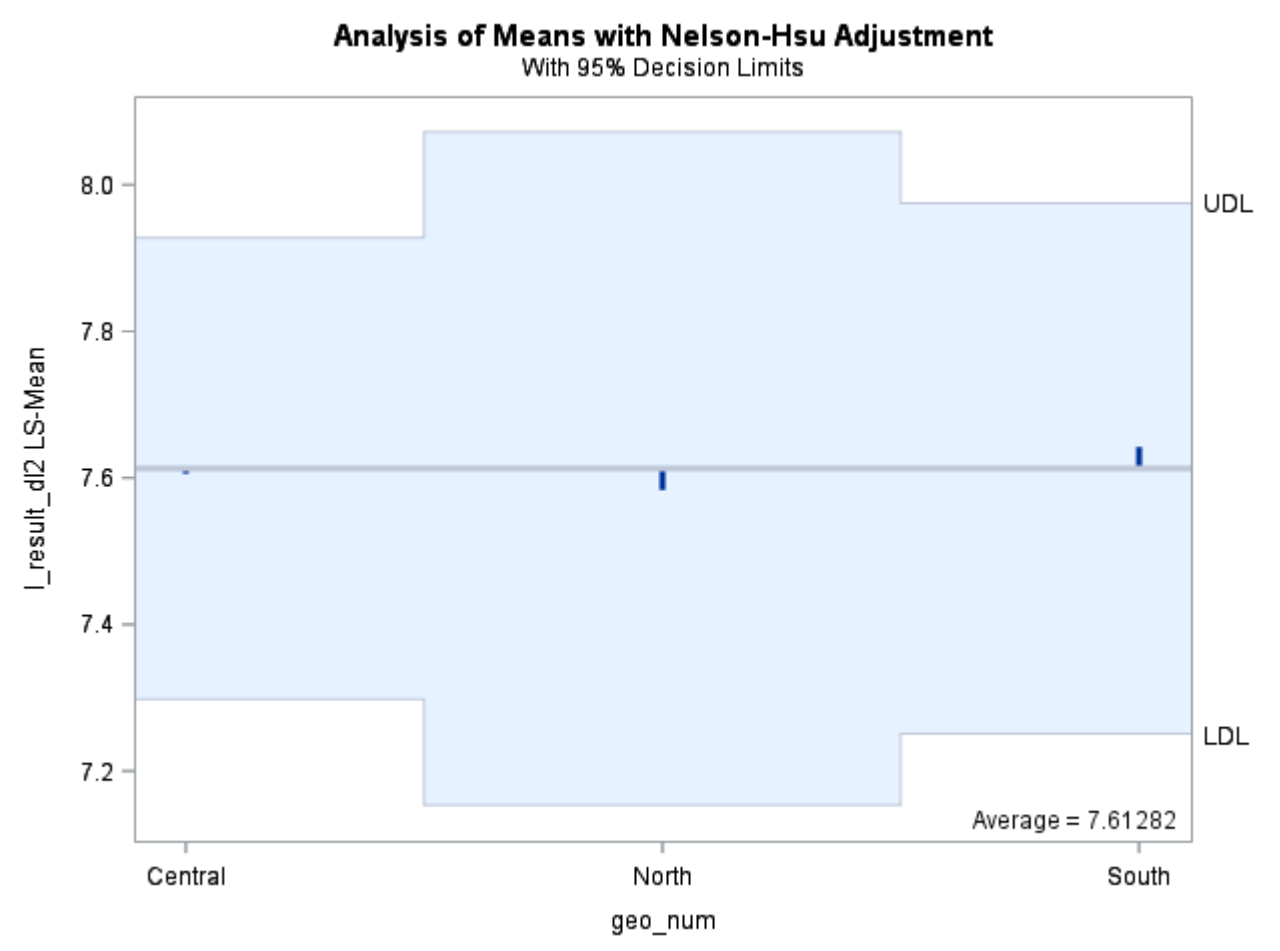
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.03220060	0.01610030	0.02	0.9781


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.7265
R-Square 0.0008
Adj R-Square -0.034

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	7.60574186	0.9984
North	7.58352926	0.9871
South	7.64216109	0.9792



Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	7.60574186	1
North	7.58352926	2
South	7.64216109	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9965	0.9886
2	0.9965		0.9774
3	0.9886	0.9774	

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	9.9954	4.9977	1.24	0.2978
Error	58	234.3	4.0400		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.04	0.9574
Error	38.6528		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	7.60574186	1.10016373
North	**15**	7.58352926	0.47652684
South	**21**	7.64216109	0.70390867

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

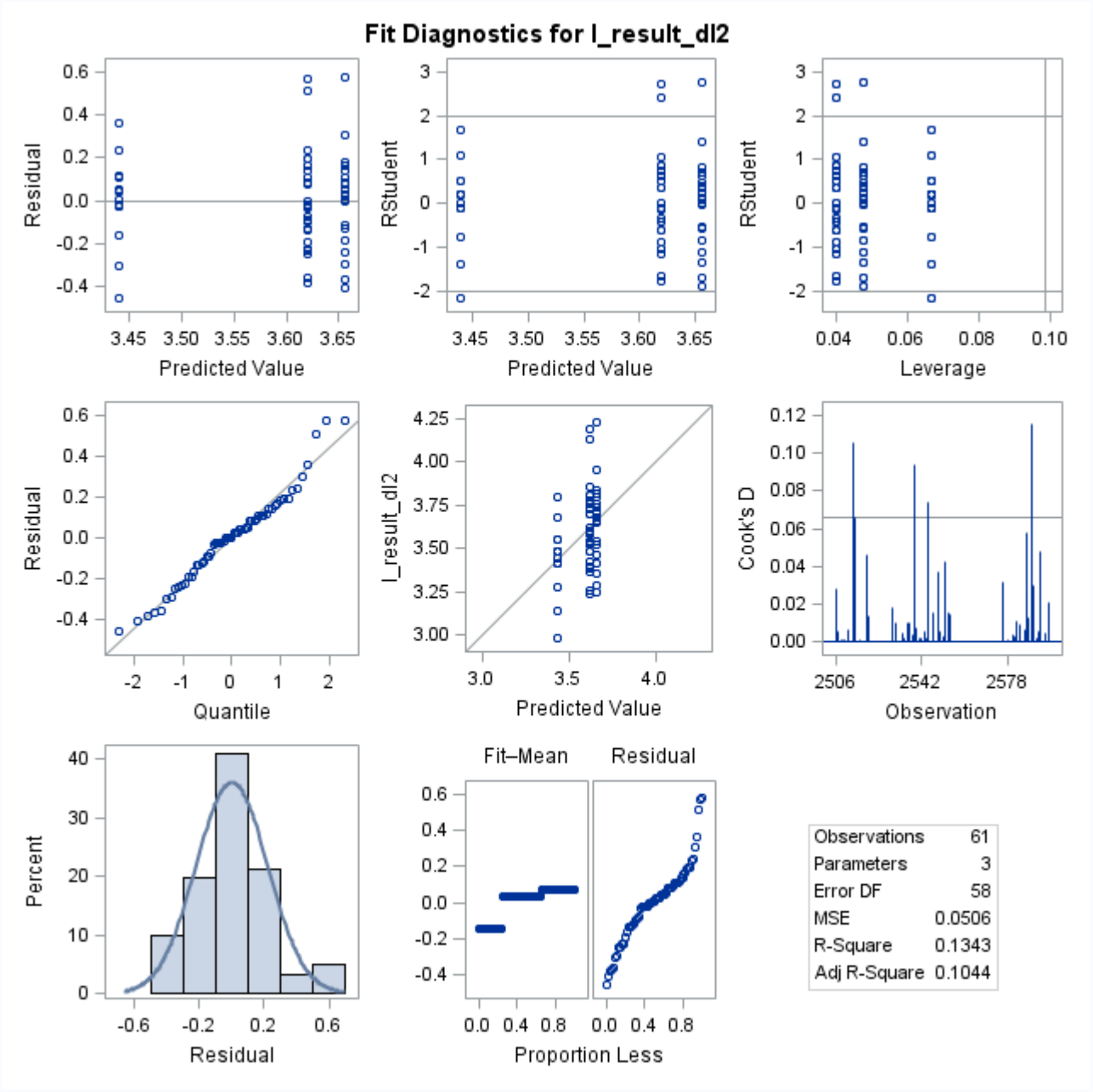
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.45480205	0.22740103	4.50	0.0153
Error	58	2.93260383	0.05056213		
Corrected Total	60	3.38740588			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.134263	6.267555	0.224860	3.587687

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.45480205	0.22740103	4.50	0.0153

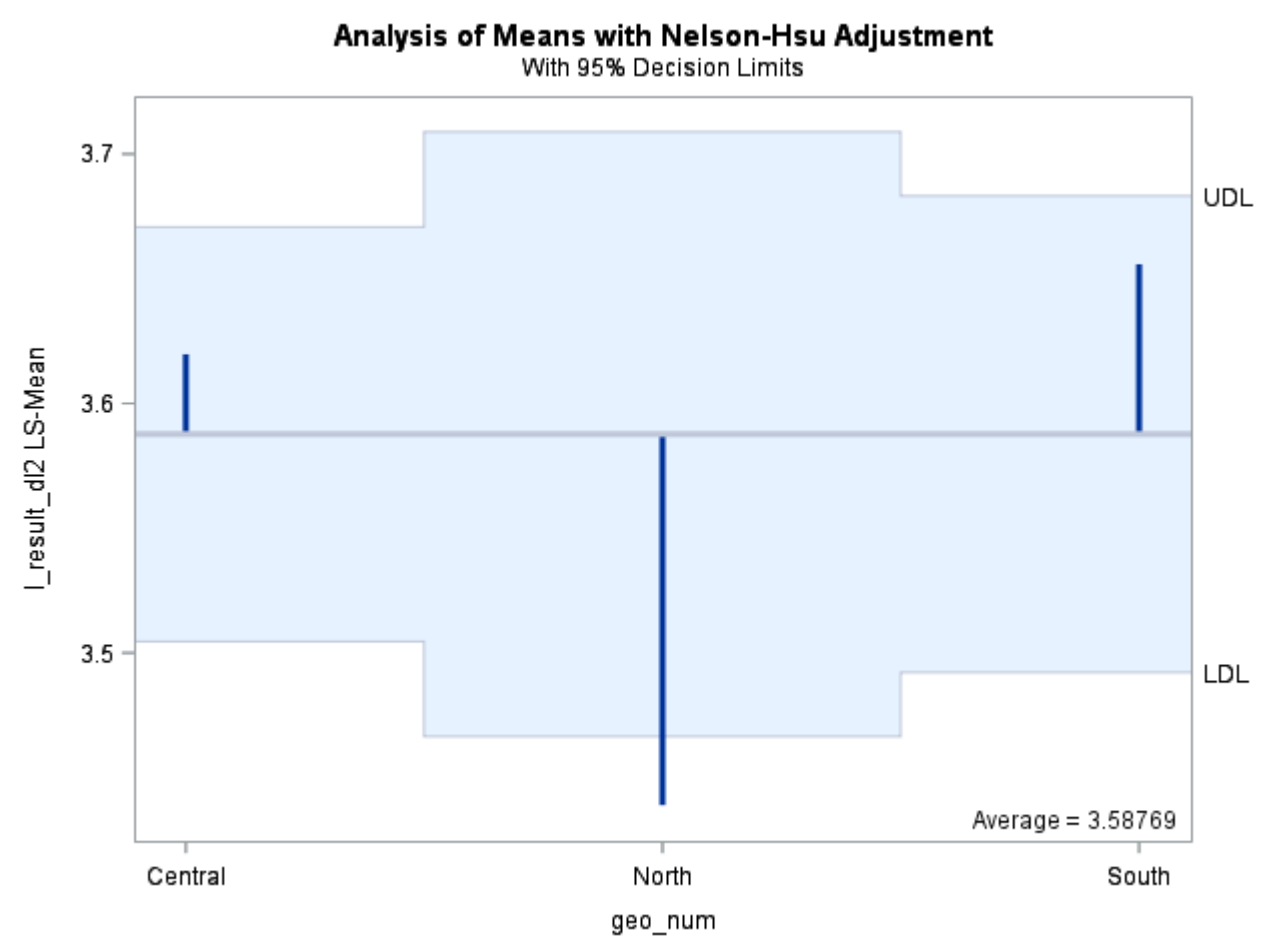
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.45480205	0.22740103	4.50	0.0153


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.0506
R-Square 0.1343
Adj R-Square 0.1044

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.61970378	0.6250
North	3.43896952	0.0125
South	3.65579820	0.2079



Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.61970378	1
North	3.43896952	2
South	3.65579820	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.0438	0.8508
2	0.0438		0.0163
3	0.8508	0.0163	

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	0.00269	0.00134	0.23	0.7981
Error	58	0.3444	0.00594		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	5.19	0.0104
Error	36.2250		

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	3.61970378	0.23545679
North	**15**	3.43896952	0.19828388
South	**21**	3.65579820	0.22930496

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 56

Number of Observations Used 55

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

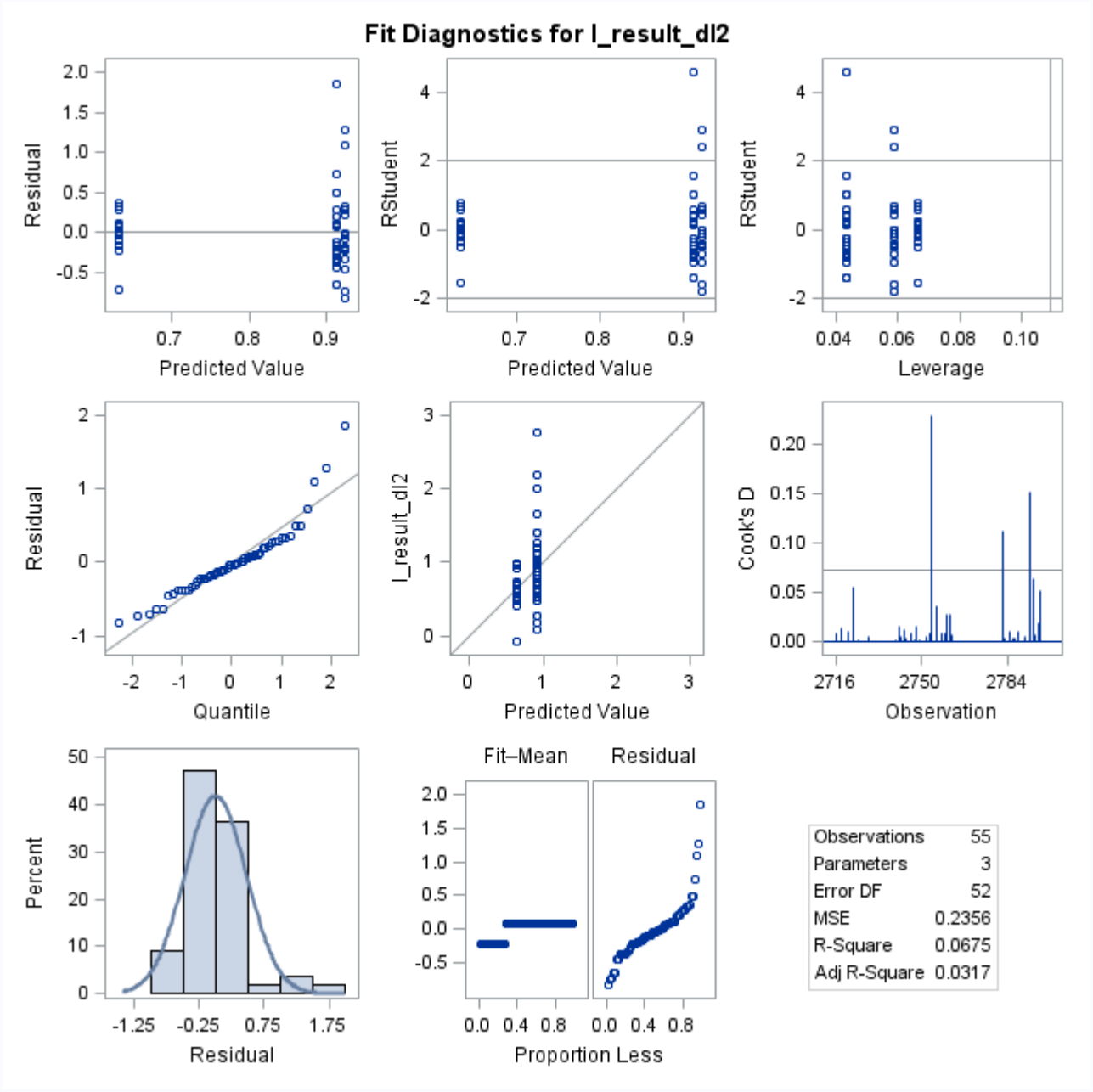
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.88714202	0.44357101	1.88	0.1624
Error	52	12.25044800	0.23558554		
Corrected Total	54	13.13759002			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.067527	57.81043	0.485372	0.839592

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.88714202	0.44357101	1.88	0.1624

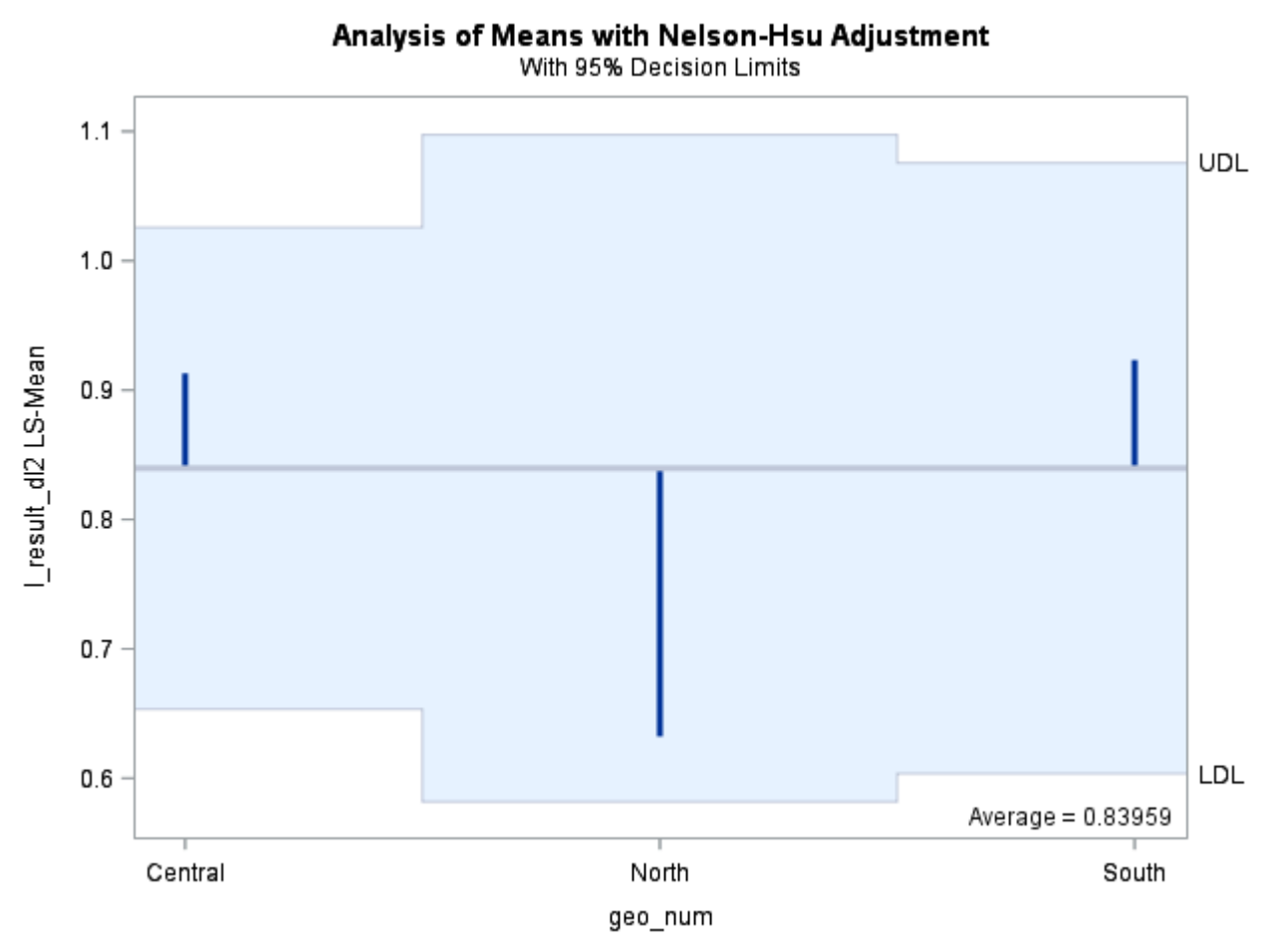
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.88714202	0.44357101	1.88	0.1624


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 55
Parameters 3
Error DF 52
MSE 0.2356
R-Square 0.0675
Adj R-Square 0.0317

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	0.91294757	0.6108
North	0.63231691	0.1376
South	0.92323468	0.6704



Metals Silver
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	0.91294757	1
North	0.63231691	2
South	0.92323468	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.1995	0.9976
2	0.1995		0.2179
3	0.9976	0.2179	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	0.5187	0.2593	0.92	0.4036
Error	52	14.6058	0.2809		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	3.32	0.0489
Error	32.5448		

Metals Silver
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**23**	0.91294757	0.54581044
North	**15**	0.63231691	0.26231052
South	**17**	0.92323468	0.54389532

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 62

Number of Observations Used 61

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure

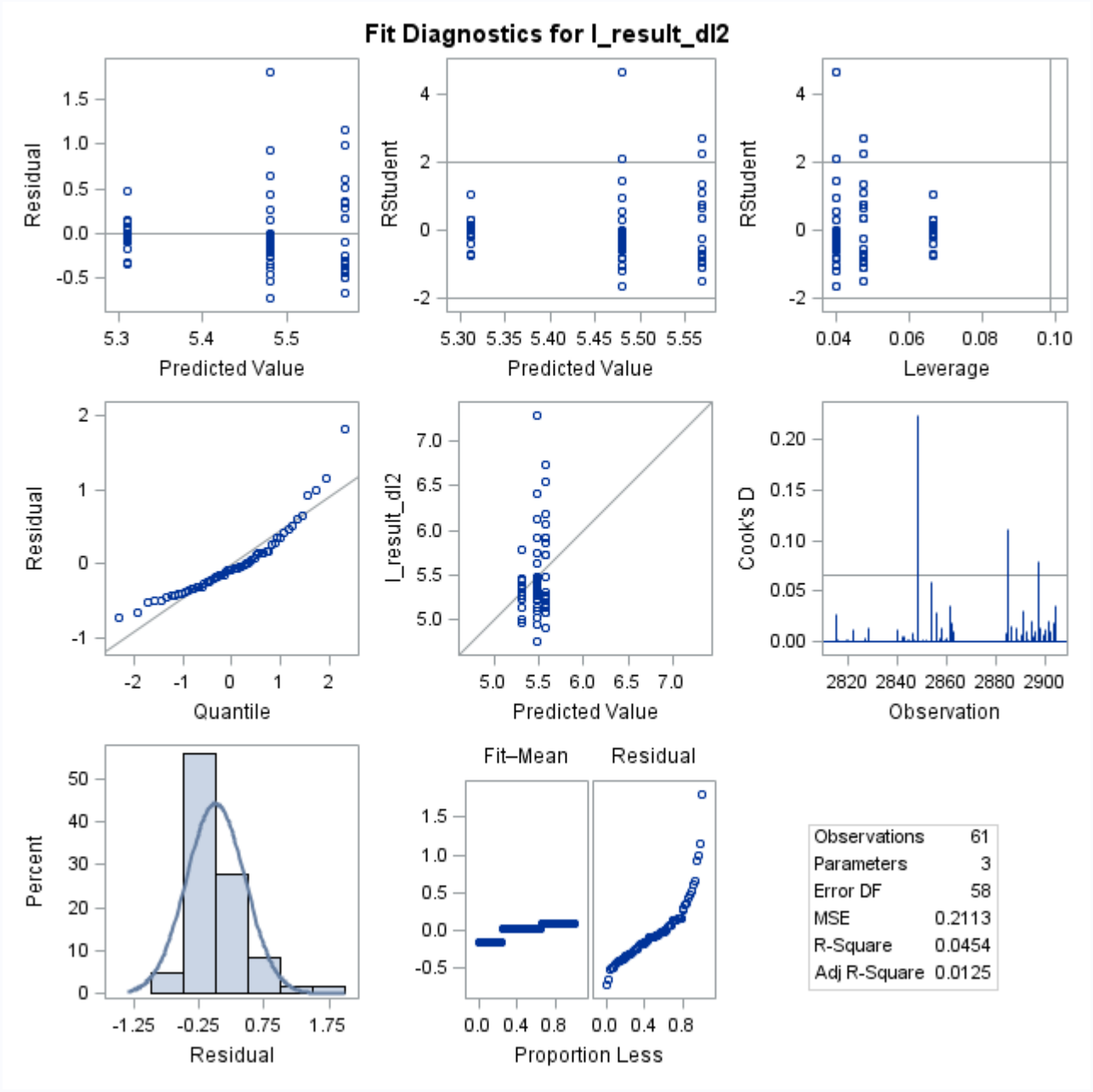
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.58332097	0.29166049	1.38	0.2597
Error	58	12.25829475	0.21134991		
Corrected Total	60	12.84161572			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.045424	8.405985	0.459728	5.469057

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.58332097	0.29166049	1.38	0.2597

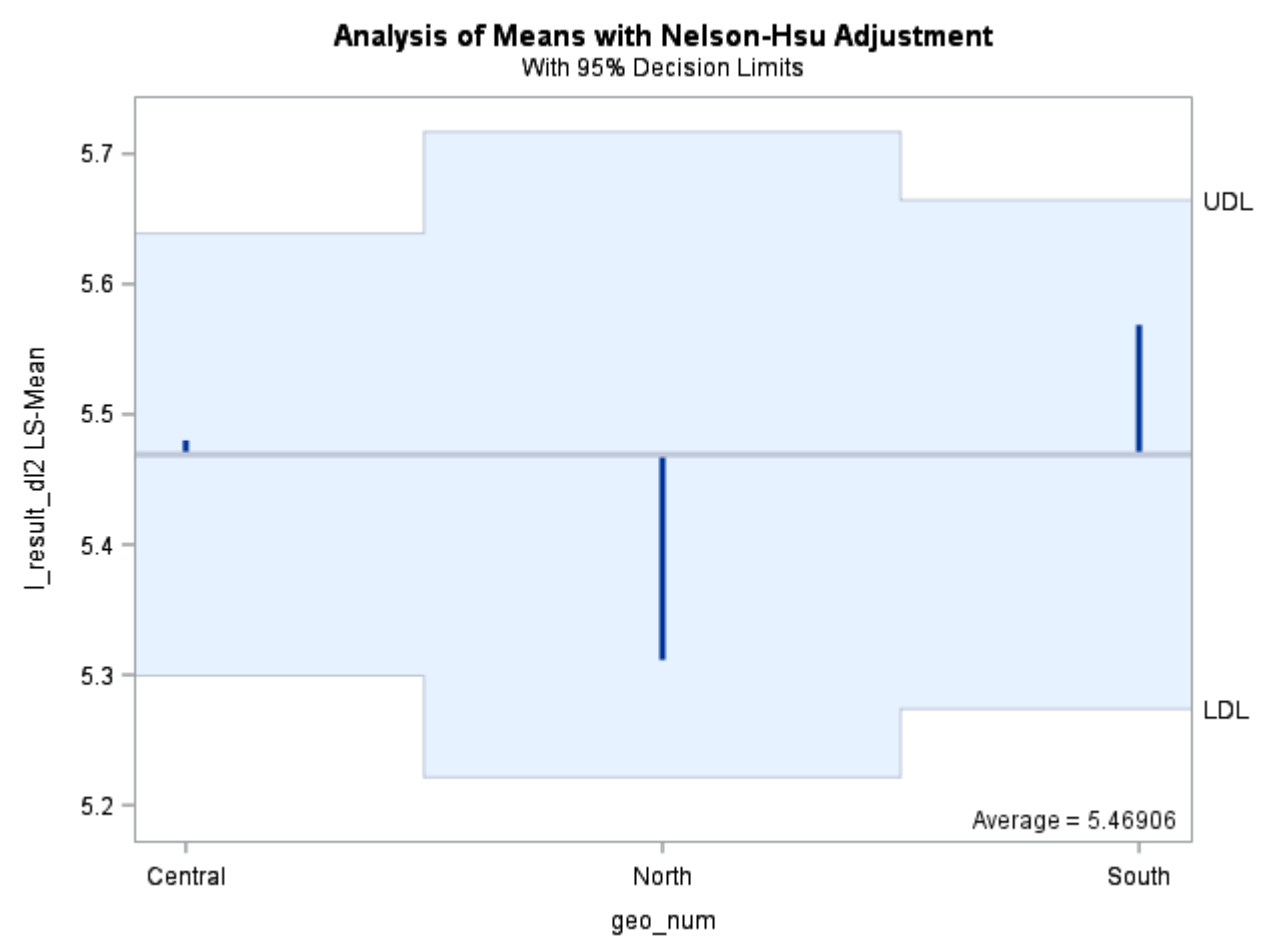
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.58332097	0.29166049	1.38	0.2597


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 61
Parameters 3
Error DF 58
MSE 0.2113
R-Square 0.0454
Adj R-Square 0.0125

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	5.48000919	0.9868
North	5.31149403	0.2844
South	5.56856313	0.4426



Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	5.48000919	1
North	5.31149403	2
South	5.56856313	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5043	0.7927
2	0.5043		0.2316
3	0.7927	0.2316	

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	0.5357	0.2679	1.24	0.2972
Error	58	12.5369	0.2162		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	2.72	0.0792
Error	36.8263		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by Geographic Area : Be-7 Bearing Samples Only

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**25**	5.48000919	0.51707846
North	**15**	5.31149403	0.19879633
South	**21**	5.56856313	0.51420482

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

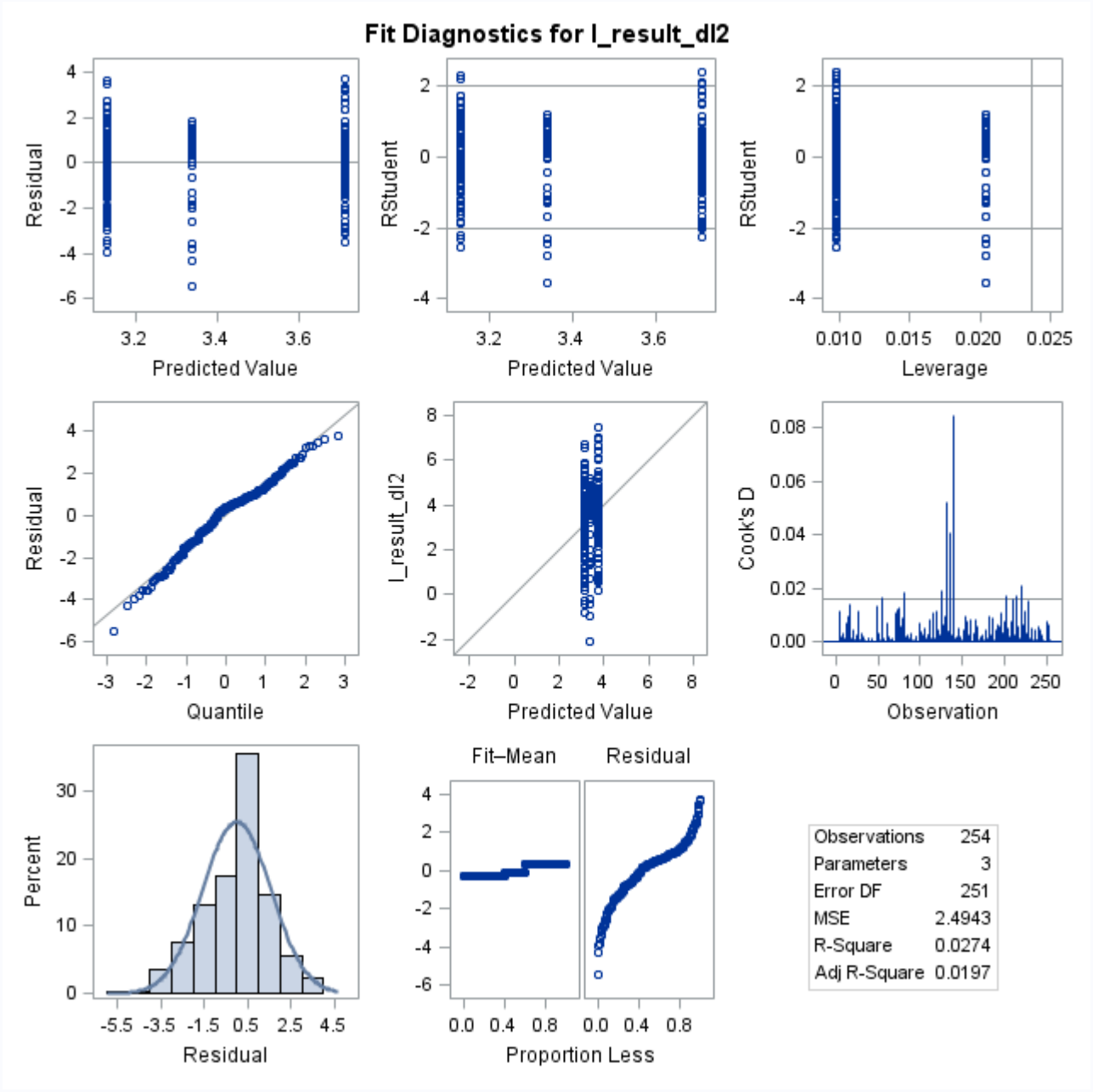
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	17.6573705	8.8286853	3.54	0.0305
Error	251	626.0613531	2.4942683		
Corrected Total	253	643.7187236			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.027430	46.37231	1.579325	3.405751

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	17.65737052	8.82868526	3.54	0.0305

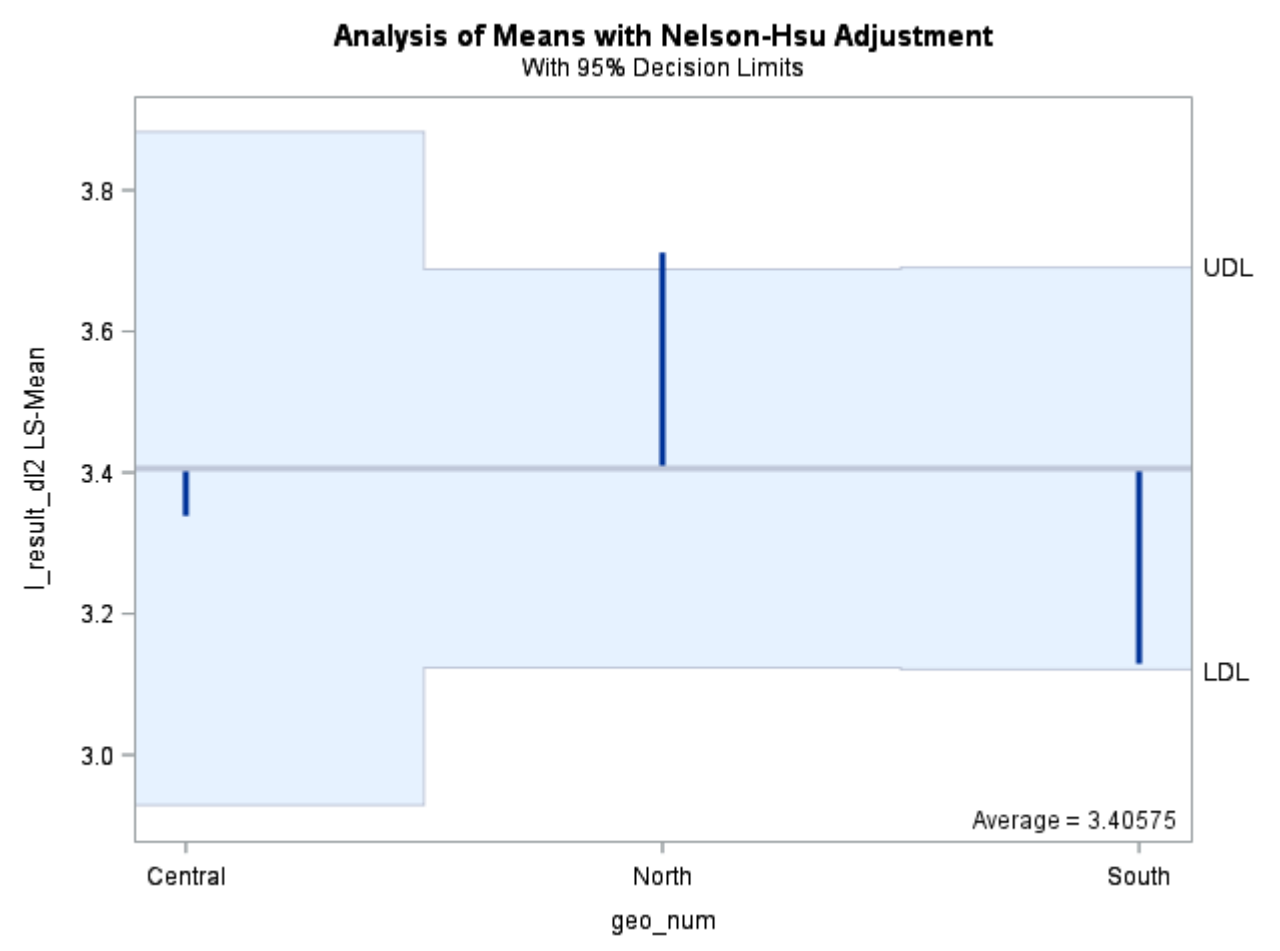
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	17.65737052	8.82868526	3.54	0.0305


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 2.4943
R-Square 0.0274
Adj R-Square 0.0197

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.33867192	0.9410
North	3.71157348	0.0301
South	3.12915458	0.0588



Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.33867192	1
North	3.71157348	2
South	3.12915458	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.3633	0.7259
2	0.3633		0.0239
3	0.7259	0.0239	

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	19.6740	9.8370	0.70	0.4974
Error	251	3525.2	14.0447		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	3.63	0.0293
Error	127.1		

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	3.33867192	1.63549098
North	**103**	3.71157348	1.46696267
South	**102**	3.12915458	1.65955848

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

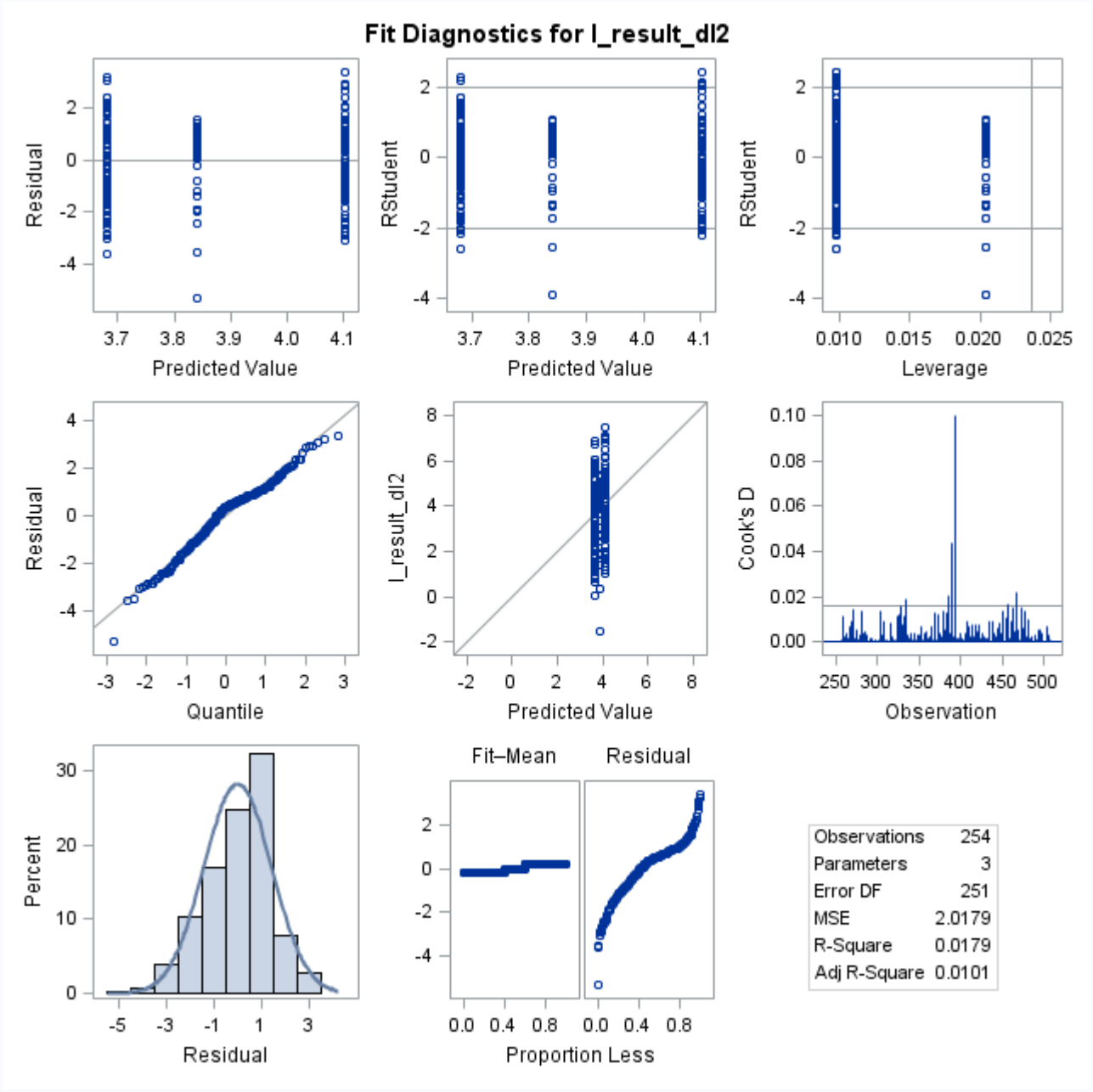
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.2390719	4.6195360	2.29	0.1034
Error	251	506.4813964	2.0178542		
Corrected Total	253	515.7204683			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.017915	36.59234	1.420512	3.881993

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	9.23907193	4.61953597	2.29	0.1034

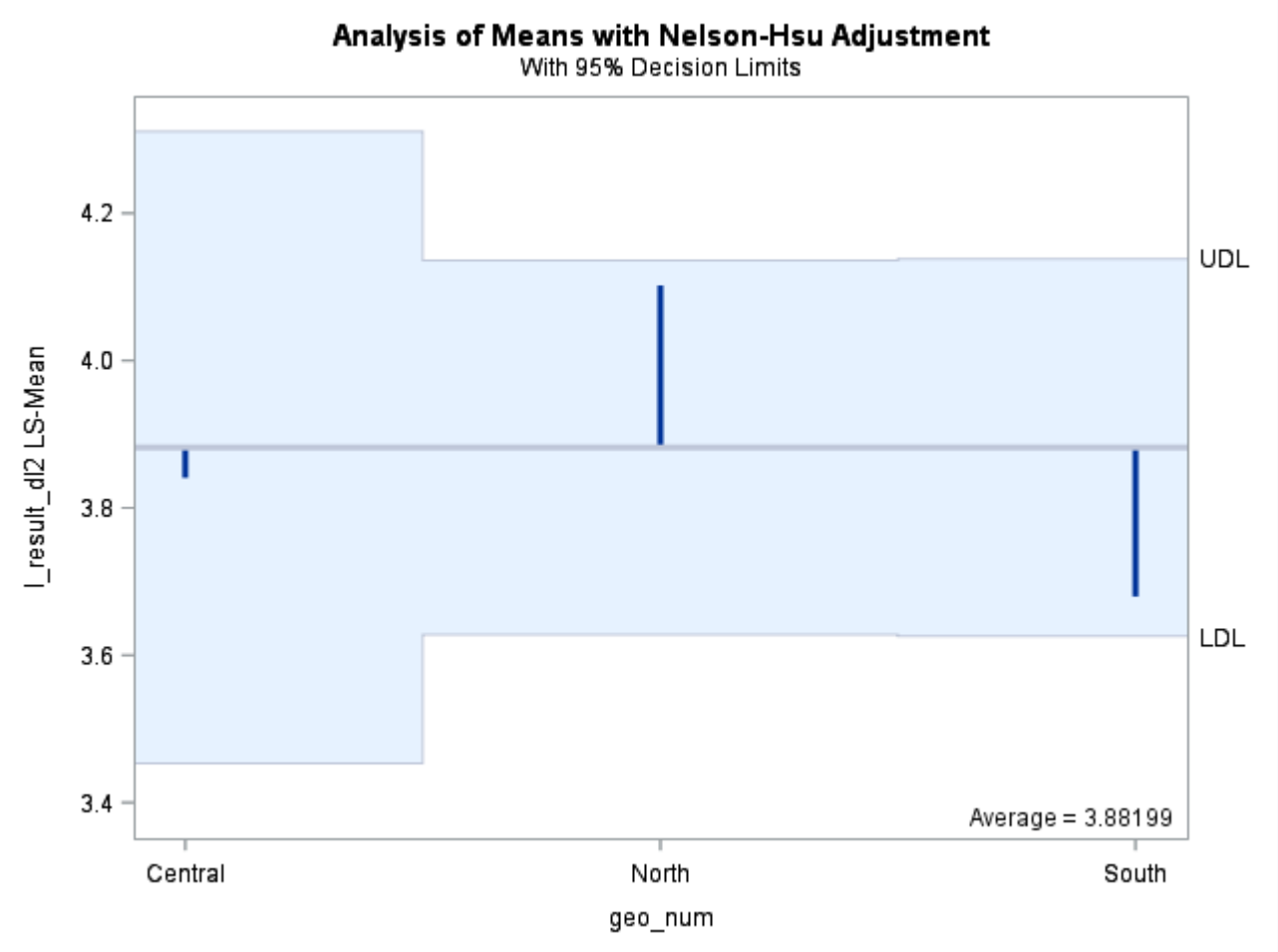
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	9.23907193	4.61953597	2.29	0.1034


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 2.0179
R-Square 0.0179
Adj R-Square 0.0101

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.84078286	0.9720
North	4.10192165	0.1042
South	3.67970488	0.1513



Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.84078286	1
North	4.10192165	2
South	3.67970488	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5403	0.7912
2	0.5403		0.0863
3	0.7912	0.0863	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	3.0985	1.5493	0.17	0.8463
Error	251	2329.0	9.2791		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	2.25	0.1093
Error	131.5		

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	3.84078286	1.36837060
North	**103**	4.10192165	1.40171675
South	**102**	3.67970488	1.46305581

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

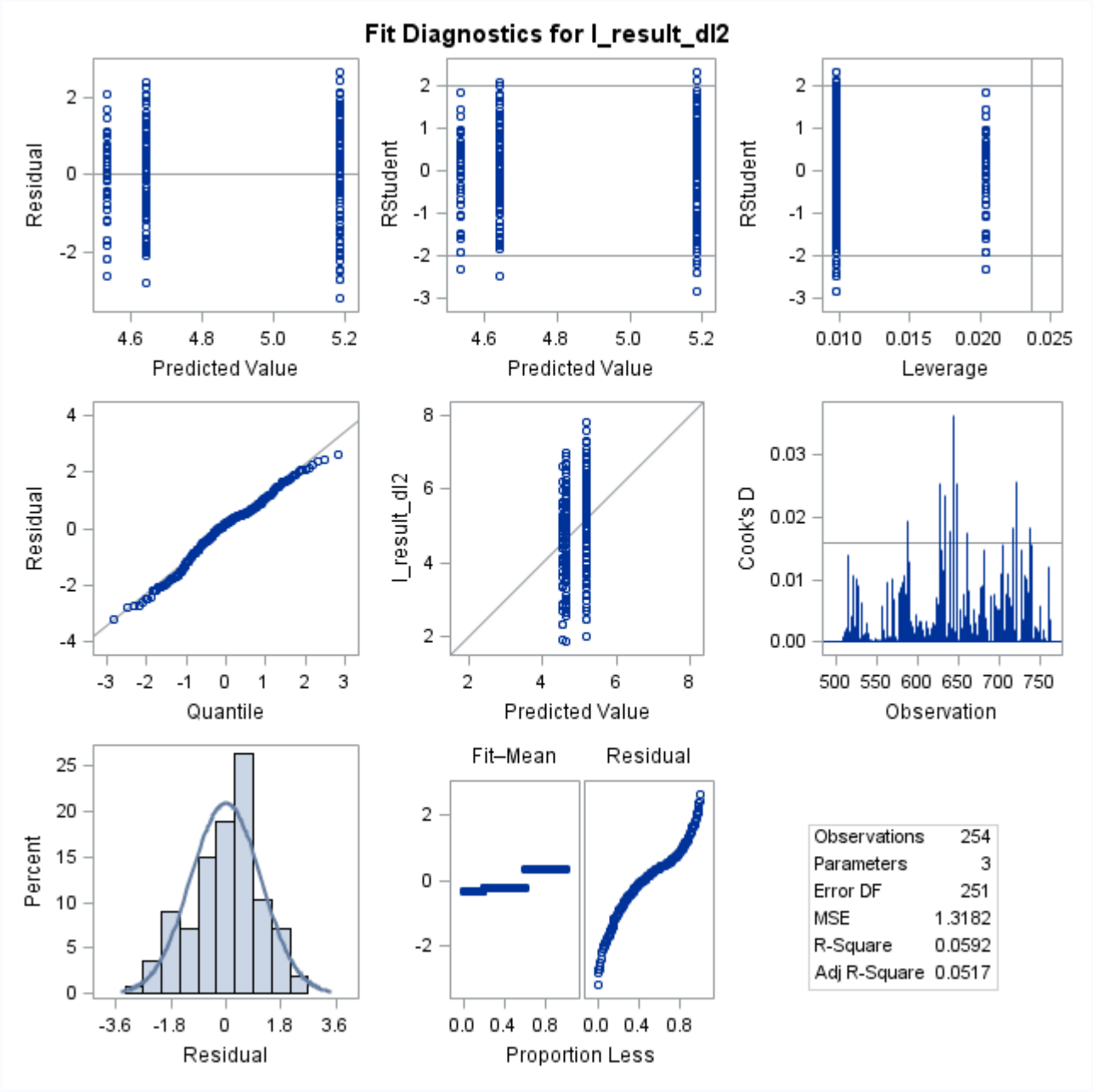
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	20.8232682	10.4116341	7.90	0.0005
Error	251	330.8689150	1.3182028		
Corrected Total	253	351.6921832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.059209	23.73153	1.148130	4.837994

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	20.82326820	10.41163410	7.90	0.0005

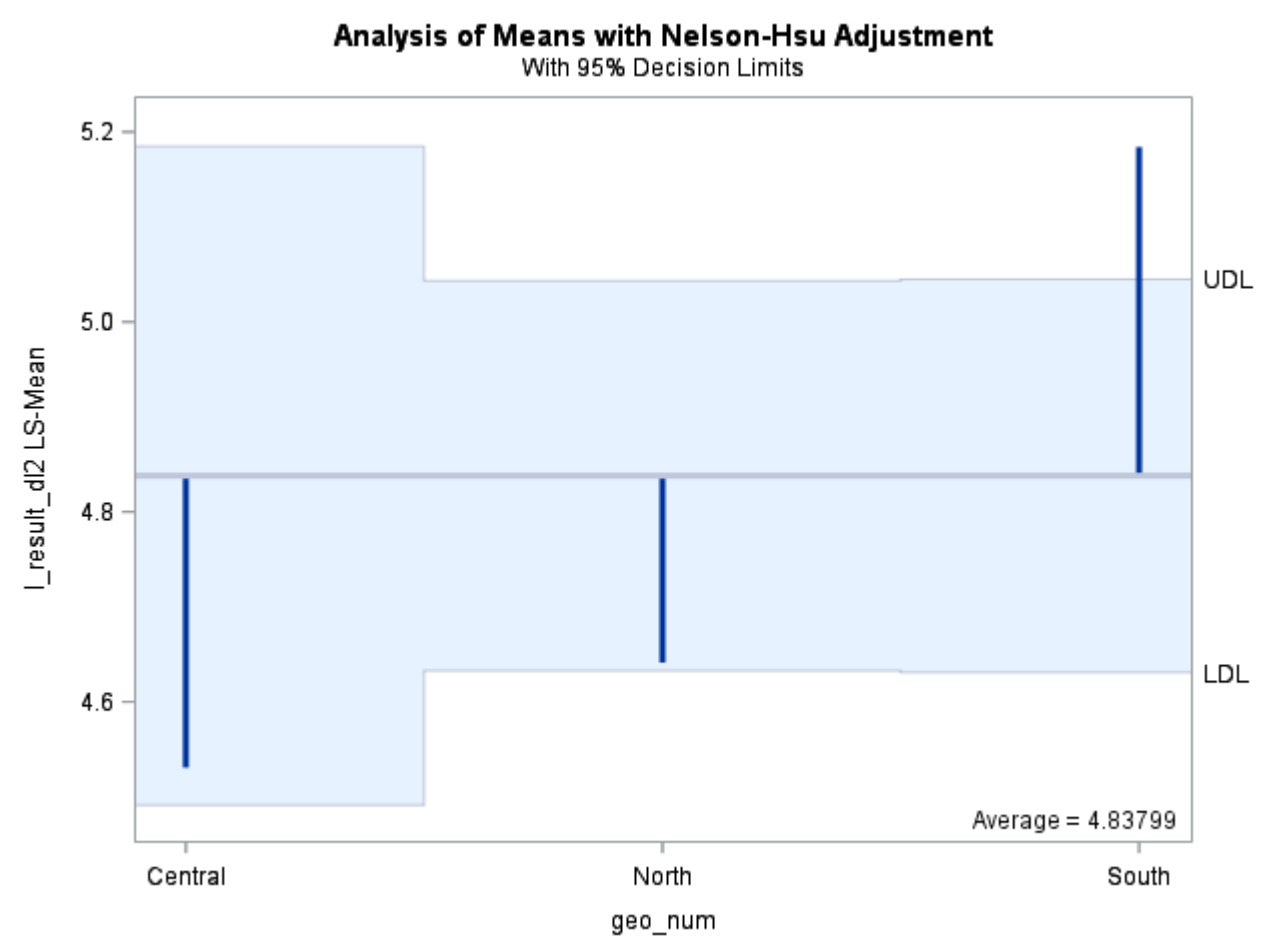
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	20.82326820	10.41163410	7.90	0.0005


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.3182
R-Square 0.0592
Adj R-Square 0.0517

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.53082161	0.0940
North	4.64138215	0.0636
South	5.18409679	0.0003



PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.53082161	1
North	4.64138215	2
South	5.18409679	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.8441	0.0035
2	0.8441		0.0024
3	0.0035	0.0024	

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	22.7364	11.3682	3.78	0.0242
Error	251	755.2	3.0086		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	7.27	0.0010
Error	133.7		

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	4.53082161	1.02422521
North	**103**	4.64138215	1.04058535
South	**102**	5.18409679	1.29762808

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

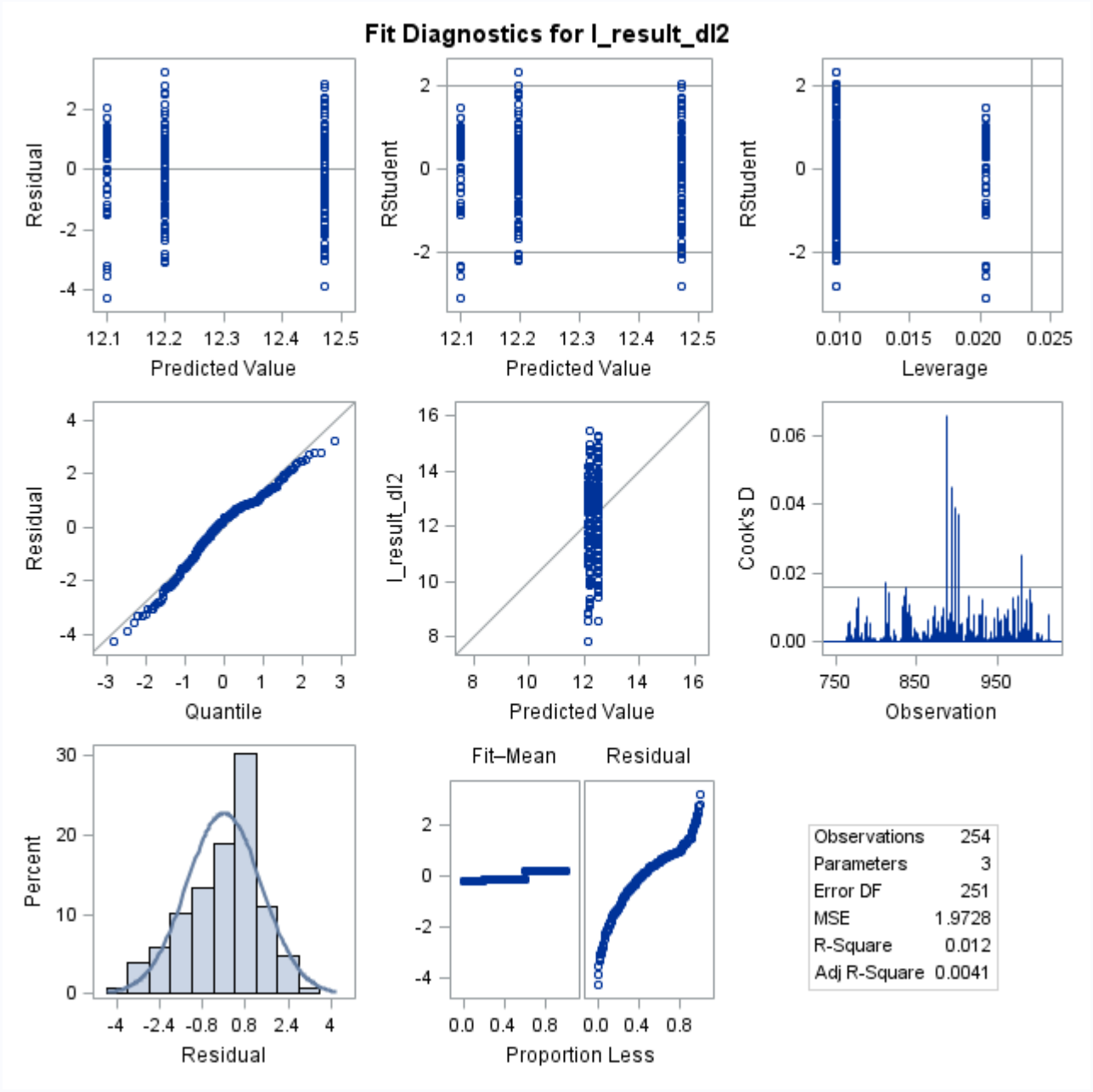
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.0117811	3.0058906	1.52	0.2199
Error	251	495.1846646	1.9728473		
Corrected Total	253	501.1964458			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.011995	11.42961	1.404581	12.28896

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	6.01178111	3.00589056	1.52	0.2199

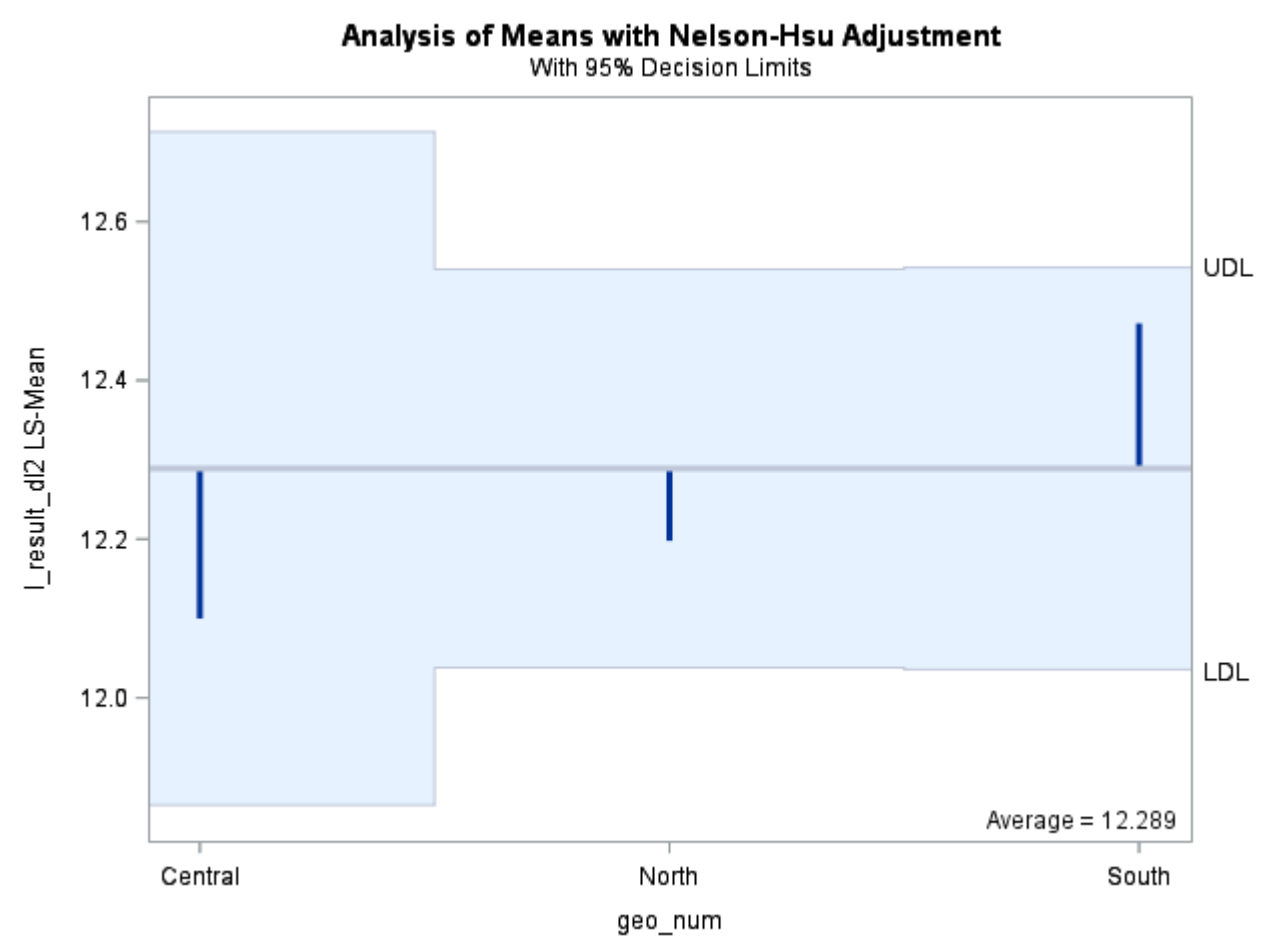
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	6.01178111	3.00589056	1.52	0.2199


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.9728
R-Square 0.012
Adj R-Square 0.0041

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	12.0999233	0.5447
North	12.1979112	0.6683
South	12.4717198	0.2059



PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	12.0999233	1
North	12.1979112	2
South	12.4717198	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9148	0.2819
2	0.9148		0.3448
3	0.2819	0.3448	

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	9.7387	4.8693	0.62	0.5361
Error	251	1955.7	7.7915		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	1.45	0.2396
Error	125.9		

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	12.0999233	1.49811225
North	**103**	12.1979112	1.31795566
South	**102**	12.4717198	1.44291236

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

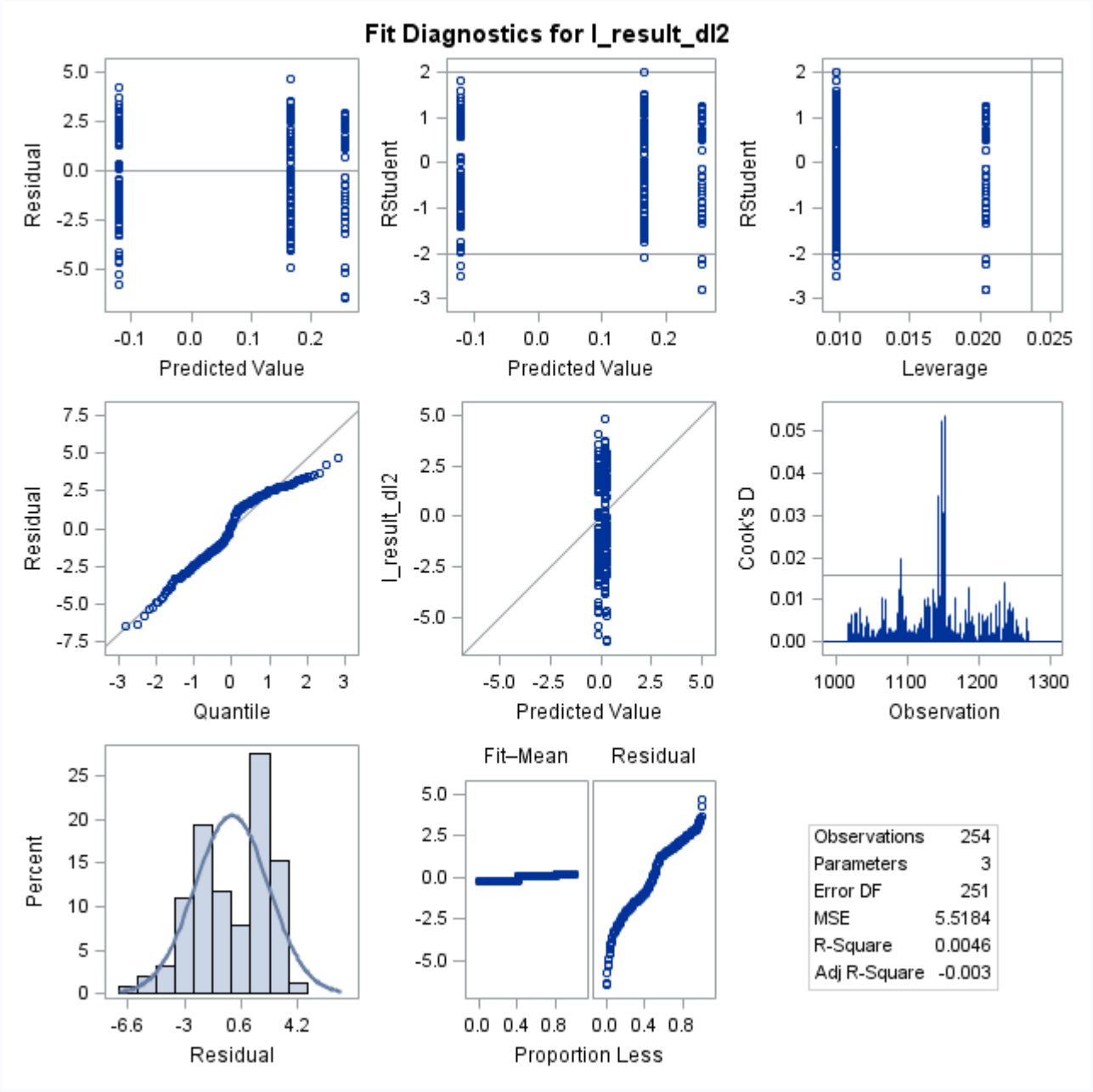
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.411146	3.205573	0.58	0.5602
Error	251	1385.118842	5.518402		
Corrected Total	253	1391.529988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.004607	3520.413	2.349128	0.066729

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	6.41114559	3.20557279	0.58	0.5602

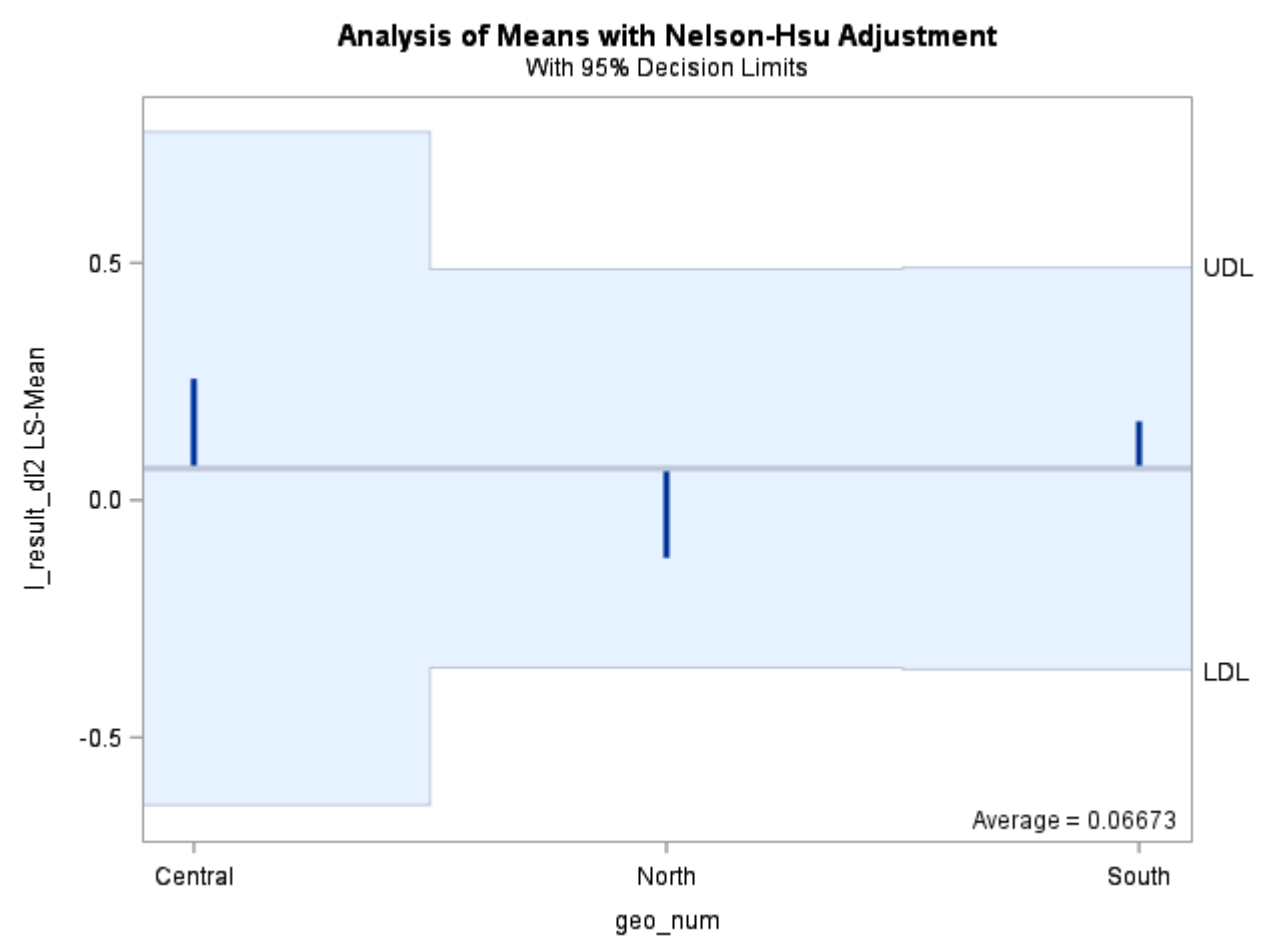
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	6.41114559	3.20557279	0.58	0.5602


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 5.5184
R-Square 0.0046
Adj R-Square -0.003

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	0.25582649	0.8040
North	-0.12158938	0.5406
South	0.16605210	0.8445



PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	0.25582649	1
North	-0.12158938	2
South	0.16605210	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6245	0.9737
2	0.6245		0.6556
3	0.9737	0.6556	

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	73.2557	36.6279	0.99	0.3748
Error	251	9331.6	37.1775		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.56	0.5742
Error	125.4		

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	0.25582649	2.54018467
North	**103**	-0.12158938	2.38026726
South	**102**	0.16605210	2.21939793

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

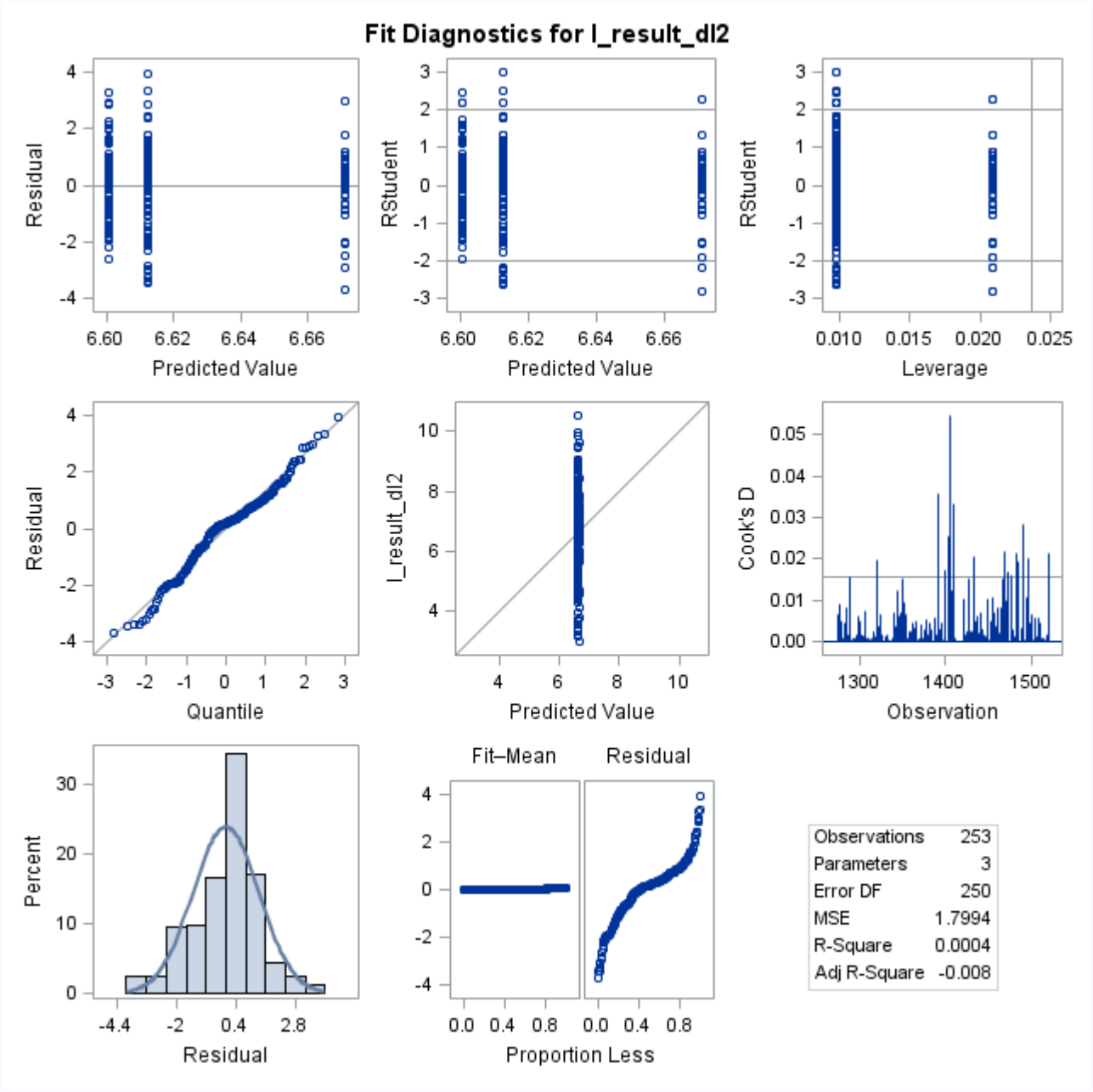
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.1694381	0.0847191	0.05	0.9540
Error	250	449.8587707	1.7994351		
Corrected Total	252	450.0282088			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000377	20.26750	1.341430	6.618627

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.16943814	0.08471907	0.05	0.9540

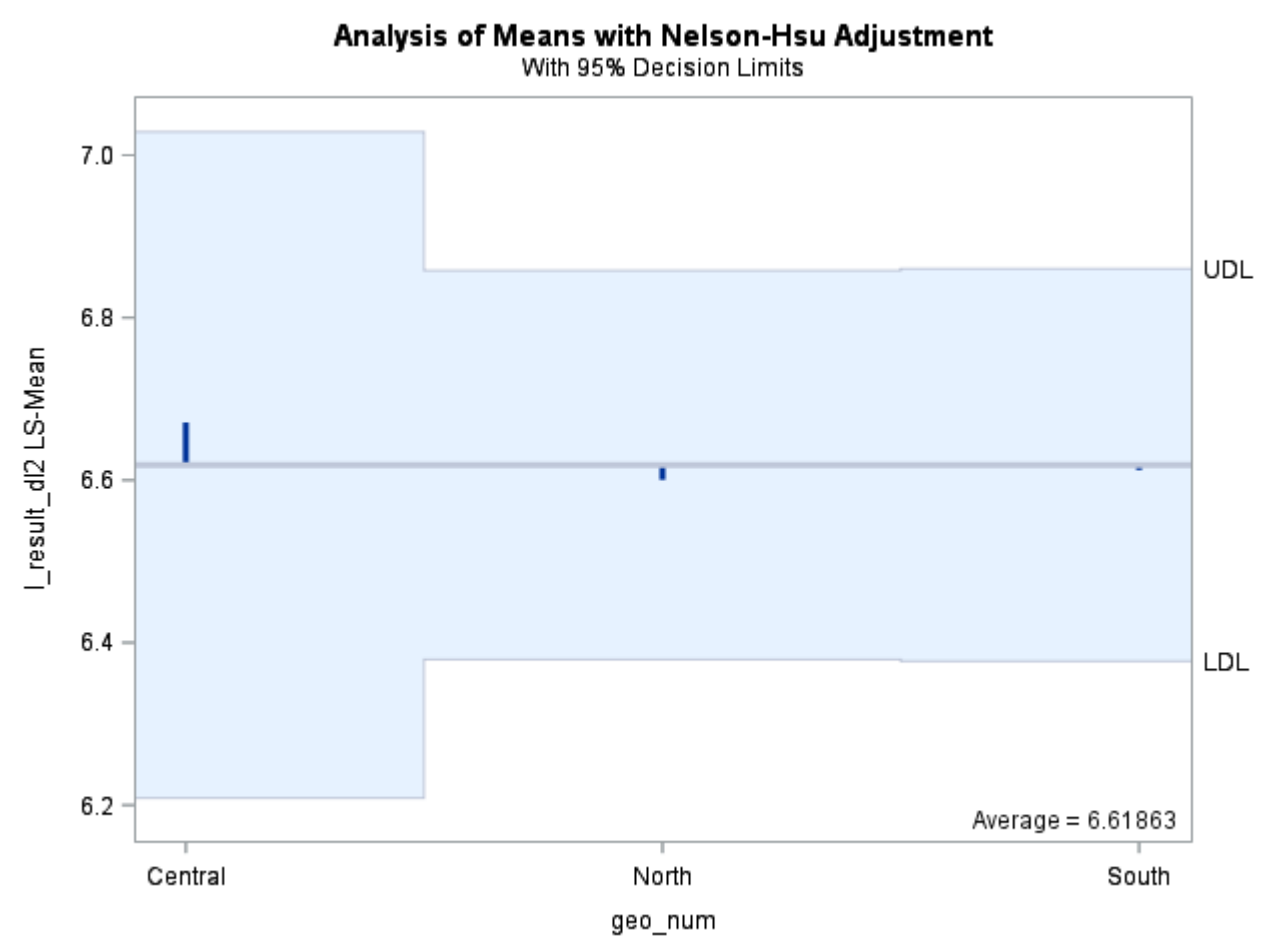
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.16943814	0.08471907	0.05	0.9540


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 1.7994
R-Square 0.0004
Adj R-Square -0.008

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.67092254	0.9512
North	6.60039122	0.9823
South	6.61243198	0.9980



Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.67092254	1
North	6.60039122	2
South	6.61243198	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9513	0.9664
2	0.9513		0.9977
3	0.9664	0.9977	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	66.1138	33.0569	4.47	0.0124
Error	250	1848.6	7.3944		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.06	0.9398
Error	132.7		

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**48**	6.67092254	1.14914746
North	**103**	6.60039122	1.18459302
South	**102**	6.61243198	1.55640107

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

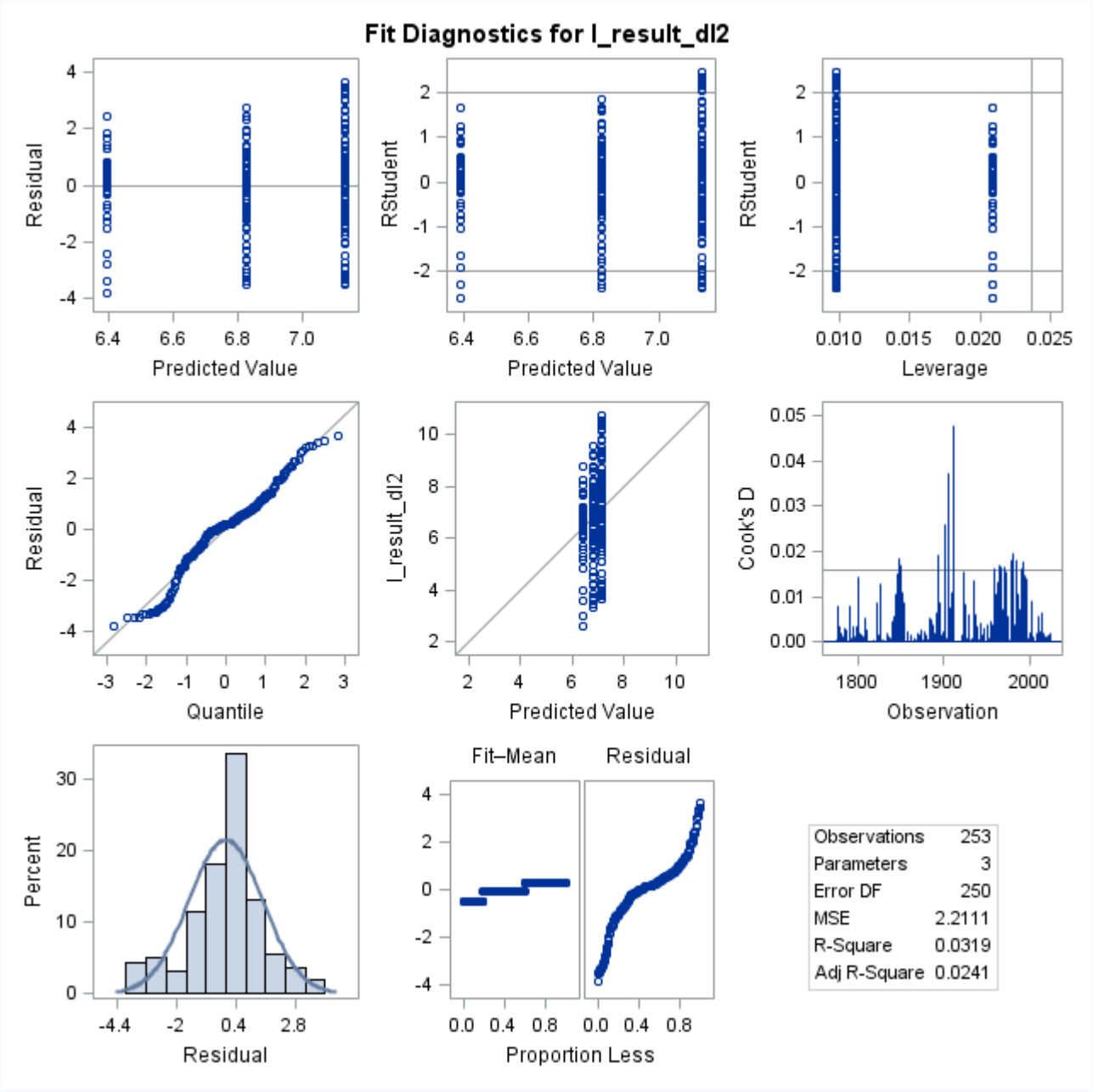
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	18.2082483	9.1041241	4.12	0.0174
Error	250	552.7775293	2.2111101		
Corrected Total	252	570.9857776			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.031889	21.65928	1.486980	6.865325

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	18.20824826	9.10412413	4.12	0.0174

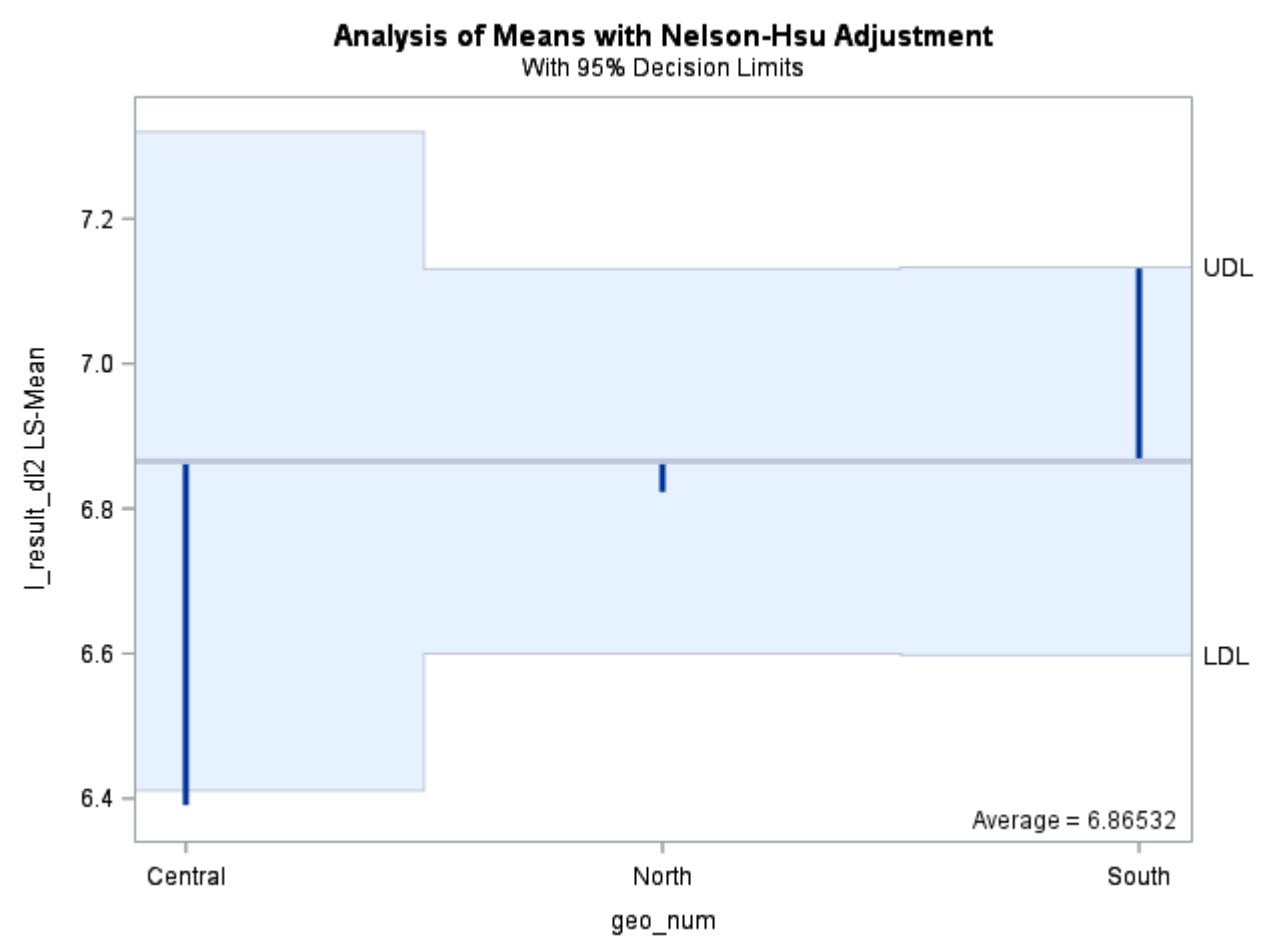
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	18.20824826	9.10412413	4.12	0.0174


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 2.2111
R-Square 0.0319
Adj R-Square 0.0241

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.39086650	0.0385
North	6.82299109	0.9248
South	7.13134752	0.0517



Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.39086650	1
North	6.82299109	2
South	7.13134752	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.2216	0.0133
2	0.2216		0.3001
3	0.0133	0.3001	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	180.9	90.4597	8.42	0.0003
Error	250	2687.4	10.7495		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	4.47	0.0132
Error	133.1		

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**48**	6.39086650	1.20748619
North	**103**	6.82299109	1.23877219
South	**102**	7.13134752	1.80133527

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

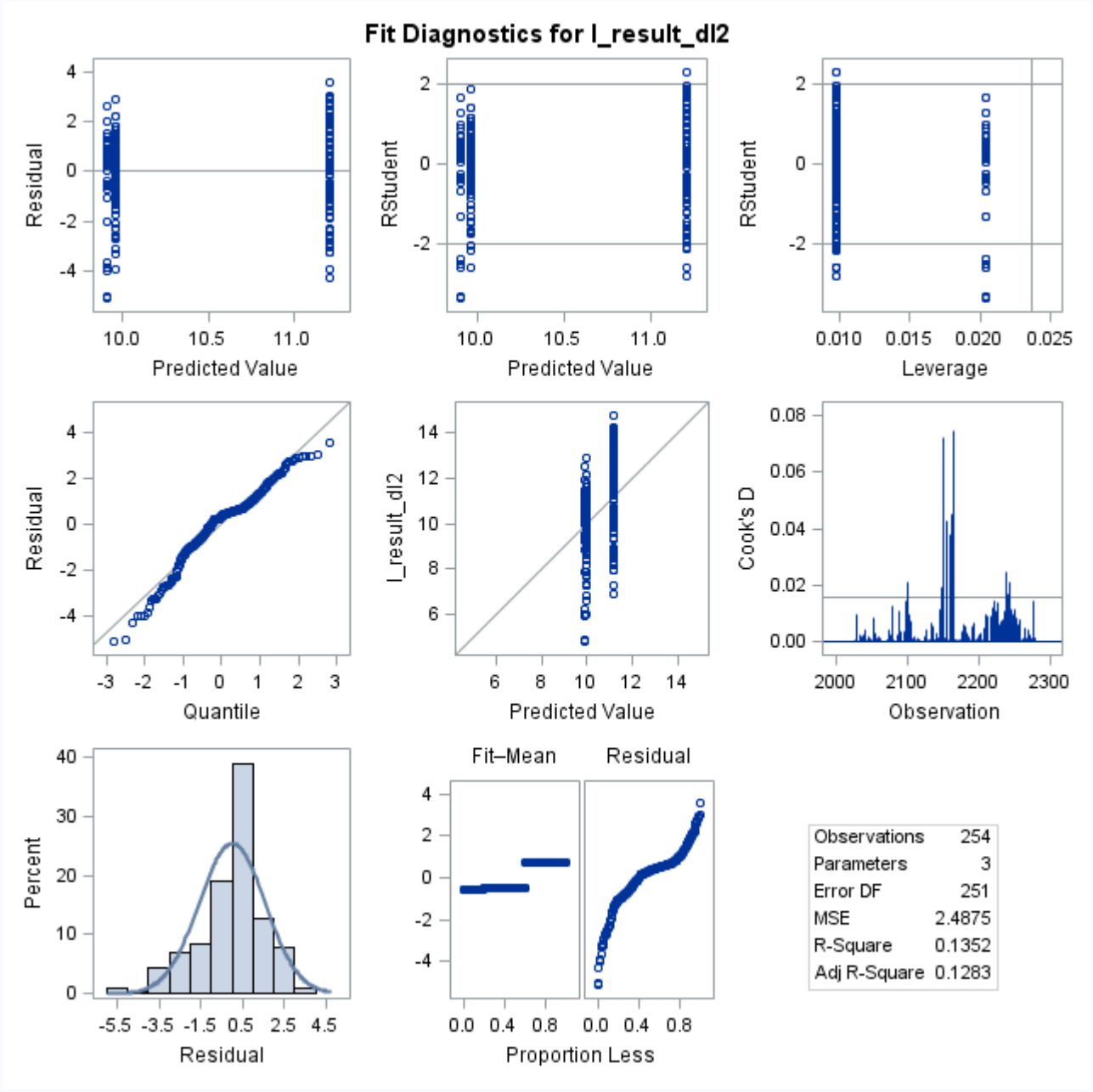
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	97.6326164	48.8163082	19.62	<.0001
Error	251	624.3522258	2.4874591		
Corrected Total	253	721.9848422			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.135228	15.09255	1.577168	10.44997

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	97.63261644	48.81630822	19.62	<.0001

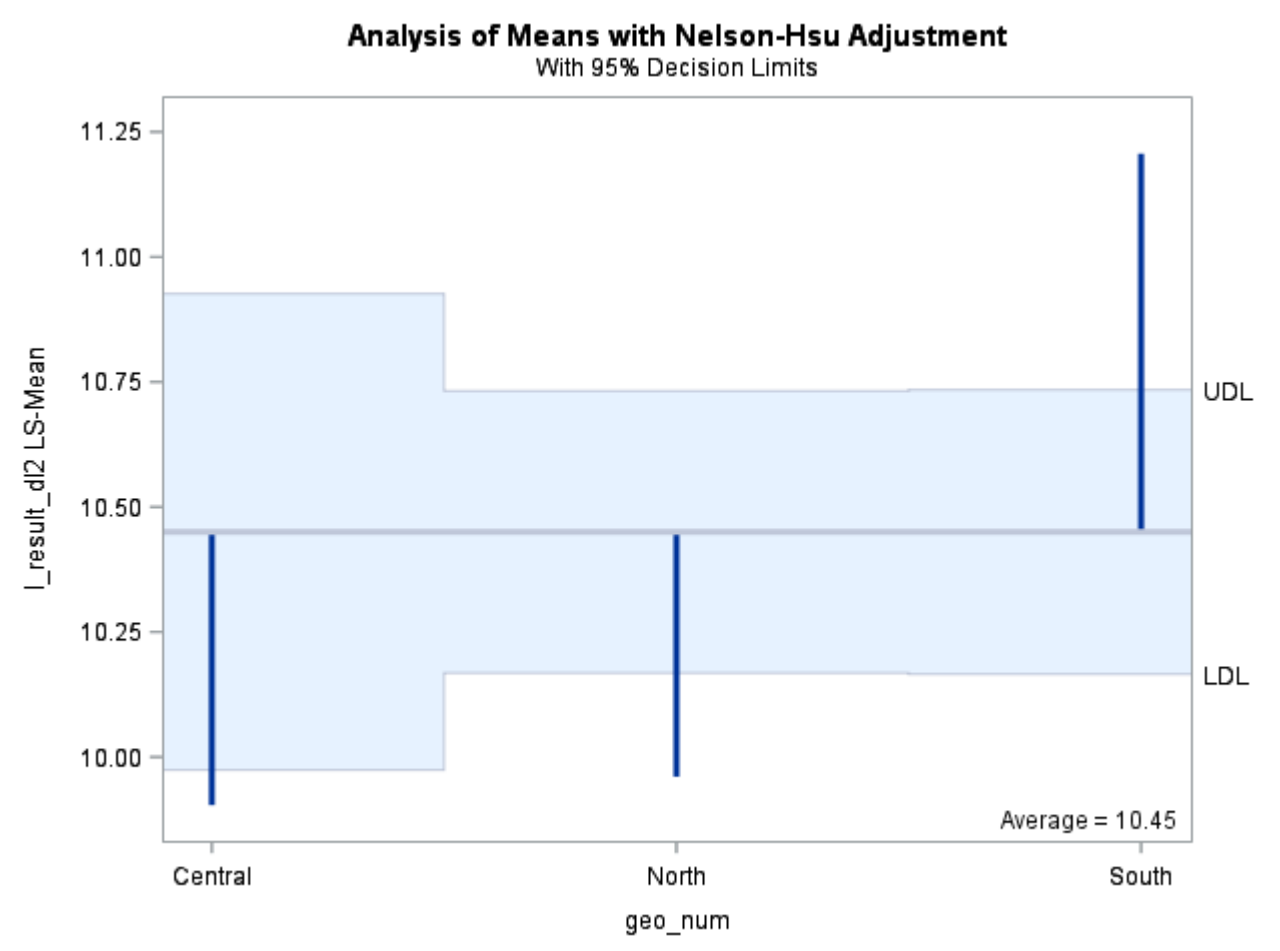
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	97.63261644	48.81630822	19.62	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 2.4875
R-Square 0.1352
Adj R-Square 0.1283

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	9.9038374	0.0200
North	9.9607100	0.0002
South	11.2063946	<.0001



Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	9.9038374	1
North	9.9607100	2
South	11.2063946	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9765	<.0001
2	0.9765		<.0001
3	<.0001	<.0001	

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	149.2	74.6126	4.83	0.0088
Error	251	3878.8	15.4535		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	17.78	<.0001
Error	122.2		

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	9.9038374	1.64737039
North	**103**	9.9607100	1.25836735
South	**102**	11.2063946	1.81460688

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

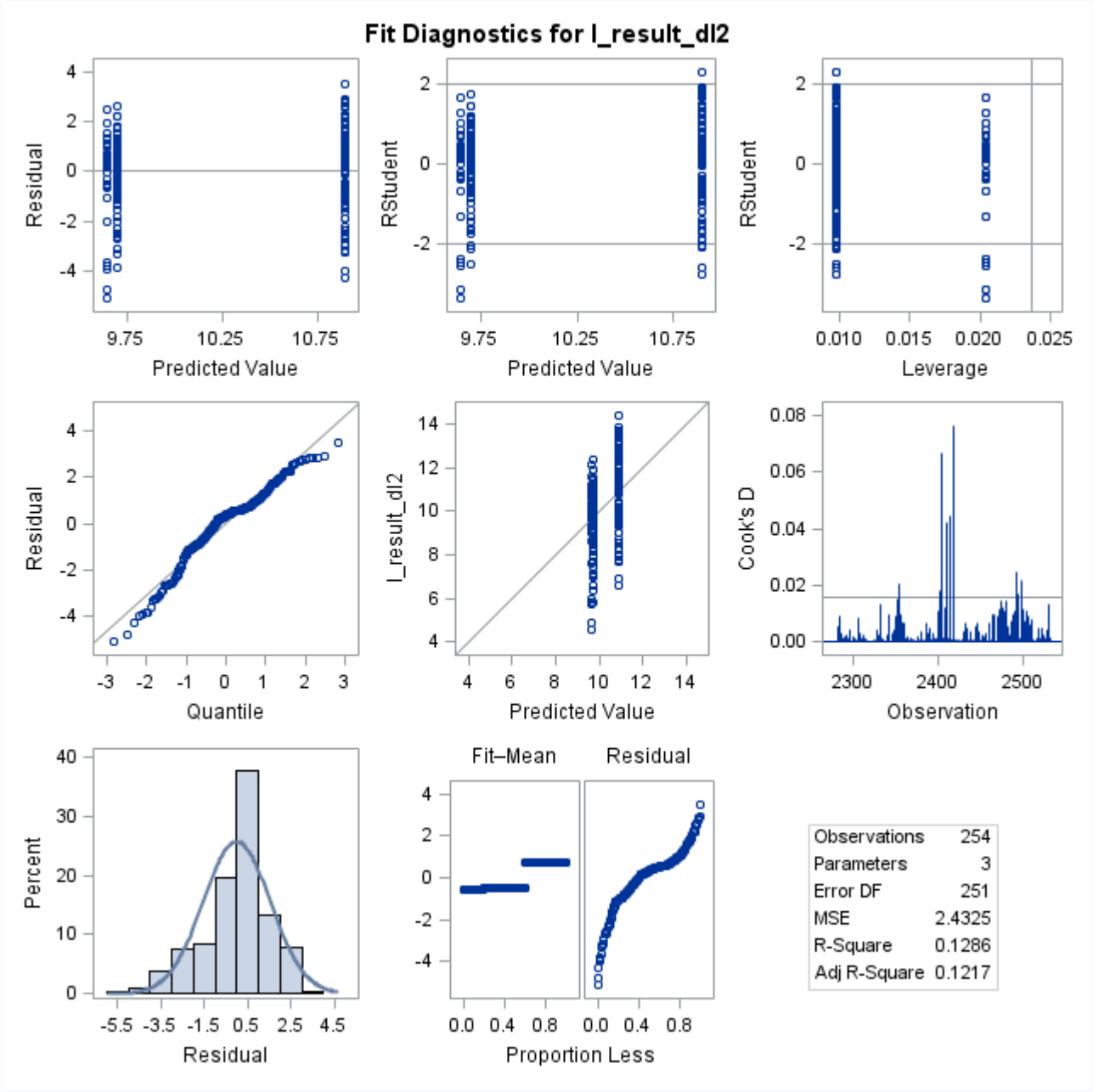
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	90.1114270	45.0557135	18.52	<.0001
Error	251	610.5547972	2.4324892		
Corrected Total	253	700.6662243			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.128608	15.33651	1.559644	10.16948

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	90.11142705	45.05571352	18.52	<.0001

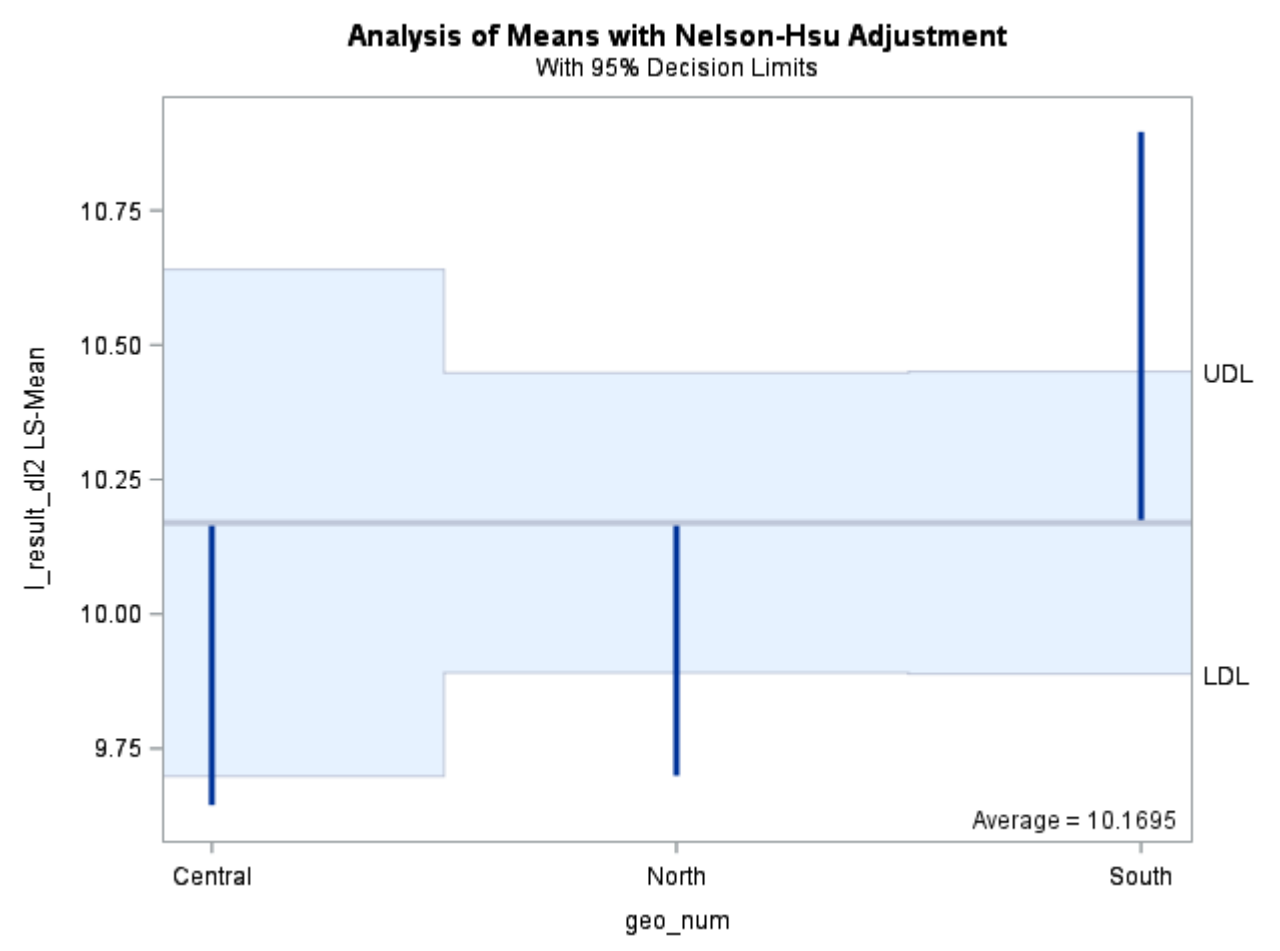
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	90.11142705	45.05571352	18.52	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 2.4325
R-Square 0.1286
Adj R-Square 0.1217

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	9.6447554	0.0248
North	9.6994630	0.0003
South	10.8961810	<.0001



Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	9.6447554	1
North	9.6994630	2
South	10.8961810	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9777	<.0001
2	0.9777		<.0001
3	<.0001	<.0001	

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	141.3	70.6286	4.91	0.0081
Error	251	3612.7	14.3933		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	16.75	<.0001
Error	122.6		

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	9.6447554	1.61680990
North	**103**	9.6994630	1.24888419
South	**102**	10.8961810	1.79655511

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

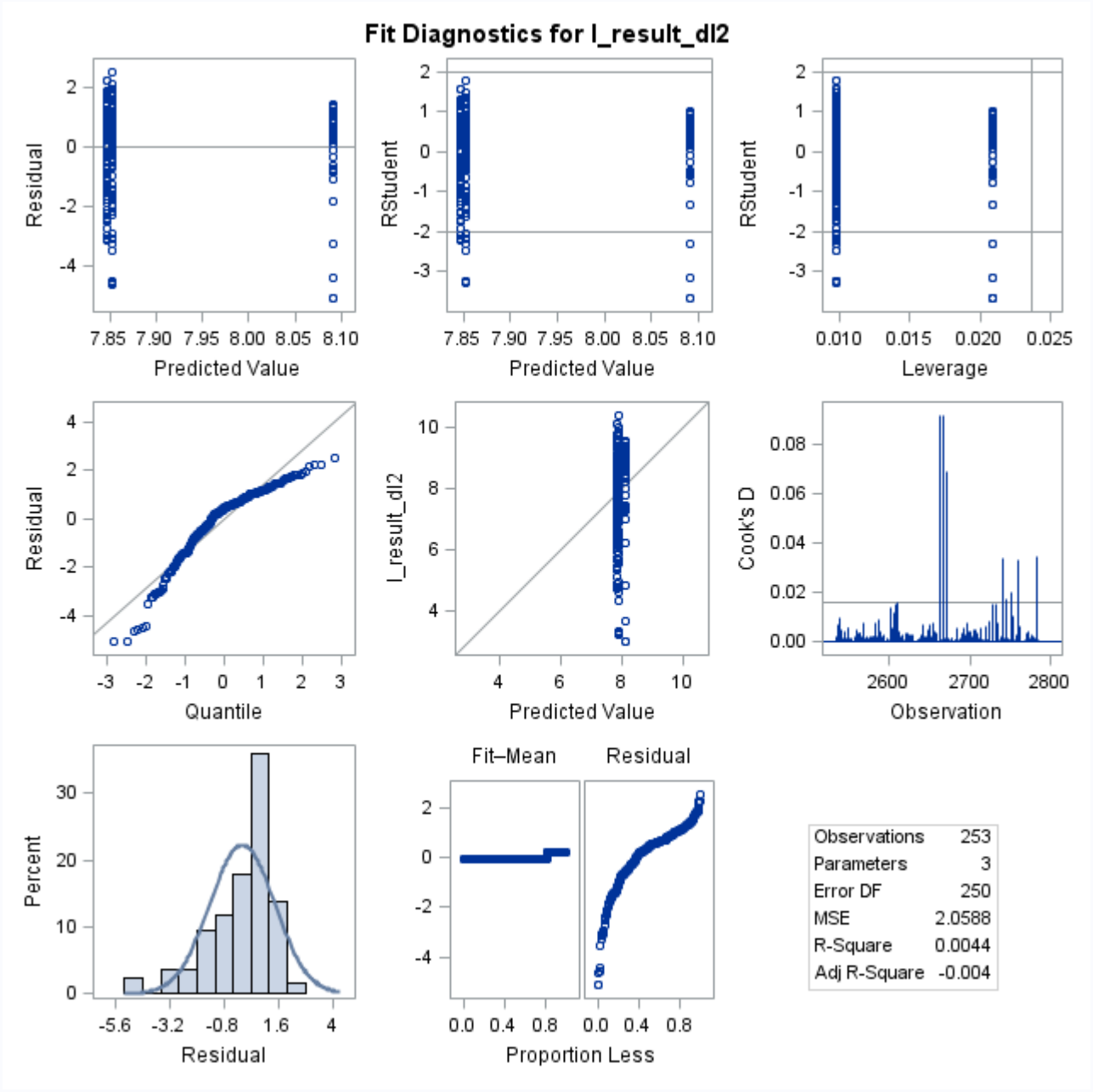
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.2563437	1.1281719	0.55	0.5788
Error	250	514.7049674	2.0588199		
Corrected Total	252	516.9613111			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.004365	18.17286	1.434859	7.895615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	2.25634374	1.12817187	0.55	0.5788

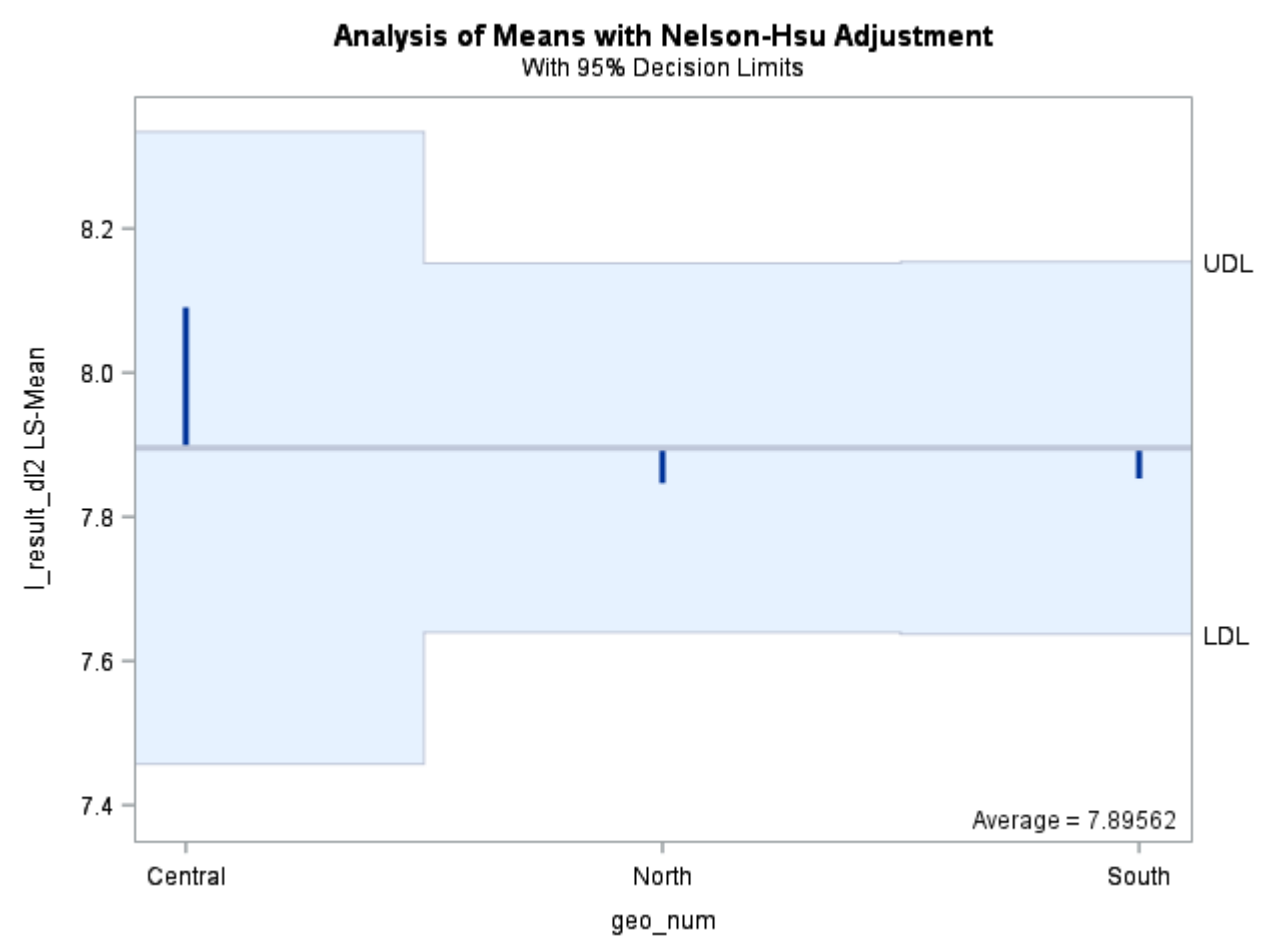
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	2.25634374	1.12817187	0.55	0.5788


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 2.0588
R-Square 0.0044
Adj R-Square -0.004

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.09068527	0.5460
North	7.84671189	0.8940
South	7.85319990	0.9204



Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.09068527	1
North	7.84671189	2
South	7.85319990	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5947	0.6120
2	0.5947		0.9994
3	0.6120	0.9994	

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	21.5210	10.7605	0.73	0.4844
Error	250	3700.4	14.8017		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.50	0.6107
Error	123.1		

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**48**	8.09068527	1.53364543
North	**103**	7.84671189	1.30359938
South	**102**	7.85319990	1.51174242

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	248
Number of Observations Used	248

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

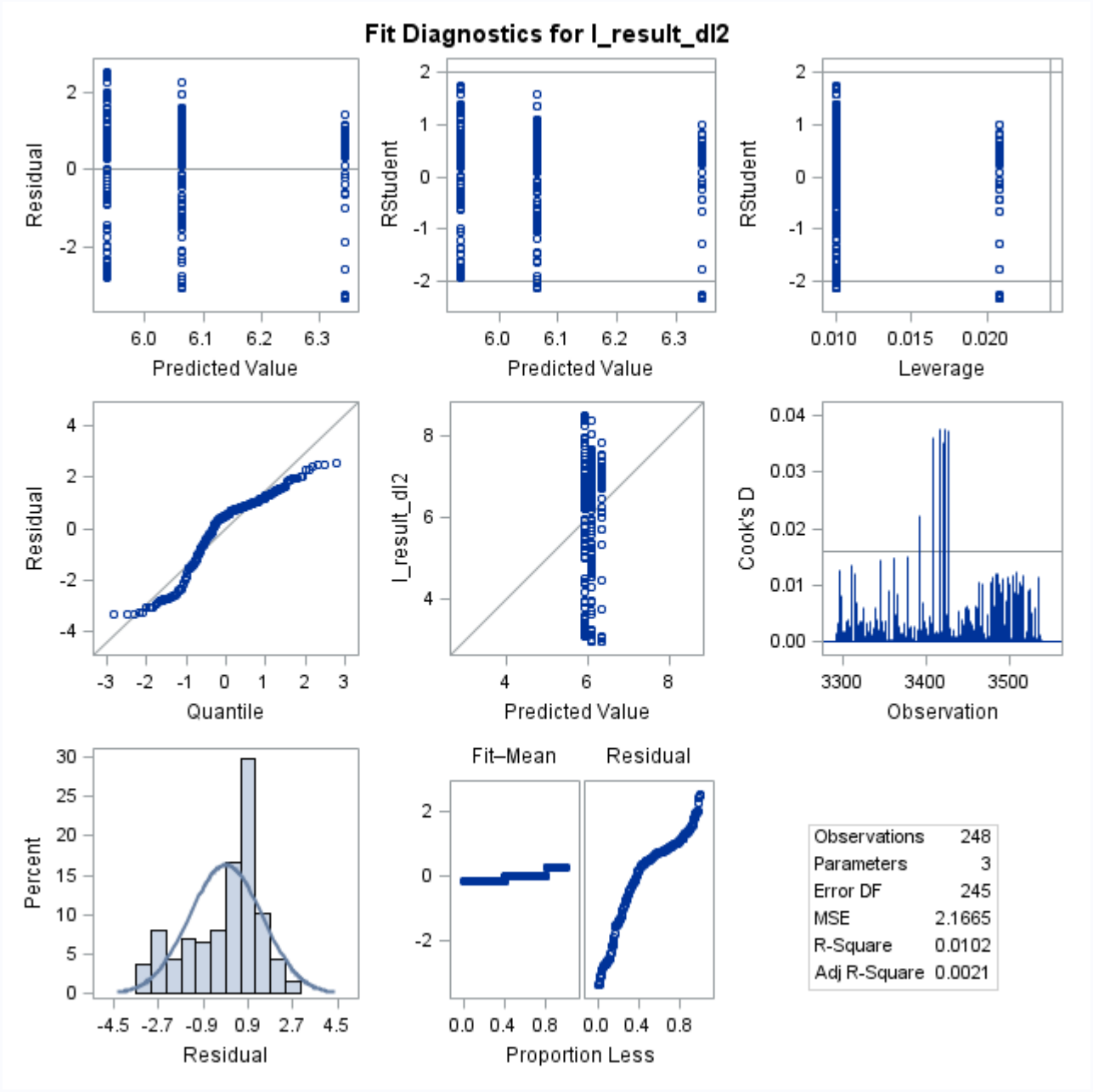
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5.4636832	2.7318416	1.26	0.2852
Error	245	530.7915024	2.1664959		
Corrected Total	247	536.2551856			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.010189	24.26577	1.471902	6.065755

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	5.46368321	2.73184161	1.26	0.2852

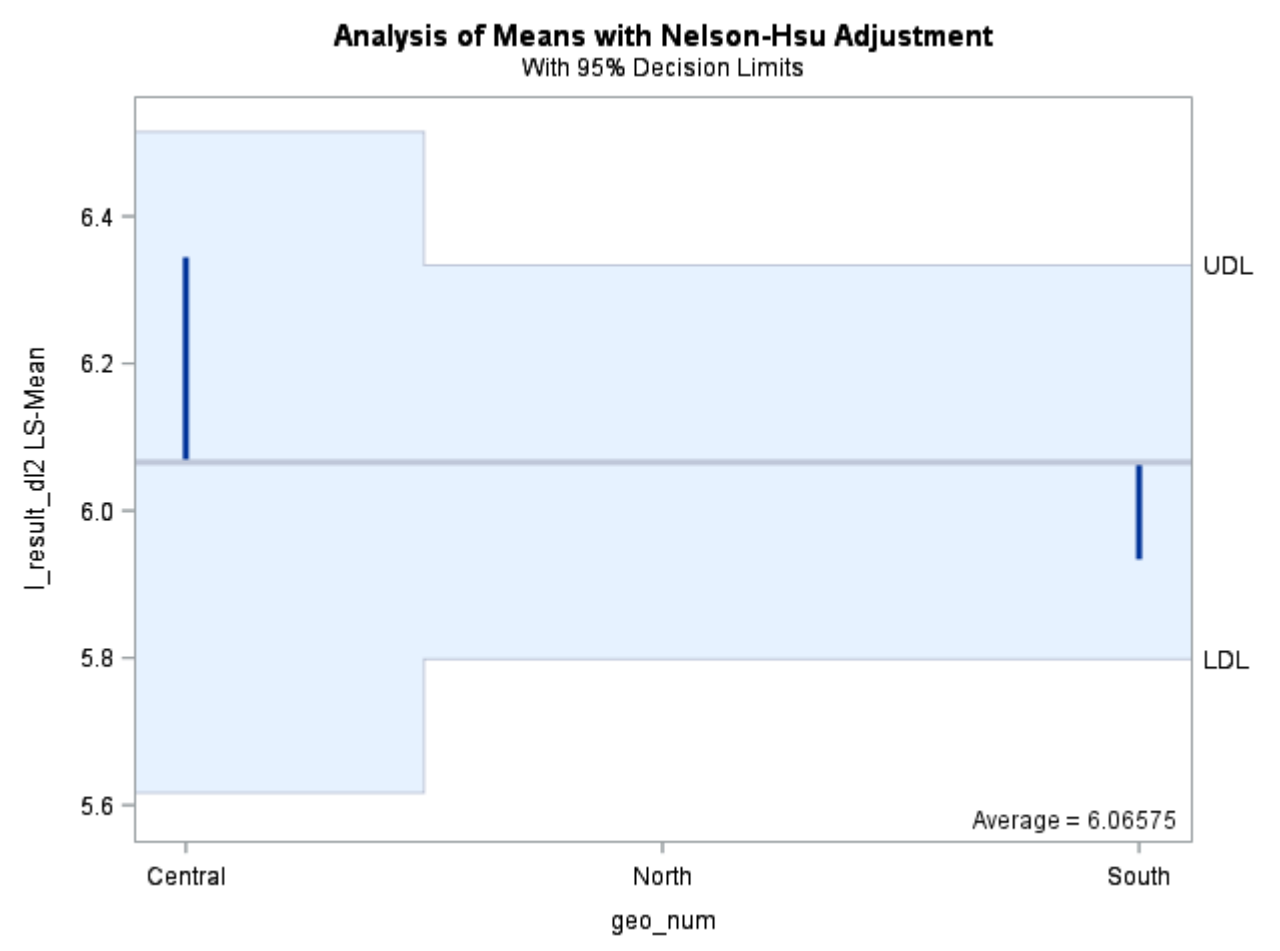
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	5.46368321	2.73184161	1.26	0.2852


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 248
Parameters 3
Error DF 245
MSE 2.1665
R-Square 0.0102
Adj R-Square 0.0021

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.34435491	0.3098
North	6.06384687	0.9998
South	5.93393469	0.4764



Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.34435491	1
North	6.06384687	2
South	5.93393469	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5241	0.2528
2	0.5241		0.8070
3	0.2528	0.8070	

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	31.2064	15.6032	2.24	0.1091
Error	245	1709.8	6.9788		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	1.33	0.2691
Error	130.3		

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**48**	6.34435491	1.35313981
North	**100**	6.06384687	1.37697981
South	**100**	5.93393469	1.61127289

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

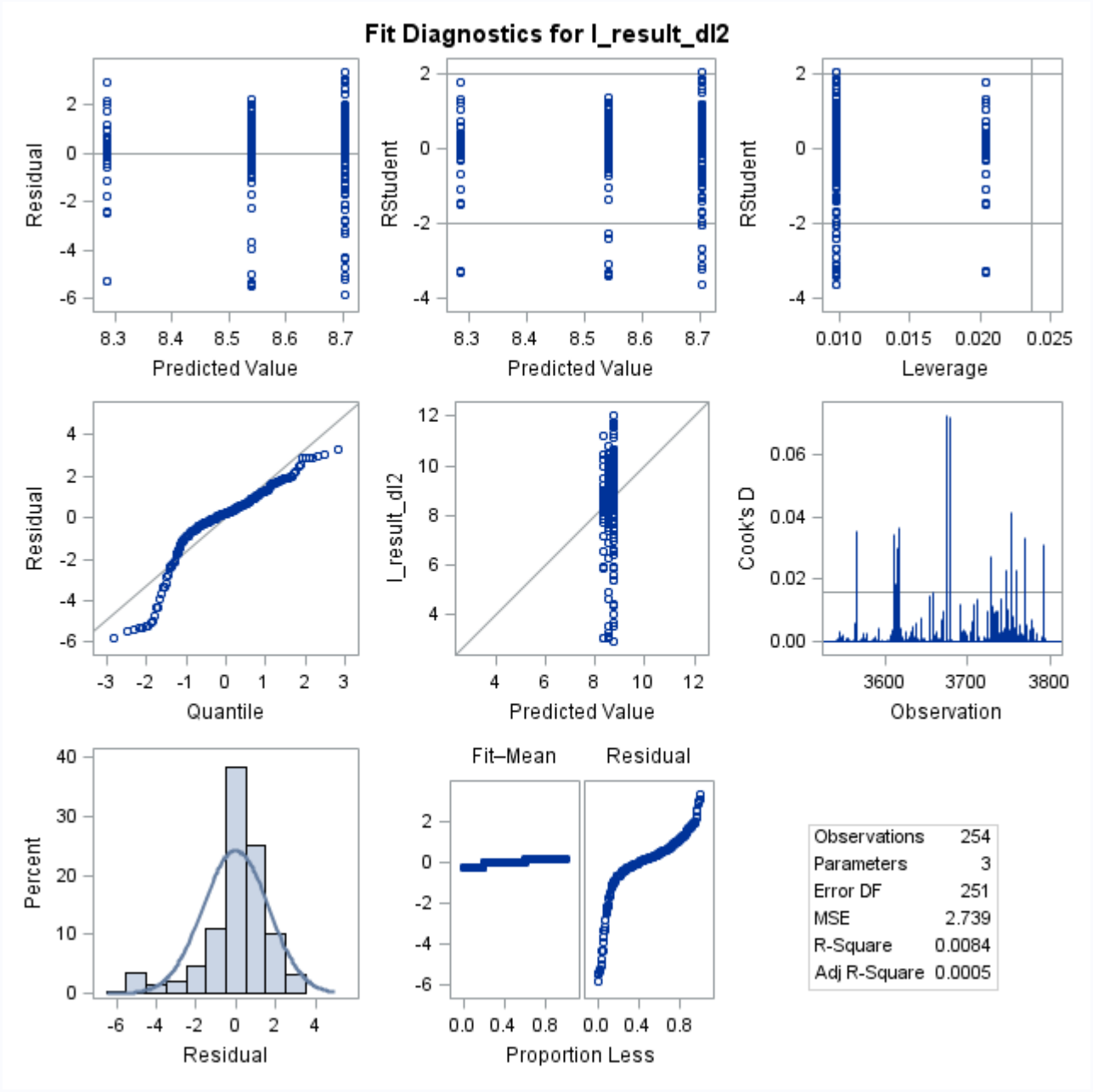
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5.8303849	2.9151924	1.06	0.3465
Error	251	687.4816354	2.7389707		
Corrected Total	253	693.3120203			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.008409	19.34031	1.654984	8.557173

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	5.83038489	2.91519244	1.06	0.3465

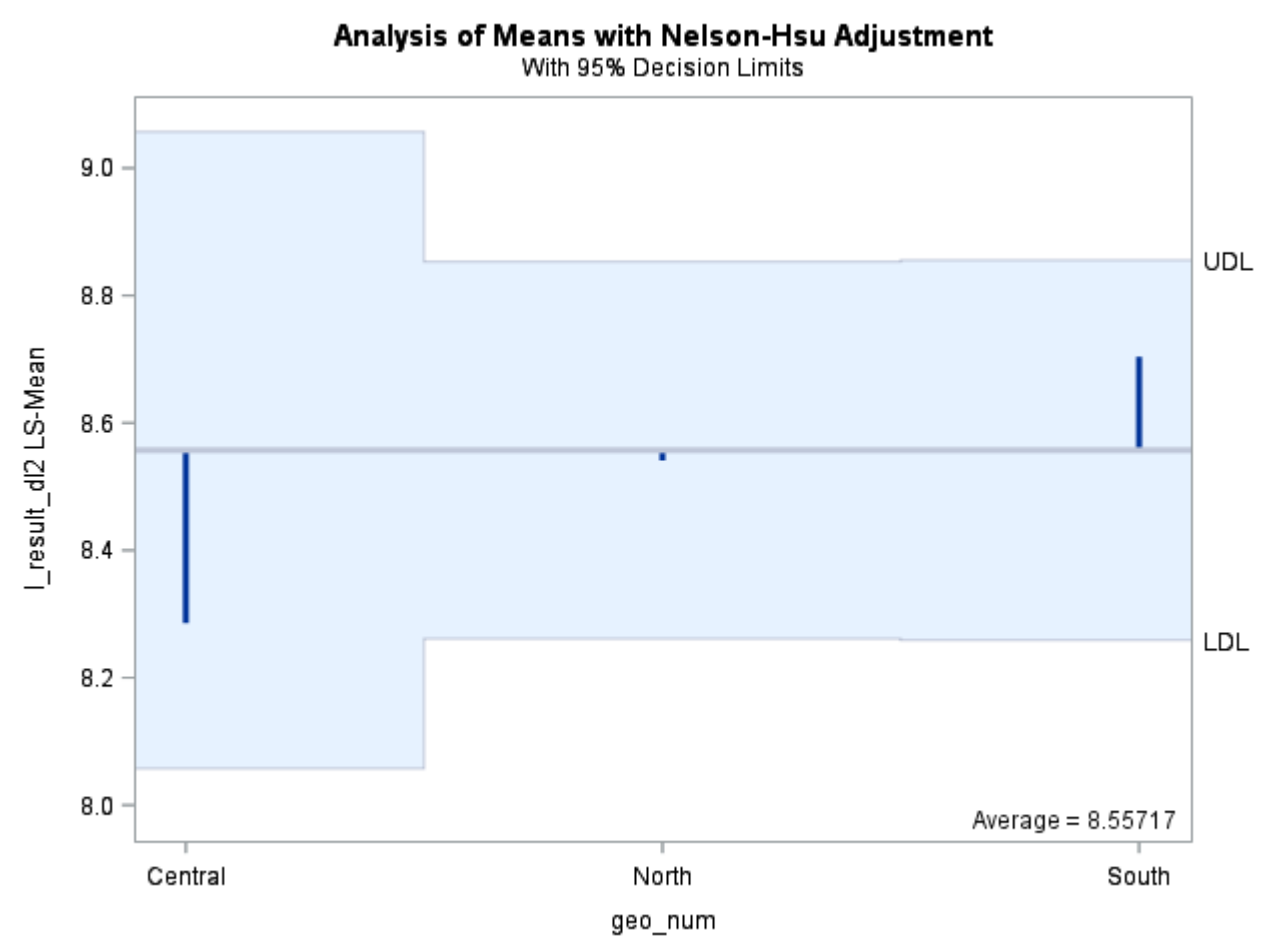
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	5.83038489	2.91519244	1.06	0.3465


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 2.739
R-Square 0.0084
Adj R-Square 0.0005

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.28573999	0.4066
North	8.54107769	0.9909
South	8.70382130	0.4778



PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.28573999	1
North	8.54107769	2
South	8.70382130	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6477	0.3153
2	0.6477		0.7614
3	0.3153	0.7614	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	145.3	72.6656	2.10	0.1248
Error	251	8693.5	34.6356		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	1.12	0.3280
Error	134.2		

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	8.28573999	1.43762856
North	**103**	8.54107769	1.46229921
South	**102**	8.70382130	1.91442636

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

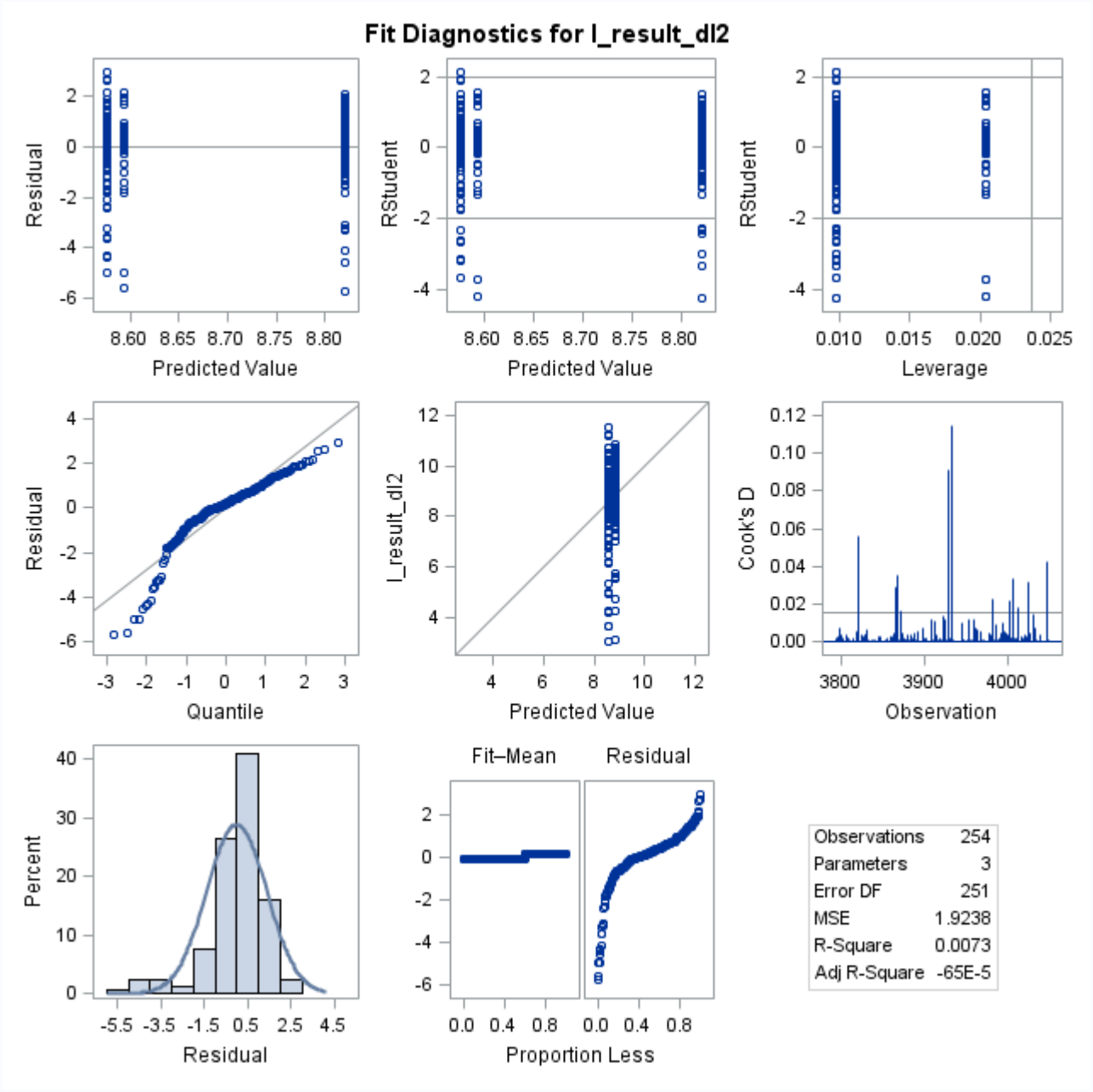
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.5302755	1.7651377	0.92	0.4008
Error	251	482.8614910	1.9237510		
Corrected Total	253	486.3917665			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.007258	15.98212	1.386993	8.678405

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	3.53027549	1.76513774	0.92	0.4008

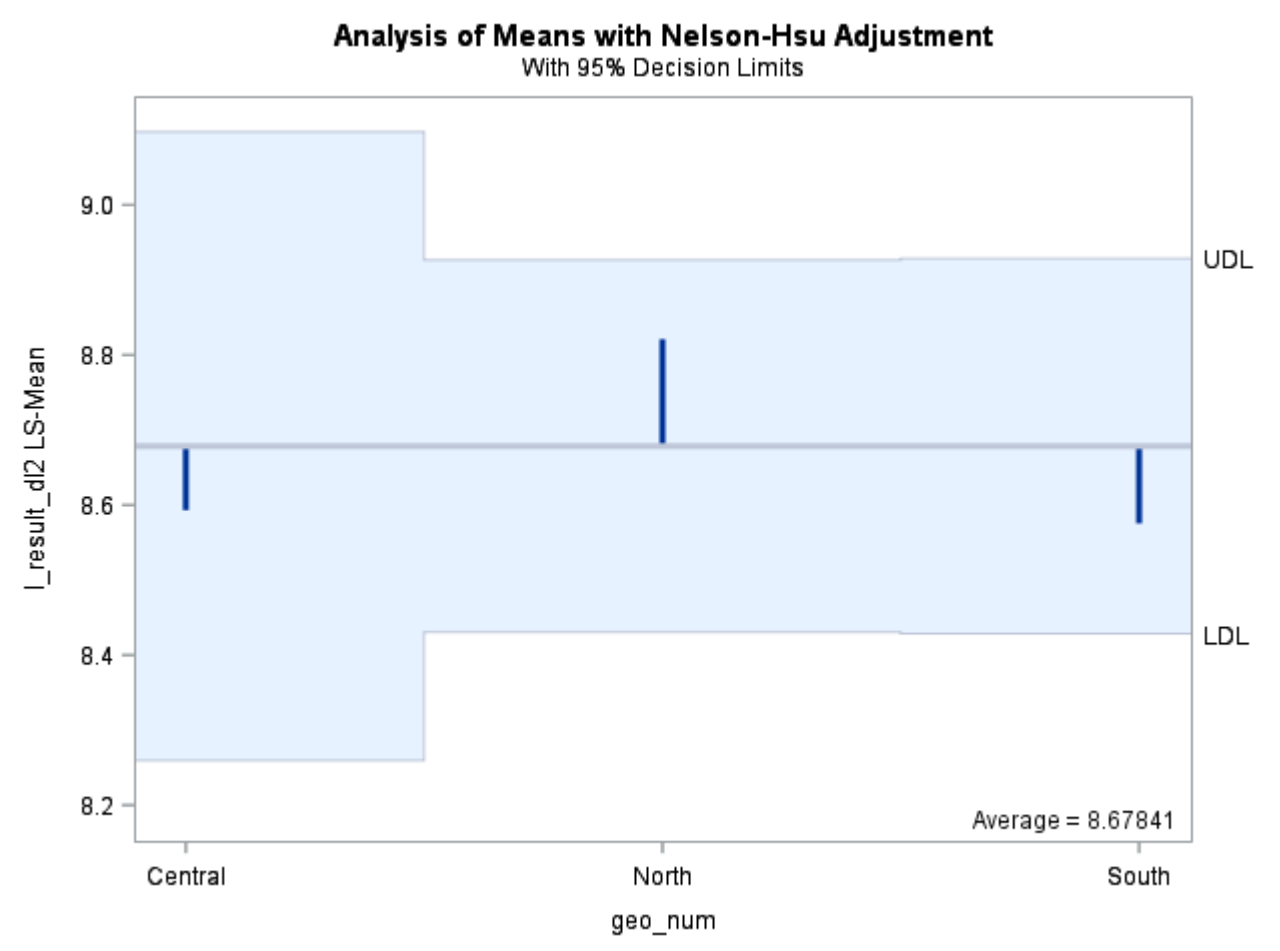
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	3.53027549	1.76513774	0.92	0.4008


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.9238
R-Square 0.0073
Adj R-Square -65E-5

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.59313535	0.8804
North	8.82093938	0.3652
South	8.57543691	0.5949



PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.59313535	1
North	8.82093938	2
South	8.57543691	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6114	0.9970
2	0.6114		0.4151
3	0.9970	0.4151	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	7.4470	3.7235	0.18	0.8347
Error	251	5167.9	20.5891		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.93	0.3956
Error	130.8		

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	8.59313535	1.34636620
North	**103**	8.82093938	1.33081509
South	**102**	8.57543691	1.45969880

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

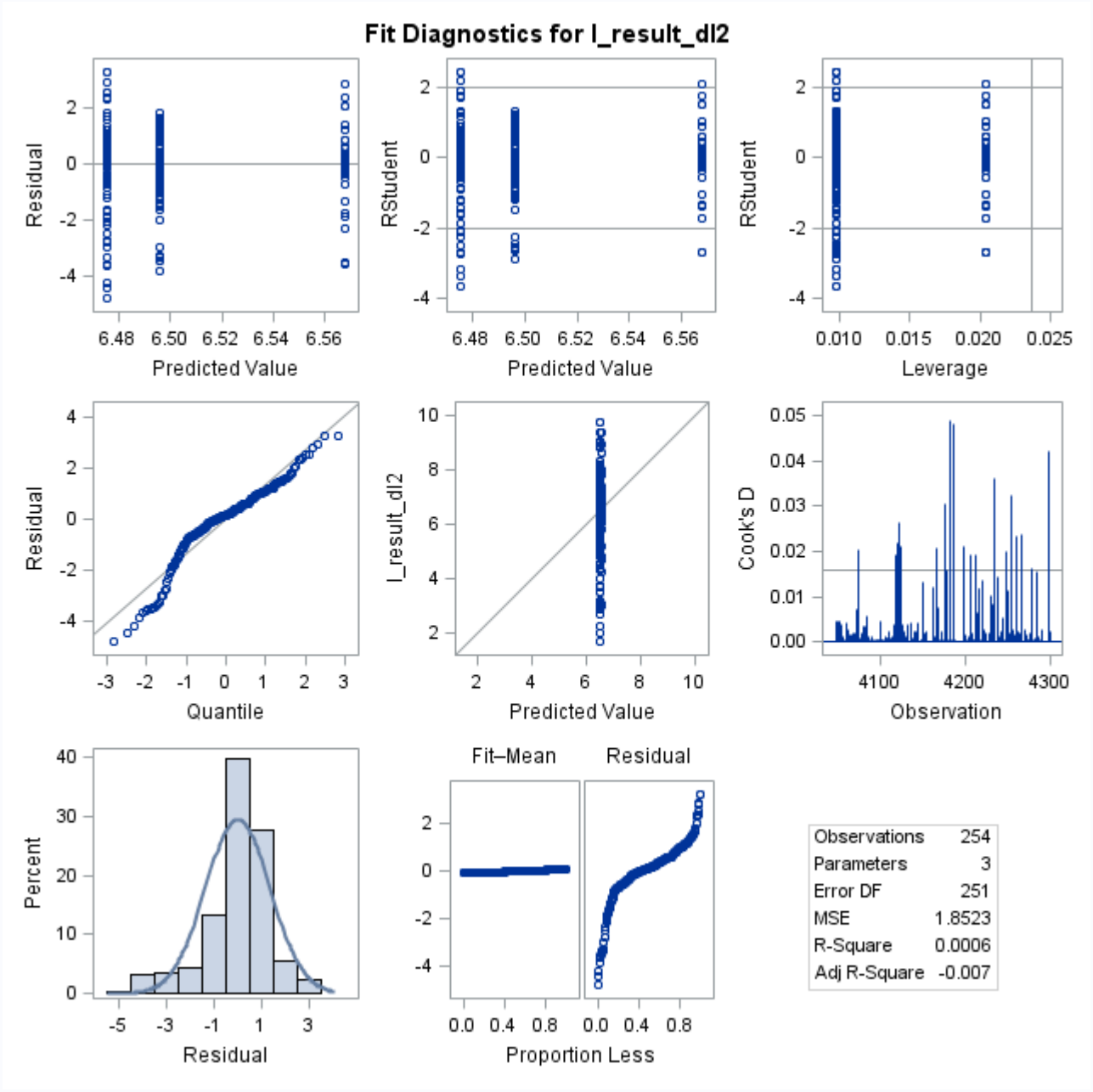
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.2869344	0.1434672	0.08	0.9255
Error	251	464.9203219	1.8522722		
Corrected Total	253	465.2072563			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.000617	20.93302	1.360982	6.501603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.28693444	0.14346722	0.08	0.9255

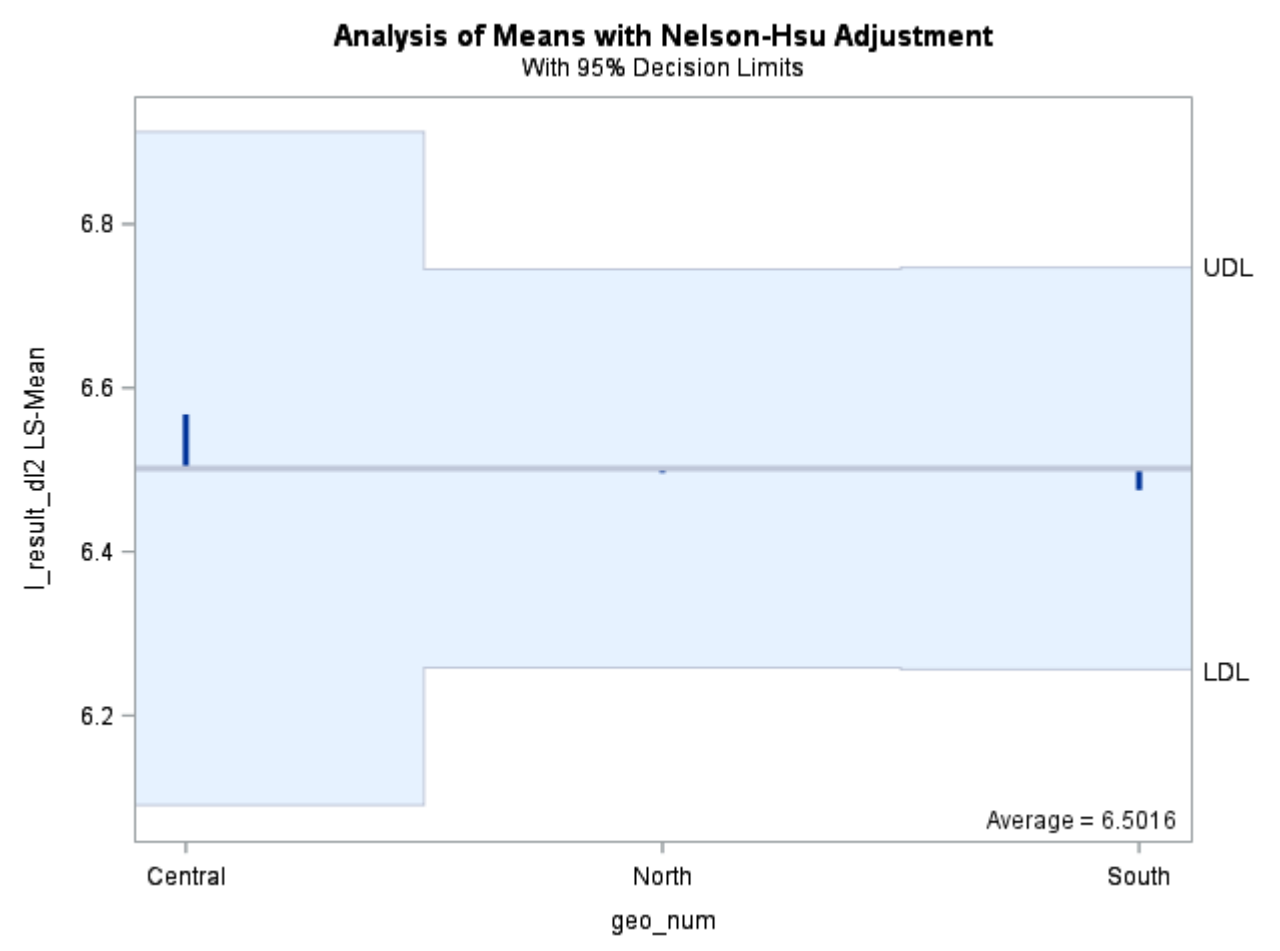
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.28693444	0.14346722	0.08	0.9255


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.8523
R-Square 0.0006
Adj R-Square -0.007

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.56765439	0.9237
North	6.49613762	0.9984
South	6.47539095	0.9655



PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.56765439	1
North	6.49613762	2
South	6.47539095	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9507	0.9196
2	0.9507		0.9935
3	0.9196	0.9935	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	58.2222	29.1111	2.32	0.0999
Error	251	3143.1	12.5223		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.09	0.9167
Error	133.6		

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	6.56765439	1.20124281
North	**103**	6.49613762	1.21011036
South	**102**	6.47539095	1.56157966

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

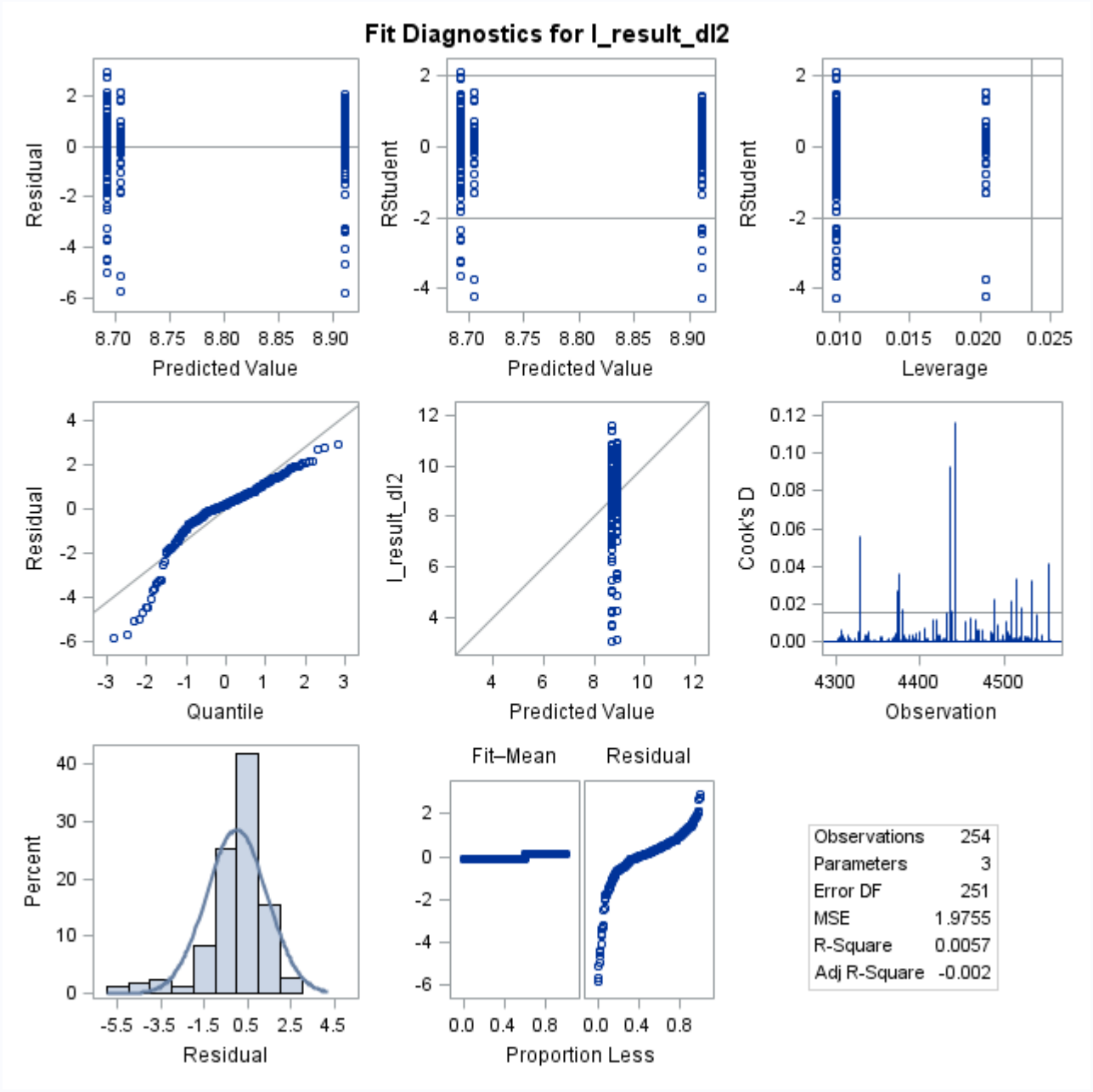
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.8353958	1.4176979	0.72	0.4889
Error	251	495.8563692	1.9755234		
Corrected Total	253	498.6917650			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.005686	16.00213	1.405533	8.783410

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	2.83539581	1.41769791	0.72	0.4889

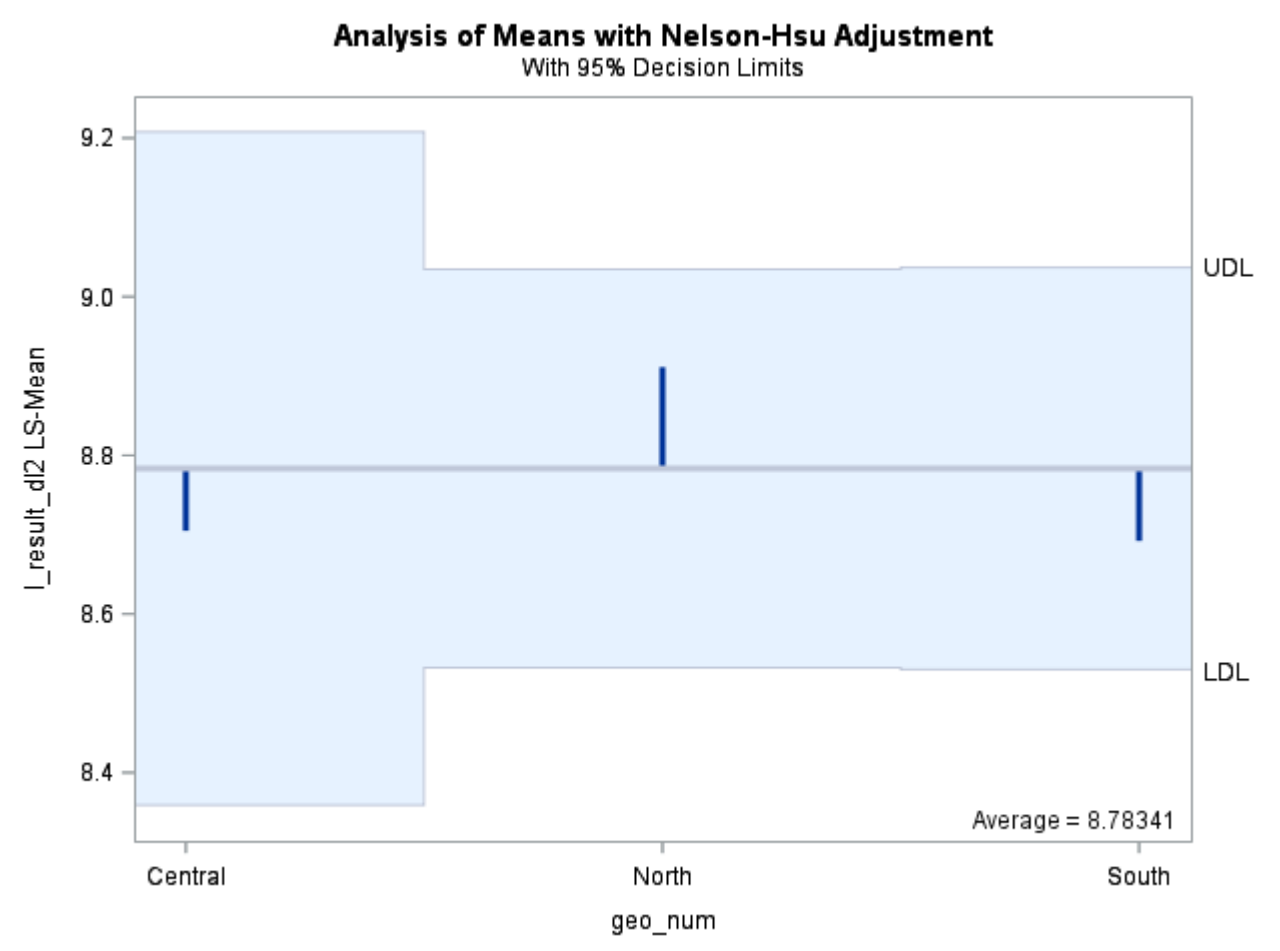
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	2.83539581	1.41769791	0.72	0.4889


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.9755
R-Square 0.0057
Adj R-Square -0.002

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.70485808	0.9001
North	8.91121482	0.4538
South	8.69208873	0.6715



PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.70485808	1
North	8.91121482	2
South	8.69208873	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6748	0.9985
2	0.6748		0.5050
3	0.9985	0.5050	

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	8.2720	4.1360	0.19	0.8283
Error	251	5505.5	21.9344		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.73	0.4822
Error	130.2		

PAHs Total PAH
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	8.70485808	1.37762724
North	**103**	8.91121482	1.34106489
South	**102**	8.69208873	1.48028907

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

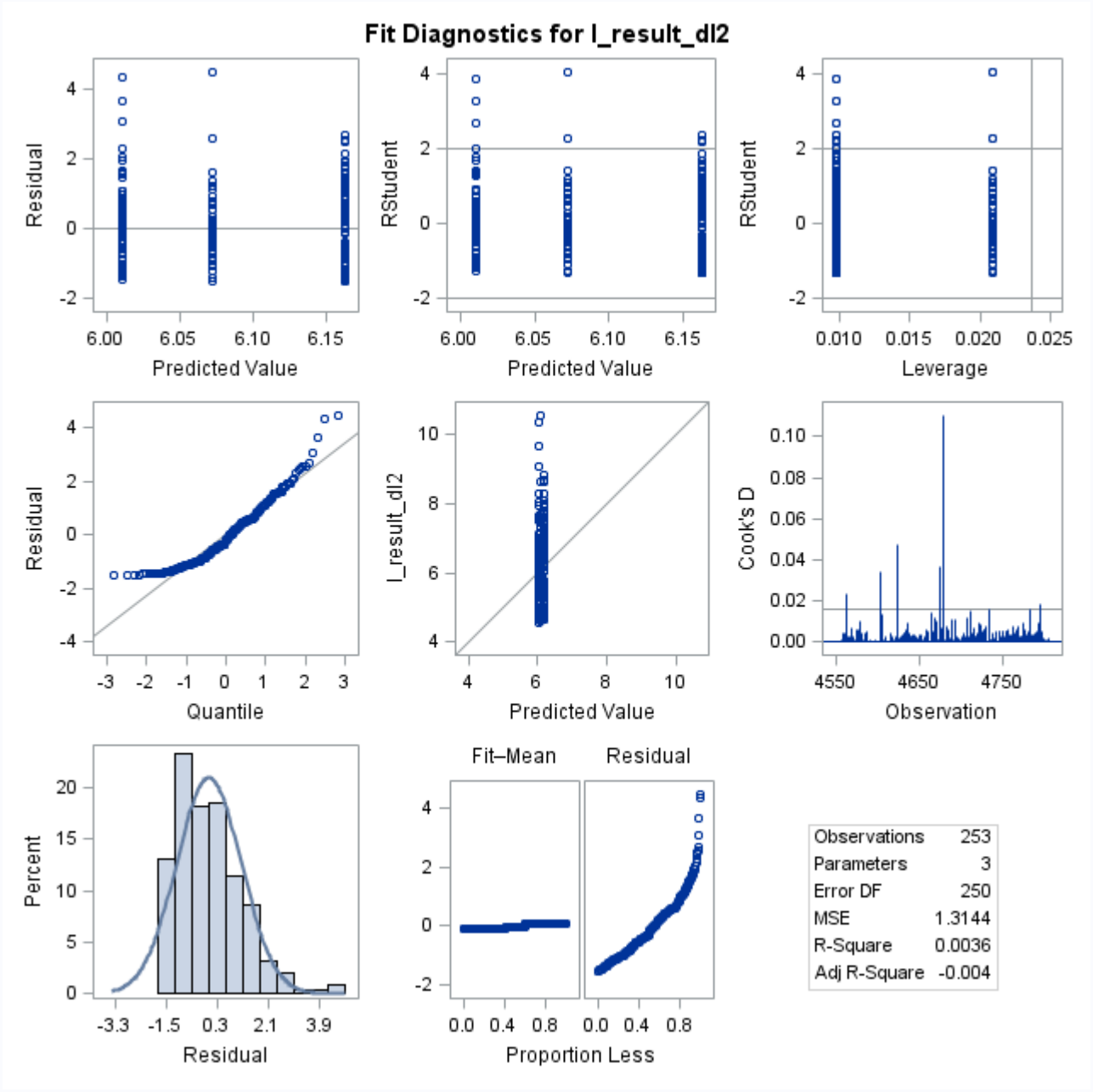
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.1852853	0.5926427	0.45	0.6376
Error	250	328.6117860	1.3144471		
Corrected Total	252	329.7970713			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.003594	18.84554	1.146493	6.083634

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	1.18528534	0.59264267	0.45	0.6376

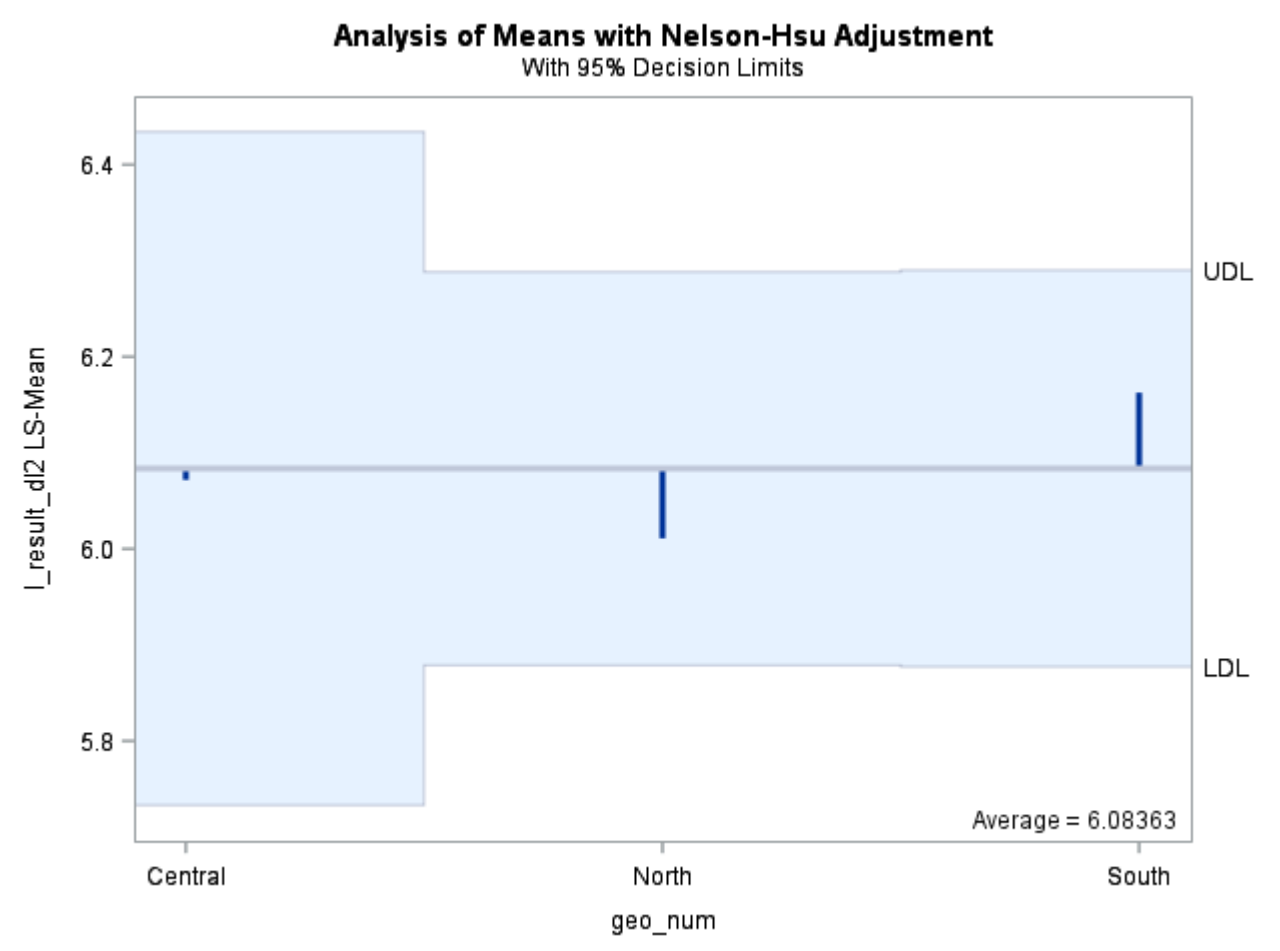
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	1.18528534	0.59264267	0.45	0.6376


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 1.3144
R-Square 0.0036
Adj R-Square -0.004

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.07183901	0.9965
North	6.01099017	0.6796
South	6.16253972	0.6389



Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.07183901	1
North	6.01099017	2
South	6.16253972	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9504	0.8936
2	0.9504		0.6115
3	0.8936	0.6115	

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	4.3186	2.1593	0.43	0.6495
Error	250	1248.9	4.9957		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.44	0.6478
Error	129.8		

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**48**	6.07183901	1.08639529
North	**103**	6.01099017	1.10535092
South	**102**	6.16253972	1.21262398

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

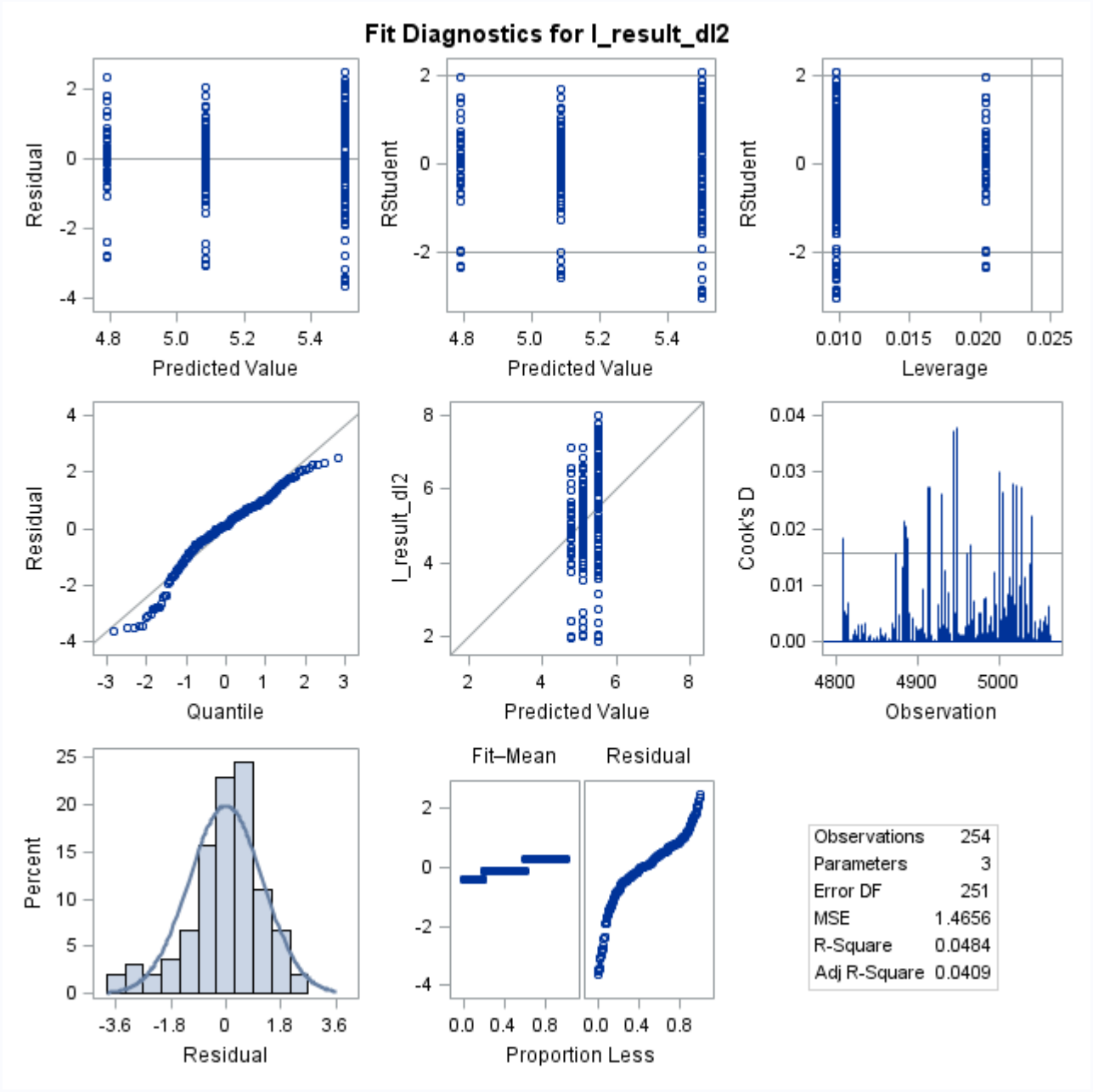
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	18.7237334	9.3618667	6.39	0.0020
Error	251	367.8554693	1.4655596		
Corrected Total	253	386.5792027			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.048434	23.30842	1.210603	5.193845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	18.72373343	9.36186672	6.39	0.0020

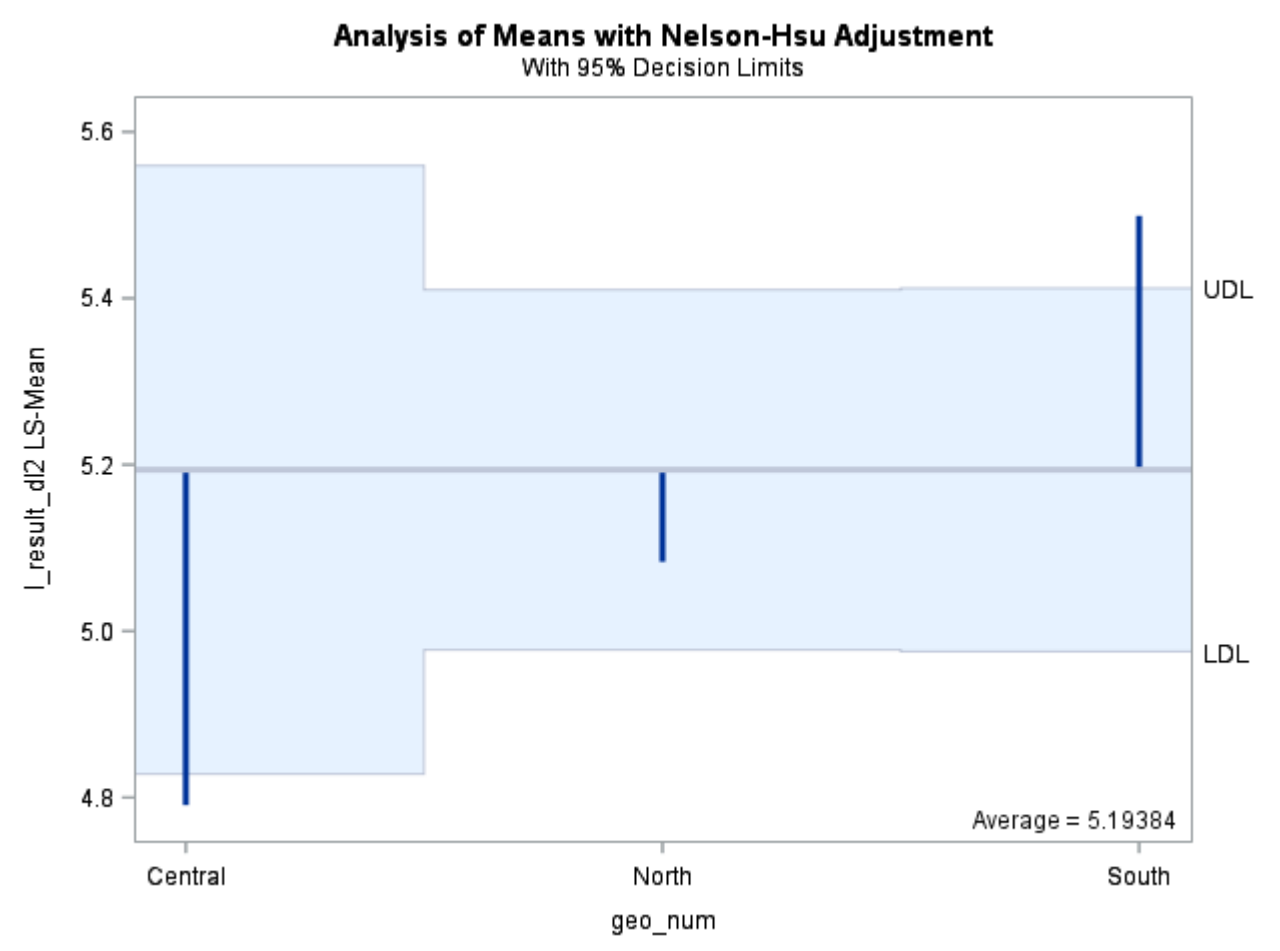
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	18.72373343	9.36186672	6.39	0.0020


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.4656
R-Square 0.0484
Adj R-Square 0.0409

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.79079935	0.0267
North	5.08328559	0.4507
South	5.49910735	0.0032



TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.79079935	1
North	5.08328559	2
South	5.49910735	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.3465	0.0025
2	0.3465		0.0387
3	0.0025	0.0387	

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	75.9362	37.9681	6.71	0.0014
Error	251	1419.5	5.6554		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	5.86	0.0037
Error	130.6		

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	4.79079935	1.05578651
North	**103**	5.08328559	0.98423768
South	**102**	5.49910735	1.46084457

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

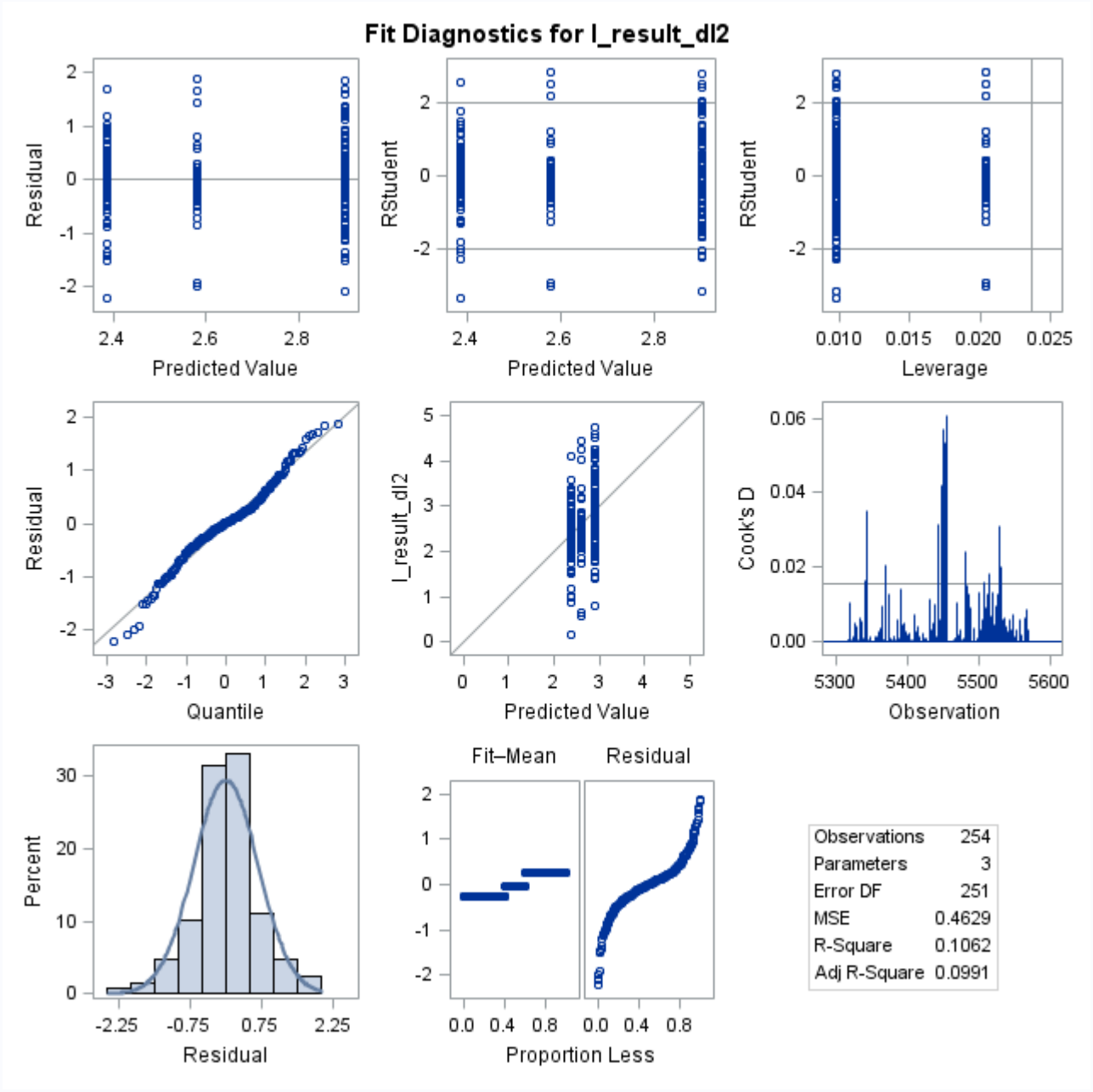
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	13.8083485	6.9041742	14.92	<.0001
Error	251	116.1866520	0.4628950		
Corrected Total	253	129.9950005			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.106222	25.86990	0.680364	2.629944

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	13.80834847	6.90417423	14.92	<.0001

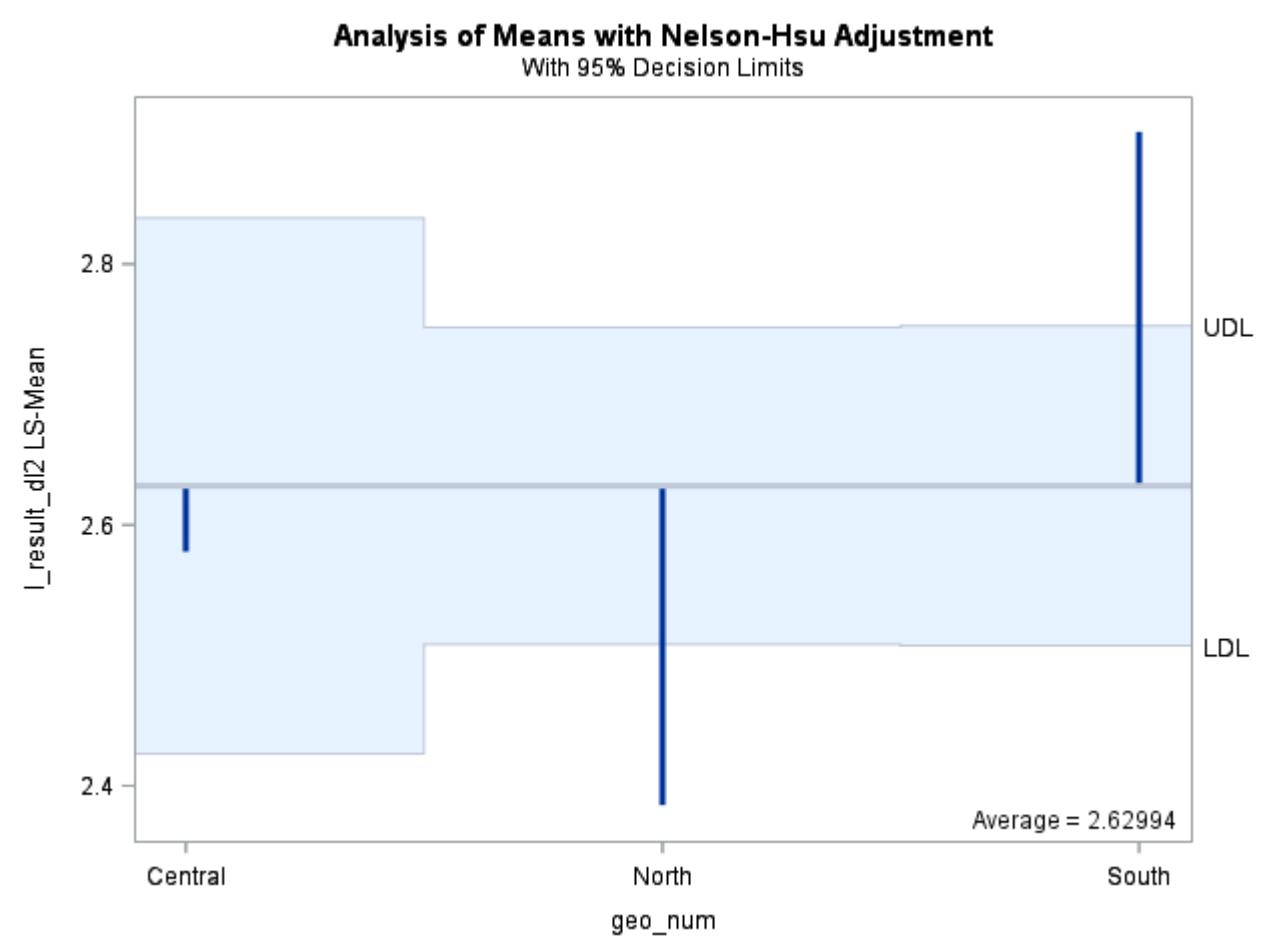
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	13.80834847	6.90417423	14.92	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.4629
R-Square 0.1062
Adj R-Square 0.0991

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	2.57953270	0.8312
North	2.38516967	<.0001
South	2.90133537	<.0001



Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	2.57953270	1
North	2.38516967	2
South	2.90133537	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.2283	0.0190
2	0.2283		<.0001
3	0.0190	<.0001	

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	5.3111	2.6556	4.26	0.0152
Error	251	156.6	0.6240		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	14.41	<.0001
Error	126.4		

Metals Arsenic
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	2.57953270	0.65535466
North	**103**	2.38516967	0.55702344
South	**102**	2.90133537	0.79555126

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

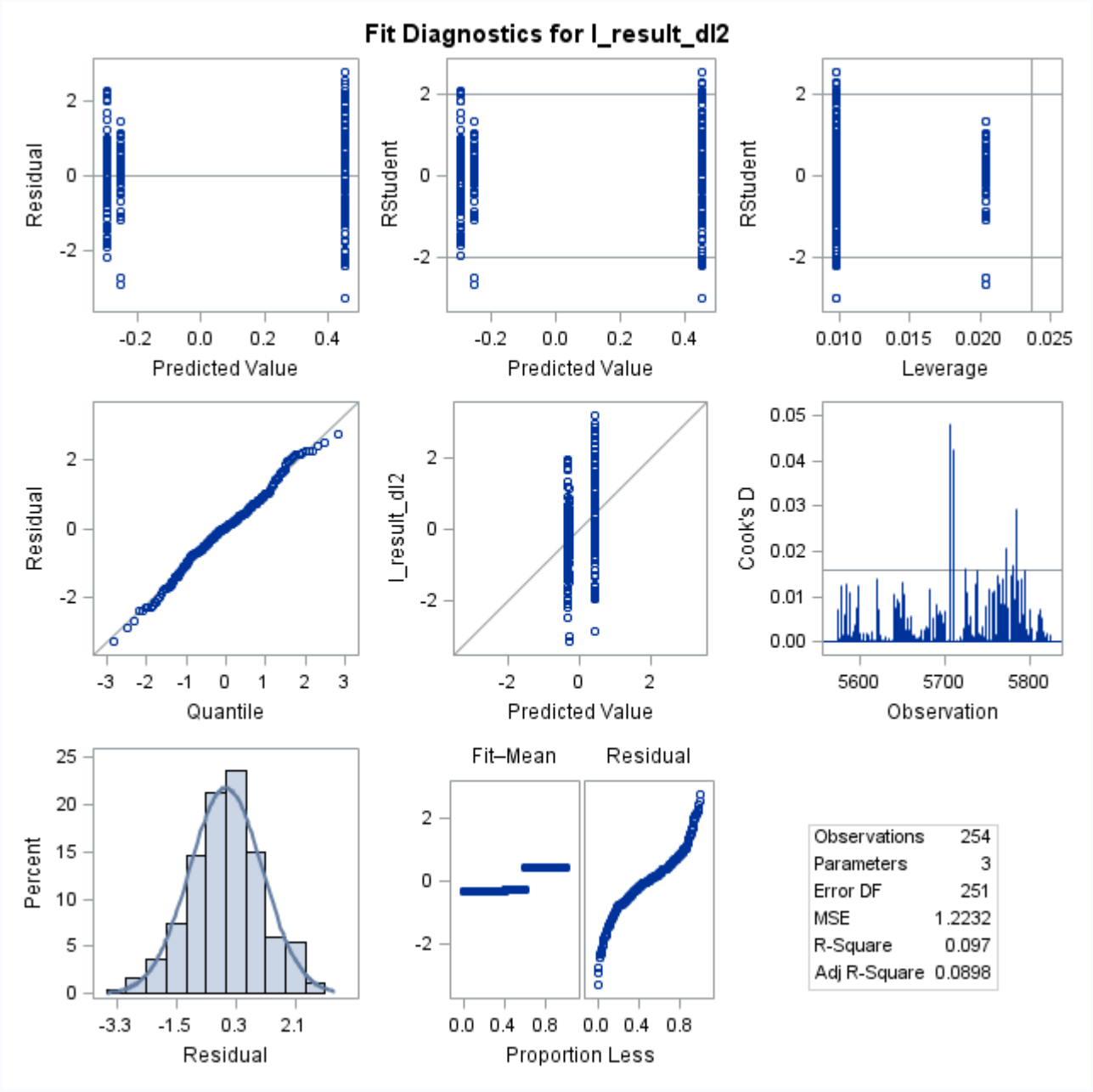
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	32.9643311	16.4821656	13.48	<.0001
Error	251	307.0137316	1.2231623		
Corrected Total	253	339.9780628			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.096960	9489.677	1.105967	0.011654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	32.96433115	16.48216557	13.48	<.0001

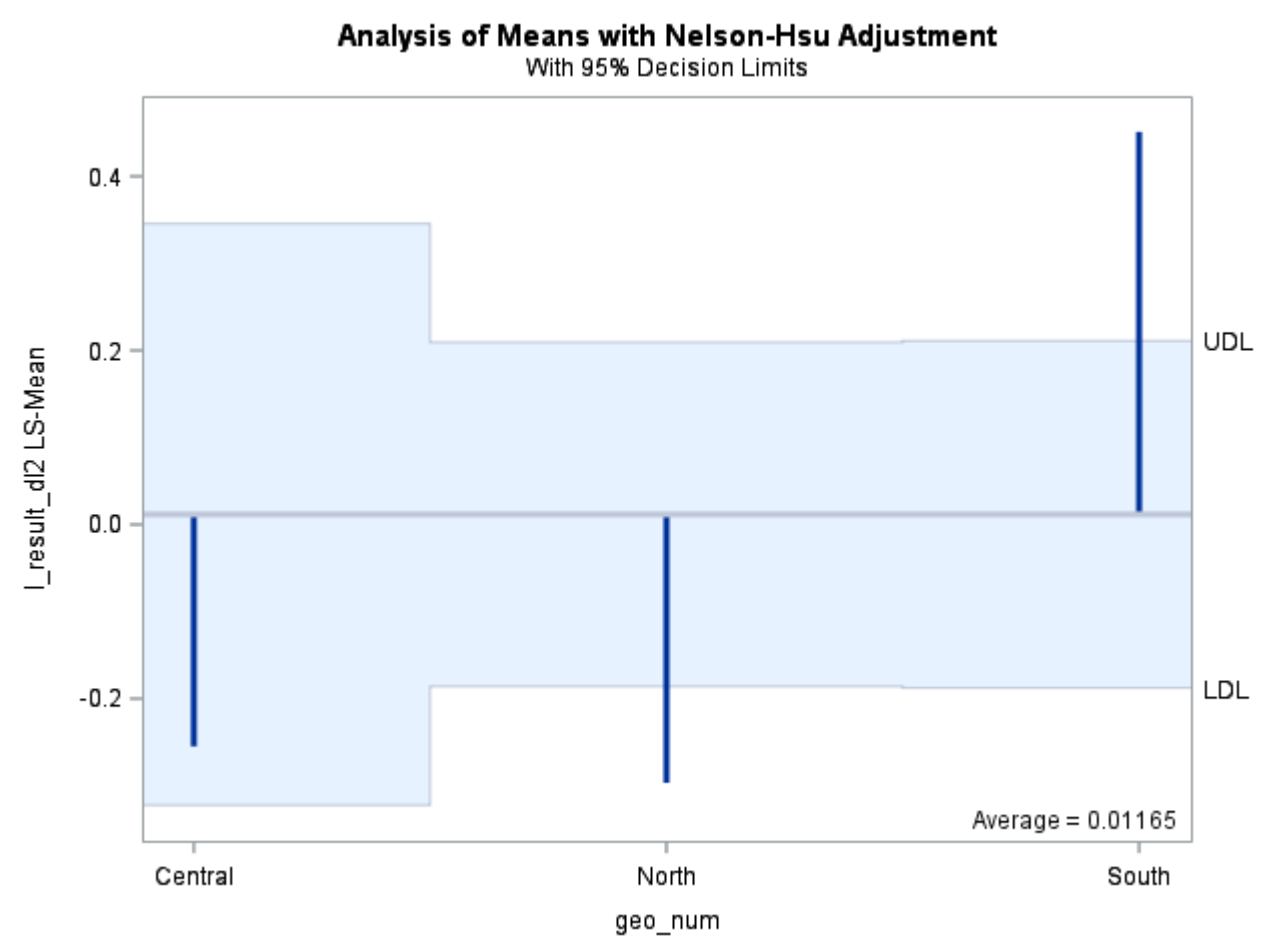
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	32.96433115	16.48216557	13.48	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.2232
R-Square 0.097
Adj R-Square 0.0898

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	-0.25482656	0.1459
North	-0.29669029	0.0009
South	0.45103748	<.0001



Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	-0.25482656	1
North	-0.29669029	2
South	0.45103748	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9741	0.0009
2	0.9741		<.0001
3	0.0009	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	51.5607	25.7804	8.78	0.0002
Error	251	737.1	2.9367		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	11.70	<.0001
Error	142.2		

Metals Cadmium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	-0.25482656	0.82439444
North	**103**	-0.29669029	0.97180858
South	**102**	0.45103748	1.32777510

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

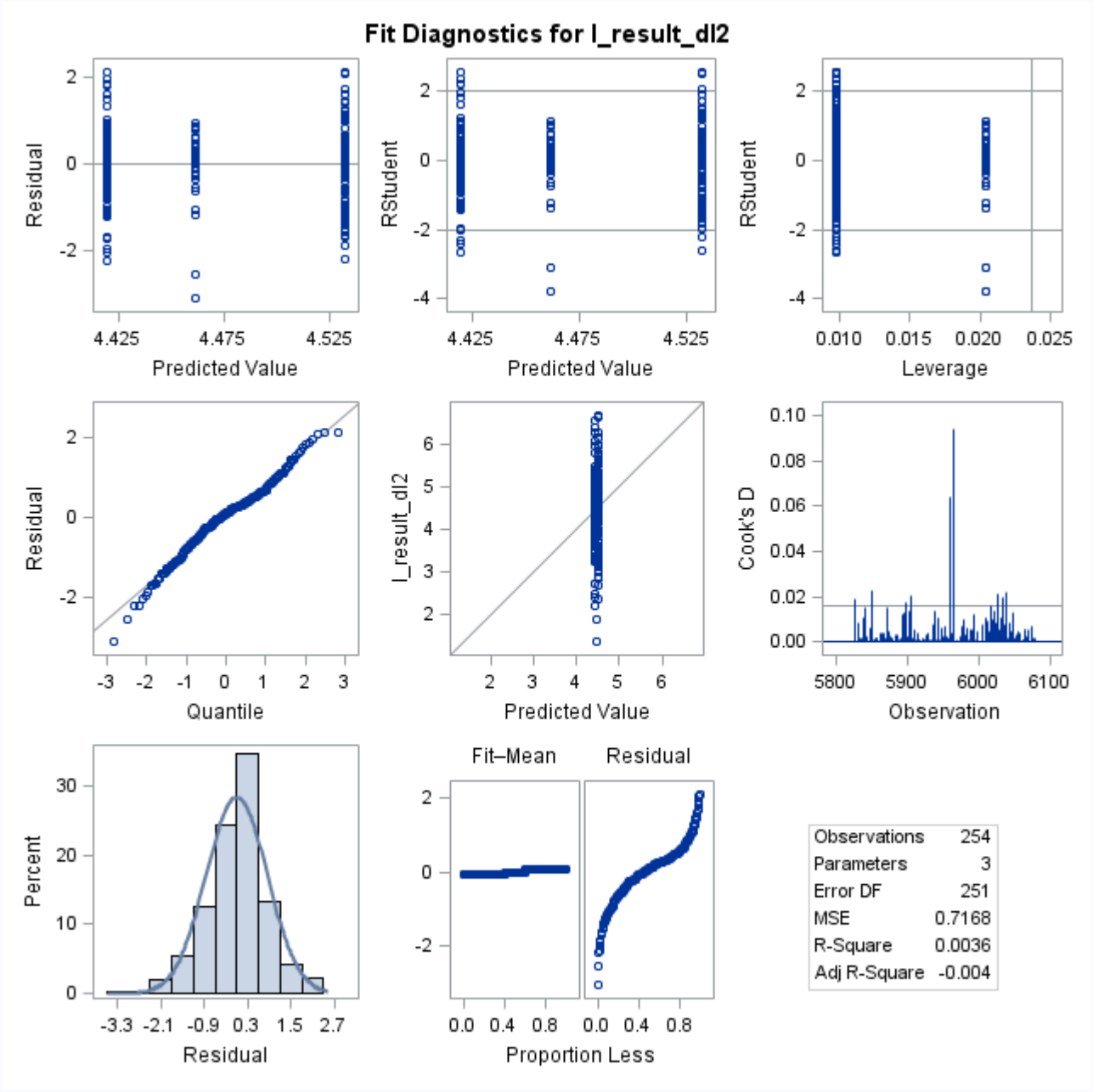
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.6585934	0.3292967	0.46	0.6322
Error	251	179.9229972	0.7168247		
Corrected Total	253	180.5815906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.003647	18.92885	0.846655	4.472828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	0.65859337	0.32929668	0.46	0.6322

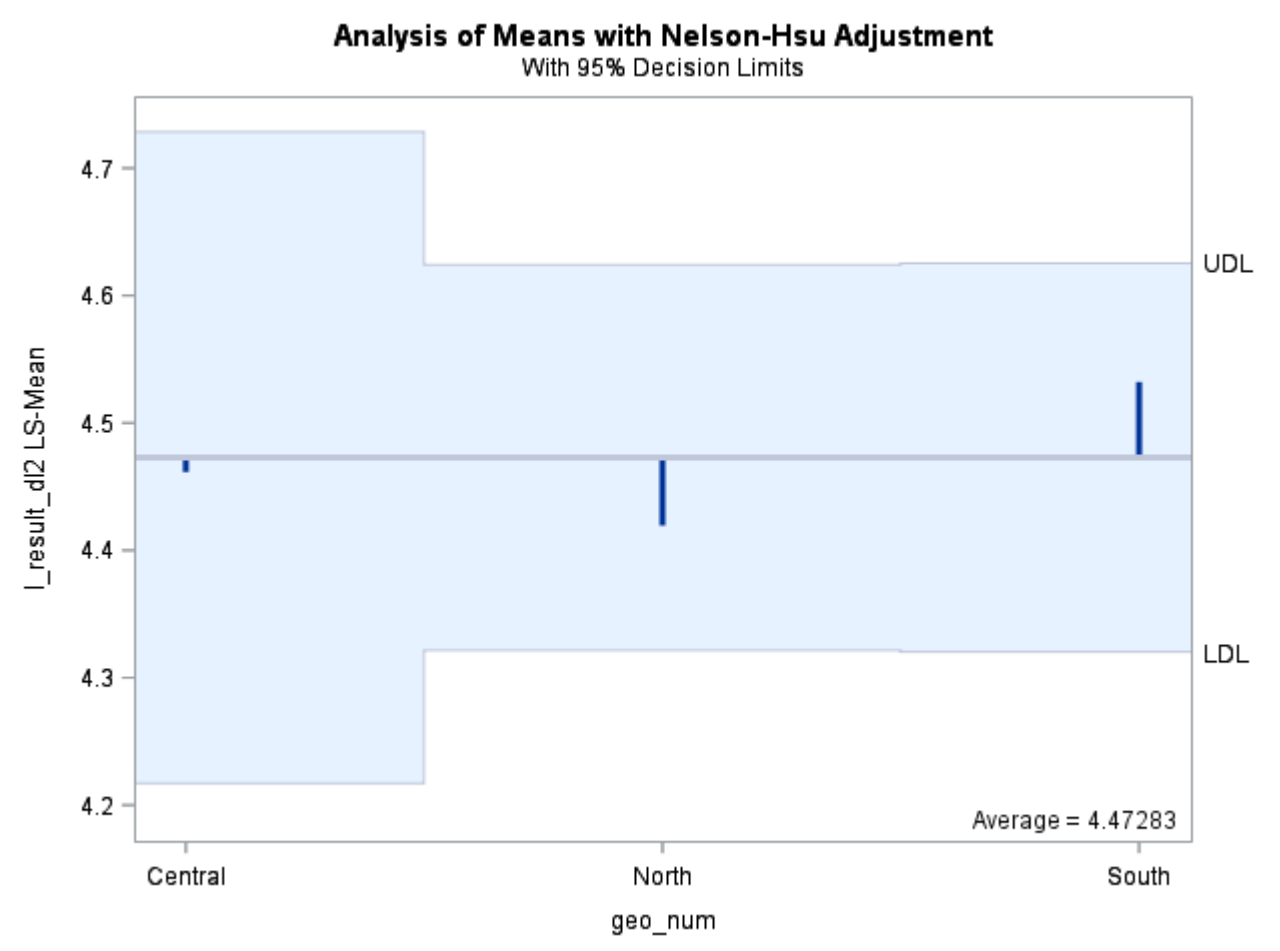
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	0.65859337	0.32929668	0.46	0.6322


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.7168
R-Square 0.0036
Adj R-Square -0.004

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.46149439	0.9940
North	4.41946698	0.6832
South	4.53215570	0.6294



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.46149439	1
North	4.41946698	2
South	4.53215570	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9559	0.8807
2	0.9559		0.6074
3	0.8807	0.6074	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	4.0819	2.0410	1.45	0.2354
Error	251	352.1	1.4028		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	0.43	0.6540
Error	137.7		

Metals Chromium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	4.46149439	0.72358526
North	**103**	4.41946698	0.81811517
South	**102**	4.53215570	0.92555308

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Copper
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

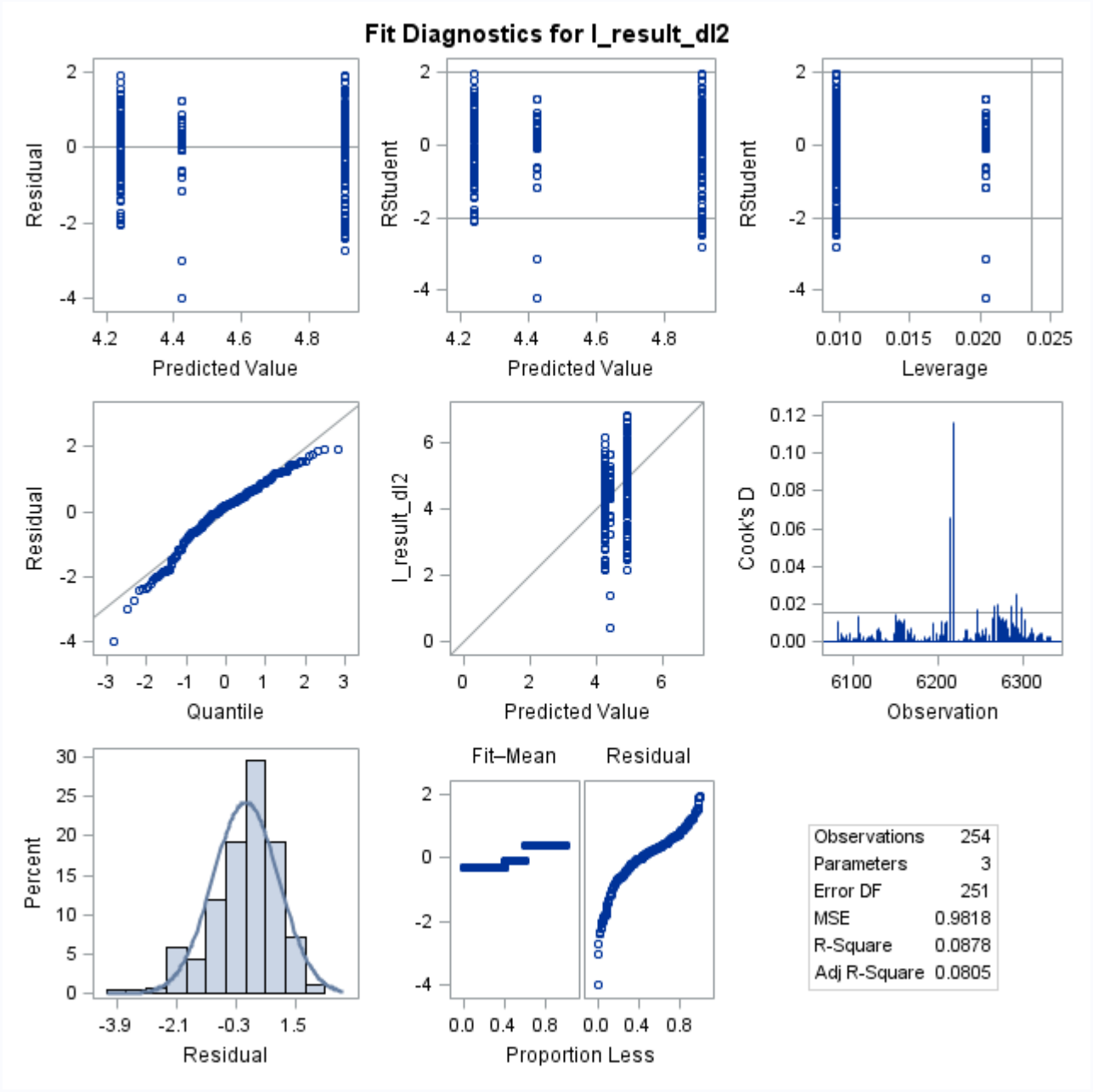
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	23.7219630	11.8609815	12.08	<.0001
Error	251	246.4324602	0.9818026		
Corrected Total	253	270.1544232			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.087809	21.80581	0.990860	4.544017

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	23.72196304	11.86098152	12.08	<.0001

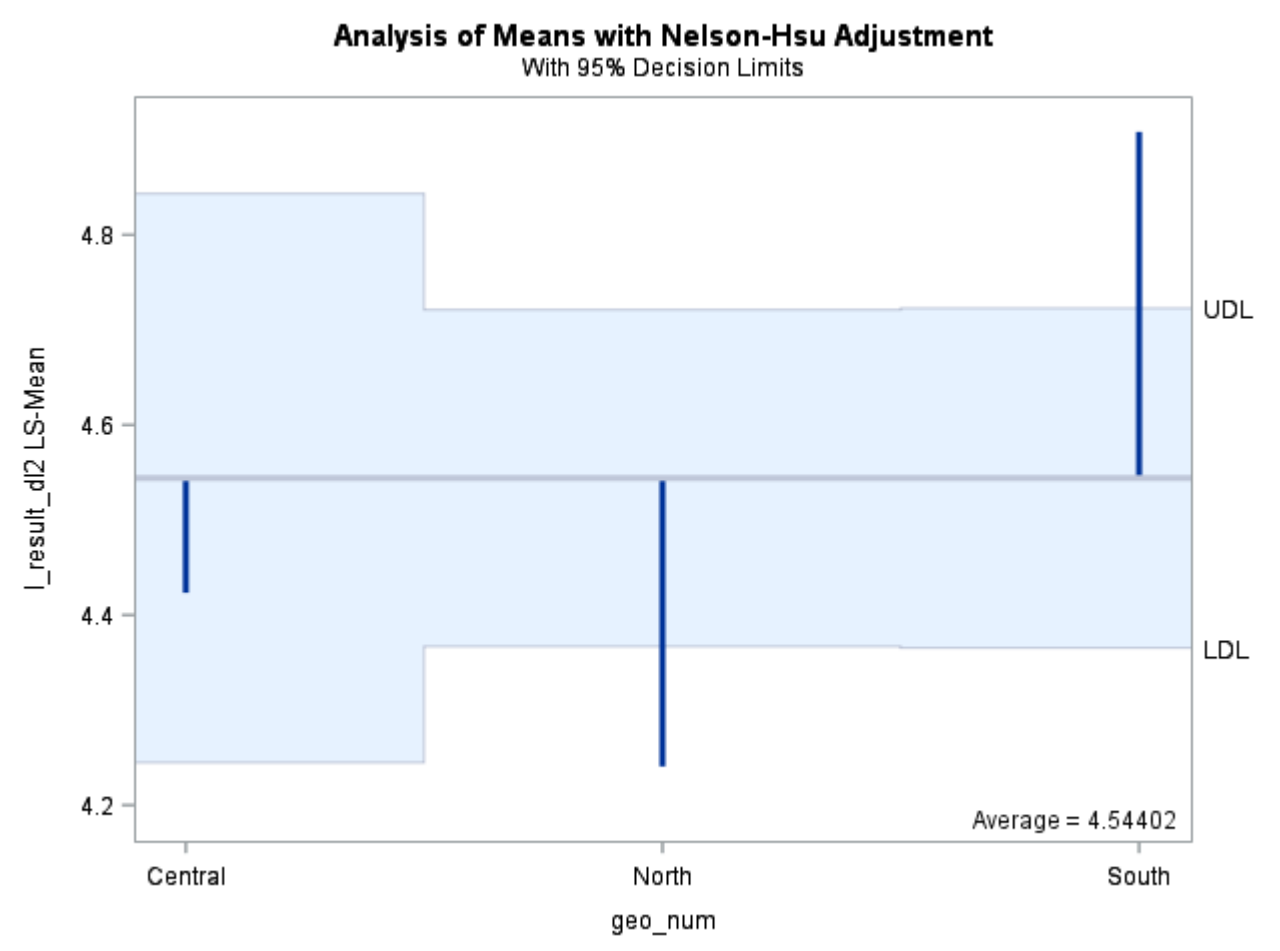
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	23.72196304	11.86098152	12.08	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.9818
R-Square 0.0878
Adj R-Square 0.0805

Metals Copper
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.42339814	0.6080
North	4.24069337	0.0002
South	4.90825847	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.42339814	1
North	4.24069337	2
South	4.90825847	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5383	0.0145
2	0.5383		<.0001
3	0.0145	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	16.6459	8.3230	3.05	0.0490
Error	251	684.3	2.7264		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	11.16	<.0001
Error	131.9		

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	4.42339814	0.89691171
North	**103**	4.24069337	0.86903908
South	**102**	4.90825847	1.13793925

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

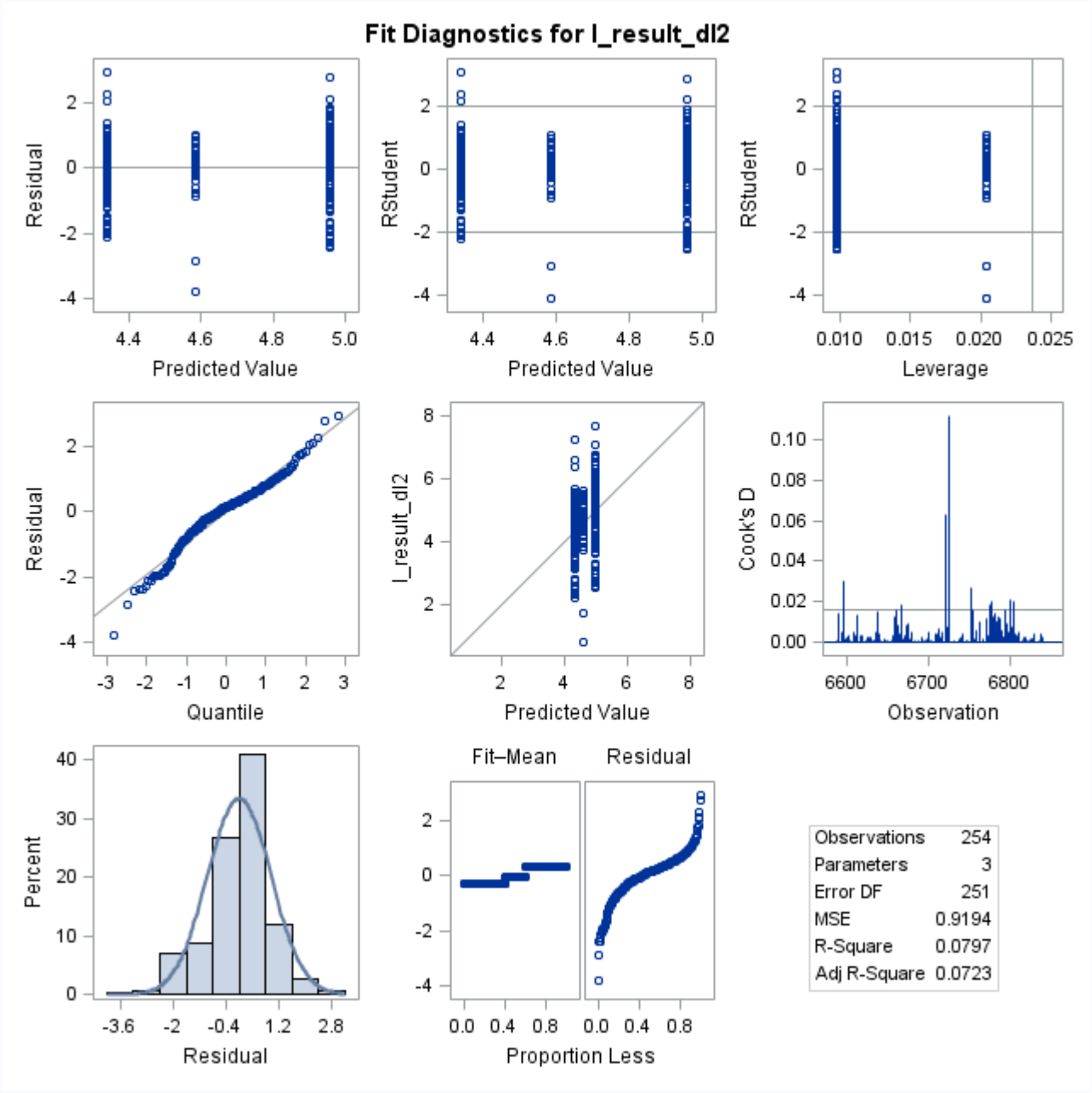
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	19.9733157	9.9866578	10.86	<.0001
Error	251	230.7651606	0.9193831		
Corrected Total	253	250.7384763			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.079658	20.69094	0.958845	4.634128

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	19.97331567	9.98665783	10.86	<.0001

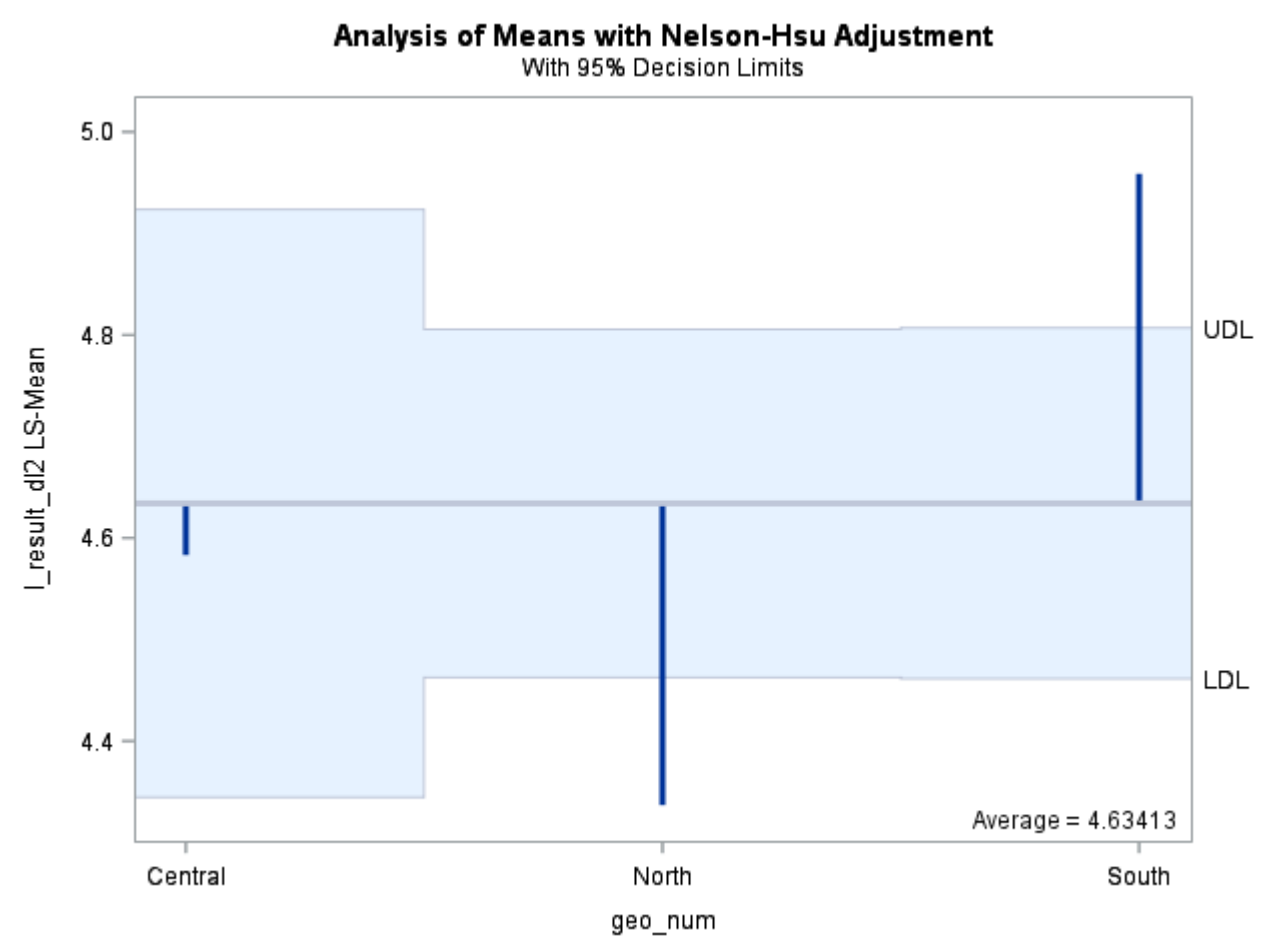
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	19.97331567	9.98665783	10.86	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.9194
R-Square 0.0797
Adj R-Square 0.0723

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.58319850	0.9093
North	4.33690849	0.0002
South	4.95872816	<.0001



Metals Lead
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.58319850	1
North	4.33690849	2
South	4.95872816	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.3022	0.0645
2	0.3022		<.0001
3	0.0645	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	11.5616	5.7808	2.08	0.1274
Error	251	698.5	2.7827		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	9.99	<.0001
Error	138.2		

Metals Lead
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	4.58319850	0.79992342
North	**103**	4.33690849	0.89619650
South	**102**	4.95872816	1.08147263

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

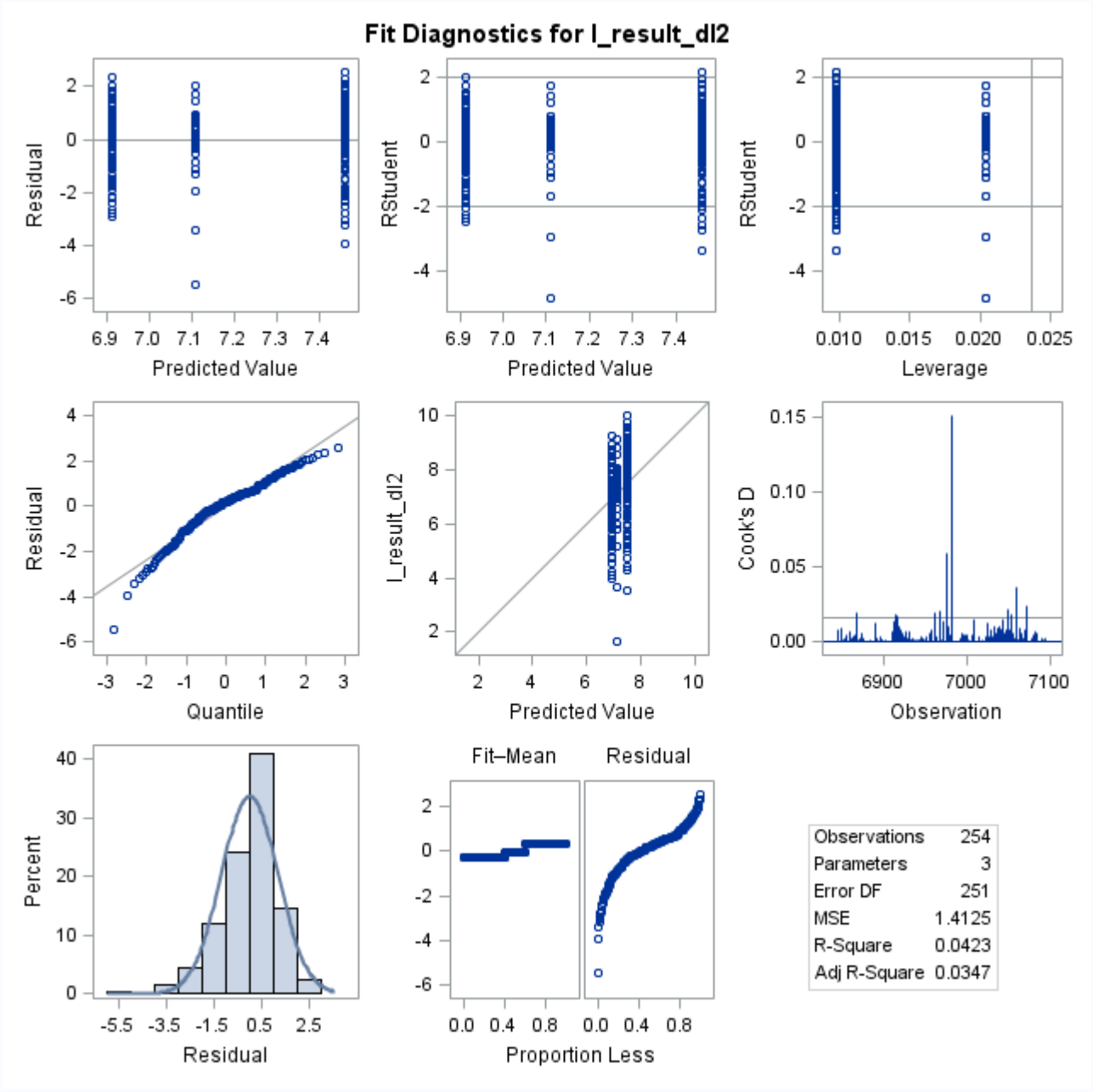
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	15.6785231	7.8392615	5.55	0.0044
Error	251	354.5475243	1.4125399		
Corrected Total	253	370.2260474			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.042349	16.57460	1.188503	7.170631

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	15.67852309	7.83926155	5.55	0.0044

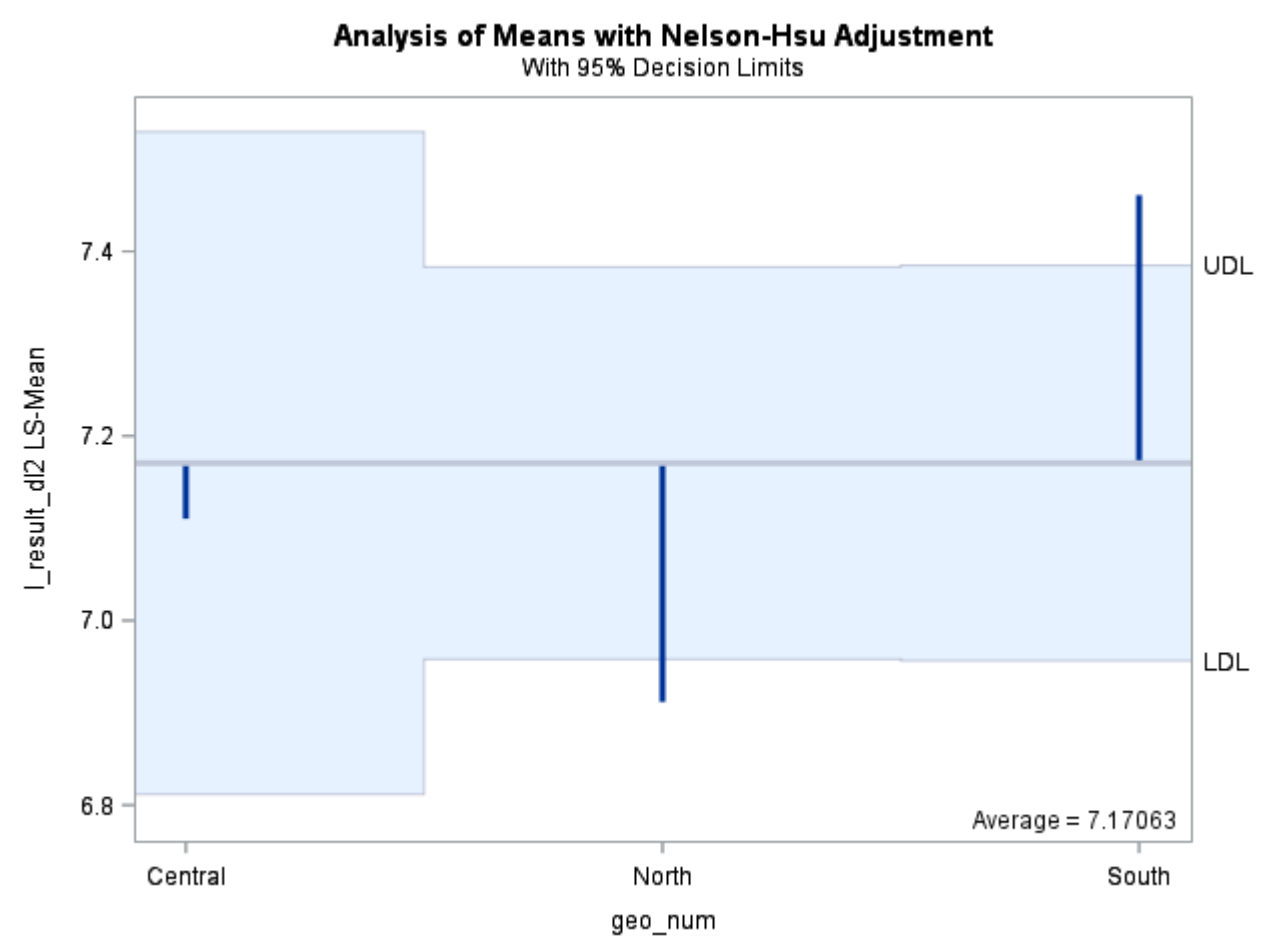
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	15.67852309	7.83926155	5.55	0.0044


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.4125
R-Square 0.0423
Adj R-Square 0.0347

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	7.11026714	0.9167
North	6.91180269	0.0123
South	7.46099574	0.0045



Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	7.11026714	1
North	6.91180269	2
South	7.46099574	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6014	0.2080
2	0.6014		0.0031
3	0.2080	0.0031	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	18.9745	9.4872	1.26	0.2867
Error	251	1896.6	7.5562		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	5.38	0.0057
Error	128.8		

Metals Mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	7.11026714	1.16181528
North	**103**	6.91180269	1.06030265
South	**102**	7.46099574	1.31662546

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

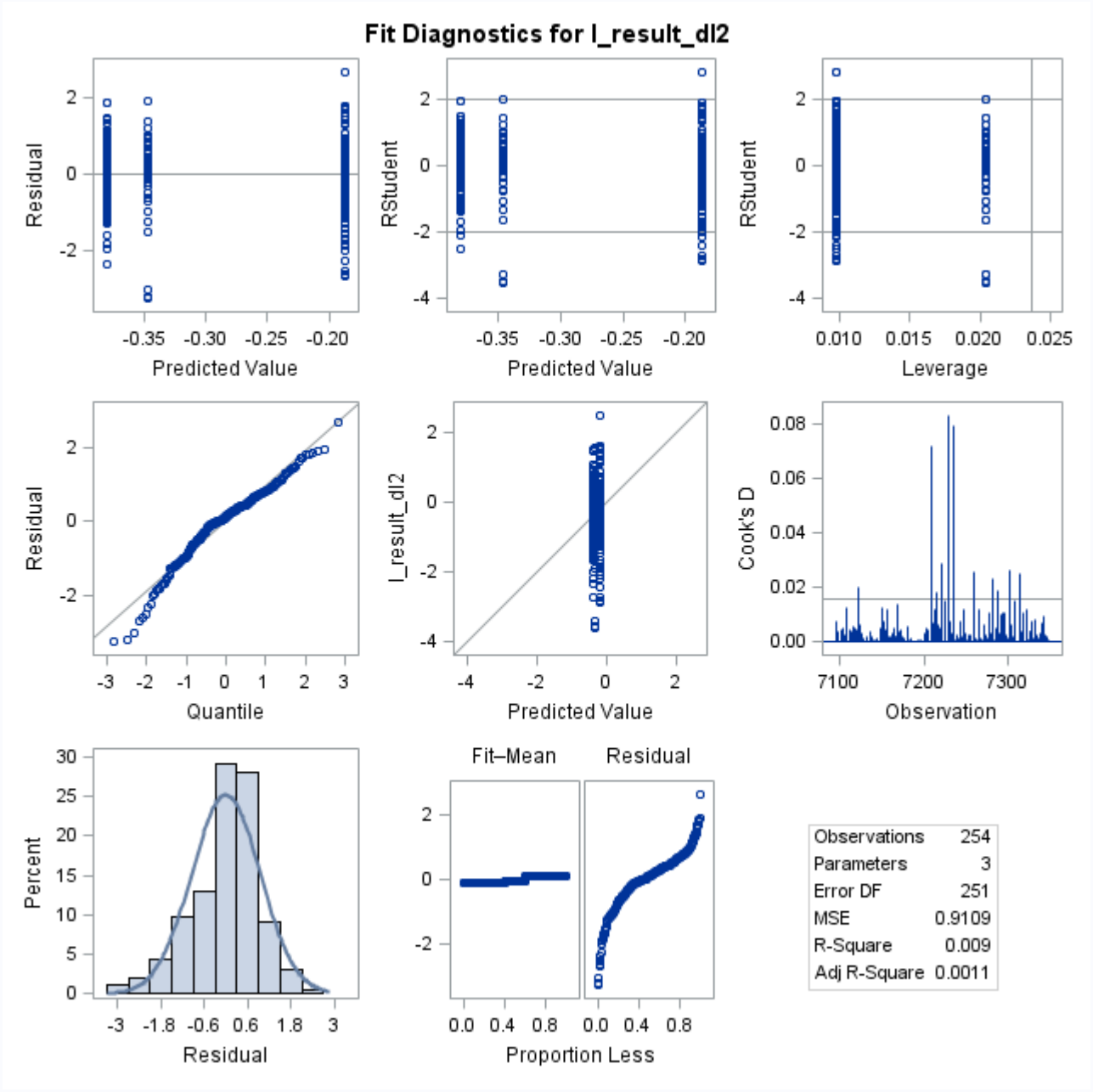
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.0827926	1.0413963	1.14	0.3205
Error	251	228.6479688	0.9109481		
Corrected Total	253	230.7307614			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.009027	-322.0761	0.954436	-0.296339

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	2.08279257	1.04139628	1.14	0.3205

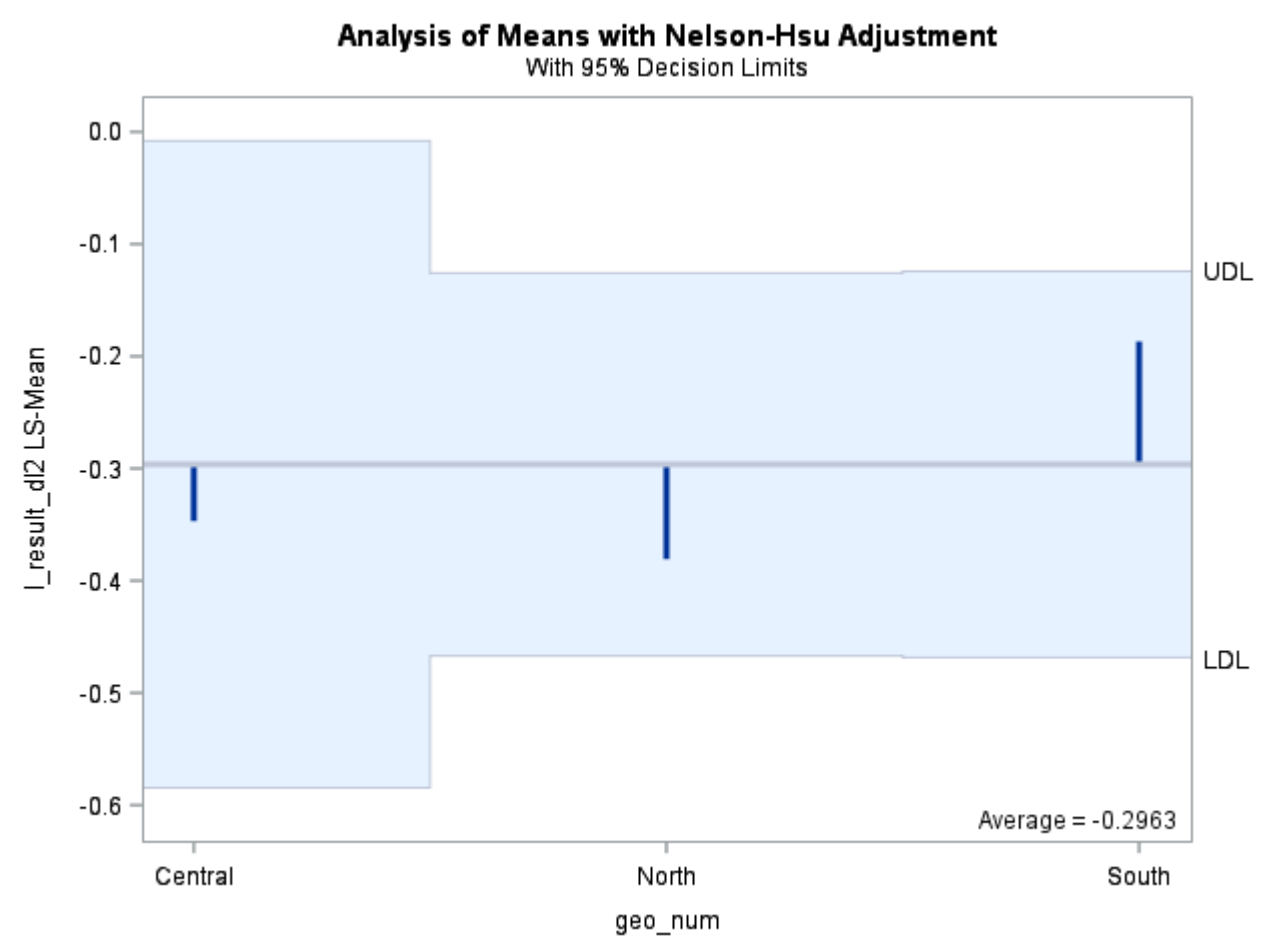
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	2.08279257	1.04139628	1.14	0.3205


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.9109
R-Square 0.009
Adj R-Square 0.0011

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	-0.34686357	0.9099
North	-0.38076397	0.4733
South	-0.18681381	0.2914



Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	-0.34686357	1
North	-0.38076397	2
South	-0.18681381	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9772	0.5998
2	0.9772		0.3146
3	0.5998	0.3146	

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	8.6763	4.3381	1.72	0.1818
Error	251	634.4	2.5277		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	1.13	0.3265
Error	123.4		

Metals Methyl mercury
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	-0.34686357	1.03611675
North	**103**	-0.38076397	0.82646367
South	**102**	-0.18681381	1.03142622

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

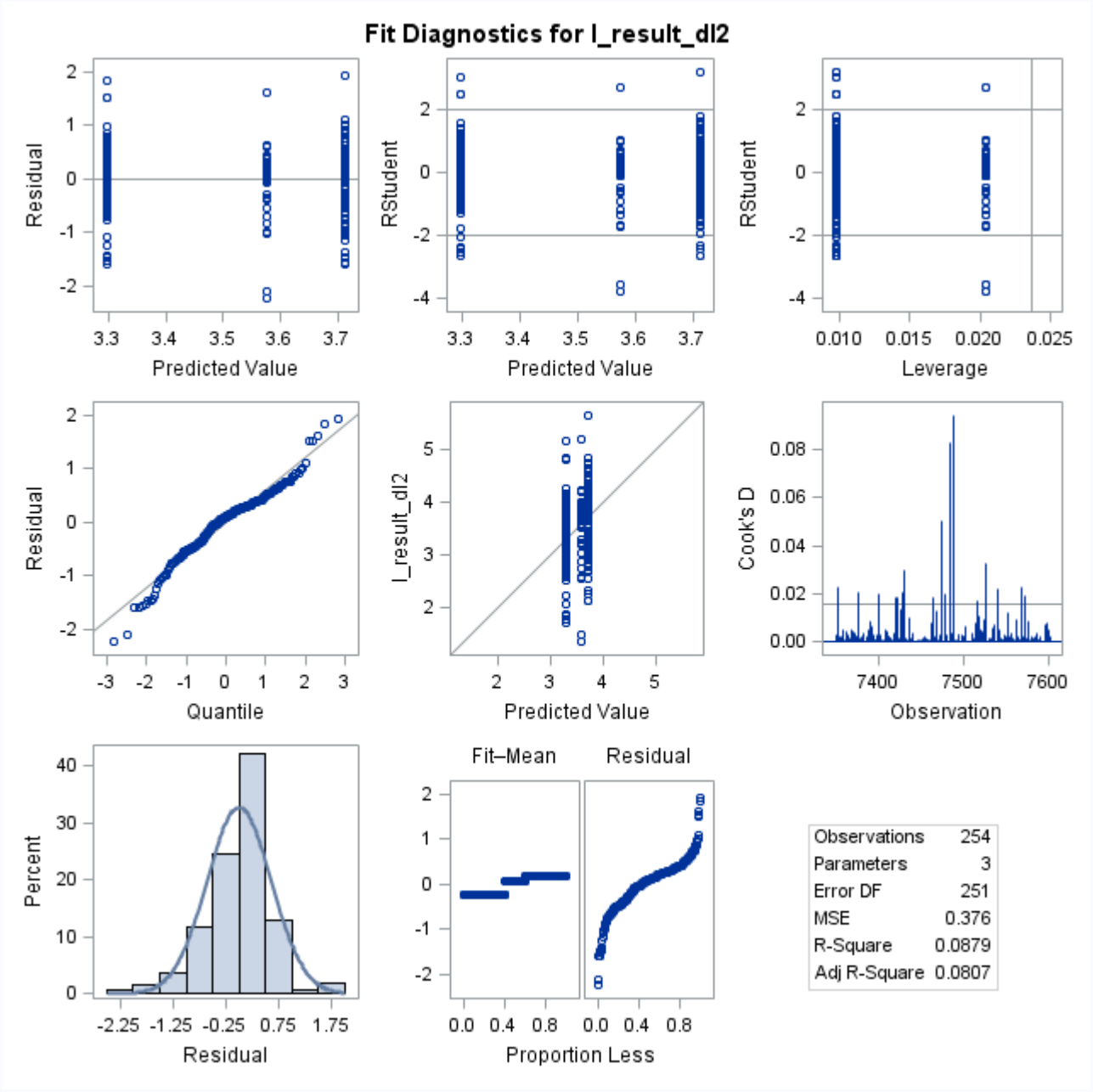
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.0993746	4.5496873	12.10	<.0001
Error	251	94.3672122	0.3759650		
Corrected Total	253	103.4665868			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.087945	17.43023	0.613160	3.517795

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	9.09937459	4.54968730	12.10	<.0001

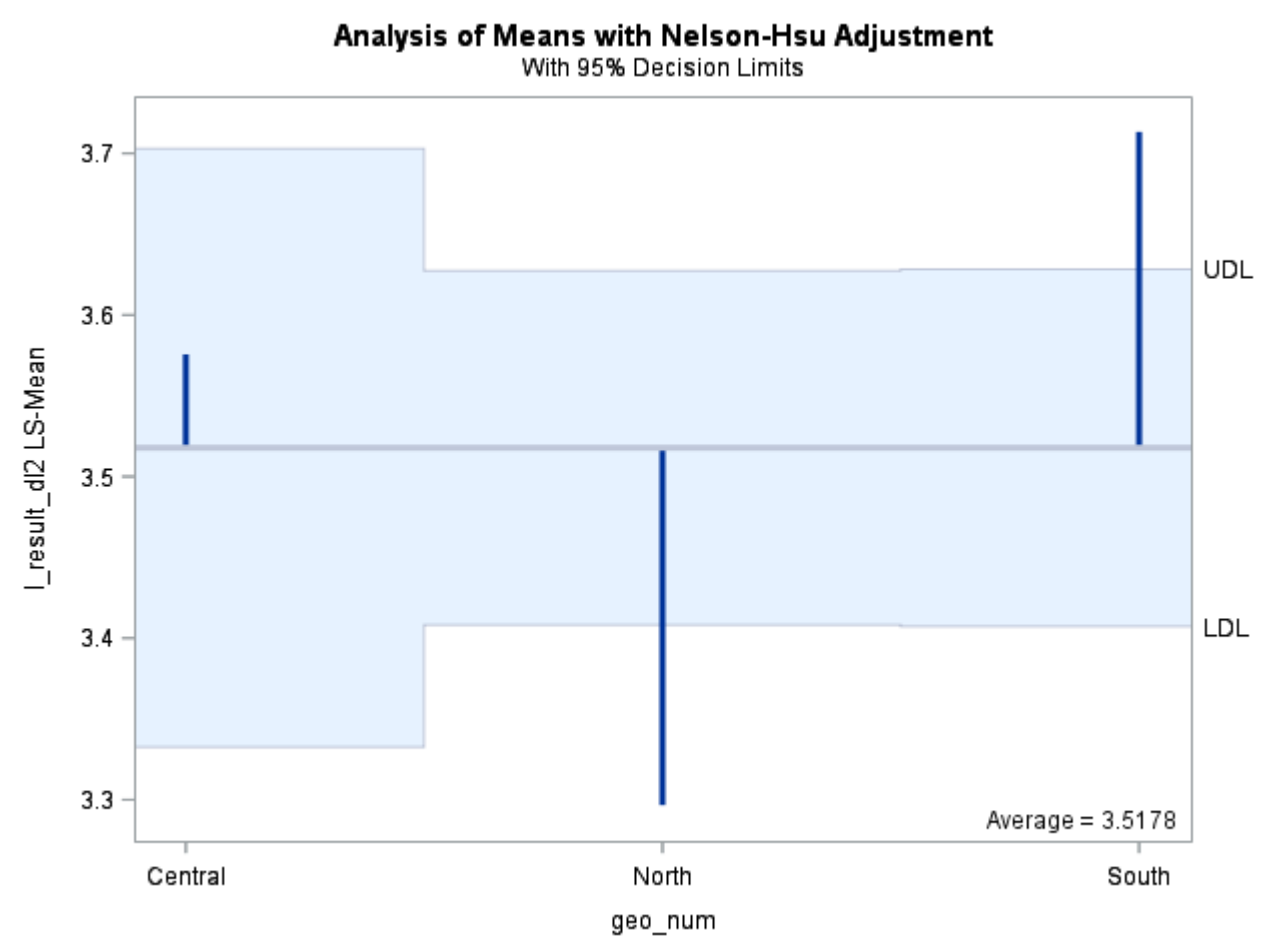
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	9.09937459	4.54968730	12.10	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.376
R-Square 0.0879
Adj R-Square 0.0807

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.57560933	0.7415
North	3.29667003	<.0001
South	3.71331538	0.0001



Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.57560933	1
North	3.29667003	2
South	3.71331538	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.0251	0.4010
2	0.0251		<.0001
3	0.4010	<.0001	

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	0.0337	0.0169	0.03	0.9663
Error	251	123.3	0.4911		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	12.13	<.0001
Error	128.3		

Metals Nickel
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	3.57560933	0.62792872
North	**103**	3.29667003	0.61779893
South	**102**	3.71331538	0.60123779

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

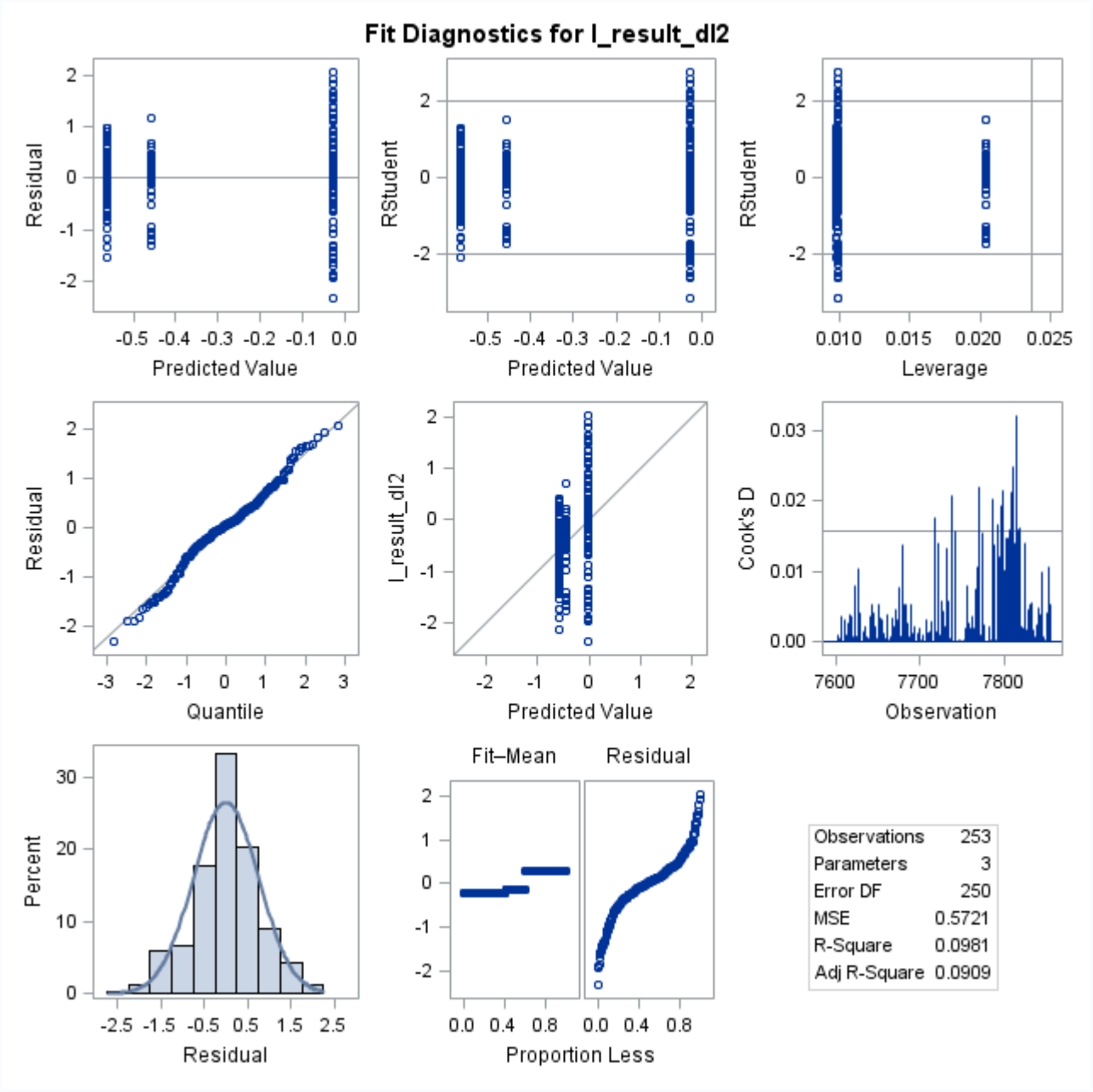
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	15.5551962	7.7775981	13.59	<.0001
Error	250	143.0240041	0.5720960		
Corrected Total	252	158.5792003			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.098091	-229.5587	0.756370	-0.329489

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	15.55519623	7.77759811	13.59	<.0001

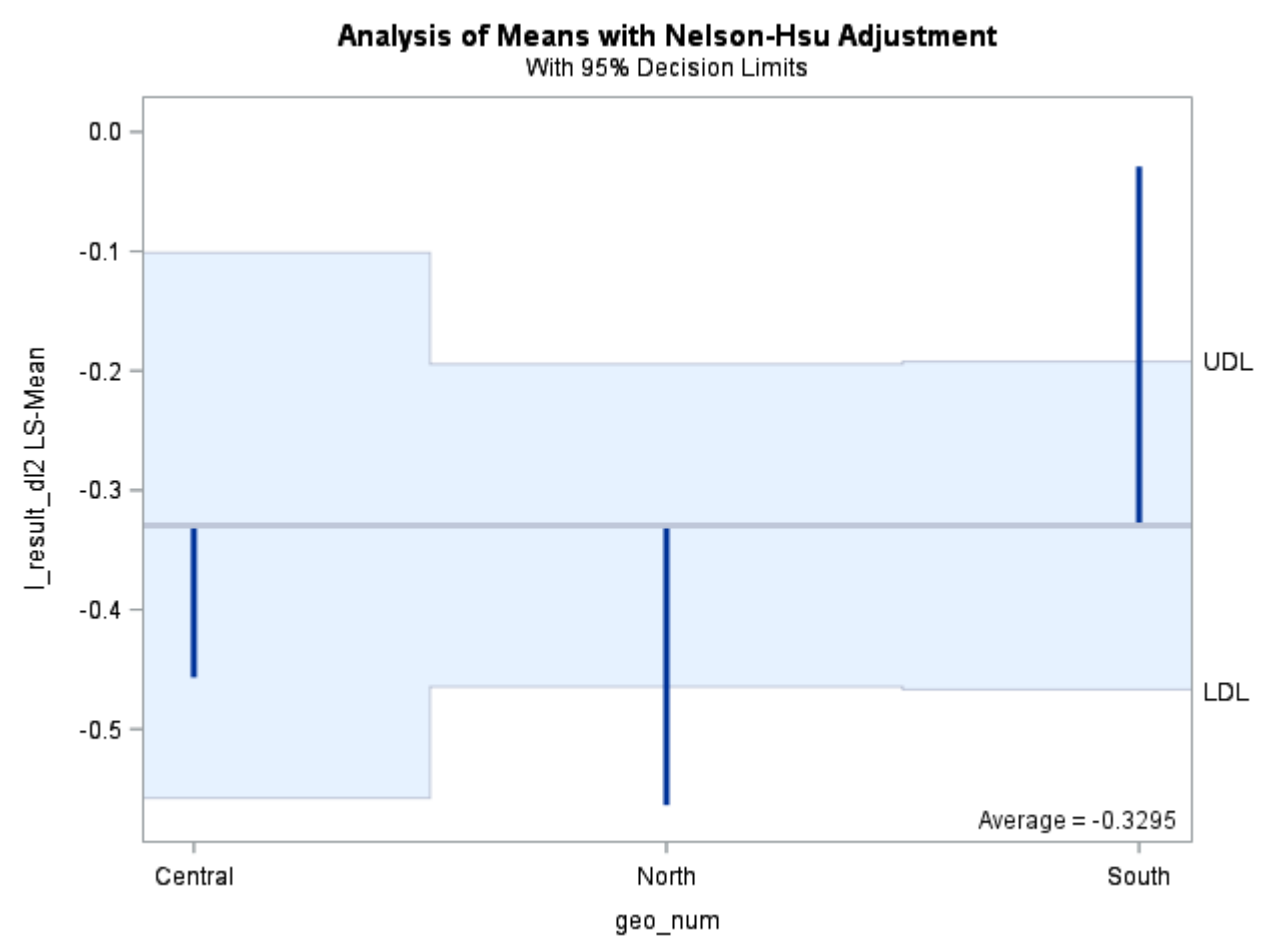
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	15.55519623	7.77759811	13.59	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 3
Error DF 250
MSE 0.5721
R-Square 0.0981
Adj R-Square 0.0909

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Selenium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	-0.45670062	0.3880
North	-0.56359000	0.0002
South	-0.02903552	<.0001



Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Selenium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	-0.45670062	1
North	-0.56359000	2
South	-0.02903552	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.6945	0.0038
2	0.6945		<.0001
3	0.0038	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	30.2810	15.1405	22.17	<.0001
Error	250	170.7	0.6830		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	11.10	<.0001
Error	138.5		

Metals Selenium
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	49	-0.45670062	0.50427295
North	103	-0.56359000	0.55055553
South	101	-0.02903552	0.99950320

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

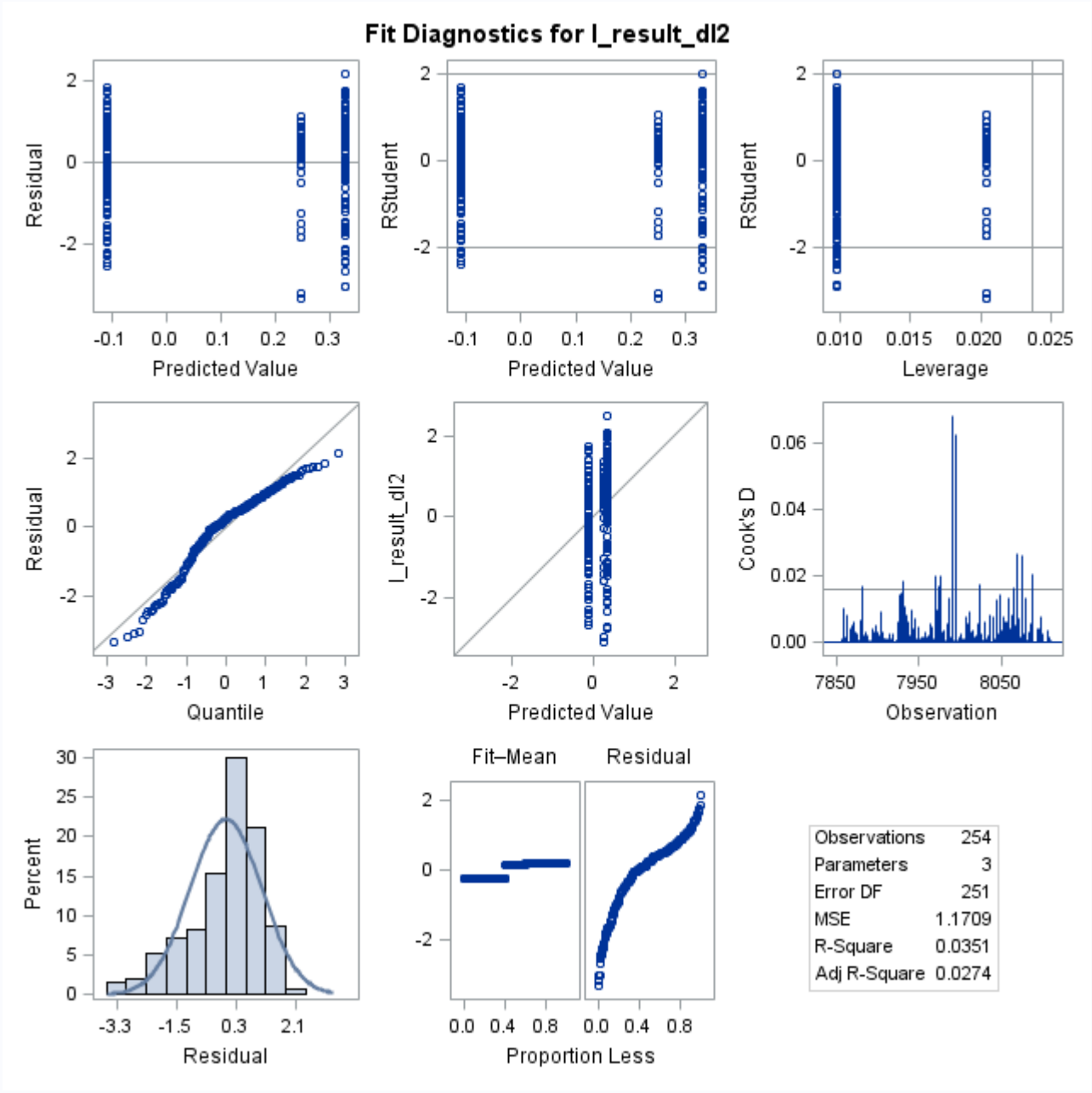
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	10.6795458	5.3397729	4.56	0.0113
Error	251	293.9041175	1.1709327		
Corrected Total	253	304.5836633			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.035063	796.5257	1.082096	0.135852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	10.67954578	5.33977289	4.56	0.0113

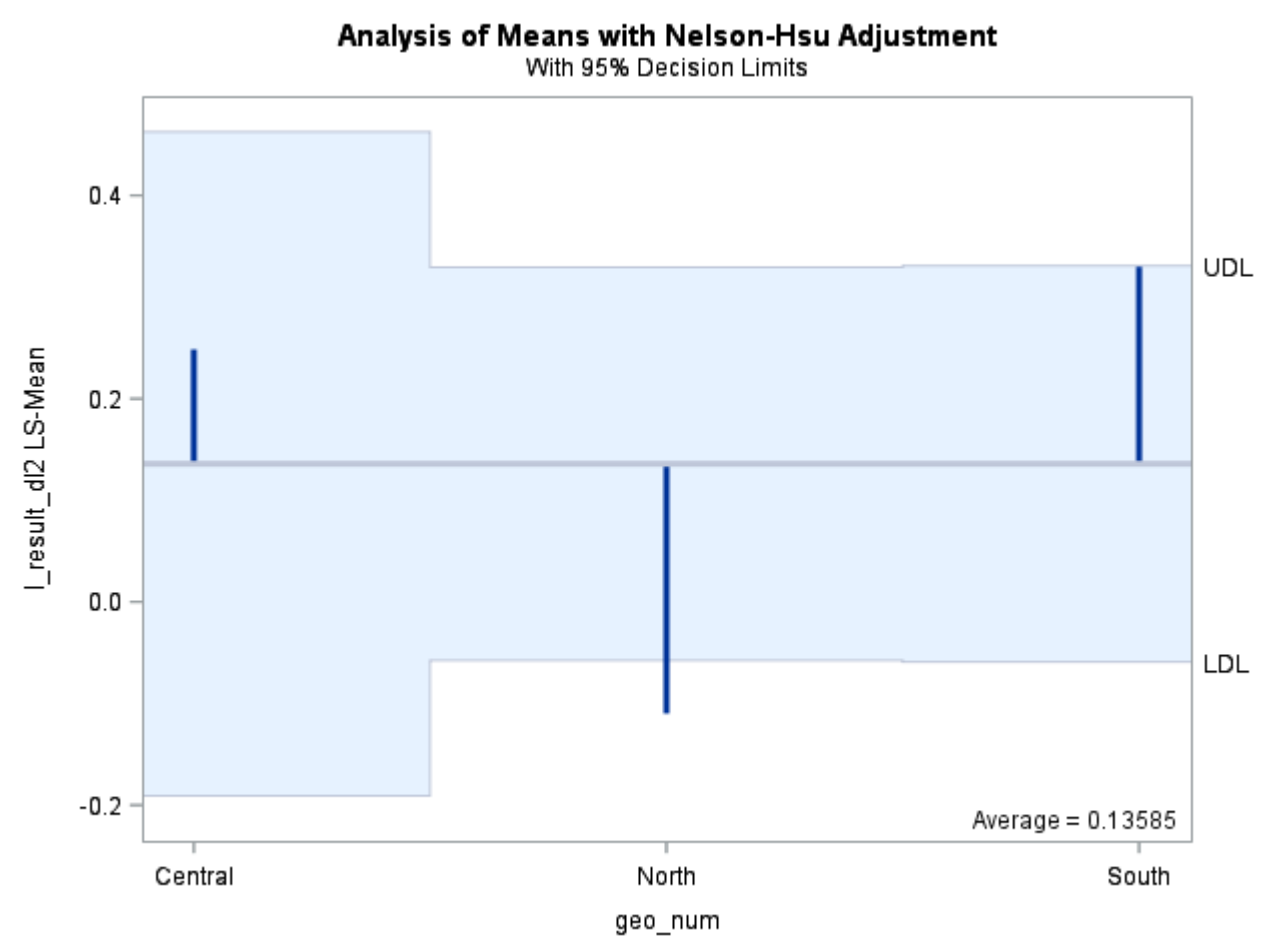
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	10.67954578	5.33977289	4.56	0.0113


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 1.1709
R-Square 0.0351
Adj R-Square 0.0274

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	0.24847389	0.6948
North	-0.10985871	0.0085
South	0.32986909	0.0515



Metals Silver
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	0.24847389	1
North	-0.10985871	2
South	0.32986909	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.1385	0.9020
2	0.1385		0.0110
3	0.9020	0.0110	

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	7.9694	3.9847	1.27	0.2832
Error	251	788.7	3.1422		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	4.57	0.0120
Error	135.0		

Metals Silver
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	0.24847389	0.96882384
North	**103**	-0.10985871	1.03742359
South	**102**	0.32986909	1.17344002

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure

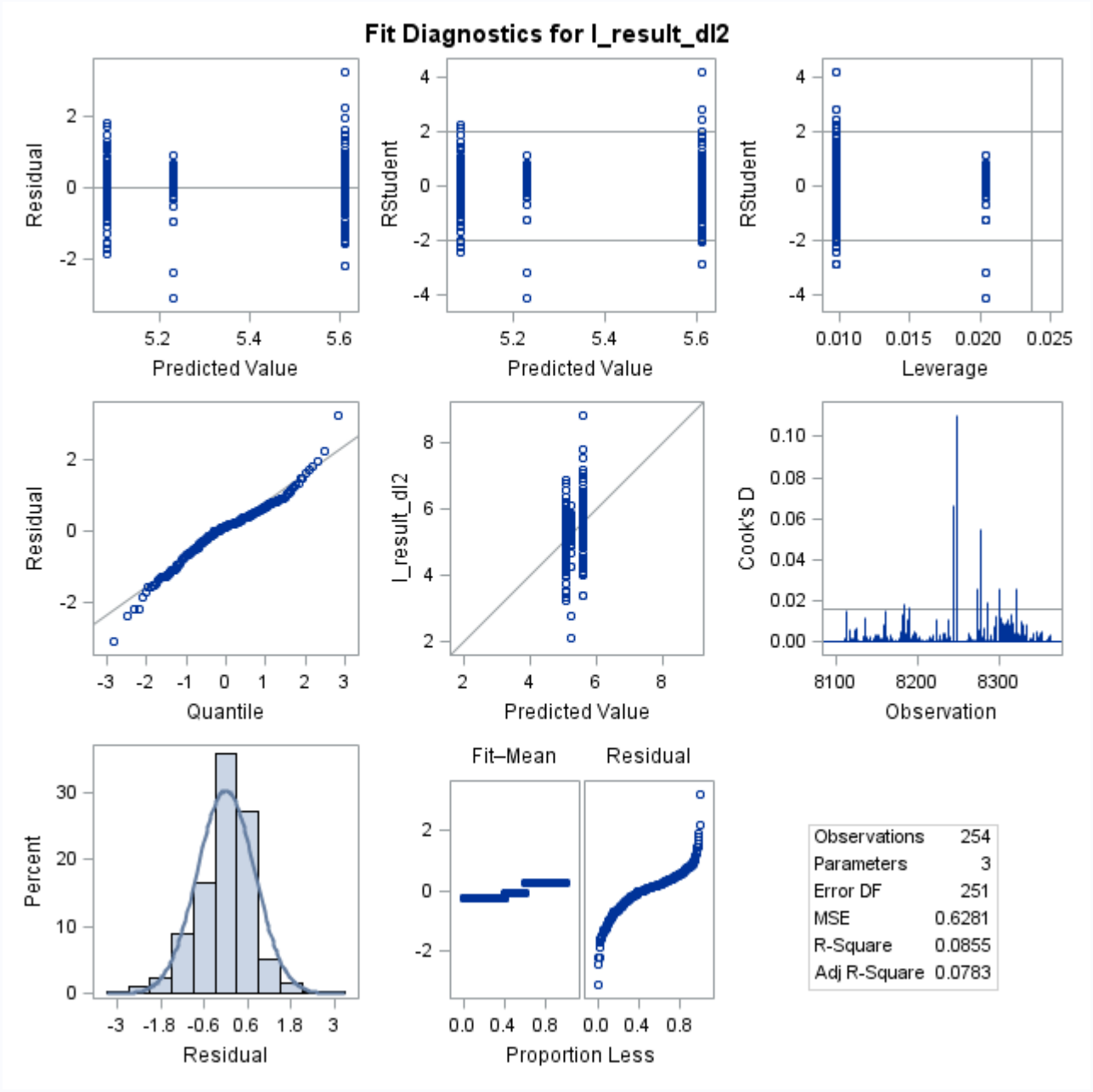
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	14.7493347	7.3746674	11.74	<.0001
Error	251	157.6640375	0.6281436		
Corrected Total	253	172.4133722			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.085546	14.89055	0.792555	5.322537

Source	DF	Type I SS	Mean Square	F Value	Pr > F
geo_num	2	14.74933472	7.37466736	11.74	<.0001

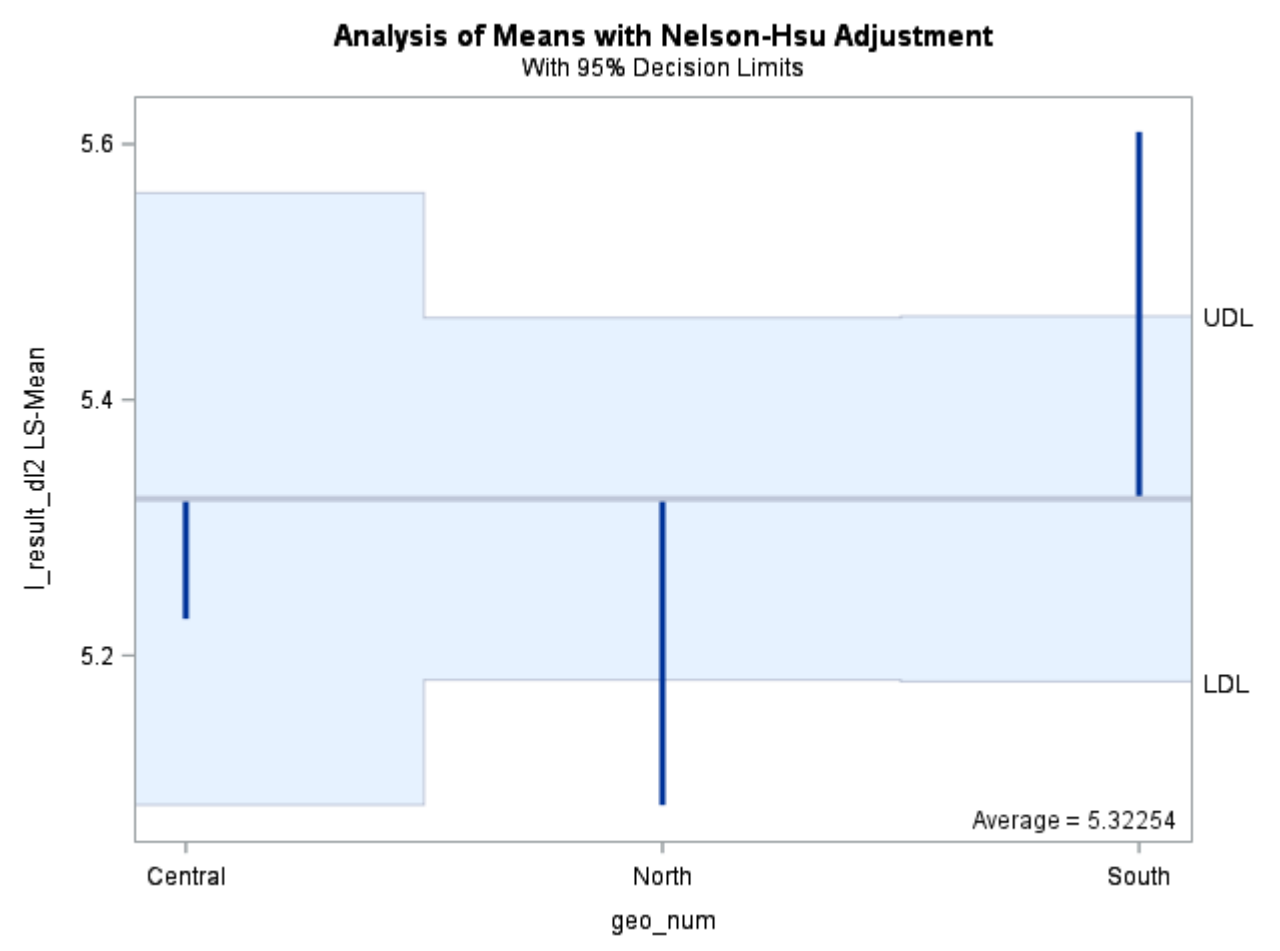
Source	DF	Type III SS	Mean Square	F Value	Pr > F
geo_num	2	14.74933472	7.37466736	11.74	<.0001


Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 3
Error DF 251
MSE 0.6281
R-Square 0.0855
Adj R-Square 0.0783

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	5.22865003	0.6242
North	5.08293925	0.0003
South	5.60958557	<.0001



Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	5.22865003	1
North	5.08293925	2
South	5.60958557	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5402	0.0168
2	0.5402		<.0001
3	0.0168	<.0001	

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Levene's Test for Homogeneity of l_result_dl2 Variance
ANOVA of Squared Deviations from Group Means

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
geo_num	2	7.2414	3.6207	2.43	0.0905
Error	251	374.7	1.4928		

Welch's ANOVA for l_result_dl2

Source	DF	F Value	Pr > F
geo_num	2.0000	10.67	<.0001
Error	135.5		

Metals Zinc
NBSA Phase III Surface Sediment ANOVA by geo_num

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Level of geo_num	N	l_result_dl2	
		Mean	Std Dev
Central	**49**	5.22865003	0.67792905
North	**103**	5.08293925	0.70973760
South	**102**	5.60958557	0.91317974

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

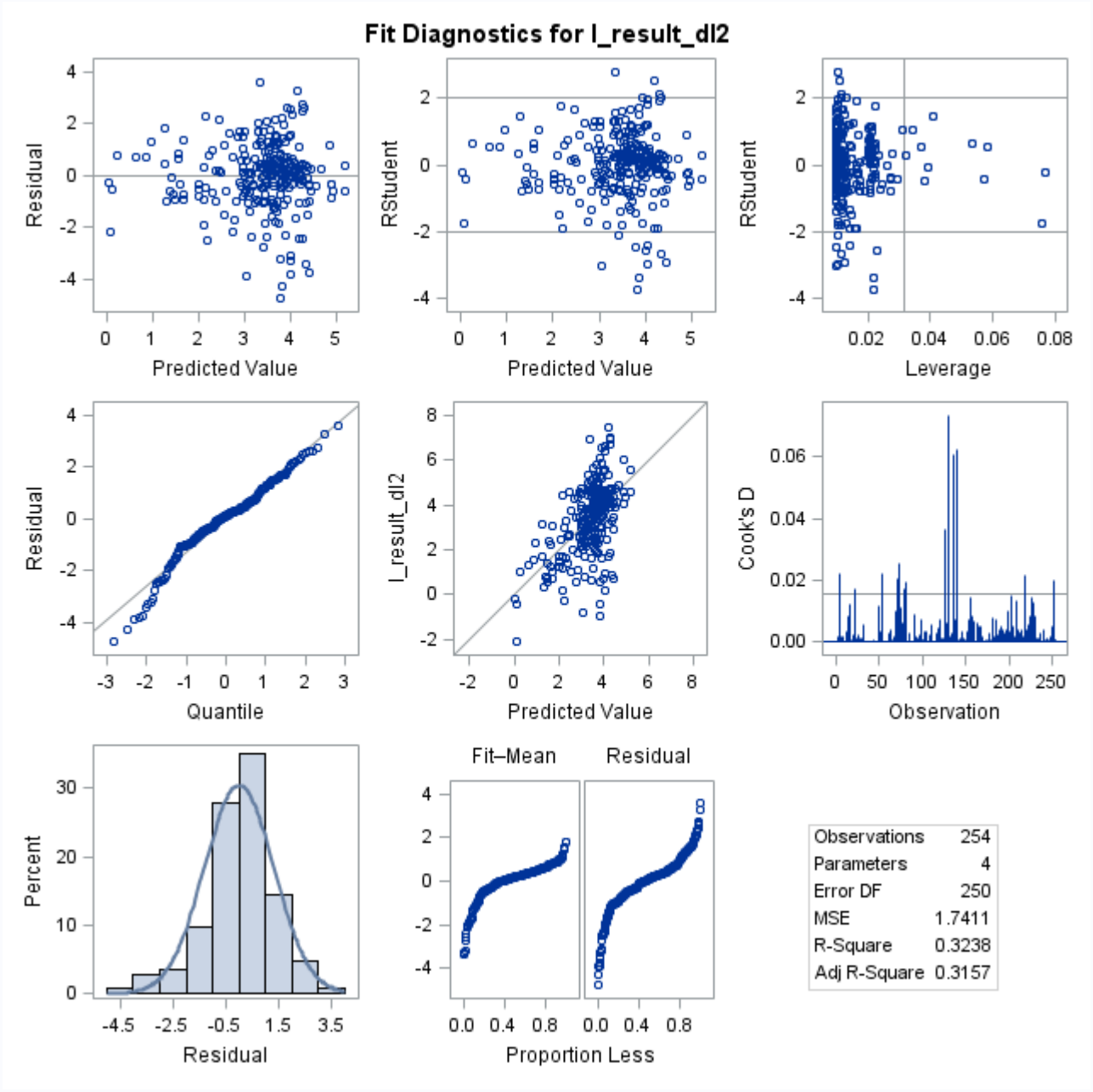
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

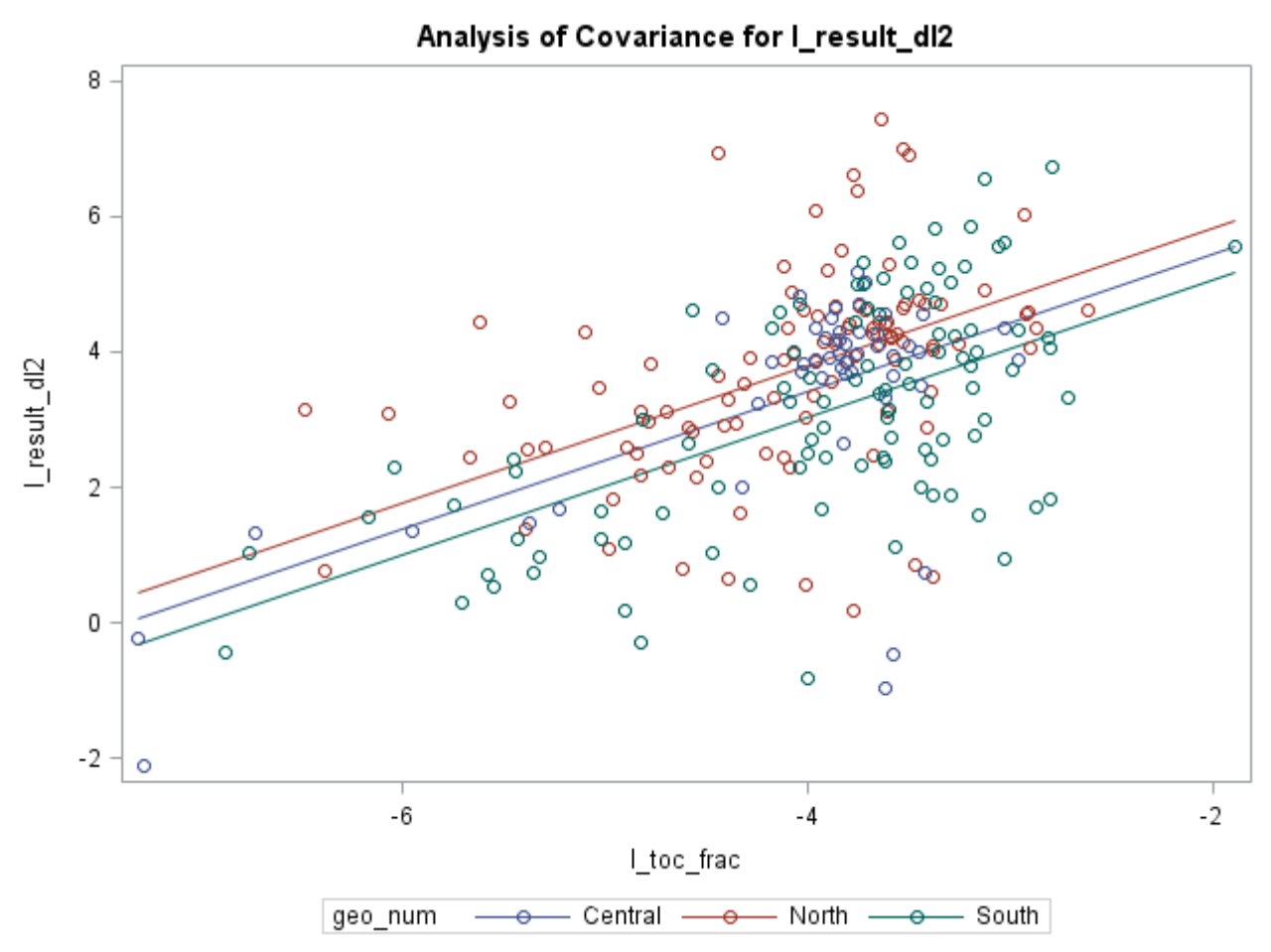
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	208.4353131	69.4784377	39.90	<.0001
Error	250	435.2834106	1.7411336		
Corrected Total	253	643.7187236			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.323799	38.74388	1.319520	3.405751

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	179.5595079	179.5595079	103.13	<.0001
geo_num	2	28.8758052	14.4379026	8.29	0.0003

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	190.7779426	190.7779426	109.57	<.0001
geo_num	2	28.8758052	14.4379026	8.29	0.0003

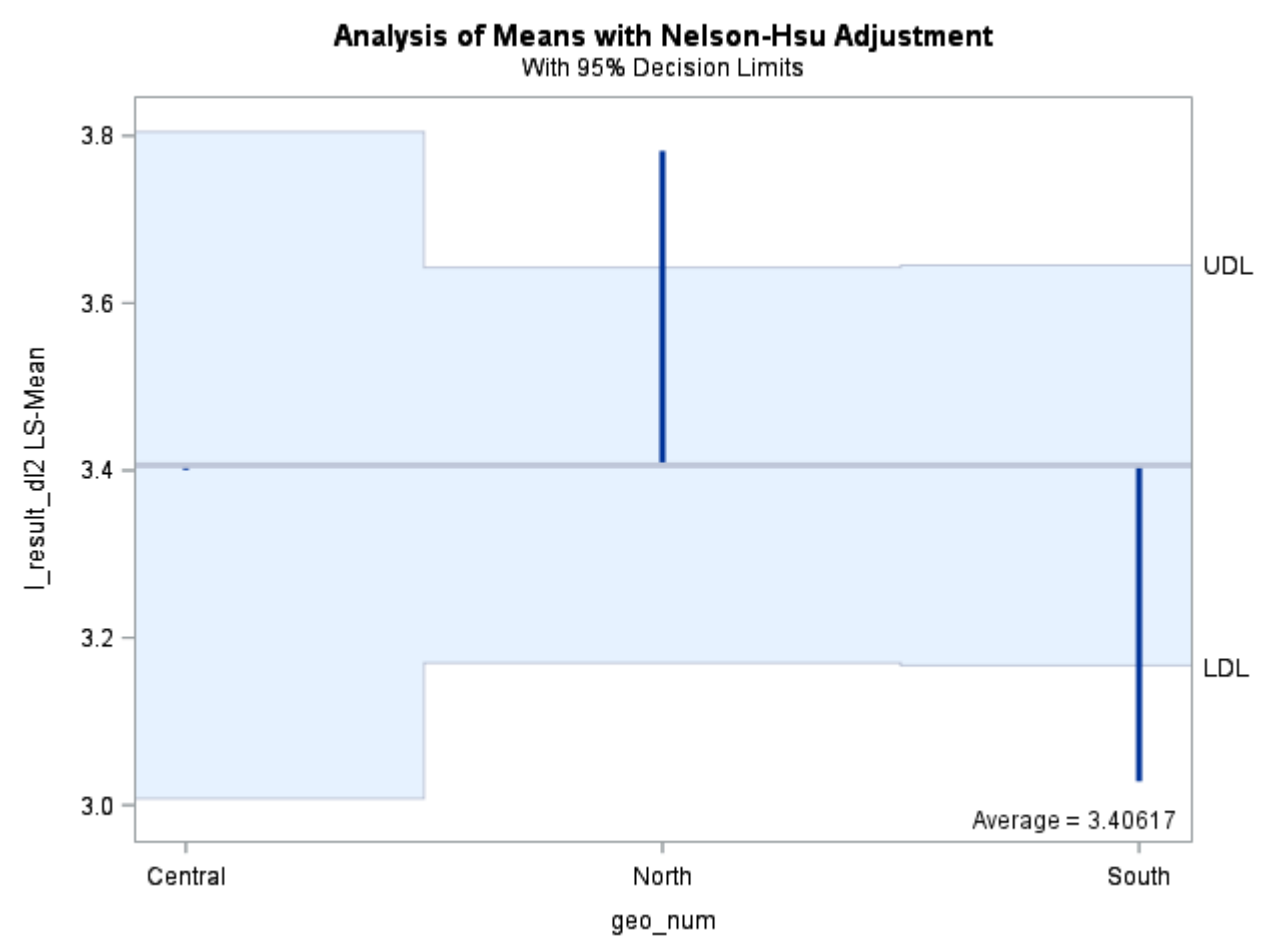

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.7411
R-Square 0.3238
Adj R-Square 0.3157


Analysis of Covariance for l_result_dl2
8
6
4
2
0
-2
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Dioxins/Furans 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.40061802	0.9994
North	3.78190678	0.0007
South	3.02837333	0.0007



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.40061802	1
North	3.78190678	2
South	3.02837333	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.2207	0.2394
2	0.2207		0.0002
3	0.2394	0.0002	

The GLM Procedure
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 254

Number of Observations Used 254

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

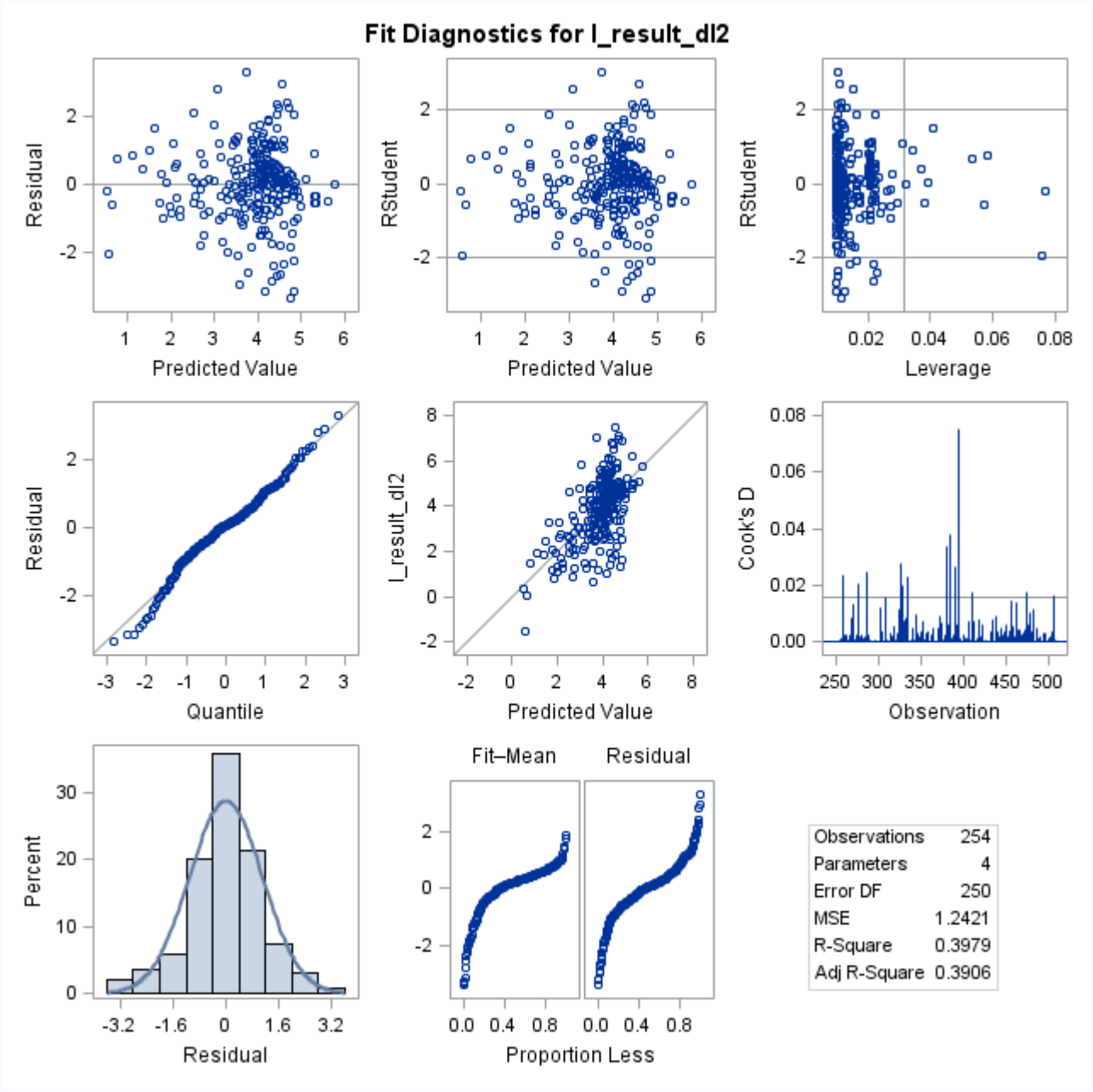
Dependent Variable: l_result_dl2
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

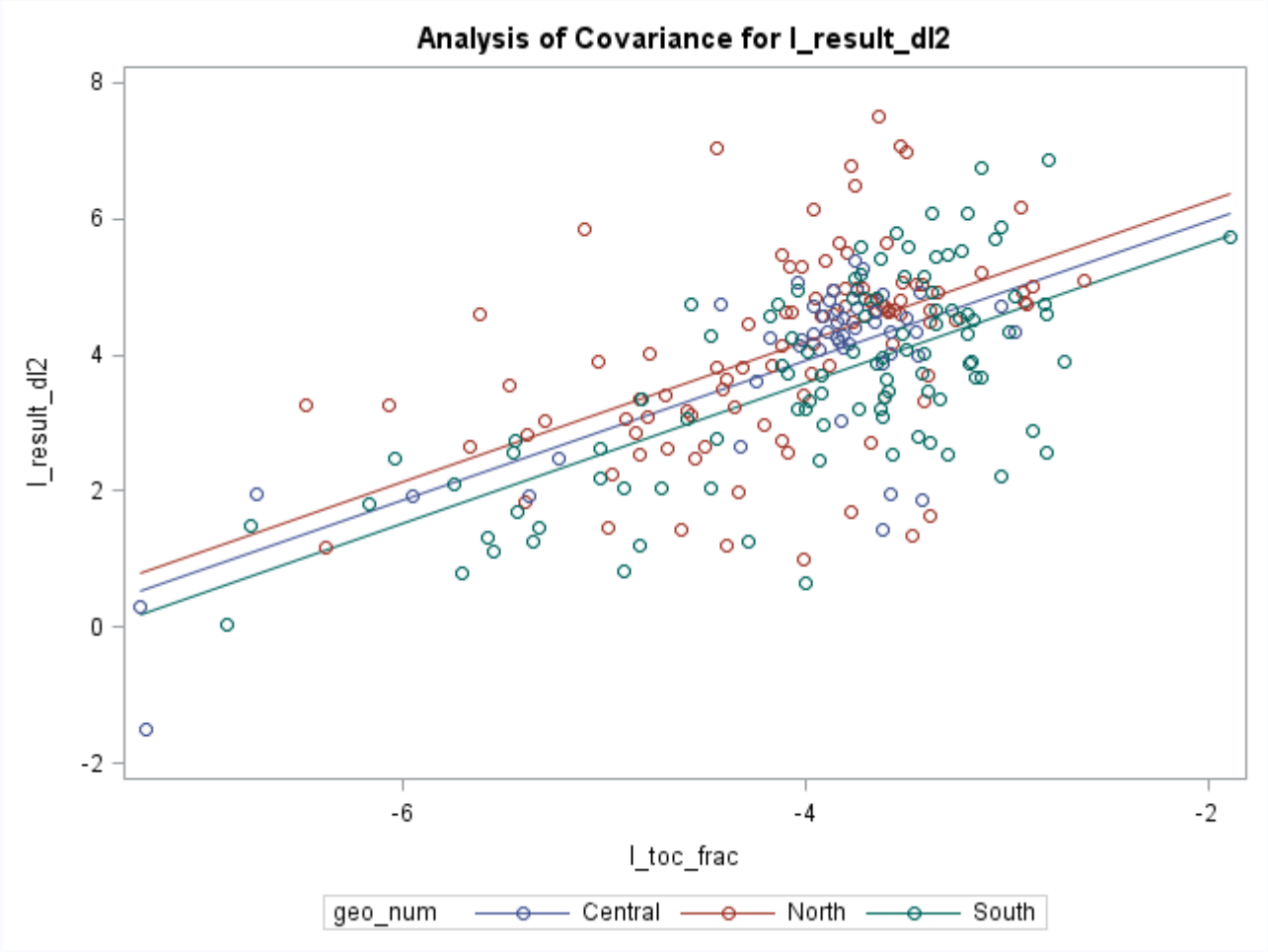
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	205.1841697	68.3947232	55.06	<.0001
Error	250	310.5362987	1.2421452		
Corrected Total	253	515.7204683			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.397859	28.70988	1.114516	3.881993

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	187.1201013	187.1201013	150.64	<.0001
geo_num	2	18.0640684	9.0320342	7.27	0.0009

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	195.9450978	195.9450978	157.75	<.0001
geo_num	2	18.0640684	9.0320342	7.27	0.0009

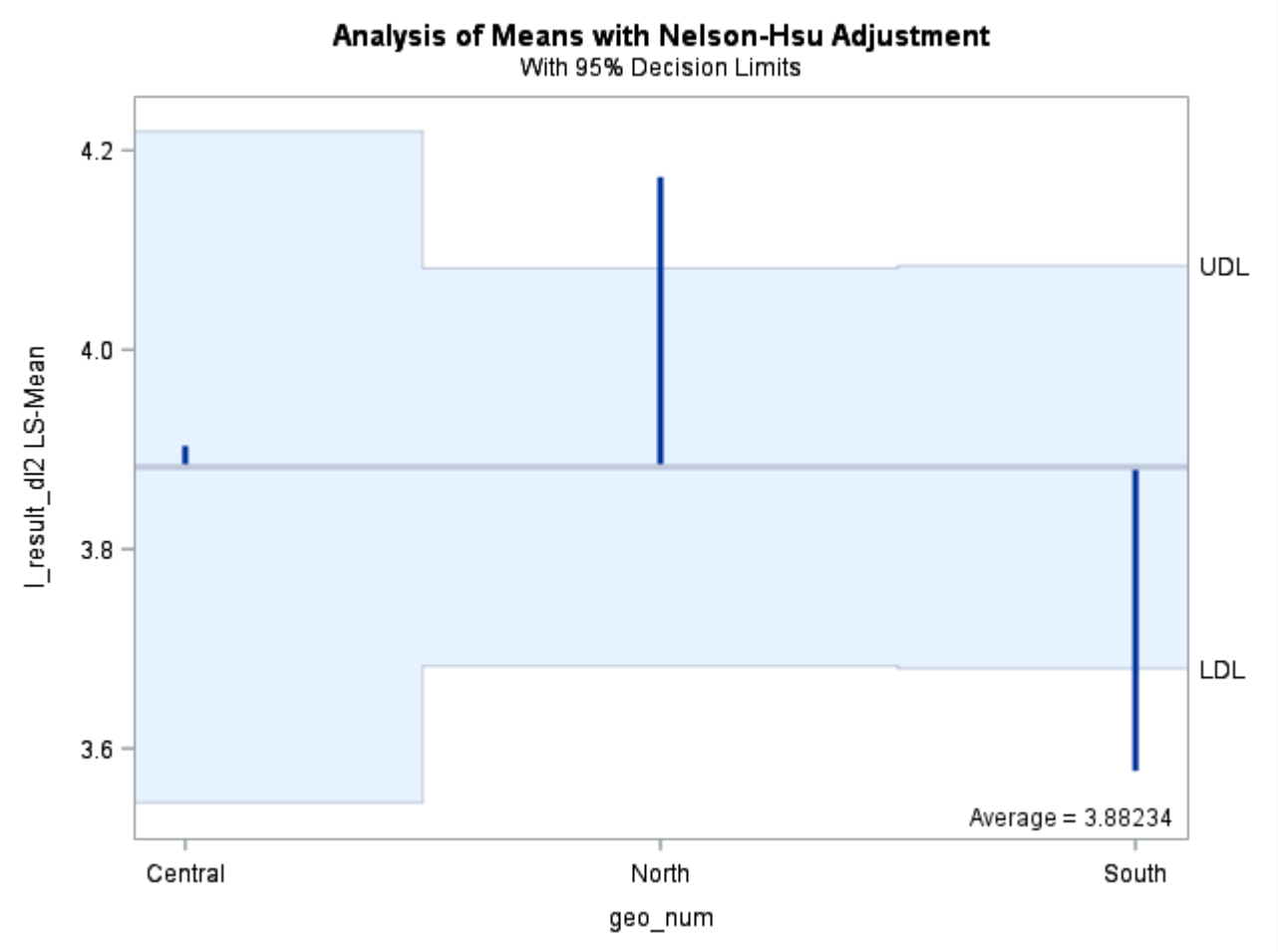

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.2421
R-Square 0.3979
Adj R-Square 0.3906


Analysis of Covariance for l_result_dl2
8
6
4
2
0
-2
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.90356225	0.9878
North	4.17320106	0.0020
South	3.57756793	0.0013



Dioxins/Furans Total WHO Dioxin TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=1 Parameter_group=Dioxins/Furans chemical_name=Total WHO Dioxin TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.90356225	1
North	4.17320106	2
South	3.57756793	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.3455	0.2153
2	0.3455		0.0005
3	0.2153	0.0005	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

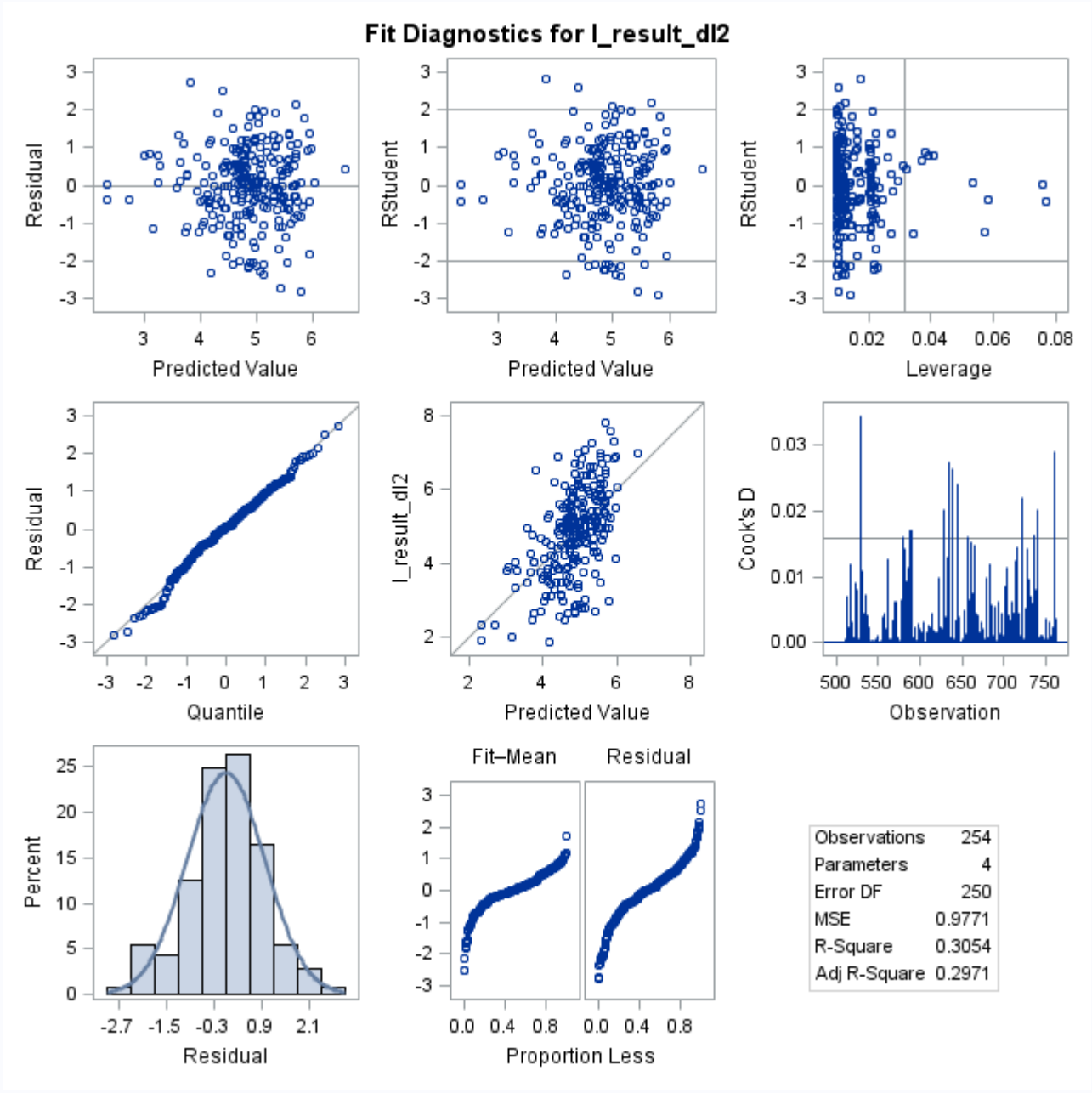
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

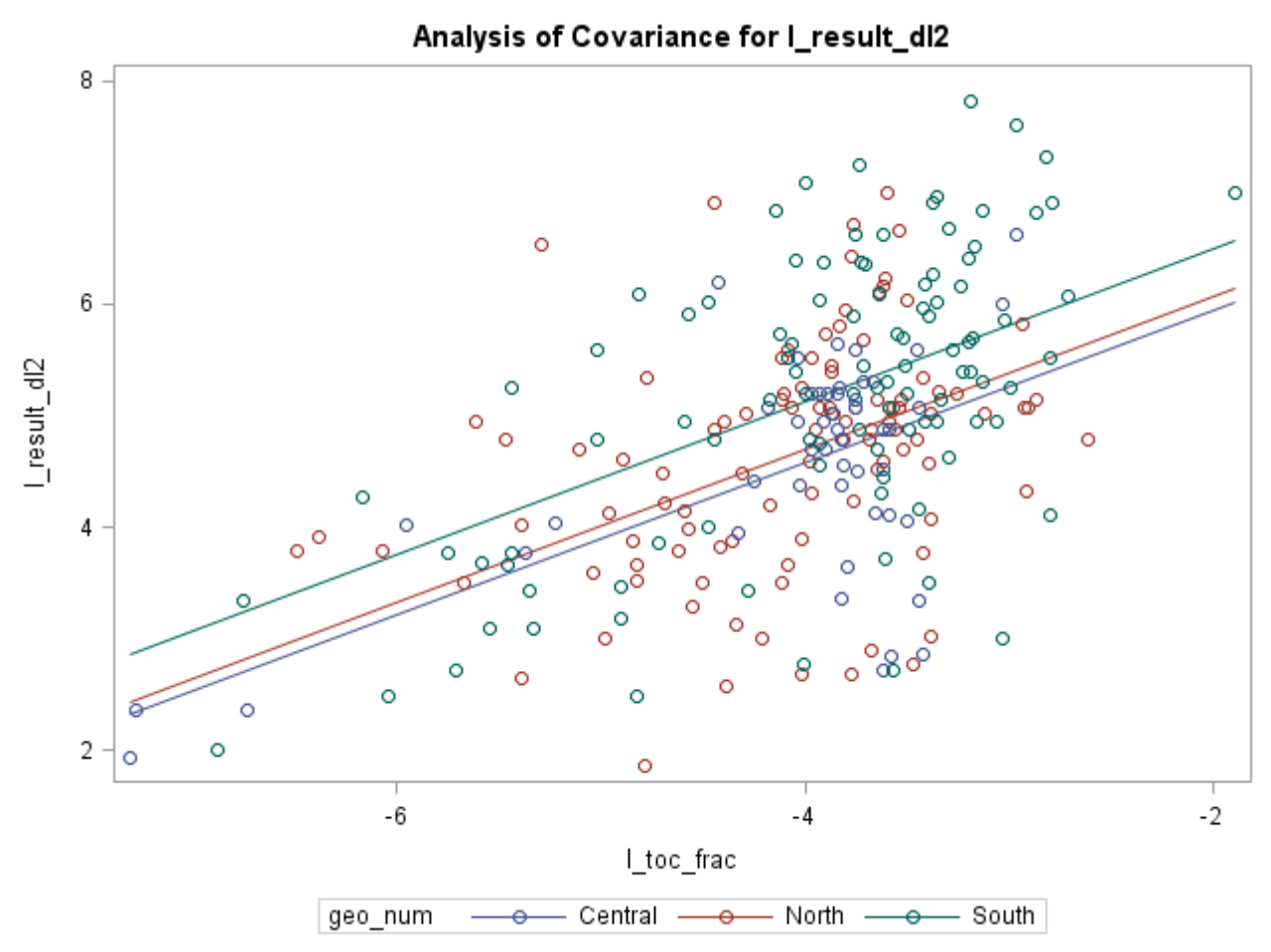
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	107.4148235	35.8049412	36.64	<.0001
Error	250	244.2773597	0.9771094		
Corrected Total	253	351.6921832			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.305423	20.43178	0.988488	4.837994

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	93.89112244	93.89112244	96.09	<.0001
geo_num	2	13.52370106	6.76185053	6.92	0.0012

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	86.59155530	86.59155530	88.62	<.0001
geo_num	2	13.52370106	6.76185053	6.92	0.0012

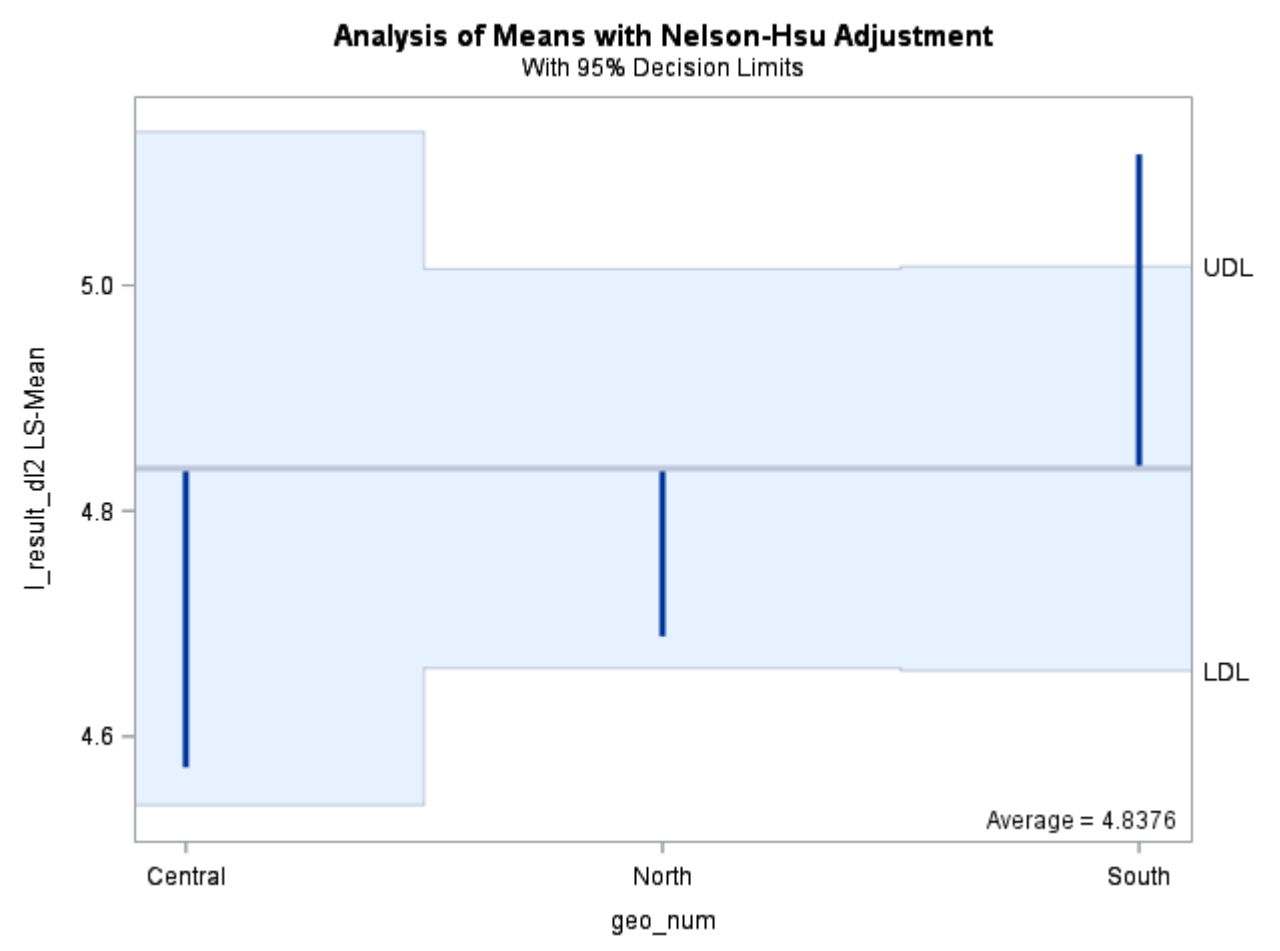

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.9771
R-Square 0.3054
Adj R-Square 0.2971


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PCBs Total PCBs (9)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.57255539	0.0931
North	4.68876647	0.1184
South	5.11619934	0.0009



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs (9)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.57255539	1
North	4.68876647	2
South	5.11619934	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.7768	0.0051
2	0.7768		0.0064
3	0.0051	0.0064	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

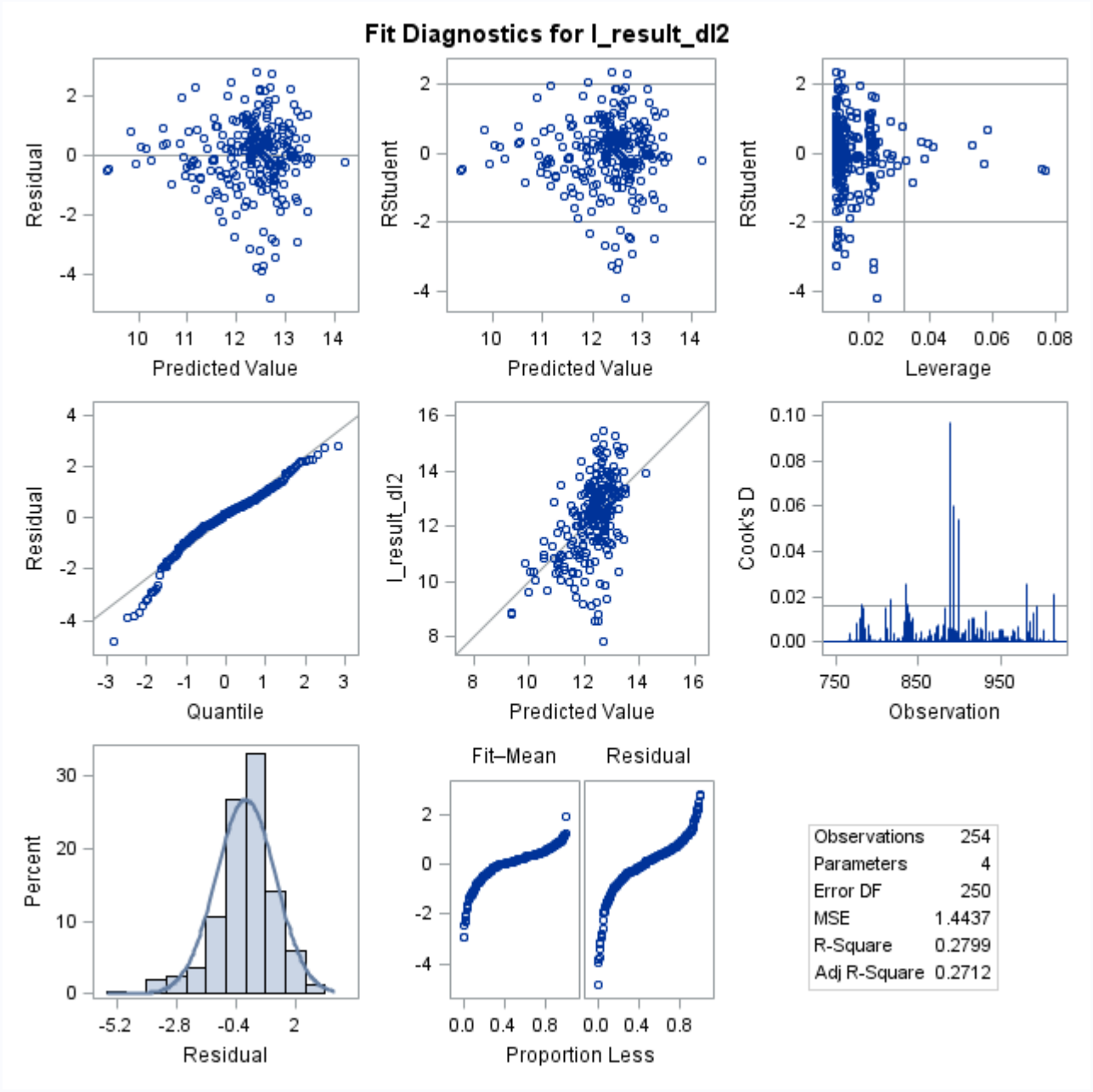
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

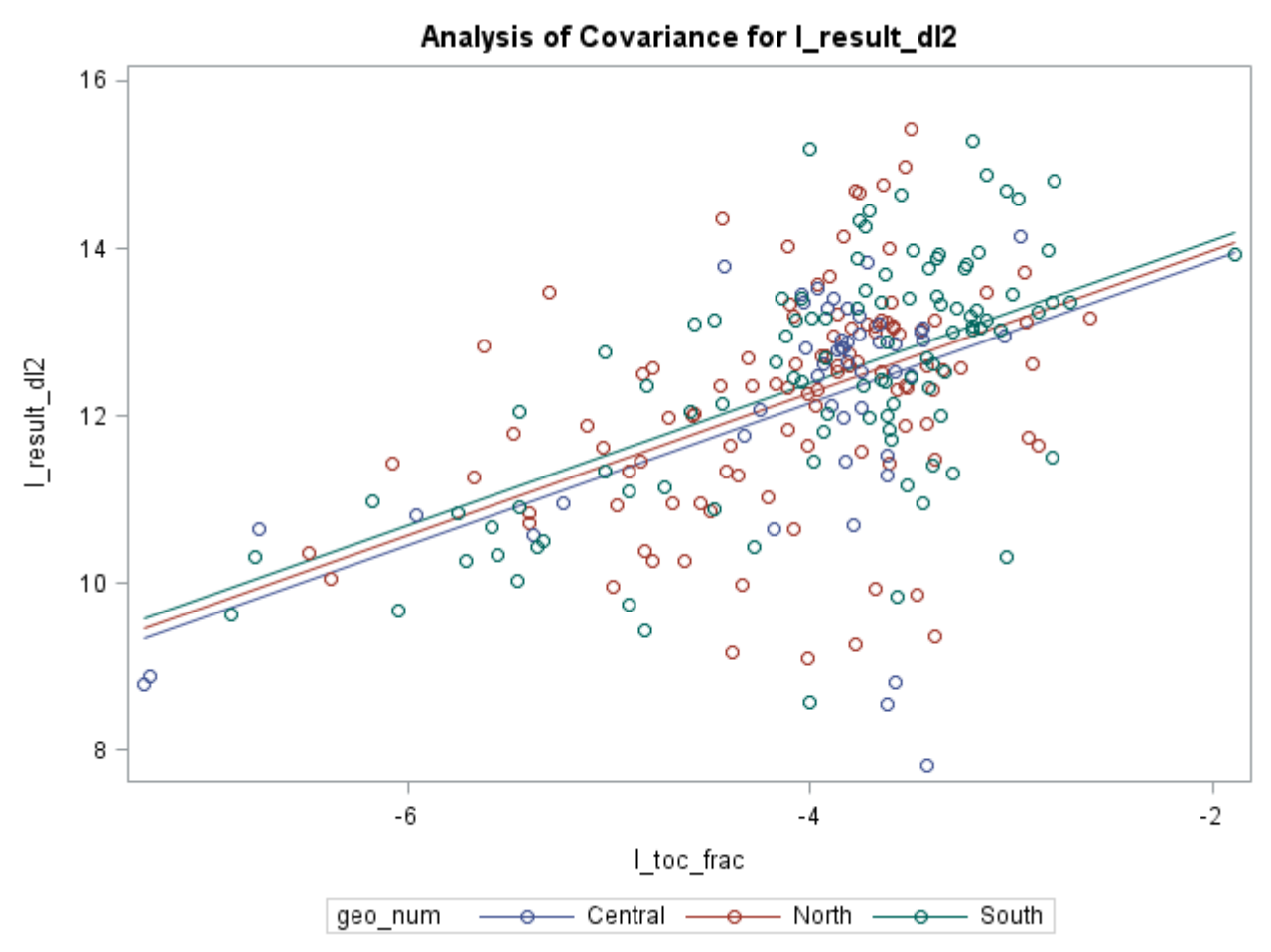
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	140.2725660	46.7575220	32.39	<.0001
Error	250	360.9238797	1.4436955		
Corrected Total	253	501.1964458			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.279875	9.777382	1.201539	12.28896

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	138.2765475	138.2765475	95.78	<.0001
geo_num	2	1.9960185	0.9980093	0.69	0.5019

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	134.2607849	134.2607849	93.00	<.0001
geo_num	2	1.9960185	0.9980093	0.69	0.5019

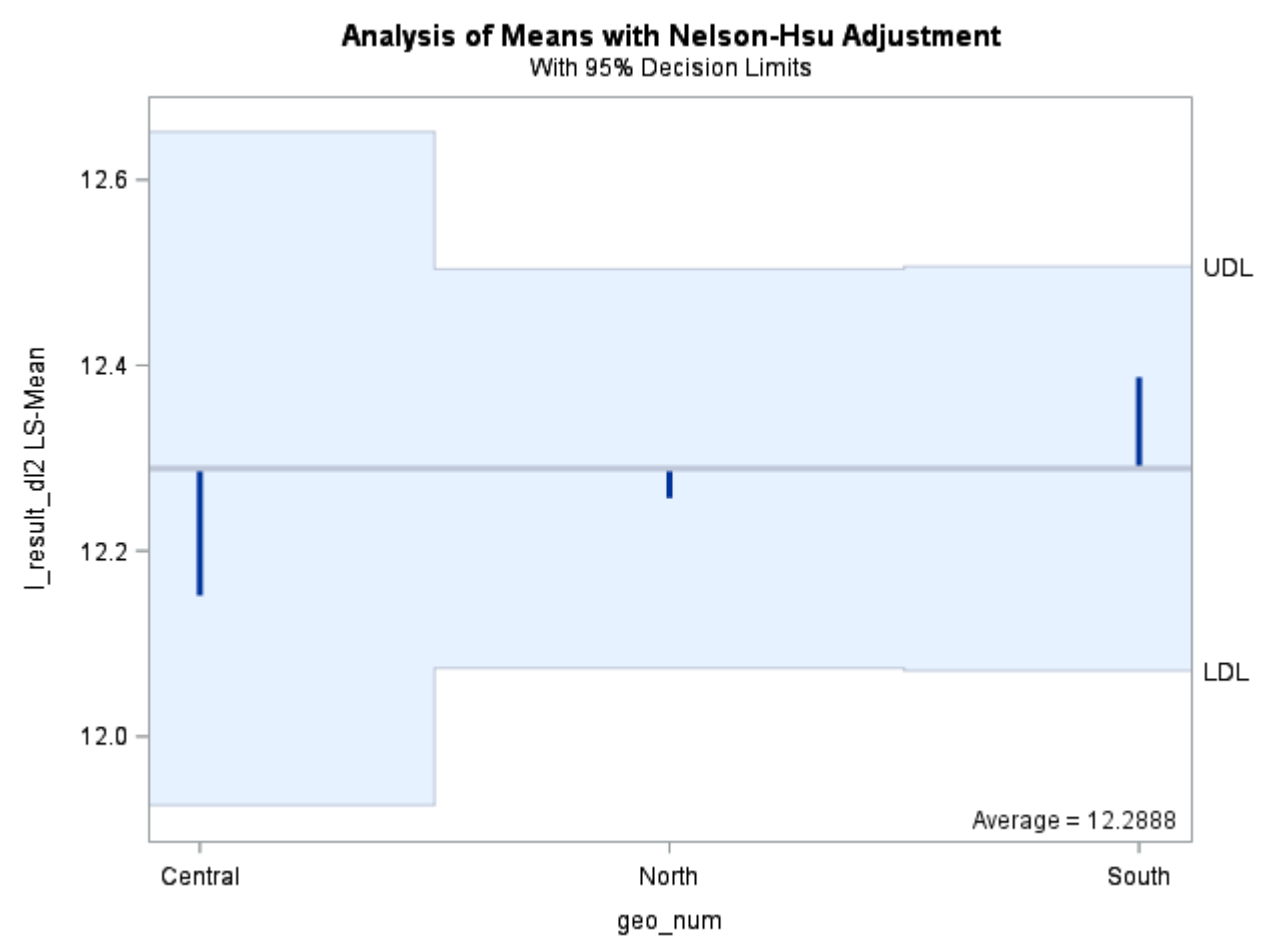

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.4437
R-Square 0.2799
Adj R-Square 0.2712


Analysis of Covariance for l_result_dl2
16
14
12
10
8
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PCBs Total PCBs congener (209 specified)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	12.1518900	0.6465
North	12.2569139	0.9347
South	12.3871743	0.5360



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total PCBs congener (209 specified)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	12.1518900	1
North	12.2569139	2
South	12.3871743	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.8696	0.5002
2	0.8696		0.7199
3	0.5002	0.7199	

The GLM Procedure
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

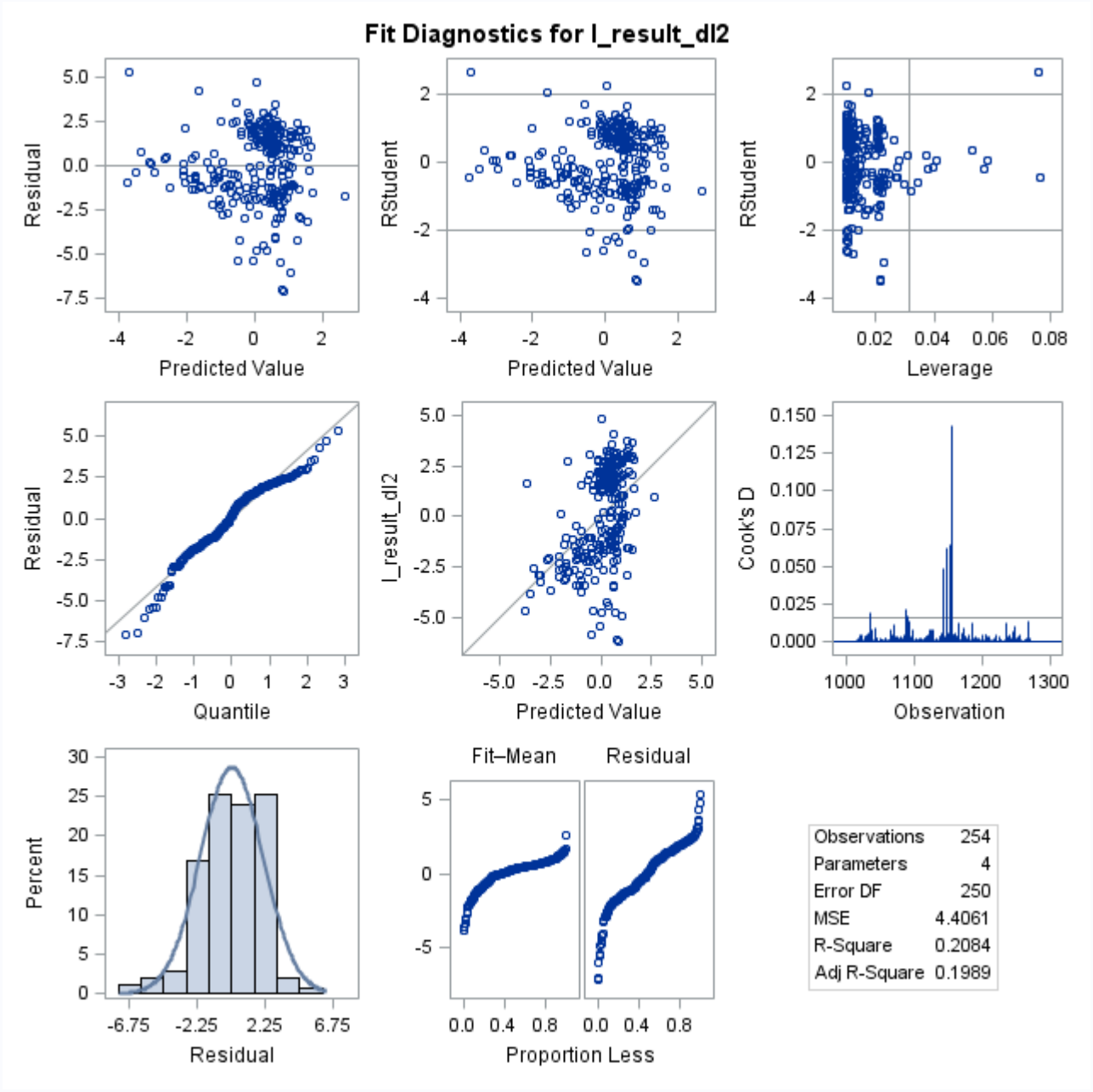
Dependent Variable: l_result_dl2
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

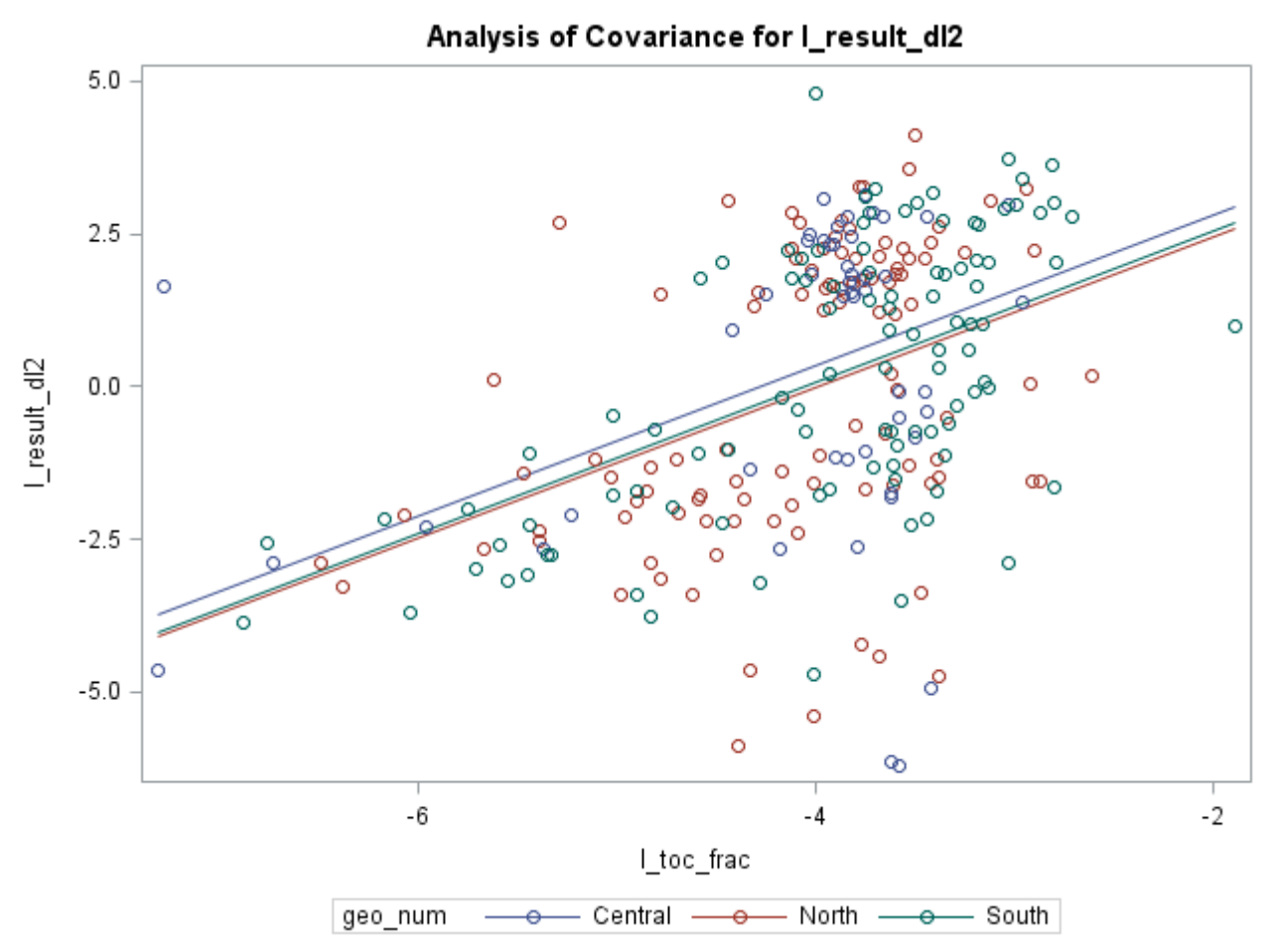
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	290.013760	96.671253	21.94	<.0001
Error	250	1101.516228	4.406065		
Corrected Total	253	1391.529988			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.208414	3145.664	2.099063	0.066729

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	285.4428401	285.4428401	64.78	<.0001
geo_num	2	4.5709194	2.2854597	0.52	0.5959

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	283.6026140	283.6026140	64.37	<.0001
geo_num	2	4.5709194	2.2854597	0.52	0.5959

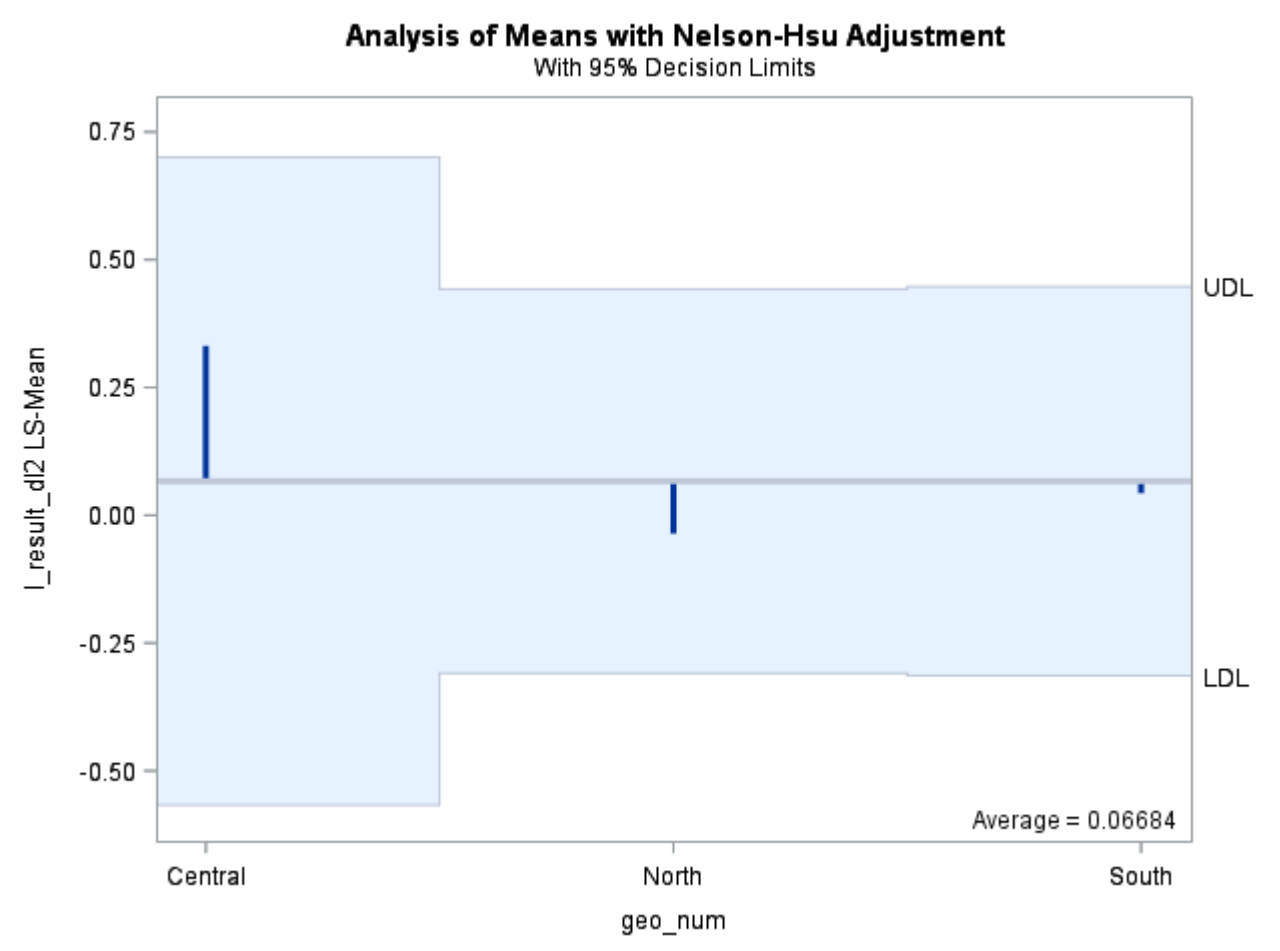

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 4.4061
R-Square 0.2084
Adj R-Square 0.1989


Analysis of Covariance for l_result_dl2
5.0
2.5
0.0
-2.5
-5.0
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	0.33135397	0.5869
North	-0.03583585	0.7953
South	0.04317504	0.9882



PCBs Total WHO PCB TEQ(Human/Mammal)(ND=0)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=2 Parameter_group=PCBs chemical_name=Total WHO PCB TEQ(Human/Mammal)(ND=0)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	0.33135397	1
North	-0.03583585	2
South	0.04317504	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5725	0.7107
2	0.5725		0.9611
3	0.7107	0.9611	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

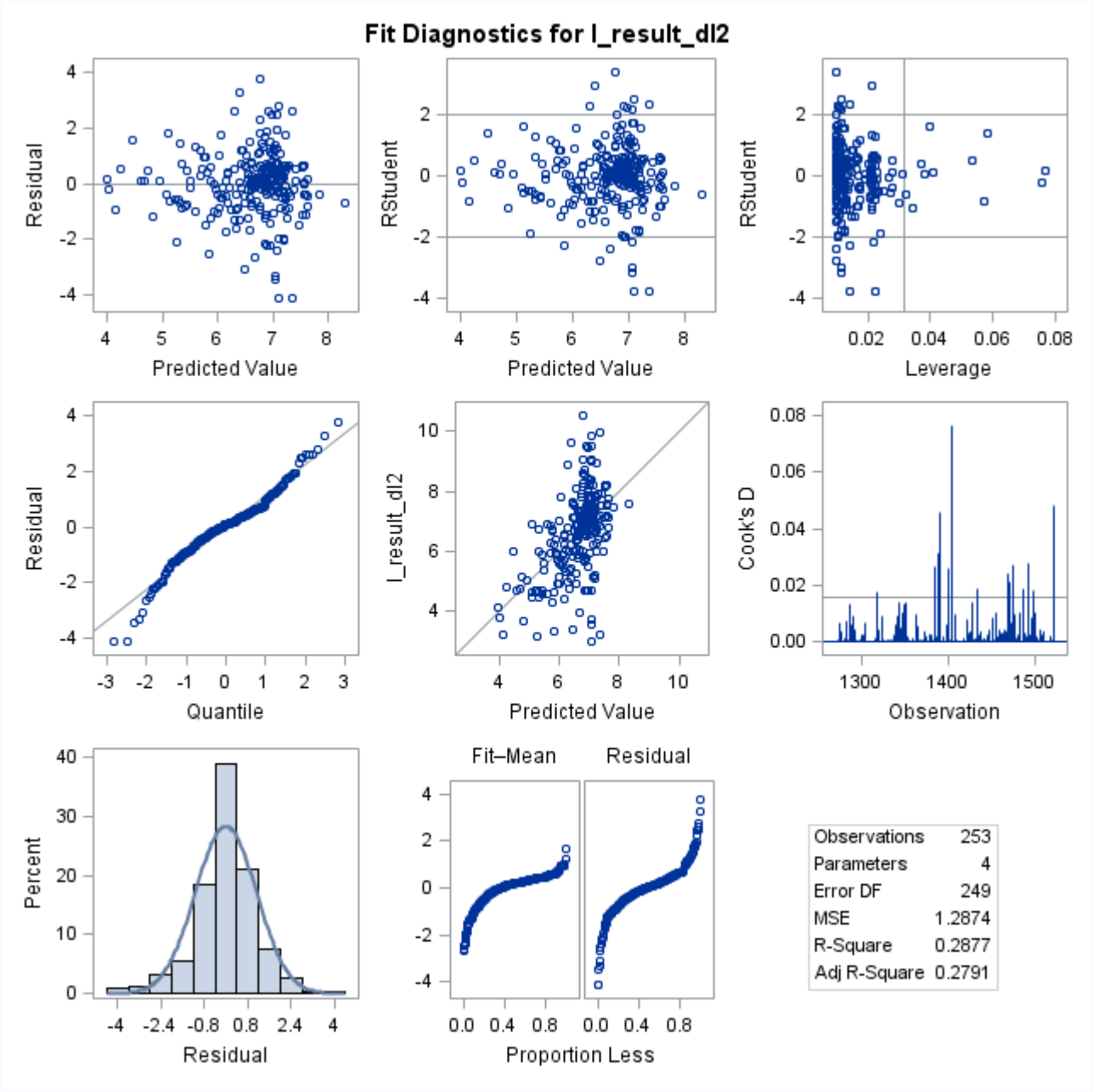
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

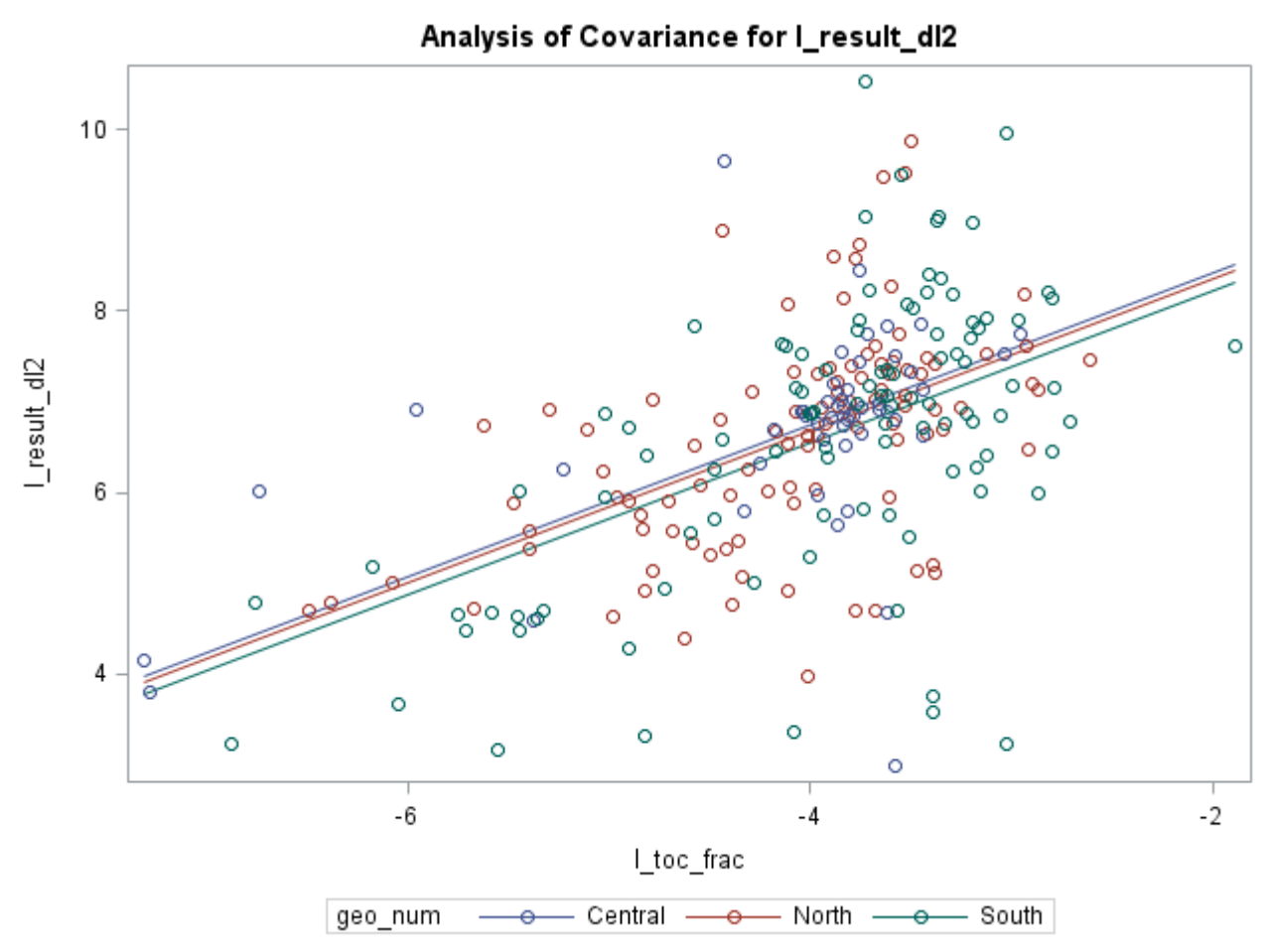
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	129.4681852	43.1560617	33.52	<.0001
Error	249	320.5600237	1.2873897		
Corrected Total	252	450.0282088			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.287689	17.14301	1.134632	6.618627

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	127.8747015	127.8747015	99.33	<.0001
geo_num	2	1.5934837	0.7967419	0.62	0.5394

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	129.2987470	129.2987470	100.43	<.0001
geo_num	2	1.5934837	0.7967419	0.62	0.5394

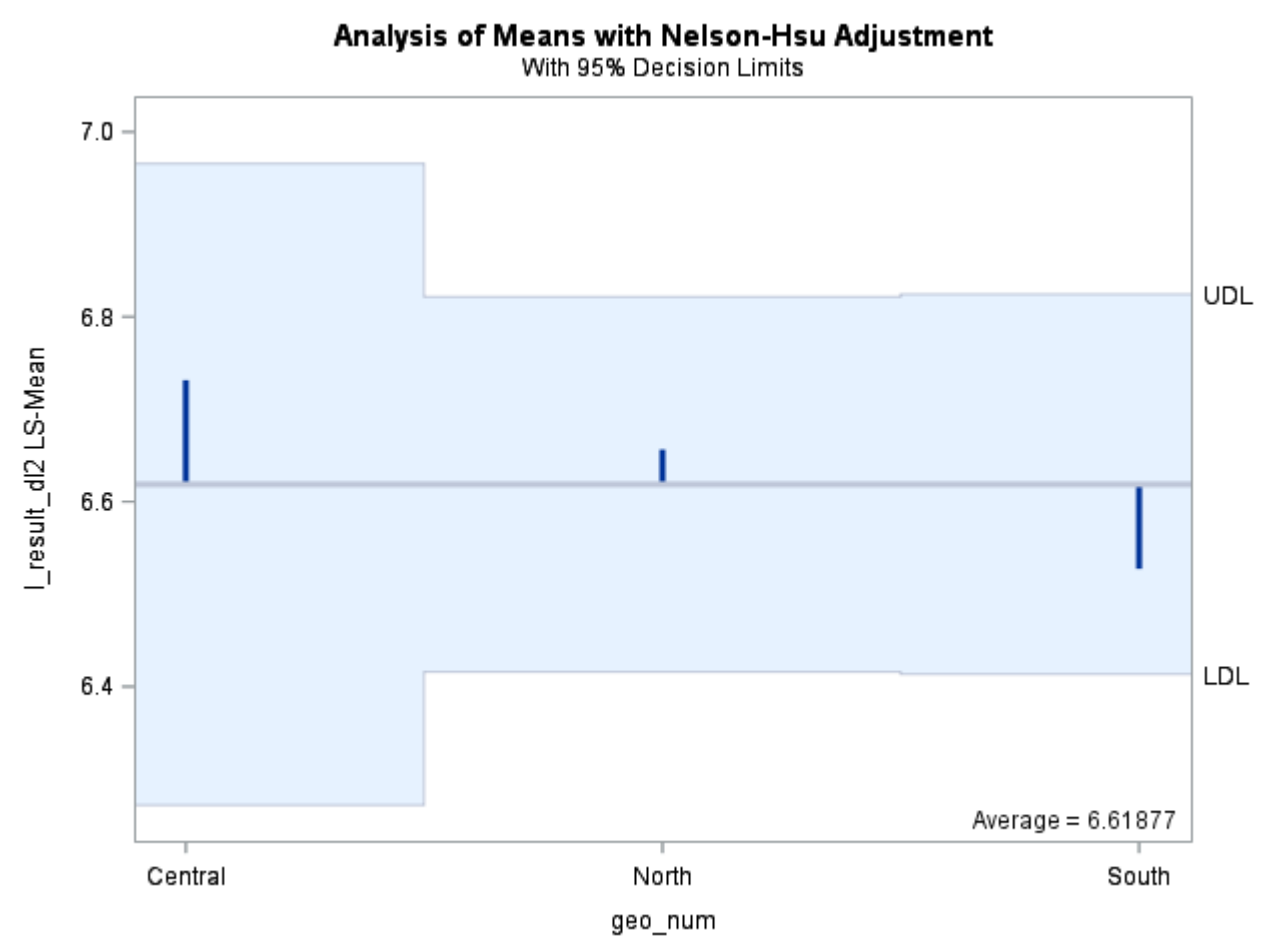

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 4
Error DF 249
MSE 1.2874
R-Square 0.2877
Adj R-Square 0.2791


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Pesticides Dieldrin
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.73147401	0.7235
North	6.65638875	0.8997
South	6.52739064	0.5461



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Dieldrin

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.73147401	1
North	6.65638875	2
South	6.52739064	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9240	0.5619
2	0.9240		0.6967
3	0.5619	0.6967	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

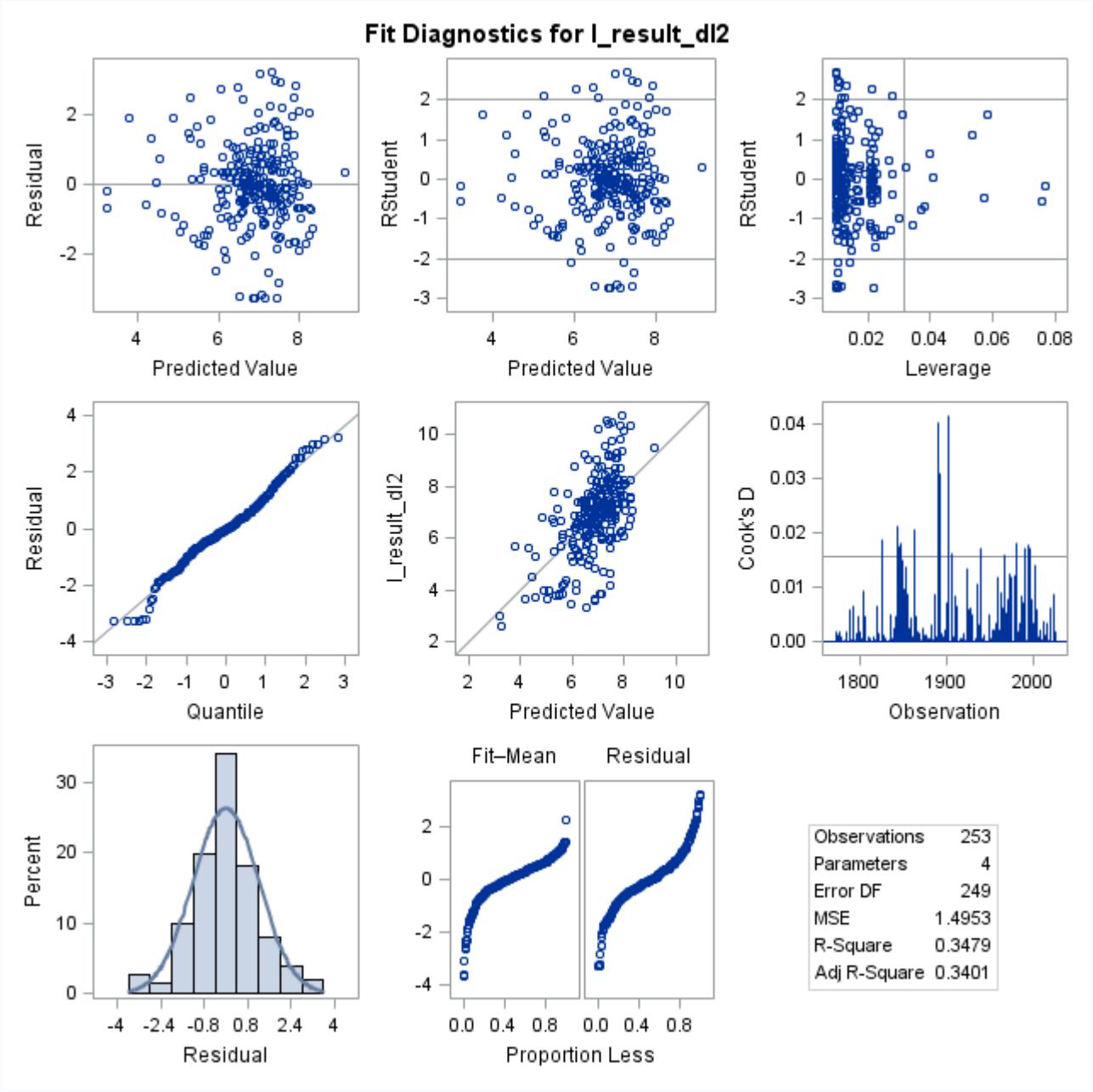
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

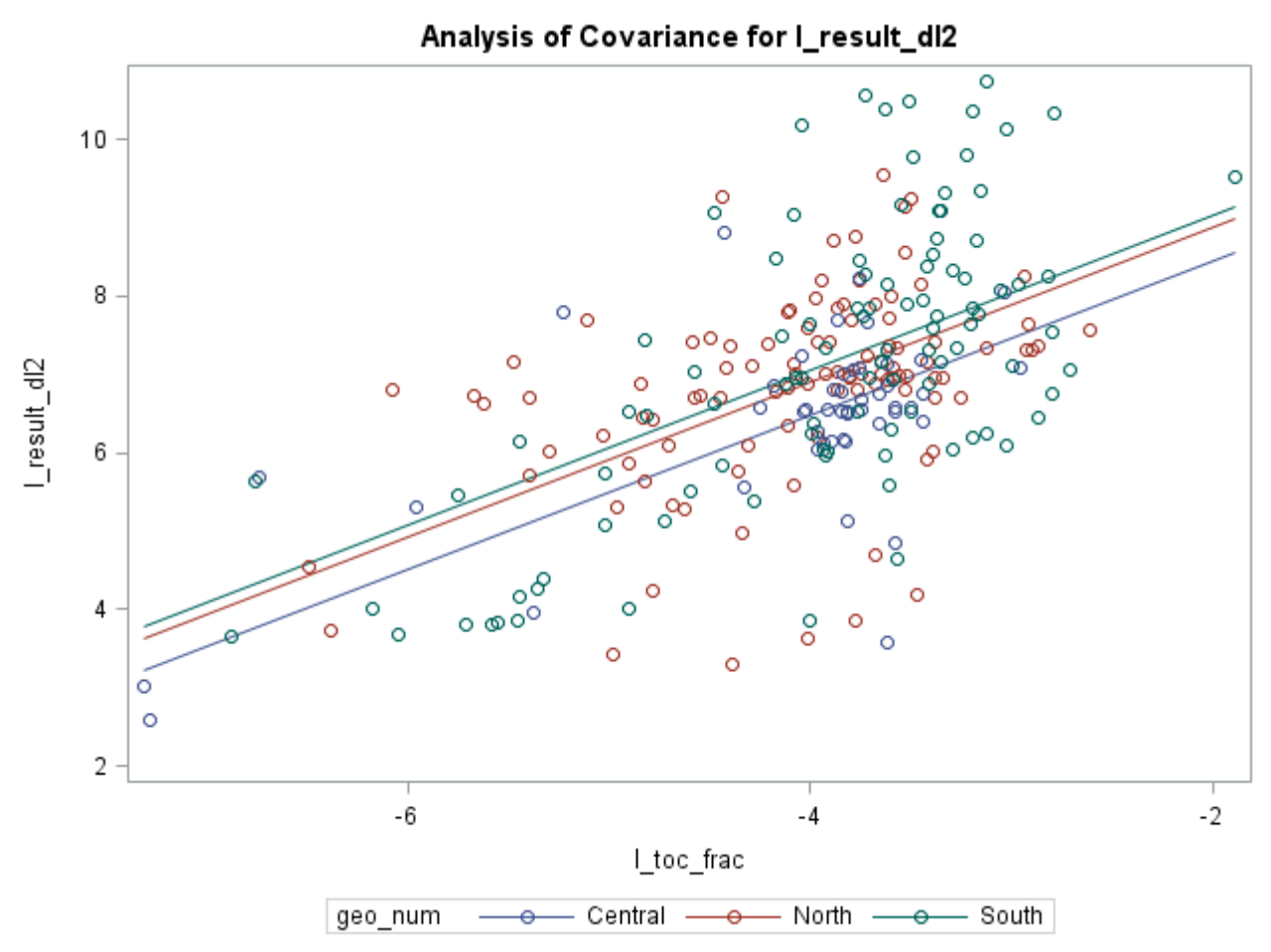
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	198.6667047	66.2222349	44.29	<.0001
Error	249	372.3190729	1.4952573		
Corrected Total	252	570.9857776			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.347936	17.81135	1.222807	6.865325

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	188.0666047	188.0666047	125.78	<.0001
geo_num	2	10.6001001	5.3000500	3.54	0.0303

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	180.4584565	180.4584565	120.69	<.0001
geo_num	2	10.6001001	5.3000500	3.54	0.0303

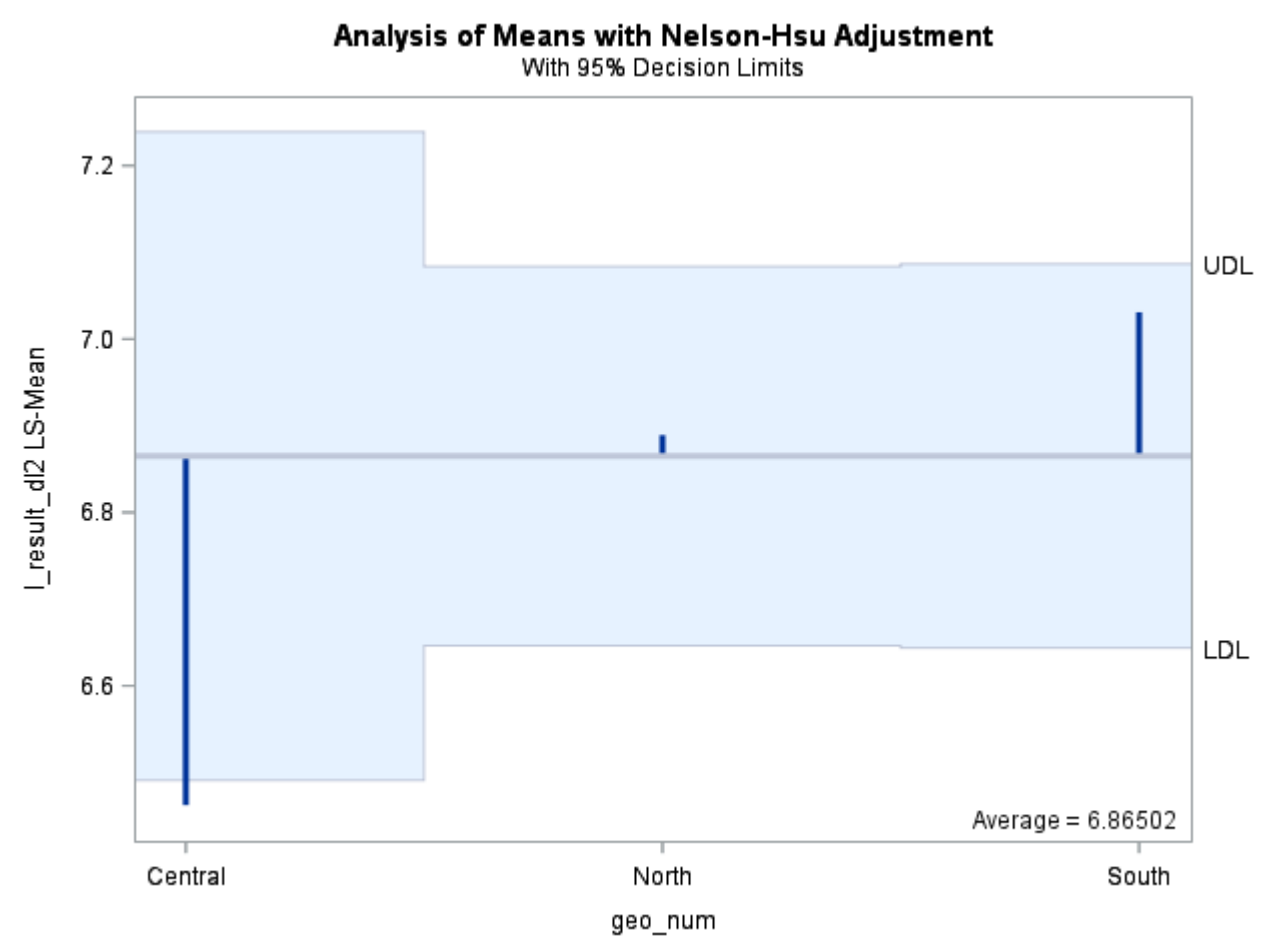

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 4
Error DF 249
MSE 1.4953
R-Square 0.3479
Adj R-Square 0.3401


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Pesticides Hexachlorobenzene
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.46240110	0.0314
North	6.88914573	0.9632
South	7.03088097	0.1828



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Hexachlorobenzene

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.46240110	1
North	6.88914573	2
South	7.03088097	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.1151	0.0233
2	0.1151		0.6869
3	0.0233	0.6869	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

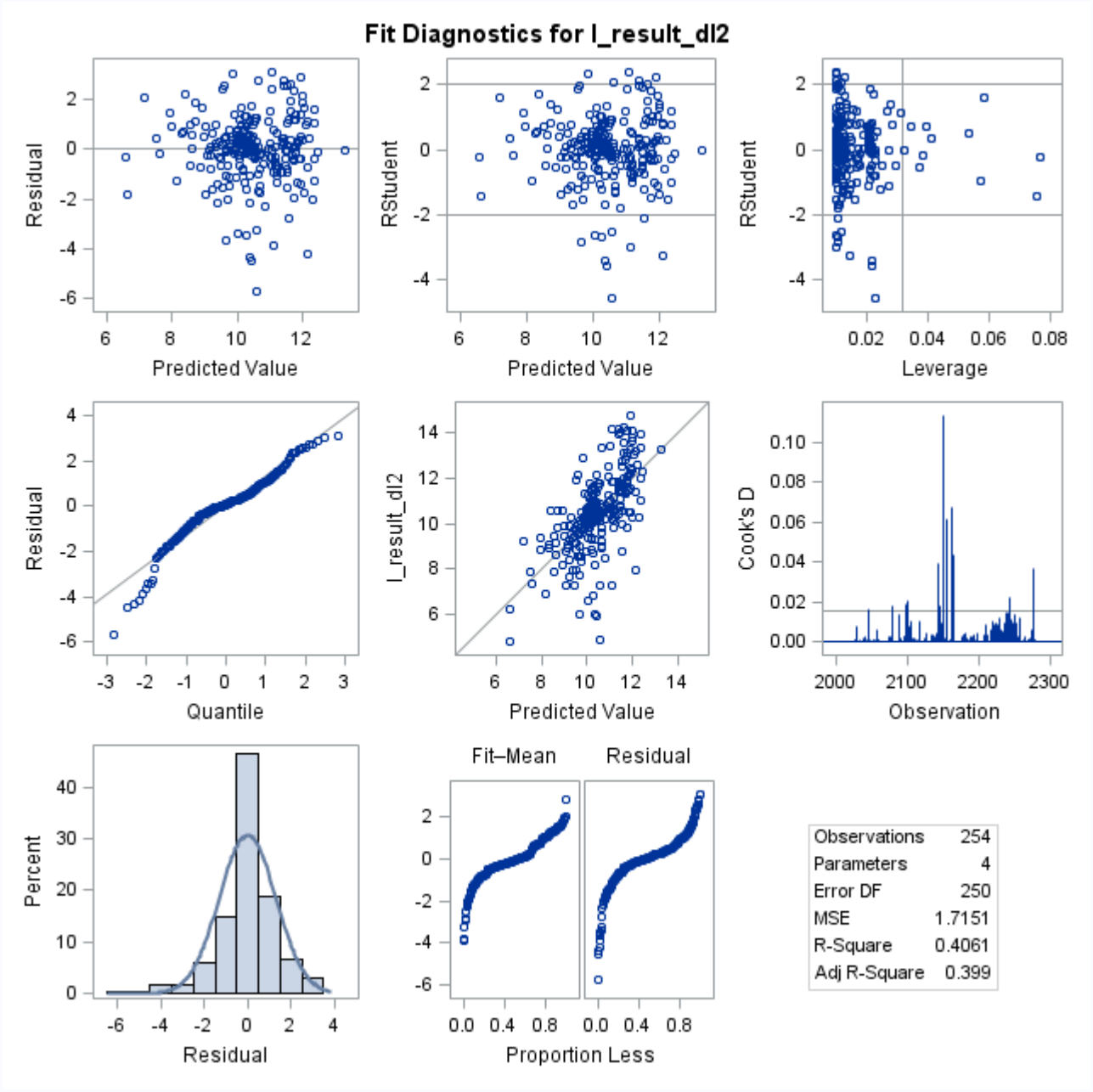
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

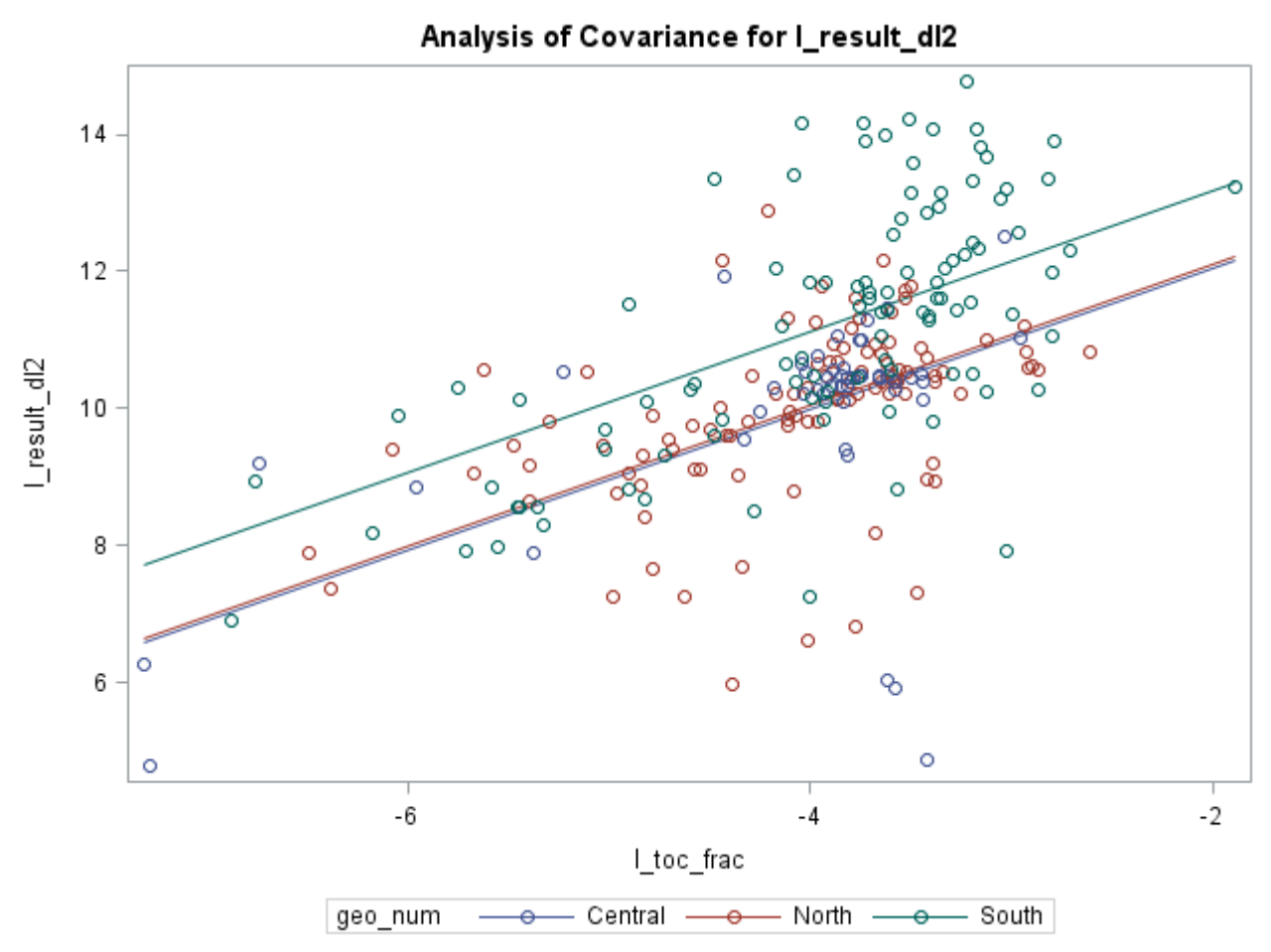
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	293.2090795	97.7363598	56.99	<.0001
Error	250	428.7757627	1.7151031		
Corrected Total	253	721.9848422			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.406115	12.53227	1.309619	10.44997

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	220.7337057	220.7337057	128.70	<.0001
geo_num	2	72.4753738	36.2376869	21.13	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	195.5764631	195.5764631	114.03	<.0001
geo_num	2	72.4753738	36.2376869	21.13	<.0001

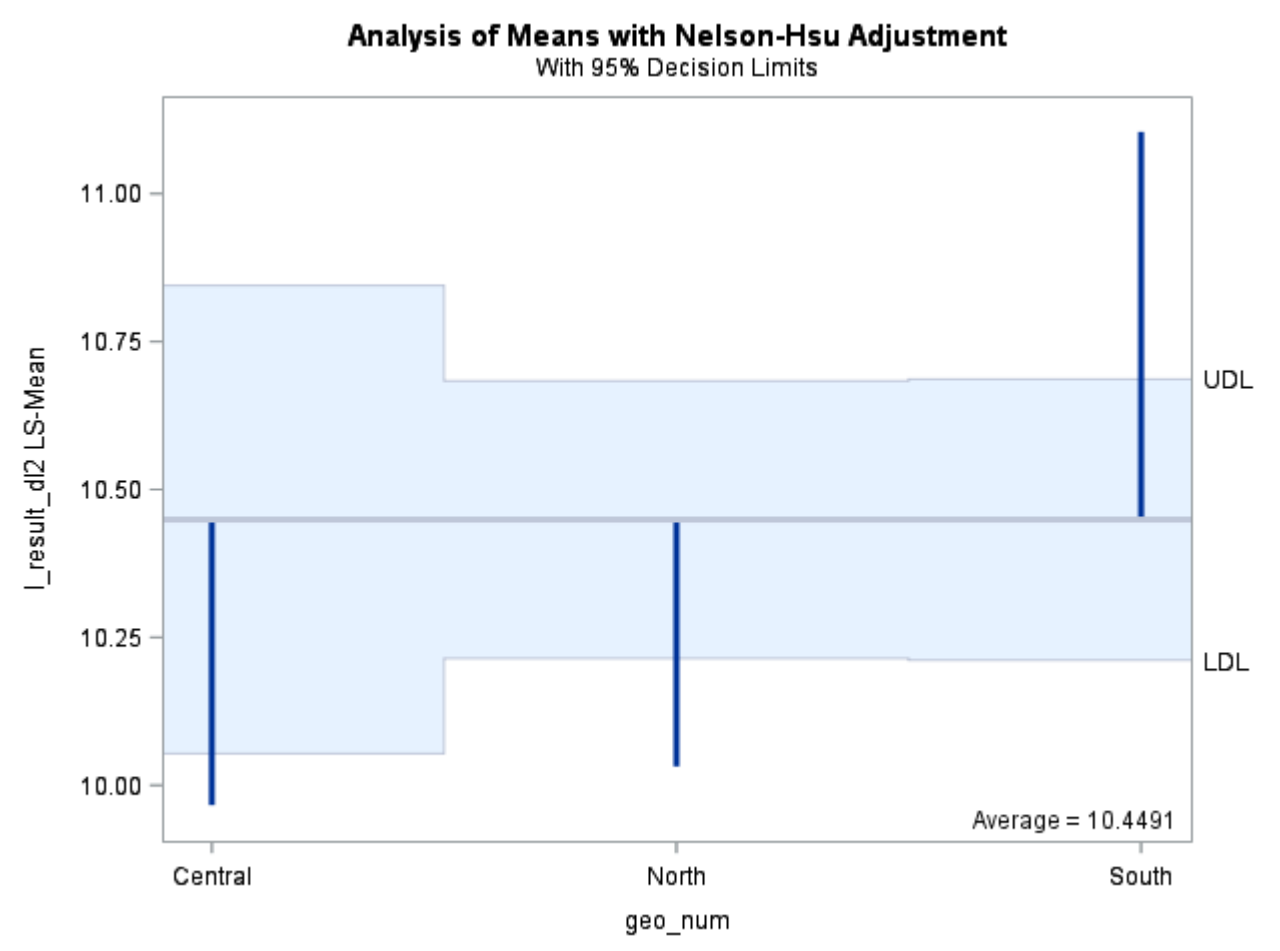

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.7151
R-Square 0.4061
Adj R-Square 0.399


Analysis of Covariance for l_result_dl2
14
12
10
8
6
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	9.9665577	0.0122
North	10.0319224	0.0001
South	11.1043538	<.0001



Pesticides Total DDx (2,4 & 4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (2,4 & 4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	9.9665577	1
North	10.0319224	2
South	11.1043538	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9554	<.0001
2	0.9554		<.0001
3	<.0001	<.0001	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

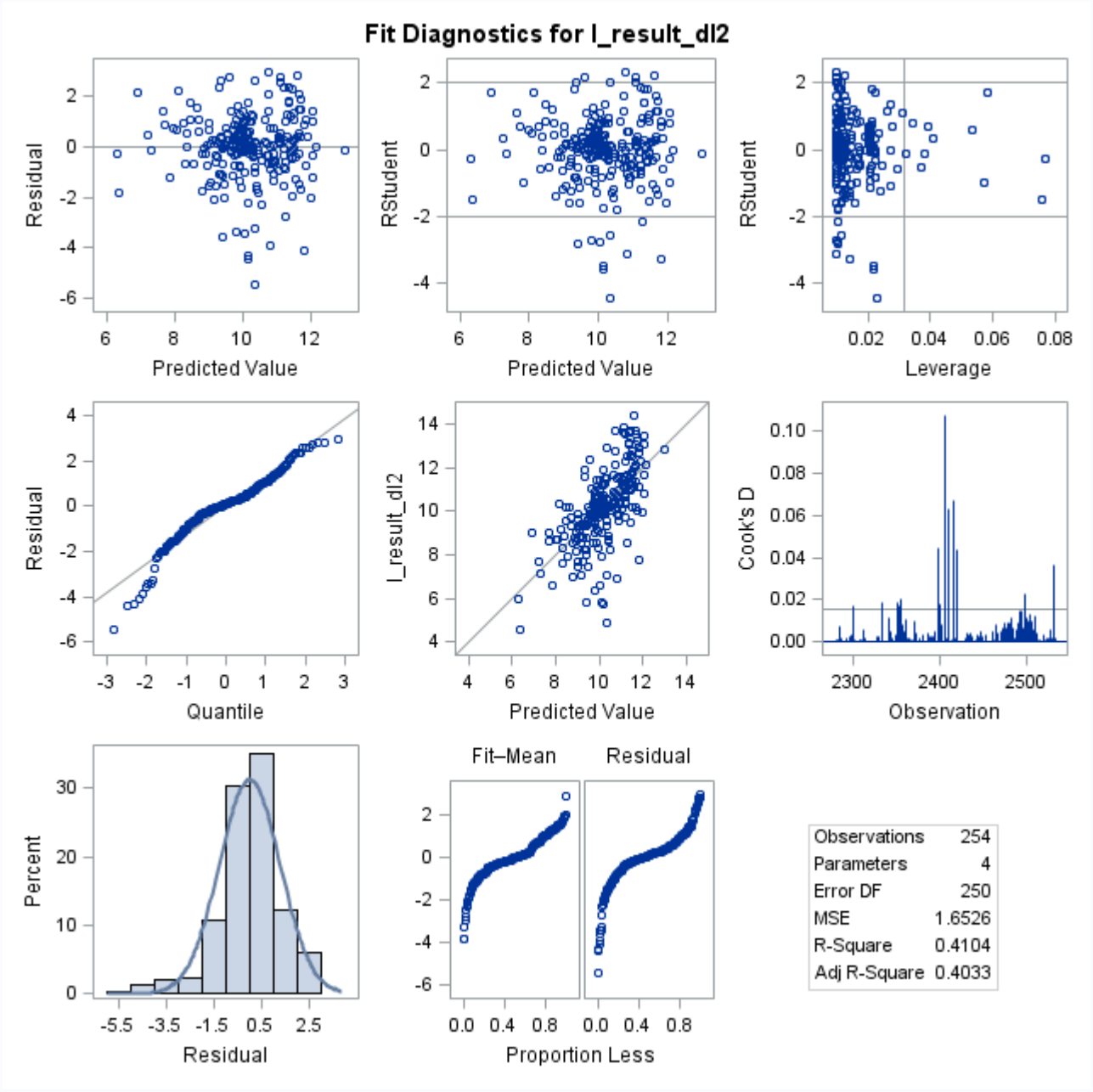
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

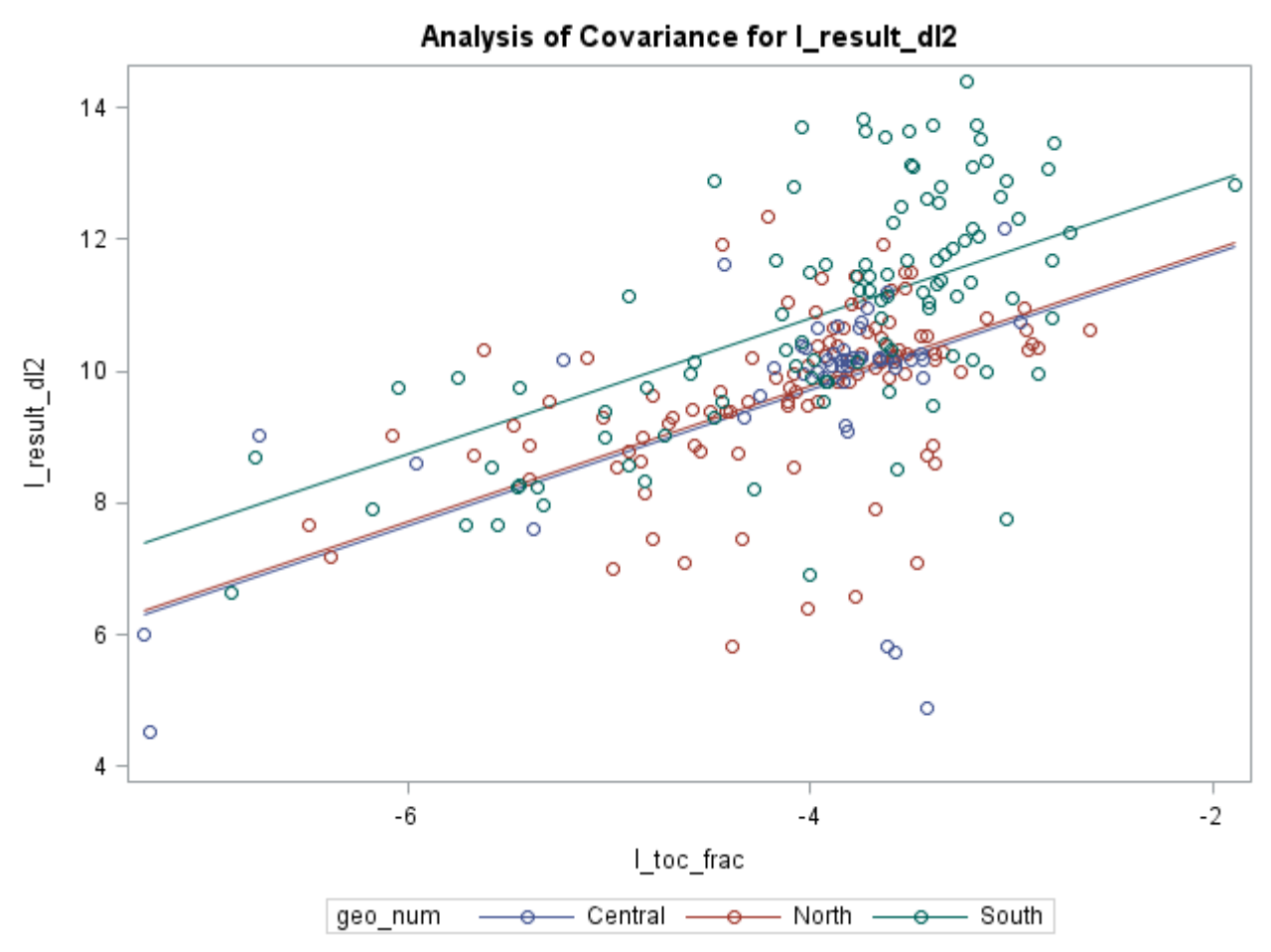
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	287.5193851	95.8397950	57.99	<.0001
Error	250	413.1468392	1.6525874		
Corrected Total	253	700.6662243			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.410351	12.64106	1.285530	10.16948

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	221.5748711	221.5748711	134.08	<.0001
geo_num	2	65.9445140	32.9722570	19.95	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	197.4079580	197.4079580	119.45	<.0001
geo_num	2	65.9445140	32.9722570	19.95	<.0001

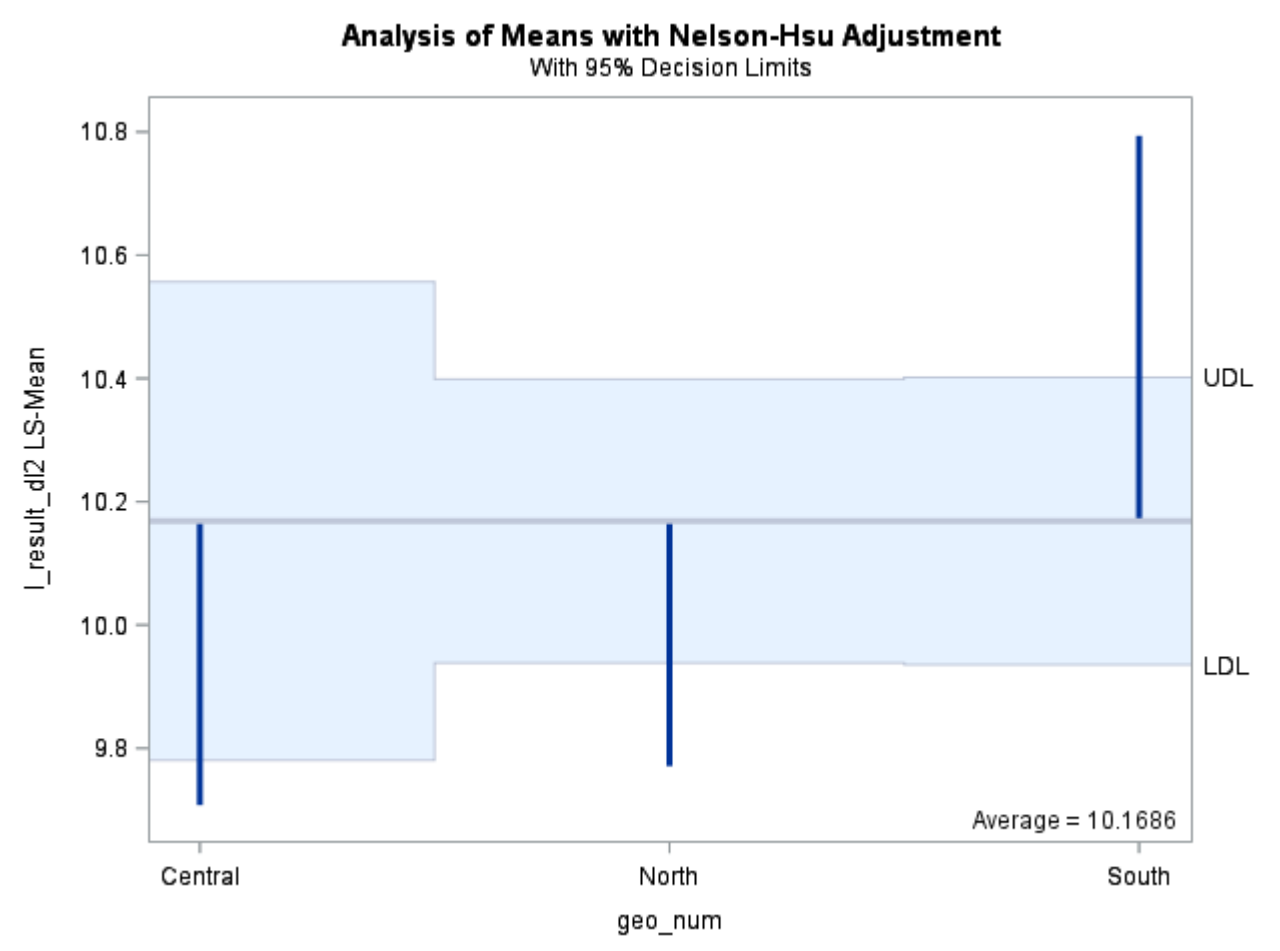

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.6526
R-Square 0.4104
Adj R-Square 0.4033


Analysis of Covariance for l_result_dl2
l_result_dl2
14
12
10
8
6
4
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Pesticides Total DDx (4,4) Total Fraction
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	9.7077687	0.0153
North	9.7710080	0.0002
South	10.7936635	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total DDx (4,4) Total Fraction

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	9.7077687	1
North	9.7710080	2
South	10.7936635	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9567	<.0001
2	0.9567		<.0001
3	<.0001	<.0001	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

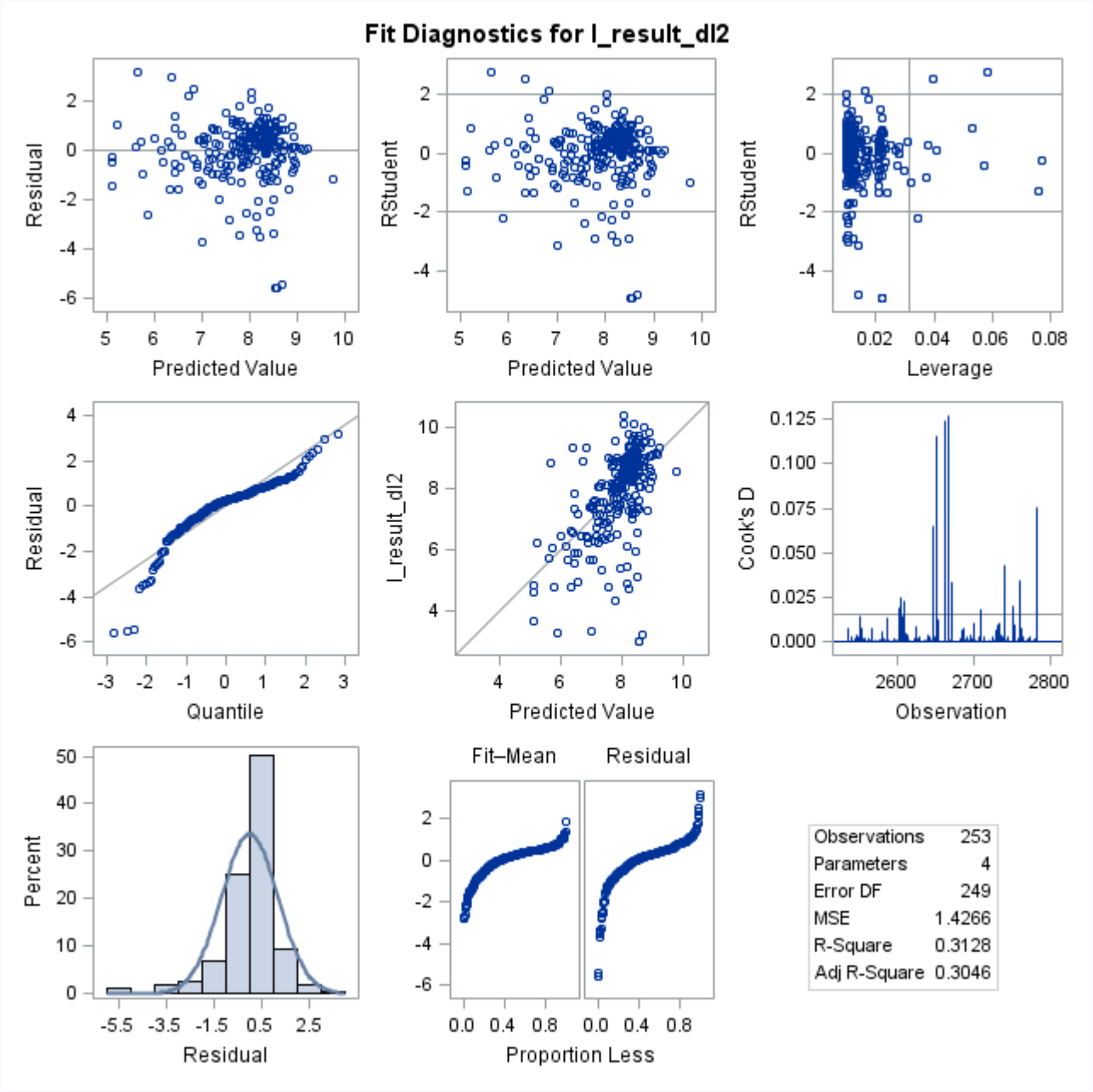
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

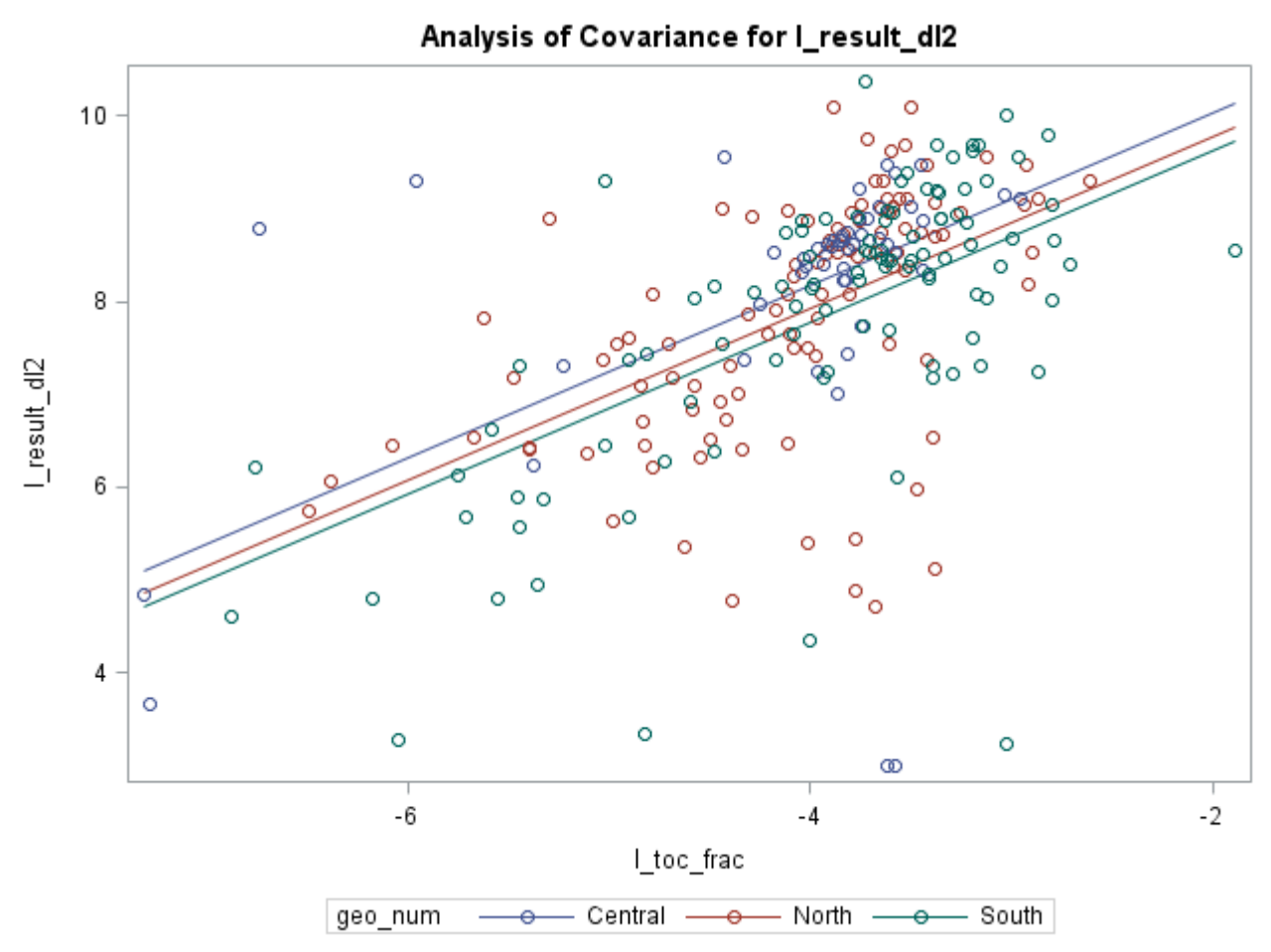
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	161.7276501	53.9092167	37.79	<.0001
Error	249	355.2336610	1.4266412		
Corrected Total	252	516.9613111			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.312843	15.12765	1.194421	7.895615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	156.5275385	156.5275385	109.72	<.0001
geo_num	2	5.2001117	2.6000558	1.82	0.1638

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	159.4713064	159.4713064	111.78	<.0001
geo_num	2	5.2001117	2.6000558	1.82	0.1638

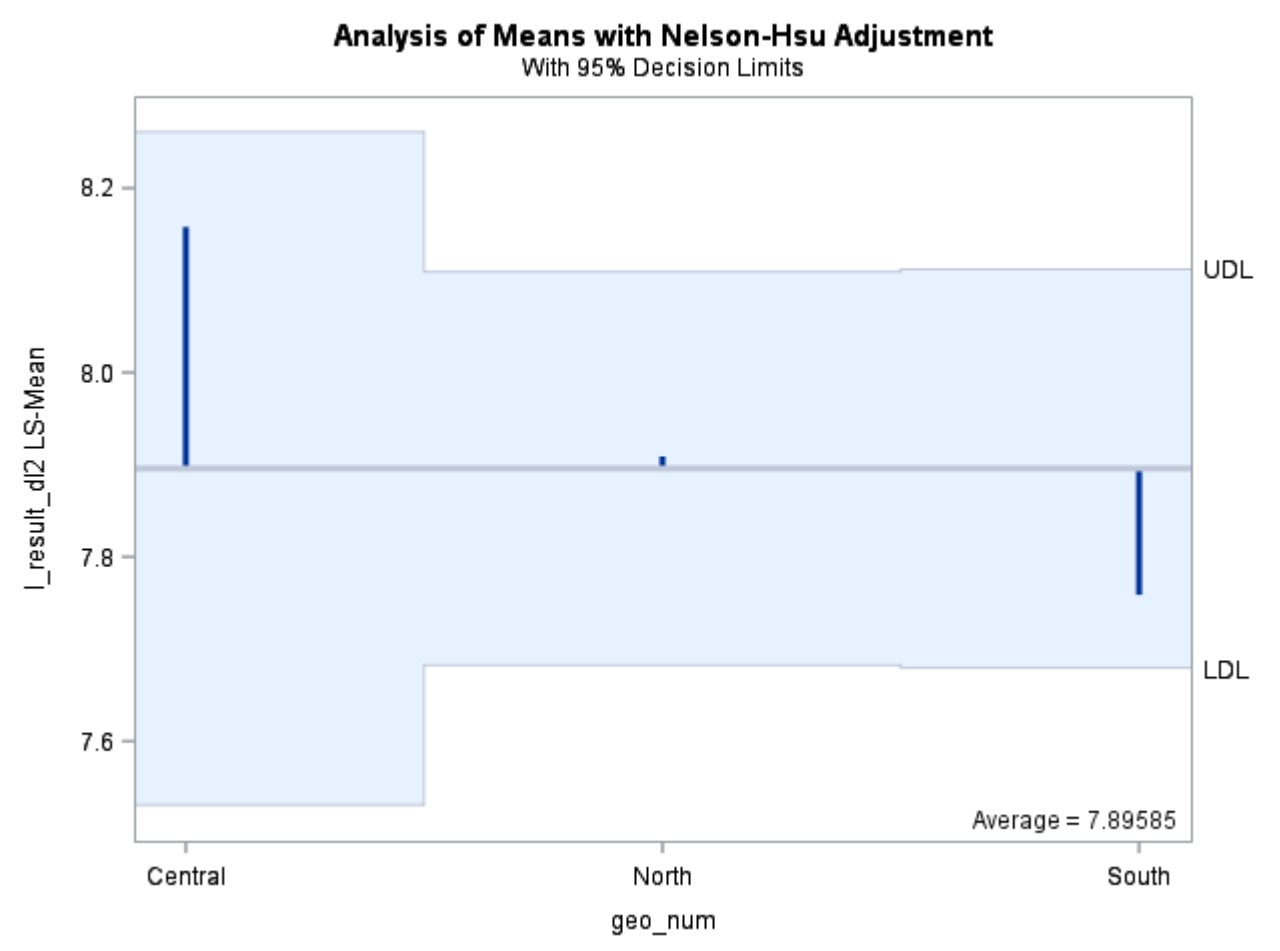

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 4
Error DF 249
MSE 1.4266
R-Square 0.3128
Adj R-Square 0.3046


Analysis of Covariance for l_result_dl2
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.15793162	0.2098
North	7.90890081	0.9886
South	7.75875594	0.2946



Pesticides Total alpha + gamma chlordane
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=Total alpha + gamma chlordane

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.15793162	1
North	7.90890081	2
South	7.75875594	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.4584	0.1396
2	0.4584		0.6431
3	0.1396	0.6431	

The GLM Procedure
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	248
Number of Observations Used	248

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

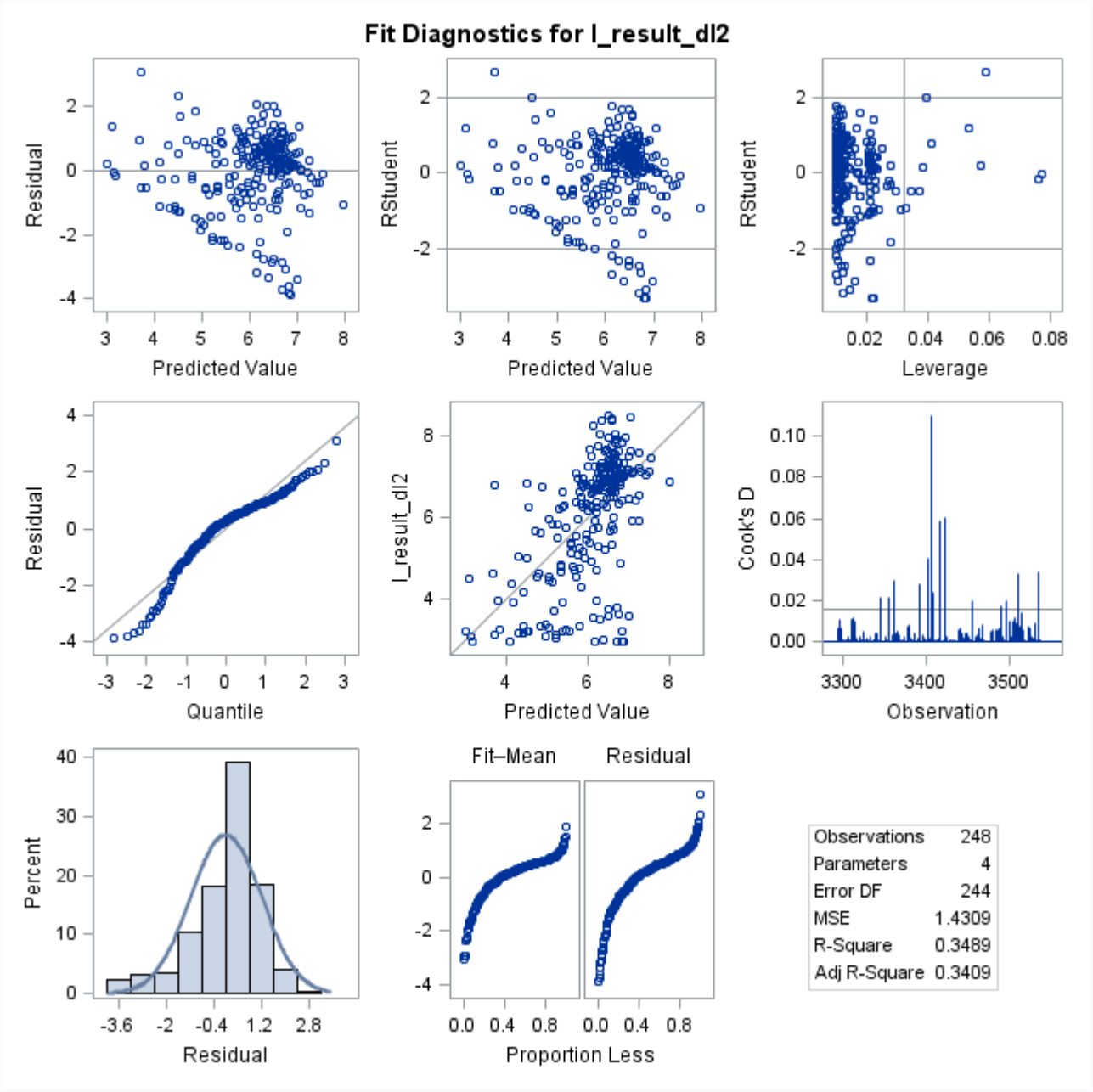
Dependent Variable: l_result_dl2
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

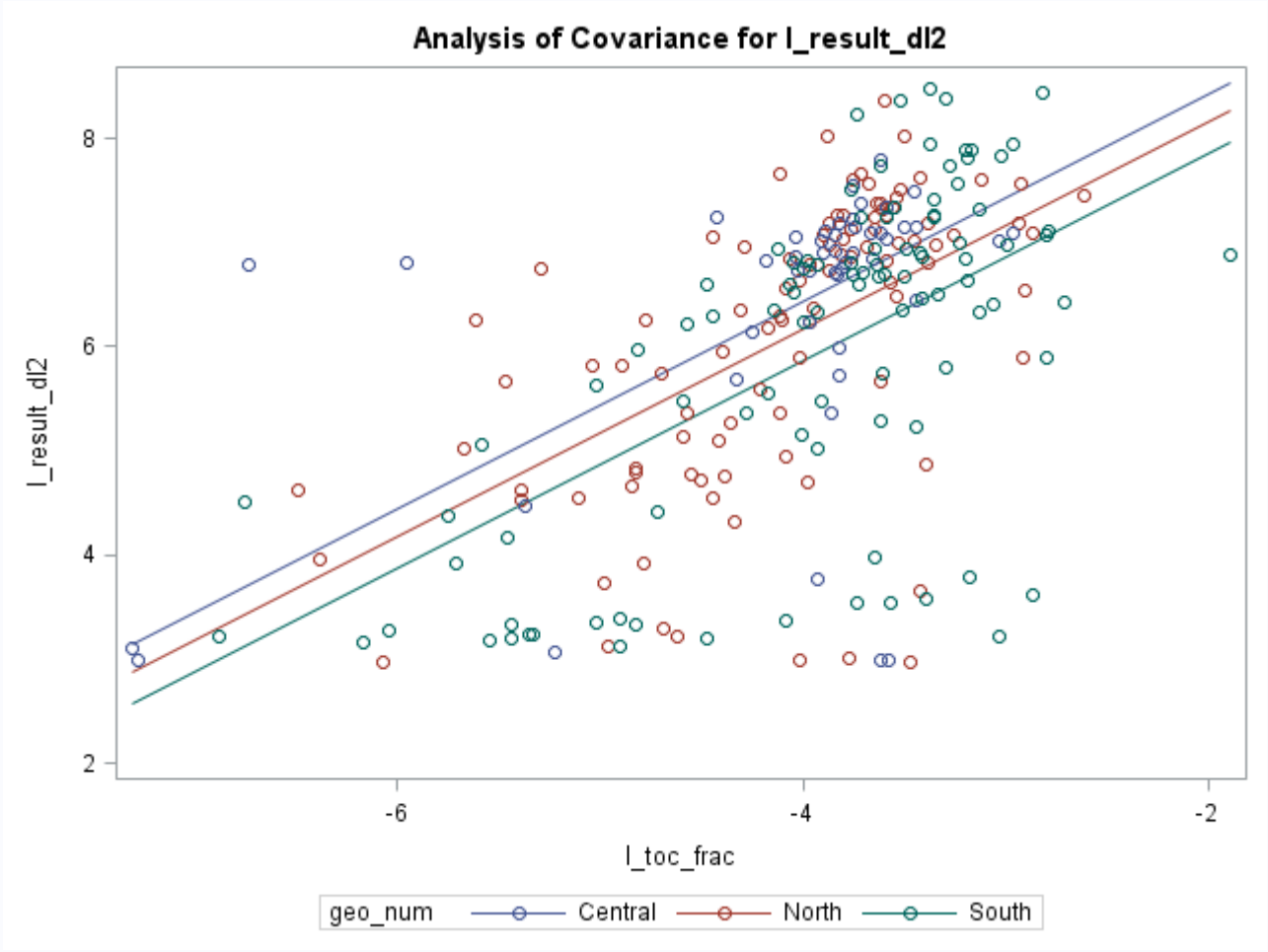
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	187.1213370	62.3737790	43.59	<.0001
Error	244	349.1338486	1.4308764		
Corrected Total	247	536.2551856			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.348941	19.72042	1.196192	6.065755

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	175.8514798	175.8514798	122.90	<.0001
geo_num	2	11.2698572	5.6349286	3.94	0.0207

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	181.6576538	181.6576538	126.96	<.0001
geo_num	2	11.2698572	5.6349286	3.94	0.0207

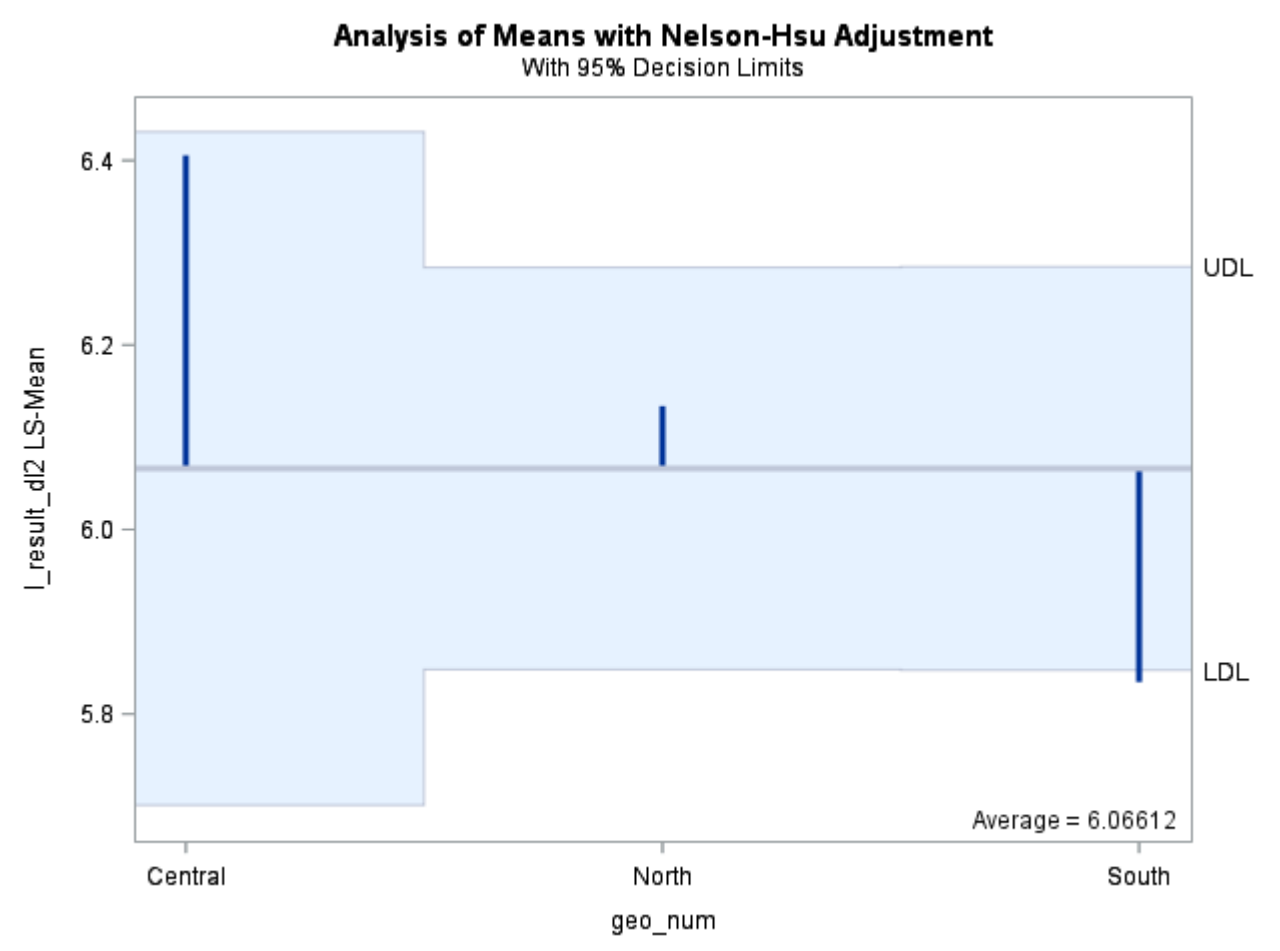

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 248
Parameters 4
Error DF 244
MSE 1.4309
R-Square 0.3489
Adj R-Square 0.3409


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Pesticides cis-Nonachlor
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.40555033	0.0742
North	6.13378882	0.7438
South	5.83461893	0.0352



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=3 Parameter_group=Pesticides chemical_name=cis-Nonachlor

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.40555033	1
North	6.13378882	2
South	5.83461893	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.4000	0.0195
2	0.4000		0.1848
3	0.0195	0.1848	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

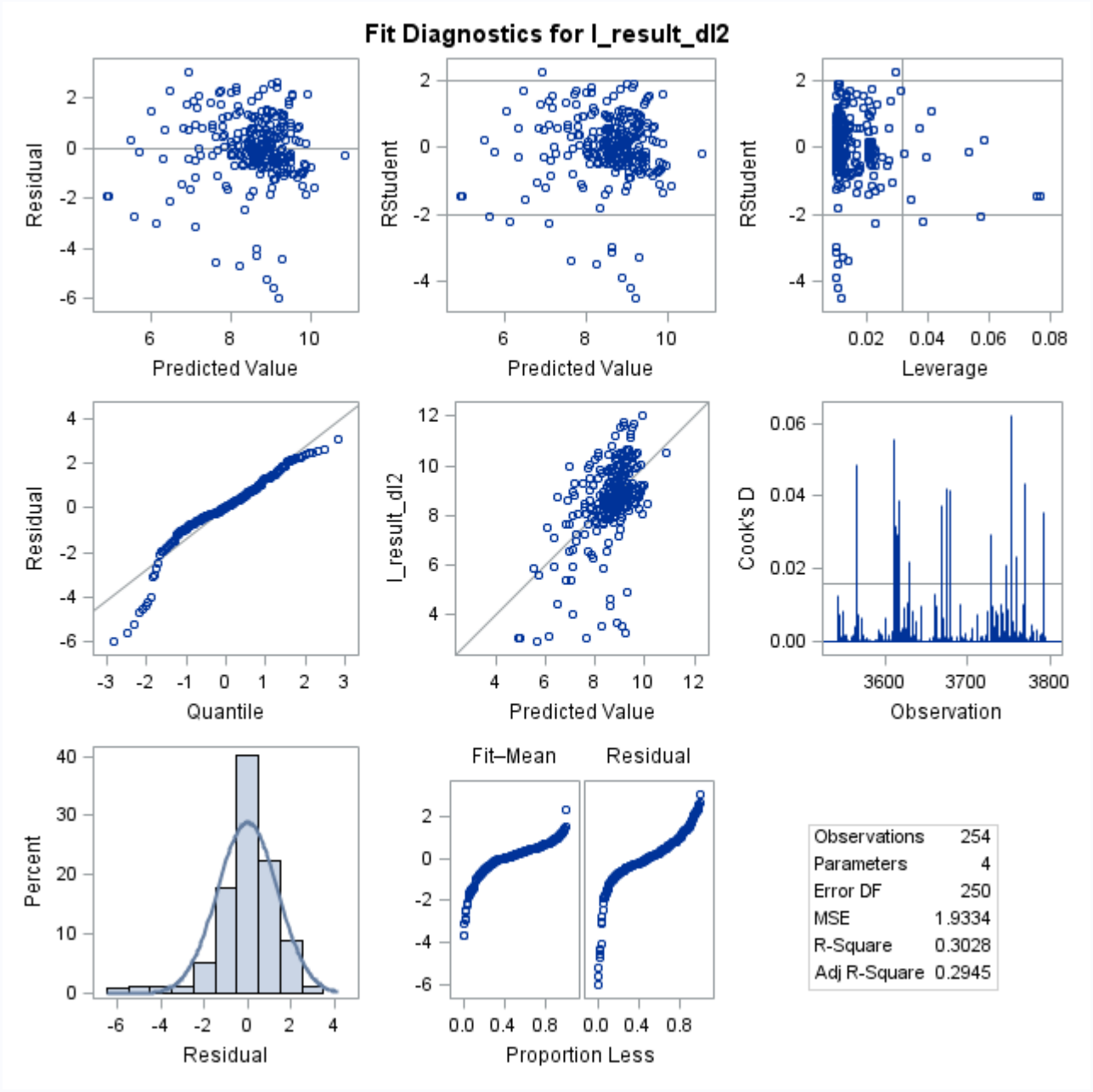
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

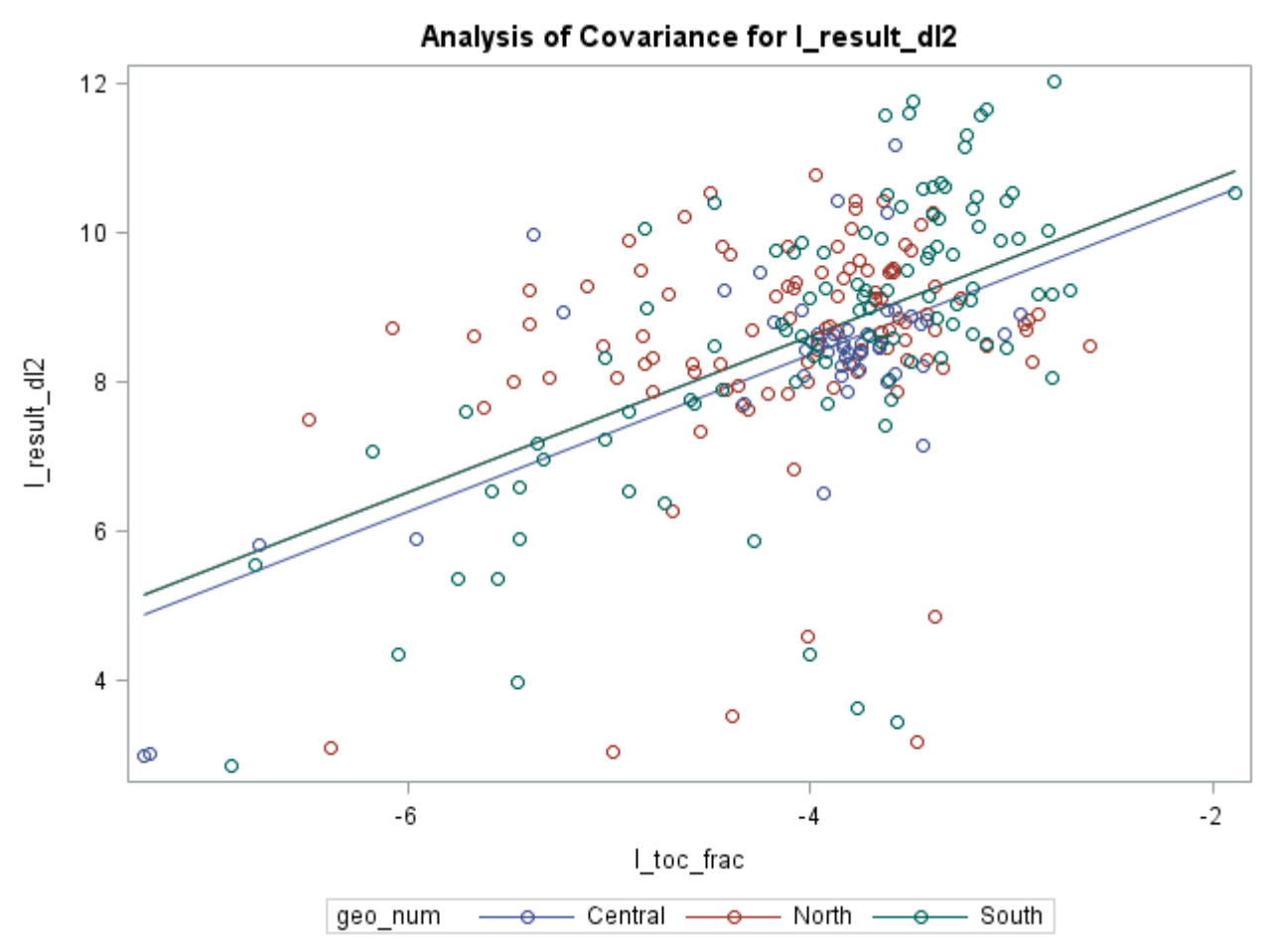
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	209.9573736	69.9857912	36.20	<.0001
Error	250	483.3546467	1.9334186		
Corrected Total	253	693.3120203			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.302832	16.24922	1.390474	8.557173

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	207.3387555	207.3387555	107.24	<.0001
geo_num	2	2.6186181	1.3093090	0.68	0.5090

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	204.1269887	204.1269887	105.58	<.0001
geo_num	2	2.6186181	1.3093090	0.68	0.5090

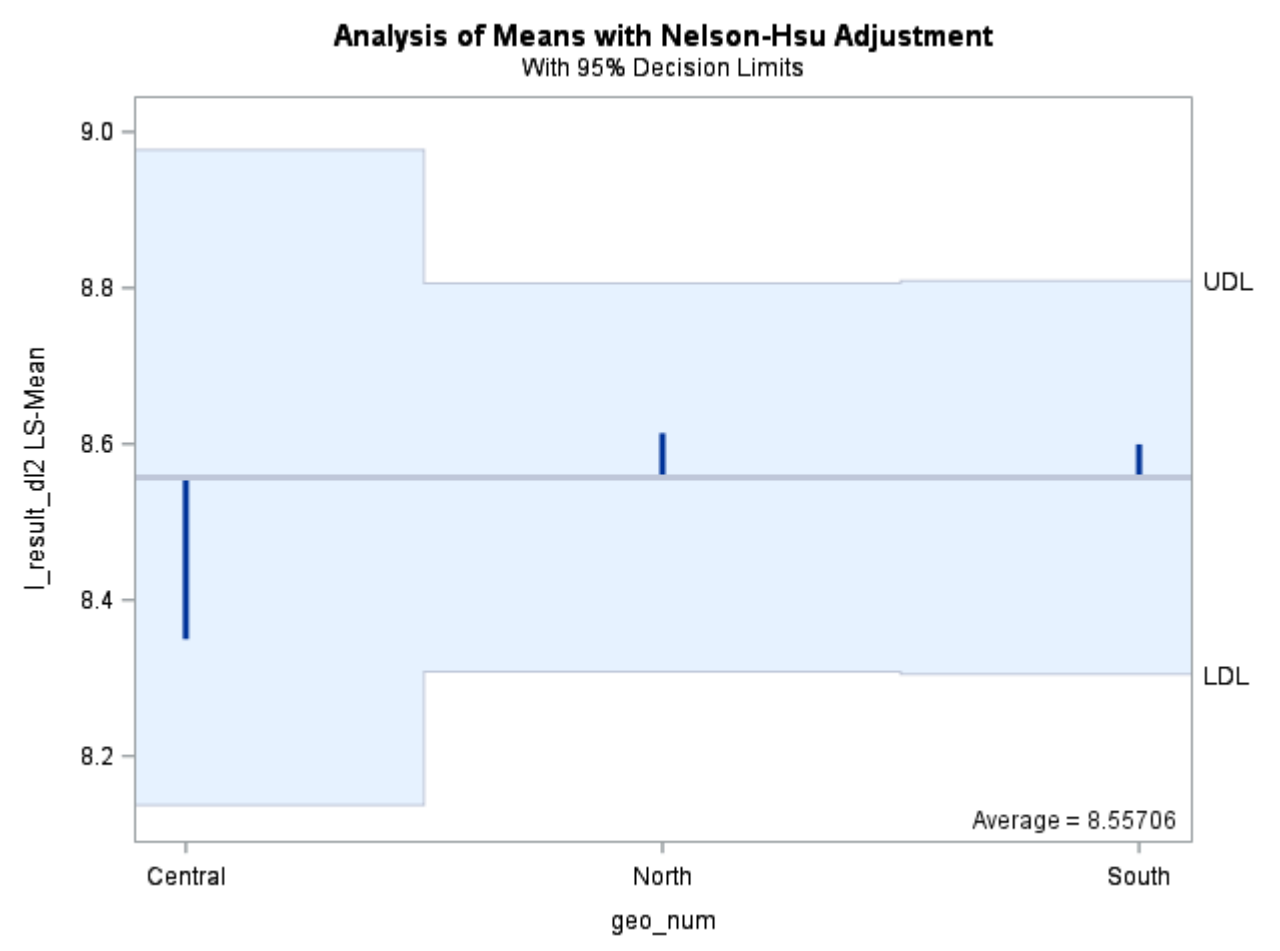

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.9334
R-Square 0.3028
Adj R-Square 0.2945


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PAHs Total Alkylated PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.34981669	0.4752
North	8.61383005	0.8525
South	8.59957374	0.9163



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total Alkylated PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.34981669	1
North	8.61383005	2
South	8.59957374	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5186	0.5580
2	0.5186		0.9971
3	0.5580	0.9971	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

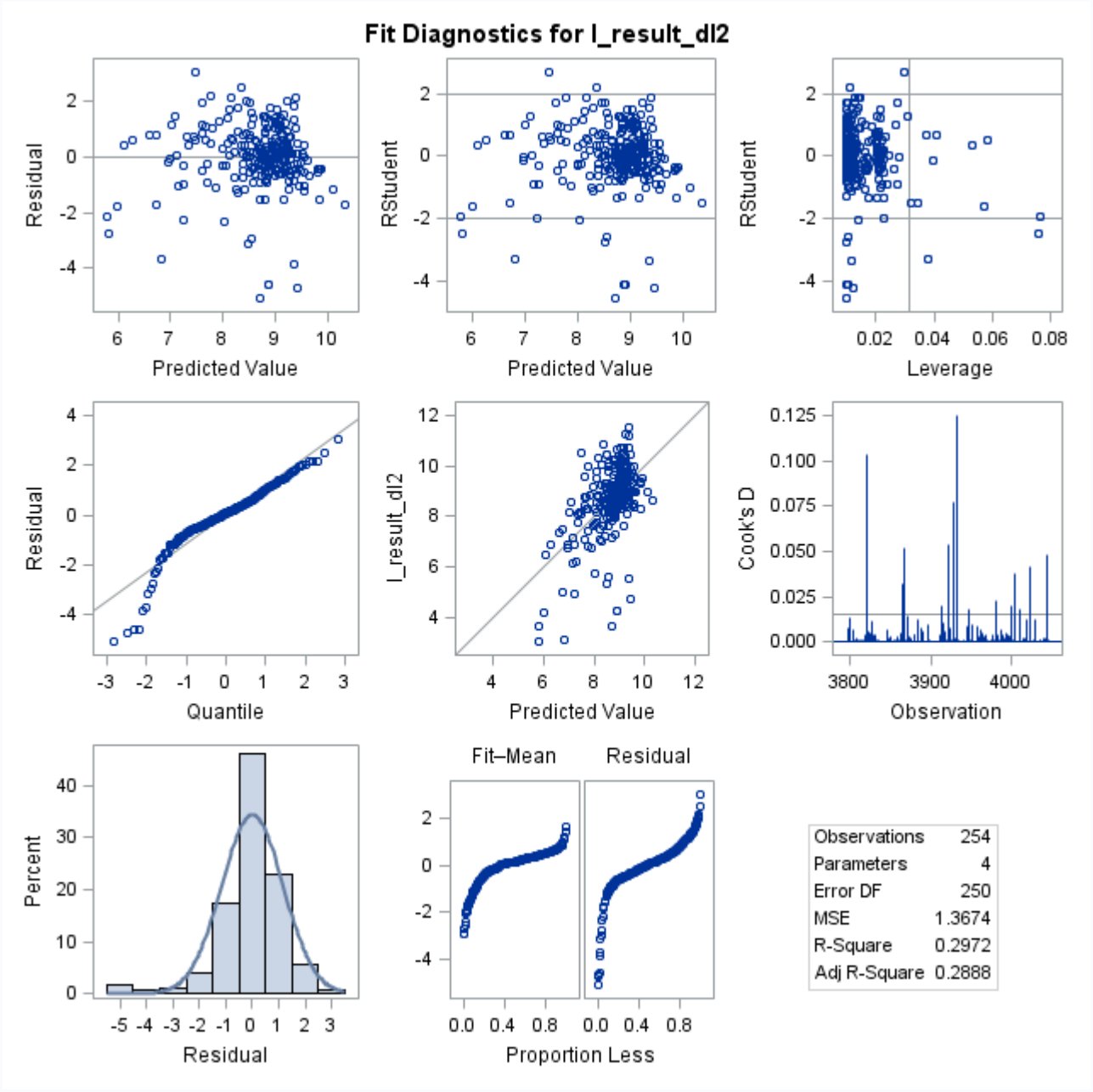
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

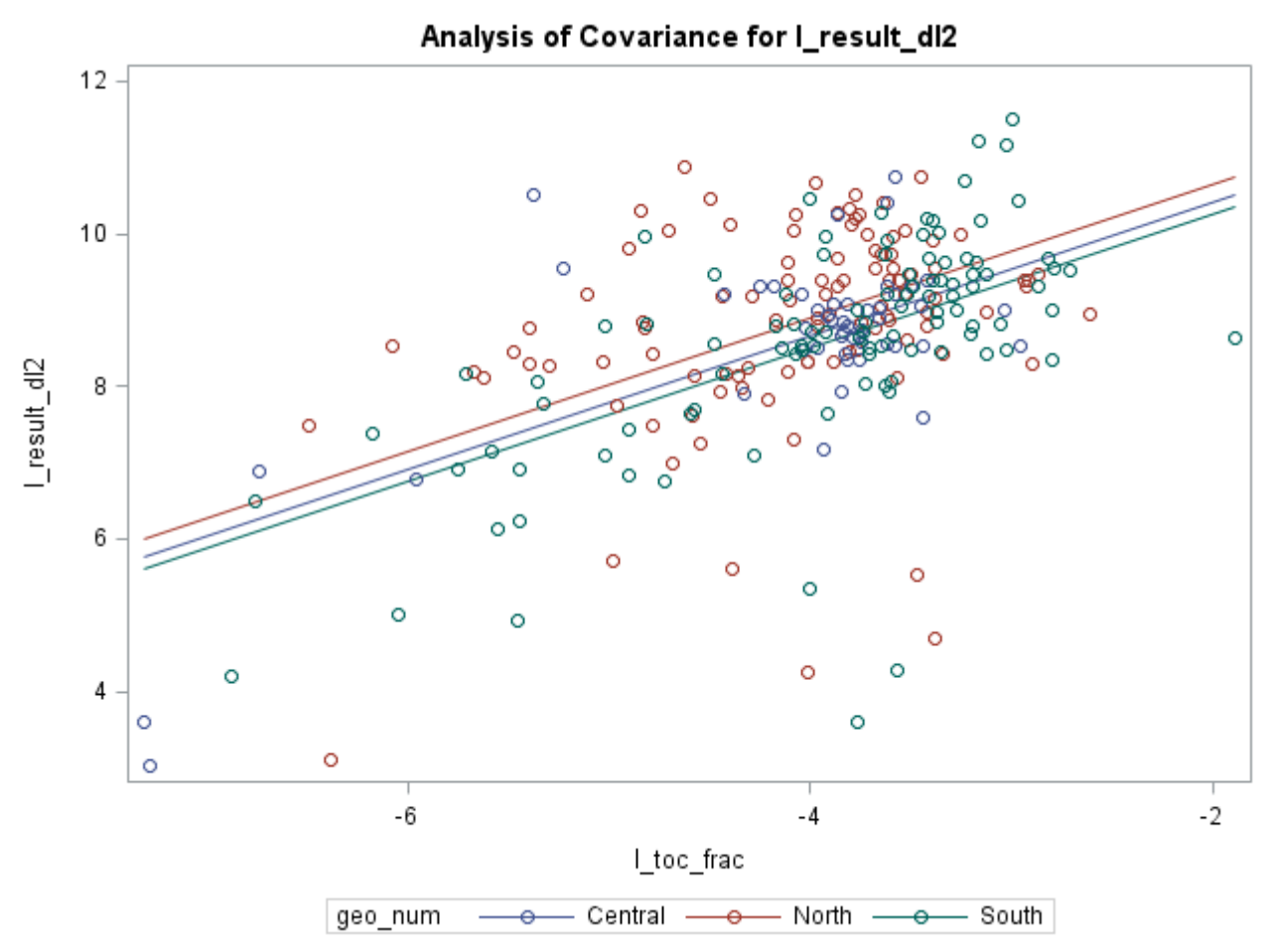
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	144.5493155	48.1831052	35.24	<.0001
Error	250	341.8424510	1.3673698		
Corrected Total	253	486.3917665			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.297187	13.47420	1.169346	8.678405

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	136.6444618	136.6444618	99.93	<.0001
geo_num	2	7.9048537	3.9524268	2.89	0.0574

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	141.0190400	141.0190400	103.13	<.0001
geo_num	2	7.9048537	3.9524268	2.89	0.0574

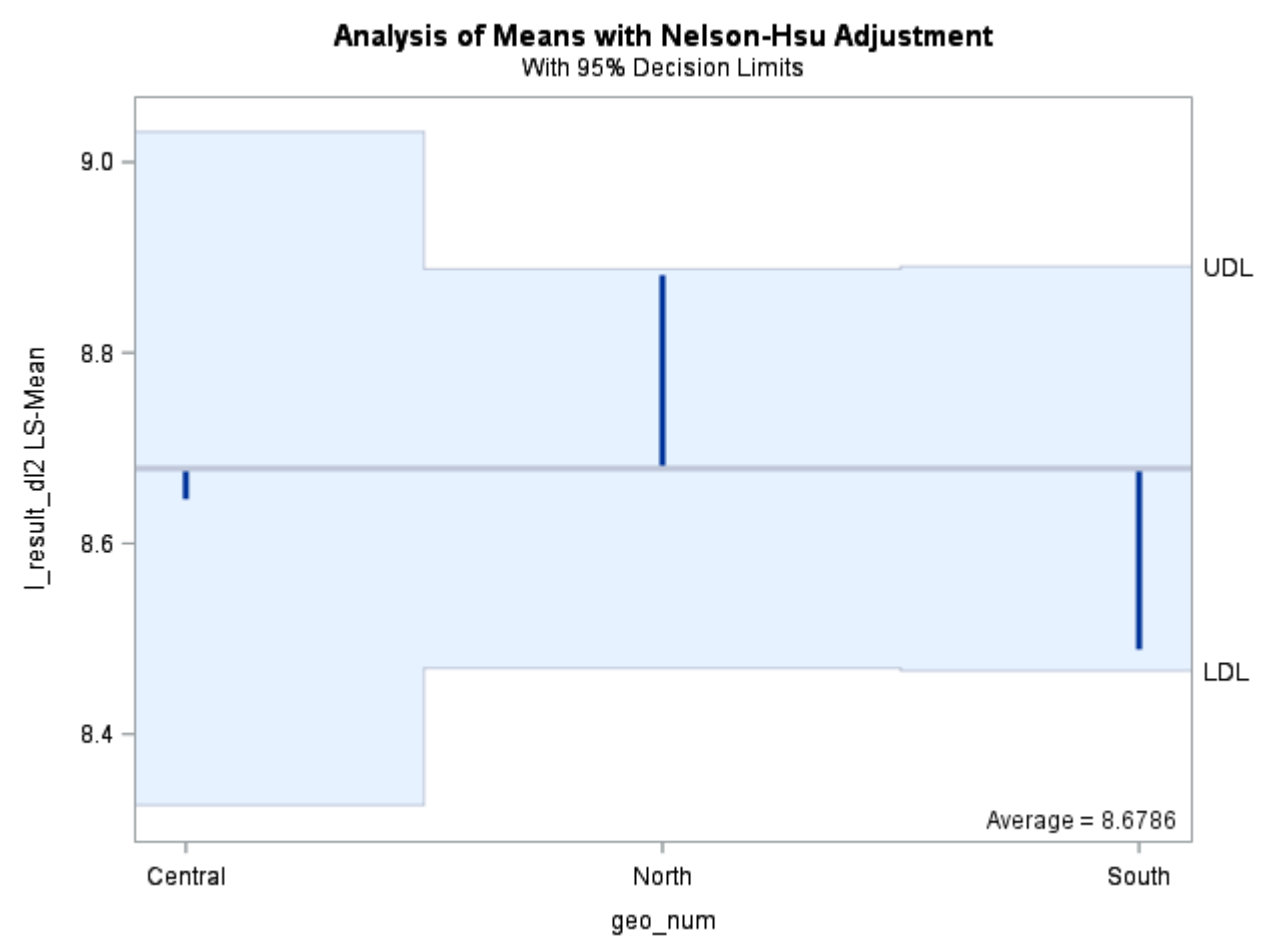

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.3674
R-Square 0.2972
Adj R-Square 0.2888


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PAHs Total HMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.64639383	0.9747
North	8.88140880	0.0599
South	8.48878970	0.0895



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total HMW PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.64639383	1
North	8.88140880	2
South	8.48878970	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.4794	0.7195
2	0.4794		0.0456
3	0.7195	0.0456	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

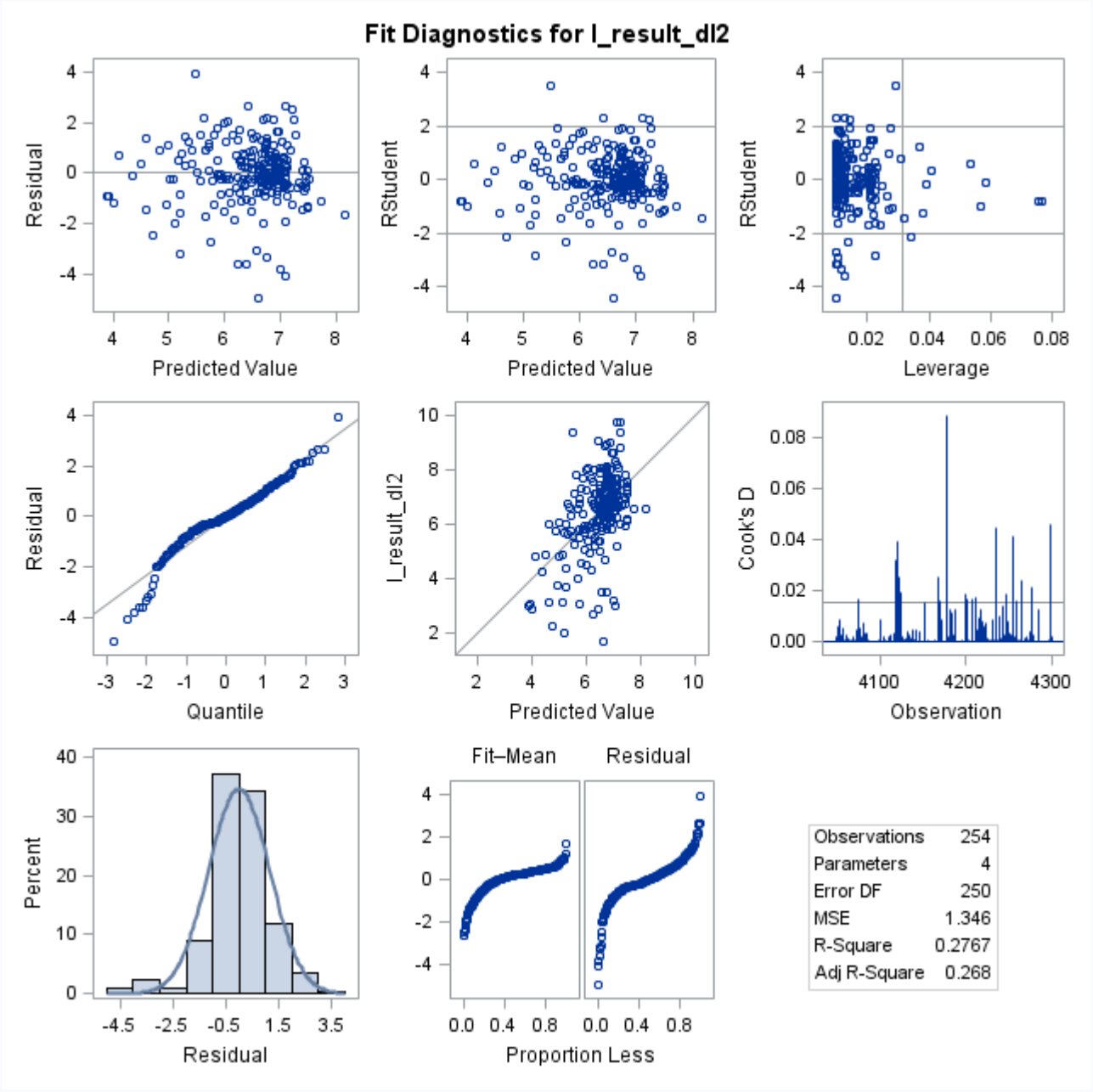
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

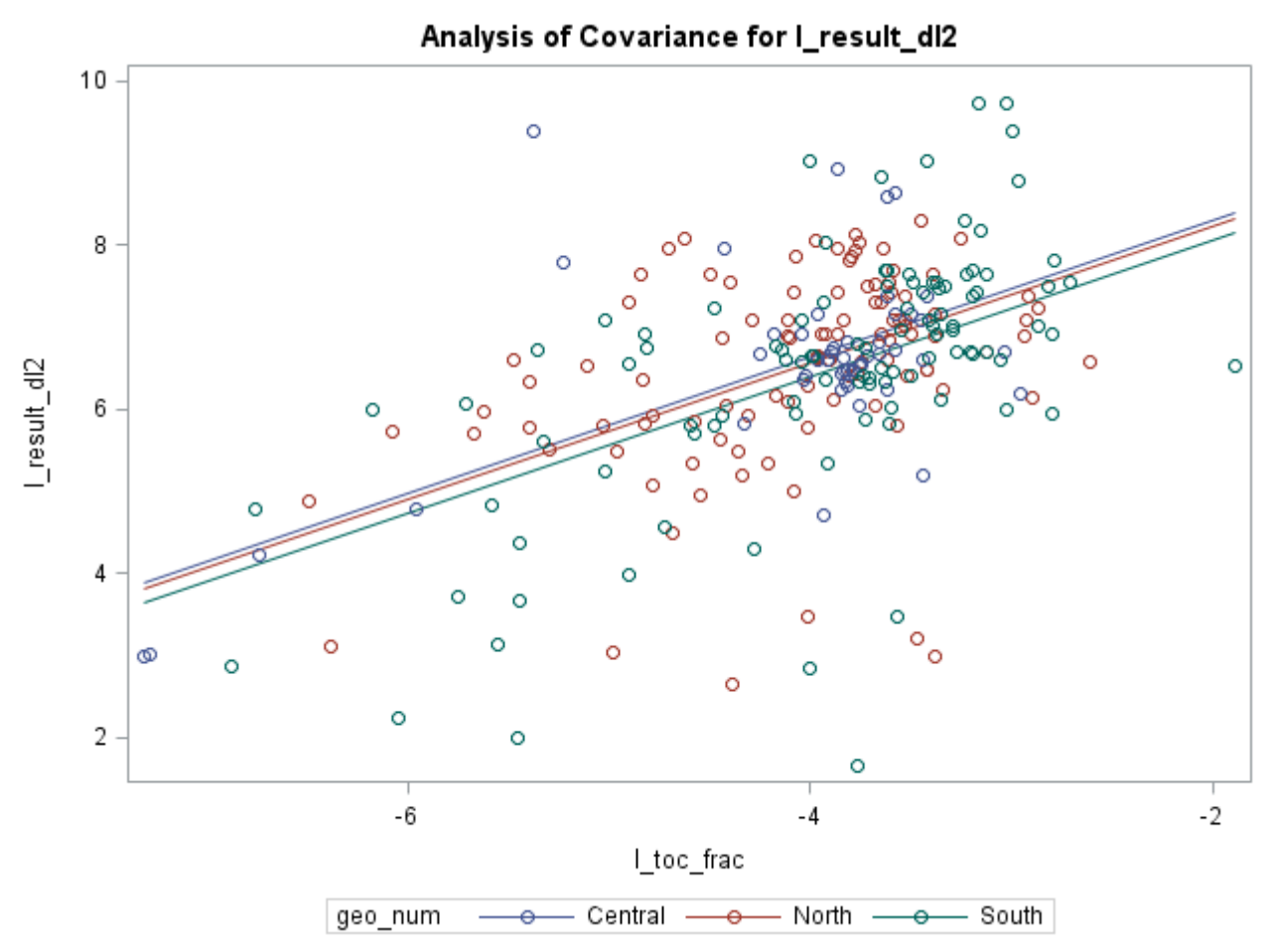
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	128.7016166	42.9005389	31.87	<.0001
Error	250	336.5056397	1.3460226		
Corrected Total	253	465.2072563			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.276654	17.84456	1.160182	6.501603

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	126.5594978	126.5594978	94.02	<.0001
geo_num	2	2.1421189	1.0710594	0.80	0.4524

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	128.4146822	128.4146822	95.40	<.0001
geo_num	2	2.1421189	1.0710594	0.80	0.4524

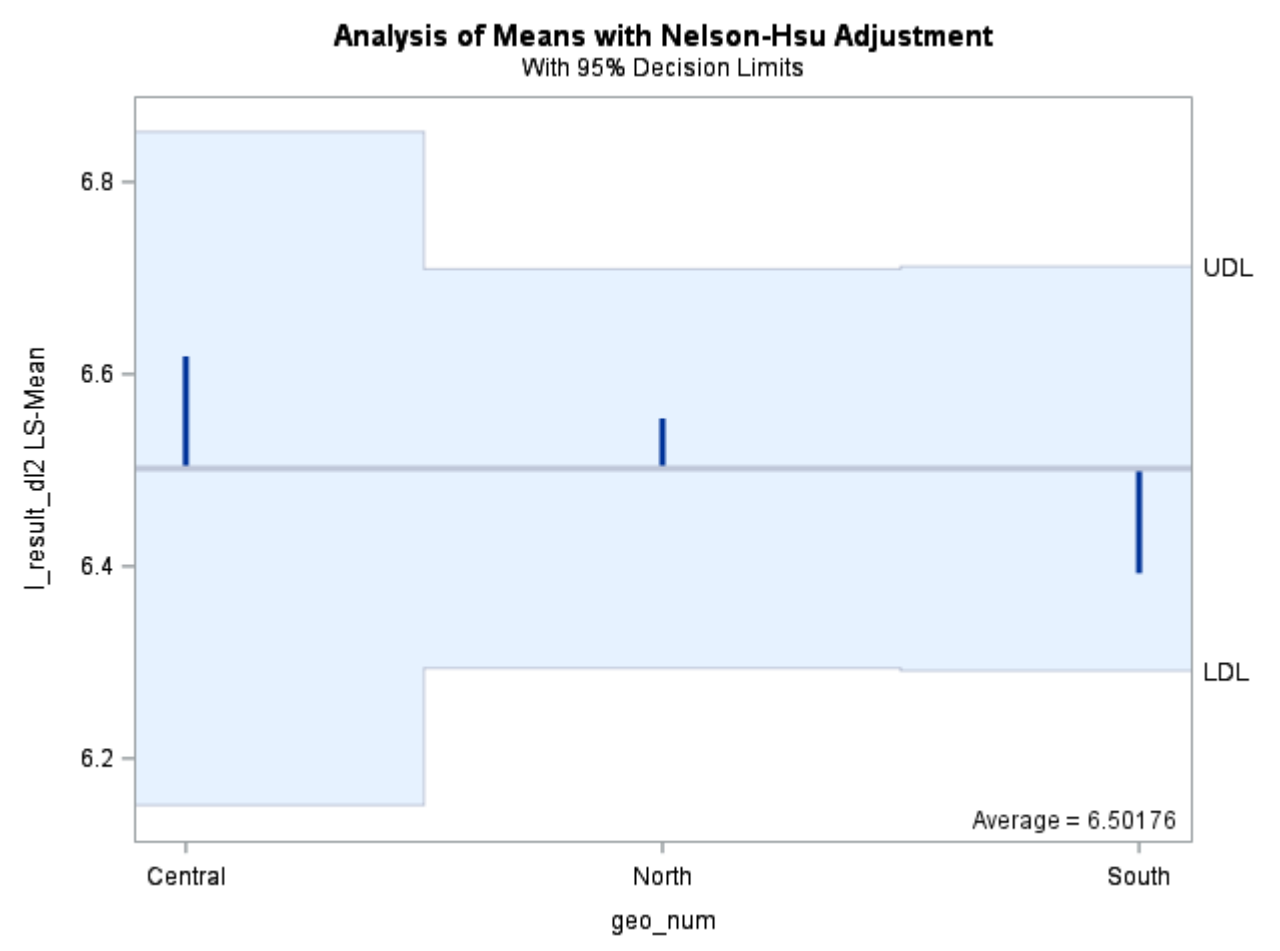

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.346
R-Square 0.2767
Adj R-Square 0.268


Analysis of Covariance for l_result_dl2
10
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PAHs Total LMW PAHs
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.61847703	0.7116
North	6.55384139	0.8246
South	6.39270665	0.4402



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total LMW PAHs

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.61847703	1
North	6.55384139	2
South	6.39270665	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9448	0.5045
2	0.9448		0.5836
3	0.5045	0.5836	

The GLM Procedure
sort=4 Parameter_group=PAHs chemical_name=Total PAH

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

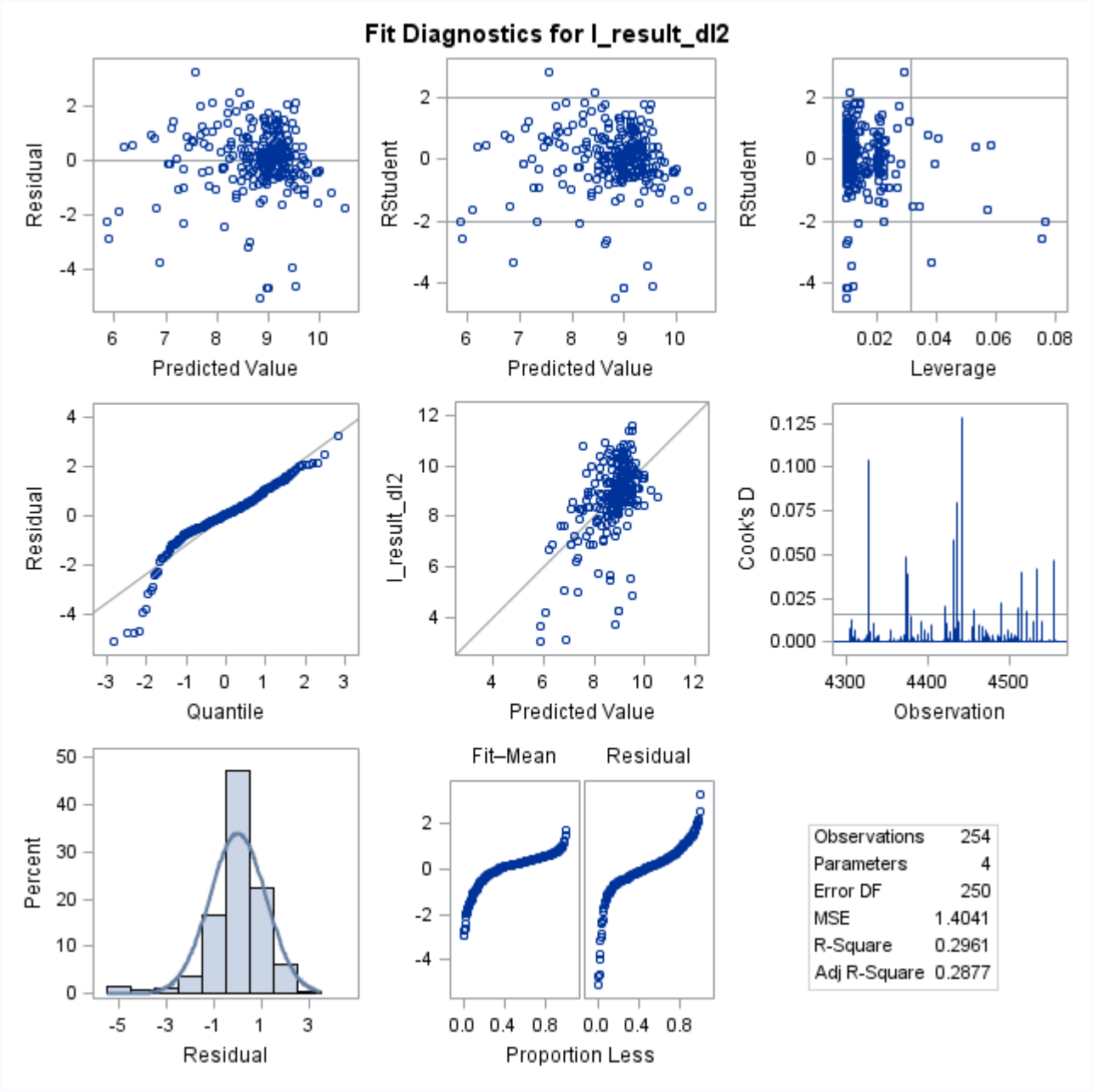
Dependent Variable: l_result_dl2
sort=4 Parameter_group=PAHs chemical_name=Total PAH

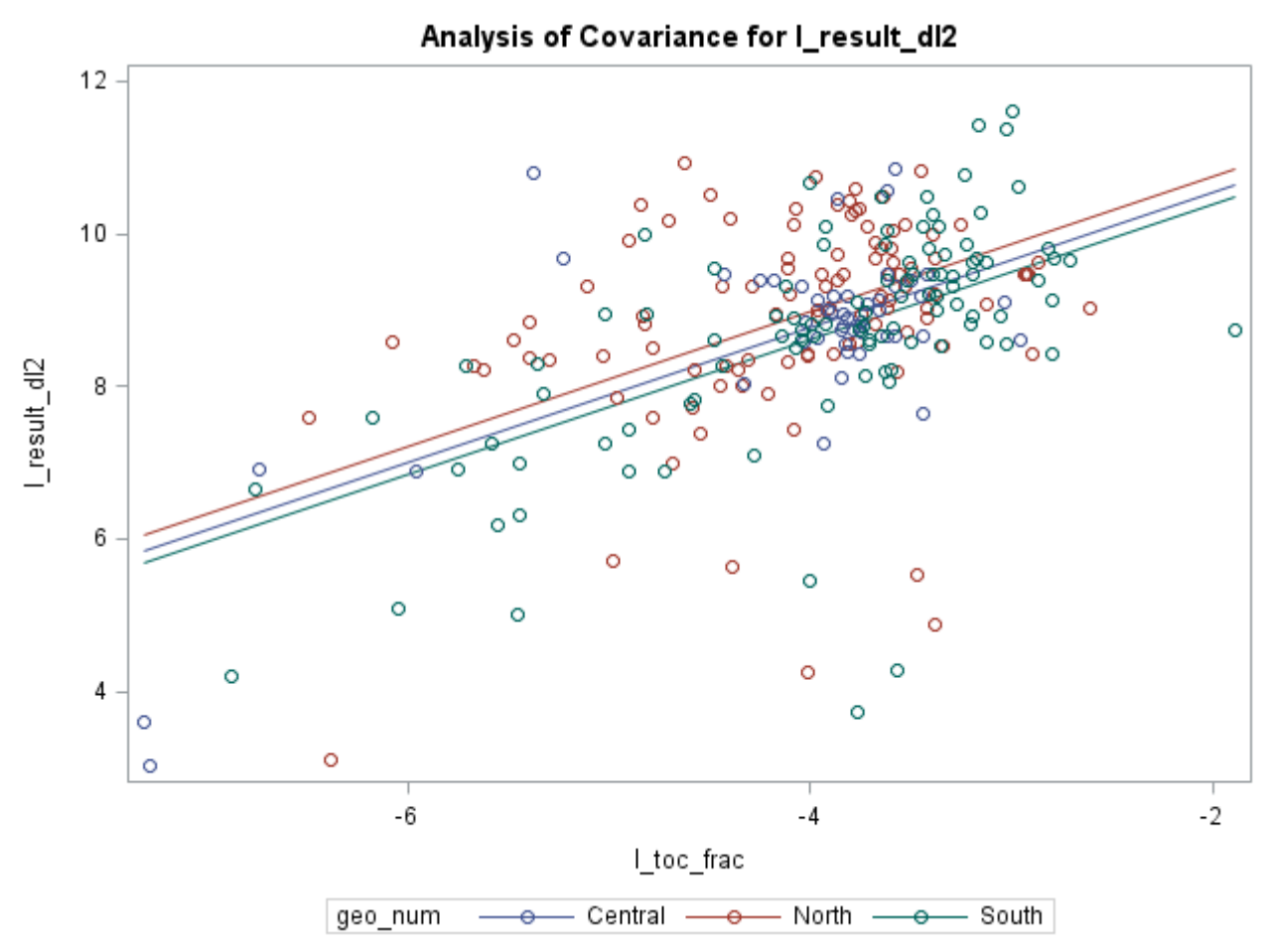
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	147.6629708	49.2209903	35.05	<.0001
Error	250	351.0287943	1.4041152		
Corrected Total	253	498.6917650			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.296101	13.49082	1.184954	8.783410

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	140.7289287	140.7289287	100.23	<.0001
geo_num	2	6.9340420	3.4670210	2.47	0.0867

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	144.8275749	144.8275749	103.15	<.0001
geo_num	2	6.9340420	3.4670210	2.47	0.0867

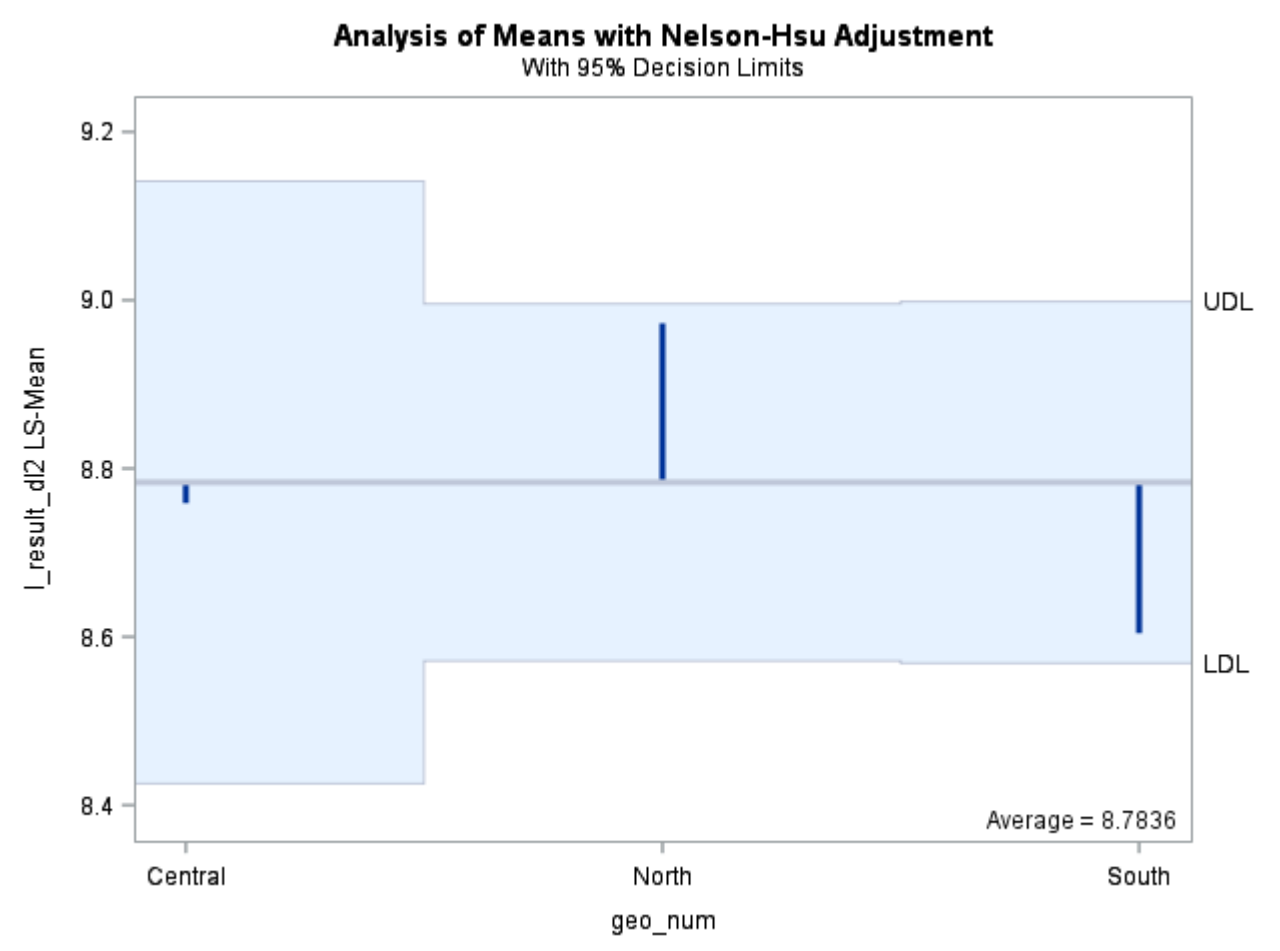

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.4041
R-Square 0.2961
Adj R-Square 0.2877


Analysis of Covariance for l_result_dl2
12
10
8
6
4
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

PAHs Total PAH
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=4 Parameter_group=PAHs chemical_name=Total PAH

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	8.75883095	0.9854
North	8.97249535	0.0919
South	8.60427926	0.1220



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=4 Parameter_group=PAHs chemical_name=Total PAH

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	8.75883095	1
North	8.97249535	2
South	8.60427926	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.5530	0.7347
2	0.5530		0.0705
3	0.7347	0.0705	

The GLM Procedure
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

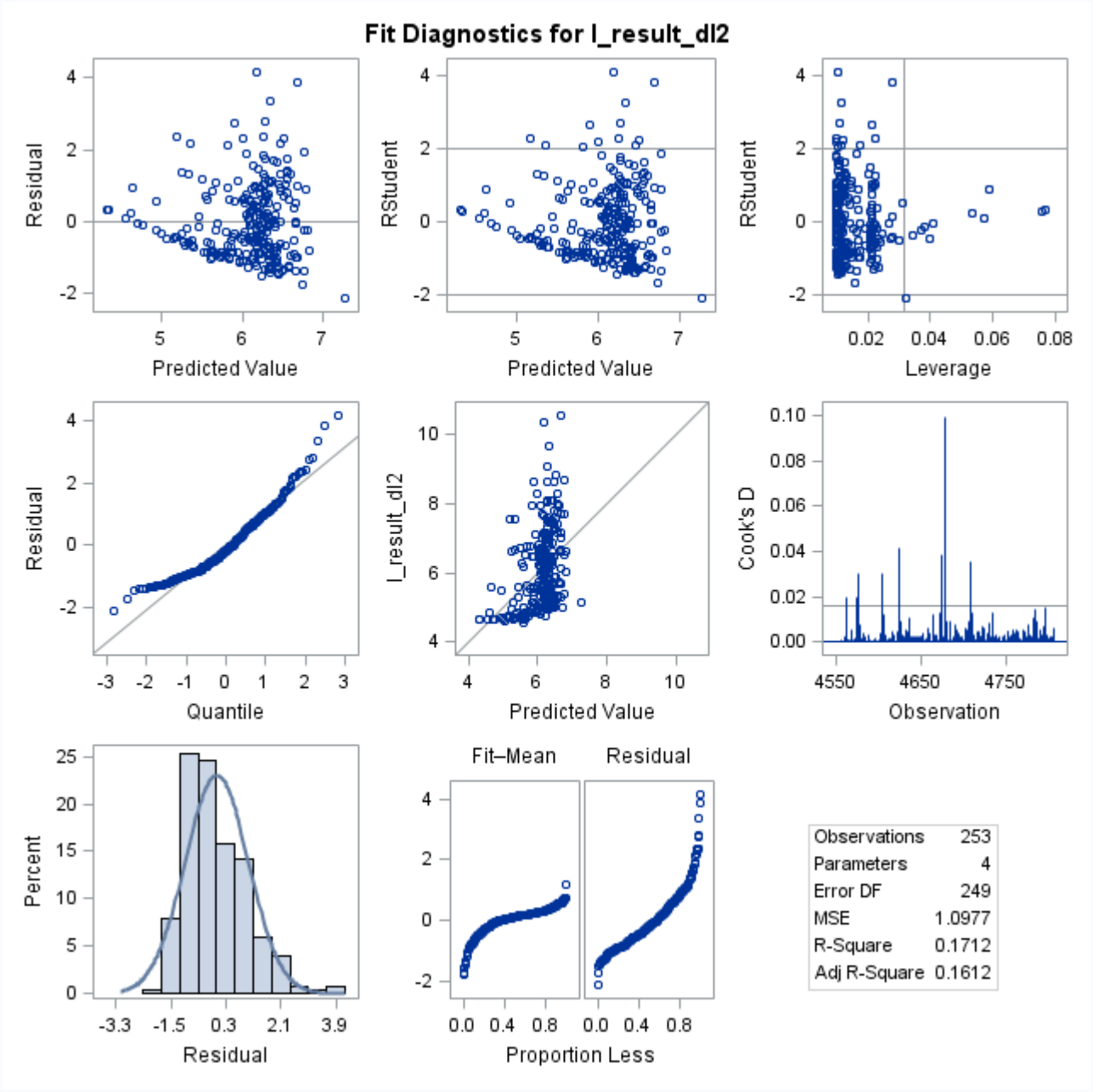
Dependent Variable: l_result_dl2
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

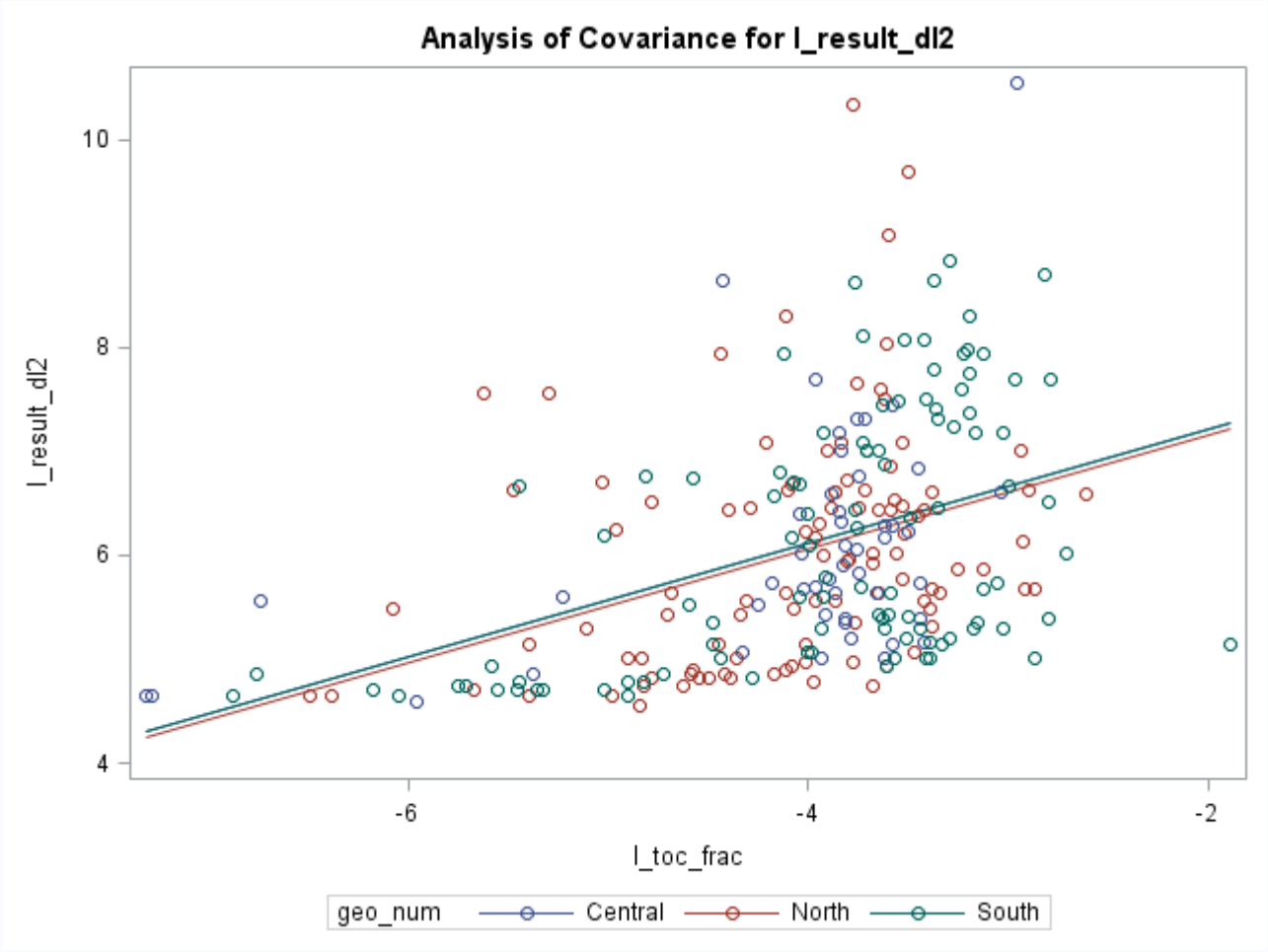
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	56.4655703	18.8218568	17.15	<.0001
Error	249	273.3315010	1.0977169		
Corrected Total	252	329.7970713			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.171213	17.22194	1.047720	6.083634

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	56.24700629	56.24700629	51.24	<.0001
geo_num	2	0.21856402	0.10928201	0.10	0.9053

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	55.28028497	55.28028497	50.36	<.0001
geo_num	2	0.21856402	0.10928201	0.10	0.9053

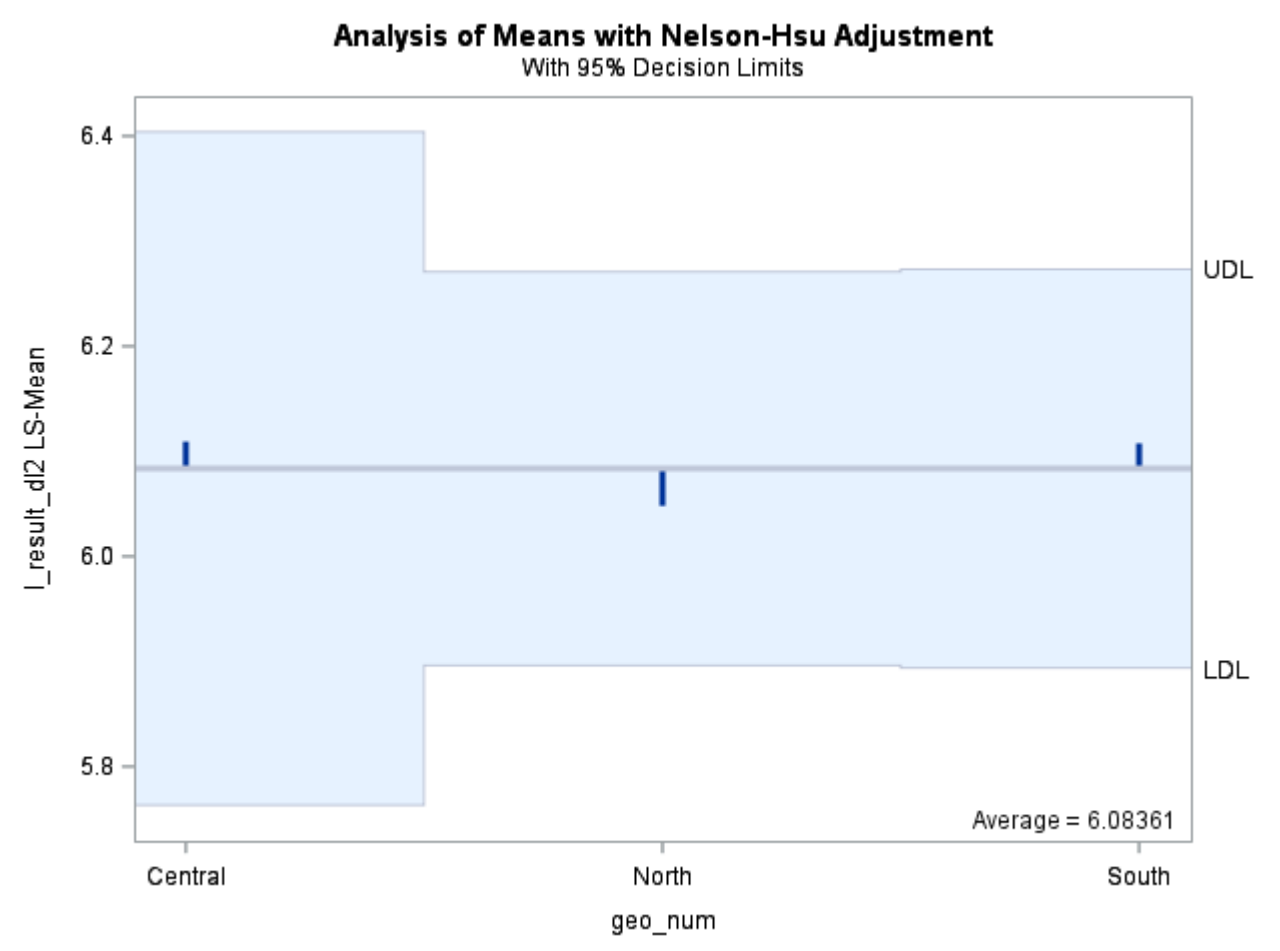

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 4
Error DF 249
MSE 1.0977
R-Square 0.1712
Adj R-Square 0.1612


Analysis of Covariance for l_result_dl2
l_result_dl2
10
8
6
4
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

Semivolatiles bis(2-Ethylhexyl)phthalate (DEHP)
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.10918292	0.9806
North	6.04809872	0.8954
South	6.10749376	0.9524



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=5 Parameter_group=Semivolatiles chemical_name=bis(2-Ethylhexyl)phthalate (DEHP)

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.10918292	1
North	6.04809872	2
South	6.10749376	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9405	1.0000
2	0.9405		0.9139
3	1.0000	0.9139	

The GLM Procedure
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure

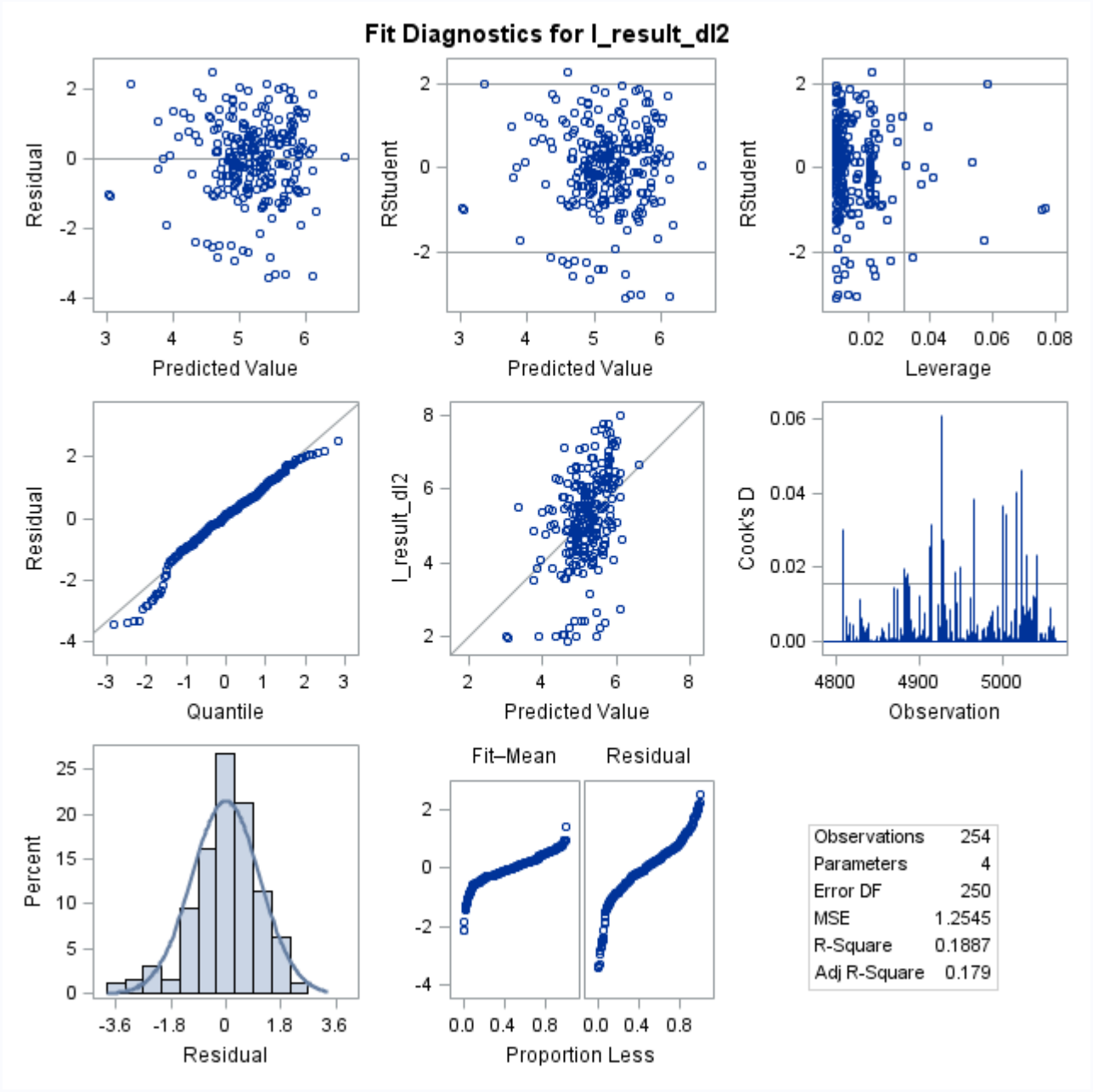
Dependent Variable: l_result_dl2
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

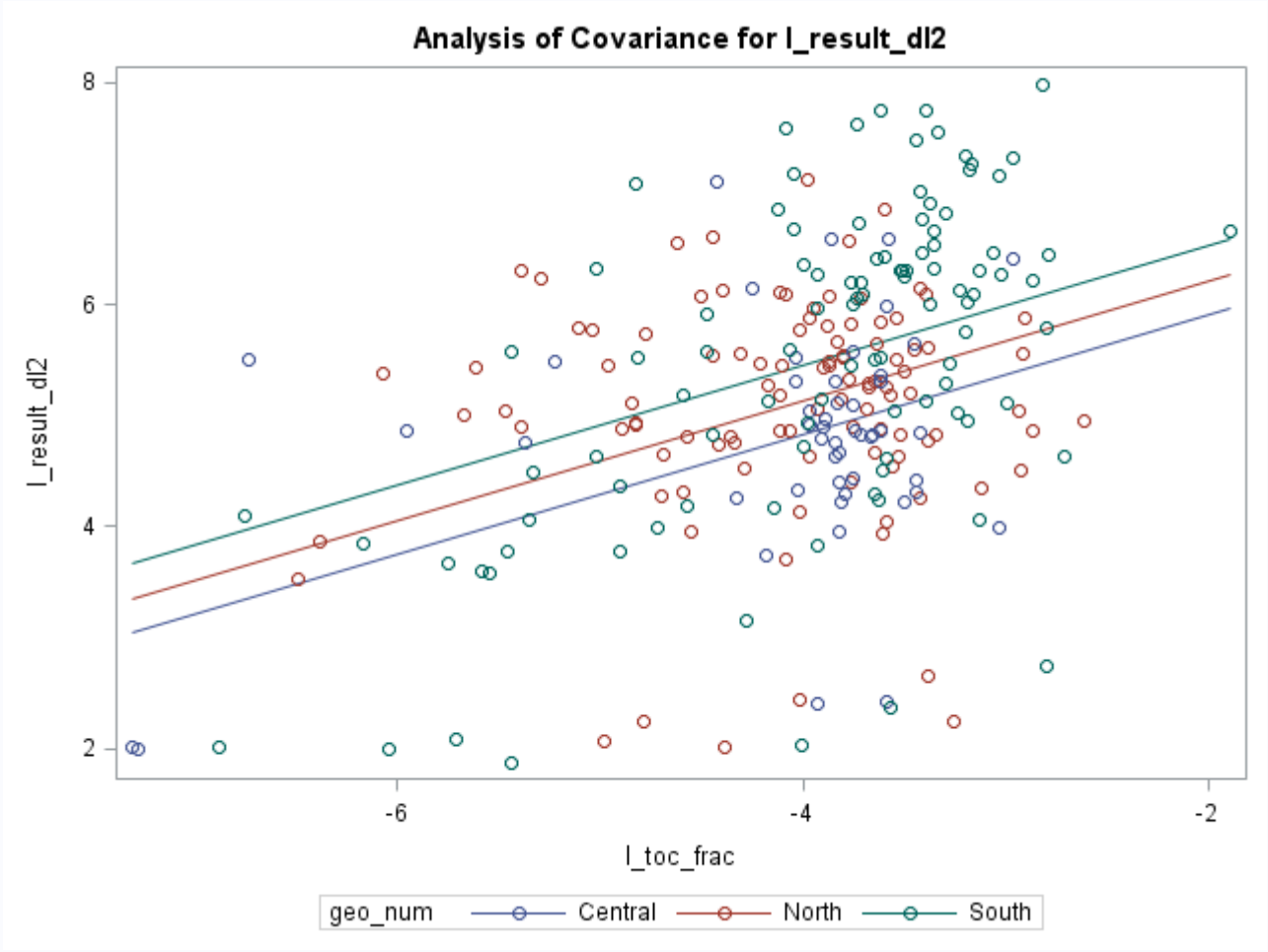
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	72.9445445	24.3148482	19.38	<.0001
Error	250	313.6346583	1.2545386		
Corrected Total	253	386.5792027			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.188692	21.56518	1.120062	5.193845

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_toc_frac	1	59.32561859	59.32561859	47.29	<.0001
geo_num	2	13.61892588	6.80946294	5.43	0.0049

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_toc_frac	1	54.22081103	54.22081103	43.22	<.0001
geo_num	2	13.61892588	6.80946294	5.43	0.0049

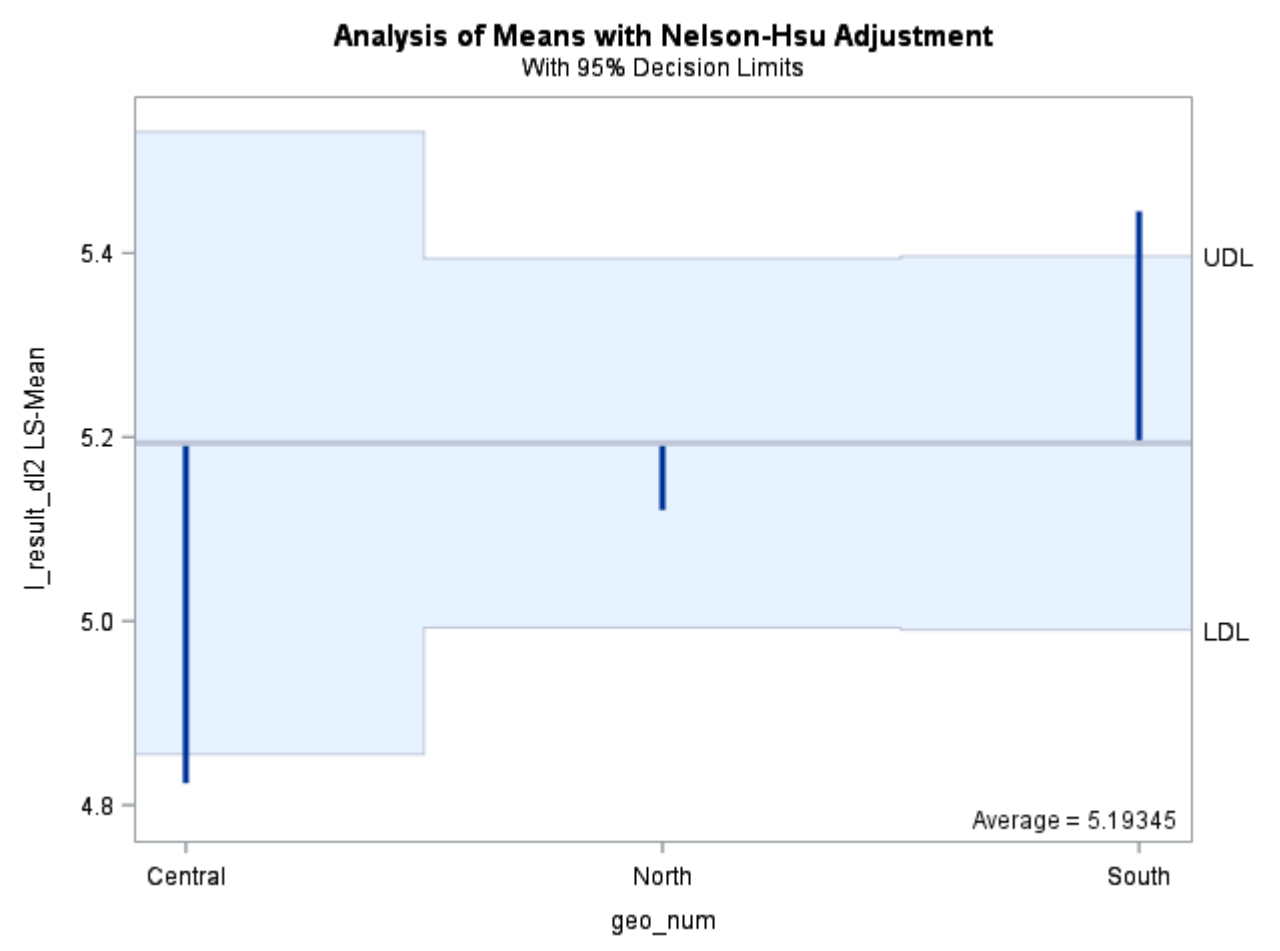

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 1.2545
R-Square 0.1887
Adj R-Square 0.179


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-4
-2
l_toc_frac
geo_num
Central
North
South

TPH Total Petroleum Hydrocarbons
NBSA Phase III Surface Sediment ANCOVA Organics by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.82382359	0.0284
North	5.12078115	0.6689
South	5.44537960	0.0105



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=6 Parameter_group=TPH chemical_name=Total Petroleum Hydrocarbons

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.82382359	1
North	5.12078115	2
South	5.44537960	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.2797	0.0046
2	0.2797		0.0990
3	0.0046	0.0990	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Arsenic

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

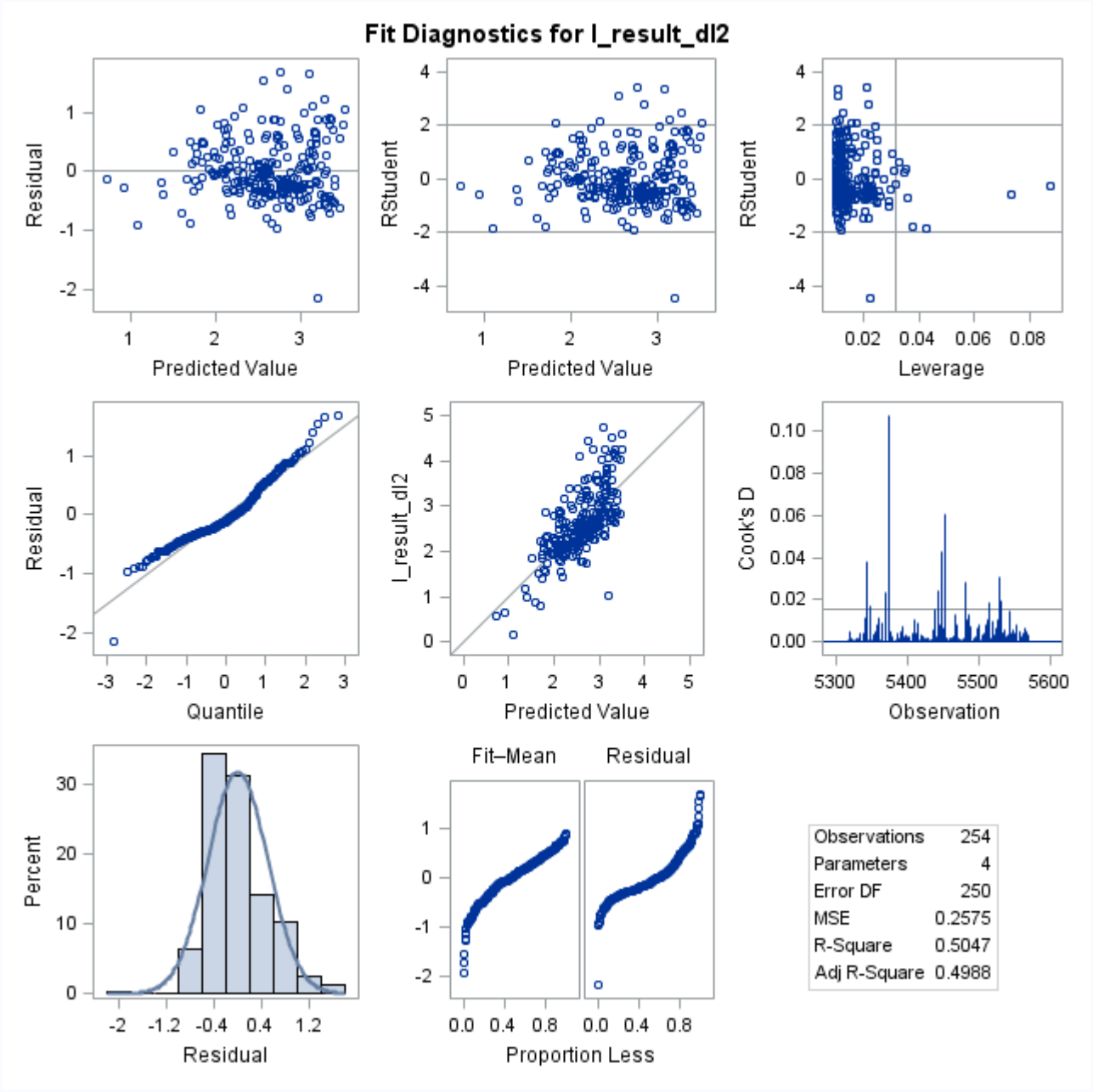
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Arsenic

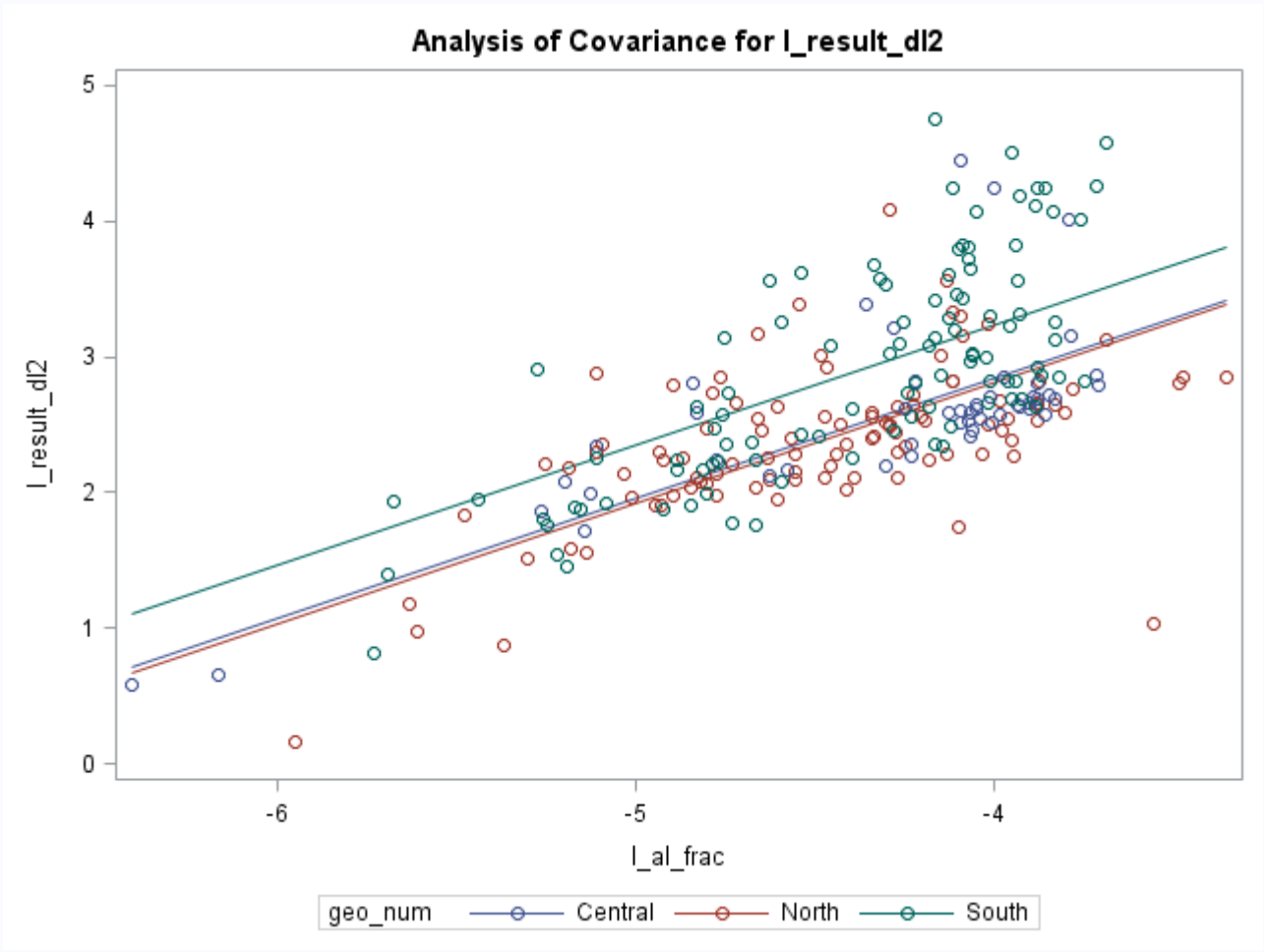
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	65.6095429	21.8698476	84.92	<.0001
Error	250	64.3854575	0.2575418		
Corrected Total	253	129.9950005			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.504708	19.29645	0.507486	2.629944

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	55.04718823	55.04718823	213.74	<.0001
geo_num	2	10.56235471	5.28117735	20.51	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	51.80119448	51.80119448	201.14	<.0001
geo_num	2	10.56235471	5.28117735	20.51	<.0001

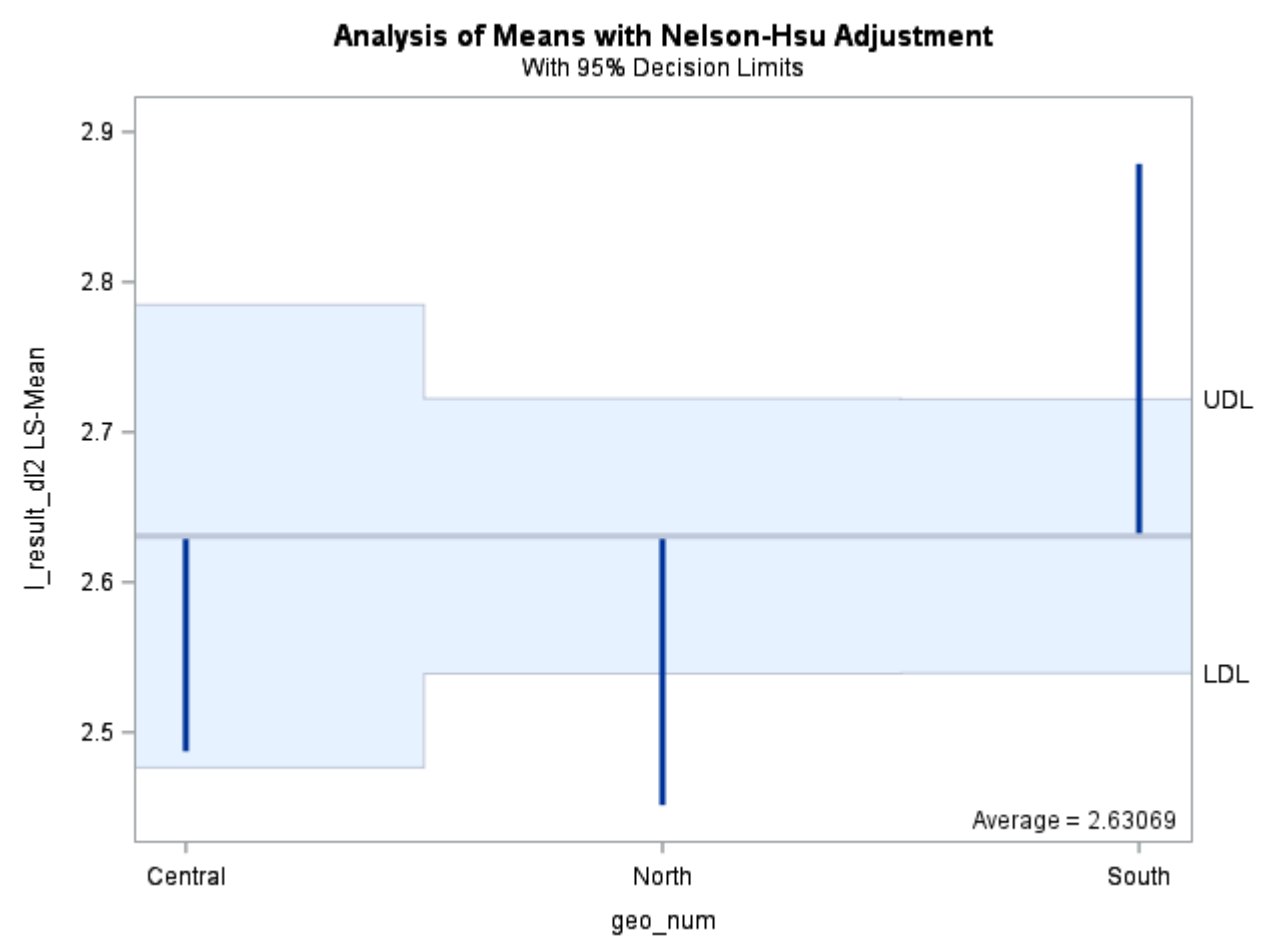

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.2575
R-Square 0.5047
Adj R-Square 0.4988


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
1
0
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Arsenic
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Arsenic

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	2.48730759	0.0741
North	2.45148732	<.0001
South	2.87867176	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Arsenic

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	2.48730759	1
North	2.45148732	2
South	2.87867176	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9142	<.0001
2	0.9142		<.0001
3	<.0001	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Cadmium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read 254

Number of Observations Used 254

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

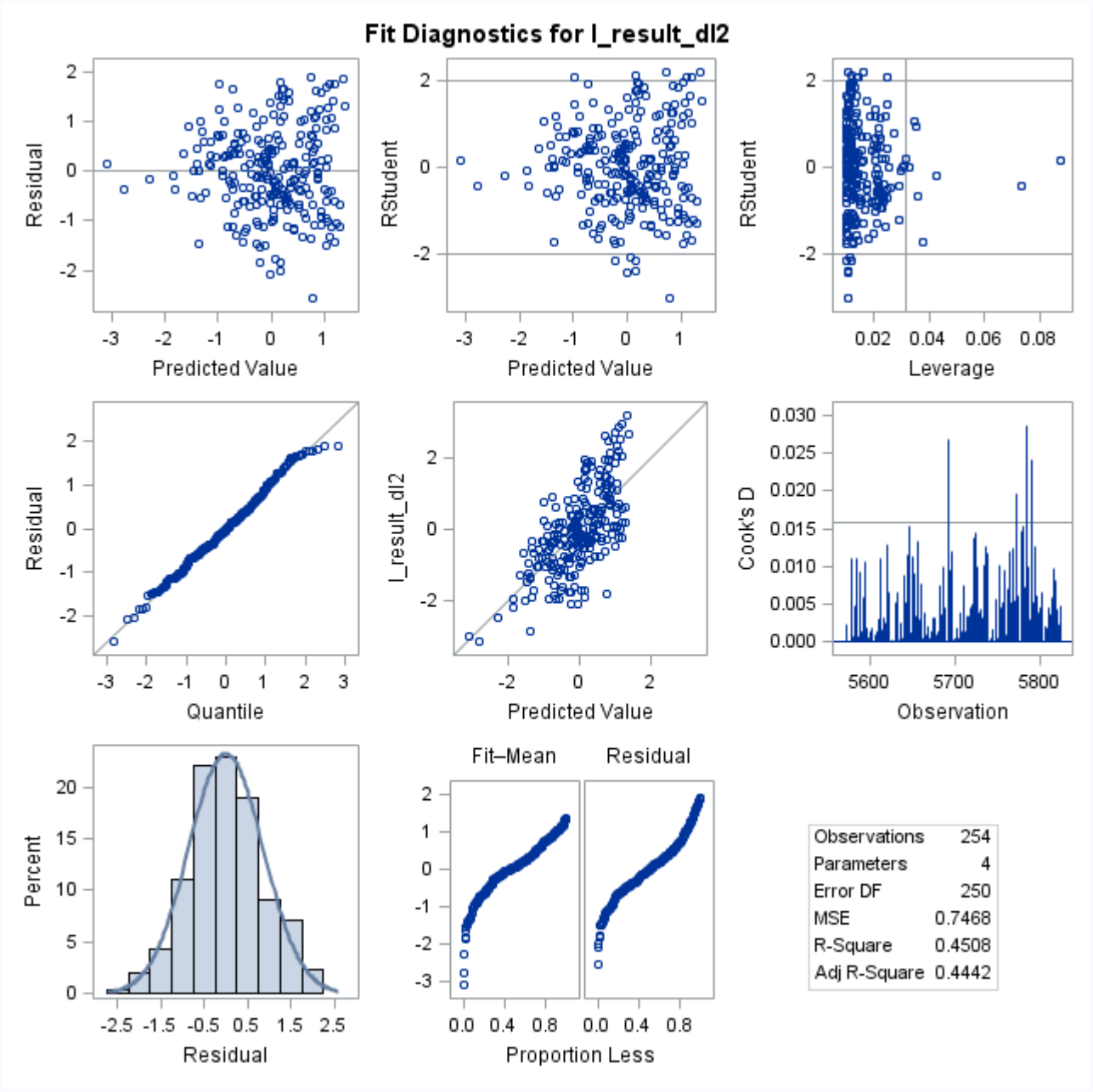
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Cadmium

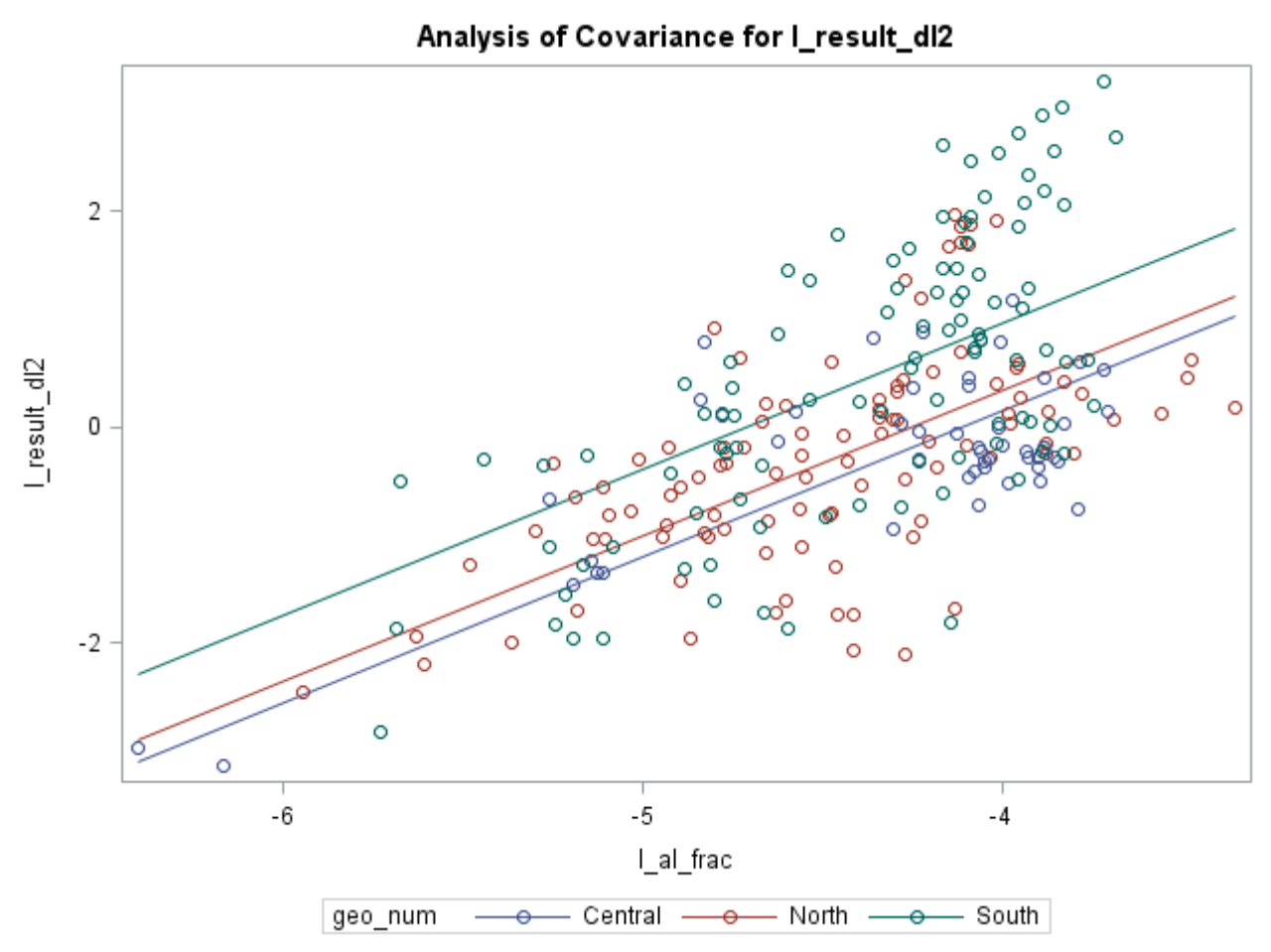
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	153.2749785	51.0916595	68.41	<.0001
Error	250	186.7030843	0.7468123		
Corrected Total	253	339.9780628			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.450838	7415.068	0.864183	0.011654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	124.0189771	124.0189771	166.06	<.0001
geo_num	2	29.2560014	14.6280007	19.59	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	120.3106473	120.3106473	161.10	<.0001
geo_num	2	29.2560014	14.6280007	19.59	<.0001

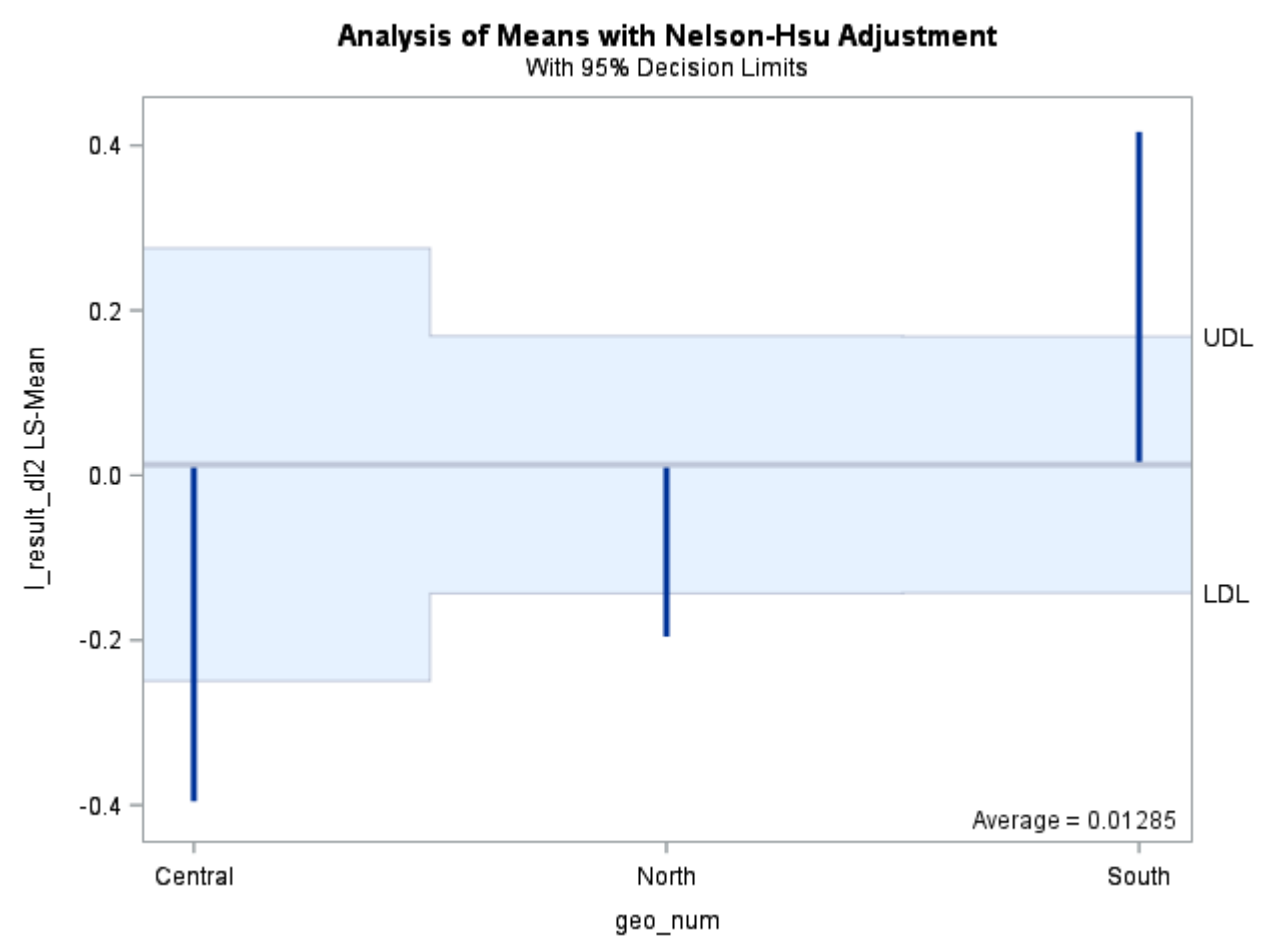

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.7468
R-Square 0.4508
Adj R-Square 0.4442


Analysis of Covariance for l_result_dl2
l_result_dl2
2
0
-2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Cadmium
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Cadmium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	-0.39537672	0.0009
North	-0.19562284	0.0052
South	0.41649837	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Cadmium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	-0.39537672	1
North	-0.19562284	2
South	0.41649837	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.3846	<.0001
2	0.3846		<.0001
3	<.0001	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Chromium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

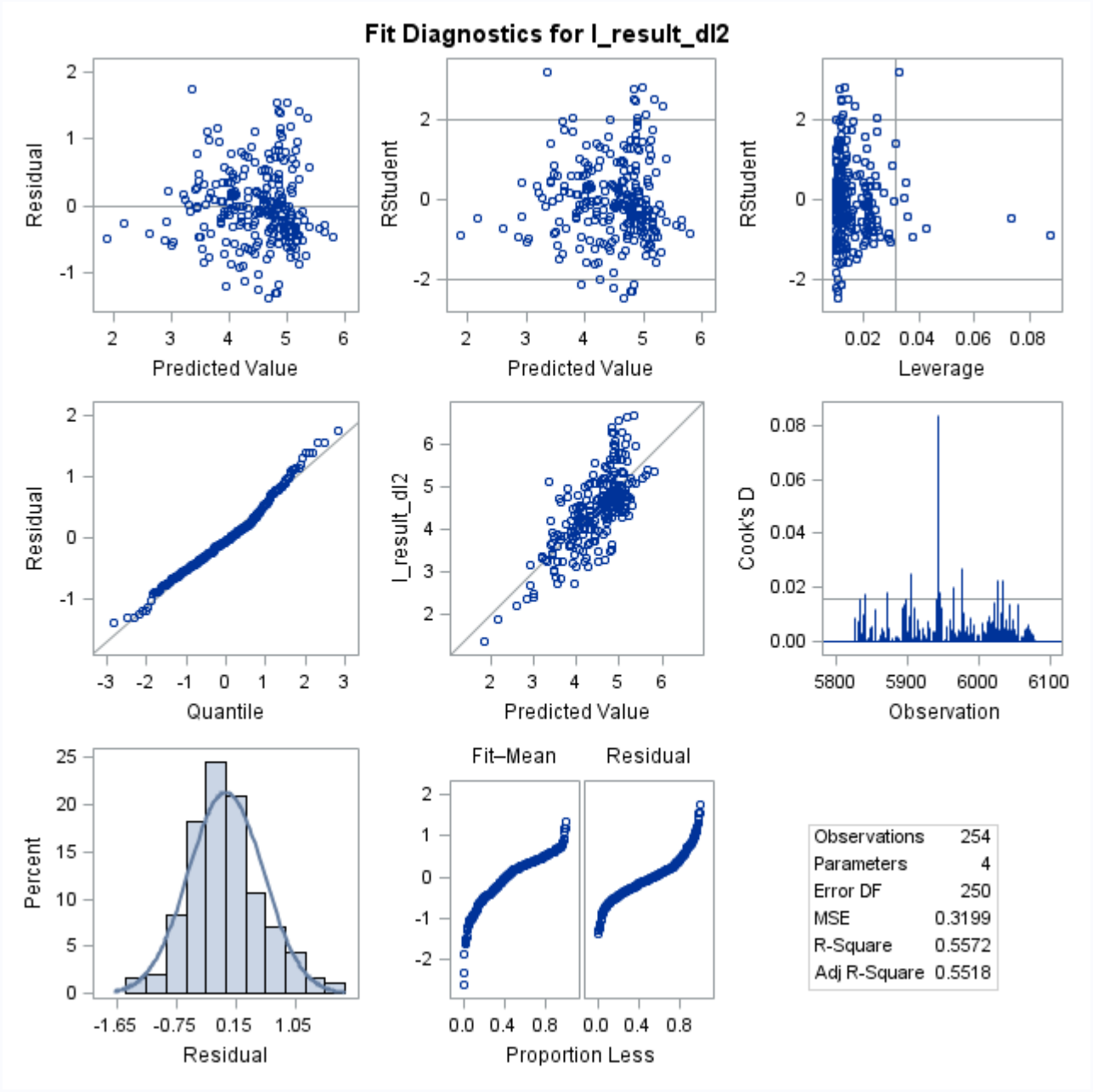
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Chromium

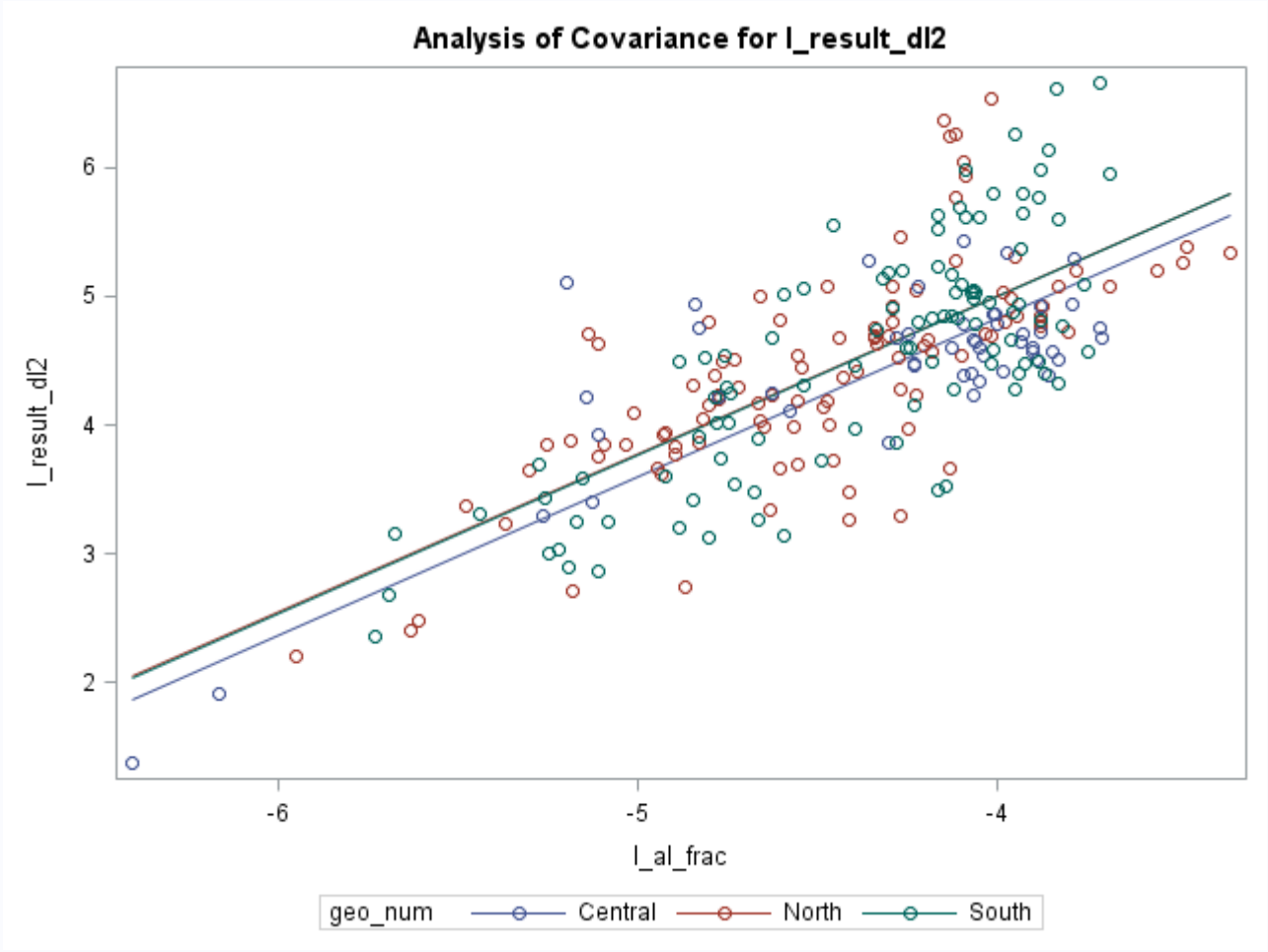
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	100.6114486	33.5371495	104.84	<.0001
Error	250	79.9701420	0.3198806		
Corrected Total	253	180.5815906			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.557152	12.64479	0.565580	4.472828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	99.43794574	99.43794574	310.86	<.0001
geo_num	2	1.17350287	0.58675143	1.83	0.1619

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	99.95285523	99.95285523	312.47	<.0001
geo_num	2	1.17350287	0.58675143	1.83	0.1619

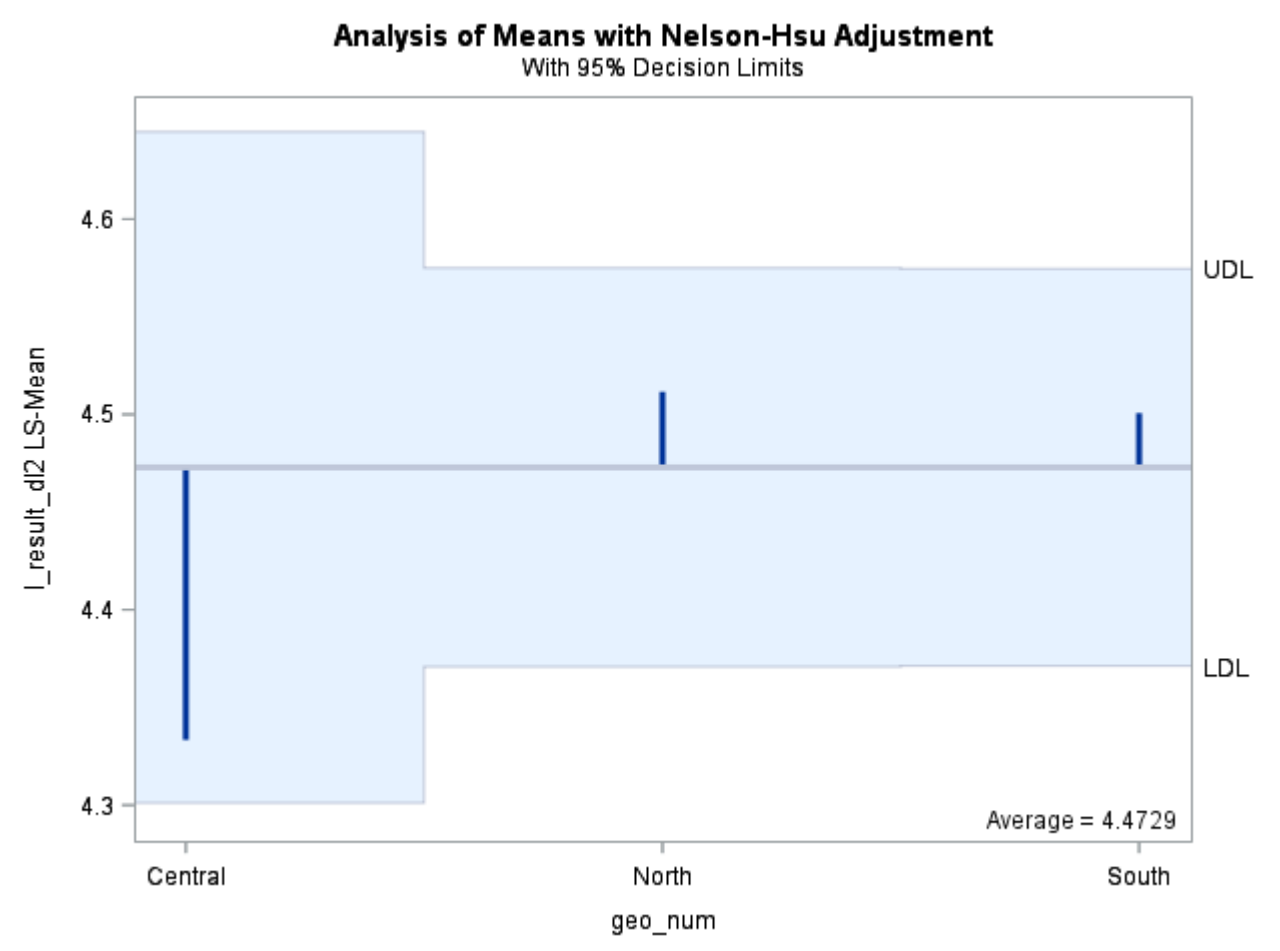

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.3199
R-Square 0.5572
Adj R-Square 0.5518


Analysis of Covariance for l_result_dl2
l_result_dl2
6
5
4
3
2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Chromium
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Chromium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.33338620	0.1362
North	4.51158760	0.6439
South	4.50067411	0.7954



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Chromium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.33338620	1
North	4.51158760	2
South	4.50067411	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.1713	0.2076
2	0.1713		0.9896
3	0.2076	0.9896	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Copper

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

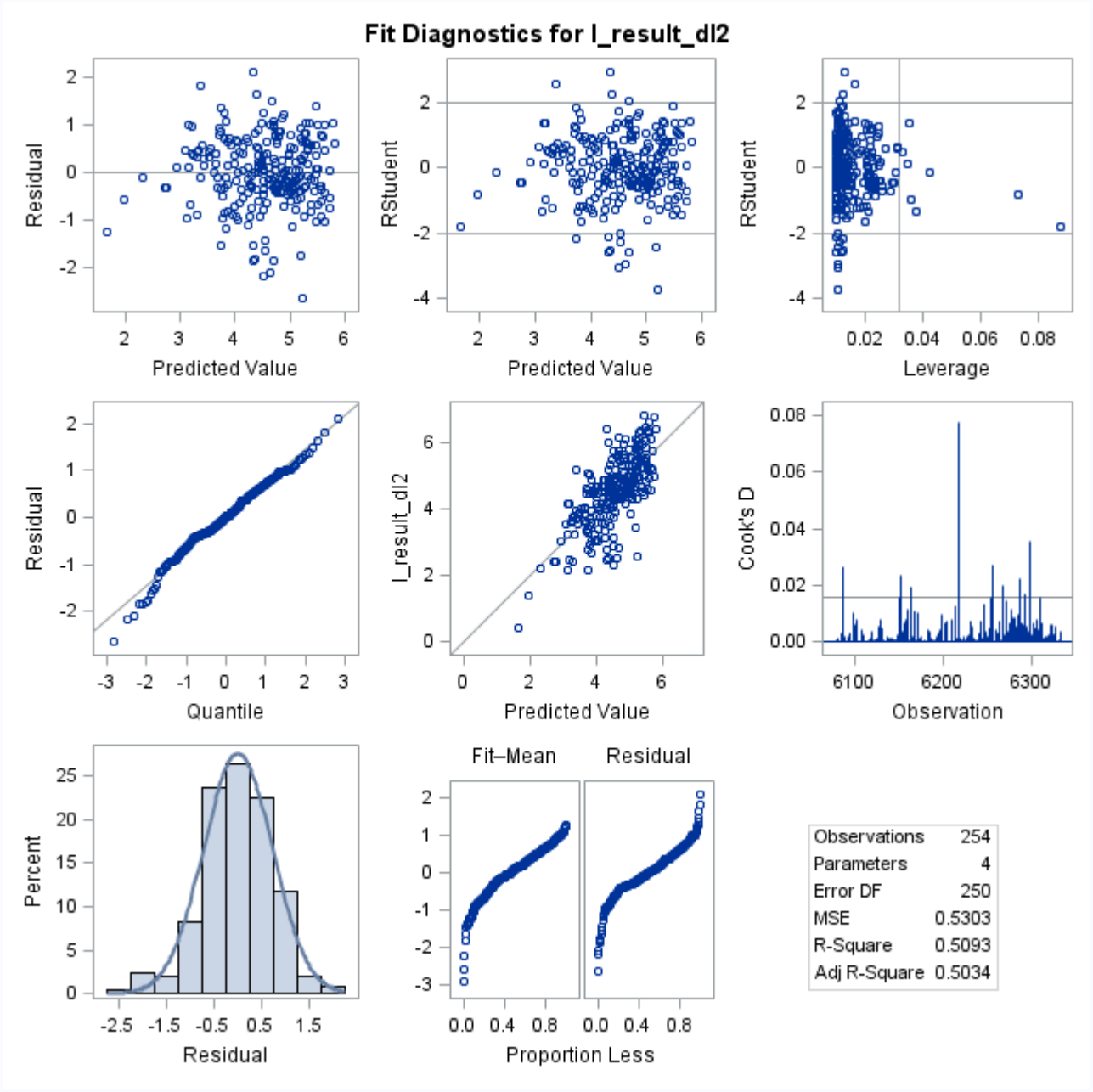
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Copper

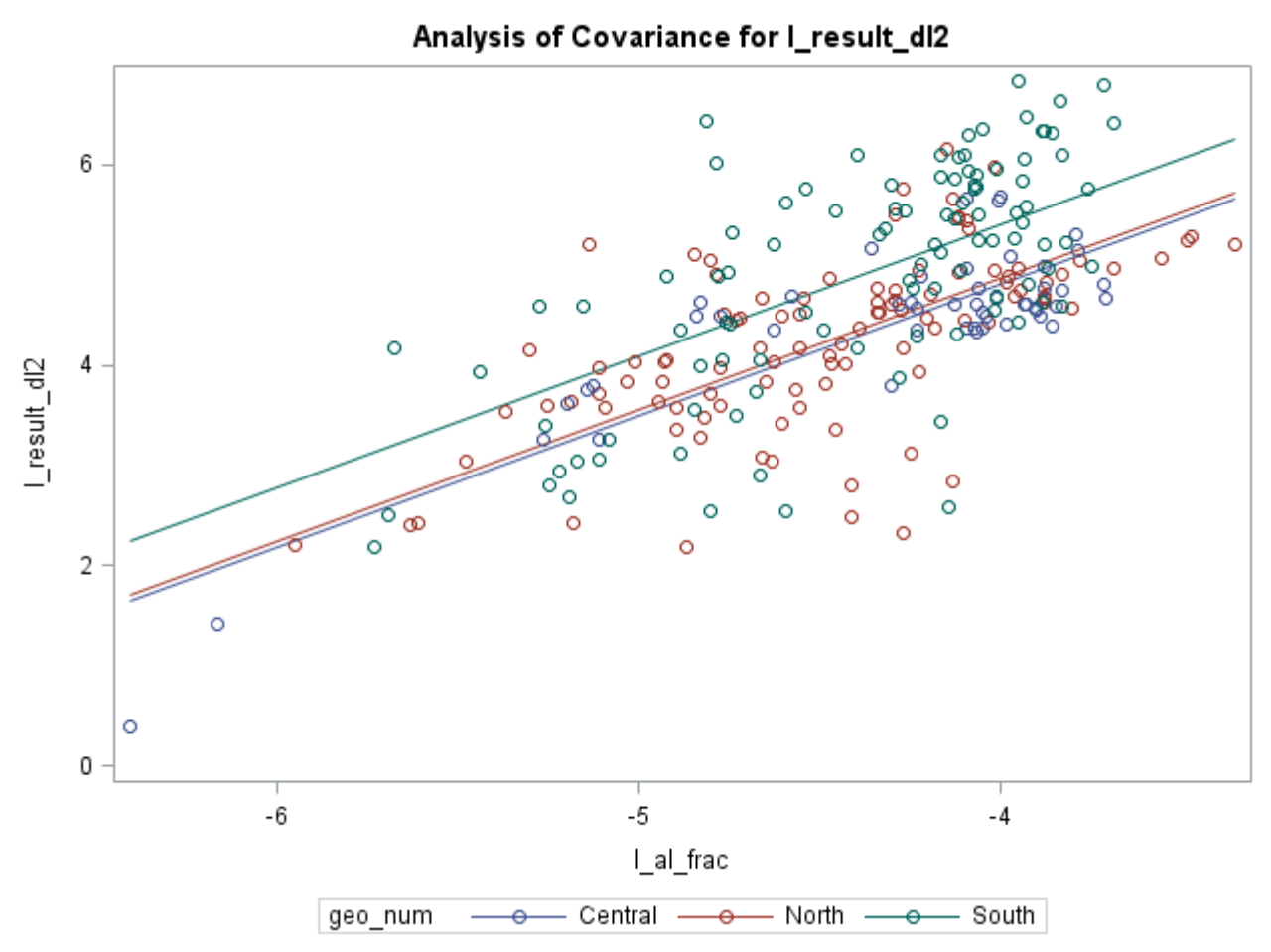
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	137.5815641	45.8605214	86.48	<.0001
Error	250	132.5728591	0.5302914		
Corrected Total	253	270.1544232			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.509270	16.02571	0.728211	4.544017

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	118.8756914	118.8756914	224.17	<.0001
geo_num	2	18.7058727	9.3529364	17.64	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	113.8596011	113.8596011	214.71	<.0001
geo_num	2	18.7058727	9.3529364	17.64	<.0001

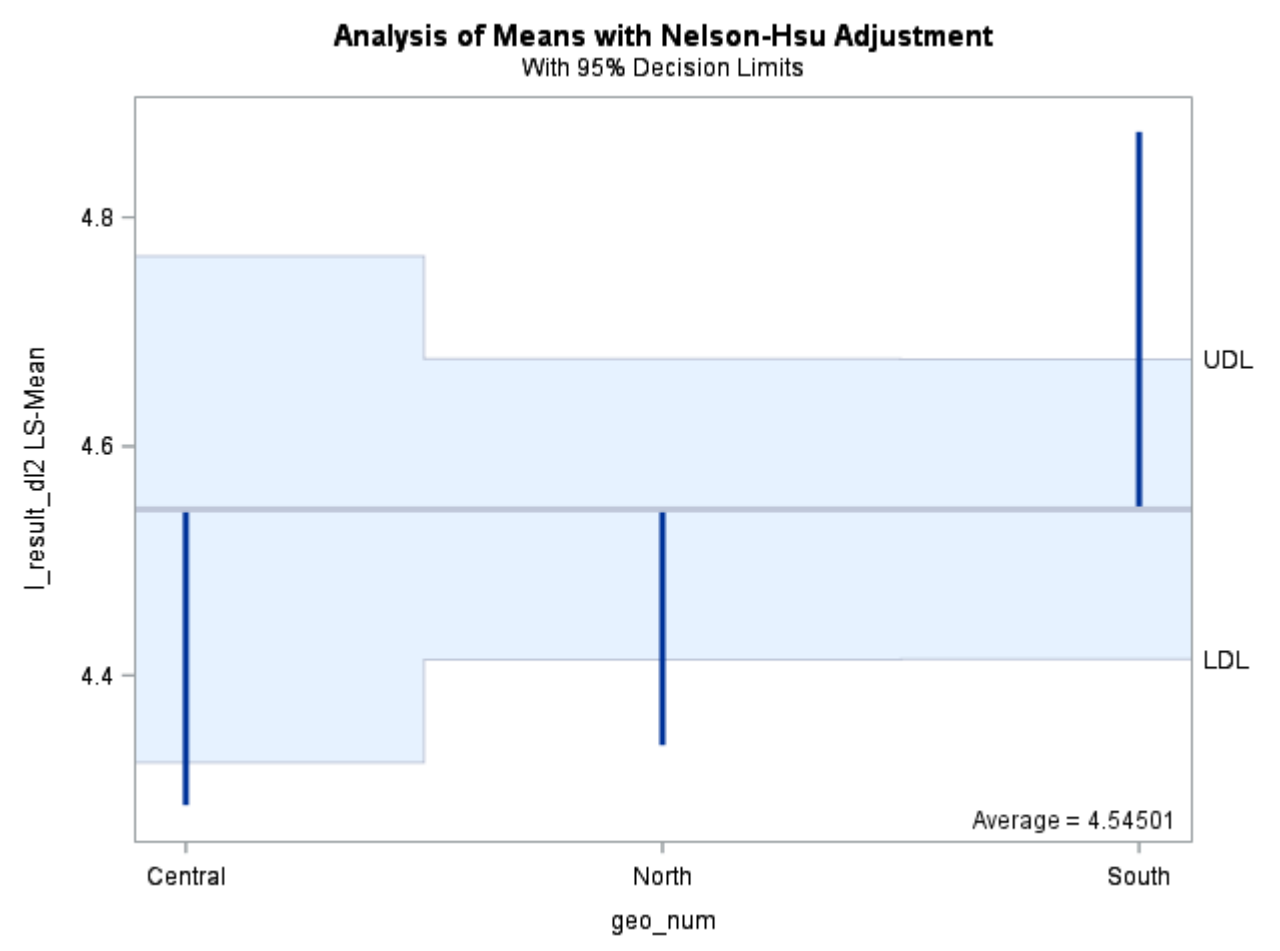

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.5303
R-Square 0.5093
Adj R-Square 0.5034


Analysis of Covariance for l_result_dl2
l_result_dl2
6
4
2
0
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Copper
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Copper

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.28666804	0.0173
North	4.33901388	0.0008
South	4.87465810	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Copper

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.28666804	1
North	4.33901388	2
South	4.87465810	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9112	<.0001
2	0.9112		<.0001
3	<.0001	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Lead

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

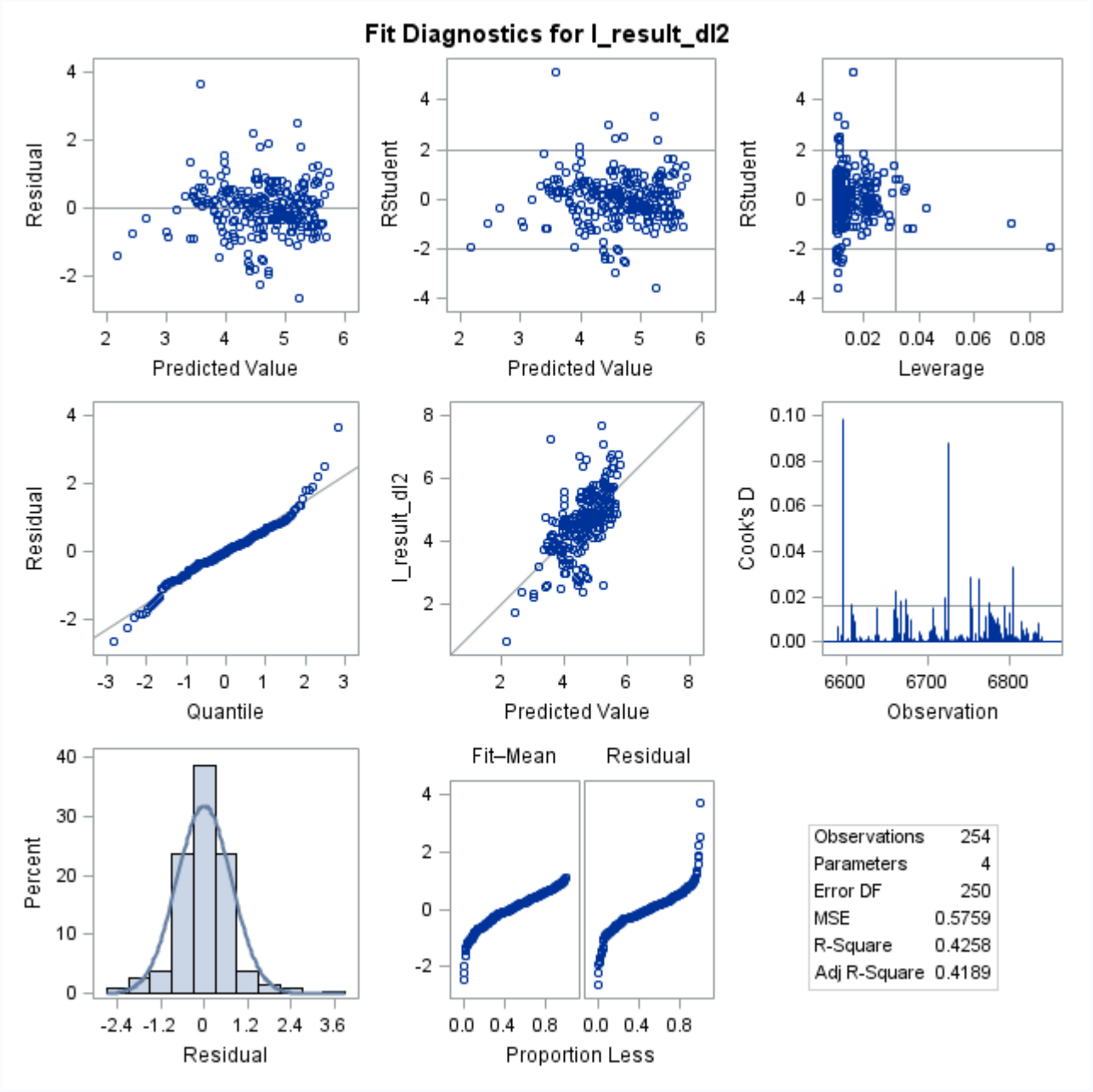
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Lead

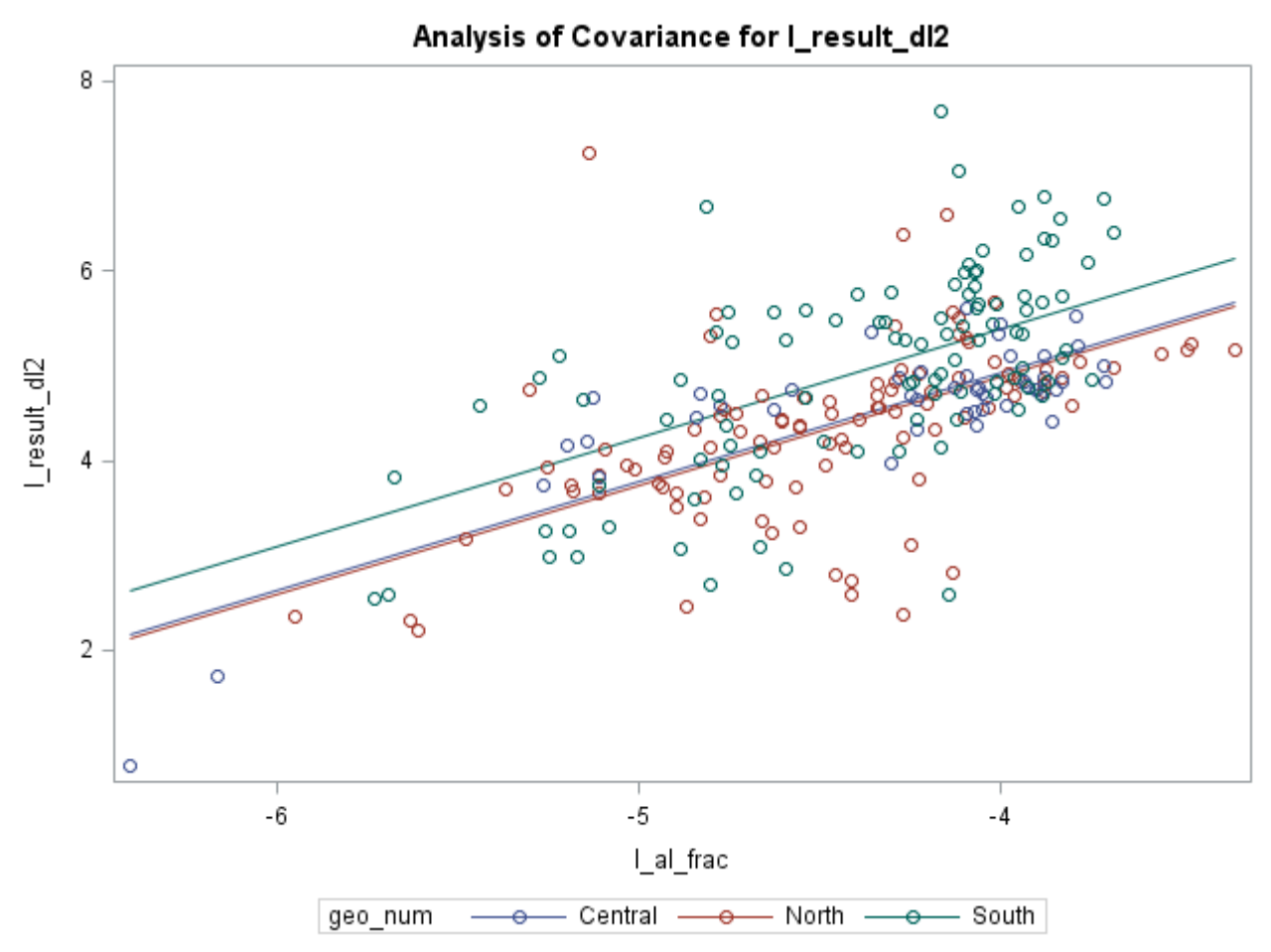
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	106.7632595	35.5877532	61.79	<.0001
Error	250	143.9752167	0.5759009		
Corrected Total	253	250.7384763			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.425795	16.37592	0.758881	4.634128

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	91.88237672	91.88237672	159.55	<.0001
geo_num	2	14.88088282	7.44044141	12.92	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	86.78994387	86.78994387	150.70	<.0001
geo_num	2	14.88088282	7.44044141	12.92	<.0001

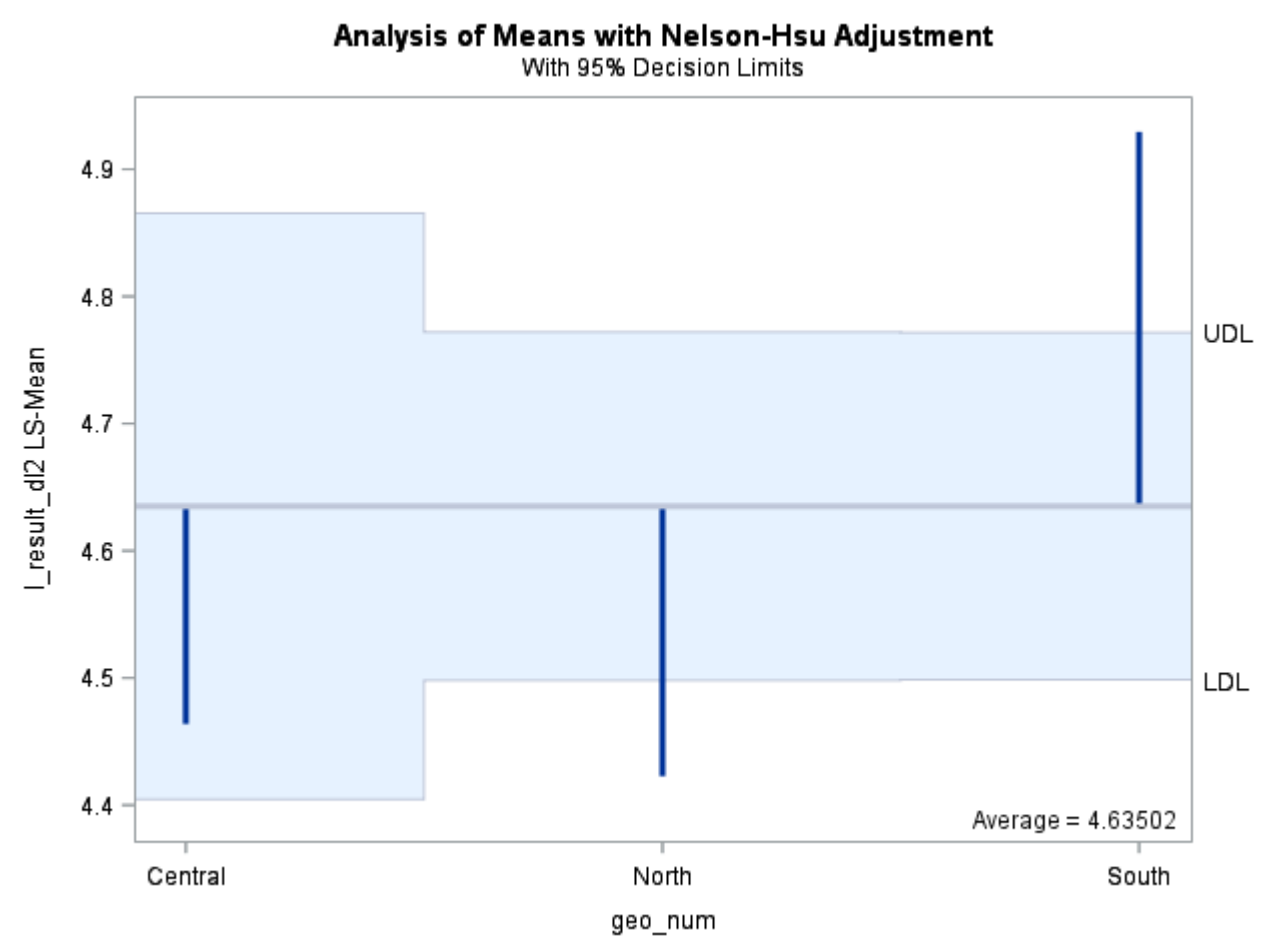

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.5759
R-Square 0.4258
Adj R-Square 0.4189


Analysis of Covariance for l_result_dl2
8
6
4
2
l_result_dl2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Lead
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Lead

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	4.46382333	0.1878
North	4.42274934	0.0009
South	4.92939264	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Lead

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	4.46382333	1
North	4.42274934	2
South	4.92939264	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9486	0.0015
2	0.9486		<.0001
3	0.0015	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Mercury

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

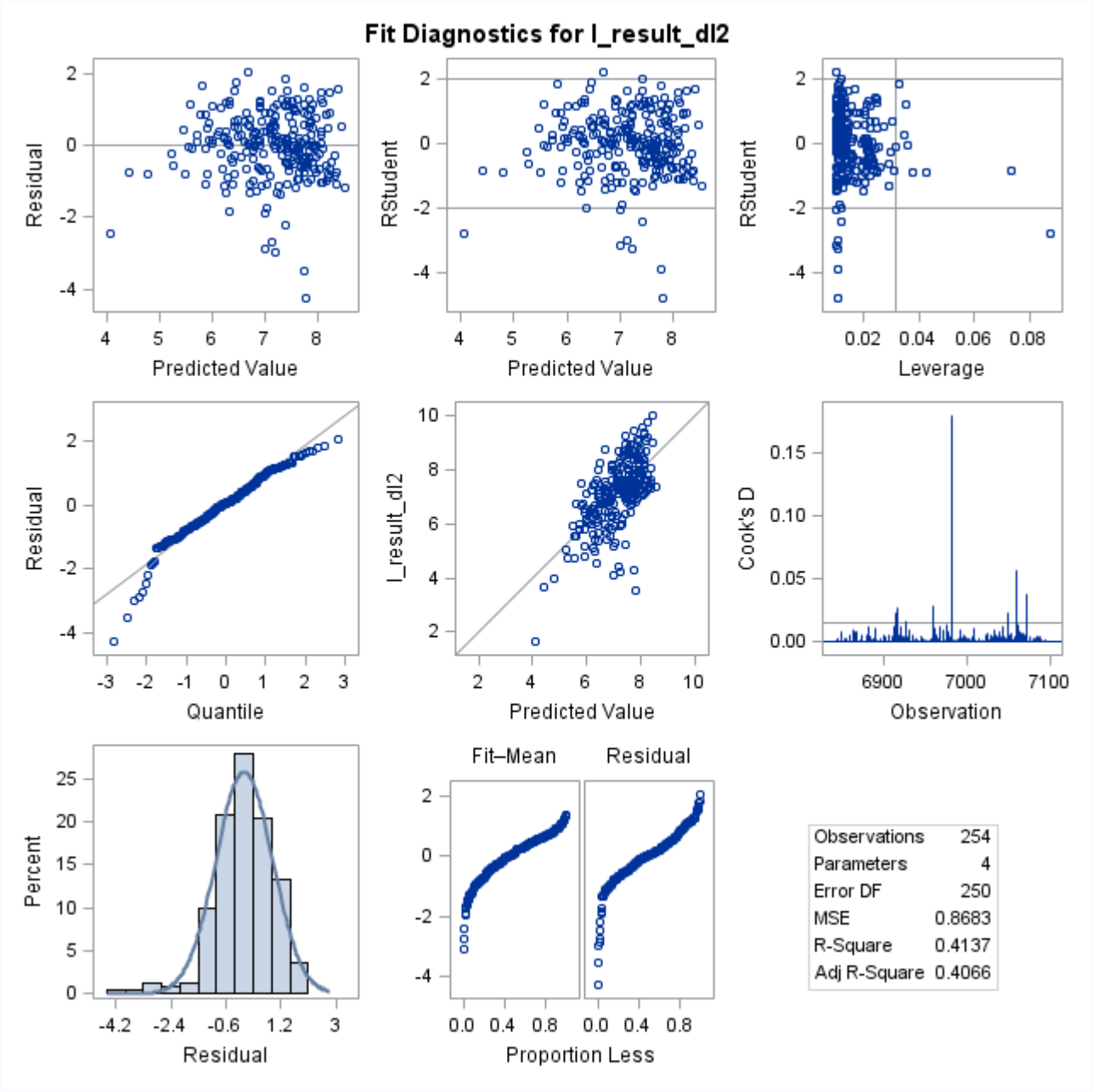
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Mercury

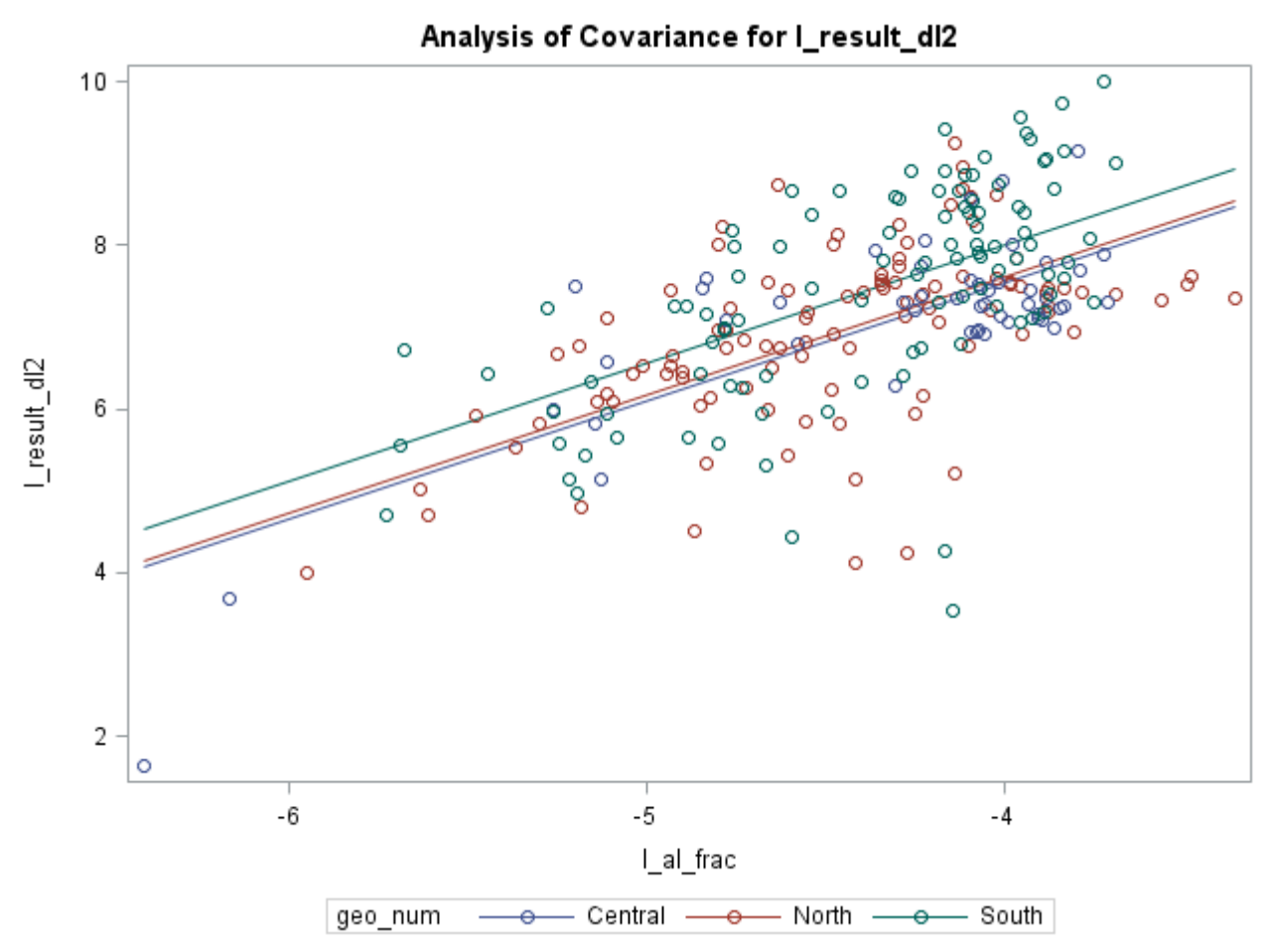
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	153.1568121	51.0522707	58.80	<.0001
Error	250	217.0692354	0.8682769		
Corrected Total	253	370.2260474			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.413685	12.99486	0.931814	7.170631

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	142.0979414	142.0979414	163.66	<.0001
geo_num	2	11.0588707	5.5294354	6.37	0.0020

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	137.4782890	137.4782890	158.33	<.0001
geo_num	2	11.0588707	5.5294354	6.37	0.0020

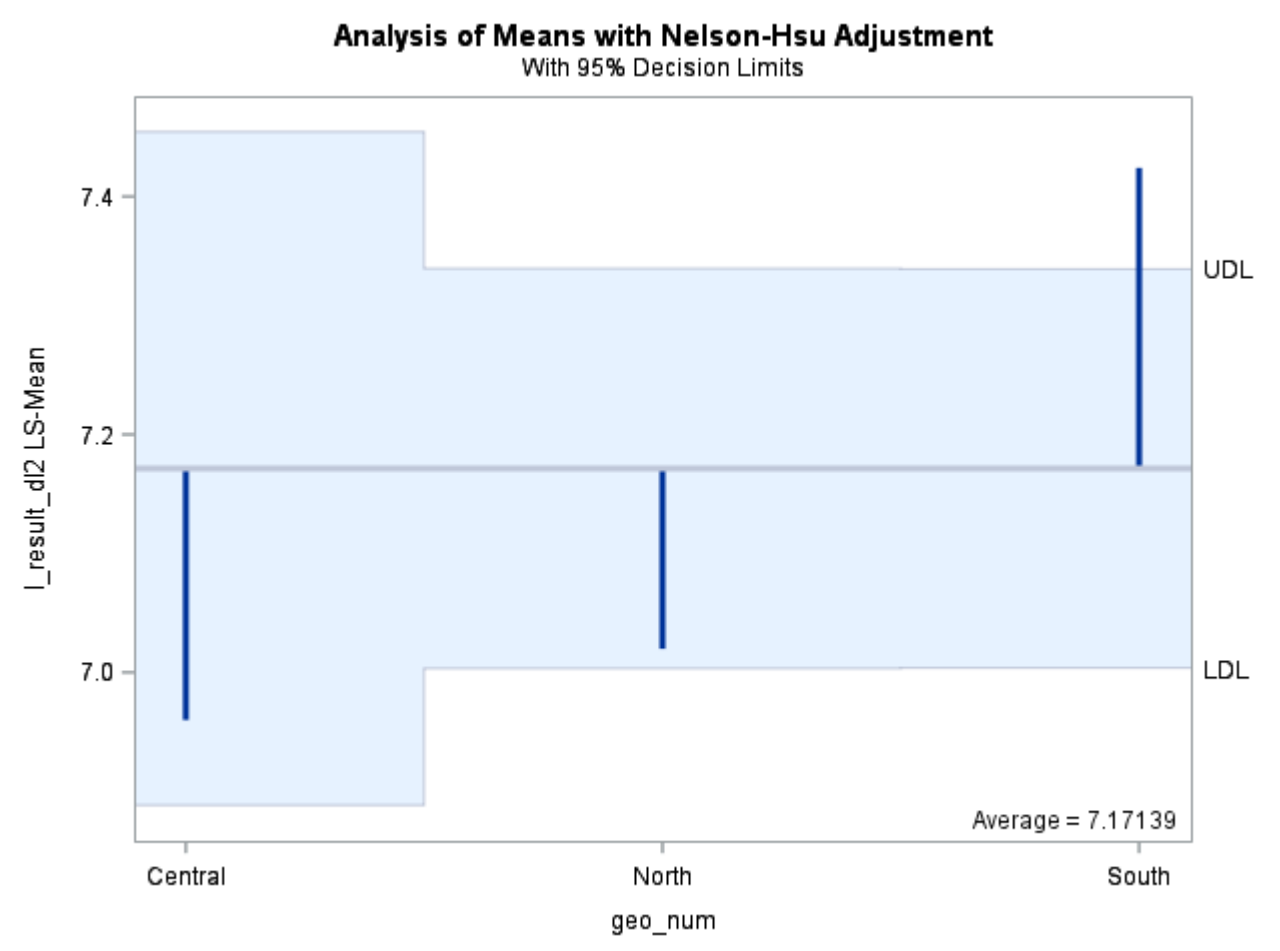

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.8683
R-Square 0.4137
Adj R-Square 0.4066


Analysis of Covariance for l_result_dl2
10
8
6
4
2
l_result_dl2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Mercury

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	6.96002341	0.1844
North	7.01984064	0.0867
South	7.42407450	0.0013



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Mercury

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	6.96002341	1
North	7.01984064	2
South	7.42407450	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9285	0.0127
2	0.9285		0.0062
3	0.0127	0.0062	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

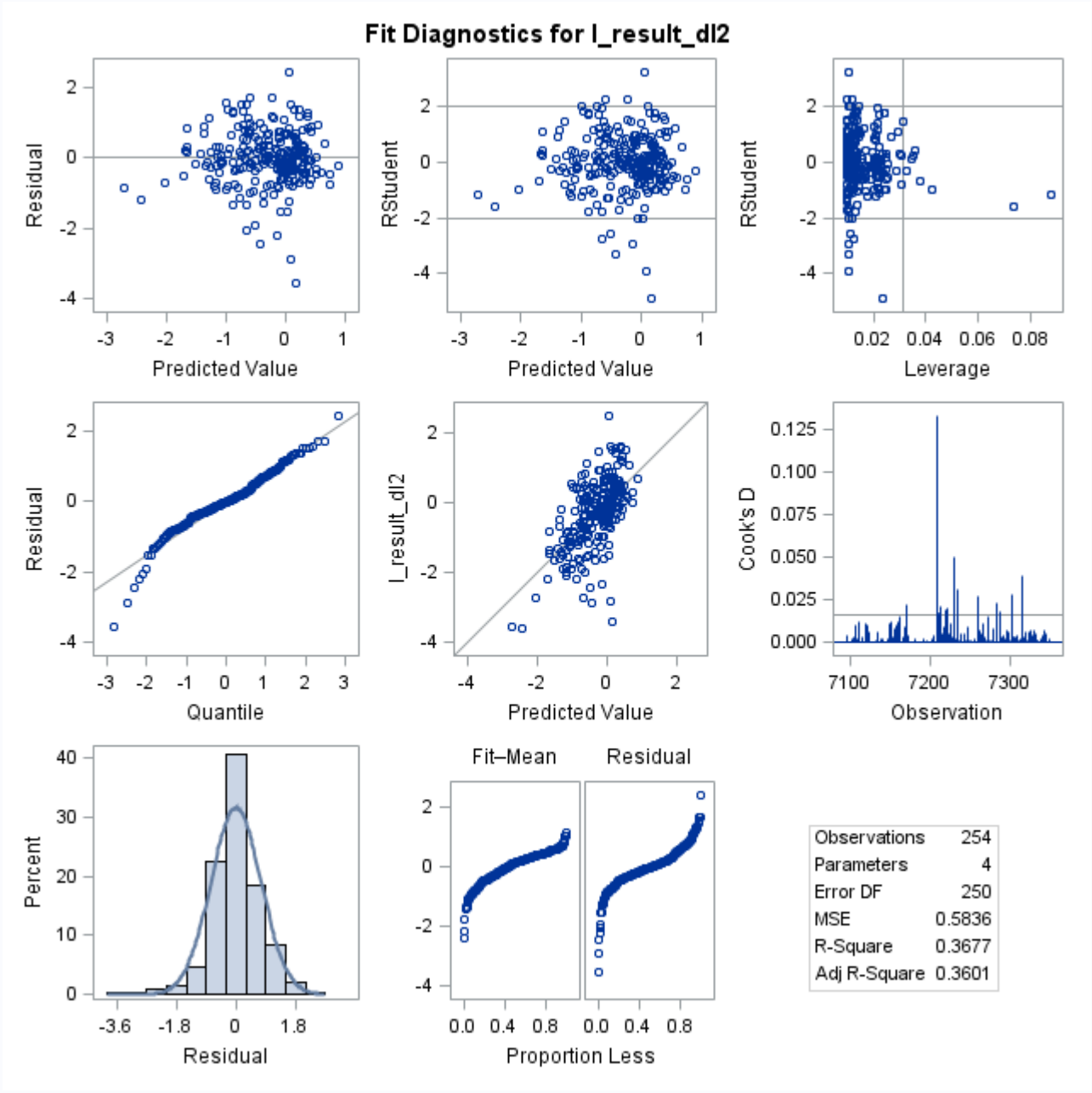
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

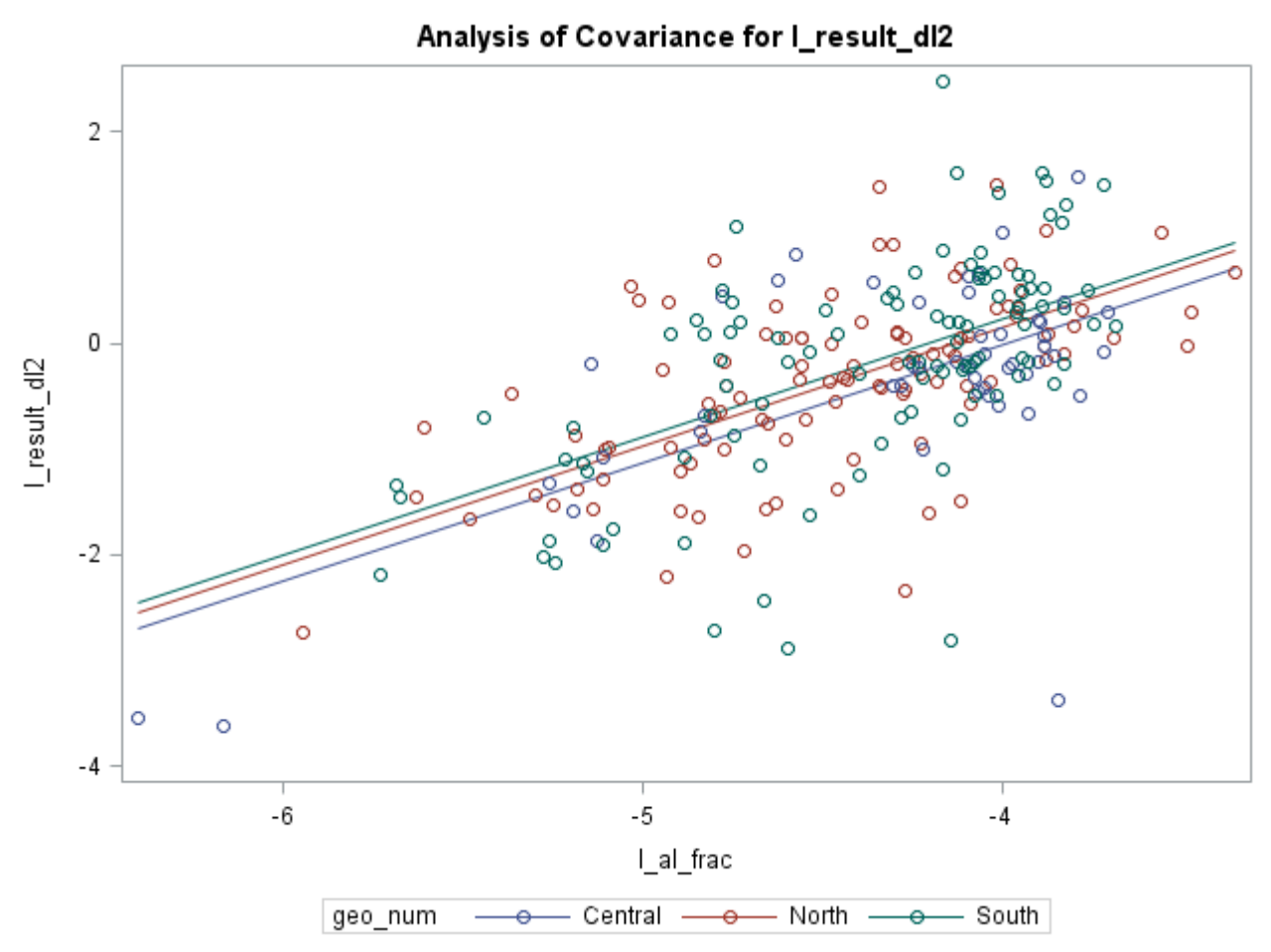
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	84.8405353	28.2801784	48.46	<.0001
Error	250	145.8902261	0.5835609		
Corrected Total	253	230.7307614			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.367704	-257.7833	0.763912	-0.296339

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	82.81120868	82.81120868	141.91	<.0001
geo_num	2	2.02932663	1.01466332	1.74	0.1779

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	82.75774274	82.75774274	141.82	<.0001
geo_num	2	2.02932663	1.01466332	1.74	0.1779

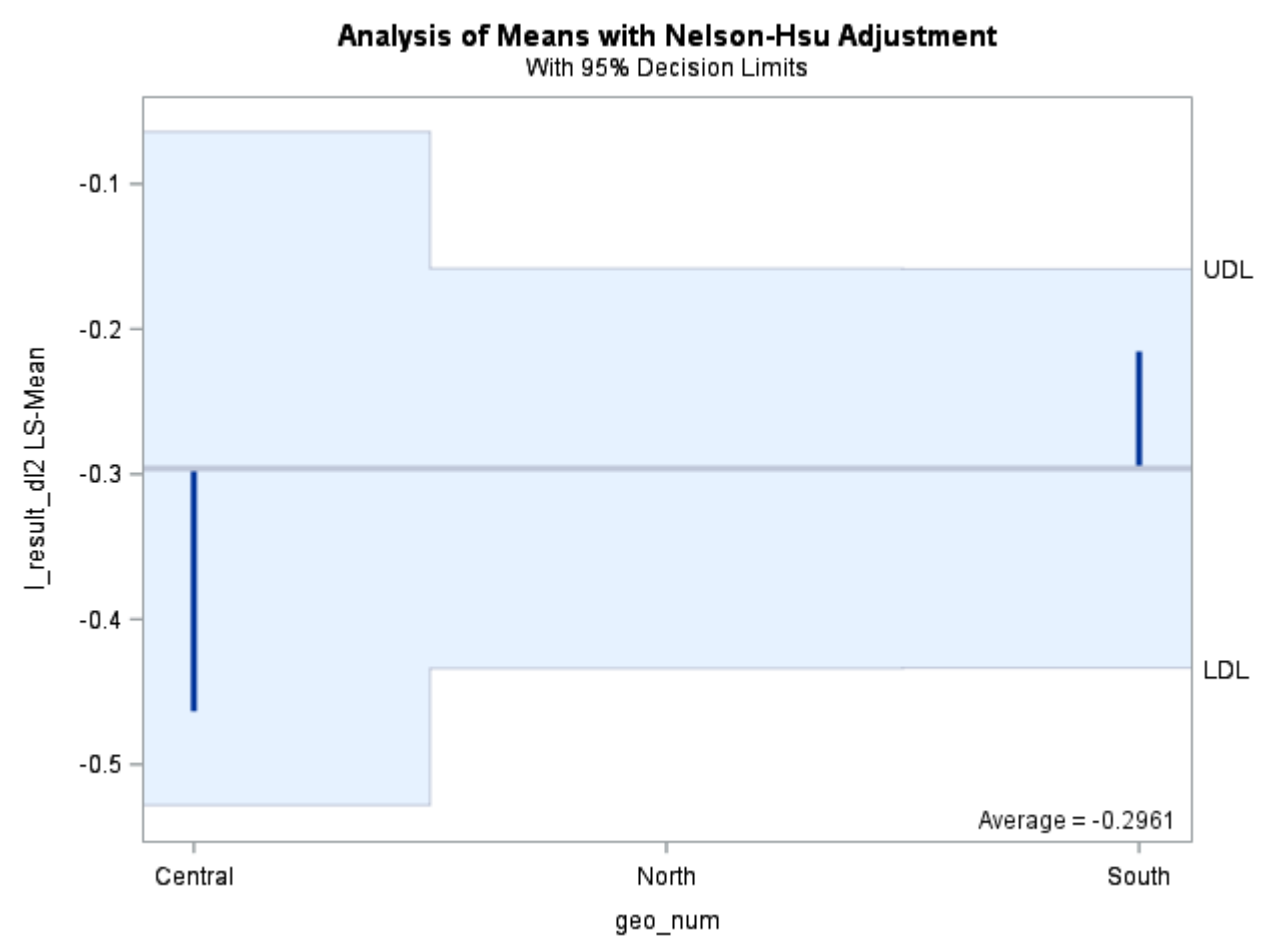

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.5836
R-Square 0.3677
Adj R-Square 0.3601


Analysis of Covariance for l_result_dl2
2
0
-2
-4
l_result_dl2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Methyl mercury
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	-0.46343272	0.2064
North	-0.29694090	0.9999
South	-0.21545977	0.3499



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Methyl mercury

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	-0.46343272	1
North	-0.29694090	2
South	-0.21545977	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.4274	0.1512
2	0.4274		0.7275
3	0.1512	0.7275	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Nickel

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

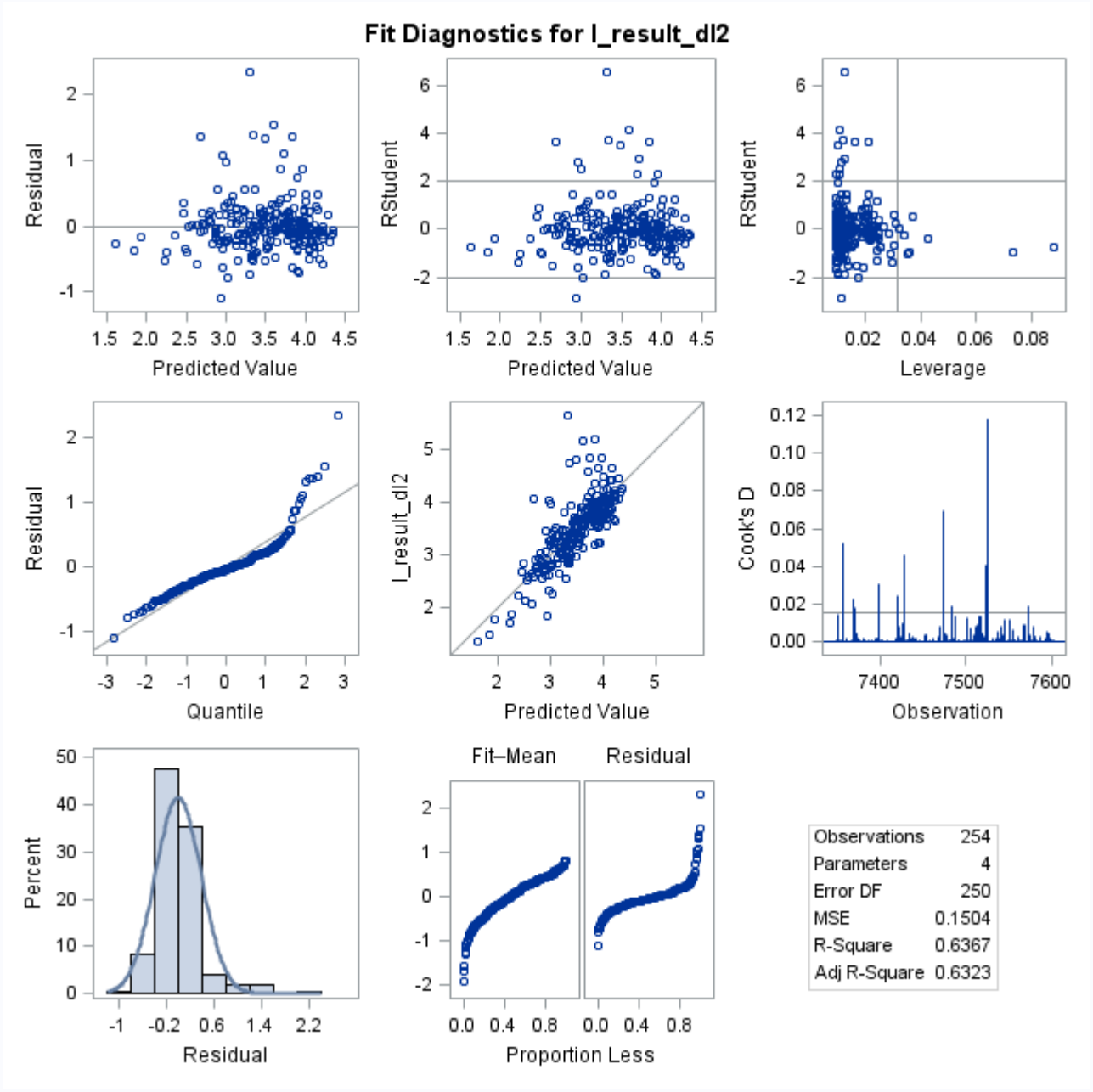
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Nickel

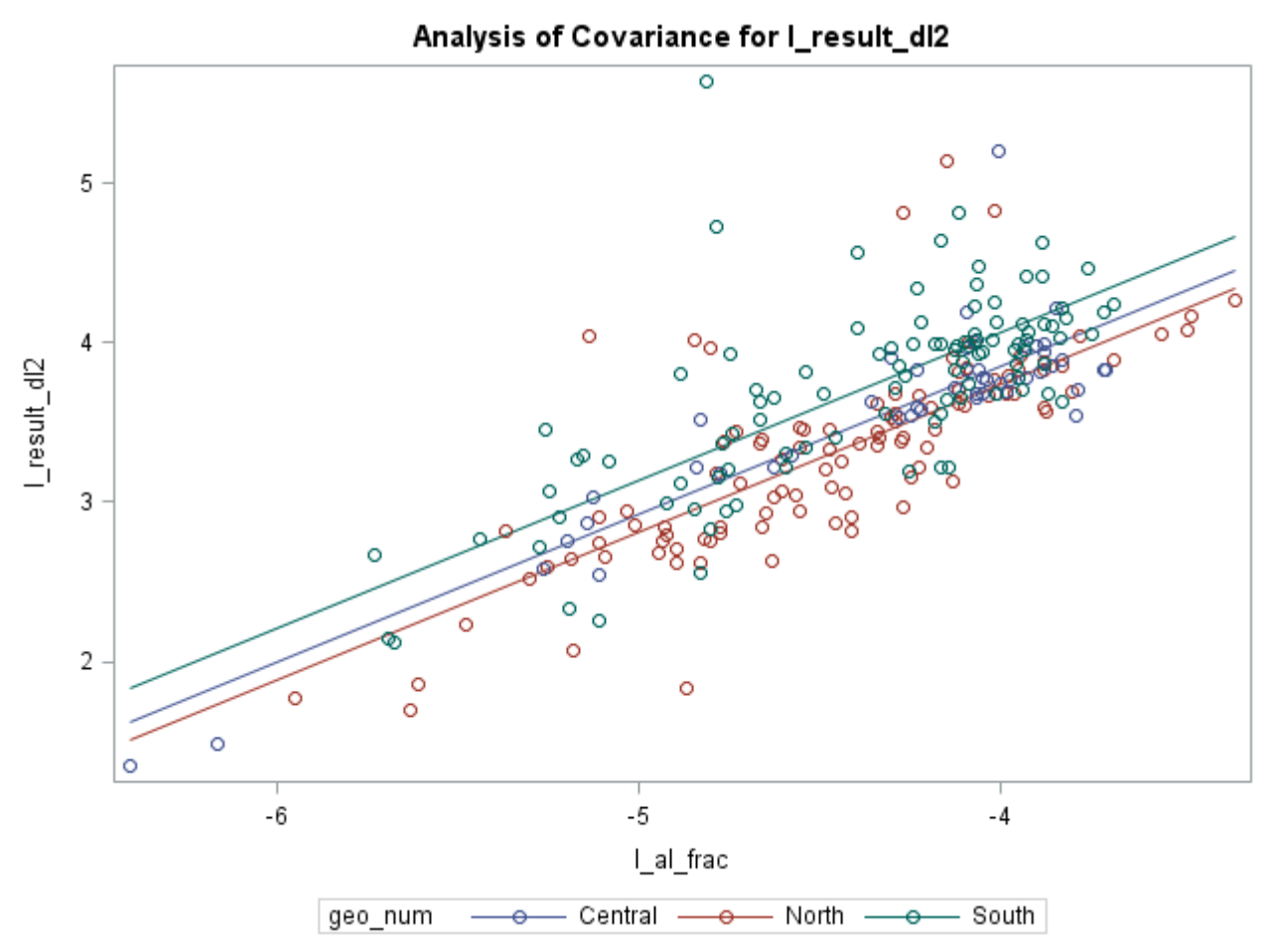
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	65.8778883	21.9592961	146.05	<.0001
Error	250	37.5886985	0.1503548		
Corrected Total	253	103.4665868			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.636707	11.02270	0.387756	3.517795

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	60.45392188	60.45392188	402.08	<.0001
geo_num	2	5.42396646	2.71198323	18.04	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	56.77851375	56.77851375	377.63	<.0001
geo_num	2	5.42396646	2.71198323	18.04	<.0001

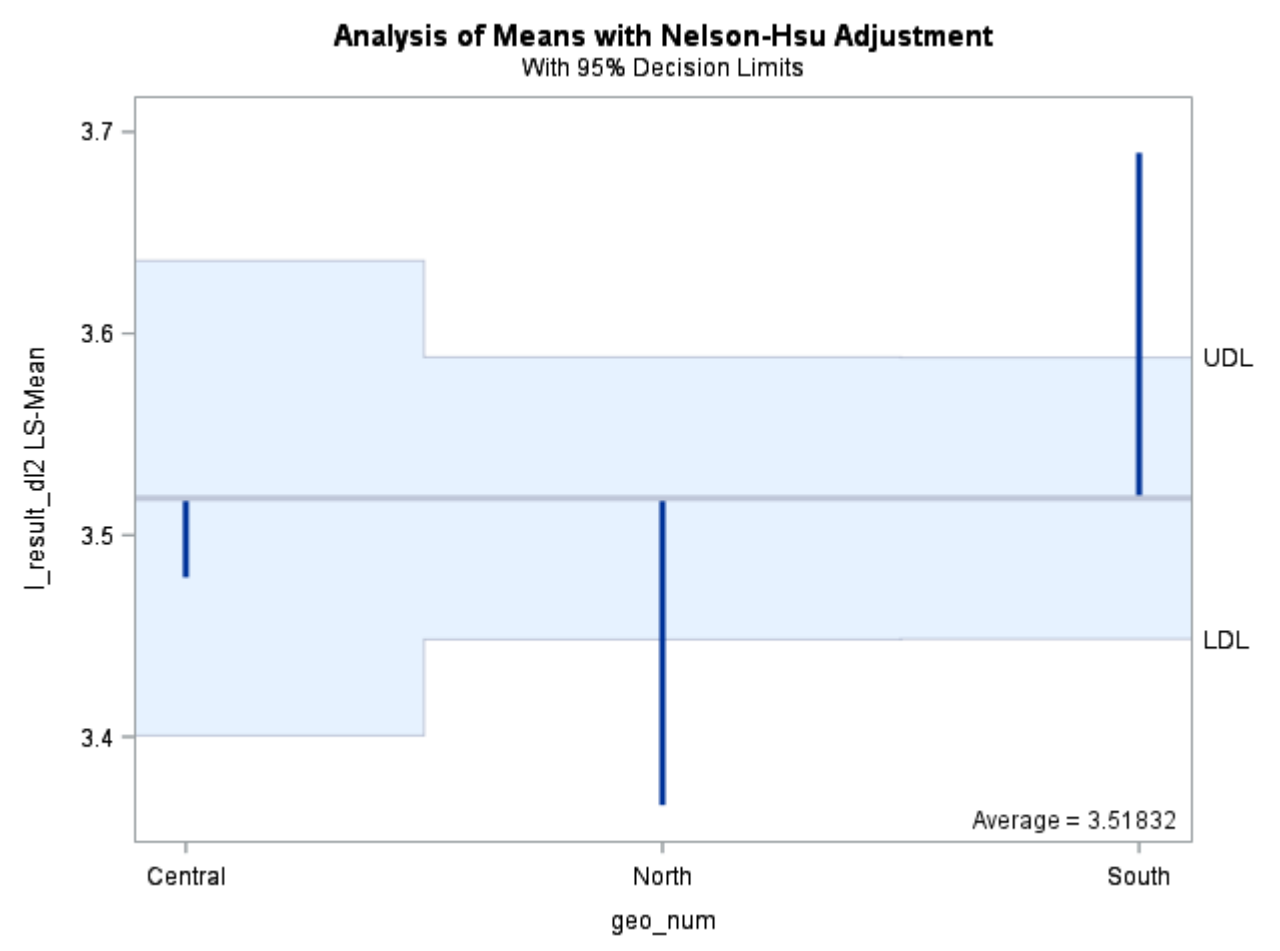

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.1504
R-Square 0.6367
Adj R-Square 0.6323


Analysis of Covariance for l_result_dl2
l_result_dl2
5
4
3
2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Nickel
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Nickel

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	3.47905509	0.7111
North	3.36610069	<.0001
South	3.68958792	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Nickel

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	3.47905509	1
North	3.36610069	2
South	3.68958792	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.2207	0.0057
2	0.2207		<.0001
3	0.0057	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Selenium

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	253
Number of Observations Used	253

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

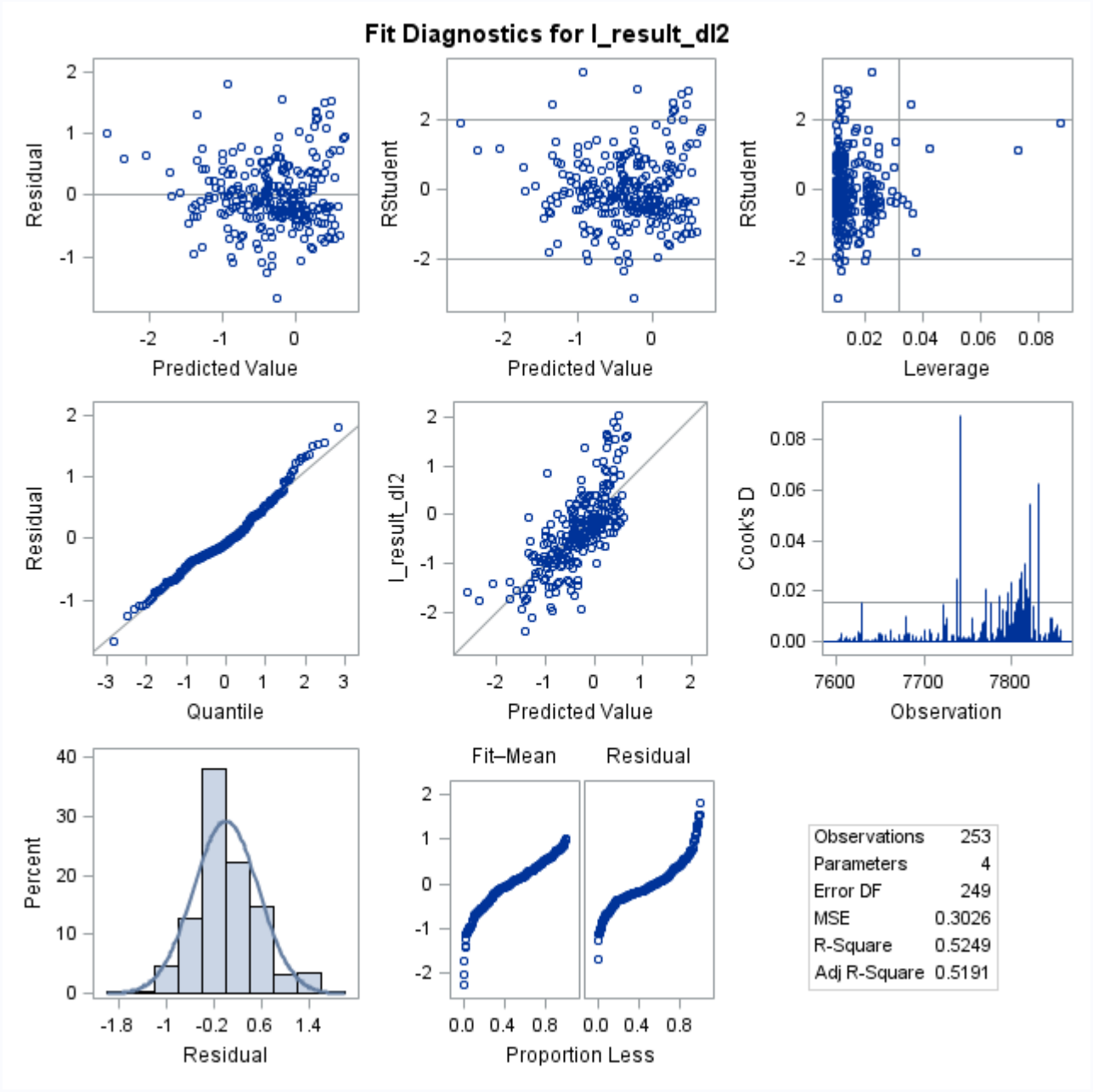
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Selenium

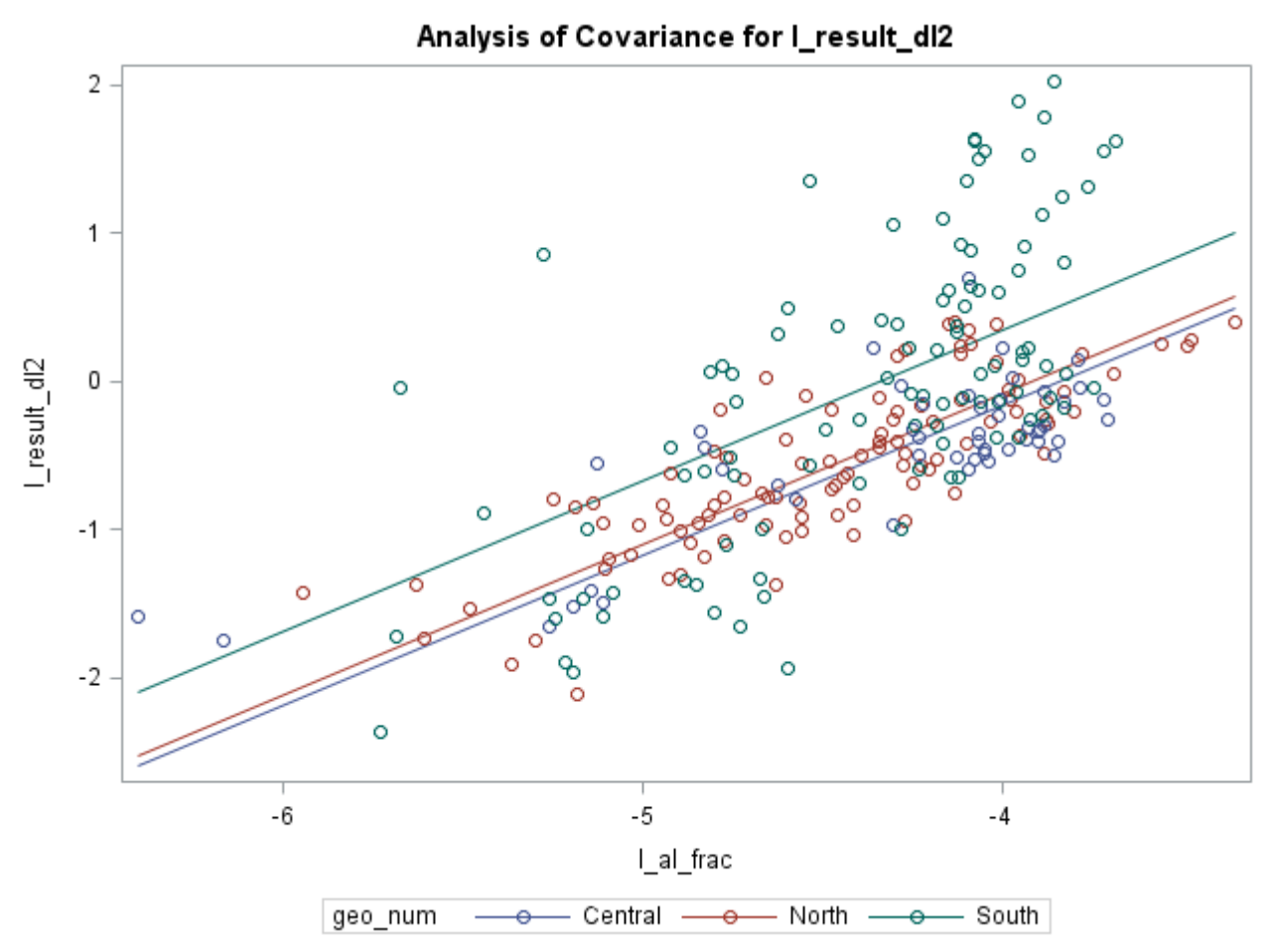
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	83.2322397	27.7440799	91.69	<.0001
Error	249	75.3469606	0.3025982		
Corrected Total	252	158.5792003			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.524862	-166.9523	0.550089	-0.329489

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	70.62459757	70.62459757	233.39	<.0001
geo_num	2	12.60764210	6.30382105	20.83	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	67.67704344	67.67704344	223.65	<.0001
geo_num	2	12.60764210	6.30382105	20.83	<.0001

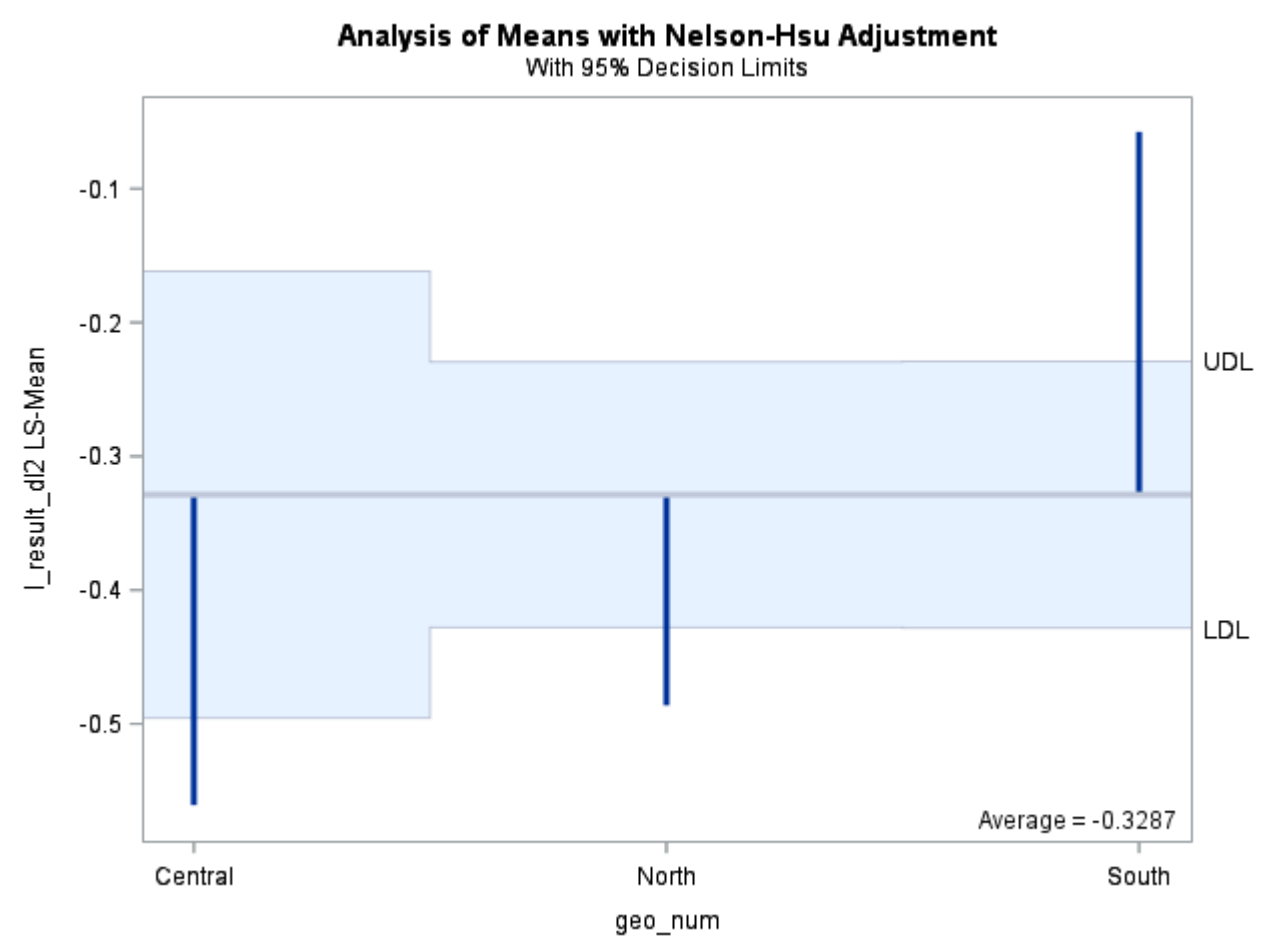

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 253
Parameters 4
Error DF 249
MSE 0.3026
R-Square 0.5249
Adj R-Square 0.5191


Analysis of Covariance for l_result_dl2
l_result_dl2
2
1
0
-1
-2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Selenium
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Selenium

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	-0.56071946	0.0035
North	-0.48616216	0.0007
South	-0.05753200	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Selenium

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	-0.56071946	1
North	-0.48616216	2
South	-0.05753200	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.7189	<.0001
2	0.7189		<.0001
3	<.0001	<.0001	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Silver

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

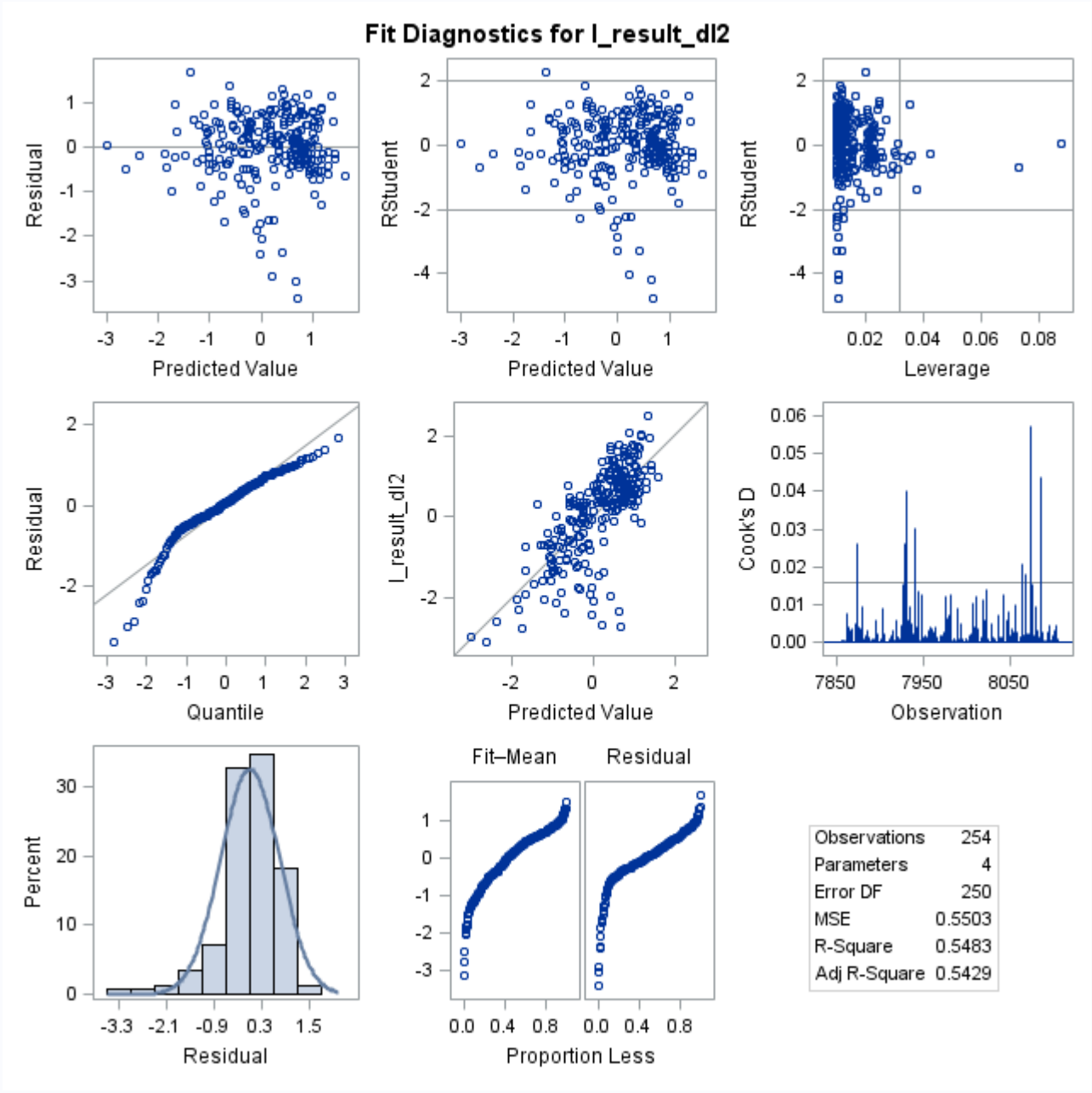
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Silver

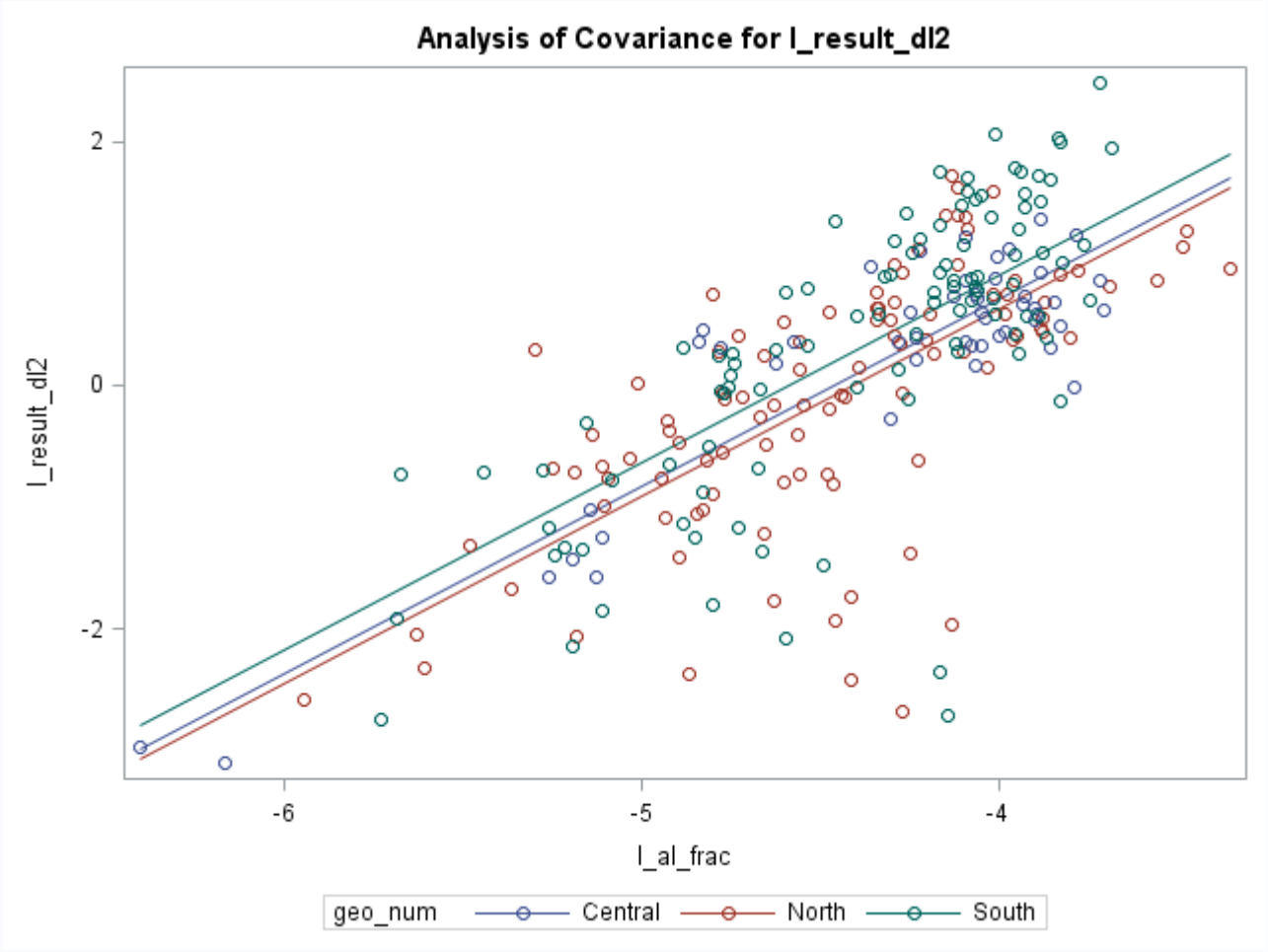
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	167.0061014	55.6687005	101.16	<.0001
Error	250	137.5775619	0.5503102		
Corrected Total	253	304.5836633			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.548309	546.0565	0.741829	0.135852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	162.7217846	162.7217846	295.69	<.0001
geo_num	2	4.2843168	2.1421584	3.89	0.0216

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	156.3265556	156.3265556	284.07	<.0001
geo_num	2	4.2843168	2.1421584	3.89	0.0216

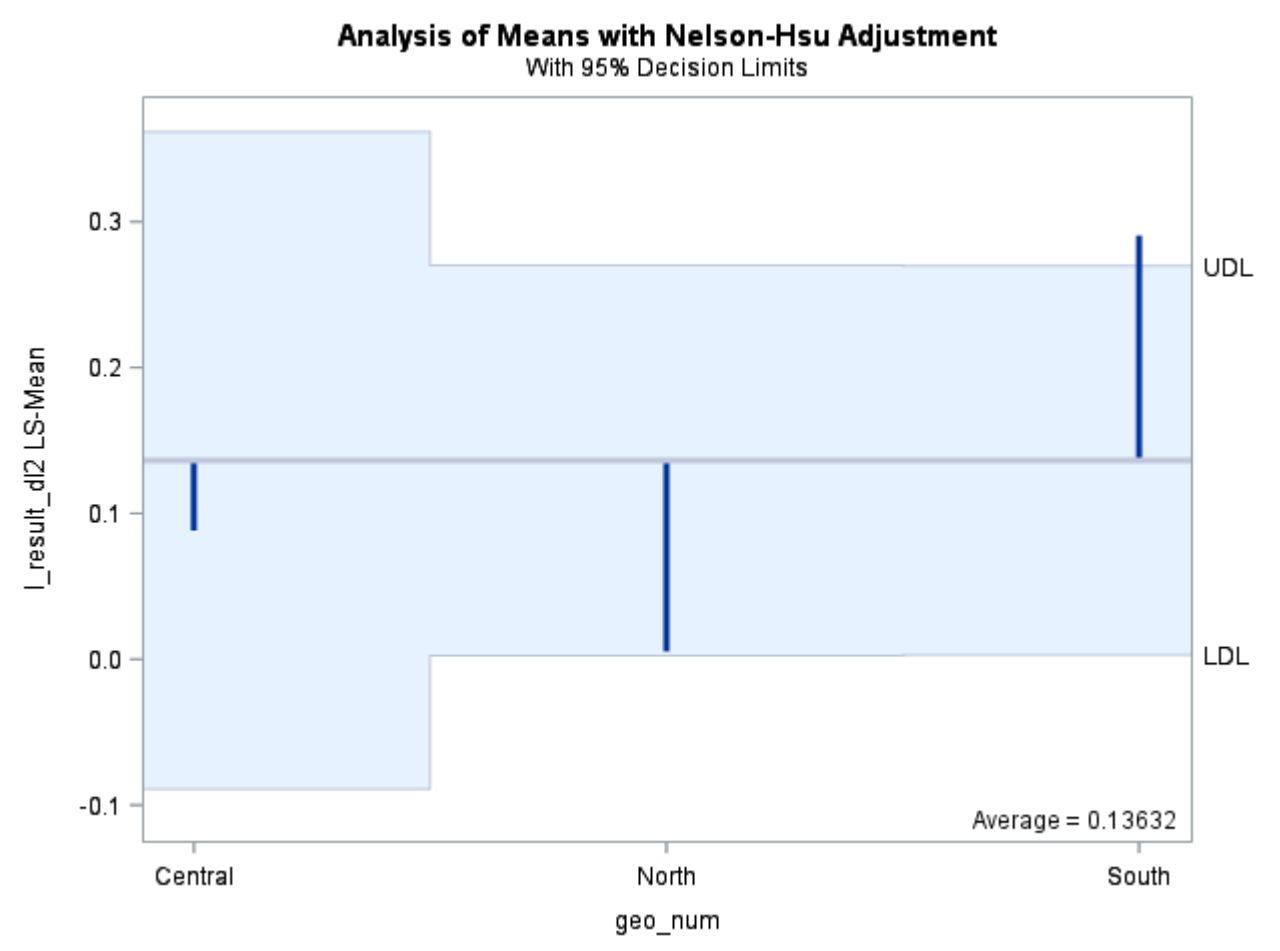

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.5503
R-Square 0.5483
Adj R-Square 0.5429


Analysis of Covariance for l_result_dl2
2
0
-2
l_result_dl2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Silver
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Silver

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	0.08826166	0.8695
North	0.00534744	0.0566
South	0.29049817	0.0189



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Silver

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	0.08826166	1
North	0.00534744	2
South	0.29049817	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.7988	0.2623
2	0.7988		0.0180
3	0.2623	0.0180	

The GLM Procedure
sort=7 Parameter_group=Metals chemical_name=Zinc

Class Level Information

Class	Levels	Values
geo_num	3	Central North South

Number of Observations Read	254
Number of Observations Used	254

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure

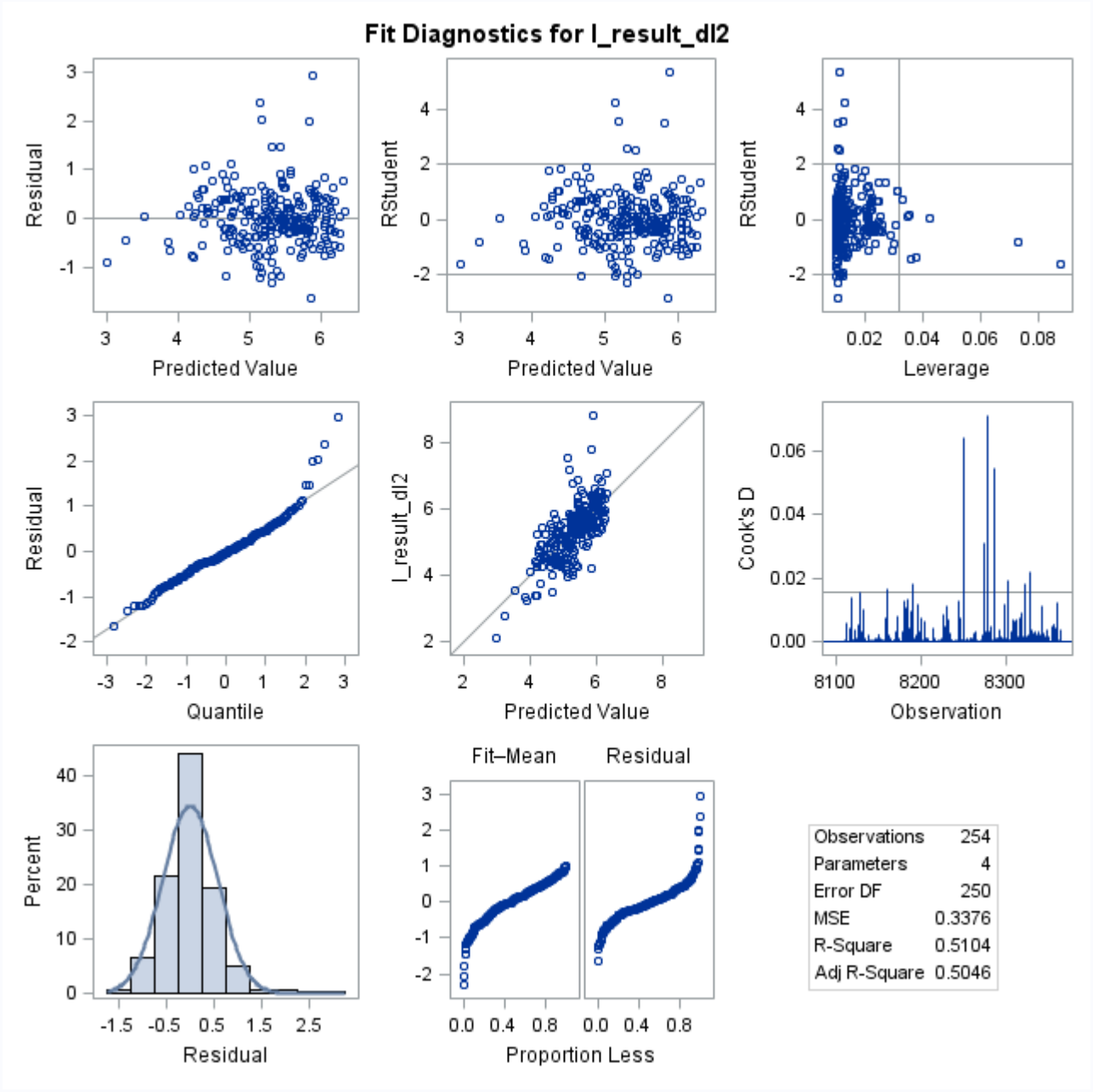
Dependent Variable: l_result_dl2
sort=7 Parameter_group=Metals chemical_name=Zinc

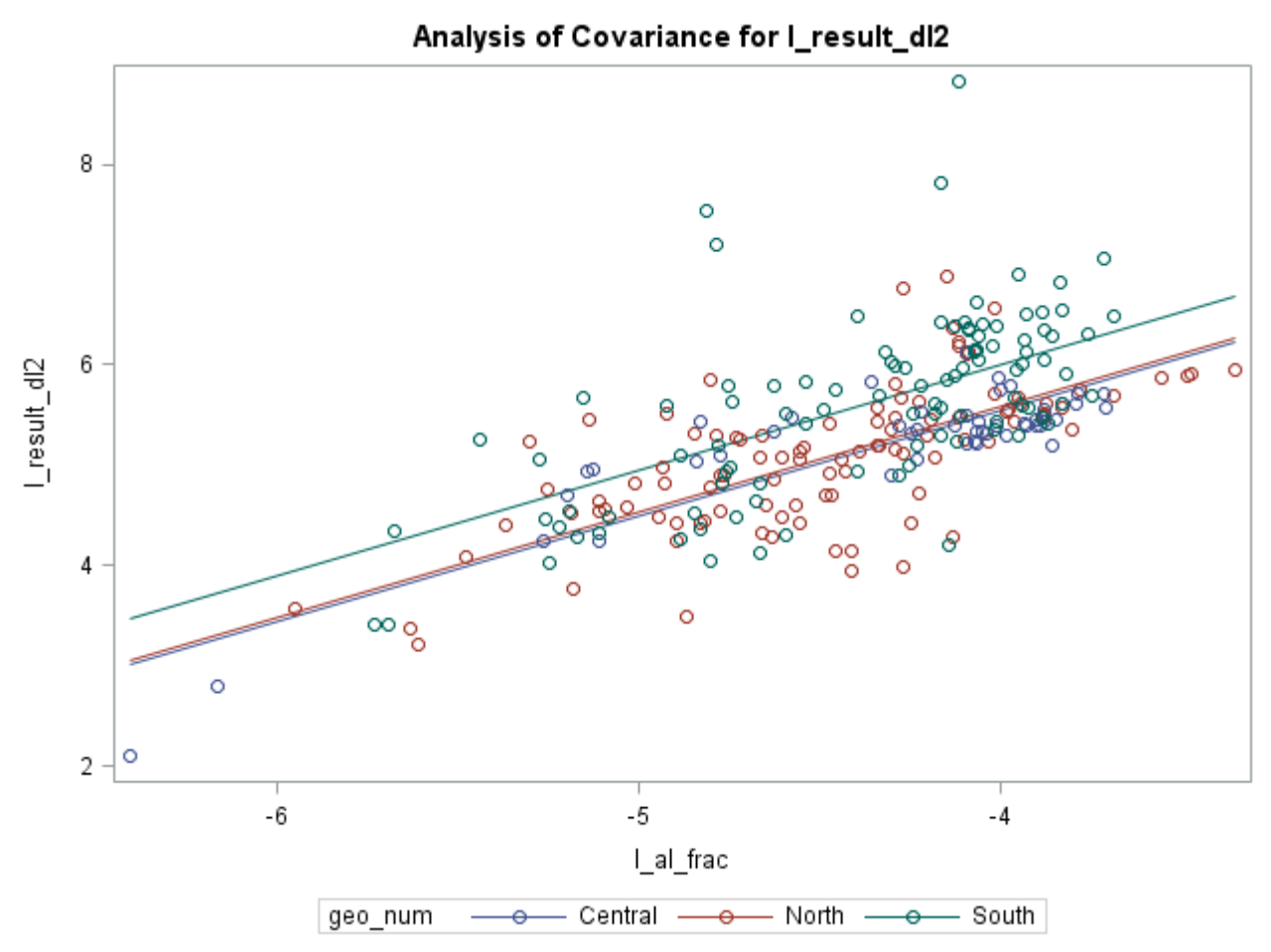
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	88.0076077	29.3358692	86.89	<.0001
Error	250	84.4057646	0.3376231		
Corrected Total	253	172.4133722			

R-Square	Coeff Var	Root MSE	l_result_dl2 Mean
0.510445	10.91685	0.581053	5.322537

Source	DF	Type I SS	Mean Square	F Value	Pr > F
l_al_frac	1	76.42736816	76.42736816	226.37	<.0001
geo_num	2	11.58023950	5.79011975	17.15	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
l_al_frac	1	73.25827294	73.25827294	216.98	<.0001
geo_num	2	11.58023950	5.79011975	17.15	<.0001

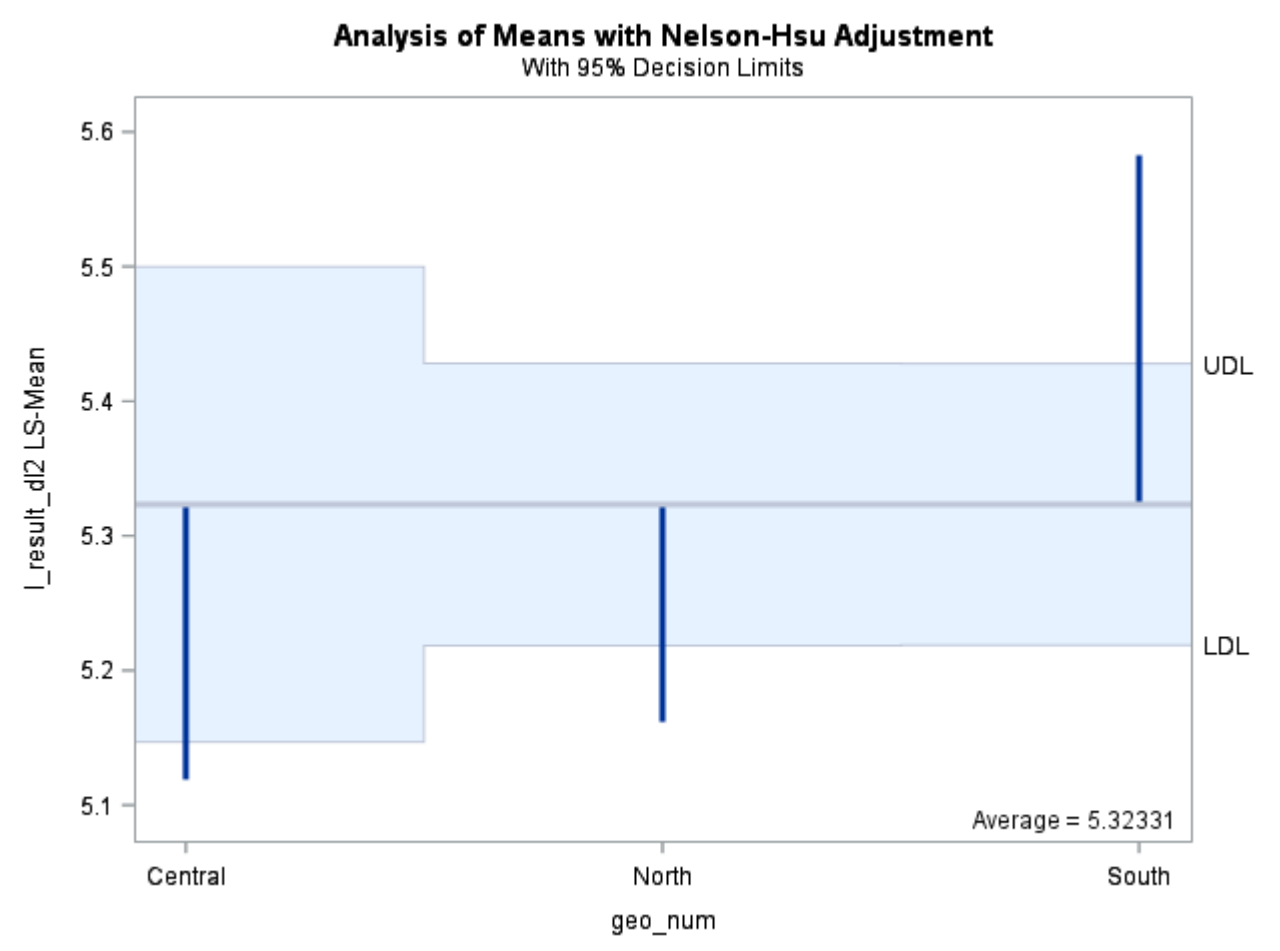

Fit Diagnostics for l_result_dl2
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
l_result_dl2
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 254
Parameters 4
Error DF 250
MSE 0.3376
R-Square 0.5104
Adj R-Square 0.5046


Analysis of Covariance for l_result_dl2
l_result_dl2
8
6
4
2
-6
-5
-4
l_al_frac
geo_num
Central
North
South

Metals Zinc
NBSA Phase III Surface Sediment ANCOVA Metals by geo_num

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Nelson-Hsu
sort=7 Parameter_group=Metals chemical_name=Zinc

geo_num	l_result_dl2 LSMEAN	H0:LSMean=Average Pr > |t|
Central	5.11897504	0.0186
North	5.16180485	0.0010
South	5.58263378	<.0001



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer
sort=7 Parameter_group=Metals chemical_name=Zinc

geo_num	l_result_dl2 LSMEAN	LSMEAN Number
Central	5.11897504	1
North	5.16180485	2
South	5.58263378	3

Least Squares Means for effect geo_num
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: l_result_dl2

i/j	1	2	3
1		0.9068	<.0001
2	0.9068		<.0001
3	<.0001	<.0001	