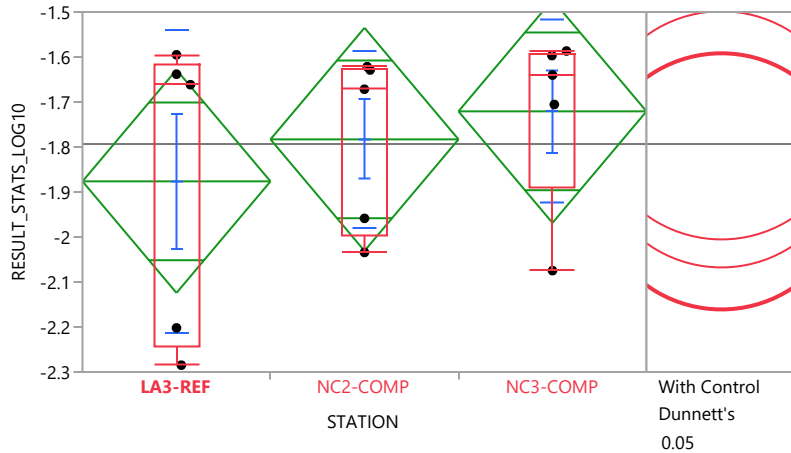


**Oneway Analysis of RESULT\_STATS\_LOG10 By STATION CHEM\_OUT=Mercury**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	-2.28483	-2.28483	-2.24344	-1.66154	-1.61672	-1.59517	-1.59517
NC2-COMP	-2.03433	-2.03433	-1.99647	-1.67162	-1.62527	-1.6216	-1.6216
NC3-COMP	-2.07469	-2.07469	-1.89011	-1.64016	-1.59179	-1.5867	-1.5867

**Oneway Anova**

**Summary of Fit**

Rsquare	0.073203
Adj Rsquare	-0.08126
Root Mean Square Error	0.25435
Mean of Response	-1.79339
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	2	0.06131864	0.030659	0.4739	0.6337
Error	12	0.77632926	0.064694		
C. Total	14	0.83764790			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	-1.8764	0.11375	-2.124	-1.629
NC2-COMP	5	-1.7830	0.11375	-2.031	-1.535
NC3-COMP	5	-1.7208	0.11375	-1.969	-1.473

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	-1.87637	0.3372008	0.1508008	-2.29506	-1.45768
NC2-COMP	5	-1.783018	0.1976099	0.0883738	-2.028383	-1.537653
NC3-COMP	5	-1.720792	0.2032936	0.0909156	-1.973214	-1.46837

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**Oneway Analysis of RESULT\_STATS\_LOG10 By STATION CHEM\_OUT=Mercury**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
NC3-COMP	-0.25	0.5415
NC2-COMP	-0.31	0.7896
LA3-REF	-0.4	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

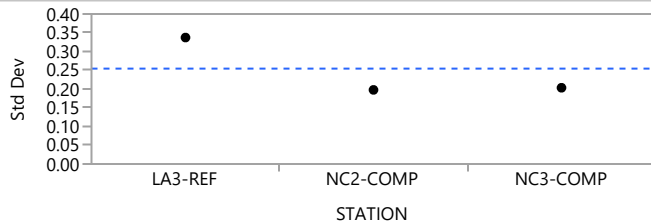
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	35.000	40.000	7.00000	-0.551
NC2-COMP	5	39.000	40.000	7.80000	-0.061
NC3-COMP	5	46.000	40.000	9.20000	0.674

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.6200	2	0.7334

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
LA3-REF	5	0.3372008	0.2936520	0.2506860
NC2-COMP	5	0.1976099	0.1707616	0.1484820
NC3-COMP	5	0.2032936	0.1415592	0.1193280

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.3561	2	12	0.1371
Brown-Forsythe	0.4711	2	12	0.6354
Levene	3.9411	2	12	0.0483*
Bartlett	0.7002	2	.	0.4965

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean	Std Err Dif	Z	p-Value	Hodges-	Lower CL	Upper CL	Difference Plot
		Difference				Lehmann			
NC3-COMP	LA3-REF	1.200000	1.914854	0.6266796	0.5309	0.0515700	-0.436420	0.6879500	
NC3-COMP	NC2-COMP	0.800000	1.914854	0.4177864	0.6761	0.0320500	-0.445760	0.4374500	
NC2-COMP	LA3-REF	0.400000	1.914854	0.2088932	0.8345	0.0166700	-0.396060	0.6559000	

**Distributions CHEM\_OUT=2,4'-DDD**

**RESULT\_STATS\_LOG10**

Normal(1.23937,0.11517)

**Quantiles**

100.0%	maximum	1.45457
99.5%		1.45457
97.5%		1.45457
90.0%		1.390114
75.0%	quartile	1.3397575
50.0%	median	1.23297
25.0%	quartile	1.17241
10.0%		1.105773
2.5%		0.985277
0.5%		0.985277
0.0%	minimum	0.985277

**Summary Statistics**

Mean	1.2393702
Std Dev	0.1151743
Std Err Mean	0.0210278
Upper 95% Mean	1.282377
Lower 95% Mean	1.1963635
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.2393702	1.1963635	1.282377
Dispersion	$\sigma$	0.1151743	0.0917256	0.1548305

-2log(Likelihood) = -45.542229749922

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.974391	0.6648

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=2,4'-DDE**

**RESULT\_STATS\_LOG10**

Normal(2.27745,0.2651)

**Quantiles**

100.0%	maximum	2.77322
99.5%		2.77322
97.5%		2.7729945
90.0%		2.591256
75.0%	quartile	2.4300675
50.0%	median	2.30103
25.0%	quartile	2.2026825
10.0%		1.743758
2.5%		1.627014
0.5%		1.61542
0.0%	minimum	1.61542

**Summary Statistics**

Mean	2.2774532
Std Dev	0.265104
Std Err Mean	0.0374914
Upper 95% Mean	2.3527949
Lower 95% Mean	2.2021115
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	2.2774532	2.2021115	2.3527949
Dispersion	$\sigma$	0.265104	0.2214504	0.330355

-2log(Likelihood) = 8.13055181194446

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.912120	0.0012*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=2,4'-DDT**

**RESULT\_STATS\_LOG10**

Normal(1.32466,0.13554)

**Quantiles**

100.0%	maximum	1.44997
99.5%		1.44997
97.5%		1.44997
90.0%		1.448039
75.0%	quartile	1.4290925
50.0%	median	1.38746
25.0%	quartile	1.23819
10.0%		1.061721
2.5%		1.05203
0.5%		1.05203
0.0%	minimum	1.05203

**Summary Statistics**

Mean	1.324662
Std Dev	0.1355379
Std Err Mean	0.0428608
Upper 95% Mean	1.42162
Lower 95% Mean	1.227704
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.324662	1.227704	1.42162
Dispersion	$\sigma$	0.1355379	0.0932277	0.2474393

-2log(Likelihood) = -12.5913131785062

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.843851	0.0491*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=4,4'-DDD**

**RESULT\_STATS\_LOG10**

Normal(3.096,0.53721)

**Quantiles**

100.0%	maximum	3.7343
99.5%		3.7343
97.5%		3.673416
90.0%		3.536784
75.0%	quartile	3.40749
50.0%	median	3.24159
25.0%	quartile	2.92689
10.0%		2.61459
2.5%		1.35999
0.5%		1.35655
0.0%	minimum	1.35655

**Summary Statistics**

Mean	3.095996
Std Dev	0.5372118
Std Err Mean	0.0724376
Upper 95% Mean	3.2412247
Lower 95% Mean	2.9507673
N	55

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.095996	2.9507673	3.2412247
Dispersion	$\sigma$	0.5372118	0.4522594	0.6617604

-2log(Likelihood) = 86.7333336279658

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.727116	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=4,4'-DDE**

**RESULT\_STATS\_LOG10**

Normal(2.92525,0.29351)

**Quantiles**

100.0%	maximum	3.40524
99.5%		3.40524
97.5%		3.380112
90.0%		3.228166
75.0%	quartile	3.11197
50.0%	median	2.96733
25.0%	quartile	2.85295
10.0%		2.543972
2.5%		1.985014
0.5%		1.94983
0.0%	minimum	1.94983

**Summary Statistics**

Mean	2.9252515
Std Dev	0.2935088
Std Err Mean	0.0395767
Upper 95% Mean	3.004598
Lower 95% Mean	2.8459049
N	55

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	2.9252515	2.8459049	3.004598
Dispersion	$\sigma$	0.2935088	0.2470945	0.3615566

-2log(Likelihood) = 20.2399803322136

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.862430	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=4,4'-DDT**

**RESULT\_STATS\_LOG10**

Normal(1.49019,0.25915)

**Quantiles**

100.0%	maximum	1.92831
99.5%		1.92831
97.5%		1.92831
90.0%		1.92831
75.0%	quartile	1.697835
50.0%	median	1.46321
25.0%	quartile	1.29604
10.0%		1.29105
2.5%		1.29105
0.5%		1.29105
0.0%	minimum	1.29105

**Summary Statistics**

Mean	1.490192
Std Dev	0.2591508
Std Err Mean	0.1158958
Upper 95% Mean	1.8119702
Lower 95% Mean	1.1684138
N	5

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.490192	1.1684138	1.8119702
Dispersion	$\sigma$	0.2591508	0.1552658	0.7446842

-2log(Likelihood) = -0.314066879904748

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.800381	0.0816

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=Dibutyltin**

**RESULT\_STATS\_LOG10**

Normal(-0.4422,0.06591)

**Quantiles**

100.0%	maximum	-0.352617
99.5%		-0.352617
97.5%		-0.352617
90.0%		-0.3538069
75.0%	quartile	-0.3839335
50.0%	median	-0.4377475
25.0%	quartile	-0.49926825
10.0%		-0.539418
2.5%		-0.540608
0.5%		-0.540608
0.0%	minimum	-0.540608

**Summary Statistics**

Mean	-0.442167
Std Dev	0.0659085
Std Err Mean	0.0208421
Upper 95% Mean	-0.395018
Lower 95% Mean	-0.489315
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	-0.442167	-0.489315	-0.395018
Dispersion	$\sigma$	0.0659085	0.0453342	0.1203233

-2log(Likelihood) = -27.0109723634004

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.950952	0.6798

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Mercury**

**RESULT\_STATS\_LOG10**

Normal(-1.7504,0.17344)

**Quantiles**

100.0%	maximum	-1.42713
99.5%		-1.42713
97.5%		-1.42713
90.0%		-1.56432
75.0%	quartile	-1.61396
50.0%	median	-1.72473
25.0%	quartile	-1.8804475
10.0%		-1.92739
2.5%		-2.25026
0.5%		-2.25026
0.0%	minimum	-2.25026

**Summary Statistics**

Mean	-1.750364
Std Dev	0.1734413
Std Err Mean	0.0316659
Upper 95% Mean	-1.6856
Lower 95% Mean	-1.815128
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	-1.750364	-1.815128	-1.6856
Dispersion	$\sigma$	0.1734413	0.1381298	0.2331597

-2log(Likelihood) = -20.978658605869

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.959256	0.2965

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB003**

**RESULT\_STATS\_LOG10**

Normal(0.72738,0.11912)

**Quantiles**

100.0%	maximum	0.931694
99.5%		0.931694
97.5%		0.931694
90.0%		0.8869742
75.0%	quartile	0.83845975
50.0%	median	0.712659
25.0%	quartile	0.65455175
10.0%		0.5885024
2.5%		0.462398
0.5%		0.462398
0.0%	minimum	0.462398

**Summary Statistics**

Mean	0.727381
Std Dev	0.1191183
Std Err Mean	0.0217479
Upper 95% Mean	0.7718605
Lower 95% Mean	0.6829015
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.727381	0.6829015	0.7718605
Dispersion	$\sigma$	0.1191183	0.0948667	0.1601326

-2log(Likelihood) = -43.5219647226259

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.967056	0.4621

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB005/008**

**RESULT\_STATS\_LOG10**

Normal(0.97943,0.13554)

**Quantiles**

100.0%	maximum	1.10474
99.5%		1.10474
97.5%		1.10474
90.0%		1.102809
75.0%	quartile	1.0838625
50.0%	median	1.042225
25.0%	quartile	0.8929535
10.0%		0.716486
2.5%		0.706795
0.5%		0.706795
0.0%	minimum	0.706795

**Summary Statistics**

Mean	0.9794292
Std Dev	0.1355396
Std Err Mean	0.0428614
Upper 95% Mean	1.0763884
Lower 95% Mean	0.88247
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9794292	0.88247	1.0763884
Dispersion	$\sigma$	0.1355396	0.0932289	0.2474425

-2log(Likelihood) = -12.5910555072156

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.843859	0.0491*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB015**

**RESULT\_STATS\_LOG10**

Normal(0.62302,0.13605)

**Quantiles**

100.0%	maximum	0.824684
99.5%		0.824684
97.5%		0.824684
90.0%		0.7770326
75.0%	quartile	0.754174
50.0%	median	0.607784
25.0%	quartile	0.507893
10.0%		0.389902
2.5%		0.355388
0.5%		0.355388
0.0%	minimum	0.355388

**Summary Statistics**

Mean	0.6230208
Std Dev	0.1360461
Std Err Mean	0.0304208
Upper 95% Mean	0.6866923
Lower 95% Mean	0.5593493
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.6230208	0.5593493	0.6866923
Dispersion	$\sigma$	0.1360461	0.1034618	0.1987051

-2log(Likelihood) = -24.0329123999099

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.945745	0.3071

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB018**

**RESULT\_STATS\_LOG10**

Normal(1.01296,0.53258)

**Quantiles**

100.0%	maximum	2.17345
99.5%		2.17345
97.5%		2.1678895
90.0%		1.904114
75.0%	quartile	1.460375
50.0%	median	0.727474
25.0%	quartile	0.6065525
10.0%		0.5569011
2.5%		0.38723835
0.5%		0.380211
0.0%	minimum	0.380211

**Summary Statistics**

Mean	1.0129576
Std Dev	0.532578
Std Err Mean	0.0753179
Upper 95% Mean	1.1643146
Lower 95% Mean	0.8616006
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.0129576	0.8616006	1.1643146
Dispersion	$\sigma$	0.532578	0.4448805	0.6636632

-2log(Likelihood) = 77.8912668343458

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.839535	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB027**

**RESULT\_STATS\_LOG10**

Normal(0.68837,0.12603)

**Quantiles**

100.0%	maximum	0.827839
99.5%		0.827839
97.5%		0.827839
90.0%		0.8232634
75.0%	quartile	0.806441
50.0%	median	0.716003
25.0%	quartile	0.553276
10.0%		0.493875
2.5%		0.435729
0.5%		0.435729
0.0%	minimum	0.435729

**Summary Statistics**

Mean	0.6883701
Std Dev	0.1260284
Std Err Mean	0.0325404
Upper 95% Mean	0.7581622
Lower 95% Mean	0.6185779
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.6883701	0.6185779	0.7581622
Dispersion	$\sigma$	0.1260284	0.0922687	0.1987592

-2log(Likelihood) = -20.5692954469299

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.900069	0.0954

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB028**

**RESULT\_STATS\_LOG10**

Normal(0.73454,0.73528)

**Quantiles**

100.0%	maximum	2.33882
99.5%		2.33882
97.5%		2.33882
90.0%		2.149588
75.0%	quartile	1.46558
50.0%	median	0.321964
25.0%	quartile	0.270216
10.0%		0.1661618
2.5%		0.0543577
0.5%		0.0543577
0.0%	minimum	0.0543577

**Summary Statistics**

Mean	0.7345404
Std Dev	0.7352849
Std Err Mean	0.1242858
Upper 95% Mean	0.9871196
Lower 95% Mean	0.4819612
N	35

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7345404	0.4819612	0.9871196
Dispersion	$\sigma$	0.7352849	0.5947514	0.9633719

-2log(Likelihood) = 76.8008927031252

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.731146	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB029**

**RESULT\_STATS\_LOG10**

Normal(0.70507,0.12874)

**Quantiles**

100.0%	maximum	0.90066
99.5%		0.90066
97.5%		0.90066
90.0%		0.8692804
75.0%	quartile	0.829678
50.0%	median	0.687071
25.0%	quartile	0.607489
10.0%		0.521903
2.5%		0.431364
0.5%		0.431364
0.0%	minimum	0.431364

**Summary Statistics**

Mean	0.7050651
Std Dev	0.1287383
Std Err Mean	0.0257477
Upper 95% Mean	0.7582057
Lower 95% Mean	0.6519246
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7050651	0.6519246	0.7582057
Dispersion	$\sigma$	0.1287383	0.1005225	0.1790946

-2log(Likelihood) = -32.5517471277063

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.961478	0.4447

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB031**

**RESULT\_STATS\_LOG10**

Normal(0.47906,0.12762)

**Quantiles**

100.0%	maximum	0.691145
99.5%		0.691145
97.5%		0.690984625
90.0%		0.6474915
75.0%	quartile	0.5870655
50.0%	median	0.474491
25.0%	quartile	0.39545675
10.0%		0.2940289
2.5%		0.221849
0.5%		0.221849
0.0%	minimum	0.221849

**Summary Statistics**

Mean	0.4790603
Std Dev	0.1276195
Std Err Mean	0.0201784
Upper 95% Mean	0.5198749
Lower 95% Mean	0.4382456
N	40

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.4790603	0.4382456	0.5198749
Dispersion	$\sigma$	0.1276195	0.1045409	0.1638679

-2log(Likelihood) = -52.181098497564

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.972173	0.4206

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB033**

**RESULT\_STATS\_LOG10**

Normal(0.91248,0.13554)

**Quantiles**

100.0%	maximum	1.03779
99.5%		1.03779
97.5%		1.03779
90.0%		1.035859
75.0%	quartile	1.0169125
50.0%	median	0.9752785
25.0%	quartile	0.82600675
10.0%		0.64954
2.5%		0.639849
0.5%		0.639849
0.0%	minimum	0.639849

**Summary Statistics**

Mean	0.9124813
Std Dev	0.1355382
Std Err Mean	0.0428609
Upper 95% Mean	1.0094395
Lower 95% Mean	0.8155231
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9124813	0.8155231	1.0094395
Dispersion	$\sigma$	0.1355382	0.093228	0.2474399

-2log(Likelihood) = -12.5912619889919

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.843854	0.0491*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB037**

**RESULT\_STATS\_LOG10**

Normal(0.57977,0.12832)

**Quantiles**

100.0%	maximum	0.777505
99.5%		0.777505
97.5%		0.777505
90.0%		0.7432398
75.0%	quartile	0.702903
50.0%	median	0.563481
25.0%	quartile	0.483442
10.0%		0.396965
2.5%		0.308209
0.5%		0.308209
0.0%	minimum	0.308209

**Summary Statistics**

Mean	0.5797663
Std Dev	0.1283214
Std Err Mean	0.0256643
Upper 95% Mean	0.6327348
Lower 95% Mean	0.5267978
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.5797663	0.5267978	0.6327348
Dispersion	$\sigma$	0.1283214	0.100197	0.1785146

-2log(Likelihood) = -32.7139298213203

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.963269	0.4833

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB044**

**RESULT\_STATS\_LOG10**

Normal(0.97541,0.48715)

**Quantiles**

100.0%	maximum	2.17609
99.5%		2.17609
97.5%		2.1735355
90.0%		2.033674
75.0%	quartile	0.94057
50.0%	median	0.750733
25.0%	quartile	0.701594
10.0%		0.6538408
2.5%		0.47153175
0.5%		0.467361
0.0%	minimum	0.467361

**Summary Statistics**

Mean	0.9754138
Std Dev	0.4871464
Std Err Mean	0.0726195
Upper 95% Mean	1.1217688
Lower 95% Mean	0.8290588
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9754138	0.8290588	1.1217688
Dispersion	$\sigma$	0.4871464	0.4032862	0.6153632

-2log(Likelihood) = 61.9773214601735

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.715731	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB049**

**RESULT\_STATS\_LOG10**

Normal(1.2744,0.46008)

**Quantiles**

100.0%	maximum	2.17872
99.5%		2.17872
97.5%		2.17268925
90.0%		1.98046
75.0%	quartile	1.61016
50.0%	median	1.309895
25.0%	quartile	0.81749675
10.0%		0.740363
2.5%		0.618318275
0.5%		0.60206
0.0%	minimum	0.60206

**Summary Statistics**

Mean	1.2744045
Std Dev	0.4600769
Std Err Mean	0.0650647
Upper 95% Mean	1.4051569
Lower 95% Mean	1.1436521
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.2744045	1.1436521	1.4051569
Dispersion	$\sigma$	0.4600769	0.3843179	0.5733172

-2log(Likelihood) = 63.2576901784739

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.915044	0.0016*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB052**

**RESULT\_STATS\_LOG10**

Normal(1.79179,0.52448)

**Quantiles**

100.0%	maximum	2.67461
99.5%		2.67461
97.5%		2.6520325
90.0%		2.466077
75.0%	quartile	2.02072
50.0%	median	1.880835
25.0%	quartile	1.7281875
10.0%		0.699545
2.5%		0.37970925
0.5%		0.353059
0.0%	minimum	0.353059

**Summary Statistics**

Mean	1.7917864
Std Dev	0.5244758
Std Err Mean	0.0741721
Upper 95% Mean	1.9408408
Lower 95% Mean	1.642732
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.7917864	1.642732	1.9408408
Dispersion	$\sigma$	0.5244758	0.4381125	0.6535668

-2log(Likelihood) = 76.3582545199836

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.819377	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB056**

**RESULT\_STATS\_LOG10**

Normal(1.06525,0.4246)

**Quantiles**

100.0%	maximum	2.05325
99.5%		2.05325
97.5%		2.05325
90.0%		1.896915
75.0%	quartile	1.058075
50.0%	median	0.8892185
25.0%	quartile	0.82620975
10.0%		0.7397444
2.5%		0.636822
0.5%		0.636822
0.0%	minimum	0.636822

**Summary Statistics**

Mean	1.0652474
Std Dev	0.4245965
Std Err Mean	0.0775204
Upper 95% Mean	1.2237943
Lower 95% Mean	0.9067004
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.0652474	0.9067004	1.2237943
Dispersion	$\sigma$	0.4245965	0.3381516	0.5707915

-2log(Likelihood) = 32.7393511094737

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.724797	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB060**

**RESULT\_STATS\_LOG10**

Normal(0.97352,0.19242)

**Quantiles**

100.0%	maximum	1.7068
99.5%		1.7068
97.5%		1.674454
90.0%		1.161246
75.0%	quartile	1.042565
50.0%	median	0.943326
25.0%	quartile	0.8589675
10.0%		0.7588254
2.5%		0.669007
0.5%		0.669007
0.0%	minimum	0.669007

**Summary Statistics**

Mean	0.9735154
Std Dev	0.1924198
Std Err Mean	0.0286842
Upper 95% Mean	1.0313247
Lower 95% Mean	0.9157061
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9735154	0.9157061	1.0313247
Dispersion	$\sigma$	0.1924198	0.1592955	0.2430646

-2log(Likelihood) = -21.6223695861918

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.883755	0.0003*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB066**

**RESULT\_STATS\_LOG10**

Normal(1.60164,0.47672)

**Quantiles**

100.0%	maximum	2.43573
99.5%		2.43573
97.5%		2.43041975
90.0%		2.281083
75.0%	quartile	1.85259
50.0%	median	1.667445
25.0%	quartile	1.451015
10.0%		0.7773156
2.5%		0.58731725
0.5%		0.560667
0.0%	minimum	0.560667

**Summary Statistics**

Mean	1.6016374
Std Dev	0.4767173
Std Err Mean	0.067418
Upper 95% Mean	1.737119
Lower 95% Mean	1.4661559
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.6016374	1.4661559	1.737119
Dispersion	$\sigma$	0.4767173	0.3982182	0.5940533

-2log(Likelihood) = 66.8106854022648

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.934417	0.0082*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB070**

**RESULT\_STATS\_LOG10**

Normal(0.82153,0.53471)

**Quantiles**

100.0%	maximum	2
99.5%		2
97.5%		2
90.0%		1.839051
75.0%	quartile	0.897952
50.0%	median	0.57499
25.0%	quartile	0.5018565
10.0%		0.4293861
2.5%		0.30103
0.5%		0.30103
0.0%	minimum	0.30103

**Summary Statistics**

Mean	0.8215268
Std Dev	0.5347062
Std Err Mean	0.0976236
Upper 95% Mean	1.0211893
Lower 95% Mean	0.6218642
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.8215268	0.6218642	1.0211893
Dispersion	$\sigma$	0.5347062	0.4258437	0.7188137

-2log(Likelihood) = 46.5740426475489

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.728799	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB074**

**RESULT\_STATS\_LOG10**

Normal(1.02795,0.48909)

**Quantiles**

100.0%	maximum	1.94675
99.5%		1.94675
97.5%		1.94675
90.0%		1.890624
75.0%	quartile	1.46489
50.0%	median	0.730004
25.0%	quartile	0.686149
10.0%		0.6009776
2.5%		0.467361
0.5%		0.467361
0.0%	minimum	0.467361

**Summary Statistics**

Mean	1.0279519
Std Dev	0.4890901
Std Err Mean	0.0826713
Upper 95% Mean	1.1959603
Lower 95% Mean	0.8599436
N	35

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.0279519	0.8599436	1.1959603
Dispersion	$\sigma$	0.4890901	0.3956113	0.6408069

-2log(Likelihood) = 48.2611026460609

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.807850	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB077**

**RESULT\_STATS\_LOG10**

Normal(0.74037,0.28159)

**Quantiles**

100.0%	maximum	1.71745
99.5%		1.71745
97.5%		1.71745
90.0%		0.8830671
75.0%	quartile	0.79998775
50.0%	median	0.667554
25.0%	quartile	0.60851075
10.0%		0.5452372
2.5%		0.414973
0.5%		0.414973
0.0%	minimum	0.414973

**Summary Statistics**

Mean	0.7403687
Std Dev	0.2815883
Std Err Mean	0.0514108
Upper 95% Mean	0.8455155
Lower 95% Mean	0.6352219
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7403687	0.6352219	0.8455155
Dispersion	$\sigma$	0.2815883	0.2242589	0.3785434

-2log(Likelihood) = 8.09775569490124

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.672074	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB081**

**RESULT\_STATS\_LOG10**

Normal(0.91248,0.13554)

**Quantiles**

100.0%	maximum	1.03779
99.5%		1.03779
97.5%		1.03779
90.0%		1.035859
75.0%	quartile	1.0169125
50.0%	median	0.9752785
25.0%	quartile	0.82600675
10.0%		0.64954
2.5%		0.639849
0.5%		0.639849
0.0%	minimum	0.639849

**Summary Statistics**

Mean	0.9124813
Std Dev	0.1355382
Std Err Mean	0.0428609
Upper 95% Mean	1.0094395
Lower 95% Mean	0.8155231
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9124813	0.8155231	1.0094395
Dispersion	$\sigma$	0.1355382	0.093228	0.2474399

-2log(Likelihood) = -12.5912619889919

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.843854	0.0491*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB087**

**RESULT\_STATS\_LOG10**

Normal(0.96311,0.27401)

**Quantiles**

100.0%	maximum	1.56371
99.5%		1.56371
97.5%		1.56371
90.0%		1.5503
75.0%	quartile	1.02436
50.0%	median	0.889104
25.0%	quartile	0.817968
10.0%		0.660206
2.5%		0.60206
0.5%		0.60206
0.0%	minimum	0.60206

**Summary Statistics**

Mean	0.9631123
Std Dev	0.2740072
Std Err Mean	0.0707483
Upper 95% Mean	1.1148524
Lower 95% Mean	0.8113722
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9631123	0.8113722	1.1148524
Dispersion	$\sigma$	0.2740072	0.2006079	0.4321364

-2log(Likelihood) = 2.73012635798483

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.850901	0.0179*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB095**

**RESULT\_STATS\_LOG10**

Normal(1.83212,0.38866)

**Quantiles**

100.0%	maximum	2.49009
99.5%		2.49009
97.5%		2.488242
90.0%		2.333689
75.0%	quartile	2.01704
50.0%	median	1.857705
25.0%	quartile	1.75924
10.0%		1.098705
2.5%		0.73344525
0.5%		0.706795
0.0%	minimum	0.706795

**Summary Statistics**

Mean	1.8321204
Std Dev	0.3886617
Std Err Mean	0.0549651
Upper 95% Mean	1.9425769
Lower 95% Mean	1.721664
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.8321204	1.721664	1.9425769
Dispersion	$\sigma$	0.3886617	0.3246623	0.4843243

-2log(Likelihood) = 46.3892527081591

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.865583	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB097**

**RESULT\_STATS\_LOG10**

Normal(1.25747,0.44109)

**Quantiles**

100.0%	maximum	2.11539
99.5%		2.11539
97.5%		2.104062
90.0%		1.96829
75.0%	quartile	1.57188
50.0%	median	1.1383
25.0%	quartile	0.8651005
10.0%		0.733732
2.5%		0.6698476
0.5%		0.669007
0.0%	minimum	0.669007

**Summary Statistics**

Mean	1.257474
Std Dev	0.4410905
Std Err Mean	0.0657539
Upper 95% Mean	1.3899922
Lower 95% Mean	1.1249558
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.257474	1.1249558	1.3899922
Dispersion	$\sigma$	0.4410905	0.3651586	0.5571853

-2log(Likelihood) = 53.0389945472103

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.896584	0.0007*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB099**

**RESULT\_STATS\_LOG10**

Normal(1.61778,0.44067)

**Quantiles**

100.0%	maximum	2.27963
99.5%		2.27963
97.5%		2.27746025
90.0%		2.140959
75.0%	quartile	1.84328
50.0%	median	1.671905
25.0%	quartile	1.529735
10.0%		0.7432199
2.5%		0.36546925
0.5%		0.338819
0.0%	minimum	0.338819

**Summary Statistics**

Mean	1.6177759
Std Dev	0.4406651
Std Err Mean	0.0623195
Upper 95% Mean	1.7430116
Lower 95% Mean	1.4925403
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.6177759	1.4925403	1.7430116
Dispersion	$\sigma$	0.4406651	0.3681025	0.5491275

-2log(Likelihood) = 58.9468428459595

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.850862	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB101**

**RESULT\_STATS\_LOG10**

Normal(1.921111,0.38606)

**Quantiles**

100.0%	maximum	2.56769
99.5%		2.56769
97.5%		2.5657595
90.0%		2.432302
75.0%	quartile	2.0865575
50.0%	median	1.92059
25.0%	quartile	1.8447375
10.0%		1.583014
2.5%		0.6681277
0.5%		0.644349
0.0%	minimum	0.644349

**Summary Statistics**

Mean	1.9211101
Std Dev	0.3860561
Std Err Mean	0.0545966
Upper 95% Mean	2.030826
Lower 95% Mean	1.8113942
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.9211101	1.8113942	2.030826
Dispersion	$\sigma$	0.3860561	0.3224858	0.4810774

-2log(Likelihood) = 45.7165907038324

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.834374	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB105**

**RESULT\_STATS\_LOG10**

Normal(0.9437,0.55956)

**Quantiles**

100.0%	maximum	1.83086
99.5%		1.83086
97.5%		1.823522
90.0%		1.757582
75.0%	quartile	1.61842
50.0%	median	0.659287
25.0%	quartile	0.5108655
10.0%		0.378043
2.5%		0.267714
0.5%		0.263241
0.0%	minimum	0.263241

**Summary Statistics**

Mean	0.9437018
Std Dev	0.5595634
Std Err Mean	0.0834148
Upper 95% Mean	1.1118133
Lower 95% Mean	0.7755904
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9437018	0.7755904	1.1118133
Dispersion	$\sigma$	0.5595634	0.4632369	0.7068403

-2log(Likelihood) = 74.4506055430054

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.808442	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB110**

**RESULT\_STATS\_LOG10**

Normal(1.69369,0.52038)

**Quantiles**

100.0%	maximum	2.49009
99.5%		2.49009
97.5%		2.46983075
90.0%		2.303401
75.0%	quartile	1.9143575
50.0%	median	1.789075
25.0%	quartile	1.68452
10.0%		0.5606943
2.5%		0.24053025
0.5%		0.21388
0.0%	minimum	0.21388

**Summary Statistics**

Mean	1.693693
Std Dev	0.5203755
Std Err Mean	0.0735922
Upper 95% Mean	1.841582
Lower 95% Mean	1.5458039
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.693693	1.5458039	1.841582
Dispersion	$\sigma$	0.5203755	0.4346873	0.6484572

-2log(Likelihood) = 75.5733838393603

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.760072	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB114**

**RESULT\_STATS\_LOG10**

Normal(0.70591,0.11802)

**Quantiles**

100.0%	maximum	0.911253
99.5%		0.911253
97.5%		0.911253
90.0%		0.861281
75.0%	quartile	0.816177
50.0%	median	0.69199
25.0%	quartile	0.633741
10.0%		0.5676647
2.5%		0.441957
0.5%		0.441957
0.0%	minimum	0.441957

**Summary Statistics**

Mean	0.7059122
Std Dev	0.1180183
Std Err Mean	0.0215471
Upper 95% Mean	0.749981
Lower 95% Mean	0.6618435
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7059122	0.6618435	0.749981
Dispersion	$\sigma$	0.1180183	0.0939906	0.1586537

-2log(Likelihood) = -44.0786432494787

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.969666	0.5301

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB118**

**RESULT\_STATS\_LOG10**

Normal(1.61803,0.43888)

**Quantiles**

100.0%	maximum	2.33882
99.5%		2.33882
97.5%		2.32842775
90.0%		2.169186
75.0%	quartile	1.8603275
50.0%	median	1.67335
25.0%	quartile	1.5515975
10.0%		0.7491999
2.5%		0.592278575
0.5%		0.576655
0.0%	minimum	0.576655

**Summary Statistics**

Mean	1.6180344
Std Dev	0.4388826
Std Err Mean	0.0620674
Upper 95% Mean	1.7427634
Lower 95% Mean	1.4933053
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.6180344	1.4933053	1.7427634
Dispersion	$\sigma$	0.4388826	0.3666136	0.5469063

-2log(Likelihood) = 58.5415300552362

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.865343	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB119**

**RESULT\_STATS\_LOG10**

Normal(0.77464,0.12905)

**Quantiles**

100.0%	maximum	0.969898
99.5%		0.969898
97.5%		0.969898
90.0%		0.9398088
75.0%	quartile	0.900534
50.0%	median	0.757109
25.0%	quartile	0.6771275
10.0%		0.591941
2.5%		0.500602
0.5%		0.500602
0.0%	minimum	0.500602

**Summary Statistics**

Mean	0.7746379
Std Dev	0.1290521
Std Err Mean	0.0258104
Upper 95% Mean	0.827908
Lower 95% Mean	0.7213678
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7746379	0.7213678	0.827908
Dispersion	$\sigma$	0.1290521	0.1007675	0.1795311

-2log(Likelihood) = -32.4300285639782

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.960852	0.4317

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB123**

**RESULT\_STATS\_LOG10**

Normal(0.91868,0.36526)

**Quantiles**

100.0%	maximum	2.12494
99.5%		2.12494
97.5%		2.12494
90.0%		1.451255
75.0%	quartile	0.93351875
50.0%	median	0.809814
25.0%	quartile	0.72602525
10.0%		0.6235678
2.5%		0.560667
0.5%		0.560667
0.0%	minimum	0.560667

**Summary Statistics**

Mean	0.9186754
Std Dev	0.3652616
Std Err Mean	0.081675
Upper 95% Mean	1.089623
Lower 95% Mean	0.7477277
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9186754	0.7477277	1.089623
Dispersion	$\sigma$	0.3652616	0.2777779	0.5334907

-2log(Likelihood) = 15.4718772439661

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.727108	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB126**

**RESULT\_STATS\_LOG10**

Normal(0.69435,0.11807)

**Quantiles**

100.0%	maximum	0.90066
99.5%		0.90066
97.5%		0.90066
90.0%		0.849825
75.0%	quartile	0.8052845
50.0%	median	0.6813285
25.0%	quartile	0.62294925
10.0%		0.556332
2.5%		0.431364
0.5%		0.431364
0.0%	minimum	0.431364

**Summary Statistics**

Mean	0.6943499
Std Dev	0.1180748
Std Err Mean	0.0215574
Upper 95% Mean	0.7384397
Lower 95% Mean	0.65026
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.6943499	0.65026	0.7384397
Dispersion	$\sigma$	0.1180748	0.0940356	0.1587298

-2log(Likelihood) = -44.0498985486408

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.970267	0.5465

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB128**

**RESULT\_STATS\_LOG10**

Normal(0.82337,0.12596)

**Quantiles**

100.0%	maximum	0.969511
99.5%		0.969511
97.5%		0.969511
90.0%		0.9629686
75.0%	quartile	0.937209
50.0%	median	0.865301
25.0%	quartile	0.702574
10.0%		0.618813
2.5%		0.560667
0.5%		0.560667
0.0%	minimum	0.560667

**Summary Statistics**

Mean	0.8233716
Std Dev	0.1259643
Std Err Mean	0.0325239
Upper 95% Mean	0.8931283
Lower 95% Mean	0.7536149
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.8233716	0.7536149	0.8931283
Dispersion	$\sigma$	0.1259643	0.0922218	0.1986582

-2log(Likelihood) = -20.5845355293828

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.914187	0.1570

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB132/153**

**RESULT\_STATS\_LOG10**

Normal(2.29499,0.17676)

**Quantiles**

100.0%	maximum	2.67966
99.5%		2.67966
97.5%		2.66363025
90.0%		2.529742
75.0%	quartile	2.3998975
50.0%	median	2.29833
25.0%	quartile	2.1675675
10.0%		2.098613
2.5%		1.8710005
0.5%		1.86709
0.0%	minimum	1.86709

**Summary Statistics**

Mean	2.2949878
Std Dev	0.176763
Std Err Mean	0.0249981
Upper 95% Mean	2.3452233
Lower 95% Mean	2.2447523
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	2.2949878	2.2447523	2.3452233
Dispersion	$\sigma$	0.176763	0.1476561	0.2202702

-2log(Likelihood) = -32.4007106562442

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.985893	0.8092

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB137**

**RESULT\_STATS\_LOG10**

Normal(0.93425,0.12656)

**Quantiles**

100.0%	maximum	1.07425
99.5%		1.07425
97.5%		1.07425
90.0%		1.07323
75.0%	quartile	1.05115
50.0%	median	0.970037
25.0%	quartile	0.80731
10.0%		0.732757
2.5%		0.674611
0.5%		0.674611
0.0%	minimum	0.674611

**Summary Statistics**

Mean	0.9342463
Std Dev	0.1265619
Std Err Mean	0.0326781
Upper 95% Mean	1.004334
Lower 95% Mean	0.8641587
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9342463	0.8641587	1.004334
Dispersion	$\sigma$	0.1265619	0.0926593	0.1996007

-2log(Likelihood) = -20.4425533165501

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.905569	0.1158

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB138/158**

**RESULT\_STATS\_LOG10**

Normal(2.1589,0.18619)

**Quantiles**

100.0%	maximum	2.51491
99.5%		2.51491
97.5%		2.5144755
90.0%		2.402769
75.0%	quartile	2.2564375
50.0%	median	2.16014
25.0%	quartile	2.0376625
10.0%		1.879769
2.5%		1.70112325
0.5%		1.69897
0.0%	minimum	1.69897

**Summary Statistics**

Mean	2.158902
Std Dev	0.1861914
Std Err Mean	0.0263314
Upper 95% Mean	2.211817
Lower 95% Mean	2.105987
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	2.158902	2.105987	2.211817
Dispersion	$\sigma$	0.1861914	0.155532	0.2320193

-2log(Likelihood) = -27.2041804155316

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.976185	0.4045

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB141**

**RESULT\_STATS\_LOG10**

Normal(0.77777,0.13111)

**Quantiles**

100.0%	maximum	0.944483
99.5%		0.944483
97.5%		0.944483
90.0%		0.944483
75.0%	quartile	0.884928
50.0%	median	0.817968
25.0%	quartile	0.650515
10.0%		0.60206
2.5%		0.60206
0.5%		0.60206
0.0%	minimum	0.60206

**Summary Statistics**

Mean	0.7777708
Std Dev	0.1311093
Std Err Mean	0.0586339
Upper 95% Mean	0.9405645
Lower 95% Mean	0.6149771
N	5

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7777708	0.6149771	0.9405645
Dispersion	$\sigma$	0.1311093	0.0785519	0.3767499

-2log(Likelihood) = -7.12785425905406

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.968806	0.8675

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB149**

**RESULT\_STATS\_LOG10**

Normal(2.00804,0.27211)

**Quantiles**

100.0%	maximum	2.41642
99.5%		2.41642
97.5%		2.411338
90.0%		2.290283
75.0%	quartile	2.16311
50.0%	median	2.03678
25.0%	quartile	1.924715
10.0%		1.634833
2.5%		0.943079325
0.5%		0.730817
0.0%	minimum	0.730817

**Summary Statistics**

Mean	2.0080415
Std Dev	0.2721139
Std Err Mean	0.0384827
Upper 95% Mean	2.0853755
Lower 95% Mean	1.9307076
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	2.0080415	1.9307076	2.0853755
Dispersion	$\sigma$	0.2721139	0.227306	0.3390902

-2log(Likelihood) = 10.7404088251699

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.823387	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB151**

**RESULT\_STATS\_LOG10**

Normal(1.11252,0.51769)

**Quantiles**

100.0%	maximum	1.91703
99.5%		1.91703
97.5%		1.913442
90.0%		1.778816
75.0%	quartile	1.57576
50.0%	median	1.30103
25.0%	quartile	0.607482
10.0%		0.5123482
2.5%		0.3600911
0.5%		0.355388
0.0%	minimum	0.355388

**Summary Statistics**

Mean	1.1125247
Std Dev	0.5176946
Std Err Mean	0.0771734
Upper 95% Mean	1.2680574
Lower 95% Mean	0.956992
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.1125247	0.956992	1.2680574
Dispersion	$\sigma$	0.5176946	0.4285757	0.6539516

-2log(Likelihood) = 67.4511851093823

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.865539	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB156**

**RESULT\_STATS\_LOG10**

Normal(0.55128,0.11793)

**Quantiles**

100.0%	maximum	0.755603
99.5%		0.755603
97.5%		0.755603
90.0%		0.7060125
75.0%	quartile	0.662994
50.0%	median	0.5389715
25.0%	quartile	0.480371
10.0%		0.414459
2.5%		0.286307
0.5%		0.286307
0.0%	minimum	0.286307

**Summary Statistics**

Mean	0.5512846
Std Dev	0.1179258
Std Err Mean	0.0215302
Upper 95% Mean	0.5953188
Lower 95% Mean	0.5072504
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.5512846	0.5072504	0.5953188
Dispersion	$\sigma$	0.1179258	0.0939169	0.1585294

-2log(Likelihood) = -44.1256832172734

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.969946	0.5377

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB157**

**RESULT\_STATS\_LOG10**

Normal(0.54509,0.13222)

**Quantiles**

100.0%	maximum	0.666177
99.5%		0.666177
97.5%		0.666177
90.0%		0.6642465
75.0%	quartile	0.64530225
50.0%	median	0.607884
25.0%	quartile	0.46282875
10.0%		0.286362
2.5%		0.276671
0.5%		0.276671
0.0%	minimum	0.276671

**Summary Statistics**

Mean	0.5450873
Std Dev	0.1322206
Std Err Mean	0.0418118
Upper 95% Mean	0.6396722
Lower 95% Mean	0.4505024
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.5450873	0.4505024	0.6396722
Dispersion	$\sigma$	0.1322206	0.090946	0.2413833

-2log(Likelihood) = -13.086893920094

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.839348	0.0433*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB167**

**RESULT\_STATS\_LOG10**

Normal(0.58156,0.11796)

**Quantiles**

100.0%	maximum	0.784566
99.5%		0.784566
97.5%		0.784566
90.0%		0.7365129
75.0%	quartile	0.692576
50.0%	median	0.567943
25.0%	quartile	0.50970325
10.0%		0.4445013
2.5%		0.31527
0.5%		0.31527
0.0%	minimum	0.31527

**Summary Statistics**

Mean	0.5815601
Std Dev	0.1179563
Std Err Mean	0.0215358
Upper 95% Mean	0.6256057
Lower 95% Mean	0.5375145
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.5815601	0.5375145	0.6256057
Dispersion	$\sigma$	0.1179563	0.0939412	0.1585705

-2log(Likelihood) = -44.1101412565156

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.968861	0.5085

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB168**

**RESULT\_STATS\_LOG10**

Normal(0.47024,0.12761)

**Quantiles**

100.0%	maximum	0.682371
99.5%		0.682371
97.5%		0.682210625
90.0%		0.6385729
75.0%	quartile	0.57829225
50.0%	median	0.4657135
25.0%	quartile	0.386547
10.0%		0.2850739
2.5%		0.213075
0.5%		0.213075
0.0%	minimum	0.213075

**Summary Statistics**

Mean	0.4702394
Std Dev	0.1276069
Std Err Mean	0.0201764
Upper 95% Mean	0.51105
Lower 95% Mean	0.4294287
N	40

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.4702394	0.4294287	0.51105
Dispersion	$\sigma$	0.1276069	0.1045306	0.1638518

-2log(Likelihood) = -52.1889816608592

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.972217	0.4219

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB169**

**RESULT\_STATS\_LOG10**

Normal(0.58242,0.13588)

**Quantiles**

100.0%	maximum	0.784566
99.5%		0.784566
97.5%		0.784566
90.0%		0.735829
75.0%	quartile	0.712781
50.0%	median	0.567667
25.0%	quartile	0.468232
10.0%		0.34851
2.5%		0.31527
0.5%		0.31527
0.0%	minimum	0.31527

**Summary Statistics**

Mean	0.582418
Std Dev	0.1358754
Std Err Mean	0.0303827
Upper 95% Mean	0.6460097
Lower 95% Mean	0.5188263
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.582418	0.5188263	0.6460097
Dispersion	$\sigma$	0.1358754	0.103332	0.1984558

-2log(Likelihood) = -24.0831316885215

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.946445	0.3163

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB170**

**RESULT\_STATS\_LOG10**

Normal(1.33517,0.50409)

**Quantiles**

100.0%	maximum	1.95861
99.5%		1.95861
97.5%		1.950041
90.0%		1.811469
75.0%	quartile	1.690285
50.0%	median	1.57977
25.0%	quartile	0.659309
10.0%		0.544115
2.5%		0.458798725
0.5%		0.456918
0.0%	minimum	0.456918

**Summary Statistics**

Mean	1.3351711
Std Dev	0.5040856
Std Err Mean	0.0712885
Upper 95% Mean	1.4784307
Lower 95% Mean	1.1919115
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.3351711	1.1919115	1.4784307
Dispersion	$\sigma$	0.5040856	0.4210799	0.6281579

-2log(Likelihood) = 72.39294074017

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.793058	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB174**

**RESULT\_STATS\_LOG10**

Normal(0.95017,0.12091)

**Quantiles**

100.0%	maximum	1.16827
99.5%		1.16827
97.5%		1.16827
90.0%		1.104422
75.0%	quartile	1.06112
50.0%	median	0.943326
25.0%	quartile	0.8839255
10.0%		0.764941
2.5%		0.69897
0.5%		0.69897
0.0%	minimum	0.69897

**Summary Statistics**

Mean	0.9501702
Std Dev	0.1209111
Std Err Mean	0.0241822
Upper 95% Mean	1.0000798
Lower 95% Mean	0.9002606
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9501702	0.9002606	1.0000798
Dispersion	$\sigma$	0.1209111	0.0944108	0.1682057

-2log(Likelihood) = -35.6880757858418

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.965888	0.5436

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB177**

**RESULT\_STATS\_LOG10**

Normal(0.80027,0.2803)

**Quantiles**

100.0%	maximum	1.7068
99.5%		1.7068
97.5%		1.7068
90.0%		1.230878
75.0%	quartile	0.792194
50.0%	median	0.718479
25.0%	quartile	0.666089
10.0%		0.6009776
2.5%		0.467361
0.5%		0.467361
0.0%	minimum	0.467361

**Summary Statistics**

Mean	0.8002749
Std Dev	0.2803008
Std Err Mean	0.0473795
Upper 95% Mean	0.8965616
Lower 95% Mean	0.7039882
N	35

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.8002749	0.7039882	0.8965616
Dispersion	$\sigma$	0.2803008	0.2267275	0.3672507

-2log(Likelihood) = 9.29325689734466

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.692867	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB180**

**RESULT\_STATS\_LOG10**

Normal(1.16054,0.74056)

**Quantiles**

100.0%	maximum	2.18339
99.5%		2.18339
97.5%		2.178725
90.0%		1.998802
75.0%	quartile	1.90908
50.0%	median	0.571391
25.0%	quartile	0.4813075
10.0%		0.3734784
2.5%		0.1984535
0.5%		0.183917
0.0%	minimum	0.183917

**Summary Statistics**

Mean	1.1605443
Std Dev	0.7405614
Std Err Mean	0.1103964
Upper 95% Mean	1.3830336
Lower 95% Mean	0.938055
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.1605443	0.938055	1.3830336
Dispersion	$\sigma$	0.7405614	0.6130769	0.9354769

-2log(Likelihood) = 99.6732655882872

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.778045	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB183**

**RESULT\_STATS\_LOG10**

Normal(1.45736,0.26535)

**Quantiles**

100.0%	maximum	1.79964
99.5%		1.79964
97.5%		1.79484675
90.0%		1.757804
75.0%	quartile	1.6609525
50.0%	median	1.49743
25.0%	quartile	1.387255
10.0%		0.9339216
2.5%		0.720311375
0.5%		0.69897
0.0%	minimum	0.69897

**Summary Statistics**

Mean	1.4573562
Std Dev	0.2653474
Std Err Mean	0.0375258
Upper 95% Mean	1.5327671
Lower 95% Mean	1.3819453
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.4573562	1.3819453	1.5327671
Dispersion	$\sigma$	0.2653474	0.2216537	0.3306583

-2log(Likelihood) = 8.22232406675922

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.867773	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB184**

**RESULT\_STATS\_LOG10**

Normal(0.73638,0.13111)

**Quantiles**

100.0%	maximum	0.90309
99.5%		0.90309
97.5%		0.90309
90.0%		0.90309
75.0%	quartile	0.8435355
50.0%	median	0.776575
25.0%	quartile	0.609122
10.0%		0.560667
2.5%		0.560667
0.5%		0.560667
0.0%	minimum	0.560667

**Summary Statistics**

Mean	0.736378
Std Dev	0.1311094
Std Err Mean	0.0586339
Upper 95% Mean	0.8991718
Lower 95% Mean	0.5735842
N	5

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.736378	0.5735842	0.8991718
Dispersion	$\sigma$	0.1311094	0.078552	0.3767501

-2log(Likelihood) = -7.12784733590965

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.968807	0.8675

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB187**

**RESULT\_STATS\_LOG10**

Normal(1.89638,0.15352)

**Quantiles**

100.0%	maximum	2.24641
99.5%		2.24641
97.5%		2.244738
90.0%		2.076235
75.0%	quartile	1.9906875
50.0%	median	1.890495
25.0%	quartile	1.802565
10.0%		1.749338
2.5%		1.48130775
0.5%		1.46376
0.0%	minimum	1.46376

**Summary Statistics**

Mean	1.8963826
Std Dev	0.1535208
Std Err Mean	0.0217111
Upper 95% Mean	1.9400127
Lower 95% Mean	1.8527525
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.8963826	1.8527525	1.9400127
Dispersion	$\sigma$	0.1535208	0.1282412	0.1913074

-2log(Likelihood) = -46.4980408136082

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.975572	0.3837

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB189**

**RESULT\_STATS\_LOG10**

Normal(0.58242,0.13588)

**Quantiles**

100.0%	maximum	0.784566
99.5%		0.784566
97.5%		0.784566
90.0%		0.735829
75.0%	quartile	0.712781
50.0%	median	0.567667
25.0%	quartile	0.468232
10.0%		0.34851
2.5%		0.31527
0.5%		0.31527
0.0%	minimum	0.31527

**Summary Statistics**

Mean	0.582418
Std Dev	0.1358754
Std Err Mean	0.0303827
Upper 95% Mean	0.6460097
Lower 95% Mean	0.5188263
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.582418	0.5188263	0.6460097
Dispersion	$\sigma$	0.1358754	0.103332	0.1984558

-2log(Likelihood) = -24.0831316885215

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.946445	0.3163

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB194**

**RESULT\_STATS\_LOG10**

Normal(0.91778,0.28957)

**Quantiles**

100.0%	maximum	1.86872
99.5%		1.86872
97.5%		1.86872
90.0%		1.362104
75.0%	quartile	1
50.0%	median	0.889104
25.0%	quartile	0.740363
10.0%		0.660206
2.5%		0.60206
0.5%		0.60206
0.0%	minimum	0.60206

**Summary Statistics**

Mean	0.917777
Std Dev	0.2895699
Std Err Mean	0.0747666
Upper 95% Mean	1.0781355
Lower 95% Mean	0.7574185
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.917777	0.7574185	1.0781355
Dispersion	$\sigma$	0.2895699	0.2120018	0.4566804

-2log(Likelihood) = 4.38739926508893

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.696477	0.0002*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB195**

**RESULT\_STATS\_LOG10**

Normal(0.89359,0.12123)

**Quantiles**

100.0%	maximum	1
99.5%		1
97.5%		1
90.0%		0.9982271
75.0%	quartile	0.981089
50.0%	median	0.9493915
25.0%	quartile	0.82600675
10.0%		0.64954
2.5%		0.639849
0.5%		0.639849
0.0%	minimum	0.639849

**Summary Statistics**

Mean	0.8935877
Std Dev	0.1212349
Std Err Mean	0.0383378
Upper 95% Mean	0.9803139
Lower 95% Mean	0.8068615
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.8935877	0.8068615	0.9803139
Dispersion	$\sigma$	0.1212349	0.0833896	0.2213276

-2log(Likelihood) = -14.8217373412315

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.822551	0.0272*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB200**

**RESULT\_STATS\_LOG10**

Normal(0.97943,0.13554)

**Quantiles**

100.0%	maximum	1.10474
99.5%		1.10474
97.5%		1.10474
90.0%		1.102809
75.0%	quartile	1.0838625
50.0%	median	1.042225
25.0%	quartile	0.8929535
10.0%		0.716486
2.5%		0.706795
0.5%		0.706795
0.0%	minimum	0.706795

**Summary Statistics**

Mean	0.9794292
Std Dev	0.1355396
Std Err Mean	0.0428614
Upper 95% Mean	1.0763884
Lower 95% Mean	0.88247
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9794292	0.88247	1.0763884
Dispersion	$\sigma$	0.1355396	0.0932289	0.2474425

-2log(Likelihood) = -12.5910555072156

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.843859	0.0491*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB201**

**RESULT\_STATS\_LOG10**

Normal(0.77863,0.11845)

**Quantiles**

100.0%	maximum	0.983401
99.5%		0.983401
97.5%		0.983401
90.0%		0.9355097
75.0%	quartile	0.890175
50.0%	median	0.7649385
25.0%	quartile	0.7067995
10.0%		0.6411311
2.5%		0.514105
0.5%		0.514105
0.0%	minimum	0.514105

**Summary Statistics**

Mean	0.7786275
Std Dev	0.1184499
Std Err Mean	0.0216259
Upper 95% Mean	0.8228574
Lower 95% Mean	0.7343976
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.7786275	0.7343976	0.8228574
Dispersion	$\sigma$	0.1184499	0.0943343	0.159234

-2log(Likelihood) = -43.8595939187987

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

	W	Prob<W
	0.968882	0.5091

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB203**

**RESULT\_STATS\_LOG10**

Normal(0.94194,0.20295)

**Quantiles**

100.0%	maximum	1.5044
99.5%		1.5044
97.5%		1.5044
90.0%		1.224434
75.0%	quartile	1.01639
50.0%	median	0.982271
25.0%	quartile	0.800428
10.0%		0.6753216
2.5%		0.639849
0.5%		0.639849
0.0%	minimum	0.639849

**Summary Statistics**

Mean	0.9419394
Std Dev	0.2029518
Std Err Mean	0.0524019
Upper 95% Mean	1.0543304
Lower 95% Mean	0.8295484
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.9419394	0.8295484	1.0543304
Dispersion	$\sigma$	0.2029518	0.1485864	0.3200751

-2log(Likelihood) = -6.27544698308218

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.856902	0.0218*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB206**

**RESULT\_STATS\_LOG10**

Normal(1.13651,0.22132)

**Quantiles**

100.0%	maximum	1.74639
99.5%		1.74639
97.5%		1.7457975
90.0%		1.48322
75.0%	quartile	1.21838
50.0%	median	1.08501
25.0%	quartile	1
10.0%		0.898542
2.5%		0.80730035
0.5%		0.801632
0.0%	minimum	0.801632

**Summary Statistics**

Mean	1.1365103
Std Dev	0.2213219
Std Err Mean	0.0329927
Upper 95% Mean	1.2030027
Lower 95% Mean	1.0700178
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.1365103	1.0700178	1.2030027
Dispersion	$\sigma$	0.2213219	0.1832223	0.2795737

-2log(Likelihood) = -9.02786983736579

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.875067	0.0002*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB209**

**RESULT\_STATS\_LOG10**

Normal(1.10758,0.29592)

**Quantiles**

100.0%	maximum	2.06424
99.5%		2.06424
97.5%		2.06424
90.0%		1.562671
75.0%	quartile	1.2322675
50.0%	median	1.002915
25.0%	quartile	0.9237665
10.0%		0.8782325
2.5%		0.803705
0.5%		0.803705
0.0%	minimum	0.803705

**Summary Statistics**

Mean	1.1075794
Std Dev	0.2959227
Std Err Mean	0.0661703
Upper 95% Mean	1.2460755
Lower 95% Mean	0.9690833
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1.1075794	0.9690833	1.2460755
Dispersion	$\sigma$	0.2959227	0.2250464	0.4322163

-2log(Likelihood) = 7.05126220485692

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.770442	0.0003*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Total Butyltins (ND = 0)**

**RESULT\_STATS\_LOG10**

Normal(-0.4422,0.06591)

**Quantiles**

100.0%	maximum	-0.352617
99.5%		-0.352617
97.5%		-0.352617
90.0%		-0.3538069
75.0%	quartile	-0.3839335
50.0%	median	-0.4377475
25.0%	quartile	-0.49926825
10.0%		-0.539418
2.5%		-0.540608
0.5%		-0.540608
0.0%	minimum	-0.540608

**Summary Statistics**

Mean	-0.442167
Std Dev	0.0659085
Std Err Mean	0.0208421
Upper 95% Mean	-0.395018
Lower 95% Mean	-0.489315
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	-0.442167	-0.489315	-0.395018
Dispersion	$\sigma$	0.0659085	0.0453342	0.1203233

-2log(Likelihood) = -27.0109723634004

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.950952	0.6798

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Total DDTs (ND = 0)**

**RESULT\_STATS\_LOG10**

Normal(3.37306,0.38277)

**Quantiles**

100.0%	maximum	3.93244
99.5%		3.93244
97.5%		3.868432
90.0%		3.73001
75.0%	quartile	3.60943
50.0%	median	3.43669
25.0%	quartile	3.25527
10.0%		2.970192
2.5%		2.10305
0.5%		1.94983
0.0%	minimum	1.94983

**Summary Statistics**

Mean	3.3730631
Std Dev	0.3827667
Std Err Mean	0.0516123
Upper 95% Mean	3.4765394
Lower 95% Mean	3.2695867
N	55

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.3730631	3.2695867	3.4765394
Dispersion	$\sigma$	0.3827667	0.3222376	0.4715084

-2log(Likelihood) = 49.4469944256634

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.823793	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Total PCB Congeners (ND = 0)**

**RESULT\_STATS\_LOG10**

Normal(3.05994,0.30453)

**Quantiles**

100.0%	maximum	3.67428
99.5%		3.67428
97.5%		3.6702045
90.0%		3.507814
75.0%	quartile	3.20379
50.0%	median	3.066915
25.0%	quartile	2.934005
10.0%		2.634619
2.5%		2.22132525
0.5%		2.20353
0.0%	minimum	2.20353

**Summary Statistics**

Mean	3.0599412
Std Dev	0.3045308
Std Err Mean	0.0430672
Upper 95% Mean	3.1464879
Lower 95% Mean	2.9733945
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.0599412	2.9733945	3.1464879
Dispersion	$\sigma$	0.3045308	0.2543849	0.3794859

-2log(Likelihood) = 21.9955374865107

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.936778	0.0101*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=Mercury****RESULT\_STATS\_LOG10**

Normal(-1.7934,0.24461)

**Quantiles**

100.0%	maximum	-1.5867
99.5%		-1.5867
97.5%		-1.5867
90.0%		-1.591782
75.0%	quartile	-1.6216
50.0%	median	-1.66154
25.0%	quartile	-2.03433
10.0%		-2.235156
2.5%		-2.28483
0.5%		-2.28483
0.0%	minimum	-2.28483

**Summary Statistics**

Mean	-1.793393
Std Dev	0.2446058
Std Err Mean	0.0631569
Upper 95% Mean	-1.657935
Lower 95% Mean	-1.928852
N	15

**Fitted Normal****Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	-1.793393	-1.928852	-1.657935
Dispersion	$\sigma$	0.2446058	0.1790824	0.3857676

**Measure**

-2*LogLikelihood	-0.675065
AICc	4.3249346
BIC	4.741035

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.780966	0.0021*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=2,4'-DDD**

**RESULT\_STATS**

Normal(17.9416,4.681)

**Quantiles**

100.0%	maximum	28.4821
99.5%		28.4821
97.5%		28.4821
90.0%		24.55345
75.0%	quartile	21.867575
50.0%	median	17.09905
25.0%	quartile	14.875
10.0%		12.75794
2.5%		9.66667
0.5%		9.66667
0.0%	minimum	9.66667

**Summary Statistics**

Mean	17.941649
Std Dev	4.6809952
Std Err Mean	0.8546289
Upper 95% Mean	19.689561
Lower 95% Mean	16.193737
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	17.941649	16.193737	19.689561
Dispersion	$\sigma$	4.6809952	3.7279771	6.292733

-2log(Likelihood) = 176.746956834988

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.964173	0.3941

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=2,4'-DDE**

**RESULT\_STATS**

Normal(222.453,124.468)

**Quantiles**

100.0%	maximum	593.22
99.5%		593.22
97.5%		592.913375
90.0%		390.2028
75.0%	quartile	269.231
50.0%	median	200
25.0%	quartile	159.47375
10.0%		55.53464
2.5%		42.4062375
0.5%		41.25
0.0%	minimum	41.25

**Summary Statistics**

Mean	222.45259
Std Dev	124.46762
Std Err Mean	17.60238
Upper 95% Mean	257.8259
Lower 95% Mean	187.07929
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	222.45259	187.07929	257.8259
Dispersion	$\sigma$	124.46762	103.97204	155.10326

-2log(Likelihood) = 623.298416270189

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.881779	0.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=2,4'-DDT**

**RESULT\_STATS**

Normal(21.9724,5.9175)

**Quantiles**

100.0%	maximum	28.1818
99.5%		28.1818
97.5%		28.1818
90.0%		28.05927
75.0%	quartile	26.8593
50.0%	median	24.40705
25.0%	quartile	17.422175
10.0%		11.55452
2.5%		11.2727
0.5%		11.2727
0.0%	minimum	11.2727

**Summary Statistics**

Mean	21.97241
Std Dev	5.9175009
Std Err Mean	1.8712781
Upper 95% Mean	26.205535
Lower 95% Mean	17.739285
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	21.97241	17.739285	26.205535
Dispersion	$\sigma$	5.9175009	4.0702655	10.80305

-2log(Likelihood) = 62.9370550294146

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.879097	0.1274

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=4,4'-DDD**

**RESULT\_STATS**

Normal(1839,1154.96)

**Quantiles**

100.0%	maximum	5423.73
99.5%		5423.73
97.5%		4782.326
90.0%		3444.442
75.0%	quartile	2555.56
50.0%	median	1744.19
25.0%	quartile	845.07
10.0%		458.4086
2.5%		22.9091
0.5%		22.7273
0.0%	minimum	22.7273

**Summary Statistics**

Mean	1838.9966
Std Dev	1154.9582
Std Err Mean	155.73454
Upper 95% Mean	2151.2255
Lower 95% Mean	1526.7676
N	55

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1838.9966	1526.7676	2151.2255
Dispersion	$\sigma$	1154.9582	972.31802	1422.7267

-2log(Likelihood) = 930.783379409891

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.962172	0.0812

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=4,4'-DDE**

**RESULT\_STATS**

Normal(995.391,496.27)

**Quantiles**

100.0%	maximum	2542.37
99.5%		2542.37
97.5%		2405.422
90.0%		1691.362
75.0%	quartile	1294.12
50.0%	median	927.536
25.0%	quartile	712.766
10.0%		349.9346
2.5%		97.09094
0.5%		89.0909
0.0%	minimum	89.0909

**Summary Statistics**

Mean	995.39122
Std Dev	496.27009
Std Err Mean	66.917045
Upper 95% Mean	1129.5518
Lower 95% Mean	861.23062
N	55

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	995.39122	861.23062	1129.5518
Dispersion	$\sigma$	496.27009	417.79203	611.32663

-2log(Likelihood) = 837.866472640068

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.968541	0.1582

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=4,4'-DDT**

**RESULT\_STATS**

Normal(36.5431,27.3757)

**Quantiles**

100.0%	maximum	84.7826
99.5%		84.7826
97.5%		84.7826
90.0%		84.7826
75.0%	quartile	57.05795
50.0%	median	29.0541
25.0%	quartile	19.77275
10.0%		19.5455
2.5%		19.5455
0.5%		19.5455
0.0%	minimum	19.5455

**Summary Statistics**

Mean	36.5431
Std Dev	27.375666
Std Err Mean	12.24277
Upper 95% Mean	70.534478
Lower 95% Mean	2.5517216
N	5

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	36.5431	2.5517216	70.534478
Dispersion	$\sigma$	27.375666	16.401668	78.665498

-2log(Likelihood) = 46.2859303394803

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.694010	0.0083*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Dibutyltin**

**RESULT\_STATS**

Normal(0.365,0.05467)

**Quantiles**

100.0%	maximum	0.444
99.5%		0.444
97.5%		0.444
90.0%		0.4428
75.0%	quartile	0.41325
50.0%	median	0.365
25.0%	quartile	0.317
10.0%		0.2888
2.5%		0.288
0.5%		0.288
0.0%	minimum	0.288

**Summary Statistics**

Mean	0.365
Std Dev	0.0546707
Std Err Mean	0.0172884
Upper 95% Mean	0.4041091
Lower 95% Mean	0.3258909
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.365	0.3258909	0.4041091
Dispersion	$\sigma$	0.0546707	0.0376045	0.0998074

-2log(Likelihood) = -30.7497650330122

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.953662	0.7119

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=Mercury**

**RESULT\_STATS**

Normal(0.01908,0.00702)

**Quantiles**

100.0%	maximum	0.0374
99.5%		0.0374
97.5%		0.0374
90.0%		0.02727
75.0%	quartile	0.024325
50.0%	median	0.01885
25.0%	quartile	0.013175
10.0%		0.01182
2.5%		0.00562
0.5%		0.00562
0.0%	minimum	0.00562

**Summary Statistics**

Mean	0.0190817
Std Dev	0.0070244
Std Err Mean	0.0012825
Upper 95% Mean	0.0217046
Lower 95% Mean	0.0164587
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.0190817	0.0164587	0.0217046
Dispersion	$\sigma$	0.0070244	0.0055942	0.009443

-2log(Likelihood) = -213.365961465867

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.970795	0.5611

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB003**

**RESULT\_STATS**

Normal(5.53207,1.49261)

**Quantiles**

100.0%	maximum	8.54464
99.5%		8.54464
97.5%		8.54464
90.0%		7.70878
75.0%	quartile	6.895775
50.0%	median	5.16012
25.0%	quartile	4.5149175
10.0%		3.877276
2.5%		2.9
0.5%		2.9
0.0%	minimum	2.9

**Summary Statistics**

Mean	5.532065
Std Dev	1.4926082
Std Err Mean	0.2725117
Upper 95% Mean	6.0894141
Lower 95% Mean	4.9747159
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	5.532065	4.9747159	6.0894141
Dispersion	$\sigma$	1.4926082	1.1887235	2.0065359

-2log(Likelihood) = 108.167817139105

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.953389	0.2082

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB005/008**

**RESULT\_STATS**

Normal(9.92303,2.67242)

**Quantiles**

100.0%	maximum	12.7273
99.5%		12.7273
97.5%		12.7273
90.0%		12.67196
75.0%	quartile	12.130025
50.0%	median	11.02255
25.0%	quartile	7.8680875
10.0%		5.218183
2.5%		5.09091
0.5%		5.09091
0.0%	minimum	5.09091

**Summary Statistics**

Mean	9.923033
Std Dev	2.6724245
Std Err Mean	0.8450948
Upper 95% Mean	11.83477
Lower 95% Mean	8.0112957
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	9.923033	8.0112957	11.83477
Dispersion	$\sigma$	2.6724245	1.8381876	4.8788053

-2log(Likelihood) = 47.0384926540744

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.879097	0.1274

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB015**

**RESULT\_STATS**

Normal(4.3888,1.29198)

**Quantiles**

100.0%	maximum	6.67857
99.5%		6.67857
97.5%		6.67857
90.0%		5.984746
75.0%	quartile	5.6780225
50.0%	median	4.05316
25.0%	quartile	3.221875
10.0%		2.46
2.5%		2.26667
0.5%		2.26667
0.0%	minimum	2.26667

**Summary Statistics**

Mean	4.3887975
Std Dev	1.2919838
Std Err Mean	0.2888964
Upper 95% Mean	4.9934645
Lower 95% Mean	3.7841305
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	4.3887975	3.7841305	4.9934645
Dispersion	$\sigma$	1.2919838	0.9825412	1.8870348

-2log(Likelihood) = 66.0046949229551

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.953984	0.4316

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB018**

**RESULT\_STATS**

Normal(23.8923,37.0651)

**Quantiles**

100.0%	maximum	149.091
99.5%		149.091
97.5%		147.225675
90.0%		81.63429
75.0%	quartile	28.901775
50.0%	median	5.34276
25.0%	quartile	4.04167
10.0%		3.605
2.5%		2.43999875
0.5%		2.4
0.0%	minimum	2.4

**Summary Statistics**

Mean	23.8923
Std Dev	37.065065
Std Err Mean	5.2417917
Upper 95% Mean	34.426074
Lower 95% Mean	13.358525
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	23.8923	13.358525	34.426074
Dispersion	$\sigma$	37.065065	30.961709	46.188014

-2log(Likelihood) = 502.161341004447

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.599554	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB027**

**RESULT\_STATS**

Normal(5.06379,1.35109)

**Quantiles**

100.0%	maximum	6.72727
99.5%		6.72727
97.5%		6.72727
90.0%		6.65701
75.0%	quartile	6.40385
50.0%	median	5.2
25.0%	quartile	3.575
10.0%		3.136362
2.5%		2.72727
0.5%		2.72727
0.0%	minimum	2.72727

**Summary Statistics**

Mean	5.0637867
Std Dev	1.3510887
Std Err Mean	0.3488496
Upper 95% Mean	5.8119946
Lower 95% Mean	4.3155787
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	5.0637867	4.3155787	5.8119946
Dispersion	$\sigma$	1.3510887	0.989168	2.1308006

-2log(Likelihood) = 50.595477246808

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.910834	0.1395

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB028**

**RESULT\_STATS**

Normal(28.1625,56.2184)

**Quantiles**

100.0%	maximum	218.182
99.5%		218.182
97.5%		218.182
90.0%		142.1186
75.0%	quartile	29.2135
50.0%	median	2.09877
25.0%	quartile	1.86301
10.0%		1.466668
2.5%		1.13333
0.5%		1.13333
0.0%	minimum	1.13333

**Summary Statistics**

Mean	28.162538
Std Dev	56.218438
Std Err Mean	9.5026505
Upper 95% Mean	47.474247
Lower 95% Mean	8.8508285
N	35

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	28.162538	8.8508285	47.474247
Dispersion	$\sigma$	56.218438	45.473524	73.657517

-2log(Likelihood) = 380.372832473584

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.542474	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB029**

**RESULT\_STATS**

Normal(5.28111,1.49533)

**Quantiles**

100.0%	maximum	7.95536
99.5%		7.95536
97.5%		7.95536
90.0%		7.405868
75.0%	quartile	6.7563
50.0%	median	4.86486
25.0%	quartile	4.050315
10.0%		3.345452
2.5%		2.7
0.5%		2.7
0.0%	minimum	2.7

**Summary Statistics**

Mean	5.2811112
Std Dev	1.4953297
Std Err Mean	0.2990659
Upper 95% Mean	5.898353
Lower 95% Mean	4.6638694
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	5.2811112	4.6638694	5.898353
Dispersion	$\sigma$	1.4953297	1.1675959	2.0802312

-2log(Likelihood) = 90.0642634553156

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.961711	0.4496

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB031**

**RESULT\_STATS**

Normal(3.13966,0.89693)

**Quantiles**

100.0%	maximum	4.91071
99.5%		4.91071
97.5%		4.90891
90.0%		4.441298
75.0%	quartile	3.8643425
50.0%	median	2.981885
25.0%	quartile	2.4857575
10.0%		1.968167
2.5%		1.66667
0.5%		1.66667
0.0%	minimum	1.66667

**Summary Statistics**

Mean	3.1396648
Std Dev	0.8969339
Std Err Mean	0.1418177
Upper 95% Mean	3.4265181
Lower 95% Mean	2.8528114
N	40

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.1396648	2.8528114	3.4265181
Dispersion	$\sigma$	0.8969339	0.7347333	1.1516949

-2log(Likelihood) = 103.813231739512

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.965100	0.2492

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB033**

**RESULT\_STATS**

Normal(8.50545,2.29064)

**Quantiles**

100.0%	maximum	10.9091
99.5%		10.9091
97.5%		10.9091
90.0%		10.86167
75.0%	quartile	10.39715
50.0%	median	9.447885
25.0%	quartile	6.74407
10.0%		4.472731
2.5%		4.36364
0.5%		4.36364
0.0%	minimum	4.36364

**Summary Statistics**

Mean	8.505447
Std Dev	2.2906416
Std Err Mean	0.7243645
Upper 95% Mean	10.144073
Lower 95% Mean	6.8668207
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	8.505447	6.8668207	10.144073
Dispersion	$\sigma$	2.2906416	1.5755839	4.1818186

-2log(Likelihood) = 43.9554097490548

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.879100	0.1274

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB037**

**RESULT\_STATS**

Normal(3.9566,1.11768)

**Quantiles**

100.0%	maximum	5.99107
99.5%		5.99107
97.5%		5.99107
90.0%		5.540764
75.0%	quartile	5.045845
50.0%	median	3.66
25.0%	quartile	3.043985
10.0%		2.50909
2.5%		2.03333
0.5%		2.03333
0.0%	minimum	2.03333

**Summary Statistics**

Mean	3.9565992
Std Dev	1.1176822
Std Err Mean	0.2235364
Upper 95% Mean	4.4179557
Lower 95% Mean	3.4952427
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.9565992	3.4952427	4.4179557
Dispersion	$\sigma$	1.1176822	0.8727179	1.554866

-2log(Likelihood) = 75.5097787709242

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.963819	0.4956

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB044**

**RESULT\_STATS**

Normal(22.6408,39.9165)

**Quantiles**

100.0%	maximum	150
99.5%		150
97.5%		149.13465
90.0%		108.169
75.0%	quartile	8.72143
50.0%	median	5.63291
25.0%	quartile	5.031045
10.0%		4.50737
2.5%		2.962421
0.5%		2.93333
0.0%	minimum	2.93333

**Summary Statistics**

Mean	22.640784
Std Dev	39.916506
Std Err Mean	5.9504014
Upper 95% Mean	34.63303
Lower 95% Mean	10.648537
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	22.640784	10.648537	34.63303
Dispersion	$\sigma$	39.916506	33.045049	50.422517

-2log(Likelihood) = 458.515561408698

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.512842	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB049**

**RESULT\_STATS**

Normal(32.4324,36.8286)

**Quantiles**

100.0%	maximum	150.909
99.5%		150.909
97.5%		148.865475
90.0%		96.37681
75.0%	quartile	40.7529
50.0%	median	20.41665
25.0%	quartile	6.5689725
10.0%		5.5
2.5%		4.16041575
0.5%		4
0.0%	minimum	4

**Summary Statistics**

Mean	32.432391
Std Dev	36.828648
Std Err Mean	5.2083573
Upper 95% Mean	42.898977
Lower 95% Mean	21.965805
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	32.432391	21.965805	42.898977
Dispersion	$\sigma$	36.828648	30.764222	45.893407

-2log(Likelihood) = 501.521455173469

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.721729	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB052**

**RESULT\_STATS**

Normal(101.532,102.403)

**Quantiles**

100.0%	maximum	472.727
99.5%		472.727
97.5%		450.335675
90.0%		296.2644
75.0%	quartile	104.89875
50.0%	median	76.0065
25.0%	quartile	53.541675
10.0%		5.008643
2.5%		2.40954825
0.5%		2.25455
0.0%	minimum	2.25455

**Summary Statistics**

Mean	101.5319
Std Dev	102.40276
Std Err Mean	14.481937
Upper 95% Mean	130.63444
Lower 95% Mean	72.429357
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	101.5319	72.429357	130.63444
Dispersion	$\sigma$	102.40276	85.540506	127.60749

-2log(Likelihood) = 603.785217362433

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.688601	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB056**

**RESULT\_STATS**

Normal(21.4805,30.0153)

**Quantiles**

100.0%	maximum	113.043
99.5%		113.043
97.5%		113.043
90.0%		78.8705
75.0%	quartile	11.45465
50.0%	median	7.748685
25.0%	quartile	6.7031225
10.0%		5.493365
2.5%		4.33333
0.5%		4.33333
0.0%	minimum	4.33333

**Summary Statistics**

Mean	21.480468
Std Dev	30.015331
Std Err Mean	5.4800246
Upper 95% Mean	32.688376
Lower 95% Mean	10.272559
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	21.480468	10.272559	32.688376
Dispersion	$\sigma$	30.015331	23.904418	40.350065

-2log(Likelihood) = 288.238808872552

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.573890	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB060**

**RESULT\_STATS**

Normal(10.649,7.53668)

**Quantiles**

100.0%	maximum	50.9091
99.5%		50.9091
97.5%		47.92062
90.0%		14.50908
75.0%	quartile	11.03105
50.0%	median	8.7766
25.0%	quartile	7.228515
10.0%		5.739998
2.5%		4.66667
0.5%		4.66667
0.0%	minimum	4.66667

**Summary Statistics**

Mean	10.648984
Std Dev	7.5366781
Std Err Mean	1.1235016
Upper 95% Mean	12.913253
Lower 95% Mean	8.3847155
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	10.648984	8.3847155	12.913253
Dispersion	$\sigma$	7.5366781	6.239271	9.5203291

-2log(Likelihood) = 308.484804261238

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.557741	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB066**

**RESULT\_STATS**

Normal(65.558,67.5341)

**Quantiles**

100.0%	maximum	272.727
99.5%		272.727
97.5%		269.466325
90.0%		191.8195
75.0%	quartile	71.25
50.0%	median	46.6216
25.0%	quartile	28.249975
10.0%		5.988542
2.5%		3.88635975
0.5%		3.63636
0.0%	minimum	3.63636

**Summary Statistics**

Mean	65.558034
Std Dev	67.534128
Std Err Mean	9.550768
Upper 95% Mean	84.75102
Lower 95% Mean	46.365047
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	65.558034	46.365047	84.75102
Dispersion	$\sigma$	67.534128	56.413554	84.15653

-2log(Likelihood) = 562.157160268818

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.741796	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB070**

**RESULT\_STATS**

Normal(17.1141,28.1973)

**Quantiles**

100.0%	maximum	100
99.5%		100
97.5%		100
90.0%		69.14948
75.0%	quartile	9.19237
50.0%	median	3.75965
25.0%	quartile	3.17582
10.0%		2.687795
2.5%		2
0.5%		2
0.0%	minimum	2

**Summary Statistics**

Mean	17.114084
Std Dev	28.197337
Std Err Mean	5.1481059
Upper 95% Mean	27.643143
Lower 95% Mean	6.5850255
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	17.114084	6.5850255	27.643143
Dispersion	$\sigma$	28.197337	22.456555	37.906109

-2log(Likelihood) = 284.489965291119

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.575765	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB074**

**RESULT\_STATS**

Normal(21.0585,26.7297)

**Quantiles**

100.0%	maximum	88.4615
99.5%		88.4615
97.5%		88.4615
90.0%		77.83222
75.0%	quartile	29.1667
50.0%	median	5.37037
25.0%	quartile	4.85455
10.0%		3.9906
2.5%		2.93333
0.5%		2.93333
0.0%	minimum	2.93333

**Summary Statistics**

Mean	21.058493
Std Dev	26.729671
Std Err Mean	4.5181391
Upper 95% Mean	30.240456
Lower 95% Mean	11.876529
N	35

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	21.058493	11.876529	30.240456
Dispersion	$\sigma$	26.729671	21.620884	35.021272

-2log(Likelihood) = 328.32989325615

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.679299	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB077**

**RESULT\_STATS**

Normal(7.79767,11.2128)

**Quantiles**

100.0%	maximum	52.1739
99.5%		52.1739
97.5%		52.1739
90.0%		7.6398
75.0%	quartile	6.314915
50.0%	median	4.65117
25.0%	quartile	4.060935
10.0%		3.509551
2.5%		2.6
0.5%		2.6
0.0%	minimum	2.6

**Summary Statistics**

Mean	7.797665
Std Dev	11.212807
Std Err Mean	2.0471691
Upper 95% Mean	11.984596
Lower 95% Mean	3.610734
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	7.797665	3.610734	11.984596
Dispersion	$\sigma$	11.212807	8.9299573	15.073547

-2log(Likelihood) = 229.159708748661

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.384036	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB081**

**RESULT\_STATS**

Normal(8.50545,2.29064)

**Quantiles**

100.0%	maximum	10.9091
99.5%		10.9091
97.5%		10.9091
90.0%		10.86167
75.0%	quartile	10.39715
50.0%	median	9.447885
25.0%	quartile	6.74407
10.0%		4.472731
2.5%		4.36364
0.5%		4.36364
0.0%	minimum	4.36364

**Summary Statistics**

Mean	8.505447
Std Dev	2.2906416
Std Err Mean	0.7243645
Upper 95% Mean	10.144073
Lower 95% Mean	6.8668207
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	8.505447	6.8668207	10.144073
Dispersion	$\sigma$	2.2906416	1.5755839	4.1818186

-2log(Likelihood) = 43.9554097490548

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.879100	0.1274

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB087**

**RESULT\_STATS**

Normal(11.5584,10.1136)

**Quantiles**

100.0%	maximum	36.6197
99.5%		36.6197
97.5%		36.6197
90.0%		35.51744
75.0%	quartile	10.5769
50.0%	median	7.74648
25.0%	quartile	6.57609
10.0%		4.6
2.5%		4
0.5%		4
0.0%	minimum	4

**Summary Statistics**

Mean	11.558377
Std Dev	10.113622
Std Err Mean	2.6113259
Upper 95% Mean	17.159114
Lower 95% Mean	5.9576402
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	11.558377	5.9576402	17.159114
Dispersion	$\sigma$	10.113622	7.4044514	15.950183

-2log(Likelihood) = 110.98465238554

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.635651	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB095**

**RESULT\_STATS**

Normal(92.0197,70.7799)

**Quantiles**

100.0%	maximum	309.091
99.5%		309.091
97.5%		307.786675
90.0%		217.3096
75.0%	quartile	104.03325
50.0%	median	72.2023
25.0%	quartile	57.443175
10.0%		13.58
2.5%		5.44091075
0.5%		5.09091
0.0%	minimum	5.09091

**Summary Statistics**

Mean	92.019673
Std Dev	70.77994
Std Err Mean	10.009795
Upper 95% Mean	112.13511
Lower 95% Mean	71.904236
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	92.019673	71.904236	112.13511
Dispersion	$\sigma$	70.77994	59.124891	88.201244

-2log(Likelihood) = 566.851415686113

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.789647	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB097**

**RESULT\_STATS**

Normal(29.8149,31.378)

**Quantiles**

100.0%	maximum	130.435
99.5%		130.435
97.5%		127.312
90.0%		92.9577
75.0%	quartile	37.3207
50.0%	median	13.75
25.0%	quartile	7.330045
10.0%		5.41667
2.5%		4.67576
0.5%		4.66667
0.0%	minimum	4.66667

**Summary Statistics**

Mean	29.814922
Std Dev	31.377999
Std Err Mean	4.6775559
Upper 95% Mean	39.241917
Lower 95% Mean	20.387928
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	29.814922	20.387928	39.241917
Dispersion	$\sigma$	31.377999	25.97641	39.636677

-2log(Likelihood) = 436.854095603295

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.758079	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB099**

**RESULT\_STATS**

Normal(59.2028,46.0267)

**Quantiles**

100.0%	maximum	190.385
99.5%		190.385
97.5%		189.4423
90.0%		138.5347
75.0%	quartile	69.722225
50.0%	median	47.04055
25.0%	quartile	33.865275
10.0%		6.32
2.5%		2.33181875
0.5%		2.18182
0.0%	minimum	2.18182

**Summary Statistics**

Mean	59.202778
Std Dev	46.026726
Std Err Mean	6.509162
Upper 95% Mean	72.283429
Lower 95% Mean	46.122127
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	59.202778	46.122127	72.283429
Dispersion	$\sigma$	46.026726	38.44769	57.355439

-2log(Likelihood) = 523.81607656931

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.829022	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB101**

**RESULT\_STATS**

Normal(111.43,84.826)

**Quantiles**

100.0%	maximum	369.565
99.5%		369.565
97.5%		367.934525
90.0%		272.3616
75.0%	quartile	122.0555
50.0%	median	83.3187
25.0%	quartile	69.94185
10.0%		38.39997
2.5%		4.6762085
0.5%		4.40909
0.0%	minimum	4.40909

**Summary Statistics**

Mean	111.42972
Std Dev	84.825962
Std Err Mean	11.996203
Upper 95% Mean	135.53699
Lower 95% Mean	87.322452
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	111.42972	87.322452	135.53699
Dispersion	$\sigma$	84.825962	70.858011	105.70446

-2log(Likelihood) = 584.954018083958

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.774112	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB105**

**RESULT\_STATS**

Normal(19.2835,22.2065)

**Quantiles**

100.0%	maximum	67.7419
99.5%		67.7419
97.5%		66.65956
90.0%		57.22548
75.0%	quartile	41.5412
50.0%	median	4.56338
25.0%	quartile	3.24242
10.0%		2.389398
2.5%		1.8528765
0.5%		1.83333
0.0%	minimum	1.83333

**Summary Statistics**

Mean	19.283514
Std Dev	22.206488
Std Err Mean	3.3103478
Upper 95% Mean	25.955082
Lower 95% Mean	12.611947
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	19.283514	12.611947	25.955082
Dispersion	$\sigma$	22.206488	18.383736	28.051228

-2log(Likelihood) = 405.739073748122

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.737078	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB110**

**RESULT\_STATS**

Normal(76.553,65.3249)

**Quantiles**

100.0%	maximum	309.091
99.5%		309.091
97.5%		295.830225
90.0%		203.0398
75.0%	quartile	82.167925
50.0%	median	61.5336
25.0%	quartile	48.365125
10.0%		3.638305
2.5%		1.74885975
0.5%		1.63636
0.0%	minimum	1.63636

**Summary Statistics**

Mean	76.552975
Std Dev	65.324926
Std Err Mean	9.2383396
Upper 95% Mean	95.118114
Lower 95% Mean	57.987837
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	76.552975	57.987837	95.118114
Dispersion	$\sigma$	65.324926	54.568132	81.40357

-2log(Likelihood) = 558.831221264397

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.743840	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB114**

**RESULT\_STATS**

Normal(5.26165,1.40542)

**Quantiles**

100.0%	maximum	8.15179
99.5%		8.15179
97.5%		8.15179
90.0%		7.265796
75.0%	quartile	6.55014
50.0%	median	4.920285
25.0%	quartile	4.30363
10.0%		3.69566
2.5%		2.76667
0.5%		2.76667
0.0%	minimum	2.76667

**Summary Statistics**

Mean	5.261653
Std Dev	1.4054221
Std Err Mean	0.2565938
Upper 95% Mean	5.7864462
Lower 95% Mean	4.7368598
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	5.261653	4.7368598	5.7864462
Dispersion	$\sigma$	1.4054221	1.1192879	1.8893302

-2log(Likelihood) = 104.556571326486

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.957570	0.2681

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB118**

**RESULT\_STATS**

Normal(60.2557,48.9539)

**Quantiles**

100.0%	maximum	218.182
99.5%		218.182
97.5%		213.18195
90.0%		149.00222
75.0%	quartile	72.499975
50.0%	median	47.1371
25.0%	quartile	35.6786
10.0%		5.613088
2.5%		3.91772925
0.5%		3.77273
0.0%	minimum	3.77273

**Summary Statistics**

Mean	60.255703
Std Dev	48.953859
Std Err Mean	6.9231212
Upper 95% Mean	74.168236
Lower 95% Mean	46.34317
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	60.255703	46.34317	74.168236
Dispersion	$\sigma$	48.953859	40.892824	61.003037

-2log(Likelihood) = 529.981674276894

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.814245	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB119**

**RESULT\_STATS**

Normal(6.19993,1.75998)

**Quantiles**

100.0%	maximum	9.33036
99.5%		9.33036
97.5%		9.33036
90.0%		8.711438
75.0%	quartile	7.95362
50.0%	median	5.71622
25.0%	quartile	4.754745
10.0%		3.93091
2.5%		3.16667
0.5%		3.16667
0.0%	minimum	3.16667

**Summary Statistics**

Mean	6.1999328
Std Dev	1.7599848
Std Err Mean	0.351997
Upper 95% Mean	6.9264188
Lower 95% Mean	5.4734468
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	6.1999328	5.4734468	6.9264188
Dispersion	$\sigma$	1.7599848	1.374246	2.4484066

-2log(Likelihood) = 98.212184324706

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.960579	0.4261

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB123**

**RESULT\_STATS**

Normal(14.8299,28.7154)

**Quantiles**

100.0%	maximum	133.333
99.5%		133.333
97.5%		133.333
90.0%		28.26593
75.0%	quartile	8.5809025
50.0%	median	6.4652
25.0%	quartile	5.32237
10.0%		4.204548
2.5%		3.63636
0.5%		3.63636
0.0%	minimum	3.63636

**Summary Statistics**

Mean	14.829886
Std Dev	28.71544
Std Err Mean	6.4209676
Upper 95% Mean	28.269126
Lower 95% Mean	1.3906464
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	14.829886	1.3906464	28.269126
Dispersion	$\sigma$	28.71544	21.837816	41.940957

-2log(Likelihood) = 190.054939700952

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.382039	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB126**

**RESULT\_STATS**

Normal(5.12363,1.36958)

**Quantiles**

100.0%	maximum	7.95536
99.5%		7.95536
97.5%		7.95536
90.0%		7.076734
75.0%	quartile	6.3878875
50.0%	median	4.80096
25.0%	quartile	4.1979825
10.0%		3.600358
2.5%		2.7
0.5%		2.7
0.0%	minimum	2.7

**Summary Statistics**

Mean	5.123628
Std Dev	1.3695846
Std Err Mean	0.2500508
Upper 95% Mean	5.6350393
Lower 95% Mean	4.6122167
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	5.123628	4.6122167	5.6350393
Dispersion	$\sigma$	1.3695846	1.0907467	1.8411534

-2log(Likelihood) = 103.006761300679

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.958035	0.2757

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB128**

**RESULT\_STATS**

Normal(6.90871,1.83424)

**Quantiles**

100.0%	maximum	9.32203
99.5%		9.32203
97.5%		9.32203
90.0%		9.183358
75.0%	quartile	8.65385
50.0%	median	7.33333
25.0%	quartile	5.04167
10.0%		4.181814
2.5%		3.63636
0.5%		3.63636
0.0%	minimum	3.63636

**Summary Statistics**

Mean	6.9087133
Std Dev	1.834245
Std Err Mean	0.4736
Upper 95% Mean	7.9244843
Lower 95% Mean	5.8929423
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	6.9087133	5.8929423	7.9244843
Dispersion	$\sigma$	1.834245	1.3428995	2.8927859

-2log(Likelihood) = 59.7671439114539

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.930431	0.2770

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB132/153**

**RESULT\_STATS**

Normal(213.516,87.1508)

**Quantiles**

100.0%	maximum	478.261
99.5%		478.261
97.5%		461.739275
90.0%		338.6418
75.0%	quartile	251.13625
50.0%	median	198.7655
25.0%	quartile	147.11875
10.0%		125.5
2.5%		74.310315
0.5%		73.6364
0.0%	minimum	73.6364

**Summary Statistics**

Mean	213.51558
Std Dev	87.150798
Std Err Mean	12.324984
Upper 95% Mean	238.28356
Lower 95% Mean	188.7476
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	213.51558	188.7476	238.28356
Dispersion	$\sigma$	87.150798	72.800026	108.60152

-2log(Likelihood) = 587.657846158455

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.936441	0.0098*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB137**

**RESULT\_STATS**

Normal(8.92177,2.38455)

**Quantiles**

100.0%	maximum	11.8644
99.5%		11.8644
97.5%		11.8644
90.0%		11.83668
75.0%	quartile	11.25
50.0%	median	9.33333
25.0%	quartile	6.41667
10.0%		5.436362
2.5%		4.72727
0.5%		4.72727
0.0%	minimum	4.72727

**Summary Statistics**

Mean	8.9217747
Std Dev	2.3845467
Std Err Mean	0.6156873
Upper 95% Mean	10.242293
Lower 95% Mean	7.6012567
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	8.9217747	7.6012567	10.242293
Dispersion	$\sigma$	2.3845467	1.7457901	3.7606663

-2log(Likelihood) = 67.6384278884428

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.917783	0.1782

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB138/158**

**RESULT\_STATS**

Normal(157.209,66.0696)

**Quantiles**

100.0%	maximum	327.273
99.5%		327.273
97.5%		326.94685
90.0%		252.8066
75.0%	quartile	180.56425
50.0%	median	144.5905
25.0%	quartile	109.05975
10.0%		75.90003
2.5%		50.2500025
0.5%		50
0.0%	minimum	50

**Summary Statistics**

Mean	157.20851
Std Dev	66.069595
Std Err Mean	9.3436517
Upper 95% Mean	175.98528
Lower 95% Mean	138.43174
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	157.20851	138.43174	175.98528
Dispersion	$\sigma$	66.069595	55.190179	82.331526

-2log(Likelihood) = 559.964718417709

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.935082	0.0086*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB141**

**RESULT\_STATS**

Normal(6.21306,1.83166)

**Quantiles**

100.0%	maximum	8.8
99.5%		8.8
97.5%		8.8
90.0%		8.8
75.0%	quartile	7.744595
50.0%	median	6.57609
25.0%	quartile	4.5
10.0%		4
2.5%		4
0.5%		4
0.0%	minimum	4

**Summary Statistics**

Mean	6.213056
Std Dev	1.831659
Std Err Mean	0.8191428
Upper 95% Mean	8.487361
Lower 95% Mean	3.938751
N	5

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	6.213056	3.938751	8.487361
Dispersion	$\sigma$	1.831659	1.0974076	5.2633739

-2log(Likelihood) = 19.2416062736338

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.964642	0.8399

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB149**

**RESULT\_STATS**

Normal(116.956,53.4645)

**Quantiles**

100.0%	maximum	260.87
99.5%		260.87
97.5%		257.88075
90.0%		195.2066
75.0%	quartile	145.58975
50.0%	median	108.858
25.0%	quartile	84.098825
10.0%		43.5333
2.5%		12.65081675
0.5%		5.38043
0.0%	minimum	5.38043

**Summary Statistics**

Mean	116.95603
Std Dev	53.4645
Std Err Mean	7.5610221
Upper 95% Mean	132.15047
Lower 95% Mean	101.76158
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	116.95603	101.76158	132.15047
Dispersion	$\sigma$	53.4645	44.660715	66.623897

-2log(Likelihood) = 538.795641915386

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.964042	0.1313

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB151**

**RESULT\_STATS**

Normal(23.6182,22.8197)

**Quantiles**

100.0%	maximum	82.6087
99.5%		82.6087
97.5%		81.944665
90.0%		60.28168
75.0%	quartile	37.6543
50.0%	median	20
25.0%	quartile	4.05032
10.0%		3.25818
2.5%		2.2921235
0.5%		2.26667
0.0%	minimum	2.26667

**Summary Statistics**

Mean	23.61823
Std Dev	22.819709
Std Err Mean	3.4017614
Upper 95% Mean	30.47403
Lower 95% Mean	16.762431
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	23.61823	16.762431	30.47403
Dispersion	$\sigma$	22.819709	18.891393	28.825849

-2log(Likelihood) = 408.190683012153

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.838278	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB156**

**RESULT\_STATS**

Normal(3.68522,0.98291)

**Quantiles**

100.0%	maximum	5.69643
99.5%		5.69643
97.5%		5.69643
90.0%		5.081819
75.0%	quartile	4.6030975
50.0%	median	3.459175
25.0%	quartile	3.02339
10.0%		2.596988
2.5%		1.93333
0.5%		1.93333
0.0%	minimum	1.93333

**Summary Statistics**

Mean	3.6852233
Std Dev	0.9829113
Std Err Mean	0.1794542
Upper 95% Mean	4.0522484
Lower 95% Mean	3.3181982
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.6852233	3.3181982	4.0522484
Dispersion	$\sigma$	0.9829113	0.7827974	1.3213426

-2log(Likelihood) = 83.102128947952

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.958039	0.2758

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB157**

**RESULT\_STATS**

Normal(3.64306,0.95669)

**Quantiles**

100.0%	maximum	4.63636
99.5%		4.63636
97.5%		4.63636
90.0%		4.616202
75.0%	quartile	4.41879
50.0%	median	4.05535
25.0%	quartile	2.922435
10.0%		1.938183
2.5%		1.89091
0.5%		1.89091
0.0%	minimum	1.89091

**Summary Statistics**

Mean	3.643057
Std Dev	0.9566855
Std Err Mean	0.3025305
Upper 95% Mean	4.3274286
Lower 95% Mean	2.9586854
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.643057	2.9586854	4.3274286
Dispersion	$\sigma$	0.9566855	0.6580419	1.7465347

-2log(Likelihood) = 26.4931585389454

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.875487	0.1158

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB167**

**RESULT\_STATS**

Normal(3.95135,1.054)

**Quantiles**

100.0%	maximum	6.08929
99.5%		6.08929
97.5%		6.08929
90.0%		5.451468
75.0%	quartile	4.927605
50.0%	median	3.697815
25.0%	quartile	3.2346775
10.0%		2.783097
2.5%		2.06667
0.5%		2.06667
0.0%	minimum	2.06667

**Summary Statistics**

Mean	3.951347
Std Dev	1.0539963
Std Err Mean	0.1924325
Upper 95% Mean	4.3449157
Lower 95% Mean	3.5577783
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.951347	3.5577783	4.3449157
Dispersion	$\sigma$	1.0539963	0.8394099	1.4169032

-2log(Likelihood) = 87.2916468254299

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.956916	0.2578

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB168**

**RESULT\_STATS**

Normal(3.07651,0.87873)

**Quantiles**

100.0%	maximum	4.8125
99.5%		4.8125
97.5%		4.810736
90.0%		4.351005
75.0%	quartile	3.787055
50.0%	median	2.922225
25.0%	quartile	2.435285
10.0%		1.928
2.5%		1.63333
0.5%		1.63333
0.0%	minimum	1.63333

**Summary Statistics**

Mean	3.076506
Std Dev	0.8787315
Std Err Mean	0.1389396
Upper 95% Mean	3.357538
Lower 95% Mean	2.795474
N	40

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.076506	2.795474	3.357538
Dispersion	$\sigma$	0.8787315	0.7198226	1.1283224

-2log(Likelihood) = 102.173009012948

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.965228	0.2516

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB169**

**RESULT\_STATS**

Normal(3.99661,1.17496)

**Quantiles**

100.0%	maximum	6.08929
99.5%		6.08929
97.5%		6.08929
90.0%		5.442993
75.0%	quartile	5.1618375
50.0%	median	3.695525
25.0%	quartile	2.940625
10.0%		2.236365
2.5%		2.06667
0.5%		2.06667
0.0%	minimum	2.06667

**Summary Statistics**

Mean	3.9966105
Std Dev	1.1749551
Std Err Mean	0.262728
Upper 95% Mean	4.5465064
Lower 95% Mean	3.4467146
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.9966105	3.4467146	4.5465064
Dispersion	$\sigma$	1.1749551	0.8935421	1.7161062

-2log(Likelihood) = 62.206740063595

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.955146	0.4520

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB170**

**RESULT\_STATS**

Normal(34.1702,23.7062)

**Quantiles**

100.0%	maximum	90.9091
99.5%		90.9091
97.5%		89.1783325
90.0%		64.79735
75.0%	quartile	49.01315
50.0%	median	38.0122
25.0%	quartile	4.56362
10.0%		3.501022
2.5%		2.87613875
0.5%		2.86364
0.0%	minimum	2.86364

**Summary Statistics**

Mean	34.170184
Std Dev	23.706236
Std Err Mean	3.3525681
Upper 95% Mean	40.907422
Lower 95% Mean	27.432946
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	34.170184	27.432946	40.907422
Dispersion	$\sigma$	23.706236	19.802625	29.541132

-2log(Likelihood) = 457.467667114802

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.916627	0.0018*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB174**

**RESULT\_STATS**

Normal(9.2447,2.50011)

**Quantiles**

100.0%	maximum	14.7321
99.5%		14.7321
97.5%		14.7321
90.0%		12.71806
75.0%	quartile	11.5155
50.0%	median	8.7766
25.0%	quartile	7.65625
10.0%		5.854548
2.5%		5
0.5%		5
0.0%	minimum	5

**Summary Statistics**

Mean	9.2447012
Std Dev	2.5001111
Std Err Mean	0.5000222
Upper 95% Mean	10.276696
Lower 95% Mean	8.2127061
N	25

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	9.2447012	8.2127061	10.276696
Dispersion	$\sigma$	2.5001111	1.9521577	3.478035

-2log(Likelihood) = 115.763685456852

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.963764	0.4944

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB177**

**RESULT\_STATS**

Normal(8.68016,10.9304)

**Quantiles**

100.0%	maximum	50.9091
99.5%		50.9091
97.5%		50.9091
90.0%		19.85508
75.0%	quartile	6.19718
50.0%	median	5.22973
25.0%	quartile	4.63542
10.0%		3.9906
2.5%		2.93333
0.5%		2.93333
0.0%	minimum	2.93333

**Summary Statistics**

Mean	8.6801586
Std Dev	10.930381
Std Err Mean	1.8475715
Upper 95% Mean	12.434876
Lower 95% Mean	4.9254415
N	35

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	8.6801586	4.9254415	12.434876
Dispersion	$\sigma$	10.930381	8.8412795	14.321008

-2log(Likelihood) = 265.733925811191

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.445403	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB180**

**RESULT\_STATS**

Normal(42.1332,44.6629)

**Quantiles**

100.0%	maximum	152.542
99.5%		152.542
97.5%		150.9607
90.0%		99.73366
75.0%	quartile	81.14035
50.0%	median	3.72727
25.0%	quartile	3.029095
10.0%		2.366566
2.5%		1.584543
0.5%		1.52727
0.0%	minimum	1.52727

**Summary Statistics**

Mean	42.133184
Std Dev	44.662927
Std Err Mean	6.657956
Upper 95% Mean	55.551413
Lower 95% Mean	28.714955
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	42.133184	28.714955	55.551413
Dispersion	$\sigma$	44.662927	36.974393	56.418193

-2log(Likelihood) = 468.627407692044

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.812859	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB183**

**RESULT\_STATS**

Normal(33.146,15.434)

**Quantiles**

100.0%	maximum	63.0435
99.5%		63.0435
97.5%		62.3614725
90.0%		57.25397
75.0%	quartile	45.810875
50.0%	median	31.4379
25.0%	quartile	24.39275
10.0%		8.597529
2.5%		5.2690215
0.5%		5
0.0%	minimum	5

**Summary Statistics**

Mean	33.146028
Std Dev	15.433998
Std Err Mean	2.182697
Upper 95% Mean	37.532322
Lower 95% Mean	28.759734
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	33.146028	28.759734	37.532322
Dispersion	$\sigma$	15.433998	12.892544	19.23282

-2log(Likelihood) = 414.551128880813

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.951031	0.0376*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB184**

**RESULT\_STATS**

Normal(5.64823,1.66515)

**Quantiles**

100.0%	maximum	8
99.5%		8
97.5%		8
90.0%		8
75.0%	quartile	7.04054
50.0%	median	5.97826
25.0%	quartile	4.090905
10.0%		3.63636
2.5%		3.63636
0.5%		3.63636
0.0%	minimum	3.63636

**Summary Statistics**

Mean	5.64823
Std Dev	1.6651461
Std Err Mean	0.744676
Upper 95% Mean	7.7157819
Lower 95% Mean	3.5806781
N	5

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	5.64823	3.5806781	7.7157819
Dispersion	$\sigma$	1.6651461	0.9976442	4.7848899

-2log(Likelihood) = 18.2885137998761

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.964642	0.8399

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB187**

**RESULT\_STATS**

Normal(83.6977,30.3363)

**Quantiles**

100.0%	maximum	176.364
99.5%		176.364
97.5%		175.689975
90.0%		119.1897
75.0%	quartile	97.8788
50.0%	median	77.7187
25.0%	quartile	63.4762
10.0%		56.15
2.5%		30.35722
0.5%		29.0909
0.0%	minimum	29.0909

**Summary Statistics**

Mean	83.697688
Std Dev	30.336332
Std Err Mean	4.2902053
Upper 95% Mean	92.319178
Lower 95% Mean	75.076198
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	83.697688	75.076198	92.319178
Dispersion	$\sigma$	30.336332	25.34097	37.803116

-2log(Likelihood) = 482.128461653001

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.917694	0.0019*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB189**

**RESULT\_STATS**

Normal(3.99661,1.17496)

**Quantiles**

100.0%	maximum	6.08929
99.5%		6.08929
97.5%		6.08929
90.0%		5.442993
75.0%	quartile	5.1618375
50.0%	median	3.695525
25.0%	quartile	2.940625
10.0%		2.236365
2.5%		2.06667
0.5%		2.06667
0.0%	minimum	2.06667

**Summary Statistics**

Mean	3.9966105
Std Dev	1.1749551
Std Err Mean	0.262728
Upper 95% Mean	4.5465064
Lower 95% Mean	3.4467146
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3.9966105	3.4467146	4.5465064
Dispersion	$\sigma$	1.1749551	0.8935421	1.7161062

-2log(Likelihood) = 62.206740063595

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.955146	0.4520

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB194**

**RESULT\_STATS**

Normal(11.7852,17.2984)

**Quantiles**

100.0%	maximum	73.913
99.5%		73.913
97.5%		73.913
90.0%		35.91134
75.0%	quartile	10
50.0%	median	7.74648
25.0%	quartile	5.5
10.0%		4.6
2.5%		4
0.5%		4
0.0%	minimum	4

**Summary Statistics**

Mean	11.785171
Std Dev	17.298421
Std Err Mean	4.466433
Upper 95% Mean	21.364717
Lower 95% Mean	2.2056252
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	11.785171	2.2056252	21.364717
Dispersion	$\sigma$	17.298421	12.664634	27.281322

-2log(Likelihood) = 127.086612282107

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.388595	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB195**

**RESULT\_STATS**

Normal(8.07908,1.94607)

**Quantiles**

100.0%	maximum	10
99.5%		10
97.5%		10
90.0%		9.96
75.0%	quartile	9.573915
50.0%	median	8.908455
25.0%	quartile	6.74407
10.0%		4.472731
2.5%		4.36364
0.5%		4.36364
0.0%	minimum	4.36364

**Summary Statistics**

Mean	8.079076
Std Dev	1.9460703
Std Err Mean	0.6154015
Upper 95% Mean	9.4712108
Lower 95% Mean	6.6869412
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	8.079076	6.6869412	9.4712108
Dispersion	$\sigma$	1.9460703	1.3385757	3.5527658

-2log(Likelihood) = 40.6950130705447

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.859911	0.0761

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB200**

**RESULT\_STATS**

Normal(9.92303,2.67242)

**Quantiles**

100.0%	maximum	12.7273
99.5%		12.7273
97.5%		12.7273
90.0%		12.67196
75.0%	quartile	12.130025
50.0%	median	11.02255
25.0%	quartile	7.8680875
10.0%		5.218183
2.5%		5.09091
0.5%		5.09091
0.0%	minimum	5.09091

**Summary Statistics**

Mean	9.923033
Std Dev	2.6724245
Std Err Mean	0.8450948
Upper 95% Mean	11.83477
Lower 95% Mean	8.0112957
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	9.923033	8.0112957	11.83477
Dispersion	$\sigma$	2.6724245	1.8381876	4.8788053

-2log(Likelihood) = 47.0384926540744

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.879097	0.1274

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Distributions CHEM\_OUT=PCB201**

**RESULT\_STATS**

Normal(6.2224,1.66931)

**Quantiles**

100.0%	maximum	9.625
99.5%		9.625
97.5%		9.625
90.0%		8.620182
75.0%	quartile	7.7670425
50.0%	median	5.820235
25.0%	quartile	5.0921875
10.0%		4.376714
2.5%		3.26667
0.5%		3.26667
0.0%	minimum	3.26667

**Summary Statistics**

Mean	6.2224013
Std Dev	1.6693115
Std Err Mean	0.3047732
Upper 95% Mean	6.8457325
Lower 95% Mean	5.5990702
N	30

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	6.2224013	5.5990702	6.8457325
Dispersion	$\sigma$	1.6693115	1.3294513	2.2440808

-2log(Likelihood) = 114.880987923648

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.955847	0.2417

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB203**

**RESULT\_STATS**

Normal(9.88913,6.49026)

**Quantiles**

100.0%	maximum	31.9444
99.5%		31.9444
97.5%		31.9444
90.0%		19.32322
75.0%	quartile	10.3846
50.0%	median	9.6
25.0%	quartile	6.31579
10.0%		4.745456
2.5%		4.36364
0.5%		4.36364
0.0%	minimum	4.36364

**Summary Statistics**

Mean	9.8891253
Std Dev	6.4902613
Std Err Mean	1.6757783
Upper 95% Mean	13.483312
Lower 95% Mean	6.2949384
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	9.8891253	6.2949384	13.483312
Dispersion	$\sigma$	6.4902613	4.7516928	10.235785

-2log(Likelihood) = 97.6772396138437

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.603150	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB206**

**RESULT\_STATS**

Normal(16.0319,11.6848)

**Quantiles**

100.0%	maximum	55.7692
99.5%		55.7692
97.5%		55.6933
90.0%		31.33804
75.0%	quartile	16.5391
50.0%	median	12.1622
25.0%	quartile	10
10.0%		7.91667
2.5%		6.419694
0.5%		6.33333
0.0%	minimum	6.33333

**Summary Statistics**

Mean	16.031933
Std Dev	11.684814
Std Err Mean	1.7418692
Upper 95% Mean	19.54244
Lower 95% Mean	12.521426
N	45

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	16.031933	12.521426	19.54244
Dispersion	$\sigma$	11.684814	9.6733228	14.760253

-2log(Likelihood) = 347.95057133902

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.639879	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=PCB209**

**RESULT\_STATS**

Normal(17.9745,24.257)

**Quantiles**

100.0%	maximum	115.942
99.5%		115.942
97.5%		115.942
90.0%		36.81817
75.0%	quartile	17.2241
50.0%	median	10.06755
25.0%	quartile	8.4007125
10.0%		7.555442
2.5%		6.36364
0.5%		6.36364
0.0%	minimum	6.36364

**Summary Statistics**

Mean	17.974511
Std Dev	24.25698
Std Err Mean	5.4240256
Upper 95% Mean	29.327127
Lower 95% Mean	6.621895
N	20

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	17.974511	6.621895	29.327127
Dispersion	$\sigma$	24.25698	18.4472	35.429057

-2log(Likelihood) = 183.305717427213

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.453721	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Total Butyltins (ND = 0)**

**RESULT\_STATS**

Normal(0.365,0.05467)

**Quantiles**

100.0%	maximum	0.444
99.5%		0.444
97.5%		0.444
90.0%		0.4428
75.0%	quartile	0.41325
50.0%	median	0.365
25.0%	quartile	0.317
10.0%		0.2888
2.5%		0.288
0.5%		0.288
0.0%	minimum	0.288

**Summary Statistics**

Mean	0.365
Std Dev	0.0546707
Std Err Mean	0.0172884
Upper 95% Mean	0.4041091
Lower 95% Mean	0.3258909
N	10

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.365	0.3258909	0.4041091
Dispersion	$\sigma$	0.0546707	0.0376045	0.0998074

-2log(Likelihood) = -30.7497650330122

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.953662	0.7119

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Total DDTs (ND = 0)**

**RESULT\_STATS**

Normal(3030.57,1712.17)

**Quantiles**

100.0%	maximum	8559.32
99.5%		8559.32
97.5%		7504.132
90.0%		5371.366
75.0%	quartile	4068.49
50.0%	median	2733.33
25.0%	quartile	1800
10.0%		951.3952
2.5%		139.54134
0.5%		89.0909
0.0%	minimum	89.0909

**Summary Statistics**

Mean	3030.5712
Std Dev	1712.1697
Std Err Mean	230.86891
Upper 95% Mean	3493.4355
Lower 95% Mean	2567.7069
N	55

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	3030.5712	2567.7069	3493.4355
Dispersion	$\sigma$	1712.1697	1441.4144	2109.1235

-2log(Likelihood) = 974.090071290402

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.968816	0.1628

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Total PCB Congeners (ND = 0)**

**RESULT\_STATS**

Normal(1432.66,1025.91)

**Quantiles**

100.0%	maximum	4723.64
99.5%		4723.64
97.5%		4680.0745
90.0%		3232.895
75.0%	quartile	1598.7775
50.0%	median	1166.665
25.0%	quartile	859.1115
10.0%		436.4003
2.5%		166.8428
0.5%		159.783
0.0%	minimum	159.783

**Summary Statistics**

Mean	1432.6551
Std Dev	1025.9116
Std Err Mean	145.0858
Upper 95% Mean	1724.216
Lower 95% Mean	1141.0943
N	50

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	1432.6551	1141.0943	1724.216
Dispersion	$\sigma$	1025.9116	856.97881	1278.4226

-2log(Likelihood) = 834.227534999648

**Goodness-of-Fit Test**

Shapiro-Wilk W Test

W	Prob<W
0.790722	<.0001*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.

**Distributions CHEM\_OUT=Mercury**

**RESULT\_STATS**

Normal(0.01819,0.00771)

**Quantiles**

100.0%	maximum	0.0259
99.5%		0.0259
97.5%		0.0259
90.0%		0.0256
75.0%	quartile	0.0239
50.0%	median	0.0218
25.0%	quartile	0.00924
10.0%		0.005844
2.5%		0.00519
0.5%		0.00519
0.0%	minimum	0.00519

**Summary Statistics**

Mean	0.0181887
Std Dev	0.0077052
Std Err Mean	0.0019895
Upper 95% Mean	0.0224557
Lower 95% Mean	0.0139217
N	15

**Fitted Normal**

**Parameter Estimates**

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	0.0181887	0.0139217	0.0224557
Dispersion	$\sigma$	0.0077052	0.0056412	0.0121519

**Measure**

-2*LogLikelihood	-104.4076
AICc	-99.40758
BIC	-98.99148

**Goodness-of-Fit Test**

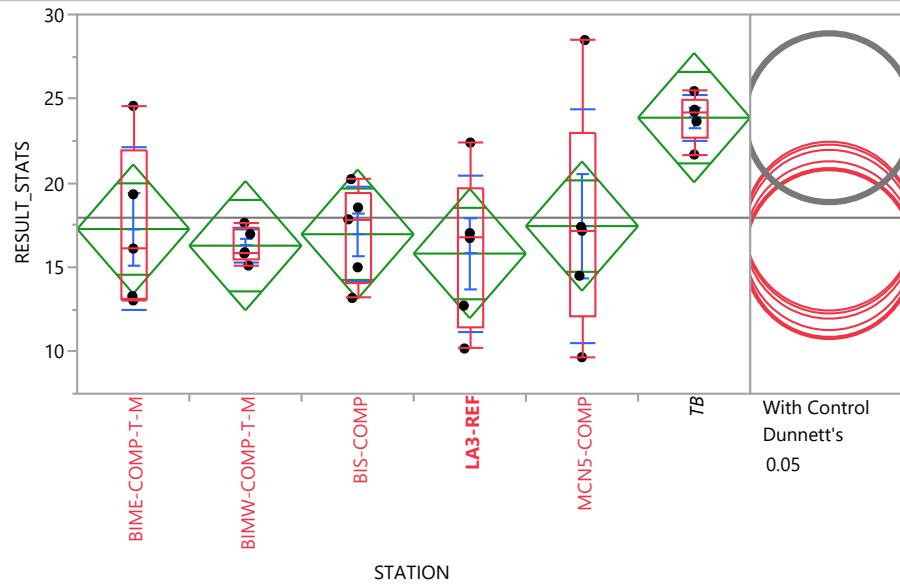
Shapiro-Wilk W Test

W	Prob<W
0.813501	0.0055*

Note: Ho = The data is from the Normal distribution. Small p-values reject Ho.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDD**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	13.0337	13.0337	13.1627	16.1111	21.9548	24.5763	24.5763
BIMW-COMP-T-M	15.1042	15.1042	15.4612	15.8904	17.3016	17.6351	17.6351
BIS-COMP	13.1818	13.1818	14.0909	17.8462	19.38955	20.2326	20.2326
LA3-REF	10.1818	10.1818	11.45455	16.7391	19.7135	22.4	22.4
MCN5-COMP	9.66667	9.66667	12.08334	17.1711	22.94105	28.4821	28.4821
TB	21.6901	21.6901	22.67605	24.2308	24.90115	25.4545	25.4545

**Oneway Anova**

**Summary of Fit**

Rsquare	0.347495
Adj Rsquare	0.211557
Root Mean Square Error	4.156458
Mean of Response	17.94165
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	5	220.81238	44.1625	2.5563	0.0544
Error	24	414.62740	17.2761		
C. Total	29	635.43978			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDD**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	17.2692	1.8588	13.433	21.106
BIMW-COMP-T-M	5	16.2832	1.8588	12.447	20.120
BIS-COMP	5	16.9614	1.8588	13.125	20.798
LA3-REF	5	15.8150	1.8588	11.979	19.651
MCN5-COMP	5	17.4440	1.8588	13.608	21.280
TB	5	23.8770	1.8588	20.041	27.713

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	17.2692	4.81548	2.1535	11.290	23.248
BIMW-COMP-T-M	5	16.2832	1.00713	0.4504	15.033	17.534
BIS-COMP	5	16.9614	2.83411	1.2675	13.442	20.480
LA3-REF	5	15.8150	4.66240	2.0851	10.026	21.604
MCN5-COMP	5	17.4440	6.91140	3.0909	8.862	26.026
TB	5	23.8770	1.38420	0.6190	22.158	25.596

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.977	0.0219*
MCN5-COMP	-5.46	0.9560
BIME-COMP-T-M	-5.63	0.9721
BIS-COMP	-5.94	0.9899
BIMW-COMP-T-M	-6.62	0.9999
LA3-REF	-7.09	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDD**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

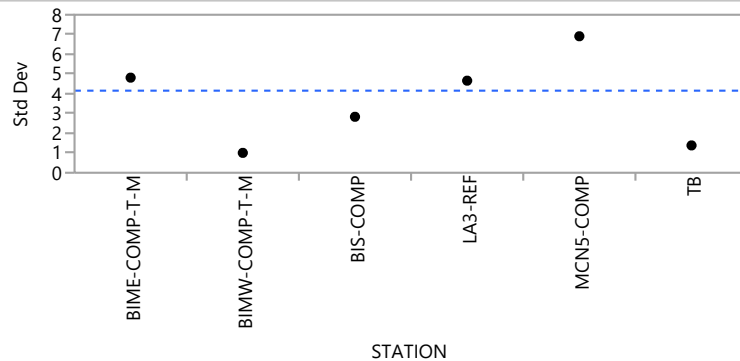
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	71.000	77.500	14.2000	-0.334
BIMW-COMP-T-M	5	62.000	77.500	12.4000	-0.835
BIS-COMP	5	74.000	77.500	14.8000	-0.167
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN5-COMP	5	71.000	77.500	14.2000	-0.334
TB	5	130.000	77.500	26.0000	2.894

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
9.0671	5	0.1064

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	4.815480	3.748464	3.516840
BIMW-COMP-T-M	5	1.007134	0.814720	0.736160
BIS-COMP	5	2.834106	2.296416	2.119460
LA3-REF	5	4.662402	3.488392	3.303580
MCN5-COMP	5	6.911405	4.415250	4.343086
TB	5	1.384205	0.960792	0.890040

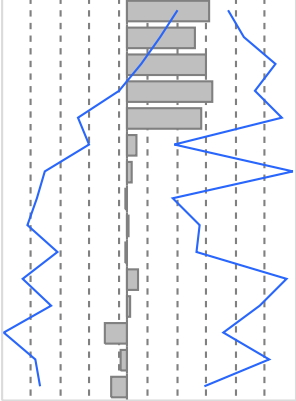
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2120	5	24	0.3337
Brown-Forsythe	1.3694	5	24	0.2706
Levene	1.7977	5	24	0.1514
Bartlett	3.1053	5	.	0.0083*

Warning: Small sample sizes. Use Caution.

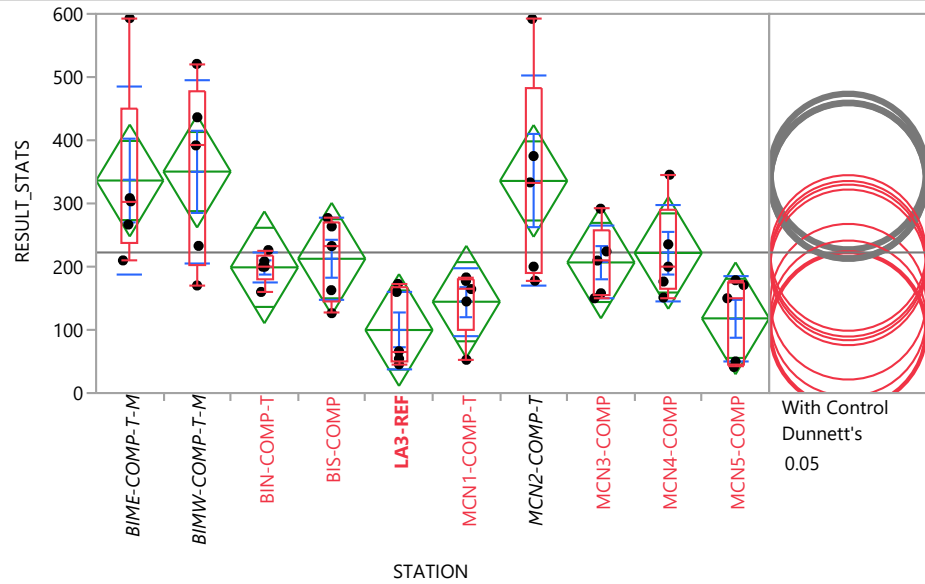
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDD**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha					
		1.95996	0.05					
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	7.81940	4.7220	9.63630
TB	BIS-COMP	4.80000	1.914854	2.50672	0.0122*	6.50160	3.1436	11.16600
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	7.60870	1.2620	14.16600
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	8.11970	-0.9143	12.16280
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	7.17670	-4.8201	14.68113
BIS-COMP	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.91140	-3.7863	4.41440
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.43200	-7.9000	15.75480
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.22070	-8.7581	4.34340
BIS-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.14810	-9.5763	6.94090
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.22900	-6.7863	6.58180
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	1.06000	-10.0763	15.19040
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.20300	-7.3014	12.66390
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-2.17630	-11.8490	9.10830
MCN5-COMP	BIS-COMP	-0.80000	1.914854	-0.41779	0.6761	-0.67510	-8.8798	13.48210
LA3-REF	BIS-COMP	-1.20000	1.914854	-0.62668	0.5309	-1.51950	-8.3647	7.40000



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDE**



With Control  
Dunnett's  
0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDE**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	209.877	209.877	238.272	303.371	450.7765	593.22	593.22
BIMW-COMP-T-M	170.213	170.213	201.545	391.892	478.5985	520.833	520.833
BIN-COMP-T	160	160	180	200	217.2615	226.19	226.19
BIS-COMP	126.437	126.437	144.614	232.558	270.2795	276.923	276.923
LA3-REF	45.4545	45.4545	49.90115	66.2162	166.3635	172.727	172.727
MCN1-COMP-T	52.6882	52.6882	98.8081	164.557	180.173	182.927	182.927
MCN2-COMP-T	177.778	177.778	188.889	333.333	483.5525	592.105	592.105
MCN3-COMP	150	150	153.9475	209.677	257.9025	291.667	291.667
MCN4-COMP	151.163	151.163	163.817	200	290.3745	345.455	345.455
MCN5-COMP	41.25	41.25	45.625	150	174.812	178.571	178.571

**Oneway Anova**

**Summary of Fit**

Rsquare	0.494399
Adj Rsquare	0.380638
Root Mean Square Error	97.95544
Mean of Response	222.4526
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	9	375306.53	41700.7	4.3460	0.0005*
Error	40	383810.75	9595.3		
C. Total	49	759117.28			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	336.294	43.807	247.76	424.83
BIMW-COMP-T-M	5	350.436	43.807	261.90	438.97
BIN-COMP-T	5	198.905	43.807	110.37	287.44
BIS-COMP	5	212.469	43.807	123.93	301.01
LA3-REF	5	99.749	43.807	11.21	188.29
MCN1-COMP-T	5	144.504	43.807	55.97	233.04
MCN2-COMP-T	5	335.643	43.807	247.11	424.18
MCN3-COMP	5	206.675	43.807	118.14	295.21
MCN4-COMP	5	221.677	43.807	133.14	310.21
MCN5-COMP	5	118.175	43.807	29.64	206.71

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDE**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	336.294	148.918	66.598	151.39	521.20
BIMW-COMP-T-M	5	350.436	145.291	64.976	170.03	530.84
BIN-COMP-T	5	198.905	24.235	10.838	168.81	229.00
BIS-COMP	5	212.469	65.279	29.194	131.41	293.52
LA3-REF	5	99.749	61.420	27.468	23.49	176.01
MCN1-COMP-T	5	144.504	53.367	23.866	78.24	210.77
MCN2-COMP-T	5	335.643	166.319	74.380	129.13	542.15
MCN3-COMP	5	206.675	57.291	25.621	135.54	277.81
MCN4-COMP	5	221.677	75.816	33.906	127.54	315.81
MCN5-COMP	5	118.175	67.123	30.018	34.83	201.52

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
BIMW-COMP-T-M	76.49	0.0018*
BIME-COMP-T-M	62.35	0.0035*
MCN2-COMP-T	61.7	0.0036*
MCN4-COMP	-52.3	0.2866
BIS-COMP	-61.5	0.3672
MCN3-COMP	-67.3	0.4244
BIN-COMP-T	-75	0.5080
MCN1-COMP-T	-129	0.9842
MCN5-COMP	-156	1.0000
LA3-REF	-174	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	202.000	127.500	40.4000	2.394
BIMW-COMP-T-M	5	193.000	127.500	38.6000	2.103
BIN-COMP-T	5	128.500	127.500	25.7000	0.016
BIS-COMP	5	132.000	127.500	26.4000	0.129
LA3-REF	5	45.500	127.500	9.1000	-2.636
MCN1-COMP-T	5	73.000	127.500	14.6000	-1.747
MCN2-COMP-T	5	185.500	127.500	37.1000	1.860

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDE**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

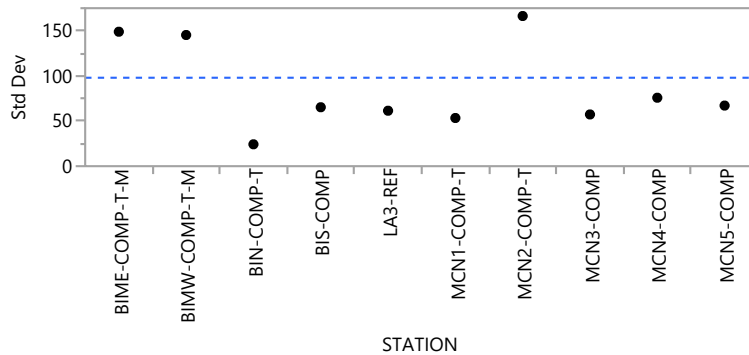
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
MCN3-COMP	5	123.500	127.500	24.7000	-0.113
MCN4-COMP	5	137.500	127.500	27.5000	0.307
MCN5-COMP	5	54.500	127.500	10.9000	-2.345

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
26.7119	9	0.0016*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	148.9177	102.7706	85.0018
BIMW-COMP-T-M	5	145.2909	119.1126	110.8214
BIN-COMP-T	5	24.2351	15.5618	14.9046
BIS-COMP	5	65.2789	54.2840	50.2662
LA3-REF	5	61.4198	53.2915	46.5849
MCN1-COMP-T	5	53.3670	36.7263	32.5460
MCN2-COMP-T	5	166.3186	118.3274	117.8654
MCN3-COMP	5	57.2913	42.1823	41.5820
MCN4-COMP	5	75.8158	54.9583	50.6230
MCN5-COMP	5	67.1228	58.0398	51.6748

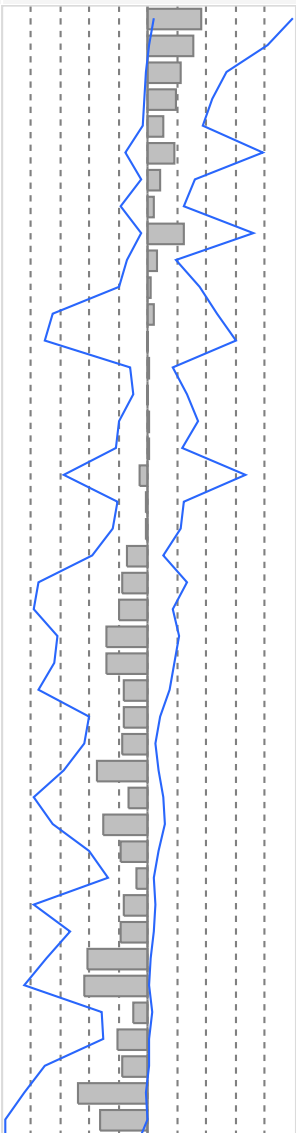
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.3395	9	40	0.2480
Brown-Forsythe	1.2264	9	40	0.3067
Levene	2.2477	9	40	0.0385*
Bartlett	2.2023	9	.	0.0191*

Warning: Small sample sizes. Use Caution.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDE**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha								
		1.95996	0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL			
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	202.273	17.778	537.757			
MCN2-COMP-T	MCN1-COMP-T	4.40000	1.914854	2.29783	0.0216*	168.776	0.359	447.177			
MCN4-COMP	LA3-REF	4.00000	1.914854	2.08893	0.0367*	122.123	-8.837	291.107			
MCN3-COMP	LA3-REF	3.20000	1.914854	1.67115	0.0947	104.546	-14.832	237.319			
MCN4-COMP	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	55.072	-26.256	200.527			
MCN2-COMP-T	BIS-COMP	2.40000	1.914854	1.25336	0.2101	98.077	-85.858	429.314			
MCN3-COMP	MCN1-COMP-T	2.40000	1.914854	1.25336	0.2101	46.719	-27.419	171.450			
MCN1-COMP-T	LA3-REF	2.00000	1.914854	1.04447	0.2963	22.927	-107.312	131.965			
MCN2-COMP-T	BIN-COMP-T	2.00000	1.891501	1.05736	0.2903	133.333	-30.555	392.105			
BIS-COMP	BIN-COMP-T	1.20000	1.909043	0.62859	0.5296	32.558	-81.896	103.636			
MCN4-COMP	MCN3-COMP	0.40000	1.914854	0.20889	0.8345	11.156	-115.196	187.560			
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	23.000	-360.343	254.166			
MCN2-COMP-T	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-1.115	-393.220	325.438			
MCN3-COMP	BIN-COMP-T	0.00000	1.909043	0.00000	1.0000	1.344	-68.295	91.667			
MCN4-COMP	BIN-COMP-T	0.00000	1.891501	0.00000	1.0000	0.000	-57.170	145.455			
MCN4-COMP	BIS-COMP	0.00000	1.914854	0.00000	1.0000	2.736	-112.473	182.664			
MCN5-COMP	LA3-REF	0.00000	1.914854	0.00000	1.0000	4.545	-122.727	125.599			
MCN2-COMP-T	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-32.877	-320.833	359.228			
MCN3-COMP	BIS-COMP	-0.40000	1.914854	-0.20889	0.8345	-8.420	-119.028	128.876			
MCN5-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-11.438	-136.169	118.365			
MCN1-COMP-T	BIS-COMP	-2.00000	1.914854	-1.04447	0.2963	-80.709	-210.948	50.982			
MCN4-COMP	MCN2-COMP-T	-2.20000	1.909043	-1.15241	0.2492	-98.039	-415.634	145.455			
MCN3-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-109.195	-434.210	91.667			
MCN4-COMP	BIMW-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-156.598	-344.362	112.578			
BIS-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-159.334	-358.042	93.423			
MCN4-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-90.196	-416.749	78.788			
MCN5-COMP	BIS-COMP	-2.80000	1.914854	-1.46225	0.1437	-92.583	-226.923	44.616			
MCN5-COMP	MCN3-COMP	-3.00000	1.909043	-1.57147	0.1161	-100.000	-241.667	21.053			
BIN-COMP-T	BIMW-COMP-T-M	-3.20000	1.909043	-1.67623	0.0937	-191.892	-320.833	38.120			
BIS-COMP	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-75.775	-430.429	53.759			
MCN3-COMP	BIMW-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-167.754	-362.938	58.790			
LA3-REF	BIS-COMP	-3.60000	1.914854	-1.88004	0.0601	-104.196	-222.575	33.563			
MCN1-COMP-T	BIN-COMP-T	-3.60000	1.909043	-1.88576	0.0593	-43.263	-155.645	17.419			
MCN3-COMP	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-93.694	-435.325	25.000			
MCN5-COMP	MCN4-COMP	-3.60000	1.914854	-1.88004	0.0601	-101.163	-295.455	19.890			
MCN1-COMP-T	BIMW-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-227.335	-383.676	7.206			
MCN5-COMP	BIMW-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-241.892	-470.833	0.840			
MCN5-COMP	BIN-COMP-T	-4.00000	1.909043	-2.09529	0.0361*	-55.137	-176.190	11.053			
LA3-REF	BIN-COMP-T	-4.20000	1.903214	-2.20679	0.0273*	-114.546	-171.842	0.000			
BIN-COMP-T	BIME-COMP-T-M	-4.40000	1.909043	-2.30482	0.0212*	-100.000	-393.220	-1.544			
LA3-REF	BIMW-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-263.637	-466.485	-10.213			
MCN5-COMP	MCN2-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-183.333	-542.105	-6.725			



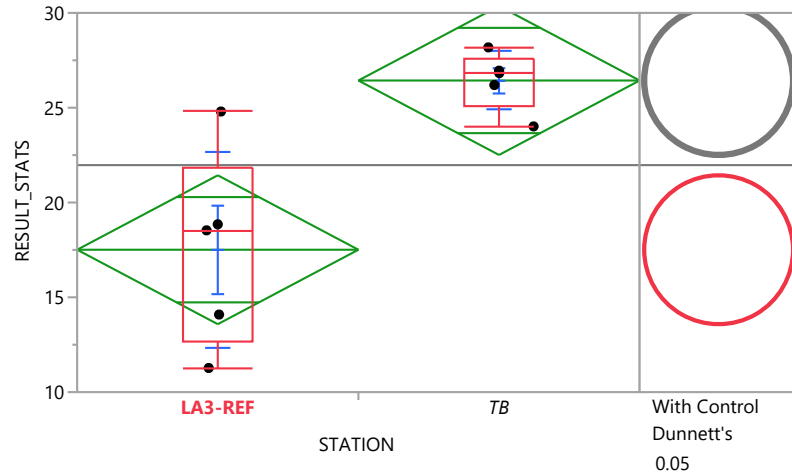


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDE**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-212.319	-538.872	-49.877
MCN1-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-138.814	-448.292	-32.458
MCN5-COMP	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-159.877	-543.220	-38.824

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDT**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	11.2727	11.2727	12.6818	18.5326	21.8257	24.8	24.8
TB	24.0141	24.0141	25.10565	26.8269	27.56915	28.1818	28.1818

**Oneway Anova**

**Summary of Fit**

Rsquare	0.631994
Adj Rsquare	0.585994
Root Mean Square Error	3.807517
Mean of Response	21.97241
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

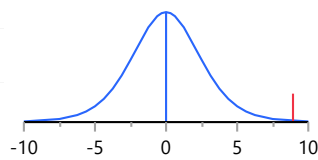
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDT**

**Oneway Anova**

**t Test**

Assuming equal variances

Difference	8.9258	t Ratio	3.706588
Std Err Dif	2.4081	DF	8
Upper CL Dif	14.4788	Prob >  t	0.0060*
Lower CL Dif	3.3727	Prob > t	0.0030*
Confidence	0.95	Prob < t	0.9970



**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	1	199.17387	199.174	13.7388	0.0060*
Error	8	115.97748	14.497		
C. Total	9	315.15135			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	17.5095	1.7028	13.583	21.436
TB	5	26.4353	1.7028	22.509	30.362

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

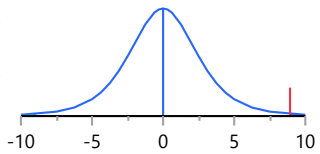
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	17.5095	5.16196	2.3085	11.100	23.919
TB	5	26.4353	1.53249	0.6854	24.532	28.338

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	8.9258	t Ratio	3.706588
Std Err Dif	2.4081	DF	4.699678
Upper CL Dif	15.2369	Prob >  t	0.0155*
Lower CL Dif	2.6147	Prob > t	0.0078*
Confidence	0.95	Prob < t	0.9922



**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDT**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	3.373	0.0060*
LA3-REF	-5.55	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	16.000	27.500	3.20000	-2.298
TB	5	39.000	27.500	7.80000	2.298

**2-Sample Test, Normal Approximation**

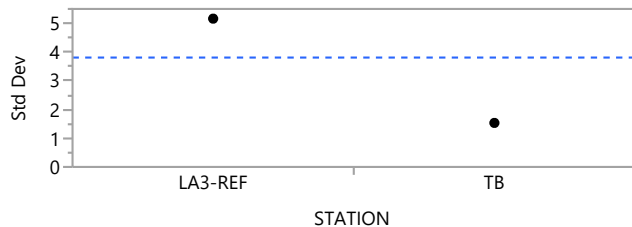
S	Z	Prob> Z
39	2.29783	0.0216*

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.7709	1	0.0163*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
LA3-REF	5	5.161960	3.862176	3.657560
TB	5	1.532495	1.063720	0.985400

Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.4861	1	8	0.1535
Brown-Forsythe	2.8429	1	8	0.1303
Levene	4.3827	1	8	0.0696
Bartlett	4.3075	1	.	0.0379*
F Test 2-sided	11.3457	4	4	0.0372*

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=2,4'-DDT**

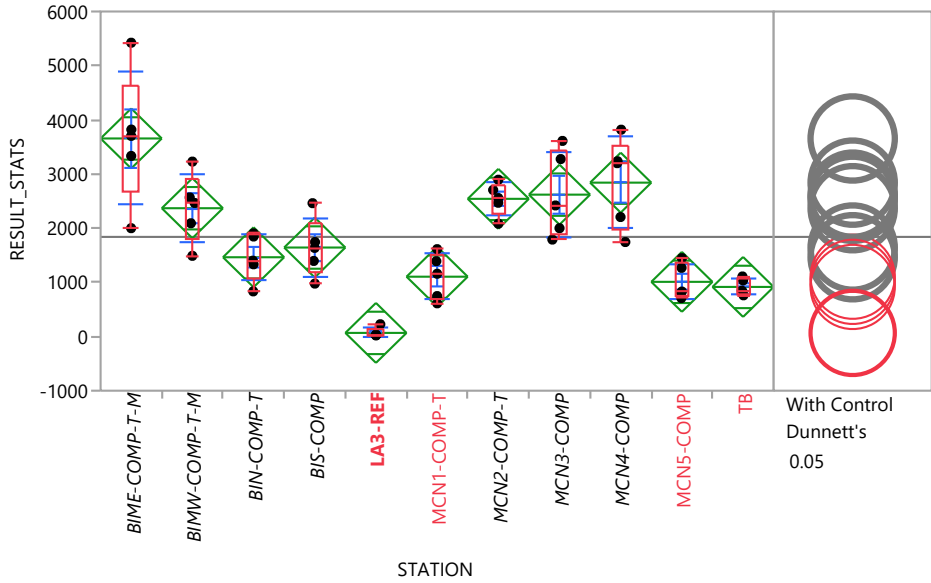
**Tests that the Variances are Equal**

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

<b>q*</b>		<b>Alpha</b>							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	8.423900	1.397200	15.68380	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDD**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2000	2000	2666.665	3703.7	4621.975	5423.73	5423.73
BIMW-COMP-T-M	1489.36	1489.36	1790.135	2465.75	2898.37	3229.17	3229.17
BIN-COMP-T	833.333	833.333	1083.332	1400	1875.455	1904.76	1904.76
BIS-COMP	977.011	977.011	1186.181	1636.36	2102.865	2461.54	2461.54
LA3-REF	22.7273	22.7273	22.95455	27.7174	130.2254	226.667	226.667
MCN1-COMP-T	612.903	612.903	679.869	1158.54	1502.1	1612.9	1612.9
MCN2-COMP-T	2083.33	2083.33	2276.235	2555.56	2800.31	2894.74	2894.74
MCN3-COMP	1789.47	1789.47	1894.735	2419.35	3443.485	3611.11	3611.11
MCN4-COMP	1744.19	1744.19	1975.035	3200	3526.735	3818.18	3818.18
MCN5-COMP	710	710	750.8335	830	1357.615	1447.37	1447.37
TB	760.563	760.563	793.743	845.07	1072.53	1108.7	1108.7

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDD**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.769739
Adj Rsquare	0.717407
Root Mean Square Error	613.9703
Mean of Response	1838.997
Observations (or Sum Wgts)	55

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	10	55445922	5544592	14.7087	<.0001*
Error	44	16586219	376960		
C. Total	54	72032140			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3656.20	274.58	3103	4209.6
BIMW-COMP-T-M	5	2368.55	274.58	1815	2921.9
BIN-COMP-T	5	1463.51	274.58	910	2016.9
BIS-COMP	5	1642.89	274.58	1090	2196.3
LA3-REF	5	66.82	274.58	-487	620.2
MCN1-COMP-T	5	1104.50	274.58	551	1657.9
MCN2-COMP-T	5	2541.73	274.58	1988	3095.1
MCN3-COMP	5	2619.16	274.58	2066	3172.5
MCN4-COMP	5	2840.71	274.58	2287	3394.1
MCN5-COMP	5	1009.38	274.58	456	1562.8
TB	5	915.52	274.58	362	1468.9

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3656.20	1224.80	547.75	2135	5177.0
BIMW-COMP-T-M	5	2368.55	640.27	286.34	1574	3163.6
BIN-COMP-T	5	1463.51	435.67	194.84	923	2004.5
BIS-COMP	5	1642.89	544.33	243.43	967	2318.8
LA3-REF	5	66.82	89.47	40.01	-44	177.9
MCN1-COMP-T	5	1104.50	422.27	188.84	580	1628.8
MCN2-COMP-T	5	2541.73	302.97	135.49	2166	2917.9
MCN3-COMP	5	2619.16	794.81	355.45	1632	3606.0
MCN4-COMP	5	2840.71	843.44	377.20	1793	3888.0
MCN5-COMP	5	1009.38	327.05	146.26	603	1415.5
TB	5	915.52	148.95	66.61	731	1100.5

**Means Comparisons**

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDD**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.83292	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
BIME-COMP-T-M	2489	<.0001*
MCN4-COMP	1674	<.0001*
MCN3-COMP	1452	<.0001*
MCN2-COMP-T	1375	<.0001*
BIMW-COMP-T-M	1202	<.0001*
BIS-COMP	476	0.0017*
BIN-COMP-T	296.6	0.0067*
MCN1-COMP-T	-62.4	0.0729
MCN5-COMP	-157	0.1251
TB	-251	0.2037
LA3-REF	-1100	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	244.500	140.000	48.9000	3.045
BIMW-COMP-T-M	5	191.000	140.000	38.2000	1.479
BIN-COMP-T	5	119.000	140.000	23.8000	-0.600
BIS-COMP	5	131.500	140.000	26.3000	-0.234
LA3-REF	5	15.000	140.000	3.0000	-3.645
MCN1-COMP-T	5	79.000	140.000	15.8000	-1.771
MCN2-COMP-T	5	207.000	140.000	41.4000	1.947
MCN3-COMP	5	201.500	140.000	40.3000	1.786
MCN4-COMP	5	212.500	140.000	42.5000	2.108
MCN5-COMP	5	72.000	140.000	14.4000	-1.976
TB	5	67.000	140.000	13.4000	-2.123

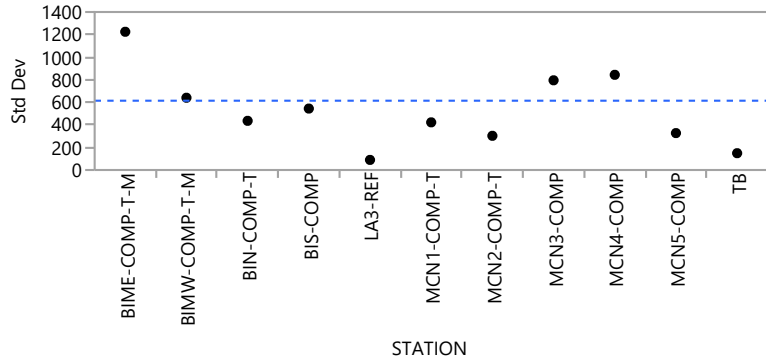
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
44.3105	10	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDD**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1224.802	791.6248	782.1240
BIMW-COMP-T-M	5	640.270	462.7336	443.2940
BIN-COMP-T	5	435.666	329.5523	316.8494
BIS-COMP	5	544.326	367.9798	366.6738
LA3-REF	5	89.471	63.9406	42.9083
MCN1-COMP-T	5	422.267	339.7013	328.8924
MCN2-COMP-T	5	302.966	212.3960	209.6300
MCN3-COMP	5	794.809	659.4616	619.5000
MCN4-COMP	5	843.445	692.5384	620.6800
MCN5-COMP	5	327.052	278.5885	242.7126
TB	5	148.951	125.6054	111.5148

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.5749	10	44	0.1462
Brown-Forsythe	1.5204	10	44	0.1644
Levene	2.3141	10	44	0.0275*
Bartlett	3.0859	10	.	0.0006*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha		Score Mean		Hodges-Lehmann		Lower CL		Upper CL	
Level	- Level	Difference	Std Err Dif	Z	p-Value	Lehmann	Lower CL	Upper CL			
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1130.82	520.17	1589.72			
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	1069.14	237.18	1872.55			
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	2521.78	2049.55	2871.56			
MCN2-COMP-T	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	1397.02	692.03	2147.91			
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	2391.63	1755.69	3587.93			
MCN3-COMP	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	1387.10	387.10	2864.28			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDD**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	3166.22	1710.41	3795.00	
MCN4-COMP	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	1808.70	352.89	3071.35	
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	802.28	565.00	1424.19	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	811.29	600.26	1085.52	
MCN2-COMP-T	BIS-COMP	4.40000	1.914854	2.29783	0.0216*	961.69	7.60	1728.87	
MCN3-COMP	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	1086.02	-56.68	2442.53	
MCN4-COMP	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	1372.55	-101.96	2484.85	
MCN4-COMP	BIS-COMP	3.80000	1.909043	1.99053	0.0465*	1356.64	-255.66	2422.83	
MCN3-COMP	BIS-COMP	3.60000	1.914854	1.88004	0.0601	814.32	-461.54	2298.85	
MCN4-COMP	BIMW-COMP-T-M	1.60000	1.914854	0.83557	0.4034	632.43	-1023.29	1745.93	
MCN4-COMP	MCN2-COMP-T	1.20000	1.914854	0.62668	0.5309	494.12	-961.69	1349.04	
MCN2-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	138.31	-760.03	1216.52	
BIS-COMP	BIN-COMP-T	0.40000	1.914854	0.20889	0.8345	143.68	-869.14	1128.21	
MCN3-COMP	BIMW-COMP-T-M	0.40000	1.914854	0.20889	0.8345	300.11	-1229.17	1786.50	
MCN4-COMP	MCN3-COMP	0.00000	1.914854	0.00000	1.0000	205.88	-1531.67	1818.18	
MCN5-COMP	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	-36.84	-821.23	700.54	
TB	MCN5-COMP	0.00000	1.914854	0.00000	1.0000	-3.08	-620.45	326.36	
MCN3-COMP	MCN2-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-83.33	-916.41	1192.53	
TB	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-282.60	-785.98	423.46	
MCN1-COMP-T	BIN-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-291.86	-1233.25	557.97	
MCN4-COMP	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-584.93	-3217.85	1235.29	
MCN2-COMP-T	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-1114.34	-2954.59	705.88	
MCN3-COMP	BIME-COMP-T-M	-3.00000	1.909043	-1.57147	0.1161	-1284.35	-3423.73	1275.86	
BIMW-COMP-T-M	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-1242.42	-3332.82	567.57	
BIS-COMP	BIMW-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-767.63	-1833.82	370.63	
MCN1-COMP-T	BIS-COMP	-3.20000	1.914854	-1.67115	0.0947	-477.82	-1714.71	414.29	
MCN5-COMP	BIN-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-541.66	-1136.15	434.53	
MCN5-COMP	BIS-COMP	-3.60000	1.914854	-1.88004	0.0601	-603.68	-1669.87	290.85	
TB	BIN-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-572.77	-1085.59	203.03	
BIN-COMP-T	BIMW-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-757.58	-1895.84	356.79	
TB	BIS-COMP	-4.00000	1.914854	-2.08893	0.0367*	-635.49	-1634.62	59.35	
BIS-COMP	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-2067.34	-4028.38	-255.81	
MCN1-COMP-T	BIMW-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-1307.21	-2482.34	-98.06	
BIN-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2000.00	-4090.40	-153.85	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-3669.92	-5400.55	-1966.22	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2431.97	-3205.99	-1455.58	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-1372.28	-1881.58	-799.55	
LA3-REF	BIS-COMP	-4.80000	1.914854	-2.50672	0.0122*	-1602.58	-2438.36	-943.23	
MCN1-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2545.16	-4676.90	-608.70	
MCN5-COMP	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2552.36	-4632.06	-732.14	
MCN5-COMP	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-1299.71	-2437.50	-221.50	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-1626.88	-2103.07	-815.47	
MCN5-COMP	MCN3-COMP	-4.80000	1.914854	-2.50672	0.0122*	-1589.35	-2819.44	-521.61	
MCN5-COMP	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-1932.14	-3026.51	-476.33	

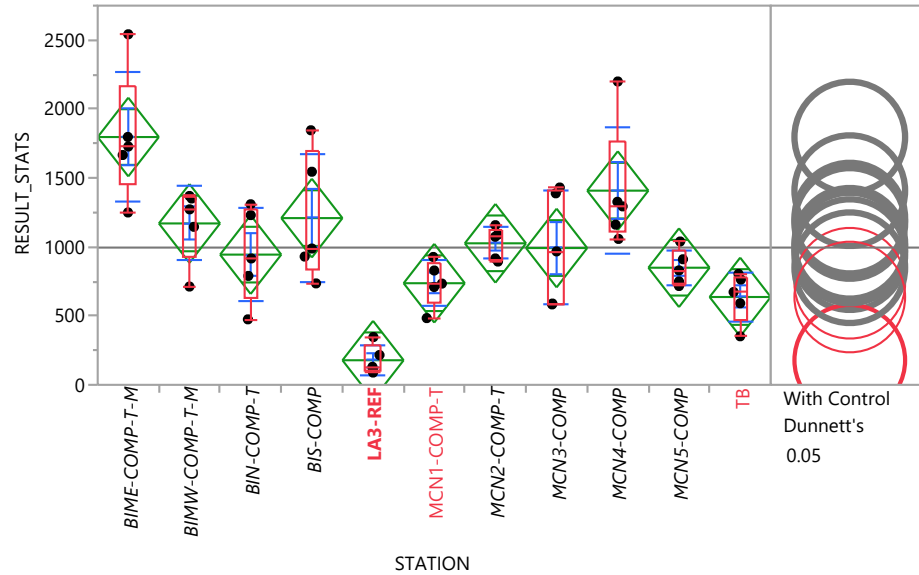


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDD**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2711.52	-4596.81	-963.64
TB	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-1458.87	-2402.25	-453.00
TB	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-1669.52	-2067.82	-1046.97
TB	MCN3-COMP	-4.80000	1.914854	-2.50672	0.0122*	-1574.28	-2784.19	-753.11
TB	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-2163.64	-2991.26	-707.83

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDE**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	1250	1250	1458.335	1728.4	2170.06	2542.37	2542.37
BIMW-COMP-T-M	712.766	712.766	929.298	1272.73	1360.605	1369.86	1369.86
BIN-COMP-T	475	475	632.5	916.667	1270.145	1309.52	1309.52
BIS-COMP	735.632	735.632	832.9325	988.372	1695.8	1846.15	1846.15
LA3-REF	89.0909	89.0909	99.09095	130.435	281.4415	346.667	346.667
MCN1-COMP-T	483.871	483.871	596.774	734.177	878.402	927.536	927.536
MCN2-COMP-T	894.118	894.118	905.3925	1074.07	1123.39	1157.89	1157.89
MCN3-COMP	583.333	583.333	586.4035	967.742	1409.96	1431.03	1431.03
MCN4-COMP	1058.14	1058.14	1109.95	1294.12	1763.635	2200	2200
MCN5-COMP	716.667	716.667	733.3335	830	975.092	1039.47	1039.47
TB	352.113	352.113	471.831	673.077	783.992	804.348	804.348

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDE**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.668188
Adj Rsquare	0.592776
Root Mean Square Error	316.6904
Mean of Response	995.3912
Observations (or Sum Wgts)	55

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	10	8886451	888645	8.8605	<.0001*
Error	44	4412885	100293		
C. Total	54	13299336			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	1797.04	141.63	1512	2082.5
BIMW-COMP-T-M	5	1170.51	141.63	885	1455.9
BIN-COMP-T	5	944.39	141.63	659	1229.8
BIS-COMP	5	1209.17	141.63	924	1494.6
LA3-REF	5	178.30	141.63	-107	463.7
MCN1-COMP-T	5	736.91	141.63	451	1022.3
MCN2-COMP-T	5	1026.33	141.63	741	1311.8
MCN3-COMP	5	992.09	141.63	707	1277.5
MCN4-COMP	5	1408.26	141.63	1123	1693.7
MCN5-COMP	5	849.37	141.63	564	1134.8
TB	5	636.94	141.63	352	922.4

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	1797.04	468.102	209.34	1215.8	2378.3
BIMW-COMP-T-M	5	1170.51	270.662	121.04	834.4	1506.6
BIN-COMP-T	5	944.39	339.214	151.70	523.2	1365.6
BIS-COMP	5	1209.17	466.268	208.52	630.2	1788.1
LA3-REF	5	178.30	105.859	47.34	46.9	309.7
MCN1-COMP-T	5	736.91	165.564	74.04	531.3	942.5
MCN2-COMP-T	5	1026.33	115.116	51.48	883.4	1169.3
MCN3-COMP	5	992.09	412.278	184.38	480.2	1504.0
MCN4-COMP	5	1408.26	455.463	203.69	842.7	1973.8
MCN5-COMP	5	849.37	130.155	58.21	687.8	1011.0
TB	5	636.94	179.283	80.18	414.3	859.6

**Means Comparisons**

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDE**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.83292	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
BIME-COMP-T-M	1051	<.0001*
MCN4-COMP	662.5	<.0001*
BIS-COMP	463.5	<.0001*
BIMW-COMP-T-M	424.8	0.0001*
MCN2-COMP-T	280.6	0.0010*
MCN3-COMP	246.4	0.0017*
BIN-COMP-T	198.7	0.0035*
MCN5-COMP	103.7	0.0133*
MCN1-COMP-T	-8.81	0.0555
TB	-109	0.1660
LA3-REF	-567	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	248.000	140.000	49.6000	3.147
BIMW-COMP-T-M	5	182.000	140.000	36.4000	1.215
BIN-COMP-T	5	135.500	140.000	27.1000	-0.117
BIS-COMP	5	179.000	140.000	35.8000	1.127
LA3-REF	5	15.000	140.000	3.0000	-3.645
MCN1-COMP-T	5	87.000	140.000	17.4000	-1.537
MCN2-COMP-T	5	156.500	140.000	31.3000	0.468
MCN3-COMP	5	144.000	140.000	28.8000	0.102
MCN4-COMP	5	211.000	140.000	42.2000	2.064
MCN5-COMP	5	113.000	140.000	22.6000	-0.776
TB	5	69.000	140.000	13.8000	-2.064

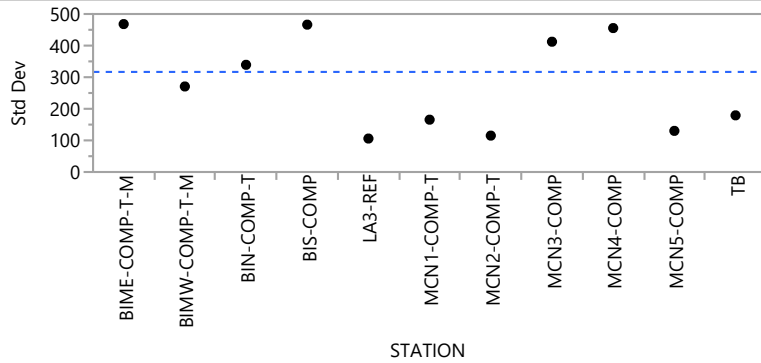
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
34.6785	10	0.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDE**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	468.1020	298.4176	284.6900
BIMW-COMP-T-M	5	270.6617	192.9674	172.5228
BIN-COMP-T	5	339.2143	260.6029	255.0580
BIS-COMP	5	466.2681	389.3061	345.1470
LA3-REF	5	105.8587	82.5132	72.9402
MCN1-COMP-T	5	165.5643	113.1970	112.6512
MCN2-COMP-T	5	115.1161	96.7476	87.1990
MCN3-COMP	5	412.2782	334.2930	329.4226
MCN4-COMP	5	455.4629	316.6968	261.4740
MCN5-COMP	5	130.1545	100.5774	96.7034
TB	5	179.2833	132.0909	124.8644

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.1505	10	44	0.3489
Brown-Forsythe	1.0396	10	44	0.4276
Levene	2.0693	10	44	0.0483*
Bartlett	2.1253	10	.	0.0194*

Warning: Small sample sizes. Use Caution.

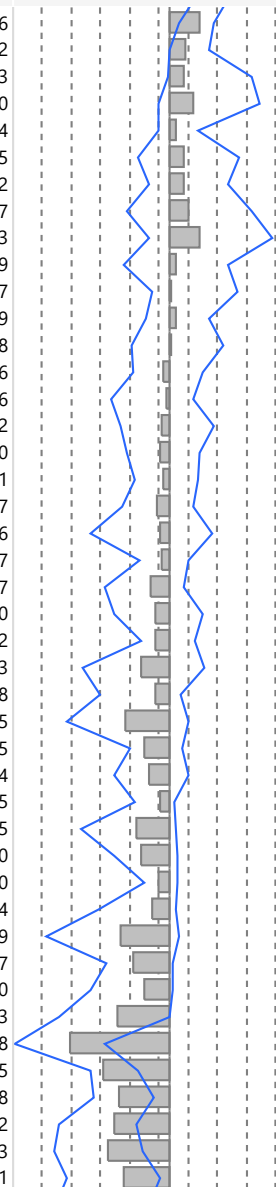
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha						
		1.95996	0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	600.59	267.66	818.45	
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	827.58	570.00	1048.80	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	837.31	242.81	1321.94	
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1077.90	815.09	2090.91	
MCN4-COMP	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	559.94	228.87	1490.32	
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	660.91	403.33	930.38	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDE**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	482.46	135.90	695.26	
MCN2-COMP-T	MCN1-COMP-T	4.00000	1.914854	2.08893	0.0367*	259.62	-10.87	605.02	
MCN4-COMP	MCN2-COMP-T	3.60000	1.914854	1.88004	0.0601	238.38	-30.75	1283.33	
MCN4-COMP	BIN-COMP-T	2.80000	1.914854	1.46225	0.1437	377.45	-172.63	1410.00	
MCN5-COMP	MCN1-COMP-T	2.00000	1.914854	1.04447	0.2963	95.82	-177.54	426.84	
BIS-COMP	BIN-COMP-T	1.60000	1.914854	0.83557	0.4034	235.93	-495.14	1070.45	
MCN3-COMP	MCN1-COMP-T	1.60000	1.914854	0.83557	0.4034	233.56	-338.06	905.02	
MCN4-COMP	BIS-COMP	1.60000	1.914854	0.83557	0.4034	305.75	-684.39	1269.77	
MCN4-COMP	MCN3-COMP	1.60000	1.914854	0.83557	0.4034	468.67	-330.75	1610.53	
MCN3-COMP	BIN-COMP-T	0.80000	1.914854	0.41779	0.6761	108.33	-720.05	913.89	
MCN4-COMP	BIMW-COMP-T-M	0.40000	1.914854	0.20889	0.8345	21.39	-293.21	1054.17	
MCN2-COMP-T	BIN-COMP-T	0.20000	1.909043	0.10476	0.9166	104.12	-392.85	613.89	
BIS-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	22.87	-615.72	832.68	
MCN3-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	-106.33	-568.42	514.36	
MCN2-COMP-T	BIS-COMP	-0.40000	1.914854	-0.20889	0.8345	-36.11	-929.48	353.26	
MCN3-COMP	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-129.43	-780.39	676.12	
MCN5-COMP	MCN3-COMP	-0.40000	1.914854	-0.20889	0.8345	-137.74	-681.03	450.00	
MCN5-COMP	BIN-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-86.67	-559.52	435.71	
MCN1-COMP-T	BIN-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-206.99	-746.90	354.27	
MCN3-COMP	BIS-COMP	-1.60000	1.914854	-0.83557	0.4034	-156.56	-1256.68	653.26	
TB	MCN1-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-118.13	-477.16	279.77	
TB	MCN3-COMP	-1.60000	1.914854	-0.83557	0.4034	-294.67	-1036.78	214.87	
BIN-COMP-T	BIMW-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-229.16	-876.35	518.00	
MCN2-COMP-T	BIMW-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-211.97	-457.23	376.12	
MCN4-COMP	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-434.28	-1380.61	533.33	
MCN5-COMP	BIS-COMP	-2.40000	1.914854	-1.25336	0.2101	-213.57	-1096.15	175.08	
BIS-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-696.22	-1612.14	295.45	
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-395.83	-634.68	197.95	
TB	BIN-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-325.12	-878.66	288.64	
TB	MCN5-COMP	-3.20000	1.914854	-1.67115	0.0947	-158.45	-558.60	54.35	
BIMW-COMP-T-M	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-520.84	-1396.54	101.35	
MCN1-COMP-T	BIMW-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-443.46	-867.48	116.50	
MCN5-COMP	MCN2-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-177.45	-407.89	122.80	
MCN1-COMP-T	BIS-COMP	-4.00000	1.914854	-2.08893	0.0367*	-278.69	-1136.47	93.64	
MCN3-COMP	BIME-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-760.66	-1952.90	138.89	
TB	BIMW-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-565.51	-999.24	50.87	
TB	BIS-COMP	-4.00000	1.914854	-2.08893	0.0367*	-396.82	-1254.60	28.00	
BIN-COMP-T	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-811.73	-1752.37	-19.23	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-1577.58	-2433.28	-1033.78	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-1056.51	-1262.26	-496.55	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-786.23	-1200.43	-258.78	
LA3-REF	BIS-COMP	-4.80000	1.914854	-2.50672	0.0122*	-857.94	-1737.06	-519.42	
MCN1-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-968.48	-1832.69	-420.73	
MCN2-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-708.86	-1625.70	-161.11	

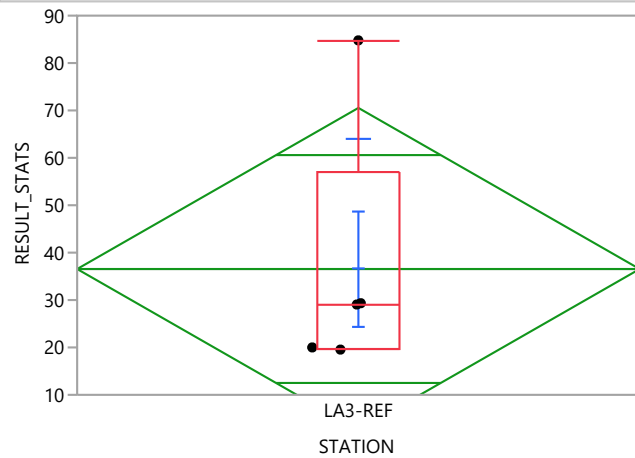


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDE**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN5-COMP	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-898.40	-1792.37	-339.29	
MCN5-COMP	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-416.56	-1450.00	-122.29	
TB	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-1055.32	-1950.82	-486.36	
TB	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-353.54	-736.78	-112.32	
TB	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-621.04	-1608.45	-294.50	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDT**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	19.5455	19.5455	19.77275	29.0541	57.05795	84.7826	84.7826

**Oneway Anova**

**Summary of Fit**

Rsquare	0
Adj Rsquare	0
Root Mean Square Error	27.37567
Mean of Response	36.5431
Observations (or Sum Wgts)	5

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	0	0.0000			
Error	4	2997.7083	749.427		
C. Total	4	2997.7083			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=4,4'-DDT**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	36.5431	12.243	2.5517	70.534

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	36.5431	27.3757	12.243	2.5517	70.534

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
LA3-REF	5	15.000	15.000	3.00000	

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.0000	0	

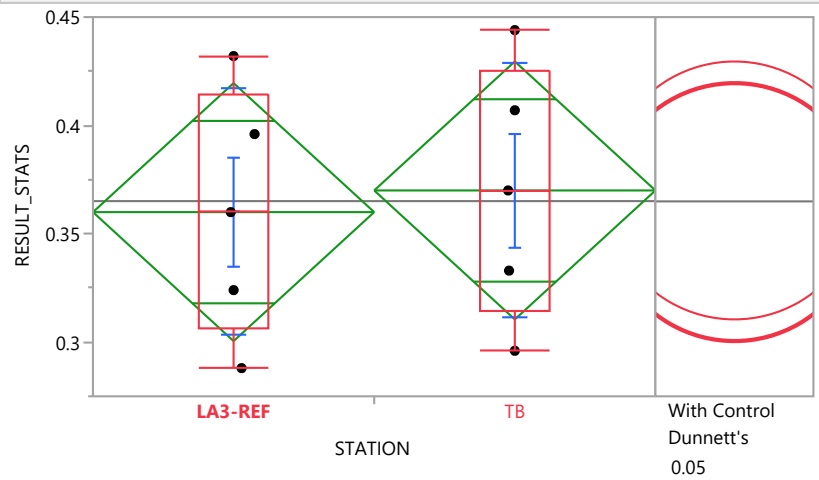
Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
		Difference	Std Err Dif					

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Dibutyltin**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Dibutyltin**

Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	0.288	0.288	0.306	0.36	0.414	0.432	0.432
TB	0.296	0.296	0.3145	0.37	0.4255	0.444	0.444

**Oneway Anova**

**Summary of Fit**

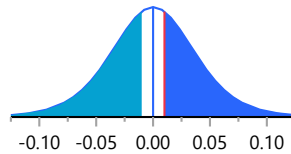
Rsquare	0.009294
Adj Rsquare	-0.11454
Root Mean Square Error	0.057717
Mean of Response	0.365
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	0.01000	t Ratio	0.273947
Std Err Dif	0.03650	DF	8
Upper CL Dif	0.09418	Prob >  t	0.7911
Lower CL Dif	-0.07418	Prob > t	0.3955
Confidence	0.95	Prob < t	0.6045



**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	1	0.00025000	0.000250	0.0750	0.7911
Error	8	0.02665000	0.003331		
C. Total	9	0.02690000			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	0.360000	0.02581	0.30048	0.41952
TB	5	0.370000	0.02581	0.31048	0.42952

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	0.360000	0.056921	0.02546	0.28932	0.43068
TB	5	0.370000	0.058502	0.02616	0.29736	0.44264

**t Test**

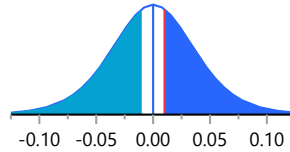
TB-LA3-REF



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Dibutyltin****t Test**

Assuming unequal variances

Difference	0.01000	t Ratio	0.273947
Std Err Dif	0.03650	DF	7.994002
Upper CL Dif	0.09419	Prob >  t	0.7911
Lower CL Dif	-0.07419	Prob > t	0.3955
Confidence	0.95	Prob < t	0.6045

**Means Comparisons****Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.07	0.7911
LA3-REF	-0.08	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	25.000	27.500	5.00000	-0.418
TB	5	30.000	27.500	6.00000	0.418

**2-Sample Test, Normal Approximation**

S	Z	Prob> Z
30	0.41779	0.6761

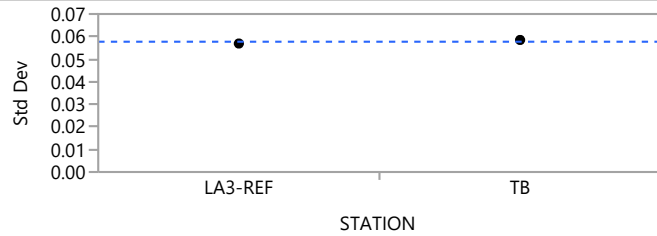
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.2727	1	0.6015

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Dibutyltin**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
LA3-REF	5	0.0569210	0.0432000	0.0432000
TB	5	0.0585021	0.0444000	0.0444000

Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	0.0063	1	8	0.9387
Brown-Forsythe	0.0039	1	8	0.9520
Levene	0.0039	1	8	0.9520
Bartlett	0.0027	1	.	0.9588
F Test 2-sided	1.0563	4	4	0.9589

Warning: Small sample sizes. Use Caution.

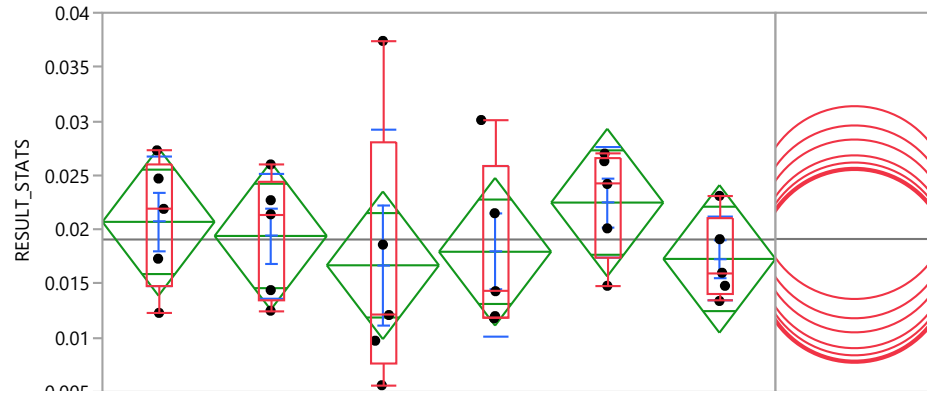
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	0.8000000	1.914854	0.4177864	0.6761	0.0100000	-0.100000	0.1200000

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury**

0.005  
 BIN-COMP-T  
 BIS-COMP  
 LA3-REF  
 MCN1-COMP-T  
 MCN2-COMP-T  
 MCN3-COMP  
 With Control  
 Dunnett's  
 0.05

STATION

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIN-COMP-T	0.0123	0.0123	0.0148	0.0219	0.026	0.0273	0.0273
BIS-COMP	0.0125	0.0125	0.01345	0.0214	0.02435	0.026	0.026
LA3-REF	0.00562	0.00562	0.007675	0.0121	0.028	0.0374	0.0374
MCN1-COMP-T	0.0118	0.0118	0.0119	0.0143	0.0258	0.0301	0.0301
MCN2-COMP-T	0.0148	0.0148	0.01745	0.0242	0.02665	0.027	0.027
MCN3-COMP	0.0134	0.0134	0.0141	0.016	0.0211	0.0231	0.0231

**Oneway Anova**

**Summary of Fit**

Rsquare	0.085744
Adj Rsquare	-0.10473
Root Mean Square Error	0.007383
Mean of Response	0.019082
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	5	0.00012269	0.000025	0.4502	0.8089
Error	24	0.00130821	0.000055		
C. Total	29	0.00143091			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIN-COMP-T	5	0.020700	0.00330	0.01389	0.02751
BIS-COMP	5	0.019400	0.00330	0.01259	0.02621
LA3-REF	5	0.016690	0.00330	0.00988	0.02350
MCN1-COMP-T	5	0.017940	0.00330	0.01113	0.02475
MCN2-COMP-T	5	0.022480	0.00330	0.01567	0.02929
MCN3-COMP	5	0.017280	0.00330	0.01047	0.02409

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury****Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIN-COMP-T	5	0.020700	0.005982	0.00268	0.01327	0.02813
BIS-COMP	5	0.019400	0.005724	0.00256	0.01229	0.02651
LA3-REF	5	0.016690	0.012496	0.00559	0.00117	0.03221
MCN1-COMP-T	5	0.017940	0.007854	0.00351	0.00819	0.02769
MCN2-COMP-T	5	0.022480	0.005065	0.00227	0.01619	0.02877
MCN3-COMP	5	0.017280	0.003874	0.00173	0.01247	0.02209

**Means Comparisons****Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
MCN2-COMP-T	-0.01	0.6122
BIN-COMP-T	-0.01	0.8577
BIS-COMP	-0.01	0.9661
MCN1-COMP-T	-0.01	0.9989
MCN3-COMP	-0.01	1.0000
LA3-REF	-0.01	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIN-COMP-T	5	92.000	77.500	18.4000	0.779
BIS-COMP	5	81.000	77.500	16.2000	0.167
LA3-REF	5	53.000	77.500	10.6000	-1.336
MCN1-COMP-T	5	64.000	77.500	12.8000	-0.724
MCN2-COMP-T	5	104.500	77.500	20.9000	1.475
MCN3-COMP	5	70.500	77.500	14.1000	-0.362

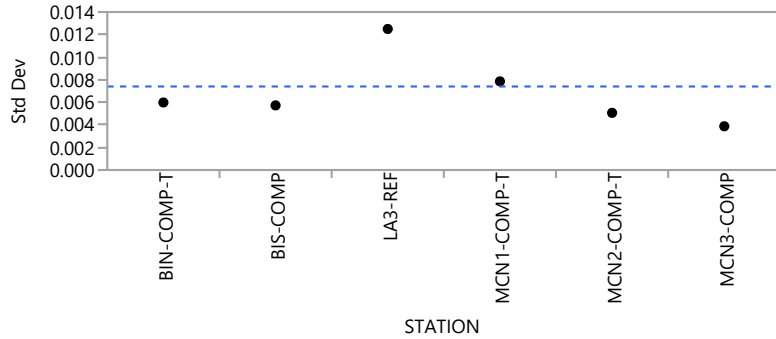
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
4.6023	5	0.4663

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIN-COMP-T	5	0.0059816	0.0047200	0.0044800
BIS-COMP	5	0.0057241	0.0047600	0.0043600
LA3-REF	5	0.0124961	0.0090480	0.0081300
MCN1-COMP-T	5	0.0078545	0.0062880	0.0055600
MCN2-COMP-T	5	0.0050653	0.0040240	0.0036800
MCN3-COMP	5	0.0038739	0.0030560	0.0028000

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.0669	5	24	0.4031
Brown-Forsythe	0.5562	5	24	0.7323
Levene	1.5351	5	24	0.2164
Bartlett	1.3103	5	.	0.2562

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

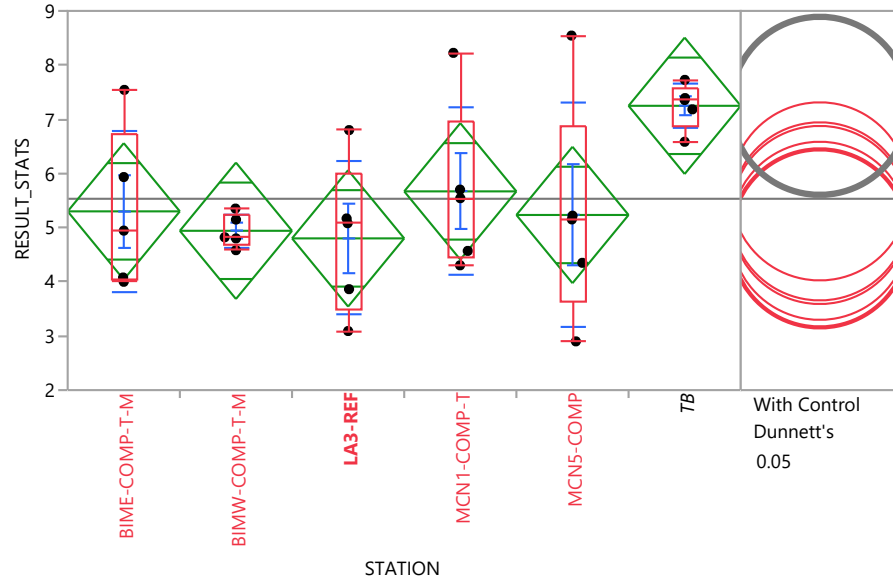
		q*	Alpha							
		1.95996	0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
MCN2-COMP-T	LA3-REF	2.40000	1.914854	1.25336	0.2101	0.008400	-0.017300	0.0206800		
MCN2-COMP-T	BIS-COMP	2.00000	1.914854	1.04447	0.2963	0.002800	-0.007900	0.0138000		
MCN2-COMP-T	MCN1-COMP-T	2.00000	1.914854	1.04447	0.2963	0.005500	-0.010000	0.0150000		
MCN3-COMP	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.003900	-0.022600	0.0134800		
MCN1-COMP-T	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.002270	-0.025400	0.0203700		
MCN3-COMP	MCN1-COMP-T	0.80000	1.914854	0.41779	0.6761	0.001600	-0.015300	0.0111000		
MCN2-COMP-T	BIN-COMP-T	0.40000	1.914854	0.20889	0.8345	0.002300	-0.009900	0.0140000		
BIS-COMP	BIN-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-0.001300	-0.012900	0.0104000		
MCN3-COMP	BIS-COMP	-0.40000	1.914854	-0.20889	0.8345	-0.002300	-0.011200	0.0087000		
MCN1-COMP-T	BIS-COMP	-1.20000	1.914854	-0.62668	0.5309	-0.001200	-0.014000	0.0157000		
MCN1-COMP-T	BIN-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-0.003200	-0.015300	0.0128000		
MCN3-COMP	BIN-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-0.003900	-0.012500	0.0068000		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
LA3-REF	BIN-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-0.006680	-0.019080	0.0201000
LA3-REF	BIS-COMP	-2.00000	1.914854	-1.04447	0.2963	-0.004670	-0.017080	0.0230000
MCN3-COMP	MCN2-COMP-T	-3.00000	1.909043	-1.57147	0.1161	-0.005300	-0.012900	0.0043000

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB003**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4	4	4.039585	4.94444	6.73785	7.54237	7.54237
BIMW-COMP-T-M	4.58333	4.58333	4.691665	4.82192	5.250145	5.35135	5.35135
LA3-REF	3.09091	3.09091	3.477275	5.08152	5.98446	6.8	6.8
MCN1-COMP-T	4.3038	4.3038	4.436845	5.54348	6.963515	8.22581	8.22581
MCN5-COMP	2.9	2.9	3.625	5.15132	6.88232	8.54464	8.54464
TB	6.58451	6.58451	6.883805	7.35577	7.559285	7.72727	7.72727

**Oneway Anova**

**Summary of Fit**

Rsquare	0.308892
Adj Rsquare	0.164911
Root Mean Square Error	1.363993
Mean of Response	5.532065
Observations (or Sum Wgts)	30

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB003**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	19.957057	3.99141	2.1454	0.0944
Error	24	44.651445	1.86048		
C. Total	29	64.608501			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.29986	0.61000	4.0409	6.5588
BIMW-COMP-T-M	5	4.94111	0.61000	3.6821	6.2001
LA3-REF	5	4.80100	0.61000	3.5420	6.0600
MCN1-COMP-T	5	5.66884	0.61000	4.4099	6.9278
MCN5-COMP	5	5.23319	0.61000	3.9742	6.4922
TB	5	7.24839	0.61000	5.9894	8.5074

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.29986	1.47785	0.66092	3.4649	7.1349
BIMW-COMP-T-M	5	4.94111	0.30562	0.13668	4.5616	5.3206
LA3-REF	5	4.80100	1.41537	0.63297	3.0436	6.5584
MCN1-COMP-T	5	5.66884	1.55128	0.69375	3.7427	7.5950
MCN5-COMP	5	5.23319	2.07343	0.92726	2.6587	7.8077
TB	5	7.24839	0.42020	0.18792	6.7266	7.7701

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.122	0.0367*
MCN1-COMP-T	-1.46	0.7705
BIME-COMP-T-M	-1.83	0.9666
MCN5-COMP	-1.89	0.9816
BIMW-COMP-T-M	-2.19	0.9999
LA3-REF	-2.33	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB003**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

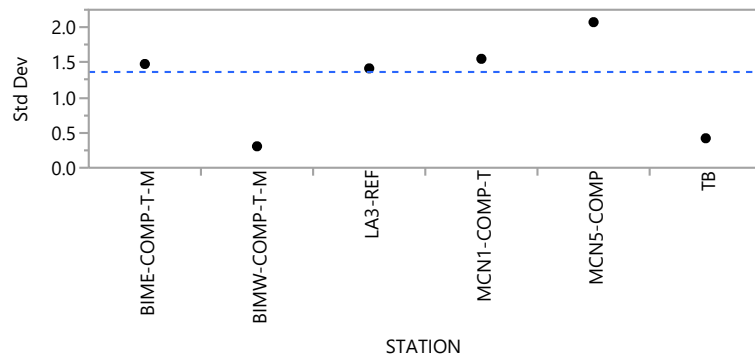
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	69.000	77.500	13.8000	-0.445
BIMW-COMP-T-M	5	62.000	77.500	12.4000	-0.835
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN1-COMP-T	5	82.000	77.500	16.4000	0.223
MCN5-COMP	5	70.000	77.500	14.0000	-0.390
TB	5	125.000	77.500	25.0000	2.615

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.9110	5	0.1612

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.477851	1.150390	1.079306
BIMW-COMP-T-M	5	0.305620	0.247230	0.223392
LA3-REF	5	1.415372	1.058978	1.002874
MCN1-COMP-T	5	1.551280	1.035740	1.010668
MCN5-COMP	5	2.073426	1.324579	1.302928
TB	5	0.420202	0.291668	0.270192

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9374	5	24	0.4747
Brown-Forsythe	1.1835	5	24	0.3465
Levene	1.4606	5	24	0.2394
Bartlett	2.9291	5	.	0.0120*

Warning: Small sample sizes. Use Caution.

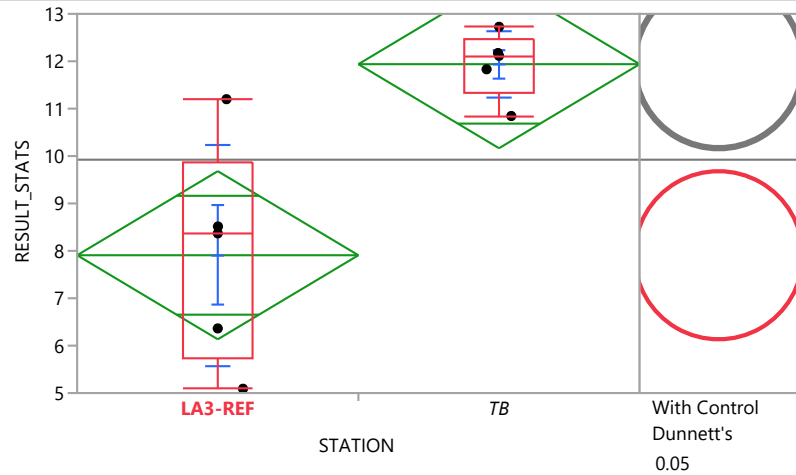


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB003**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha							
		1.95996	0.05							
Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
		Difference	Std Err Dif							
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	2.37592	1.43557	2.927270		
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.30978	0.38310	4.300390		
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.41133	-0.35927	3.648100		
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.84782	-1.04271	3.157380		
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	2.23451	-1.36154	4.491300		
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.61970	-2.23011	4.362170		
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.49072	-2.97248	4.146640		
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.39454	-0.84514	3.425810		
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.06980	-2.45000	4.681000		
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.12252	-2.74237	1.272180		
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.06742	-2.05803	2.000000		
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.20688	-3.19237	4.465470		
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.00238	-2.24894	3.744640		
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.74237	-3.67873	2.720830		
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.39216	-3.87581	3.974750		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB005/008**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	5.09091	5.09091	5.727275	8.36957	9.856755	11.2	11.2
TB	10.8451	10.8451	11.33805	12.1154	12.4506	12.7273	12.7273

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB005/008**

**Oneway Anova**

**Summary of Fit**

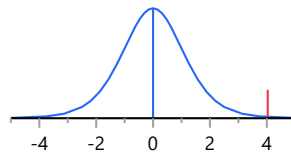
Rsquare	0.631997
Adj Rsquare	0.585997
Root Mean Square Error	1.71952
Mean of Response	9.923033
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	4.03101	t Ratio	3.706612
Std Err Dif	1.08752	DF	8
Upper CL Dif	6.53884	Prob >  t	0.0060*
Lower CL Dif	1.52319	Prob > t	0.0030*
Confidence	0.95	Prob < t	0.9970



**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	1	40.622685	40.6227	13.7390	0.0060*
Error	8	23.653988	2.9567		
C. Total	9	64.276673			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	7.9075	0.76899	6.134	9.681
TB	5	11.9385	0.76899	10.165	13.712

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

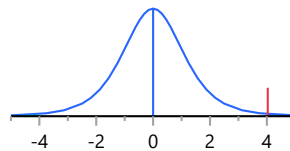
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	7.9075	2.33120	1.0425	5.013	10.802
TB	5	11.9385	0.69210	0.3095	11.079	12.798

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	4.03101	t Ratio	3.706612
Std Err Dif	1.08752	DF	4.699686
Upper CL Dif	6.88117	Prob >  t	0.0155*
Lower CL Dif	1.18086	Prob > t	0.0078*
Confidence	0.95	Prob < t	0.9922



**Means Comparisons**

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB005/008**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	1.523	0.0060*
LA3-REF	-2.51	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	16.000	27.500	3.20000	-2.298
TB	5	39.000	27.500	7.80000	2.298

**2-Sample Test, Normal Approximation**

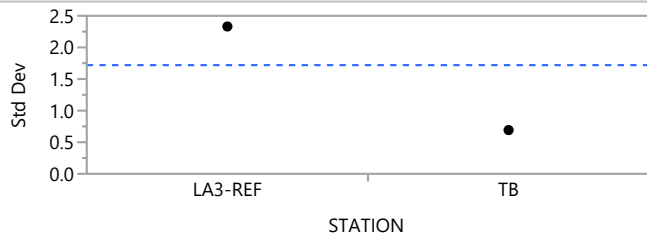
S	Z	Prob> Z
39	2.29783	0.0216*

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.7709	1	0.0163*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
LA3-REF	5	2.331201	1.744201	1.651792
TB	5	0.692097	0.480392	0.445020

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB005/008**

**Tests that the Variances are Equal**

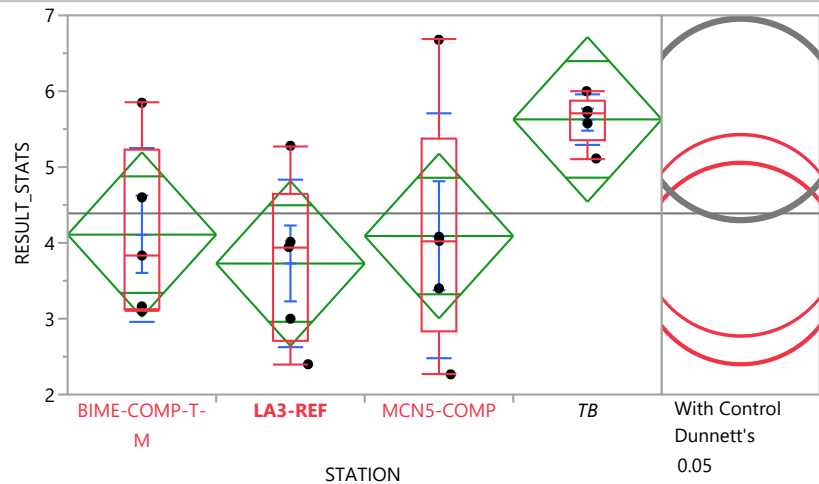
Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.4861	1	8	0.1535
Brown-Forsythe	2.8428	1	8	0.1303
Levene	4.3826	1	8	0.0696
Bartlett	4.3075	1	.	0.0379*
F Test 2-sided	11.3456	4	4	0.0372*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean				Hodges-			
		Difference	Std Err Dif	Z	p-Value	Lehmann	Lower CL	Upper CL	
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	3.804330	0.6310000	7.082990	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB015**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.10112	3.10112	3.13181	3.83333	5.22373	5.84746	5.84746
LA3-REF	2.4	2.4	2.7	3.94565	4.646755	5.28	5.28
MCN5-COMP	2.26667	2.26667	2.833335	4.02632	5.379285	6.67857	6.67857
TB	5.11268	5.11268	5.345075	5.71154	5.869565	6	6

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB015**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.337433
Adj Rsquare	0.213201
Root Mean Square Error	1.146011
Mean of Response	4.388798
Observations (or Sum Wgts)	20

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	3	10.701755	3.56725	2.7162	0.0793
Error	16	21.013464	1.31334		
C. Total	19	31.715219			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.10888	0.51251	3.0224	5.1954
LA3-REF	5	3.72783	0.51251	2.6414	4.8143
MCN5-COMP	5	4.09031	0.51251	3.0038	5.1768
TB	5	5.62816	0.51251	4.5417	6.7146

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.10888	1.14575	0.51240	2.6862	5.5315
LA3-REF	5	3.72783	1.09899	0.49149	2.3632	5.0924
MCN5-COMP	5	4.09031	1.62061	0.72476	2.0781	6.1026
TB	5	5.62816	0.32627	0.14591	5.2230	6.0333

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.59232	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.021	0.0472*
BIME-COMP-T-M	-1.5	0.9133
MCN5-COMP	-1.52	0.9238
LA3-REF	-1.88	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB015**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

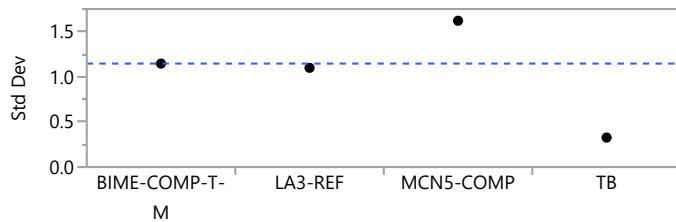
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	46.000	52.500	9.2000	-0.524
LA3-REF	5	36.000	52.500	7.2000	-1.397
MCN5-COMP	5	48.000	52.500	9.6000	-0.349
TB	5	80.000	52.500	16.0000	2.357

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.2343	3	0.1008

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



STATION

Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.145753	0.891878	0.836768
LA3-REF	5	1.098995	0.822266	0.778702
MCN5-COMP	5	1.620608	1.035303	1.018380
TB	5	0.326275	0.226471	0.209796

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9055	3	16	0.4602
Brown-Forsythe	1.0016	3	16	0.4176
Levene	1.2627	3	16	0.3206
Bartlett	2.2989	3	.	0.0753

Warning: Small sample sizes. Use Caution.

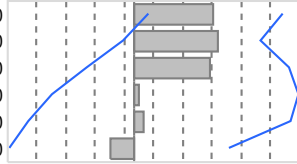
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

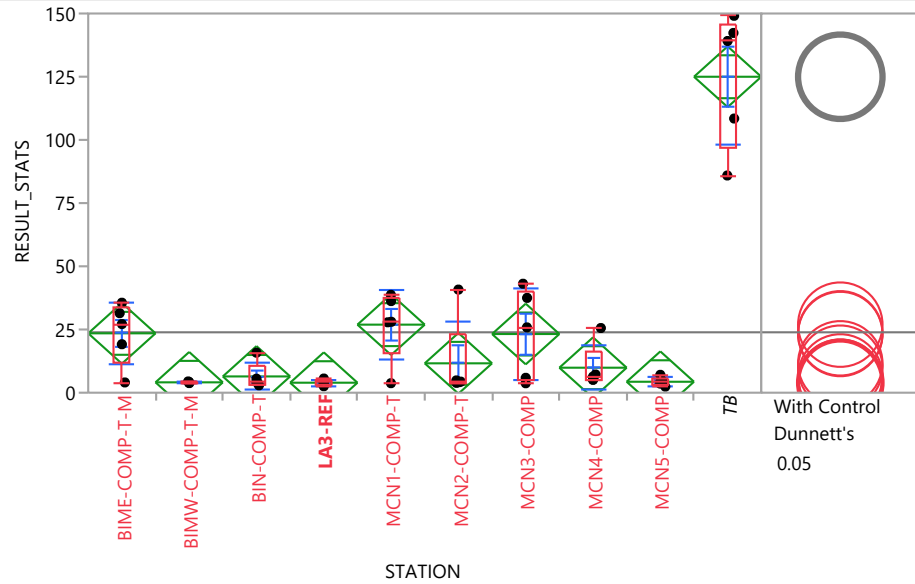
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB015**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
		Difference	Std Err Dif					
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.79348	0.29747	3.339130
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.87821	-0.26999	2.837500
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.71268	-1.10110	3.472460
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.08067	-1.88000	3.678570
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.19299	-2.44746	3.516070
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.56746	-2.84746	2.117500



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB018**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.05556	4.05556	11.61113	27.1605	33.52695	35.5932	35.5932
BIMW-COMP-T-M	3.80208	3.80208	3.89195	4	4.355235	4.43919	4.43919
BIN-COMP-T	2.91667	2.91667	3.283335	4.22619	10.68588	15.8333	15.8333
LA3-REF	2.54545	2.54545	2.863635	4.18478	4.92838	5.6	5.6
MCN1-COMP-T	3.76344	3.76344	15.80577	28.0488	37.4708	38.7097	38.7097
MCN2-COMP-T	3.88889	3.88889	4.03268	4.38272	22.82531	40.7895	40.7895
MCN3-COMP	3.73684	3.73684	4.81197	25.8333	40.3017	43.1034	43.1034
MCN4-COMP	5.14706	5.14706	5.14706	6.36364	16.3907	25.5814	25.5814
MCN5-COMP	2.4	2.4	3	4.26316	5.695715	7.07143	7.07143
TB	85.9155	85.9155	97.18325	139.13	145.6995	149.091	149.091

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB018**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.895157
Adj Rsquare	0.871567
Root Mean Square Error	13.28319
Mean of Response	23.8923
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	60259.402	6695.49	37.9470	<.0001*
Error	40	7057.730	176.44		
C. Total	49	67317.132			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	23.487	5.9404	11.5	35.49
BIMW-COMP-T-M	5	4.099	5.9404	-7.9	16.10
BIN-COMP-T	5	6.433	5.9404	-5.6	18.44
LA3-REF	5	3.954	5.9404	-8.1	15.96
MCN1-COMP-T	5	26.920	5.9404	14.9	38.93
MCN2-COMP-T	5	11.620	5.9404	-0.3863	23.63
MCN3-COMP	5	23.212	5.9404	11.2	35.22
MCN4-COMP	5	9.888	5.9404	-2.1	21.89
MCN5-COMP	5	4.331	5.9404	-7.7	16.34
TB	5	124.979	5.9404	113.0	136.99

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	23.487	12.4487	5.567	8.03	38.94
BIMW-COMP-T-M	5	4.099	0.2535	0.113	3.78	4.41
BIN-COMP-T	5	6.433	5.3419	2.389	-0.20	13.07
LA3-REF	5	3.954	1.1656	0.521	2.51	5.40
MCN1-COMP-T	5	26.920	13.8209	6.181	9.76	44.08
MCN2-COMP-T	5	11.620	16.3102	7.294	-8.63	31.87
MCN3-COMP	5	23.212	17.9313	8.019	0.95	45.48
MCN4-COMP	5	9.888	8.8159	3.943	-1.06	20.83
MCN5-COMP	5	4.331	1.7159	0.767	2.20	6.46
TB	5	124.979	26.8378	12.002	91.66	158.30

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB018****Means Comparisons****Comparisons with a control using Dunnett's Method****Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	97.4	<.0001*
MCN1-COMP-T	-0.66	0.0600
BIME-COMP-T-M	-4.09	0.1462
MCN3-COMP	-4.36	0.1561
MCN2-COMP-T	-16	0.9390
MCN4-COMP	-17.7	0.9863
BIN-COMP-T	-21.1	1.0000
MCN5-COMP	-23.2	1.0000
BIMW-COMP-T-M	-23.5	1.0000
LA3-REF	-23.6	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	161.000	127.500	32.2000	1.067
BIMW-COMP-T-M	5	73.000	127.500	14.6000	-1.746
BIN-COMP-T	5	83.000	127.500	16.6000	-1.423
LA3-REF	5	65.000	127.500	13.0000	-2.005
MCN1-COMP-T	5	167.000	127.500	33.4000	1.261
MCN2-COMP-T	5	112.000	127.500	22.4000	-0.485
MCN3-COMP	5	157.000	127.500	31.4000	0.938
MCN4-COMP	5	143.000	127.500	28.6000	0.485
MCN5-COMP	5	74.000	127.500	14.8000	-1.714
TB	5	240.000	127.500	48.0000	3.622

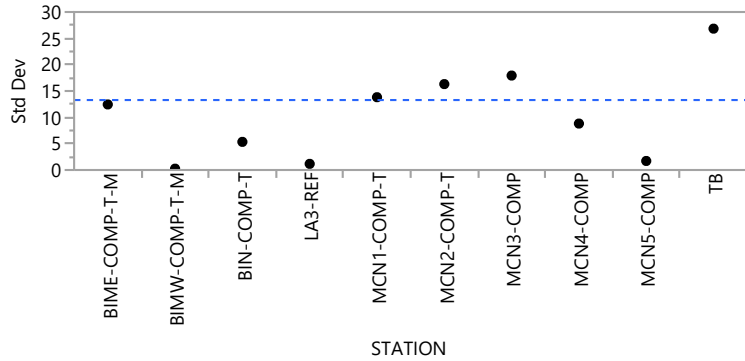
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
26.7387	9	0.0015*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB018**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	12.44870	9.50096	8.76633
BIMW-COMP-T-M	5	0.25353	0.20509	0.18531
BIN-COMP-T	5	5.34195	3.76015	2.96102
LA3-REF	5	1.16560	0.87210	0.82590
MCN1-COMP-T	5	13.82091	9.26278	8.66601
MCN2-COMP-T	5	16.31025	11.66790	7.51705
MCN3-COMP	5	17.93126	14.72013	14.19589
MCN4-COMP	5	8.81593	6.27743	4.49746
MCN5-COMP	5	1.71594	1.09620	1.07829
TB	5	26.83778	22.23668	19.40650

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.1727	9	40	0.0451*
Brown-Forsythe	1.7749	9	40	0.1038
Levene	5.9498	9	40	<.0001*
Bartlett	6.9830	9	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

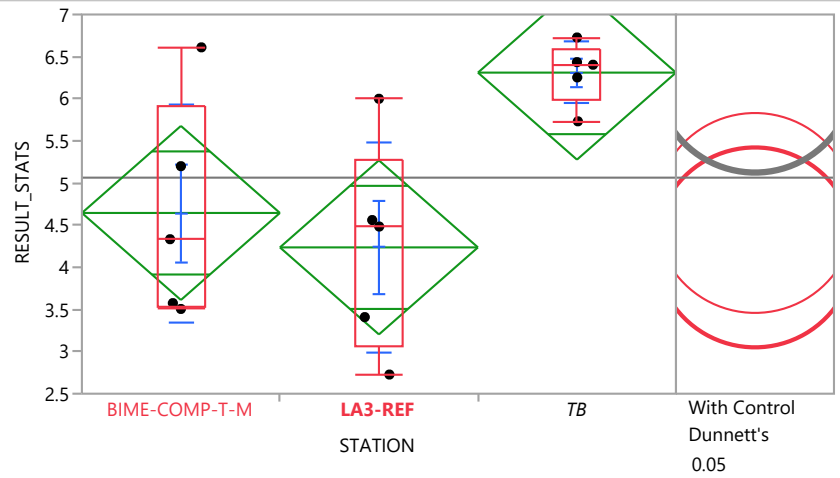
q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
MCN4-COMP	BIMW-COMP-T-M	4.80000	1.909043	2.51435	0.0119*	2.364	0.7079	21.5996		
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	107.669	54.4548	138.2524		
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	135.130	81.6442	145.1092		
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	133.258	80.3770	145.4410		
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	134.945	81.6587	145.9092		
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	104.688	49.6836	138.5446		
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	108.302	67.6615	144.9145		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB018**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	104.714	48.4155	143.2039	
TB	MCN4-COMP	4.80000	1.909043	2.51435	0.0119*	123.510	78.7155	143.9439	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	134.867	81.5955	145.4910	
MCN4-COMP	LA3-REF	4.00000	1.909043	2.09529	0.0361*	2.602	-0.4529	22.3996	
MCN1-COMP-T	BIN-COMP-T	3.60000	1.914854	1.88004	0.0601	23.823	-1.7750	35.0597	
MCN1-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	24.867	-0.4933	35.5279	
MCN3-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	21.649	-0.5199	39.9216	
MCN3-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	21.607	-9.9462	39.4534	
MCN1-COMP-T	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	24.049	-0.5078	34.7279	
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	21.833	-0.5344	39.1216	
MCN4-COMP	MCN2-COMP-T	2.80000	1.909043	1.46670	0.1425	1.258	-35.6424	21.4049	
MCN4-COMP	BIN-COMP-T	2.40000	1.909043	1.25717	0.2087	2.137	-10.6862	21.9314	
MCN2-COMP-T	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	0.383	-0.3824	36.8077	
MCN2-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.707	-1.4235	37.6077	
MCN3-COMP	MCN2-COMP-T	1.60000	1.914854	0.83557	0.4034	2.314	-34.9024	38.9269	
MCN1-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	3.116	-27.6973	32.1763	
MCN2-COMP-T	BIN-COMP-T	0.80000	1.914854	0.41779	0.6761	0.526	-11.6568	37.1395	
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.078	-2.0000	3.8896	
BIN-COMP-T	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.226	-1.3546	11.8515	
MCN3-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	1.832	-29.7061	33.4444	
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.00812	-1.8713	3.0896	
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.087	-1.7258	1.6182	
MCN3-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-1.210	-32.8226	33.7366	
MCN5-COMP	BIN-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-0.517	-12.2333	3.4214	
LA3-REF	BIN-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.468	-12.6515	1.9500	
MCN2-COMP-T	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-23.666	-34.5332	12.9414	
MCN2-COMP-T	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-15.278	-31.4167	21.6228	
MCN4-COMP	MCN3-COMP	-1.60000	1.909043	-0.83812	0.4020	-17.522	-37.9563	19.6943	
MCN5-COMP	MCN2-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-0.576	-37.1895	2.8950	
MCN4-COMP	BIME-COMP-T-M	-2.40000	1.909043	-1.25717	0.2087	-14.020	-30.4461	6.4147	
MCN4-COMP	MCN1-COMP-T	-2.80000	1.909043	-1.46670	0.1425	-21.685	-33.5626	3.4366	
MCN5-COMP	MCN3-COMP	-3.20000	1.914854	-1.67115	0.0947	-21.570	-39.5034	1.1843	
BIN-COMP-T	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-19.760	-31.9432	1.4829	
LA3-REF	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-22.976	-32.4114	0.2012	
MCN5-COMP	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-22.897	-31.9932	0.2644	
MCN5-COMP	MCN1-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-24.449	-35.1097	0.5566	
MCN5-COMP	MCN4-COMP	-3.60000	1.909043	-1.88576	0.0593	-2.747	-21.9814	1.9244	
BIMW-COMP-T-M	BIME-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-23.161	-31.6114	0.2157	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB027**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.50562	3.50562	3.54031	4.33333	5.905085	6.61017	6.61017
LA3-REF	2.72727	2.72727	3.06818	4.4837	5.280405	6	6
TB	5.73239	5.73239	5.992955	6.40385	6.581025	6.72727	6.72727

**Oneway Anova**

**Summary of Fit**

Rsquare	0.472376
Adj Rsquare	0.384438
Root Mean Square Error	1.060034
Mean of Response	5.063787
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	2	12.072113	6.03606	5.3717	0.0216*
Error	12	13.484057	1.12367		
C. Total	14	25.556169			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.64482	0.47406	3.6119	5.6777
LA3-REF	5	4.23617	0.47406	3.2033	5.2691
TB	5	6.31036	0.47406	5.2775	7.3433

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB027**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.64482	1.29520	0.57923	3.0366	6.2530
LA3-REF	5	4.23617	1.24886	0.55851	2.6855	5.7868
TB	5	6.31036	0.36583	0.16360	5.8561	6.7646

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.397	0.0171*
BIME-COMP-T-M	-1.27	0.7714
LA3-REF	-1.68	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

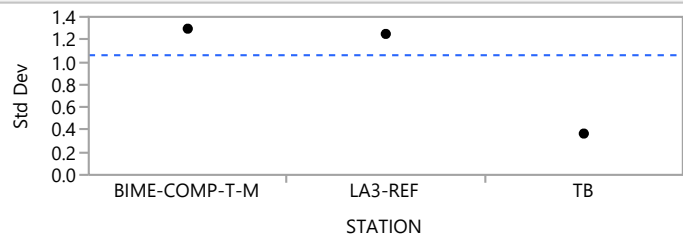
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	34.000	40.000	6.8000	-0.674
LA3-REF	5	26.000	40.000	5.2000	-1.653
TB	5	60.000	40.000	12.0000	2.388

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.3200	2	0.0424*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB027**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.295197	1.008209	0.9459100
LA3-REF	5	1.248859	0.934395	0.8848900
TB	5	0.365826	0.253926	0.2352280

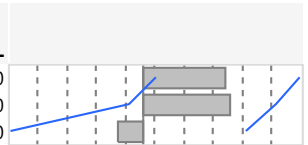
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2503	2	12	0.3212
Brown-Forsythe	1.6464	2	12	0.2334
Levene	2.7935	2	12	0.1009
Bartlett	2.5186	2	.	0.0806

Warning: Small sample sizes. Use Caution.

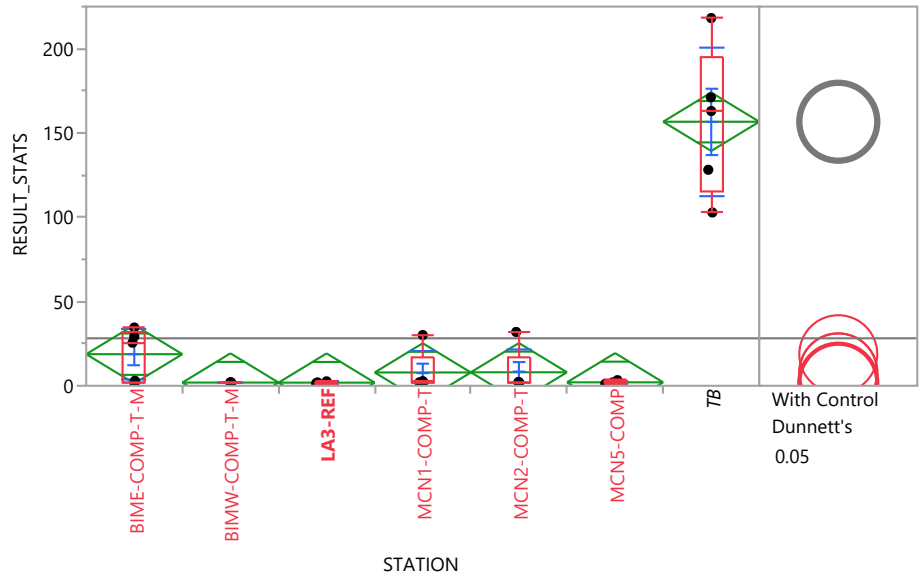
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.95108	0.25352	3.707510
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.07052	-0.35665	3.152270
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.61017	-3.20108	2.425000



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB028**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB028**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	1.41667	1.41667	2.191385	25.5556	31.8907	34.5679	34.5679
BIMW-COMP-T-M	1.77083	1.77083	1.81269	1.86301	2.028465	2.06757	2.06757
LA3-REF	1.2	1.2	1.35	1.97283	2.32338	2.64	2.64
MCN1-COMP-T	2.07317	2.07317	2.112535	2.3913	16.42472	30.1075	30.1075
MCN2-COMP-T	1.83333	1.83333	1.916665	2.09877	17.05773	31.9444	31.9444
MCN5-COMP	1.13333	1.13333	1.416665	2.01316	2.689645	3.33929	3.33929
TB	102.817	102.817	115.493	163.043	194.668	218.182	218.182

**Oneway Anova**

**Summary of Fit**

Rsquare	0.906574
Adj Rsquare	0.886554
Root Mean Square Error	18.93535
Mean of Response	28.16254
Observations (or Sum Wgts)	35

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	6	97418.10	16236.4	45.2837	<.0001*
Error	28	10039.33	358.5		
C. Total	34	107457.44			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	18.744	8.4681	1.4	36.09
BIMW-COMP-T-M	5	1.909	8.4681	-15.4	19.26
LA3-REF	5	1.864	8.4681	-15.5	19.21
MCN1-COMP-T	5	7.893	8.4681	-9.5	25.24
MCN2-COMP-T	5	8.010	8.4681	-9.3	25.36
MCN5-COMP	5	2.045	8.4681	-15.3	19.39
TB	5	156.673	8.4681	139.3	174.02

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	18.744	15.4562	6.912	-0.4475	37.94
BIMW-COMP-T-M	5	1.909	0.1181	0.053	1.8	2.06
LA3-REF	5	1.864	0.5495	0.246	1.2	2.55
MCN1-COMP-T	5	7.893	12.4209	5.555	-7.5	23.32
MCN2-COMP-T	5	8.010	13.3806	5.984	-8.6	24.62
MCN5-COMP	5	2.045	0.8103	0.362	1.0	3.05
TB	5	156.673	44.0073	19.681	102.0	211.32

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB028**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.73128	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	122.1	<.0001*
BIME-COMP-T-M	-15.8	0.5424
MCN2-COMP-T	-26.6	0.9896
MCN1-COMP-T	-26.7	0.9905
MCN5-COMP	-32.5	1.0000
BIMW-COMP-T-M	-32.7	1.0000
LA3-REF	-32.7	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	110.000	90.000	22.0000	0.919
BIMW-COMP-T-M	5	50.000	90.000	10.0000	-1.862
LA3-REF	5	51.000	90.000	10.2000	-1.815
MCN1-COMP-T	5	108.000	90.000	21.6000	0.825
MCN2-COMP-T	5	86.000	90.000	17.2000	-0.165
MCN5-COMP	5	60.000	90.000	12.0000	-1.391
TB	5	165.000	90.000	33.0000	3.512

**1-Way Test, ChiSquare Approximation**

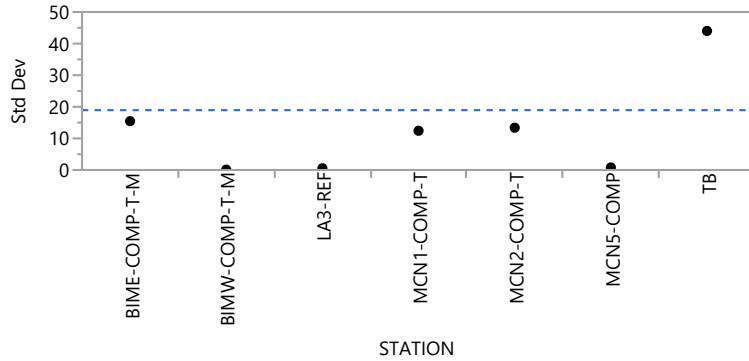
ChiSquare	DF	Prob>ChiSq
19.7829	6	0.0030*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB028**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	15.45625	13.24206	11.87973
BIMW-COMP-T-M	5	0.11808	0.09552	0.08631
LA3-REF	5	0.54950	0.41113	0.38935
MCN1-COMP-T	5	12.42092	8.88574	5.72487
MCN2-COMP-T	5	13.38061	9.57396	6.05642
MCN5-COMP	5	0.81031	0.51765	0.50919
TB	5	44.00733	32.94400	31.67000

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[5]	2.7373	6	28	0.0321*
Brown-Forsythe	3.7534	6	28	0.0073*
Levene	6.6066	6	28	0.0002*
Bartlett	14.4835	6	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

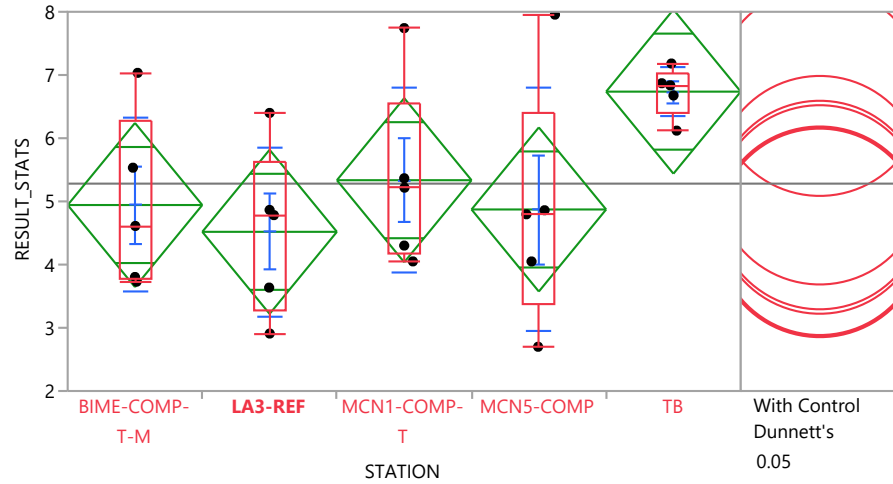
		q*	Alpha						
		1.95996	0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	0.528	0.084	28.2530	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	136.586	73.604	215.2159	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	161.180	100.828	216.3275	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	161.070	100.810	216.6820	
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	160.301	98.062	216.0301	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	160.872	96.225	216.1820	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	161.030	100.777	216.4820	
MCN1-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	0.735	-0.488	28.6075	
MCN2-COMP-T	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	0.182	-0.156	30.0899	
MCN2-COMP-T	LA3-REF	2.00000	1.914854	1.04447	0.2963	0.333	-0.640	30.4444	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB028**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.040	-0.940	1.8393	
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.017	-0.789	0.7855	
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.024	-0.856	1.4847	
MCN1-COMP-T	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-4.460	-32.416	27.1414	
MCN2-COMP-T	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-2.624	-32.568	28.9783	
MCN2-COMP-T	MCN1-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-0.240	-28.108	29.7925	
MCN5-COMP	MCN2-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-0.158	-30.244	1.3393	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-23.693	-32.713	0.5727	
MCN5-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-23.542	-32.868	0.6233	
LA3-REF	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-23.583	-33.068	0.5901	
MCN5-COMP	MCN1-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-0.691	-28.408	1.1874	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB029**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.73034	3.73034	3.767255	4.61111	6.283615	7.0339	7.0339
LA3-REF	2.90909	2.90909	3.272725	4.78261	5.63243	6.4	6.4
MCN1-COMP-T	4.05063	4.05063	4.175855	5.21739	6.553895	7.74194	7.74194
MCN5-COMP	2.7	2.7	3.375	4.79605	6.40768	7.95536	7.95536
TB	6.11972	6.11972	6.39789	6.83654	7.025695	7.18182	7.18182

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB029**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.278119
Adj Rsquare	0.133742
Root Mean Square Error	1.391748
Mean of Response	5.281111
Observations (or Sum Wgts)	25

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	4	14.925026	3.73126	1.9263	0.1453
Error	20	38.739238	1.93696		
C. Total	24	53.664264			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.94257	0.62241	3.6442	6.2409
LA3-REF	5	4.51858	0.62241	3.2203	5.8169
MCN1-COMP-T	5	5.33538	0.62241	4.0371	6.6337
MCN5-COMP	5	4.87228	0.62241	3.5740	6.1706
TB	5	6.73674	0.62241	5.4384	8.0351

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.94257	1.37822	0.61636	3.2313	6.6539
LA3-REF	5	4.51858	1.33212	0.59574	2.8645	6.1726
MCN1-COMP-T	5	5.33538	1.46003	0.65294	3.5225	7.1482
MCN5-COMP	5	4.87228	1.93043	0.86332	2.4753	7.2692
TB	5	6.73674	0.39054	0.17466	6.2518	7.2217

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.65103	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB029**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.12	0.0653
MCN1-COMP-T	-1.52	0.7619
BIME-COMP-T-M	-1.91	0.9676
MCN5-COMP	-1.98	0.9830
LA3-REF	-2.33	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

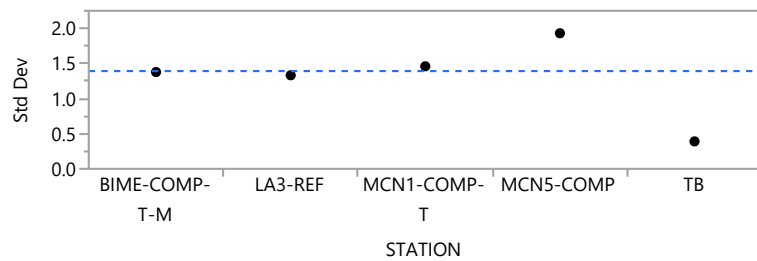
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	56.000	65.000	11.2000	-0.577
LA3-REF	5	46.000	65.000	9.2000	-1.257
MCN1-COMP-T	5	68.000	65.000	13.6000	0.170
MCN5-COMP	5	55.000	65.000	11.0000	-0.645
TB	5	100.000	65.000	20.0000	2.344

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.5575	4	0.1612

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.378222	1.072836	1.006544
LA3-REF	5	1.332116	0.996687	0.943882
MCN1-COMP-T	5	1.460029	0.974814	0.951216
MCN5-COMP	5	1.930433	1.233231	1.213072
TB	5	0.390543	0.271082	0.251122

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB029**

**Tests that the Variances are Equal**

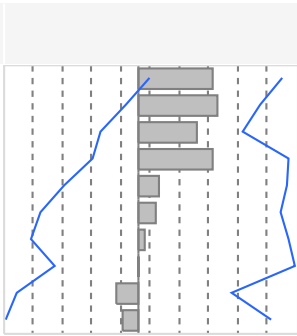
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.6715	4	20	0.6194
Brown-Forsythe	0.7352	4	20	0.5788
Levene	0.9005	4	20	0.4822
Bartlett	1.7259	4	.	0.1411

Warning: Small sample sizes. Use Caution.

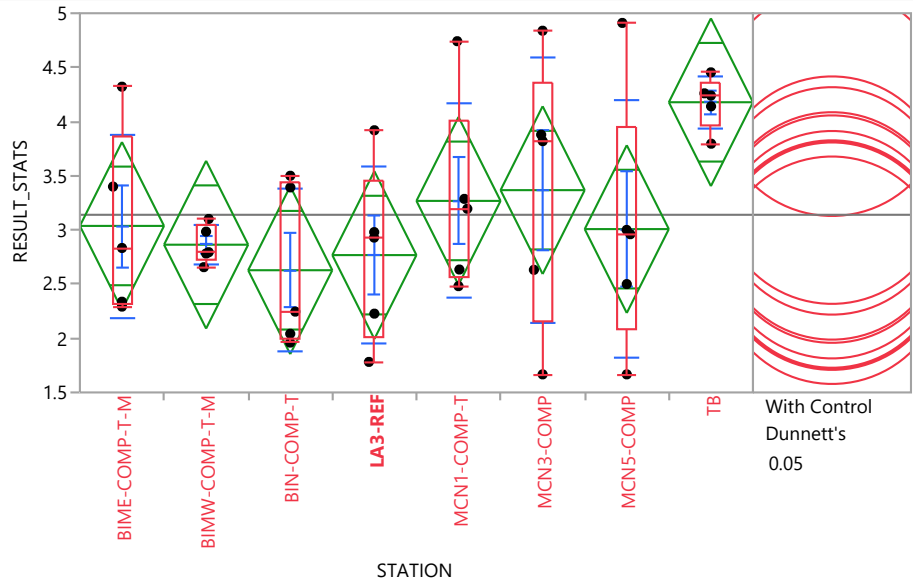
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* Alpha  
1.95996 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.08696	0.27606	3.960480
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.22543	-0.35784	3.377650
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.65218	-1.06588	2.880740
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	2.06972	-1.27930	4.169570
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.58324	-2.09892	4.105580
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.49691	-2.73282	3.937770
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.18494	-2.98390	4.151190
MCN5-COMP	LA3-REF	0.00000	1.914854	0.00000	1.0000	0.01344	-2.35000	4.319000
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.63390	-3.39754	2.595830
MCN5-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-0.42134	-3.69194	3.654280



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB031**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB031**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.29213	2.29213	2.314815	2.83333	3.861015	4.32203	4.32203
BIMW-COMP-T-M	2.65625	2.65625	2.719035	2.79452	3.042695	3.10135	3.10135
BIN-COMP-T	1.96	1.96	2.000835	2.24583	3.446155	3.5	3.5
LA3-REF	1.78182	1.78182	2.004545	2.92935	3.449865	3.92	3.92
MCN1-COMP-T	2.48101	2.48101	2.55771	3.19565	4.014265	4.74194	4.74194
MCN3-COMP	1.66667	1.66667	2.149125	3.81944	4.35901	4.83871	4.83871
MCN5-COMP	1.66667	1.66667	2.083335	2.96053	3.955355	4.91071	4.91071
TB	3.79577	3.79577	3.96831	4.24038	4.35771	4.45455	4.45455

**Oneway Anova**

**Summary of Fit**

Rsquare	0.263232
Adj Rsquare	0.102064
Root Mean Square Error	0.84993
Mean of Response	3.139665
Observations (or Sum Wgts)	40

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	7	8.258938	1.17985	1.6333	0.1618
Error	32	23.116187	0.72238		
C. Total	39	31.375125			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.03700	0.38010	2.2628	3.8112
BIMW-COMP-T-M	5	2.86360	0.38010	2.0894	3.6378
BIN-COMP-T	5	2.62796	0.38010	1.8537	3.4022
LA3-REF	5	2.76763	0.38010	1.9934	3.5419
MCN1-COMP-T	5	3.26792	0.38010	2.4937	4.0422
MCN3-COMP	5	3.36714	0.38010	2.5929	4.1414
MCN5-COMP	5	3.00758	0.38010	2.2333	3.7818
TB	5	4.17848	0.38010	3.4042	4.9527

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.03700	0.84686	0.37873	1.9855	4.0885
BIMW-COMP-T-M	5	2.86360	0.17712	0.07921	2.6437	3.0835
BIN-COMP-T	5	2.62796	0.75509	0.33768	1.6904	3.5655
LA3-REF	5	2.76763	0.81592	0.36489	1.7545	3.7807
MCN1-COMP-T	5	3.26792	0.89427	0.39993	2.1575	4.3783
MCN3-COMP	5	3.36714	1.23137	0.55068	1.8382	4.8961

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB031****Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
MCN5-COMP	5	3.00758	1.19162	0.53291	1.5280	4.4872
TB	5	4.17848	0.24224	0.10833	3.8777	4.4793

**Means Comparisons****Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.76173	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.07	0.0680
MCN3-COMP	-0.89	0.7852
MCN1-COMP-T	-0.98	0.8903
BIME-COMP-T-M	-1.22	0.9953
MCN5-COMP	-1.24	0.9977
BIMW-COMP-T-M	-1.39	1.0000
LA3-REF	-1.48	1.0000
BIN-COMP-T	-1.34	0.9999

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	97.000	102.500	19.4000	-0.204
BIMW-COMP-T-M	5	89.000	102.500	17.8000	-0.532
BIN-COMP-T	5	70.000	102.500	14.0000	-1.309
LA3-REF	5	79.000	102.500	15.8000	-0.941
MCN1-COMP-T	5	110.000	102.500	22.0000	0.286
MCN3-COMP	5	113.500	102.500	22.7000	0.429
MCN5-COMP	5	93.500	102.500	18.7000	-0.348
TB	5	168.000	102.500	33.6000	2.658

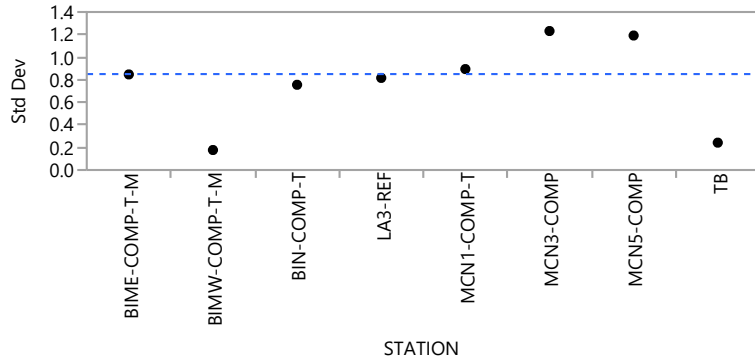
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
9.3221	7	0.2304

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB031**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	0.846860	0.6592136	0.6184800
BIMW-COMP-T-M	5	0.177119	0.1432792	0.1294640
BIN-COMP-T	5	0.755085	0.6545544	0.5781280
LA3-REF	5	0.815921	0.6104712	0.5781280
MCN1-COMP-T	5	0.894269	0.5970760	0.5826220
MCN3-COMP	5	1.231367	0.9744136	0.8839540
MCN5-COMP	5	1.191622	0.7612512	0.7488080
TB	5	0.242238	0.1681392	0.1557600

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9856	7	32	0.4589
Brown-Forsythe	0.9782	7	32	0.4639
Levene	1.7653	7	32	0.1291
Bartlett	2.3268	7	.	0.0226*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha											
1.95996		0.05											
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL					
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	1.35320	0.81173	1.672730					
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	1.83577	0.40346	2.412880					
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.33152	0.22085	2.479050					
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.40705	-0.18118	2.117050					
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.06522	-0.60109	1.820140					
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.29577	-0.76986	2.594200					
MCN3-COMP	BIN-COMP-T	2.00000	1.914854	1.04447	0.2963	0.58991	-1.72564	2.797040					
TB	MCN3-COMP	2.00000	1.914854	1.04447	0.2963	0.44143	-0.69786	2.594200					
MCN1-COMP-T	BIN-COMP-T	1.60000	1.914854	0.83557	0.4034	0.59274	-0.91130	2.700270					

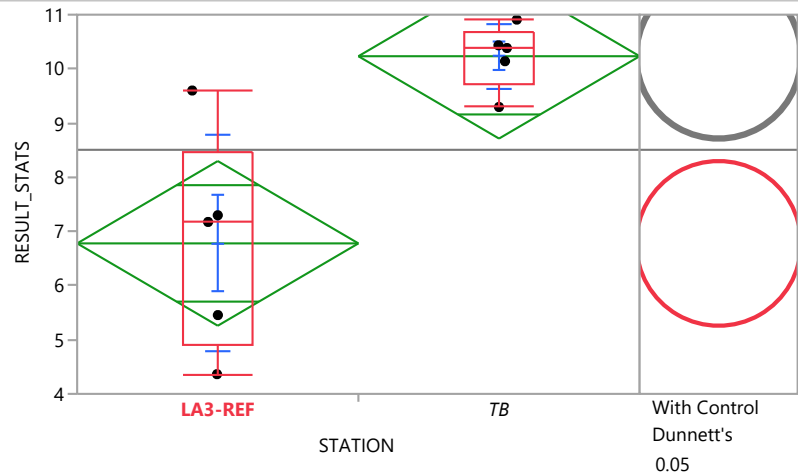


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB031**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.35724	-1.28559	2.514670	
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.29691	-1.68762	2.404440	
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.21161	-0.50303	1.960120	
MCN3-COMP	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.41944	-1.73333	2.501210	
MCN3-COMP	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.83540	-1.31737	2.056890	
MCN3-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.84976	-1.31306	2.611440	
MCN3-COMP	MCN1-COMP-T	0.40000	1.914854	0.20889	0.8345	0.15057	-2.11036	2.204300	
MCN5-COMP	BIN-COMP-T	0.40000	1.914854	0.20889	0.8345	0.45833	-1.72564	2.869040	
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.03118	-1.42000	2.683440	
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.03881	-1.54021	0.763850	
LA3-REF	BIN-COMP-T	0.00000	1.914854	0.00000	1.0000	0.18560	-1.61049	1.878330	
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.12720	-1.82203	2.573210	
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.02351	-1.31737	2.128890	
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.05469	-1.20222	1.138180	
MCN5-COMP	MCN3-COMP	-0.60000	1.909043	-0.31429	0.7533	-0.81944	-2.33871	2.279130	
BIN-COMP-T	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.54869	-1.05968	0.736060	
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.40203	-2.09476	1.582500	
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.23512	-2.24194	2.276300	
BIN-COMP-T	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-0.33213	-2.28036	1.162500	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB033**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	4.36364	4.36364	4.909095	7.17391	8.44865	9.6	9.6
TB	9.29577	9.29577	9.718285	10.3846	10.67195	10.9091	10.9091

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB033**

**Oneway Anova**

**Summary of Fit**

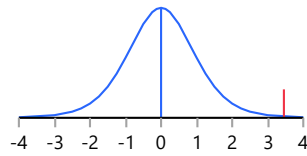
Rsquare	0.631994
Adj Rsquare	0.585993
Root Mean Square Error	1.473876
Mean of Response	8.505447
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	3.45513	t Ratio	3.706586
Std Err Dif	0.93216	DF	8
Upper CL Dif	5.60470	Prob >  t	0.0060*
Lower CL Dif	1.30557	Prob > t	0.0030*
Confidence	0.95	Prob < t	0.9970



**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	1	29.844877	29.8449	13.7388	0.0060*
Error	8	17.378473	2.1723		
C. Total	9	47.223351			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	6.7779	0.65914	5.2579	8.298
TB	5	10.2330	0.65914	8.7130	11.753

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

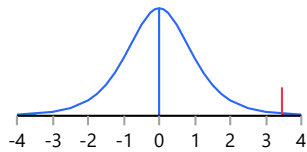
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	6.7779	1.99817	0.89361	4.2968	9.259
TB	5	10.2330	0.59324	0.26530	9.4964	10.970

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	3.45513	t Ratio	3.706586
Std Err Dif	0.93216	DF	4.699712
Upper CL Dif	5.89812	Prob >  t	0.0155*
Lower CL Dif	1.01215	Prob > t	0.0078*
Confidence	0.95	Prob < t	0.9922



**Means Comparisons**

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB033**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	1.306	0.0060*
LA3-REF	-2.15	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	16.000	27.500	3.20000	-2.298
TB	5	39.000	27.500	7.80000	2.298

**2-Sample Test, Normal Approximation**

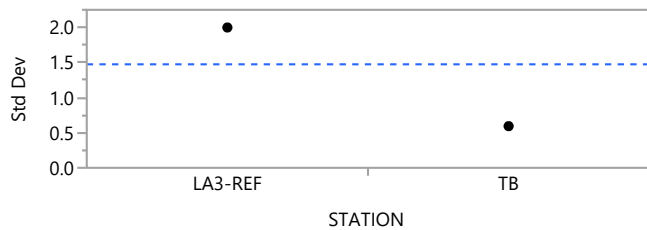
S	Z	Prob> Z
39	2.29783	0.0216*

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.7709	1	0.0163*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
LA3-REF	5	1.998171	1.495028	1.415822
TB	5	0.593236	0.411783	0.381466

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB033**

**Tests that the Variances are Equal**

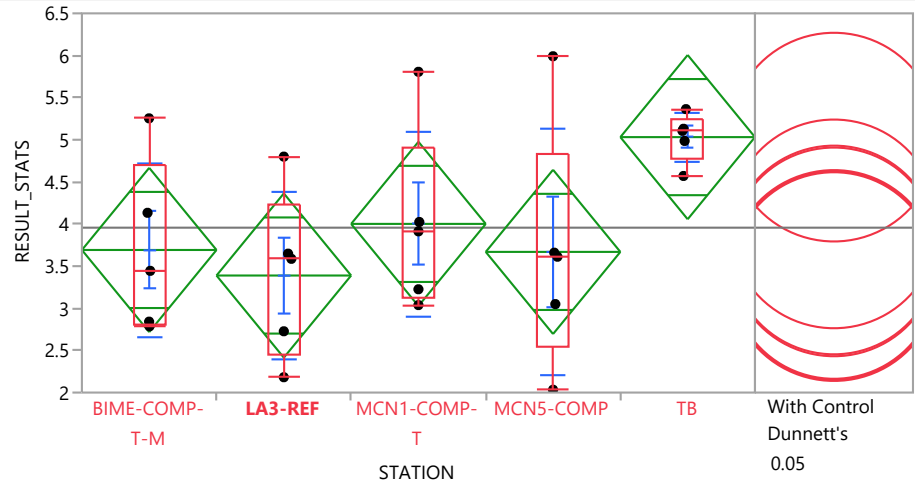
Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.4861	1	8	0.1535
Brown-Forsythe	2.8427	1	8	0.1303
Levene	4.3824	1	8	0.0696
Bartlett	4.3073	1	.	0.0379*
F Test 2-sided	11.3451	4	4	0.0372*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	3.260890	0.5408000	6.071160	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB037**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.78652	2.78652	2.814095	3.44444	4.693785	5.25424	5.25424
LA3-REF	2.18182	2.18182	2.454545	3.58696	4.224325	4.8	4.8
MCN1-COMP-T	3.03797	3.03797	3.13189	3.91304	4.91542	5.80645	5.80645
MCN5-COMP	2.03333	2.03333	2.541665	3.61184	4.825535	5.99107	5.99107
TB	4.57042	4.57042	4.77817	5.10577	5.247035	5.36364	5.36364

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB037**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.272115
Adj Rsquare	0.126538
Root Mean Square Error	1.044577
Mean of Response	3.956599
Observations (or Sum Wgts)	25

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	4	8.158312	2.03958	1.8692	0.1553
Error	20	21.822810	1.09114		
C. Total	24	29.981122			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.69204	0.46715	2.7176	4.6665
LA3-REF	5	3.38894	0.46715	2.4145	4.3634
MCN1-COMP-T	5	4.00153	0.46715	3.0271	4.9760
MCN5-COMP	5	3.66925	0.46715	2.6948	4.6437
TB	5	5.03124	0.46715	4.0568	6.0057

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.69204	1.02952	0.46041	2.4137	4.9704
LA3-REF	5	3.38894	0.99909	0.44681	2.1484	4.6295
MCN1-COMP-T	5	4.00153	1.09502	0.48971	2.6419	5.3612
MCN5-COMP	5	3.66925	1.45378	0.65015	1.8641	5.4744
TB	5	5.03124	0.29167	0.13044	4.6691	5.3934

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.65103	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB037**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.11	0.0699
MCN1-COMP-T	-1.14	0.7623
BIME-COMP-T-M	-1.45	0.9726
MCN5-COMP	-1.47	0.9793
LA3-REF	-1.75	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

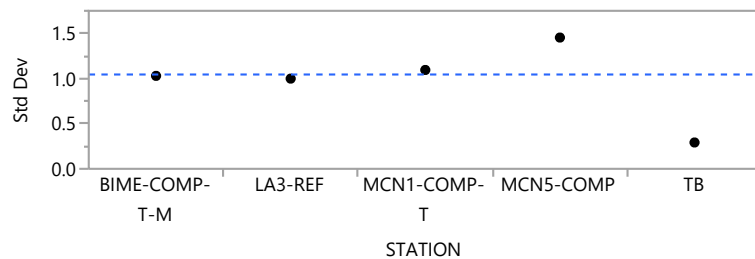
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	56.000	65.000	11.2000	-0.577
LA3-REF	5	45.000	65.000	9.0000	-1.325
MCN1-COMP-T	5	67.000	65.000	13.4000	0.102
MCN5-COMP	5	57.000	65.000	11.4000	-0.510
TB	5	100.000	65.000	20.0000	2.344

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.5502	4	0.1617

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.029515	0.8013960	0.7518760
LA3-REF	5	0.999087	0.7475160	0.7079120
MCN1-COMP-T	5	1.095020	0.7311104	0.7134120
MCN5-COMP	5	1.453783	0.9287288	0.9135480
TB	5	0.291673	0.2024528	0.1875460

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB037**

**Tests that the Variances are Equal**

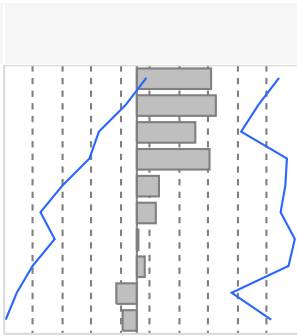
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.6779	4	20	0.6152
Brown-Forsythe	0.7389	4	20	0.5765
Levene	0.9035	4	20	0.4806
Bartlett	1.7401	4	.	0.1380

Warning: Small sample sizes. Use Caution.

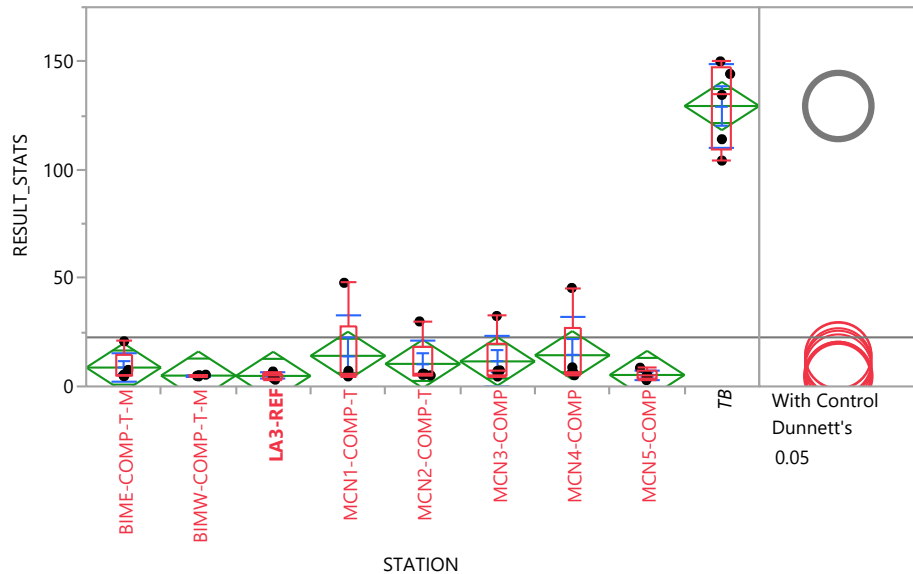
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* Alpha  
1.95996 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.54347	0.18592	2.948610
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.66133	-0.26832	2.521970
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.21739	-0.82053	2.137830
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.51859	-1.00515	3.097100
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.43743	-1.57419	3.079180
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.38414	-2.02843	2.964780
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.02488	-1.75000	3.263800
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.16740	-2.20424	3.149400
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.45424	-2.52697	1.958330
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.30120	-2.75645	2.765260



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB044**



With Control  
Dunnnett's  
0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB044**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.77528	4.77528	4.85986	5.37037	14.23021	20.8333	20.8333
BIMW-COMP-T-M	4.63542	4.63542	4.744985	4.87671	5.309805	5.41216	5.41216
LA3-REF	3.12727	3.12727	3.51818	5.1413	6.054865	6.88	6.88
MCN1-COMP-T	4.62366	4.62366	4.994755	5.63291	27.50176	47.8261	47.8261
MCN2-COMP-T	5.11765	5.11765	5.24401	5.65789	17.95139	30	30
MCN3-COMP	4.57895	4.57895	5.34503	7.17742	19.9569	32.5	32.5
MCN4-COMP	5.17442	5.17442	5.71221	6.32353	27.12725	45.4545	45.4545
MCN5-COMP	2.93333	2.93333	3.666665	5.21053	6.96143	8.64286	8.64286
TB	104.225	104.225	109.155	134.545	147.1155	150	150

**Oneway Anova**

**Summary of Fit**

Rsquare	0.922642
Adj Rsquare	0.905451
Root Mean Square Error	12.27383
Mean of Response	22.64078
Observations (or Sum Wgts)	45

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	8	64683.118	8085.39	53.6711	<.0001*
Error	36	5423.290	150.65		
C. Total	44	70106.408			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.710	5.4890	-2.4	19.84
BIMW-COMP-T-M	5	4.997	5.4890	-6.1	16.13
LA3-REF	5	4.857	5.4890	-6.3	15.99
MCN1-COMP-T	5	14.125	5.4890	3.0	25.26
MCN2-COMP-T	5	10.410	5.4890	-0.7225	21.54
MCN3-COMP	5	11.556	5.4890	0.424	22.69
MCN4-COMP	5	14.400	5.4890	3.3	25.53
MCN5-COMP	5	5.293	5.4890	-5.8	16.43
TB	5	129.417	5.4890	118.3	140.55

Std Error uses a pooled estimate of error variance



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB044**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.710	6.8732	3.0738	0.17594	17.24
BIMW-COMP-T-M	5	4.997	0.3091	0.1382	4.6	5.38
LA3-REF	5	4.857	1.4320	0.6404	3.1	6.64
MCN1-COMP-T	5	14.125	18.8623	8.4355	-9.3	37.55
MCN2-COMP-T	5	10.410	10.9553	4.8993	-3.2	24.01
MCN3-COMP	5	11.556	11.7612	5.2598	-3.0	26.16
MCN4-COMP	5	14.400	17.4105	7.7862	-7.2	36.02
MCN5-COMP	5	5.293	2.0973	0.9379	2.7	7.90
TB	5	129.417	19.6158	8.7725	105.1	153.77

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.78823	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	102.9	<.0001*
MCN4-COMP	-12.1	0.7428
MCN1-COMP-T	-12.4	0.7668
MCN3-COMP	-14.9	0.9401
MCN2-COMP-T	-16.1	0.9779
BIME-COMP-T-M	-17.8	0.9977
MCN5-COMP	-21.2	1.0000
BIMW-COMP-T-M	-21.5	1.0000
LA3-REF	-21.6	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	108.500	115.000	21.7000	-0.217
BIMW-COMP-T-M	5	63.000	115.000	12.6000	-1.860
LA3-REF	5	64.000	115.000	12.8000	-1.824
MCN1-COMP-T	5	118.500	115.000	23.7000	0.108
MCN2-COMP-T	5	118.500	115.000	23.7000	0.108
MCN3-COMP	5	131.500	115.000	26.3000	0.578
MCN4-COMP	5	143.000	115.000	28.6000	0.993
MCN5-COMP	5	73.000	115.000	14.6000	-1.499
TB	5	215.000	115.000	43.0000	3.594

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB044**

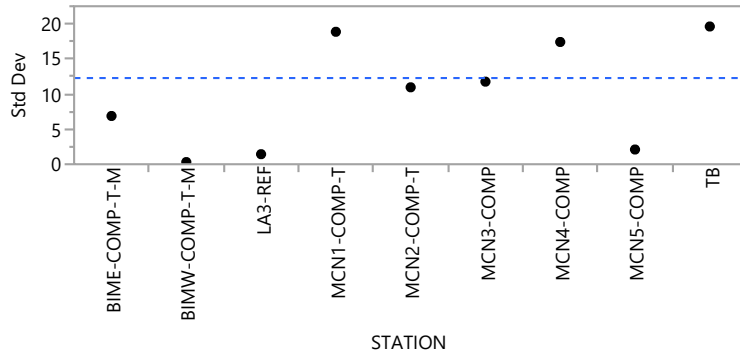
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
21.0950	8	0.0069*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	6.87317	4.84928	3.74814
BIMW-COMP-T-M	5	0.30909	0.25004	0.22593
LA3-REF	5	1.43202	1.07144	1.01467
MCN1-COMP-T	5	18.86231	13.48036	9.00280
MCN2-COMP-T	5	10.95528	7.83610	5.08295
MCN3-COMP	5	11.76124	8.37750	5.84475
MCN4-COMP	5	17.41052	12.42160	8.56602
MCN5-COMP	5	2.09726	1.33981	1.31791
TB	5	19.61580	16.20976	15.18420

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.0345	8	36	0.4290
Brown-Forsythe	0.9875	8	36	0.4618
Levene	3.7793	8	36	0.0026*
Bartlett	6.4844	8	.	<.0001*

Warning: Small sample sizes. Use Caution.

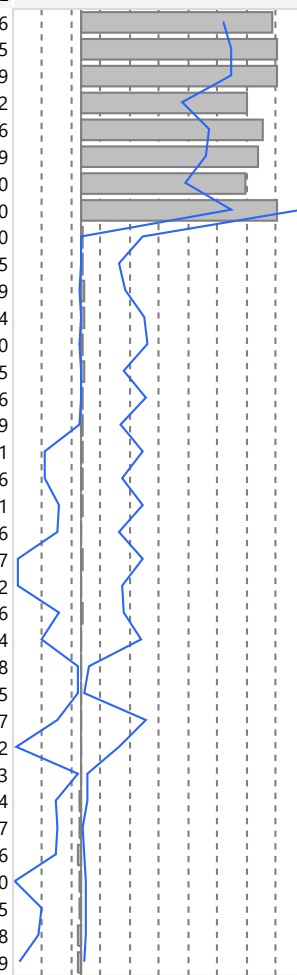
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

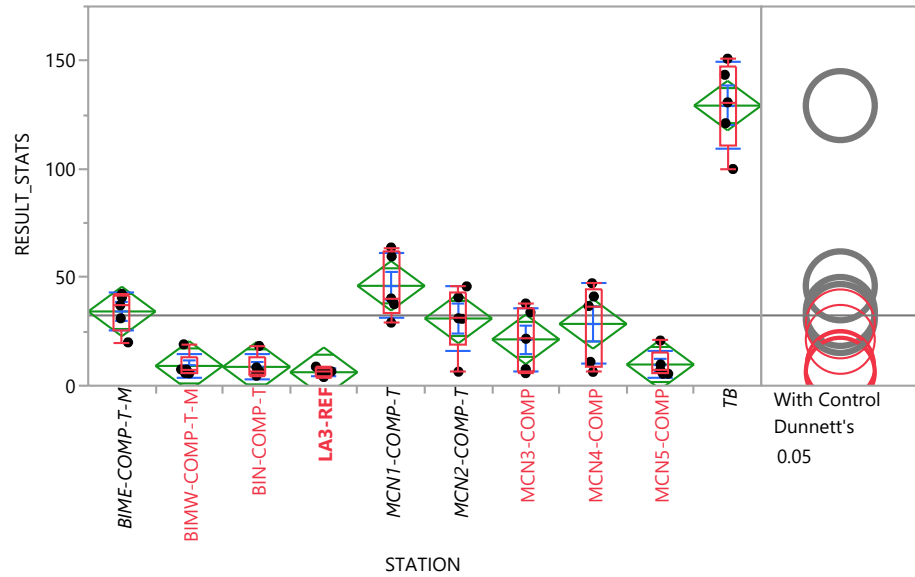
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB044**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	126.918	93.2517	145.0556
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	129.668	99.0176	145.1455
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	129.404	98.9953	146.0909
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	109.461	66.2589	144.6342
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	120.000	84.0850	144.6296
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	117.500	81.5850	143.8889
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	108.911	68.6305	143.7500
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	129.334	98.9450	145.6000
MCN4-COMP	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	1.469	-0.0330	40.6000
MCN2-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	0.695	-0.0898	25.1455
MCN3-COMP	LA3-REF	3.20000	1.914854	1.67115	0.0947	2.184	-0.7689	28.5909
MCN4-COMP	LA3-REF	3.20000	1.914854	1.67115	0.0947	2.341	-0.6300	41.5454
MCN1-COMP-T	LA3-REF	2.80000	1.914854	1.46225	0.1437	1.496	-1.5142	43.9170
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	2.002	-0.6285	27.6455
MCN1-COMP-T	BIMW-COMP-T-M	2.40000	1.914854	1.25336	0.2101	0.756	-0.5838	42.9716
MCN2-COMP-T	LA3-REF	2.40000	1.914854	1.25336	0.2101	1.209	-1.5096	26.0909
MCN4-COMP	MCN2-COMP-T	2.00000	1.914854	1.04447	0.2963	0.880	-23.7500	40.0841
MCN3-COMP	MCN2-COMP-T	1.60000	1.914854	0.83557	0.4034	1.275	-23.8889	27.1296
MCN4-COMP	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	1.173	-14.5833	40.5101
MCN2-COMP-T	BIME-COMP-T-M	1.00000	1.909043	0.52382	0.6004	0.342	-15.4629	25.0556
MCN4-COMP	MCN1-COMP-T	0.80000	1.914854	0.41779	0.6761	0.691	-41.5761	40.0887
MCN3-COMP	MCN1-COMP-T	0.60000	1.909043	0.31429	0.7533	0.478	-41.7150	27.1342
MCN3-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	1.167	-14.7222	27.5556
MCN4-COMP	MCN3-COMP	0.40000	1.914854	0.20889	0.8345	0.212	-26.2500	39.3434
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.069	-2.4800	4.7338
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.066	-2.0802	2.0255
MCN1-COMP-T	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.263	-15.4675	42.8817
MCN2-COMP-T	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	0.00452	-42.4557	24.6342
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.00308	-2.2741	3.7883
MCN5-COMP	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-0.970	-16.4333	3.6984
BIMW-COMP-T-M	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-0.494	-15.9788	0.4677
LA3-REF	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-1.461	-16.9242	1.9356
MCN5-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-1.233	-43.4261	3.2770
MCN5-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-0.718	-25.6000	3.2725
MCN5-COMP	MCN3-COMP	-2.40000	1.914854	-1.25336	0.2101	-1.967	-28.1000	2.5318
MCN5-COMP	MCN4-COMP	-2.80000	1.914854	-1.46225	0.1437	-1.924	-41.0545	2.3929



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB049**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	20	20	25.55555	37.0787	41.5568	42.3729	42.3729
BIMW-COMP-T-M	5.72917	5.72917	5.790115	7.43243	13.31258	19.0909	19.0909
BIN-COMP-T	4.58333	4.58333	5.041665	6.54762	13.39742	18.3333	18.3333
LA3-REF	4	4	4.5	6.57609	7.744595	8.8	8.8
MCN1-COMP-T	29.1139	29.1139	33.37415	40.2439	61.72275	63.7681	63.7681
MCN2-COMP-T	6.47059	6.47059	18.6674	31.1111	43.3114	45.8333	45.8333
MCN3-COMP	5.78947	5.78947	6.71418	21.6667	35.901	37.931	37.931
MCN4-COMP	6.39535	6.39535	8.697675	36.7647	44.2246	47.2727	47.2727
MCN5-COMP	5.5	5.5	5.5	7.23684	15.32737	20.8333	20.8333
TB	100	100	110.5635	130.769	147.1935	150.909	150.909

**Oneway Anova**

**Summary of Fit**

Rsquare	0.90368
Adj Rsquare	0.882008
Root Mean Square Error	12.65064
Mean of Response	32.43239
Observations (or Sum Wgts)	50

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB049**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	60059.566	6673.29	41.6979	<.0001*
Error	40	6401.550	160.04		
C. Total	49	66461.116			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	34.261	5.6575	22.8	45.69
BIMW-COMP-T-M	5	9.128	5.6575	-2.3	20.56
BIN-COMP-T	5	8.685	5.6575	-2.7	20.12
LA3-REF	5	6.213	5.6575	-5.2	17.65
MCN1-COMP-T	5	46.088	5.6575	34.7	57.52
MCN2-COMP-T	5	31.014	5.6575	19.6	42.45
MCN3-COMP	5	21.379	5.6575	9.9	32.81
MCN4-COMP	5	28.522	5.6575	17.1	39.96
MCN5-COMP	5	9.778	5.6575	-1.7	21.21
TB	5	129.257	5.6575	117.8	140.69

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	34.261	9.0695	4.0560	23.00	45.52
BIMW-COMP-T-M	5	9.128	5.6339	2.5196	2.13	16.12
BIN-COMP-T	5	8.685	5.5829	2.4968	1.75	15.62
LA3-REF	5	6.213	1.8317	0.8191	3.94	8.49
MCN1-COMP-T	5	46.088	14.9248	6.6746	27.56	64.62
MCN2-COMP-T	5	31.014	15.1458	6.7734	12.21	49.82
MCN3-COMP	5	21.379	14.6793	6.5648	3.15	39.61
MCN4-COMP	5	28.522	18.5491	8.2954	5.49	51.55
MCN5-COMP	5	9.778	6.4281	2.8747	1.80	17.76
TB	5	129.257	19.9712	8.9314	104.46	154.05

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB049****Means Comparisons****Comparisons with a control using Dunnett's Method****LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	100.5	<.0001*
MCN1-COMP-T	17.38	0.0001*
BIME-COMP-T-M	5.551	0.0085*
MCN2-COMP-T	2.304	0.0247*
MCN4-COMP	-0.19	0.0529
MCN3-COMP	-7.33	0.3243
MCN5-COMP	-18.9	0.9995
BIMW-COMP-T-M	-19.6	0.9999
BIN-COMP-T	-20	1.0000
LA3-REF	-22.5	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	168.500	127.500	33.7000	1.310
BIMW-COMP-T-M	5	73.000	127.500	14.6000	-1.746
BIN-COMP-T	5	61.000	127.500	12.2000	-2.135
LA3-REF	5	51.000	127.500	10.2000	-2.458
MCN1-COMP-T	5	189.000	127.500	37.8000	1.973
MCN2-COMP-T	5	151.500	127.500	30.3000	0.760
MCN3-COMP	5	121.000	127.500	24.2000	-0.194
MCN4-COMP	5	148.000	127.500	29.6000	0.647
MCN5-COMP	5	72.000	127.500	14.4000	-1.779
TB	5	240.000	127.500	48.0000	3.622

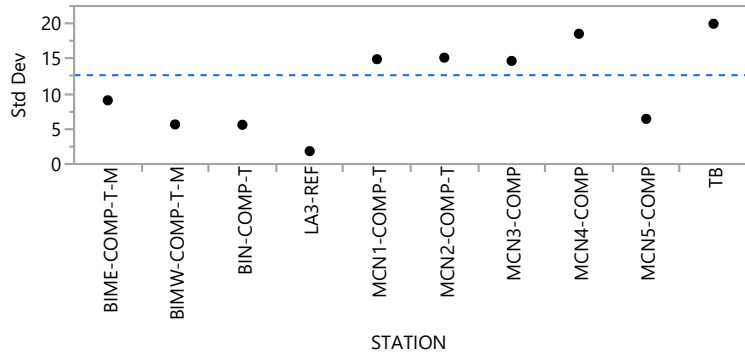
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
33.4038	9	0.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB049**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	9.06955	6.96410	6.40050
BIMW-COMP-T-M	5	5.63393	3.98534	3.00898
BIN-COMP-T	5	5.58292	3.85926	3.34230
LA3-REF	5	1.83166	1.37044	1.29784
MCN1-COMP-T	5	14.92477	12.50817	11.33944
MCN2-COMP-T	5	15.14582	9.87707	9.85760
MCN3-COMP	5	14.67928	11.73219	11.67473
MCN4-COMP	5	18.54910	15.85934	14.21077
MCN5-COMP	5	6.42809	4.43924	3.93095
TB	5	19.97124	14.95448	14.65200

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.8738	9	40	0.0845
Brown-Forsythe	1.7912	9	40	0.1004
Levene	3.3521	9	40	0.0038*
Bartlett	2.6348	9	.	0.0048*

Warning: Small sample sizes. Use Caution.

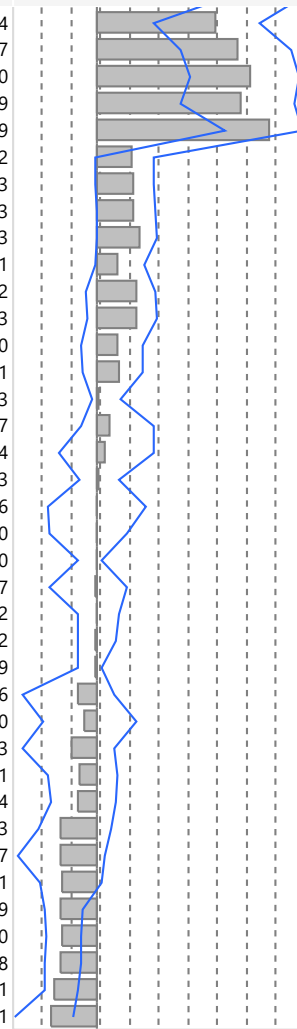
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha						
		1.95996	0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	32.811	18.5435	57.917	
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	33.696	19.3011	58.268	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	33.668	22.4247	58.768	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	99.658	59.2593	123.478	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	123.337	92.4658	145.058	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	124.221	91.5385	145.409	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	124.193	93.3108	145.909	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB049**

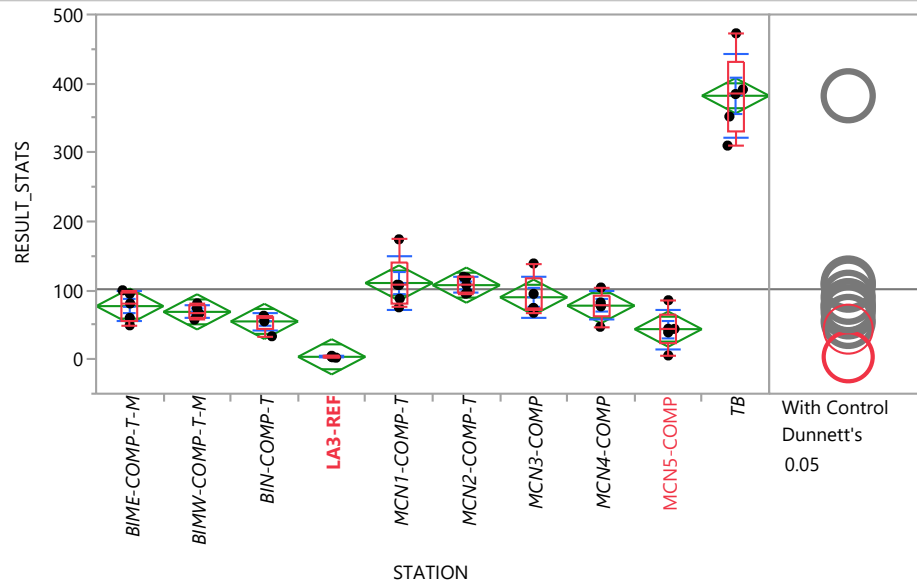
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean				Hodges-				
		Difference	Std Err Dif	Z	p-Value	Lehmann	Lower CL	Upper CL		
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	83.801	40.3226	114.364		
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	99.658	59.2105	137.007		
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	109.607	66.1290	143.270		
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	102.302	58.8235	139.909		
TB	MCN5-COMP	4.80000	1.909043	2.51435	0.0119*	122.645	90.1786	145.409		
MCN2-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	25.013	-1.0637	39.982		
MCN2-COMP-T	BIN-COMP-T	3.60000	1.914854	1.88004	0.0601	25.364	-1.9910	40.333		
MCN2-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	26.111	-0.2186	40.833		
MCN4-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	30.189	-0.2938	42.273		
MCN3-COMP	LA3-REF	3.20000	1.914854	1.67115	0.0947	15.091	-1.1611	32.931		
MCN4-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	28.182	-8.0909	41.422		
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	28.303	-7.3333	41.773		
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	14.234	-11.4520	32.080		
MCN3-COMP	BIN-COMP-T	2.80000	1.914854	1.46225	0.1437	15.119	-10.6944	32.431		
MCN5-COMP	LA3-REF	2.00000	1.909043	1.04765	0.2948	1.500	-3.3000	15.833		
MCN1-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	9.133	-11.6268	39.677		
MCN4-COMP	MCN3-COMP	1.60000	1.914854	0.83557	0.4034	5.211	-27.4757	39.634		
MCN5-COMP	BIN-COMP-T	0.80000	1.891501	0.42294	0.6723	0.917	-12.8333	15.333		
MCN4-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	0.387	-34.8333	34.706		
MCN2-COMP-T	BIME-COMP-T-M	-0.20000	1.909043	-0.10476	0.9166	-0.247	-34.2701	20.790		
LA3-REF	BIN-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-0.583	-13.3333	3.300		
MCN4-COMP	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-1.196	-34.3454	21.177		
MCN5-COMP	BIMW-COMP-T-M	-0.40000	1.909043	-0.20953	0.8340	-0.229	-13.5909	14.982		
BIN-COMP-T	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.758	-13.5909	12.482		
LA3-REF	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-0.856	-14.0909	2.949		
MCN2-COMP-T	MCN1-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-13.844	-53.2068	11.676		
MCN3-COMP	MCN2-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-9.198	-38.1944	27.400		
MCN4-COMP	MCN1-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-18.501	-53.2821	12.063		
MCN3-COMP	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-12.361	-34.9512	13.871		
MCN5-COMP	MCN3-COMP	-2.80000	1.909043	-1.46670	0.1425	-13.038	-32.4310	13.194		
MCN5-COMP	MCN4-COMP	-3.20000	1.909043	-1.67623	0.0937	-26.439	-41.7727	9.833		
MCN3-COMP	MCN1-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-25.806	-56.1292	4.757		
MCN5-COMP	MCN2-COMP-T	-3.60000	1.909043	-1.88576	0.0593	-25.000	-40.3333	3.351		
MCN5-COMP	BIME-COMP-T-M	-4.40000	1.909043	-2.30482	0.0212*	-25.611	-36.8729	-10.179		
BIMW-COMP-T-M	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-25.382	-36.5218	-12.020		
BIN-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-26.528	-36.8729	-11.538		
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-30.503	-37.3729	-13.311		
MCN5-COMP	MCN1-COMP-T	-4.80000	1.909043	-2.51435	0.0119*	-33.007	-58.2681	-16.801		





**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB052**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	49.1667	49.1667	54.58335	80.8989	97.53085	100	100
BIMW-COMP-T-M	57.4468	57.4468	61.01505	66.3636	77.52685	81.0811	81.0811
BIN-COMP-T	33.3333	33.3333	44.16665	60.8333	62.49085	63.0769	63.0769
LA3-REF	2.25455	2.25455	2.536365	3.70652	4.365135	4.96	4.96
MCN1-COMP-T	75.2688	75.2688	81.53685	107.595	140.989	173.913	173.913
MCN2-COMP-T	95.0617	95.0617	95.76615	107.778	118.9325	119.444	119.444
MCN3-COMP	67.3684	67.3684	70.76755	74.1936	116.8583	138.889	138.889
MCN4-COMP	47.0588	47.0588	61.9015	78.1818	93.17645	104	104
MCN5-COMP	5.44643	5.44643	22.22322	44	64.8465	85.5263	85.5263
TB	309.859	309.859	330.986	384.615	432.0155	472.727	472.727

**Oneway Anova**

**Summary of Fit**

Rsquare	0.937816
Adj Rsquare	0.923825
Root Mean Square Error	28.26299
Mean of Response	101.5319
Observations (or Sum Wgts)	50

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB052**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	481878.06	53542.0	67.0284	<.0001*
Error	40	31951.86	798.8		
C. Total	49	513829.91			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	77.025	12.640	51.5	102.57
BIMW-COMP-T-M	5	68.689	12.640	43.1	94.24
BIN-COMP-T	5	54.830	12.640	29.3	80.38
LA3-REF	5	3.502	12.640	-22.0	29.05
MCN1-COMP-T	5	110.529	12.640	85.0	136.07
MCN2-COMP-T	5	107.435	12.640	81.9	132.98
MCN3-COMP	5	89.889	12.640	64.3	115.43
MCN4-COMP	5	77.668	12.640	52.1	103.21
MCN5-COMP	5	43.628	12.640	18.1	69.17
TB	5	382.124	12.640	356.6	407.67

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	77.025	21.9893	9.834	49.72	104.33
BIMW-COMP-T-M	5	68.689	9.0848	4.063	57.41	79.97
BIN-COMP-T	5	54.830	12.4121	5.551	39.42	70.24
LA3-REF	5	3.502	1.0324	0.462	2.22	4.78
MCN1-COMP-T	5	110.529	38.0522	17.017	63.28	157.78
MCN2-COMP-T	5	107.435	11.6011	5.188	93.03	121.84
MCN3-COMP	5	89.889	29.2665	13.088	53.55	126.23
MCN4-COMP	5	77.668	20.3308	9.092	52.42	102.91
MCN5-COMP	5	43.628	28.4392	12.718	8.32	78.94
TB	5	382.124	60.0464	26.854	307.57	456.68

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB052**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	328.4	<.0001*
MCN1-COMP-T	56.77	<.0001*
MCN2-COMP-T	53.67	<.0001*
MCN3-COMP	36.13	0.0002*
MCN4-COMP	23.91	0.0013*
BIME-COMP-T-M	23.26	0.0015*
BIMW-COMP-T-M	14.93	0.0057*
BIN-COMP-T	1.067	0.0434*
MCN5-COMP	-10.1	0.1716
LA3-REF	-50.3	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	126.500	127.500	25.3000	-0.016
BIMW-COMP-T-M	5	104.000	127.500	20.8000	-0.744
BIN-COMP-T	5	71.000	127.500	14.2000	-1.811
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	182.000	127.500	36.4000	1.746
MCN2-COMP-T	5	195.500	127.500	39.1000	2.183
MCN3-COMP	5	145.000	127.500	29.0000	0.550
MCN4-COMP	5	132.000	127.500	26.4000	0.129
MCN5-COMP	5	64.000	127.500	12.8000	-2.037
TB	5	240.000	127.500	48.0000	3.622

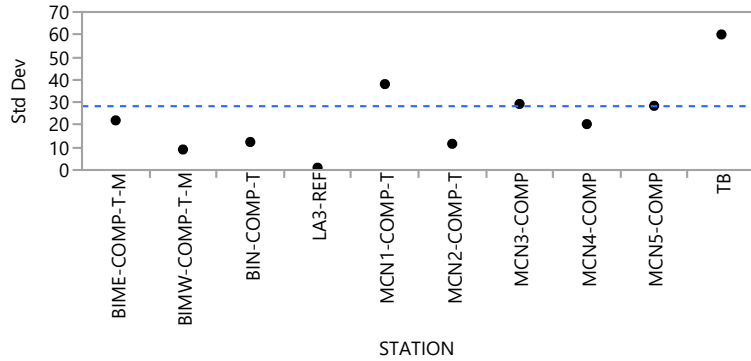
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
38.6004	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB052**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	21.98929	17.95369	17.17900
BIMW-COMP-T-M	5	9.08477	7.06990	6.60472
BIN-COMP-T	5	12.41210	8.59854	7.32968
LA3-REF	5	1.03239	0.77243	0.73151
MCN1-COMP-T	5	38.05219	25.35346	23.78086
MCN2-COMP-T	5	11.60110	9.33513	9.26654
MCN3-COMP	5	29.26646	21.57539	18.43630
MCN4-COMP	5	20.33078	12.61283	12.50998
MCN5-COMP	5	28.43918	17.12374	17.04931
TB	5	60.04638	40.91008	40.41180

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.5040	9	40	0.1799
Brown-Forsythe	1.5269	9	40	0.1719
Levene	1.9768	9	40	0.0682
Bartlett	4.5975	9	.	<.0001*

Warning: Small sample sizes. Use Caution.

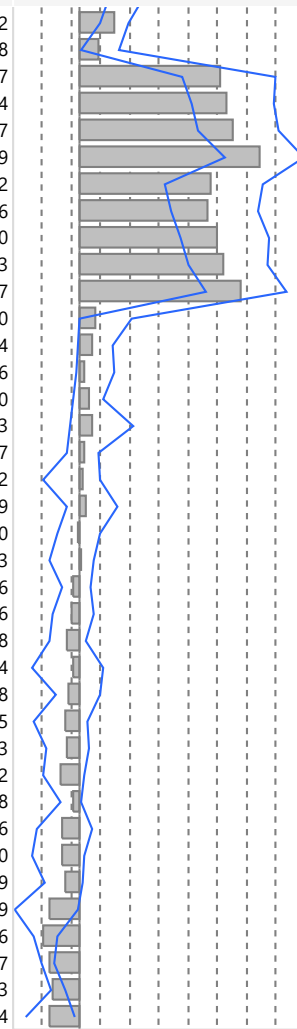
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	Box Plot
Level	- Level		Difference	Std Err Dif						
MCN1-COMP-T	BIN-COMP-T	1.95996	4.80000	1.914854	2.50672	0.0122*	46.160	13.364	118.913	[Box Plot]
MCN1-COMP-T	LA3-REF	0.05	4.80000	1.914854	2.50672	0.0122*	103.825	71.499	171.095	
MCN2-COMP-T	BIMW-COMP-T-M		4.80000	1.914854	2.50672	0.0122*	38.363	15.390	60.974	
MCN2-COMP-T	BIN-COMP-T		4.80000	1.914854	2.50672	0.0122*	55.344	33.157	85.088	
MCN2-COMP-T	LA3-REF		4.80000	1.914854	2.50672	0.0122*	104.071	91.291	116.626	
MCN3-COMP	BIN-COMP-T		4.80000	1.914854	2.50672	0.0122*	31.751	5.464	83.889	
MCN3-COMP	LA3-REF		4.80000	1.914854	2.50672	0.0122*	71.375	63.598	136.071	

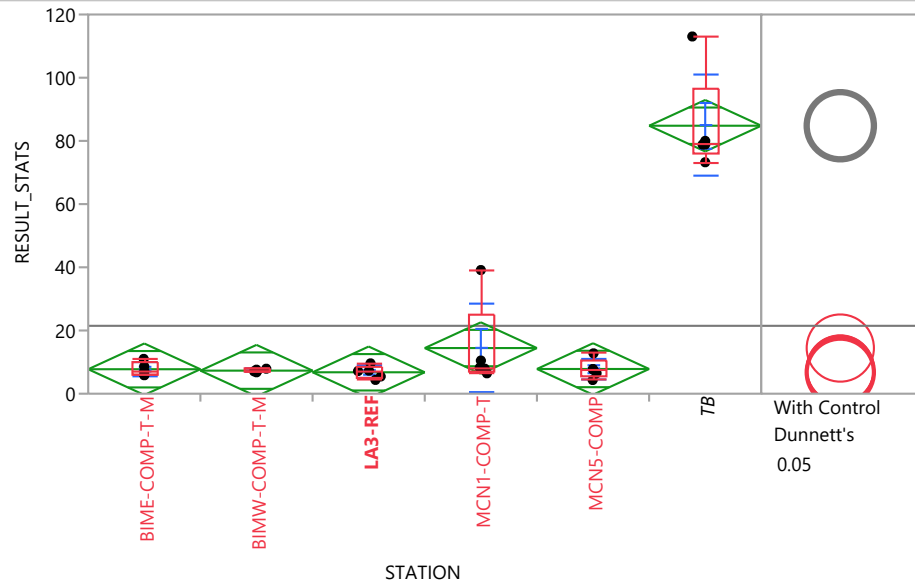
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB052**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean				Hodges-				
		Difference	Std Err Dif	Z	p-Value	Lehmann	Lower CL	Upper CL		
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	74.490	43.289	101.182		
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	40.230	1.676	82.708		
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	296.242	214.797	412.727		
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	310.642	235.886	408.144		
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	323.782	247.954	417.727		
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	380.908	306.089	469.909		
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	276.844	178.200	384.922		
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	271.860	191.438	376.256		
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	289.787	213.224	398.560		
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	305.054	227.506	395.983		
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	340.615	265.692	433.727		
MCN1-COMP-T	BIMW-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	33.622	1.296	109.330		
MCN2-COMP-T	BIME-COMP-T-M	3.80000	1.909043	1.99053	0.0465*	26.879	-3.529	69.254		
MCN3-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	9.922	-6.914	74.306		
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	20.448	-14.846	49.020		
MCN1-COMP-T	BIME-COMP-T-M	2.80000	1.914854	1.46225	0.1437	26.696	-19.793	113.913		
MCN4-COMP	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	11.818	-26.914	39.417		
MCN2-COMP-T	MCN1-COMP-T	0.80000	1.914854	0.41779	0.6761	8.666	-77.442	43.152		
MCN3-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	13.929	-27.693	78.889		
MCN4-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-2.108	-48.003	44.000		
MCN4-COMP	MCN3-COMP	0.00000	1.914854	0.00000	1.0000	2.551	-62.145	29.833		
BIMW-COMP-T-M	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-13.981	-37.615	24.806		
MCN5-COMP	BIN-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-16.833	-56.458	30.526		
BIN-COMP-T	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-25.899	-61.728	12.738		
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-13.638	-99.746	51.084		
MCN3-COMP	MCN2-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-23.593	-51.053	42.418		
MCN4-COMP	MCN1-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-28.210	-97.169	16.195		
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-25.583	-68.526	20.943		
MCN5-COMP	MCN4-COMP	-3.20000	1.914854	-1.67115	0.0947	-37.744	-76.906	8.782		
BIN-COMP-T	BIMW-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-11.364	-40.639	4.458		
MCN5-COMP	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-36.899	-89.615	25.526		
MCN5-COMP	MCN3-COMP	-3.60000	1.914854	-1.88004	0.0601	-35.194	-99.889	11.360		
MCN4-COMP	MCN2-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-29.596	-71.362	7.529		
MCN5-COMP	MCN1-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-63.898	-134.913	-2.279		
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-77.192	-97.182	-45.396		
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-62.657	-78.263	-53.677		
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-57.063	-60.259	-29.563		
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-63.778	-112.975	-10.944		



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB056**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	5.8427	5.8427	5.900515	7.22222	9.841785	11.0169	11.0169
BIMW-COMP-T-M	6.77083	6.77083	6.93087	7.12329	7.755895	7.90541	7.90541
LA3-REF	4.36364	4.36364	4.909095	7.17391	8.44865	9.6	9.6
MCN1-COMP-T	6.45161	6.45161	7.18922	8.22785	24.80715	39.1304	39.1304
MCN5-COMP	4.33333	4.33333	5.416665	7.69737	10.28395	12.7679	12.7679
TB	73.2394	73.2394	76.0428	78.8732	96.5215	113.043	113.043

**Oneway Anova**

**Summary of Fit**

Rsquare	0.92847
Adj Rsquare	0.913568
Root Mean Square Error	8.824312
Mean of Response	21.48047
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	24257.839	4851.57	62.3046	<.0001*
Error	24	1868.844	77.87		
C. Total	29	26126.683			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB056**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	7.7414	3.9464	-0.40	15.886
BIMW-COMP-T-M	5	7.2994	3.9464	-0.85	15.444
LA3-REF	5	6.7779	3.9464	-1.37	14.923
MCN1-COMP-T	5	14.4441	3.9464	6.30	22.589
MCN5-COMP	5	7.8197	3.9464	-0.33	15.965
TB	5	84.8004	3.9464	76.66	92.945

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	7.7414	2.1586	0.9654	5.06	10.42
BIMW-COMP-T-M	5	7.2994	0.4515	0.2019	6.74	7.86
LA3-REF	5	6.7779	1.9982	0.8936	4.30	9.26
MCN1-COMP-T	5	14.4441	13.8753	6.2052	-2.78	31.67
MCN5-COMP	5	7.8197	3.0982	1.3856	3.97	11.67
TB	5	84.8004	16.0073	7.1587	64.92	104.68

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	62.98	<.0001*
MCN1-COMP-T	-7.38	0.5215
MCN5-COMP	-14	0.9998
BIME-COMP-T-M	-14.1	0.9999
BIMW-COMP-T-M	-14.5	1.0000
LA3-REF	-15	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB056**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

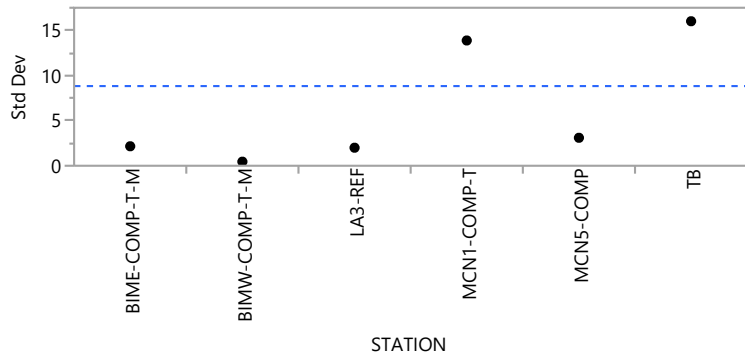
Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	64.000	77.500	12.8000	-0.723
BIMW-COMP-T-M	5	58.000	77.500	11.6000	-1.057
LA3-REF	5	50.000	77.500	10.0000	-1.503
MCN1-COMP-T	5	90.000	77.500	18.0000	0.668
MCN5-COMP	5	63.000	77.500	12.6000	-0.779
TB	5	140.000	77.500	28.0000	3.450

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
14.4297	5	0.0131*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	2.15864	1.68034	1.576508
BIMW-COMP-T-M	5	0.45148	0.36522	0.330010
LA3-REF	5	1.99817	1.49503	1.415822
MCN1-COMP-T	5	13.87528	9.87451	7.047172
MCN5-COMP	5	3.09824	1.97927	1.946914
TB	5	16.00726	11.29706	8.191480

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.0595	5	24	0.4069
Brown-Forsythe	0.8185	5	24	0.5485
Levene	3.9734	5	24	0.0091*
Bartlett	8.5519	5	.	<.0001*

Warning: Small sample sizes. Use Caution.

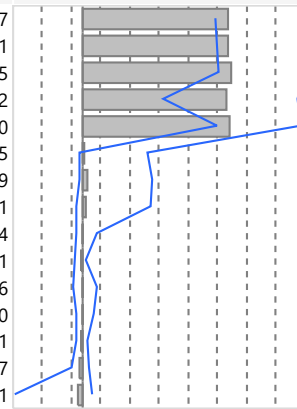


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB056**

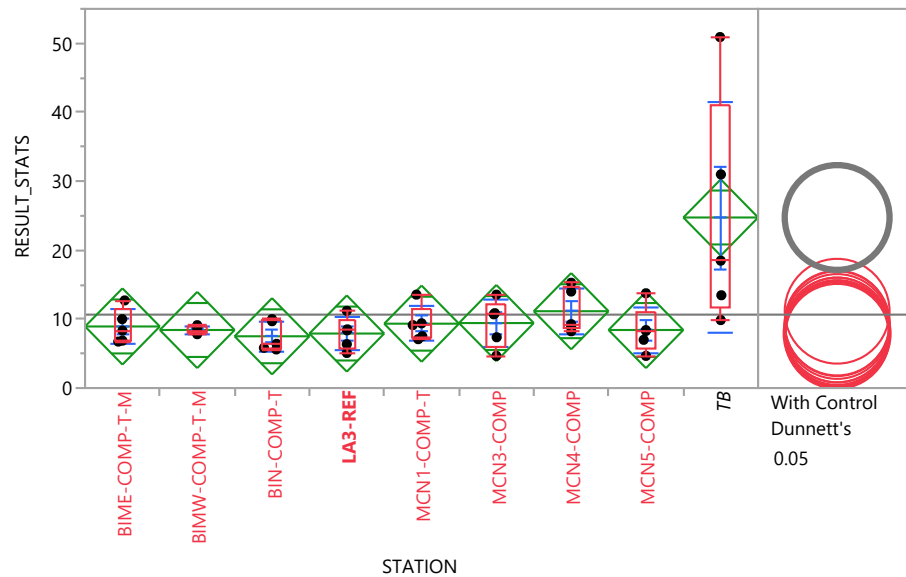
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* 1.95996  
Alpha 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	71.6510	64.5727	107.0847
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	71.7823	65.6330	105.9521
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	72.7027	65.9421	107.5885
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	70.6454	39.7158	105.1162
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	72.2000	65.4394	106.5430
MCN1-COMP-T	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	1.1369	-1.1548	32.0395
MCN1-COMP-T	LA3-REF	2.80000	1.914854	1.46225	0.1437	2.4723	-1.6732	33.6759
MCN1-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	1.8172	-3.0901	33.1721
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.5235	-3.1000	7.3134
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.0989	-3.9260	1.9471
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.4752	-4.5169	6.8096
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.0910	-3.2731	5.6770
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.4325	-3.2427	2.5091
LA3-REF	BIME-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-1.3694	-5.5624	3.6417
MCN5-COMP	MCN1-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-1.7279	-32.6304	4.8411



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB060**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB060**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	6.74157	6.74157	6.808285	8.33333	11.35595	12.7119	12.7119
BIMW-COMP-T-M	7.8125	7.8125	7.99716	8.21918	8.94911	9.12162	9.12162
BIN-COMP-T	5.6	5.6	5.716665	6.41667	9.846155	10	10
LA3-REF	5.09091	5.09091	5.727275	8.36957	9.856755	11.2	11.2
MCN1-COMP-T	7.08861	7.08861	7.307745	9.13043	11.46932	13.5484	13.5484
MCN3-COMP	4.66667	4.66667	6.017545	10.6944	12.20525	13.5484	13.5484
MCN4-COMP	8.23529	8.23529	8.59439	9.26471	14.63635	15.2727	15.2727
MCN5-COMP	4.66667	4.66667	5.833335	8.28947	11.075	13.75	13.75
TB	9.85915	9.85915	11.66033	18.4783	40.9475	50.9091	50.9091

**Oneway Anova**

**Summary of Fit**

Rsquare	0.464591
Adj Rsquare	0.345611
Root Mean Square Error	6.096743
Mean of Response	10.64898
Observations (or Sum Wgts)	45

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	8	1161.1367	145.142	3.9048	0.0021*
Error	36	1338.1301	37.170		
C. Total	44	2499.2667			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.9324	2.7265	3.403	14.462
BIMW-COMP-T-M	5	8.4223	2.7265	2.893	13.952
BIN-COMP-T	5	7.5085	2.7265	1.979	13.038
LA3-REF	5	7.9075	2.7265	2.378	13.437
MCN1-COMP-T	5	9.3369	2.7265	3.807	14.867
MCN3-COMP	5	9.4280	2.7265	3.898	14.958
MCN4-COMP	5	11.1452	2.7265	5.616	16.675
MCN5-COMP	5	8.4212	2.7265	2.892	13.951
TB	5	24.7388	2.7265	19.209	30.268

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB060**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.9324	2.4908	1.1139	5.8397	12.025
BIMW-COMP-T-M	5	8.4223	0.5209	0.2330	7.7755	9.069
BIN-COMP-T	5	7.5085	2.1574	0.9648	4.8297	10.187
LA3-REF	5	7.9075	2.3312	1.0425	5.0130	10.802
MCN1-COMP-T	5	9.3369	2.5551	1.1427	6.1644	12.509
MCN3-COMP	5	9.4280	3.4478	1.5419	5.1469	13.709
MCN4-COMP	5	11.1452	3.2401	1.4490	7.1221	15.168
MCN5-COMP	5	8.4212	3.3365	1.4921	4.2784	12.564
TB	5	24.7388	16.6710	7.4555	4.0390	45.439

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.78823	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	6.08	0.0007*
MCN4-COMP	-7.51	0.9477
MCN3-COMP	-9.23	0.9995
MCN1-COMP-T	-9.32	0.9997
BIME-COMP-T-M	-9.73	1.0000
BIMW-COMP-T-M	-10.2	1.0000
MCN5-COMP	-10.2	1.0000
LA3-REF	-10.8	1.0000
BIN-COMP-T	-10.4	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	103.500	115.000	20.7000	-0.397
BIMW-COMP-T-M	5	93.000	115.000	18.6000	-0.777
BIN-COMP-T	5	76.500	115.000	15.3000	-1.373
LA3-REF	5	86.000	115.000	17.2000	-1.029
MCN1-COMP-T	5	116.500	115.000	23.3000	0.036
MCN3-COMP	5	119.000	115.000	23.8000	0.126
MCN4-COMP	5	151.000	115.000	30.2000	1.282
MCN5-COMP	5	90.500	115.000	18.1000	-0.867
TB	5	199.000	115.000	39.8000	3.016

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB060**

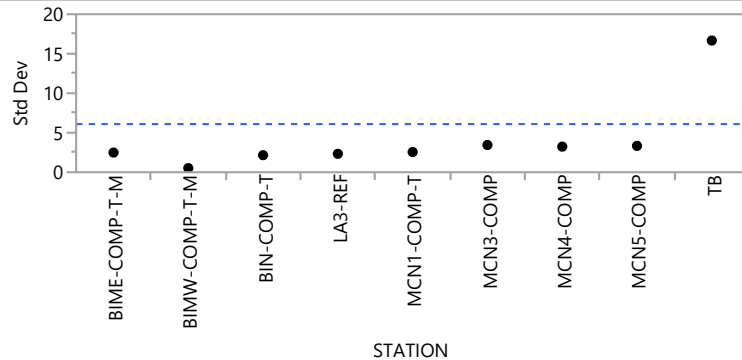
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
13.8114	8	0.0868

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	2.49078	1.93887	1.81907
BIMW-COMP-T-M	5	0.52094	0.42141	0.38078
BIN-COMP-T	5	2.15739	1.87015	1.65180
LA3-REF	5	2.33120	1.74420	1.65179
MCN1-COMP-T	5	2.55505	1.70593	1.66463
MCN3-COMP	5	3.44783	2.72836	2.47508
MCN4-COMP	5	3.24012	2.79289	2.41678
MCN5-COMP	5	3.33655	2.13151	2.09667
TB	5	16.67098	12.96697	11.71487

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[5]	2.3689	8	36	0.0367*
Brown-Forsythe	2.7541	8	36	0.0176*
Levene	7.6229	8	36	<.0001*
Bartlett	6.4287	8	.	<.0001*

Warning: Small sample sizes. Use Caution.

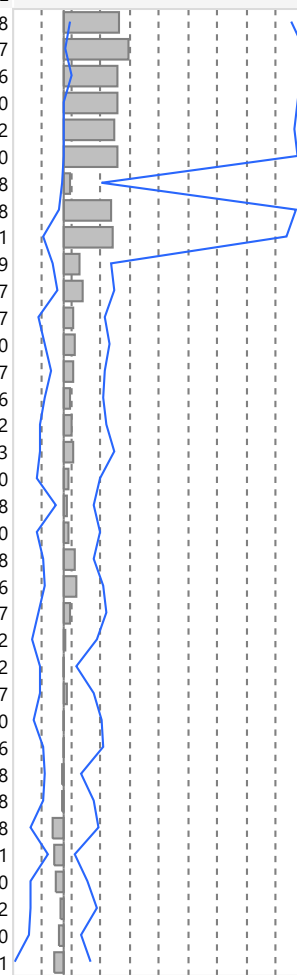
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

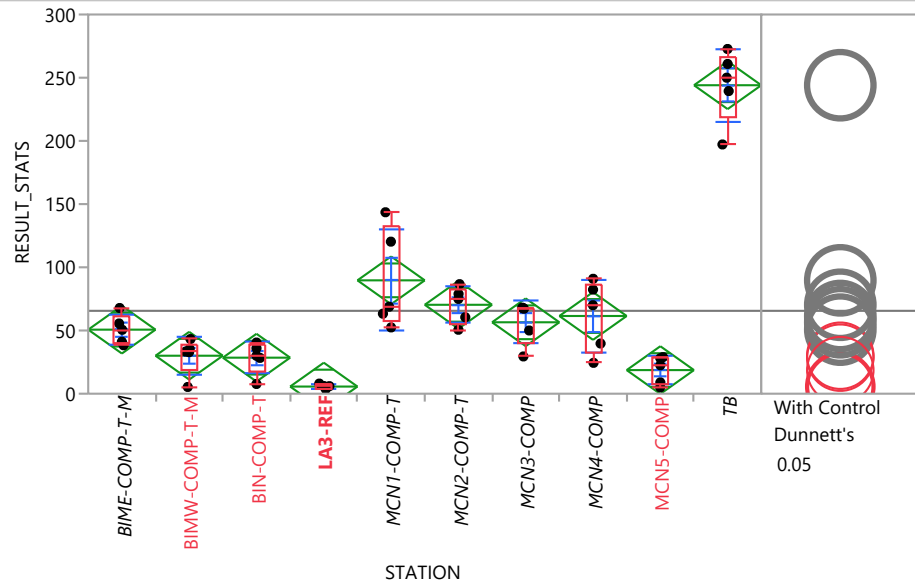
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB060**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	10.2591	1.08255	42.72728
TB	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	12.0616	0.16684	45.07577
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	10.1087	1.34564	44.54546
TB	BIME-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	10.1450	-0.14085	44.03410
TB	MCN1-COMP-T	4.00000	1.914854	2.08893	0.0367*	9.3479	-0.08690	43.38222
TB	MCN5-COMP	4.00000	1.914854	2.08893	0.0367*	10.1888	-0.28850	43.90910
MCN4-COMP	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	1.0829	-0.54131	7.09088
TB	MCN3-COMP	3.20000	1.914854	1.67115	0.0947	8.7948	-1.00295	43.54068
TB	MCN4-COMP	3.20000	1.914854	1.67115	0.0947	9.2136	-4.14085	41.95561
MCN4-COMP	LA3-REF	2.80000	1.914854	1.46225	0.1437	2.9011	-2.24651	8.90909
MCN4-COMP	BIN-COMP-T	2.40000	1.914854	1.25336	0.2101	3.3535	-1.45702	9.43937
MCN3-COMP	BIN-COMP-T	2.00000	1.914854	1.04447	0.2963	1.5351	-5.02564	7.71507
MCN4-COMP	BIME-COMP-T-M	2.00000	1.914854	1.04447	0.2963	2.0785	-3.75841	8.39770
MCN1-COMP-T	BIN-COMP-T	1.60000	1.914854	0.83557	0.4034	1.6936	-2.60370	7.71507
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	1.0207	-3.67312	7.18476
MCN4-COMP	MCN1-COMP-T	1.60000	1.914854	0.83557	0.4034	1.4266	-4.59491	7.74582
MCN4-COMP	MCN3-COMP	1.20000	1.914854	0.62668	0.5309	1.7243	-4.59491	9.33333
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.6519	-5.18502	6.67340
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.3538	-1.68799	5.36658
MCN3-COMP	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.6944	-5.34348	6.67340
MCN3-COMP	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	1.9178	-4.10993	5.36658
MCN3-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	2.2775	-3.84684	7.18476
MCN5-COMP	BIN-COMP-T	0.40000	1.914854	0.20889	0.8345	1.1667	-5.02564	7.91667
MCN3-COMP	MCN1-COMP-T	0.20000	1.909043	0.10476	0.9166	0.2798	-6.17998	6.02152
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.1142	-4.53008	2.24662
LA3-REF	BIN-COMP-T	0.00000	1.914854	0.00000	1.0000	0.5303	-4.60140	5.36667
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.0439	-5.71190	6.87500
MCN5-COMP	LA3-REF	0.00000	1.914854	0.00000	1.0000	-0.0801	-4.20000	7.38636
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.4070	-3.68569	3.01818
MCN5-COMP	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.4871	-4.10993	5.56818
MCN5-COMP	MCN3-COMP	-0.60000	1.909043	-0.31429	0.7533	-2.2944	-6.54840	6.38158
BIN-COMP-T	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-1.8025	-3.28829	1.87981
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-1.4865	-6.34826	4.32500
MCN5-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-0.8410	-6.54840	6.22312
BIN-COMP-T	BIME-COMP-T-M	-2.20000	1.909043	-1.15241	0.2492	-1.1416	-6.87857	3.12500
MCN5-COMP	MCN4-COMP	-2.80000	1.914854	-1.46225	0.1437	-1.9535	-9.33333	4.79651



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB066**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	38.3333	38.3333	39.7222	50.5618	61.6761	67.7966	67.7966
BIMW-COMP-T-M	5.31915	5.31915	19.09793	33.3333	39.34885	43.2432	43.2432
BIN-COMP-T	7.69231	7.69231	18.01281	30	38.2381	40.4762	40.4762
LA3-REF	3.63636	3.63636	4.090905	5.97826	7.04054	8	8
MCN1-COMP-T	52.439	52.439	57.86505	68.8172	131.919	143.548	143.548
MCN2-COMP-T	50.5882	50.5882	55.541	75	82.80705	86.6667	86.6667
MCN3-COMP	29.4737	29.4737	39.73685	67.2414	67.89875	68.0556	68.0556
MCN4-COMP	24.4186	24.4186	32.06225	70	86.631	90.9091	90.9091
MCN5-COMP	5	5	6.964285	22.5	28.4737	28.9474	28.9474
TB	197.183	197.183	218.31	250	266.7985	272.727	272.727

**Oneway Anova**

**Summary of Fit**

Rsquare	0.921852
Adj Rsquare	0.904269
Root Mean Square Error	20.89538
Mean of Response	65.55803
Observations (or Sum Wgts)	50

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB066**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	206017.38	22890.8	52.4277	<.0001*
Error	40	17464.68	436.6		
C. Total	49	223482.06			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	50.672	9.3447	31.8	69.56
BIMW-COMP-T-M	5	30.045	9.3447	11.2	48.93
BIN-COMP-T	5	28.500	9.3447	9.6	47.39
LA3-REF	5	5.648	9.3447	-13.2	24.53
MCN1-COMP-T	5	89.677	9.3447	70.8	108.56
MCN2-COMP-T	5	70.339	9.3447	51.5	89.23
MCN3-COMP	5	56.503	9.3447	37.6	75.39
MCN4-COMP	5	61.477	9.3447	42.6	80.36
MCN5-COMP	5	18.675	9.3447	-0.2111	37.56
TB	5	244.043	9.3447	225.2	262.93

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	50.672	11.8403	5.295	35.97	65.37
BIMW-COMP-T-M	5	30.045	14.4365	6.456	12.12	47.97
BIN-COMP-T	5	28.500	12.5988	5.634	12.86	44.14
LA3-REF	5	5.648	1.6651	0.745	3.58	7.72
MCN1-COMP-T	5	89.677	39.8662	17.829	40.18	139.18
MCN2-COMP-T	5	70.339	14.5726	6.517	52.24	88.43
MCN3-COMP	5	56.503	16.9408	7.576	35.47	77.54
MCN4-COMP	5	61.477	28.3813	12.693	26.24	96.72
MCN5-COMP	5	18.675	11.0579	4.945	4.95	32.41
TB	5	244.043	28.9762	12.959	208.06	280.02

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB066**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	201.2	<.0001*
MCN1-COMP-T	46.87	<.0001*
MCN2-COMP-T	27.53	0.0001*
MCN4-COMP	18.67	0.0011*
MCN3-COMP	13.7	0.0032*
BIME-COMP-T-M	7.865	0.0111*
BIMW-COMP-T-M	-12.8	0.3518
BIN-COMP-T	-14.3	0.4223
MCN5-COMP	-24.1	0.9102
LA3-REF	-37.2	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	137.000	127.500	27.4000	0.291
BIMW-COMP-T-M	5	83.000	127.500	16.6000	-1.423
BIN-COMP-T	5	79.000	127.500	15.8000	-1.552
LA3-REF	5	22.000	127.500	4.4000	-3.395
MCN1-COMP-T	5	187.000	127.500	37.4000	1.908
MCN2-COMP-T	5	180.000	127.500	36.0000	1.682
MCN3-COMP	5	144.000	127.500	28.8000	0.517
MCN4-COMP	5	155.000	127.500	31.0000	0.873
MCN5-COMP	5	48.000	127.500	9.6000	-2.555
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

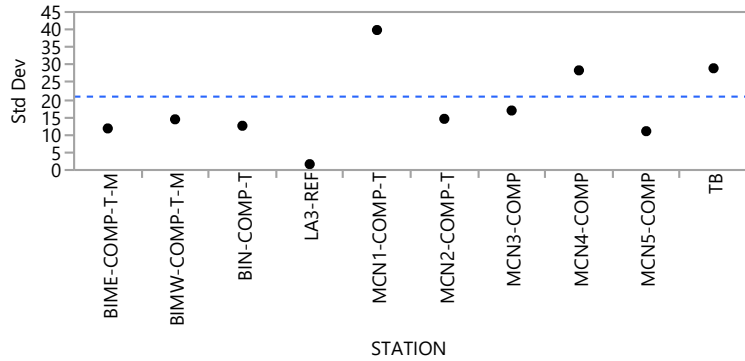
ChiSquare	DF	Prob>ChiSq
39.3925	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB066**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	11.84027	8.80354	8.78156
BIMW-COMP-T-M	5	14.43654	9.89049	8.10037
BIN-COMP-T	5	12.59878	8.39005	8.09012
LA3-REF	5	1.66515	1.24586	1.17985
MCN1-COMP-T	5	39.86620	33.79355	29.62158
MCN2-COMP-T	5	14.57262	11.83858	10.90642
MCN3-COMP	5	16.94078	13.41254	11.26476
MCN4-COMP	5	28.38133	23.53204	21.82750
MCN5-COMP	5	11.05788	9.36873	8.60377
TB	5	28.97620	20.58672	19.39540

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.5590	9	40	0.0199*
Brown-Forsythe	1.4352	9	40	0.2061
Levene	4.8911	9	40	0.0002*
Bartlett	3.1762	9	.	0.0008*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

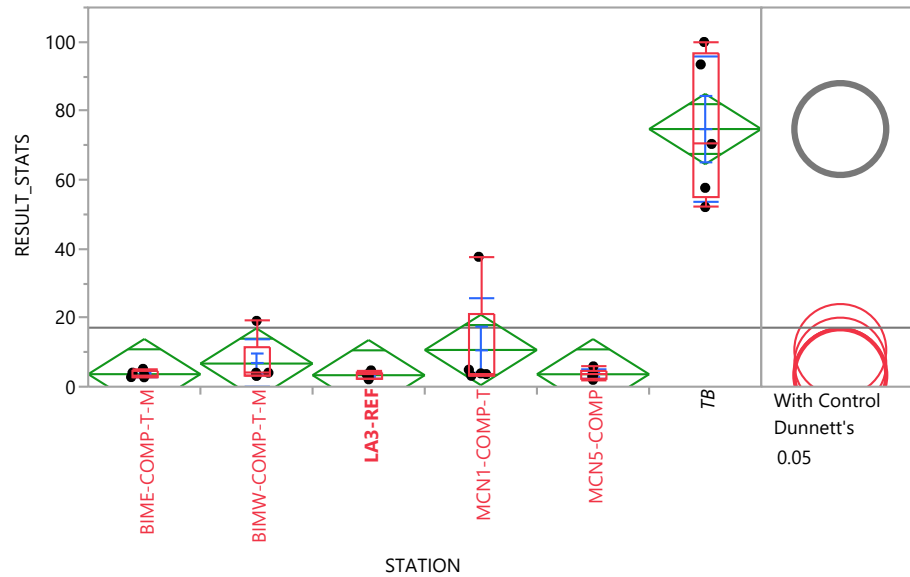
		q*	Alpha						
		1.95996	0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	47.120	16.985	114.971	
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	44.747	16.439	115.215	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	62.839	46.358	139.003	
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	42.123	15.134	73.628	
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	42.947	14.588	71.255	
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	69.022	44.507	82.121	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	60.056	23.393	64.106	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB066**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	64.022	18.338	86.364	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	199.438	141.627	231.616	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	217.123	161.729	255.551	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	220.394	161.183	253.178	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	244.022	191.102	268.182	
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	152.437	76.893	209.436	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	178.943	118.236	212.233	
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	192.814	129.441	231.396	
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	180.000	114.830	236.451	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	231.923	169.183	263.798	
MCN1-COMP-T	BIME-COMP-T-M	3.60000	1.914854	1.88004	0.0601	24.958	-4.505	102.437	
MCN2-COMP-T	BIME-COMP-T-M	3.60000	1.914854	1.88004	0.0601	19.444	-7.303	45.556	
MCN3-COMP	BIN-COMP-T	3.60000	1.914854	1.88004	0.0601	31.241	-6.526	60.050	
MCN5-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	16.522	-1.081	24.402	
MCN3-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	31.787	-5.981	62.423	
MCN4-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	36.667	-11.036	77.034	
MCN4-COMP	BIN-COMP-T	2.80000	1.914854	1.46225	0.1437	40.000	-11.581	74.661	
MCN4-COMP	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	14.556	-31.137	49.798	
MCN4-COMP	MCN3-COMP	1.20000	1.914854	0.62668	0.5309	10.232	-43.323	52.879	
MCN3-COMP	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	11.667	-26.082	29.409	
BIN-COMP-T	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-2.877	-27.762	30.681	
MCN4-COMP	MCN2-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-5.000	-54.529	31.765	
MCN2-COMP-T	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-8.323	-83.054	26.508	
MCN4-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-29.111	-103.842	29.914	
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-22.965	-93.548	15.303	
MCN3-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-11.206	-49.474	17.154	
MCN5-COMP	BIN-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-8.000	-31.548	20.308	
MCN5-COMP	BIMW-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-10.833	-34.315	22.681	
LA3-REF	BIMW-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-28.331	-38.698	0.762	
BIMW-COMP-T-M	BIME-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-17.685	-50.236	2.132	
MCN5-COMP	MCN4-COMP	-4.00000	1.914854	-2.08893	0.0367*	-47.500	-81.981	3.581	
BIN-COMP-T	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-20.562	-47.863	-0.635	
LA3-REF	BIN-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-24.697	-35.931	-1.611	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-44.584	-63.251	-32.252	
MCN5-COMP	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-32.183	-58.868	-10.333	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-58.291	-134.619	-24.439	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-51.565	-77.738	-22.588	
MCN5-COMP	MCN3-COMP	-4.80000	1.914854	-2.50672	0.0122*	-39.742	-62.742	-1.474	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB070**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.74157	2.74157	2.7687	3.38889	4.61808	5.16949	5.16949
BIMW-COMP-T-M	3.17708	3.17708	3.184285	4.0411	11.57248	19.0909	19.0909
LA3-REF	2.14545	2.14545	2.413635	3.52717	4.15392	4.72	4.72
MCN1-COMP-T	3.17204	3.17204	3.41529	3.86076	21.30028	37.6812	37.6812
MCN5-COMP	2	2	2.5	3.55263	4.74643	5.89286	5.89286
TB	52.1127	52.1127	54.9025	70.4225	96.73915	100	100

**Oneway Anova**

**Summary of Fit**

Rsquare	0.872782
Adj Rsquare	0.846278
Root Mean Square Error	11.05543
Mean of Response	17.11408
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	20124.265	4024.85	32.9305	<.0001*
Error	24	2933.340	122.22		
C. Total	29	23057.605			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB070**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.6325	4.9441	-6.57	13.837
BIMW-COMP-T-M	5	6.7109	4.9441	-3.49	16.915
LA3-REF	5	3.3325	4.9441	-6.87	13.537
MCN1-COMP-T	5	10.6584	4.9441	0.45	20.863
MCN5-COMP	5	3.6091	4.9441	-6.60	13.813
TB	5	74.7412	4.9441	64.54	84.945

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.6325	1.0129	0.4530	2.37	4.89
BIMW-COMP-T-M	5	6.7109	6.9341	3.1010	-1.90	15.32
LA3-REF	5	3.3325	0.9824	0.4394	2.11	4.55
MCN1-COMP-T	5	10.6584	15.1197	6.7617	-8.12	29.43
MCN5-COMP	5	3.6091	1.4300	0.6395	1.83	5.38
TB	5	74.7412	21.2747	9.5143	48.33	101.16

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	52.56	<.0001*
MCN1-COMP-T	-11.5	0.7433
BIMW-COMP-T-M	-15.5	0.9842
BIME-COMP-T-M	-18.5	1.0000
MCN5-COMP	-18.6	1.0000
LA3-REF	-18.8	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB070**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

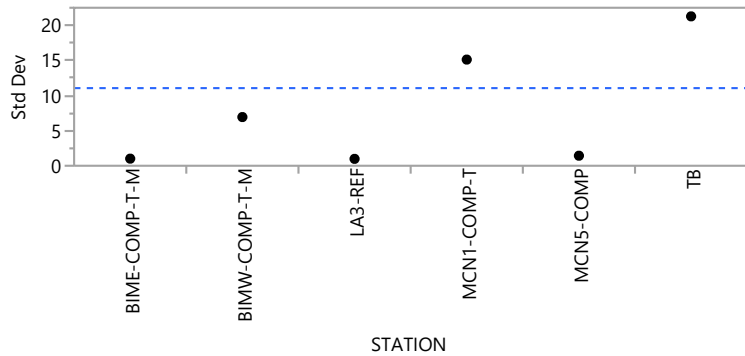
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	60.000	77.500	12.0000	-0.946
BIMW-COMP-T-M	5	76.000	77.500	15.2000	-0.056
LA3-REF	5	49.000	77.500	9.8000	-1.558
MCN1-COMP-T	5	84.000	77.500	16.8000	0.334
MCN5-COMP	5	56.000	77.500	11.2000	-1.169
TB	5	140.000	77.500	28.0000	3.450

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
14.2748	5	0.0140*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.01291	0.78847	0.73975
BIMW-COMP-T-M	5	6.93407	4.95199	3.35528
LA3-REF	5	0.98244	0.73506	0.69611
MCN1-COMP-T	5	15.11969	10.80913	7.15399
MCN5-COMP	5	1.42995	0.91350	0.89857
TB	5	21.27470	17.59839	16.73466

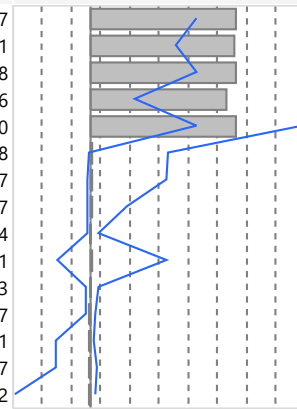
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	3.1256	5	24	0.0259*
Brown-Forsythe	3.0304	5	24	0.0293*
Levene	8.6040	5	24	<.0001*
Bartlett	9.2668	5	.	<.0001*

Warning: Small sample sizes. Use Caution.

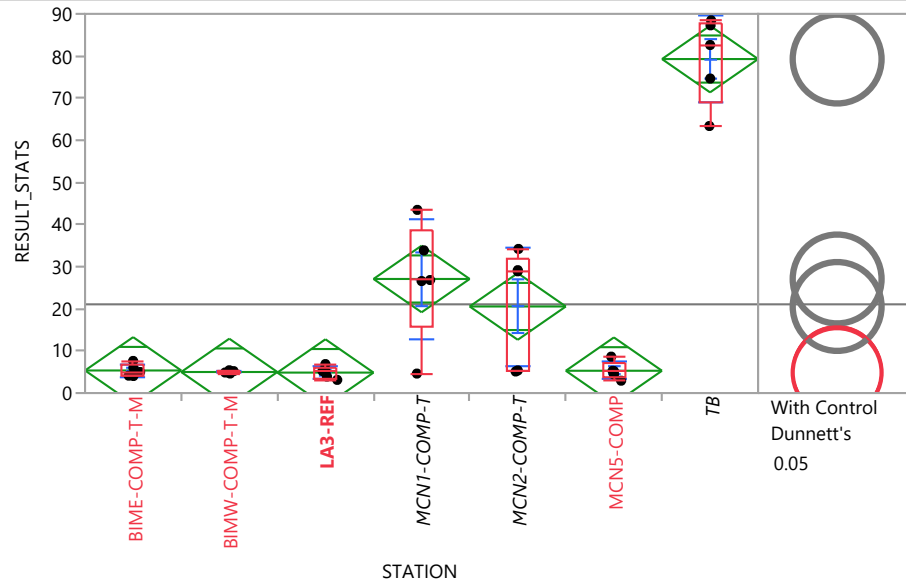
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB070**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha					
		1.95996	0.05					
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	67.0336	48.0460	97.20417
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	66.3814	38.6014	96.80851
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	66.8953	48.5249	97.31818
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	62.3188	20.0111	96.34146
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	66.8699	48.5127	97.00000
MCN1-COMP-T	LA3-REF	2.80000	1.914854	1.46225	0.1437	1.0266	-1.0615	34.99938
MCN1-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	0.8527	-1.5110	34.88537
BIMW-COMP-T-M	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.4355	-1.9780	16.29507
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.0255	-1.7200	3.21104
MCN1-COMP-T	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.4671	-15.4324	34.48971
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.1637	-2.1695	3.09703
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.4495	-2.4877	1.92417
LA3-REF	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-0.5139	-16.4091	1.52851
MCN5-COMP	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-0.4885	-16.0909	2.70137
MCN5-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-0.8608	-34.6812	2.23432



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB074**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB074**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.04494	4.04494	4.08497	5	6.81356	7.62712	7.62712
BIMW-COMP-T-M	4.63542	4.63542	4.744985	4.87671	5.309805	5.41216	5.41216
LA3-REF	3.12727	3.12727	3.51818	5.1413	6.054865	6.88	6.88
MCN1-COMP-T	4.62366	4.62366	15.60298	26.8293	38.67465	43.4783	43.4783
MCN2-COMP-T	5.11765	5.11765	5.24401	28.8889	31.6886	34.2105	34.2105
MCN5-COMP	2.93333	2.93333	3.666665	5.21053	6.96143	8.64286	8.64286
TB	63.3803	63.3803	69.0141	82.6087	87.8671	88.4615	88.4615

**Oneway Anova**

**Summary of Fit**

Rsquare	0.914078
Adj Rsquare	0.895666
Root Mean Square Error	8.633872
Mean of Response	21.05849
Observations (or Sum Wgts)	35

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	6	22204.936	3700.82	49.6463	<.0001*
Error	28	2087.225	74.54		
C. Total	34	24292.161			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.3594	3.8612	-2.55	13.269
BIMW-COMP-T-M	5	4.9973	3.8612	-2.91	12.907
LA3-REF	5	4.8575	3.8612	-3.05	12.767
MCN1-COMP-T	5	27.0769	3.8612	19.17	34.986
MCN2-COMP-T	5	20.5508	3.8612	12.64	28.460
MCN5-COMP	5	5.2933	3.8612	-2.62	13.203
TB	5	79.2742	3.8612	71.36	87.183

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.3594	1.4945	0.6683	3.504	7.215
BIMW-COMP-T-M	5	4.9973	0.3091	0.1382	4.613	5.381
LA3-REF	5	4.8575	1.4320	0.6404	3.079	6.636
MCN1-COMP-T	5	27.0769	14.3145	6.4016	9.303	44.851
MCN2-COMP-T	5	20.5508	14.1331	6.3205	3.002	38.099
MCN5-COMP	5	5.2933	2.0973	0.9379	2.689	7.897
TB	5	79.2742	10.4106	4.6557	66.348	92.201

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB074**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.73128	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	59.5	<.0001*
MCN1-COMP-T	7.305	0.0019*
MCN2-COMP-T	0.779	0.0363*
BIME-COMP-T-M	-14.4	1.0000
MCN5-COMP	-14.5	1.0000
BIMW-COMP-T-M	-14.8	1.0000
LA3-REF	-14.9	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	62.000	90.000	12.4000	-1.296
BIMW-COMP-T-M	5	60.000	90.000	12.0000	-1.391
LA3-REF	5	55.000	90.000	11.0000	-1.626
MCN1-COMP-T	5	114.000	90.000	22.8000	1.108
MCN2-COMP-T	5	112.000	90.000	22.4000	1.014
MCN5-COMP	5	62.000	90.000	12.4000	-1.296
TB	5	165.000	90.000	33.0000	3.512

**1-Way Test, ChiSquare Approximation**

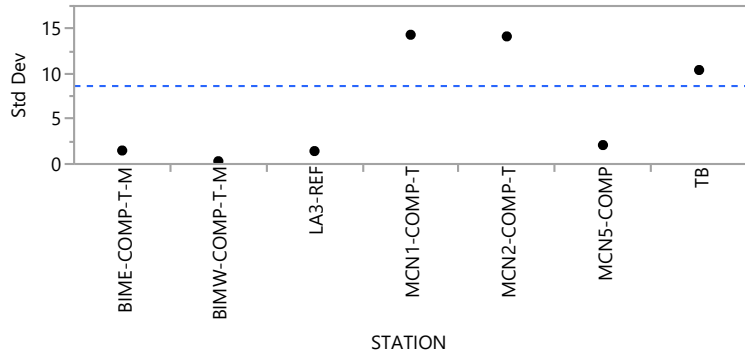
ChiSquare	DF	Prob>ChiSq
19.7676	6	0.0030*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB074**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.49446	1.16332	1.09144
BIMW-COMP-T-M	5	0.30909	0.25004	0.22593
LA3-REF	5	1.43202	1.07144	1.01467
MCN1-COMP-T	5	14.31450	9.27819	9.22867
MCN2-COMP-T	5	14.13305	12.24545	10.57784
MCN5-COMP	5	2.09726	1.33981	1.31791
TB	5	10.41057	8.20810	7.54120

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.3127	6	28	0.0613
Brown-Forsythe	2.3421	6	28	0.0586
Levene	6.2507	6	28	0.0003*
Bartlett	8.6555	6	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

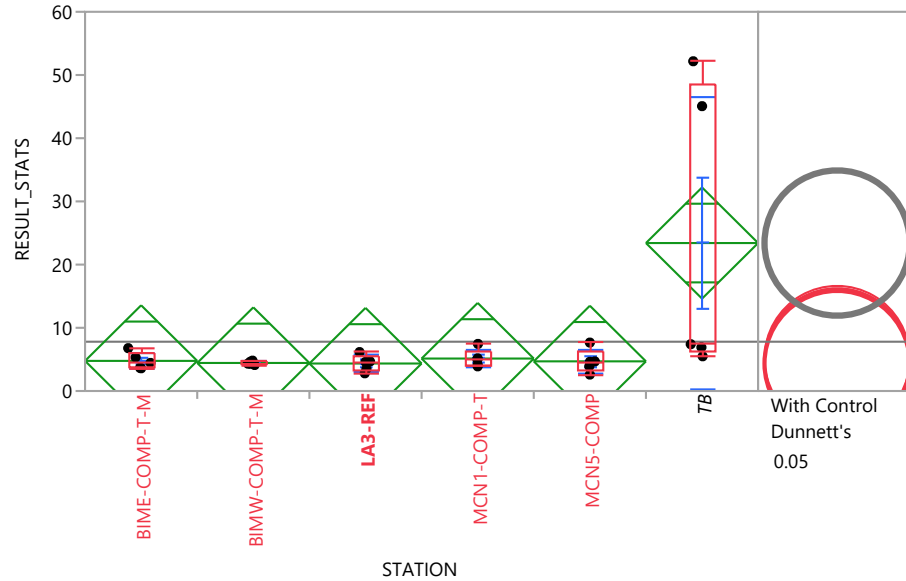
		q*	Alpha						
		1.95996	0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	77.6087	57.3803	84.33650	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	77.7320	58.1729	83.60695	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	77.4674	58.1506	84.55241	
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	53.4017	29.5093	82.64904	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	58.1060	34.2136	83.09113	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	77.3982	58.1003	84.33937	
MCN1-COMP-T	BIME-COMP-T-M	3.60000	1.914854	1.88004	0.0601	22.5374	-1.3763	39.35330	
MCN1-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	22.9202	-0.6061	39.56921	
MCN2-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	23.7545	-0.0898	29.35595	
MCN2-COMP-T	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	22.8889	-2.2567	30.08550	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB074**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
MCN2-COMP-T	LA3-REF	3.20000	1.914854	1.67115	0.0947	23.6592	-1.5096	30.30141
MCN1-COMP-T	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	21.9526	-0.5838	38.62375
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.0692	-2.4800	4.73377
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.1233	-2.7726	1.28716
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.0661	-2.0802	2.02545
MCN2-COMP-T	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	-4.7043	-38.1079	24.54304
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.2105	-3.2271	4.51786
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.0031	-2.2741	3.78831
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.7471	-3.7180	2.75500
MCN5-COMP	MCN2-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-23.6089	-29.8105	3.27249
MCN5-COMP	MCN1-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-22.4293	-39.0783	0.65634

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB077**



Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.59551	3.59551	3.63109	4.44444	6.056495	6.77966	6.77966
BIMW-COMP-T-M	4.11458	4.11458	4.211835	4.32877	4.713195	4.80405	4.80405
LA3-REF	2.8	2.8	3.15	4.60326	5.421215	6.16	6.16
MCN1-COMP-T	3.89873	3.89873	4.019255	5.02174	6.30812	7.45161	7.45161
MCN5-COMP	2.6	2.6	3.25	4.61842	6.170355	7.66071	7.66071
TB	5.49296	5.49296	6.201025	7.40385	48.62215	52.1739	52.1739

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB077**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.401635
Adj Rsquare	0.276976
Root Mean Square Error	9.534344
Mean of Response	7.797665
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	1464.3949	292.879	3.2219	0.0230*
Error	24	2181.6893	90.904		
C. Total	29	3646.0842			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.7639	4.2639	-4.04	13.564
BIMW-COMP-T-M	5	4.4358	4.2639	-4.36	13.236
LA3-REF	5	4.3491	4.2639	-4.45	13.149
MCN1-COMP-T	5	5.1353	4.2639	-3.66	13.936
MCN5-COMP	5	4.6918	4.2639	-4.11	13.492
TB	5	23.4100	4.2639	14.61	32.210

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.7639	1.3284	0.594	3.114	6.413
BIMW-COMP-T-M	5	4.4358	0.2744	0.123	4.095	4.776
LA3-REF	5	4.3491	1.2822	0.573	2.757	5.941
MCN1-COMP-T	5	5.1353	1.4053	0.628	3.390	6.880
MCN5-COMP	5	4.6918	1.8589	0.831	2.384	7.000
TB	5	23.4100	23.1626	10.359	-5.350	52.170

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB077**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	2.808	0.0176*
MCN1-COMP-T	-15.5	1.0000
BIME-COMP-T-M	-15.8	1.0000
MCN5-COMP	-15.9	1.0000
BIMW-COMP-T-M	-16.2	1.0000
LA3-REF	-16.3	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

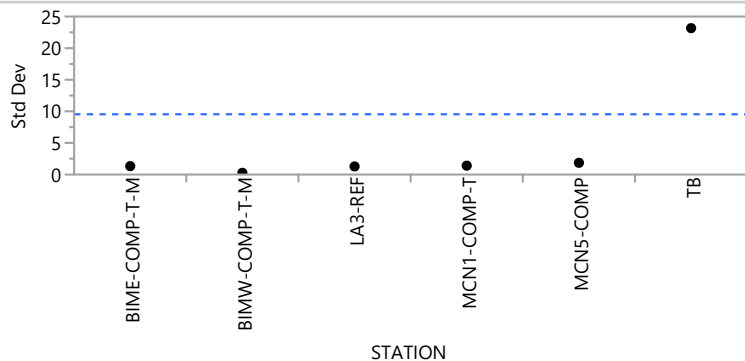
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	66.000	77.500	13.2000	-0.612
BIMW-COMP-T-M	5	62.000	77.500	12.4000	-0.835
LA3-REF	5	58.000	77.500	11.6000	-1.057
MCN1-COMP-T	5	81.000	77.500	16.2000	0.167
MCN5-COMP	5	66.000	77.500	13.2000	-0.612
TB	5	132.000	77.500	26.4000	3.005

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
9.9806	5	0.0758

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB077**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.32841	1.03406	0.97016
BIMW-COMP-T-M	5	0.27436	0.22194	0.20054
LA3-REF	5	1.28216	0.95931	0.90849
MCN1-COMP-T	5	1.40528	0.93826	0.91555
MCN5-COMP	5	1.85893	1.18755	1.16814
TB	5	23.16264	20.16969	16.96845

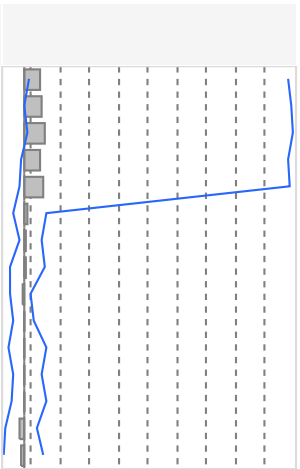
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	11.8729	5	24	<.0001*
Brown-Forsythe	2.6050	5	24	0.0510
Levene	59.2596	5	24	<.0001*
Bartlett	14.8556	5	.	<.0001*

Warning: Small sample sizes. Use Caution.

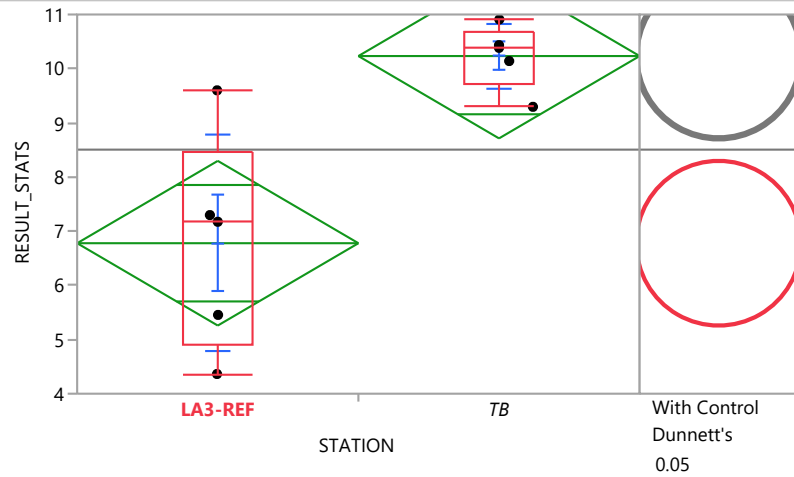
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* Alpha  
1.95996 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	3.07508	0.87062	47.86481
TB	BIME-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	3.31358	0.12943	48.50723
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	3.90385	0.74909	48.67390
TB	MCN1-COMP-T	3.60000	1.914854	1.88004	0.0601	3.01036	-0.54252	48.03412
TB	MCN5-COMP	3.60000	1.914854	1.88004	0.0601	3.50385	-0.75162	48.27390
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.56137	-2.02022	3.95161
MCN1-COMP-T	BIMW-COMP-T-M	1.20000	1.914854	0.62668	0.5309	0.39940	-0.72361	3.14252
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.47311	-2.63988	3.78494
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.11567	-2.47057	1.13738
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.01908	-1.82234	1.85091
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.17398	-2.87966	3.99404
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.00392	-2.02234	3.35162
MCN5-COMP	LA3-REF	0.00000	1.914854	0.00000	1.0000	0.01516	-2.26000	4.16071
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.61966	-3.27966	2.49333
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.40332	-3.55161	3.52093



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB081**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	4.36364	4.36364	4.909095	7.17391	8.44865	9.6	9.6
TB	9.29577	9.29577	9.718285	10.3846	10.67195	10.9091	10.9091

**Oneway Anova**

**Summary of Fit**

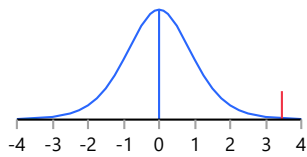
Rsquare	0.631994
Adj Rsquare	0.585993
Root Mean Square Error	1.473876
Mean of Response	8.505447
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	3.45513	t Ratio	3.706586
Std Err Dif	0.93216	DF	8
Upper CL Dif	5.60470	Prob >  t	0.0060*
Lower CL Dif	1.30557	Prob > t	0.0030*
Confidence	0.95	Prob < t	0.9970



**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	1	29.844877	29.8449	13.7388	0.0060*
Error	8	17.378473	2.1723		
C. Total	9	47.223351			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB081**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	6.7779	0.65914	5.2579	8.298
TB	5	10.2330	0.65914	8.7130	11.753

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

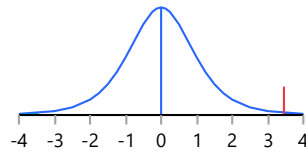
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	6.7779	1.99817	0.89361	4.2968	9.259
TB	5	10.2330	0.59324	0.26530	9.4964	10.970

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	3.45513	t Ratio	3.706586
Std Err Dif	0.93216	DF	4.699712
Upper CL Dif	5.89812	Prob >  t	0.0155*
Lower CL Dif	1.01215	Prob > t	0.0078*
Confidence	0.95	Prob < t	0.9922



**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	1.306	0.0060*
LA3-REF	-2.15	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
LA3-REF	5	16.000	27.500	3.20000	-2.298
TB	5	39.000	27.500	7.80000	2.298

**2-Sample Test, Normal Approximation**

S	Z	Prob> Z
39	2.29783	0.0216*

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB081**

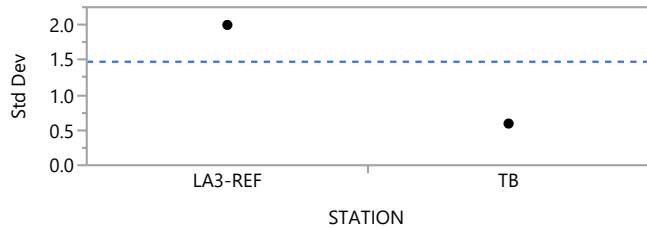
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.7709	1	0.0163*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
LA3-REF	5	1.998171	1.495028	1.415822
TB	5	0.593236	0.411783	0.381466

Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.4861	1	8	0.1535
Brown-Forsythe	2.8427	1	8	0.1303
Levene	4.3824	1	8	0.0696
Bartlett	4.3073	1	.	0.0379*
F Test 2-sided	11.3451	4	4	0.0372*

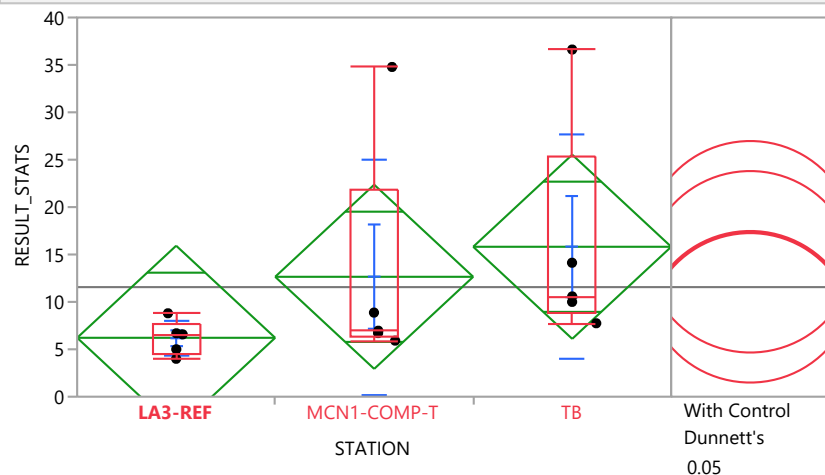
Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	3.260890	0.5408000	6.071160		



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB087**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	4	4	4.5	6.57609	7.744595	8.8	8.8
MCN1-COMP-T	5.91398	5.91398	6.31065	6.96203	21.82679	34.7826	34.7826
TB	7.74648	7.74648	8.87324	10.5769	25.37505	36.6197	36.6197

**Oneway Anova**

**Summary of Fit**

Rsquare	0.167161
Adj Rsquare	0.028354
Root Mean Square Error	9.96921
Mean of Response	11.55838
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	2	239.3732	119.687	1.2043	0.3337
Error	12	1192.6217	99.385		
C. Total	14	1431.9949			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	6.2131	4.4584	-3.501	15.927
MCN1-COMP-T	5	12.6474	4.4584	2.933	22.361
TB	5	15.8147	4.4584	6.101	25.529

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB087**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	6.2131	1.8317	0.8191	3.939	8.487
MCN1-COMP-T	5	12.6474	12.4215	5.5551	-2.776	28.071
TB	5	15.8147	11.8535	5.3011	1.097	30.533

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-6.18	0.2572
MCN1-COMP-T	-9.34	0.5087
LA3-REF	-15.8	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

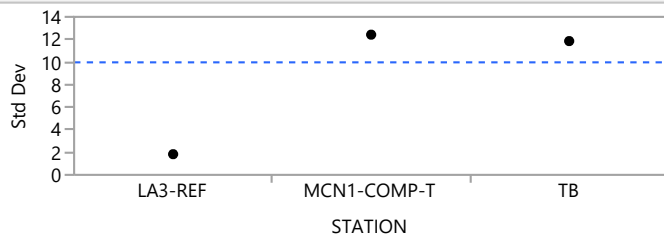
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	21.000	40.000	4.2000	-2.266
MCN1-COMP-T	5	40.000	40.000	8.0000	0.000
TB	5	59.000	40.000	11.8000	2.266

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.2200	2	0.0271*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB087**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
LA3-REF	5	1.83166	1.370445	1.297838
MCN1-COMP-T	5	12.42151	8.854088	6.206454
TB	5	11.85355	8.322002	6.600724

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.6575	2	12	0.5358
Brown-Forsythe	0.4880	2	12	0.6255
Levene	2.3510	2	12	0.1376
Bartlett	4.6844	2	.	0.0092*

Warning: Small sample sizes. Use Caution.

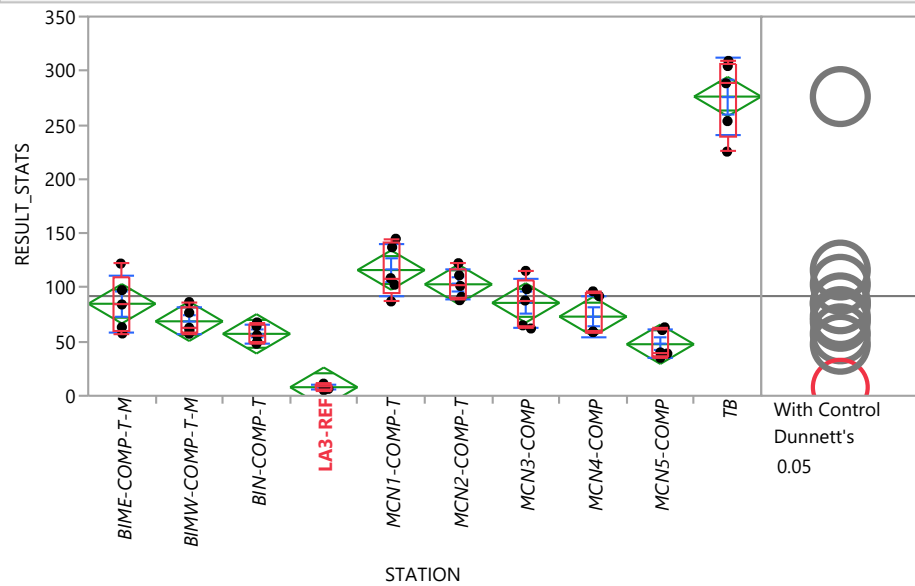
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	5.330400	1.0573	31.61970
MCN1-COMP-T	LA3-REF	2.800000	1.914854	1.462252	0.1437	1.913980	-2.0927	29.78260
TB	MCN1-COMP-T	2.800000	1.914854	1.462252	0.1437	3.292680	-24.7826	29.91238

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB095**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB095**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	57.5	57.5	60.41665	84.2697	109.7825	122.034	122.034
BIMW-COMP-T-M	57.2727	57.2727	58.8447	62.766	81.5994	86.4865	86.4865
BIN-COMP-T	48	48	49	55.8333	65.989	67.6923	67.6923
LA3-REF	5.09091	5.09091	5.727275	8.36957	9.856755	11.2	11.2
MCN1-COMP-T	87.0968	87.0968	94.8144	108.537	141.0125	144.928	144.928
MCN2-COMP-T	88.2353	88.2353	89.79665	101.389	116.7395	122.368	122.368
MCN3-COMP	62.1053	62.1053	63.55265	87.931	106.8326	115.278	115.278
MCN4-COMP	58.8235	58.8235	58.8235	59.3023	94.1818	96.3636	96.3636
MCN5-COMP	35	35	37	40	61.9361	63.1579	63.1579
TB	225.352	225.352	239.4365	288.462	306.7195	309.091	309.091

**Oneway Anova**

**Summary of Fit**

Rsquare	0.934037
Adj Rsquare	0.919195
Root Mean Square Error	20.12007
Mean of Response	92.01967
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	9	229287.51	25476.4	62.9331	<.0001*
Error	40	16192.69	404.8		
C. Total	49	245480.19			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	84.934	8.9980	66.7	103.12
BIMW-COMP-T-M	5	68.731	8.9980	50.5	86.92
BIN-COMP-T	5	57.162	8.9980	39.0	75.35
LA3-REF	5	7.908	8.9980	-10.3	26.09
MCN1-COMP-T	5	116.038	8.9980	97.9	134.22
MCN2-COMP-T	5	102.892	8.9980	84.7	121.08
MCN3-COMP	5	85.740	8.9980	67.6	103.93
MCN4-COMP	5	73.063	8.9980	54.9	91.25
MCN5-COMP	5	47.574	8.9980	29.4	65.76
TB	5	276.155	8.9980	258.0	294.34

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB095**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	84.934	26.2428	11.736	52.35	117.52
BIMW-COMP-T-M	5	68.731	12.3992	5.545	53.34	84.13
BIN-COMP-T	5	57.162	8.6405	3.864	46.43	67.89
LA3-REF	5	7.908	2.3312	1.043	5.01	10.80
MCN1-COMP-T	5	116.038	24.2610	10.850	85.91	146.16
MCN2-COMP-T	5	102.892	14.1154	6.313	85.37	120.42
MCN3-COMP	5	85.740	22.5055	10.065	57.80	113.68
MCN4-COMP	5	73.063	19.3417	8.650	49.05	97.08
MCN5-COMP	5	47.574	13.2713	5.935	31.10	64.05
TB	5	276.155	35.7922	16.007	231.71	320.60

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	232.5	<.0001*
MCN1-COMP-T	72.35	<.0001*
MCN2-COMP-T	59.21	<.0001*
MCN3-COMP	42.05	<.0001*
BIME-COMP-T-M	41.25	<.0001*
MCN4-COMP	29.38	<.0001*
BIMW-COMP-T-M	25.04	0.0002*
BIN-COMP-T	13.48	0.0030*
MCN5-COMP	3.887	0.0236*
LA3-REF	-35.8	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	139.000	127.500	27.8000	0.356
BIMW-COMP-T-M	5	103.000	127.500	20.6000	-0.776
BIN-COMP-T	5	78.000	127.500	15.6000	-1.585
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	195.000	127.500	39.0000	2.167
MCN2-COMP-T	5	183.000	127.500	36.6000	1.779
MCN3-COMP	5	150.000	127.500	30.0000	0.711

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB095**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

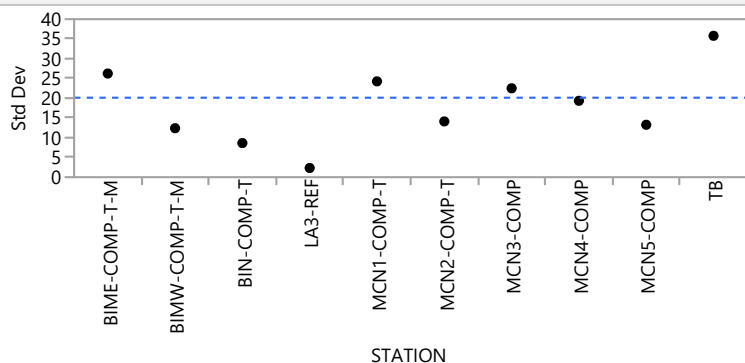
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
MCN4-COMP	5	112.000	127.500	22.4000	-0.485
MCN5-COMP	5	60.000	127.500	12.0000	-2.167
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
38.9990	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	26.24285	19.87910	19.74632
BIMW-COMP-T-M	5	12.39920	10.29485	9.10188
BIN-COMP-T	5	8.64055	7.06139	6.79560
LA3-REF	5	2.33120	1.74420	1.65179
MCN1-COMP-T	5	24.26100	19.97947	18.47924
MCN2-COMP-T	5	14.11540	11.07779	10.77714
MCN3-COMP	5	22.50550	17.75010	17.31196
MCN4-COMP	5	19.34174	16.89538	14.14332
MCN5-COMP	5	13.27130	11.48933	9.97444
TB	5	35.79221	29.37464	26.91320

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.3232	9	40	0.0328*
Brown-Forsythe	1.4963	9	40	0.1827
Levene	4.3332	9	40	0.0006*
Bartlett	2.5680	9	.	0.0059*

Warning: Small sample sizes. Use Caution.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB095**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

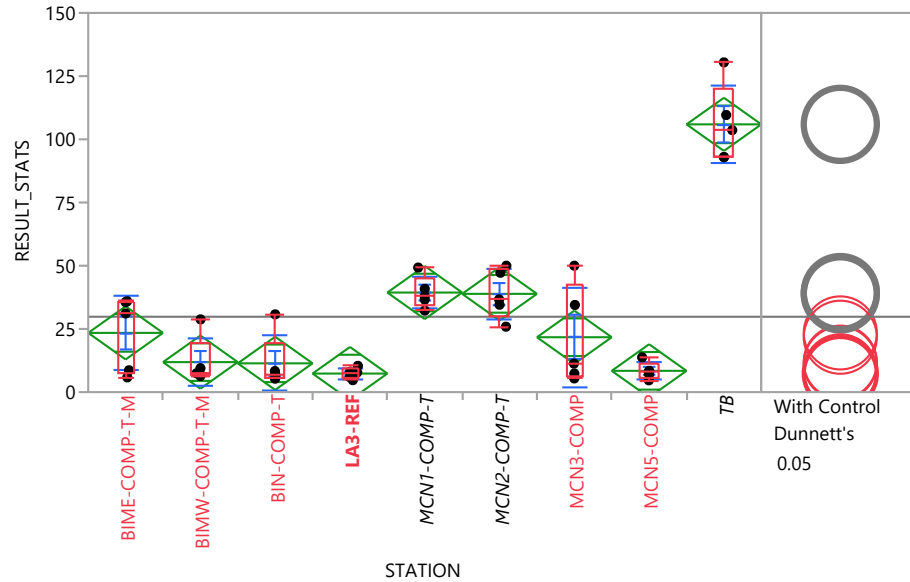
		q*	Alpha								
		1.95996	0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL			
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	45.771	10.385	84.511			
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	54.532	22.811	94.928			
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	100.167	78.583	138.564			
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	34.085	4.871	61.951			
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	43.419	23.666	72.368			
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	93.019	79.722	116.004			
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	79.561	53.592	108.914			
MCN4-COMP	LA3-REF	4.80000	1.909043	2.51435	0.0119*	53.733	47.624	90.000			
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	33.636	26.486	56.794			
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	190.931	127.821	246.848			
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	217.862	148.640	248.674			
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	232.629	161.066	259.091			
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	280.092	216.838	302.727			
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	164.163	88.255	217.251			
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	181.980	114.241	217.733			
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	191.416	126.965	244.091			
TB	MCN4-COMP	4.80000	1.909043	2.51435	0.0119*	207.984	133.352	250.268			
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	241.190	164.638	270.091			
MCN3-COMP	BIN-COMP-T	3.60000	1.914854	1.88004	0.0601	30.695	-2.692	65.278			
MCN1-COMP-T	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	29.597	-19.502	81.595			
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	11.901	-21.487	54.861			
MCN2-COMP-T	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	24.837	-30.676	59.035			
MCN4-COMP	BIN-COMP-T	2.40000	1.909043	1.25717	0.2087	10.824	-8.869	46.364			
MCN3-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	1.667	-57.034	51.945			
MCN4-COMP	BIMW-COMP-T-M	0.00000	1.909043	0.00000	1.0000	1.551	-27.663	35.947			
MCN2-COMP-T	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-14.297	-53.570	24.014			
MCN4-COMP	BIME-COMP-T-M	-1.20000	1.909043	-0.62859	0.5296	-4.510	-63.211	34.500			
BIMW-COMP-T-M	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-11.044	-61.617	23.153			
BIN-COMP-T	BIMW-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-10.417	-36.487	7.276			
MCN3-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-23.180	-57.368	23.920			
MCN4-COMP	MCN3-COMP	-2.40000	1.909043	-1.25717	0.2087	-6.176	-56.455	31.364			
MCN5-COMP	BIN-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-10.000	-29.286	13.158			
MCN5-COMP	MCN4-COMP	-2.40000	1.909043	-1.25717	0.2087	-23.824	-57.364	4.334			
MCN3-COMP	MCN1-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-29.650	-79.928	12.746			
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-22.273	-47.487	3.442			
BIN-COMP-T	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-28.436	-72.034	6.786			
MCN4-COMP	MCN2-COMP-T	-3.20000	1.909043	-1.67623	0.0937	-30.368	-63.545	5.006			
MCN4-COMP	MCN1-COMP-T	-4.00000	1.909043	-2.09529	0.0361*	-43.709	-86.105	4.903			
MCN5-COMP	BIME-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-34.373	-83.034	3.214			
MCN5-COMP	MCN3-COMP	-4.40000	1.914854	-2.29783	0.0216*	-35.229	-76.278	-1.391			
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-75.900	-115.670	-48.986			
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-55.326	-80.123	-48.759			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB095**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-47.464	-61.329	-38.800	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-68.537	-105.928	-26.383	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-53.235	-83.368	-27.521	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB097**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	5.83333	5.83333	7.237655	31.1111	35.77415	35.9551	35.9551
BIMW-COMP-T-M	6.36364	6.36364	6.827655	7.44681	19.11328	28.7671	28.7671
BIN-COMP-T	5.41667	5.41667	5.41667	7	19.55127	30.7692	30.7692
LA3-REF	4.72727	4.72727	5.31818	7.77174	9.152705	10.4	10.4
MCN1-COMP-T	32.2581	32.2581	34.42175	37.9747	45.0678	49.2754	49.2754
MCN2-COMP-T	25.8824	25.8824	30.22515	36.6667	48.6111	50	50
MCN3-COMP	5.41667	5.41667	6.392545	11.2903	42.2414	50	50
MCN5-COMP	4.66667	4.66667	5.833335	8.28947	11.075	13.75	13.75
TB	92.9577	92.9577	92.9577	103.636	120.025	130.435	130.435



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB097**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.888312
Adj Rsquare	0.863492
Root Mean Square Error	11.59322
Mean of Response	29.81492
Observations (or Sum Wgts)	45

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	8	38482.965	4810.37	35.7907	<.0001*
Error	36	4838.503	134.40		
C. Total	44	43321.468			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	23.427	5.1846	12.91	33.94
BIMW-COMP-T-M	5	11.866	5.1846	1.35	22.38
BIN-COMP-T	5	11.387	5.1846	0.87	21.90
LA3-REF	5	7.343	5.1846	-3.17	17.86
MCN1-COMP-T	5	39.391	5.1846	28.88	49.91
MCN2-COMP-T	5	38.868	5.1846	28.35	49.38
MCN3-COMP	5	21.712	5.1846	11.20	32.23
MCN5-COMP	5	8.421	5.1846	-2.09	18.94
TB	5	105.920	5.1846	95.41	116.44

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	23.427	14.9344	6.6789	4.88	41.97
BIMW-COMP-T-M	5	11.866	9.5154	4.2554	0.05086	23.68
BIN-COMP-T	5	11.387	10.9033	4.8761	-2.15	24.93
LA3-REF	5	7.343	2.1647	0.9681	4.65	10.03
MCN1-COMP-T	5	39.391	6.3367	2.8339	31.52	47.26
MCN2-COMP-T	5	38.868	9.8193	4.3913	26.68	51.06
MCN3-COMP	5	21.712	19.6417	8.7841	-2.68	46.10
MCN5-COMP	5	8.421	3.3365	1.4921	4.28	12.56
TB	5	105.920	15.4588	6.9134	86.73	125.11

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB097**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**Confidence Quantile**

d	Alpha
2.78823	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	78.13	<.0001*
MCN1-COMP-T	11.6	0.0007*
MCN2-COMP-T	11.08	0.0009*
BIME-COMP-T-M	-4.36	0.1780
MCN3-COMP	-6.07	0.2735
BIMW-COMP-T-M	-15.9	0.9908
BIN-COMP-T	-16.4	0.9955
MCN5-COMP	-19.4	1.0000
LA3-REF	-20.4	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	115.000	115.000	23.0000	0.000
BIMW-COMP-T-M	5	77.000	115.000	15.4000	-1.355
BIN-COMP-T	5	60.500	115.000	12.1000	-1.951
LA3-REF	5	59.000	115.000	11.8000	-2.005
MCN1-COMP-T	5	170.000	115.000	34.0000	1.969
MCN2-COMP-T	5	164.500	115.000	32.9000	1.770
MCN3-COMP	5	106.500	115.000	21.3000	-0.289
MCN5-COMP	5	67.500	115.000	13.5000	-1.698
TB	5	215.000	115.000	43.0000	3.594

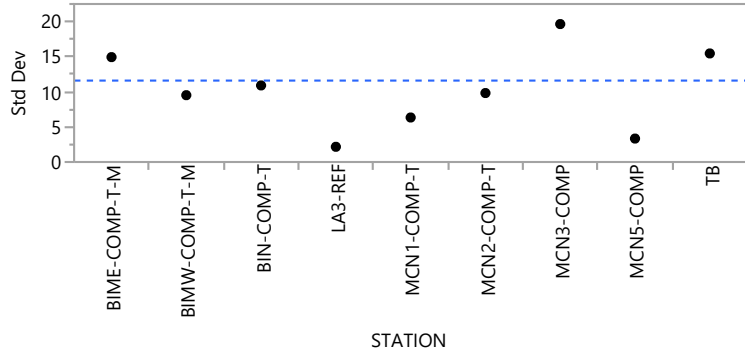
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
29.4095	8	0.0003*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB097**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	14.93443	12.95143	11.41460
BIMW-COMP-T-M	5	9.51536	6.76055	4.91425
BIN-COMP-T	5	10.90333	7.75281	5.65384
LA3-REF	5	2.16469	1.61962	1.53381
MCN1-COMP-T	5	6.33671	4.54163	4.25842
MCN2-COMP-T	5	9.81932	7.79461	7.35438
MCN3-COMP	5	19.64174	16.42381	14.33954
MCN5-COMP	5	3.33655	2.13151	2.09667
TB	5	15.45879	11.28378	10.82692

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.7429	8	36	0.1219
Brown-Forsythe	1.1712	8	36	0.3428
Levene	4.2068	8	36	0.0012*
Bartlett	2.6399	8	.	0.0068*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

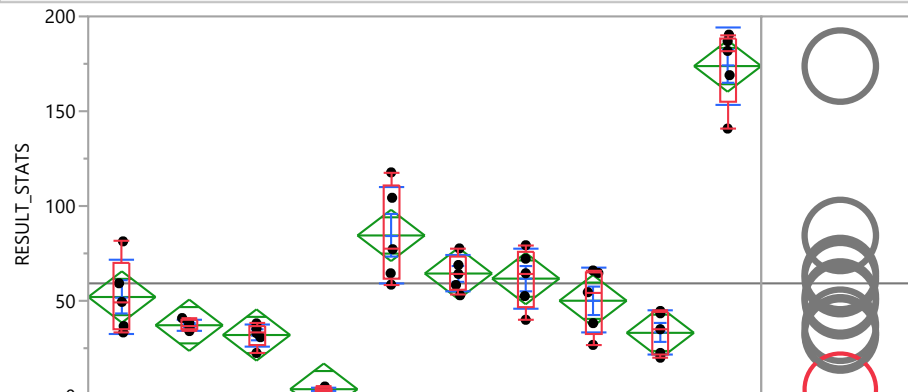
q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	29.2937	7.8183	41.984		
MCN1-COMP-T	BIN-COMP-T	4.80000	1.909043	2.51435	0.0119*	30.9747	5.8162	43.859		
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	30.6763	24.3527	43.366		
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	29.8406	17.9770	44.091		
TB	BIME-COMP-T-M	4.80000	1.909043	2.51435	0.0119*	84.3157	57.0026	121.793		
TB	BIMW-COMP-T-M	4.80000	1.909043	2.51435	0.0119*	94.1765	64.1906	123.143		
TB	BIN-COMP-T	4.80000	1.903214	2.52205	0.0117*	95.3027	62.1885	125.018		
TB	LA3-REF	4.80000	1.909043	2.51435	0.0119*	95.8643	82.5577	124.526		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB097**

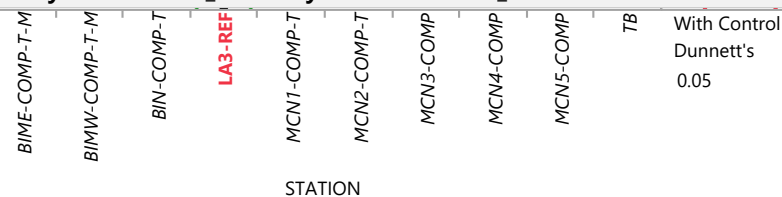
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	MCN1-COMP-T	4.80000	1.909043	2.51435	0.0119*	62.7758	43.6823	93.850	
TB	MCN2-COMP-T	4.80000	1.909043	2.51435	0.0119*	66.9693	42.9577	95.867	
TB	MCN3-COMP	4.80000	1.909043	2.51435	0.0119*	85.5893	42.9577	123.067	
TB	MCN5-COMP	4.80000	1.909043	2.51435	0.0119*	95.3465	79.2077	123.435	
MCN2-COMP-T	BIMW-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	27.2762	5.8008	42.708	
MCN2-COMP-T	BIN-COMP-T	4.40000	1.909043	2.30482	0.0212*	29.1512	3.7987	44.583	
MCN1-COMP-T	BIME-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	13.3203	-3.3351	40.633	
MCN2-COMP-T	BIME-COMP-T-M	2.80000	1.914854	1.46225	0.1437	14.4068	-9.7108	41.389	
MCN3-COMP	BIN-COMP-T	2.00000	1.891501	1.05736	0.2903	3.7136	-23.4008	44.583	
MCN3-COMP	LA3-REF	2.00000	1.914854	1.04447	0.2963	3.5186	-3.0316	44.091	
MCN3-COMP	BIMW-COMP-T-M	1.20000	1.914854	0.62668	0.5309	3.8435	-21.3987	42.708	
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.5177	-3.4000	7.841	
MCN5-COMP	BIN-COMP-T	0.20000	1.903214	0.10509	0.9163	0.0667	-23.7692	8.333	
LA3-REF	BIN-COMP-T	0.00000	1.909043	0.00000	1.0000	-0.4279	-24.8601	4.983	
MCN2-COMP-T	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	-1.3080	-14.9778	14.964	
MCN3-COMP	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-1.1104	-30.1765	41.358	
MCN5-COMP	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.4468	-21.7671	6.458	
LA3-REF	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-1.5377	-22.8580	3.108	
BIN-COMP-T	BIMW-COMP-T-M	-1.20000	1.909043	-0.62859	0.5296	-0.9470	-23.3504	23.478	
MCN5-COMP	MCN3-COMP	-1.60000	1.914854	-0.83557	0.4034	-3.0008	-43.0000	6.382	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-7.1880	-29.2296	20.125	
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-25.2951	-41.9070	13.415	
MCN3-COMP	MCN2-COMP-T	-2.60000	1.909043	-1.36194	0.1732	-20.4657	-42.6316	15.432	
LA3-REF	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-23.3394	-30.8659	2.072	
MCN5-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-22.2051	-30.9265	5.108	
BIN-COMP-T	BIME-COMP-T-M	-3.20000	1.909043	-1.67623	0.0937	-5.1859	-30.5384	22.127	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-29.6852	-42.2754	-22.835	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-29.6667	-43.0000	-17.482	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB099**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB099**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	33.3333	33.3333	35	49.4382	70.3076	81.3559	81.3559
BIMW-COMP-T-M	34.0426	34.0426	34.58885	36.9863	39.7254	40.9091	40.9091
BIN-COMP-T	22.5	22.5	26.66665	33	36.7399	38.0952	38.0952
LA3-REF	2.18182	2.18182	2.454545	3.58696	4.224325	4.8	4.8
MCN1-COMP-T	58.5366	58.5366	61.52635	77.2152	111.045	117.742	117.742
MCN2-COMP-T	52.9412	52.9412	55.63725	64.1975	73.26025	77.6316	77.6316
MCN3-COMP	40	40	46.25	64.5161	75.76625	79.3103	79.3103
MCN4-COMP	26.7442	26.7442	32.48975	54.5455	65.35295	66	66
MCN5-COMP	20	20	21.25	35	44.032	44.6429	44.6429
TB	140.845	140.845	154.9295	181.818	188.671	190.385	190.385

**Oneway Anova**

**Summary of Fit**

Rsquare	0.913552
Adj Rsquare	0.894102
Root Mean Square Error	14.97803
Mean of Response	59.20278
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	94830.86	10536.8	46.9675	<.0001*
Error	40	8973.65	224.3		
C. Total	49	103804.52			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	52.011	6.6984	38.5	65.55
BIMW-COMP-T-M	5	37.123	6.6984	23.6	50.66
BIN-COMP-T	5	31.963	6.6984	18.4	45.50
LA3-REF	5	3.389	6.6984	-10.1	16.93
MCN1-COMP-T	5	84.472	6.6984	70.9	98.01
MCN2-COMP-T	5	64.399	6.6984	50.9	77.94
MCN3-COMP	5	61.710	6.6984	48.2	75.25
MCN4-COMP	5	50.046	6.6984	36.5	63.58
MCN5-COMP	5	33.113	6.6984	19.6	46.65
TB	5	173.804	6.6984	160.3	187.34

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB099**

**Oneway Anova**

**Means for Oneway Anova**

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	52.011	19.3945	8.673	27.93	76.09
BIMW-COMP-T-M	5	37.123	2.7298	1.221	33.73	40.51
BIN-COMP-T	5	31.963	5.9416	2.657	24.59	39.34
LA3-REF	5	3.389	0.9991	0.447	2.15	4.63
MCN1-COMP-T	5	84.472	25.6198	11.458	52.66	116.28
MCN2-COMP-T	5	64.399	9.5312	4.262	52.56	76.23
MCN3-COMP	5	61.710	15.6868	7.015	42.23	81.19
MCN4-COMP	5	50.046	17.1184	7.656	28.79	71.30
MCN5-COMP	5	33.113	11.4820	5.135	18.86	47.37
TB	5	173.804	20.1333	9.004	148.81	198.80

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-LSD	p-Value
TB	143.8	<.0001*
MCN1-COMP-T	54.45	<.0001*
MCN2-COMP-T	34.37	<.0001*
MCN3-COMP	31.69	<.0001*
BIME-COMP-T-M	21.99	<.0001*
MCN4-COMP	20.02	0.0001*
BIMW-COMP-T-M	7.098	0.0073*
MCN5-COMP	3.088	0.0224*
BIN-COMP-T	1.938	0.0304*
LA3-REF	-26.6	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB099**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

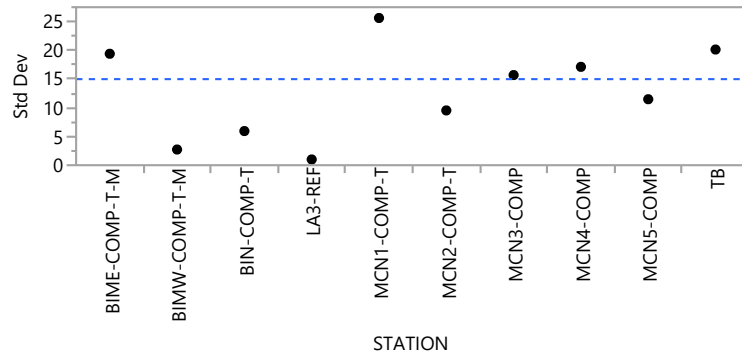
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	130.000	127.500	26.0000	0.065
BIMW-COMP-T-M	5	90.000	127.500	18.0000	-1.197
BIN-COMP-T	5	63.500	127.500	12.7000	-2.054
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	194.500	127.500	38.9000	2.151
MCN2-COMP-T	5	170.000	127.500	34.0000	1.358
MCN3-COMP	5	164.500	127.500	32.9000	1.180
MCN4-COMP	5	131.000	127.500	26.2000	0.097
MCN5-COMP	5	76.500	127.500	15.3000	-1.633
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
38.6847	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	19.39449	14.63754	14.12304
BIMW-COMP-T-M	5	2.72977	2.08195	2.05462
BIN-COMP-T	5	5.94162	4.23678	4.02930
LA3-REF	5	0.99909	0.74752	0.70791
MCN1-COMP-T	5	25.61978	21.25874	19.80746
MCN2-COMP-T	5	9.53120	7.08940	7.04920
MCN3-COMP	5	15.68677	12.36778	11.80650
MCN4-COMP	5	17.11837	14.04514	13.14528
MCN5-COMP	5	11.48197	9.49024	9.11280
TB	5	20.13327	15.09944	13.49660

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB099**

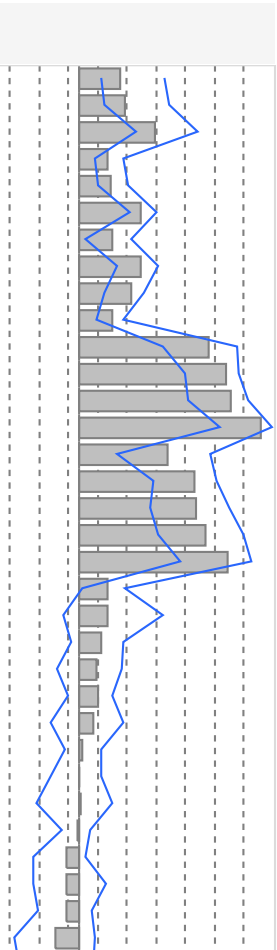
**Tests that the Variances are Equal**

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.9414	9	40	0.0734
Brown-Forsythe	2.0684	9	40	0.0562
Levene	4.4356	9	40	0.0005*
Bartlett	3.8933	9	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha									
1.95996		0.05									
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL			
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	40.229	19.995	82.607			
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	44.215	23.152	86.909			
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	73.628	54.888	115.015			
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	27.211	14.400	42.497			
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	31.198	17.557	46.798			
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	60.611	49.293	74.904			
MCN3-COMP	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	31.516	4.615	49.722			
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	60.929	36.351	76.583			
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	50.959	23.096	63.273			
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	31.413	16.351	41.916			
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	127.698	81.586	153.718			
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	144.832	102.303	155.250			
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	148.818	105.460	164.457			
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	178.231	137.196	187.658			
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	86.037	36.497	128.420			
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	112.929	71.956	134.016			
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	114.735	68.623	146.957			
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	124.385	76.139	160.213			
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	145.742	97.424	167.885			
MCN3-COMP	BIMW-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	27.530	1.458	44.175			
MCN1-COMP-T	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	27.849	-16.840	81.075			
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	21.546	-8.640	42.206			
MCN2-COMP-T	BIME-COMP-T-M	2.00000	1.914854	1.04447	0.2963	16.275	-23.023	40.965			
MCN4-COMP	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	17.559	-11.798	30.865			
MCN3-COMP	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	12.963	-28.856	42.644			
MCN5-COMP	BIN-COMP-T	0.20000	1.909043	0.10476	0.9166	2.000	-15.595	20.921			
MCN3-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	-0.441	-28.889	20.977			
MCN4-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	1.569	-43.121	31.373			
MCN5-COMP	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-1.986	-18.542	9.508			
BIMW-COMP-T-M	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-12.452	-46.221	5.208			
MCN4-COMP	MCN3-COMP	-1.60000	1.914854	-0.83557	0.4034	-13.256	-45.478	24.706			
MCN4-COMP	MCN2-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-12.926	-42.145	11.765			
MCN3-COMP	MCN1-COMP-T	-2.20000	1.909043	-1.15241	0.2492	-24.516	-65.242	14.794			



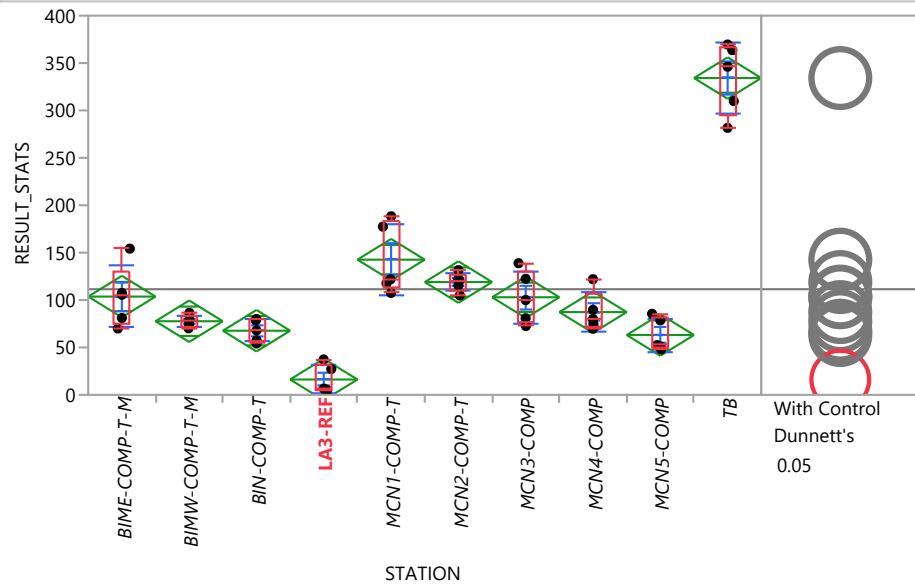


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB099**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN2-COMP-T	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-13.018	-59.409	13.116	
BIN-COMP-T	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-3.986	-16.042	2.960	
MCN5-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-14.616	-58.856	10.088	
MCN5-COMP	MCN4-COMP	-2.80000	1.914854	-1.46225	0.1437	-19.546	-44.706	16.677	
MCN4-COMP	MCN1-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-37.772	-79.507	6.169	
BIN-COMP-T	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-16.438	-50.523	2.051	
MCN5-COMP	MCN3-COMP	-4.00000	1.914854	-2.08893	0.0367*	-29.516	-56.810	3.421	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-45.851	-78.629	-29.685	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-33.399	-38.182	-30.335	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-29.413	-35.368	-18.851	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-44.516	-95.242	-15.115	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-32.941	-55.132	-9.520	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB101**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	70	70	75.55555	105.618	130.822	154.237	154.237
BIMW-COMP-T-M	70.2128	70.2128	72.08555	78.1818	82.9693	86.4865	86.4865
BIN-COMP-T	54.1667	54.1667	55.83335	68	79.2857	80	80
LA3-REF	4.40909	4.40909	4.89476	6.55405	32.303	37.3333	37.3333
MCN1-COMP-T	107.527	107.527	112.6245	121.951	182.9125	188.406	188.406
MCN2-COMP-T	104.938	104.938	110.116	120.833	126.9005	131.579	131.579

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB101**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
MCN3-COMP	72.6316	72.6316	76.73245	100	130.6515	138.889	138.889
MCN4-COMP	69.7674	69.7674	72.3837	80	105.853	122	122
MCN5-COMP	48	48	49.5	52.5	82.04885	85.5263	85.5263
TB	281.69	281.69	295.7745	346.154	366.6005	369.565	369.565

**Oneway Anova**

**Summary of Fit**

Rsquare	0.933459
Adj Rsquare	0.918488
Root Mean Square Error	24.21812
Mean of Response	111.4297
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	9	329116.04	36568.4	62.3484	<.0001*
Error	40	23460.70	586.5		
C. Total	49	352576.74			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	103.675	10.831	81.8	125.56
BIMW-COMP-T-M	5	77.658	10.831	55.8	99.55
BIN-COMP-T	5	67.648	10.831	45.8	89.54
LA3-REF	5	16.190	10.831	-5.7	38.08
MCN1-COMP-T	5	142.605	10.831	120.7	164.49
MCN2-COMP-T	5	118.973	10.831	97.1	140.86
MCN3-COMP	5	102.954	10.831	81.1	124.84
MCN4-COMP	5	87.295	10.831	65.4	109.18
MCN5-COMP	5	63.120	10.831	41.2	85.01
TB	5	334.181	10.831	312.3	356.07

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	103.675	32.4706	14.521	63.4	143.99
BIMW-COMP-T-M	5	77.658	6.1350	2.744	70.0	85.28
BIN-COMP-T	5	67.648	11.7977	5.276	53.0	82.30
LA3-REF	5	16.190	15.1522	6.776	-2.6	35.00
MCN1-COMP-T	5	142.605	37.3697	16.712	96.2	189.01
MCN2-COMP-T	5	118.973	9.7909	4.379	106.8	131.13
MCN3-COMP	5	102.954	27.7827	12.425	68.5	137.45
MCN4-COMP	5	87.295	20.7476	9.279	61.5	113.06

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB101**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
MCN5-COMP	5	63.120	17.5291	7.839	41.4	84.88
TB	5	334.181	37.4494	16.748	287.7	380.68

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	274.9	<.0001*
MCN1-COMP-T	83.35	<.0001*
MCN2-COMP-T	59.72	<.0001*
BIME-COMP-T-M	44.42	<.0001*
MCN3-COMP	43.7	<.0001*
MCN4-COMP	28.04	0.0003*
BIMW-COMP-T-M	18.4	0.0020*
BIN-COMP-T	8.39	0.0125*
MCN5-COMP	3.862	0.0270*
LA3-REF	-43.1	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	144.000	127.500	28.8000	0.517
BIMW-COMP-T-M	5	96.000	127.500	19.2000	-1.003
BIN-COMP-T	5	72.000	127.500	14.4000	-1.779
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	194.000	127.500	38.8000	2.134
MCN2-COMP-T	5	180.000	127.500	36.0000	1.682
MCN3-COMP	5	150.000	127.500	30.0000	0.711
MCN4-COMP	5	117.500	127.500	23.5000	-0.307
MCN5-COMP	5	66.500	127.500	13.3000	-1.957
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

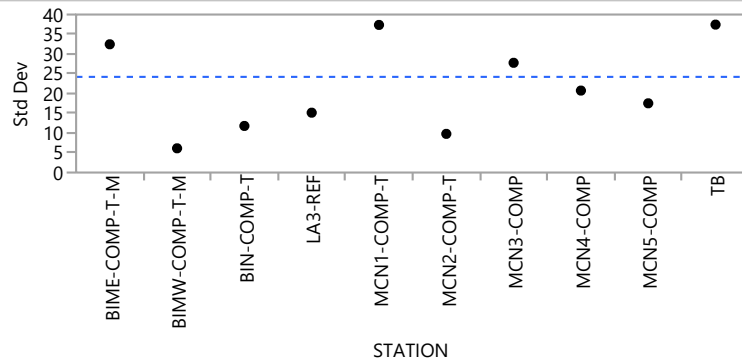
ChiSquare	DF	Prob>ChiSq
38.7454	9	<.0001*

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB101**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	32.47058	22.49526	22.10658
BIMW-COMP-T-M	5	6.13503	4.45820	4.35350
BIN-COMP-T	5	11.79771	9.45142	9.38094
LA3-REF	5	15.15217	12.89047	10.96330
MCN1-COMP-T	5	37.36965	32.24600	28.11520
MCN2-COMP-T	5	9.79085	7.08576	6.71380
MCN3-COMP	5	27.78271	22.15834	21.56762
MCN4-COMP	5	20.74759	14.84663	13.38770
MCN5-COMP	5	17.52913	15.14345	13.01954
TB	5	37.44944	30.72504	28.33040

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.1413	9	40	0.0482*
Brown-Forsythe	1.2632	9	40	0.2865
Levene	3.8698	9	40	0.0014*
Bartlett	2.1534	9	.	0.0221*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB101**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

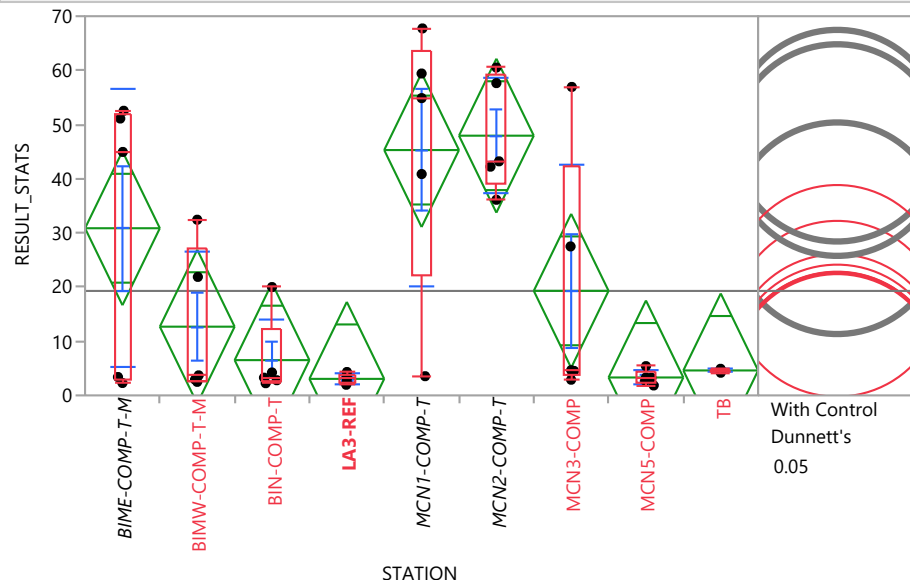
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	47.509	28.075	114.448	
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	63.555	28.956	130.906	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	115.397	80.254	183.026	
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	42.651	25.486	57.621	
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	51.579	26.367	74.079	
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	104.306	77.665	126.199	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	85.081	43.500	133.509	
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	69.620	37.667	116.620	
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	45.946	13.667	80.146	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	238.747	155.622	293.636	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	267.972	202.238	295.607	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	278.154	203.119	312.065	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	326.303	254.417	364.185	
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	187.908	104.271	256.109	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	225.321	159.468	258.698	
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	230.676	159.276	291.004	
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	247.565	187.859	294.565	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	278.110	203.119	318.565	
MCN3-COMP	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	32.000	-5.940	81.389	
MCN1-COMP-T	BIME-COMP-T-M	3.60000	1.914854	1.88004	0.0601	36.611	-36.515	107.419	
MCN4-COMP	BIN-COMP-T	3.00000	1.909043	1.57147	0.1161	15.601	-8.804	64.500	
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	21.818	-6.820	64.931	
MCN2-COMP-T	BIME-COMP-T-M	2.00000	1.914854	1.04447	0.2963	16.604	-38.943	52.222	
MCN4-COMP	BIMW-COMP-T-M	1.20000	1.914854	0.62668	0.5309	3.219	-11.487	48.042	
MCN3-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.278	-73.404	57.778	
MCN2-COMP-T	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-6.657	-73.112	14.695	
MCN3-COMP	MCN2-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-20.833	-50.746	23.595	
MCN5-COMP	BIN-COMP-T	-1.40000	1.909043	-0.73335	0.4633	-5.000	-30.571	28.026	
MCN4-COMP	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-15.912	-79.237	40.889	
BIN-COMP-T	BIMW-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-10.182	-28.987	8.359	
MCN4-COMP	MCN3-COMP	-2.00000	1.914854	-1.04447	0.2963	-11.066	-63.889	41.167	
MCN5-COMP	BIMW-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-21.458	-35.487	11.568	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-26.166	-80.279	9.452	
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-38.530	-107.573	21.167	
MCN5-COMP	MCN4-COMP	-2.80000	1.914854	-1.46225	0.1437	-24.000	-71.000	10.526	
MCN4-COMP	MCN1-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-46.951	-113.406	4.278	
MCN4-COMP	MCN2-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-35.294	-56.579	6.706	
MCN5-COMP	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-30.111	-103.237	8.571	
MCN5-COMP	MCN3-COMP	-3.60000	1.914854	-1.88004	0.0601	-36.888	-87.889	5.940	
BIN-COMP-T	BIME-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-27.407	-96.737	8.571	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-78.345	-148.857	-42.727	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-65.804	-81.106	-36.625	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-51.299	-74.620	-20.167	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-69.722	-137.406	-28.956	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB101**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-56.938	-80.579	-26.367

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB105**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.29167	2.29167	2.843365	44.9438	51.82675	52.5424	52.5424
BIMW-COMP-T-M	2.5	2.5	2.712765	3.69863	27.1537	32.4324	32.4324
BIN-COMP-T	2.25	2.25	2.525	3.27381	12.11539	20	20
LA3-REF	1.96364	1.96364	2.209095	3.22826	3.80189	4.32	4.32
MCN1-COMP-T	3.5443	3.5443	22.20225	54.878	63.5811	67.7419	67.7419
MCN2-COMP-T	36.1111	36.1111	39.16665	43.2099	59.0867	60.5263	60.5263
MCN3-COMP	2.89474	2.89474	3.705435	4.65517	42.2222	56.9444	56.9444
MCN5-COMP	1.83333	1.83333	2.291665	3.25658	4.350895	5.40179	5.40179
TB	4.1831	4.1831	4.37324	4.67308	4.80237	4.90909	4.90909

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB105**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.592798
Adj Rsquare	0.502309
Root Mean Square Error	15.66606
Mean of Response	19.28351
Observations (or Sum Wgts)	45

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	8	12862.325	1607.79	6.5510	<.0001*
Error	36	8835.312	245.43		
C. Total	44	21697.637			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	30.8568	7.0061	16.65	45.066
BIMW-COMP-T-M	5	12.6863	7.0061	-1.52	26.895
BIN-COMP-T	5	6.5109	7.0061	-7.70	20.720
LA3-REF	5	3.0500	7.0061	-11.16	17.259
MCN1-COMP-T	5	45.2889	7.0061	31.08	59.498
MCN2-COMP-T	5	47.9433	7.0061	33.73	62.152
MCN3-COMP	5	19.3021	7.0061	5.09	33.511
MCN5-COMP	5	3.3083	7.0061	-10.90	17.517
TB	5	4.6049	7.0061	-9.60	18.814

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	30.8568	25.7345	11.509	-1.10	62.810
BIMW-COMP-T-M	5	12.6863	13.7309	6.141	-4.36	29.735
BIN-COMP-T	5	6.5109	7.5756	3.388	-2.90	15.917
LA3-REF	5	3.0500	0.8992	0.402	1.93	4.167
MCN1-COMP-T	5	45.2889	25.2884	11.309	13.89	76.689
MCN2-COMP-T	5	47.9433	10.5787	4.731	34.81	61.078
MCN3-COMP	5	19.3021	23.3801	10.456	-9.73	48.332
MCN5-COMP	5	3.3083	1.3108	0.586	1.68	4.936
TB	5	4.6049	0.2670	0.119	4.27	4.936

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB105**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**Confidence Quantile**

d	Alpha
2.78823	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
MCN2-COMP-T	17.27	0.0005*
MCN1-COMP-T	14.61	0.0010*
BIME-COMP-T-M	0.181	0.0479*
MCN3-COMP	-11.4	0.4548
BIMW-COMP-T-M	-18	0.8953
BIN-COMP-T	-24.2	0.9998
TB	-26.1	1.0000
MCN5-COMP	-27.4	1.0000
LA3-REF	-27.6	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	134.000	115.000	26.8000	0.668
BIMW-COMP-T-M	5	96.000	115.000	19.2000	-0.668
BIN-COMP-T	5	73.000	115.000	14.6000	-1.499
LA3-REF	5	53.000	115.000	10.6000	-2.221
MCN1-COMP-T	5	179.000	115.000	35.8000	2.293
MCN2-COMP-T	5	190.000	115.000	38.0000	2.691
MCN3-COMP	5	127.000	115.000	25.4000	0.415
MCN5-COMP	5	63.000	115.000	12.6000	-1.860
TB	5	120.000	115.000	24.0000	0.163

**1-Way Test, ChiSquare Approximation**

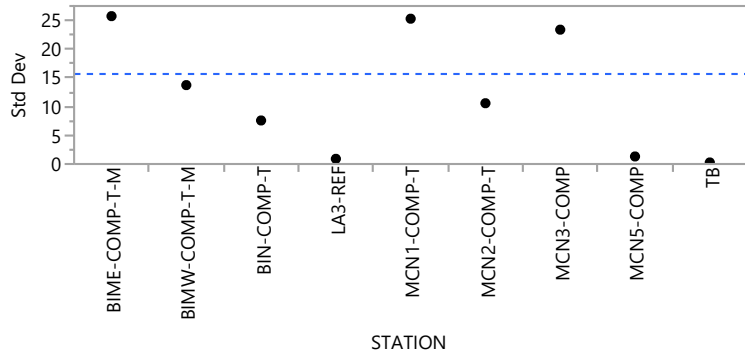
ChiSquare	DF	Prob>ChiSq
21.9409	8	0.0050*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB105**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	25.73451	22.41075	19.59335
BIMW-COMP-T-M	5	13.73092	11.57391	9.77637
BIN-COMP-T	5	7.57561	5.39563	3.83615
LA3-REF	5	0.89918	0.67276	0.63712
MCN1-COMP-T	5	25.28838	18.46935	16.55154
MCN2-COMP-T	5	10.57867	8.91470	7.96802
MCN3-COMP	5	23.38005	18.33609	15.40671
MCN5-COMP	5	1.31079	0.83738	0.82369
TB	5	0.26695	0.18530	0.17165

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.9144	8	36	0.0880
Brown-Forsythe	1.5359	8	36	0.1794
Levene	7.6741	8	36	<.0001*
Bartlett	8.4993	8	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

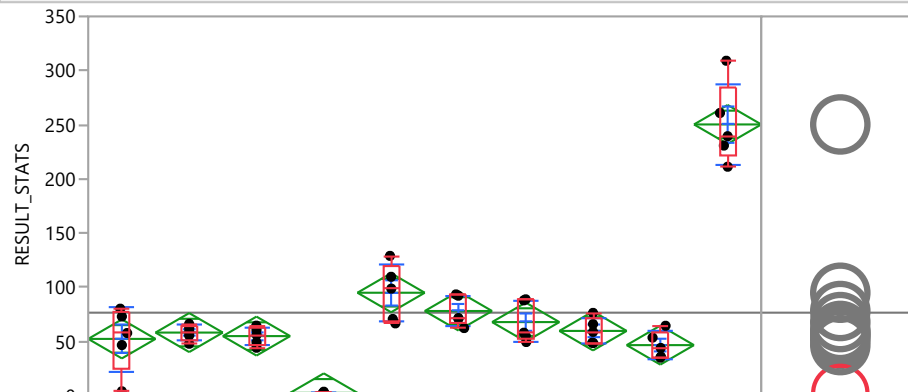
q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	38.5236	9.7898	57.6008		
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	39.9361	22.2222	57.7263		
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	40.2586	32.8273	58.0718		
MCN1-COMP-T	LA3-REF	4.40000	1.914854	2.29783	0.0216*	51.6497	0.2605	65.2874		
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.4674	0.2434	2.7320		
MCN1-COMP-T	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	47.7419	-0.6865	64.9419		
MCN1-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	37.5453	-18.3307	64.8164		
MCN3-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	2.2006	-0.3890	54.4899		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB105**

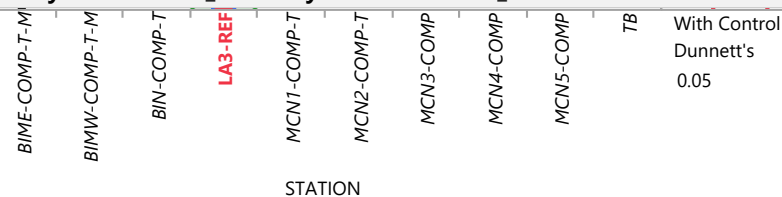
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN3-COMP	BIN-COMP-T	2.80000	1.914854	1.46225	0.1437	1.8552	-15.4839	54.1444	
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.4331	-0.8384	2.8623	
MCN1-COMP-T	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	9.9342	-47.5668	64.3468	
TB	BIN-COMP-T	2.40000	1.914854	1.25336	0.2101	1.3831	-15.4366	2.4457	
MCN2-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	9.4152	-15.0000	57.1312	
MCN3-COMP	BIMW-COMP-T-M	1.20000	1.914854	0.62668	0.5309	1.5906	-27.9163	54.0189	
TB	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.9744	-27.8690	2.1957	
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.0283	-1.5700	2.9472	
MCN2-COMP-T	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	-1.7732	-25.5197	54.1028	
MCN3-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.5003	-48.2164	53.5493	
TB	MCN3-COMP	0.00000	1.914854	0.00000	1.0000	-0.0918	-52.3810	1.8009	
LA3-REF	BIN-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.3455	-17.5455	1.5200	
MCN5-COMP	BIN-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.4167	-17.2500	2.6018	
TB	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-40.2707	-47.9790	2.4040	
BIN-COMP-T	BIMW-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-0.6755	-29.6324	17.0745	
BIMW-COMP-T-M	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-20.1100	-49.6169	29.0373	
MCN5-COMP	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-0.9486	-29.6824	2.4763	
LA3-REF	BIMW-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-0.9619	-29.9779	1.3945	
BIN-COMP-T	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-32.5424	-49.7424	16.6049	
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-36.2050	-63.2258	23.9557	
LA3-REF	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-41.7155	-50.0879	0.9921	
MCN5-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-41.6872	-49.7924	2.0067	
MCN5-COMP	MCN3-COMP	-2.80000	1.914854	-1.46225	0.1437	-1.9052	-54.1944	0.8857	
TB	MCN1-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-50.2049	-63.1785	1.1514	
MCN3-COMP	MCN2-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-33.2164	-56.0102	14.7222	
MCN5-COMP	MCN1-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-51.6214	-64.9919	-0.2443	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-40.3889	-57.7763	-32.8111	
TB	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-38.5368	-55.9629	-31.4155	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB110**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB110**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.98305	3.98305	25.32488	57.7778	76.6403	80.2469	80.2469
BIMW-COMP-T-M	47.8723	47.8723	51.6634	58.9041	64.3581	66.2162	66.2162
BIN-COMP-T	44.1667	44.1667	46.6667	56	62.66485	64.6154	64.6154
LA3-REF	1.63636	1.63636	1.840905	2.69022	3.168245	3.6	3.6
MCN1-COMP-T	66.6667	66.6667	68.6992	98.7342	119.3315	128.986	128.986
MCN2-COMP-T	62.3529	62.3529	66.5931	71.6049	92.82165	93.4211	93.4211
MCN3-COMP	49.4737	49.4737	52.23685	58.0645	88.40995	88.8889	88.8889
MCN4-COMP	48.5294	48.5294	48.6833	58.8235	71.1818	76.3636	76.3636
MCN5-COMP	35	35	35.5	44	59.02255	64.4737	64.4737
TB	211.268	211.268	221.0185	239.437	284.9805	309.091	309.091

**Oneway Anova**

**Summary of Fit**

Rsquare	0.924171
Adj Rsquare	0.90711
Root Mean Square Error	19.90966
Mean of Response	76.55298
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	193244.18	21471.6	54.1672	<.0001*
Error	40	15855.78	396.4		
C. Total	49	209099.95			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	52.342	8.9039	34.3	70.34
BIMW-COMP-T-M	5	58.189	8.9039	40.2	76.18
BIN-COMP-T	5	54.933	8.9039	36.9	72.93
LA3-REF	5	2.542	8.9039	-15.5	20.54
MCN1-COMP-T	5	94.959	8.9039	77.0	112.95
MCN2-COMP-T	5	78.087	8.9039	60.1	96.08
MCN3-COMP	5	67.872	8.9039	49.9	85.87
MCN4-COMP	5	59.711	8.9039	41.7	77.71
MCN5-COMP	5	46.609	8.9039	28.6	64.60
TB	5	250.287	8.9039	232.3	268.28

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB110**

**Oneway Anova**

**Means for Oneway Anova**

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	52.342	30.0299	13.430	15.05	89.63
BIMW-COMP-T-M	5	58.189	7.0257	3.142	49.47	66.91
BIN-COMP-T	5	54.933	8.3288	3.725	44.59	65.27
LA3-REF	5	2.542	0.7493	0.335	1.61	3.47
MCN1-COMP-T	5	94.959	26.3445	11.782	62.25	127.67
MCN2-COMP-T	5	78.087	13.9386	6.234	60.78	95.39
MCN3-COMP	5	67.872	19.0029	8.498	44.28	91.47
MCN4-COMP	5	59.711	11.8418	5.296	45.01	74.41
MCN5-COMP	5	46.609	12.4674	5.576	31.13	62.09
TB	5	250.287	37.3867	16.720	203.87	296.71

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	212.3	<.0001*
MCN1-COMP-T	57.01	<.0001*
MCN2-COMP-T	40.14	<.0001*
MCN3-COMP	29.92	<.0001*
MCN4-COMP	21.76	0.0004*
BIMW-COMP-T-M	20.24	0.0006*
BIN-COMP-T	16.99	0.0013*
BIME-COMP-T-M	14.39	0.0024*
MCN5-COMP	8.662	0.0086*
LA3-REF	-35.4	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB110**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

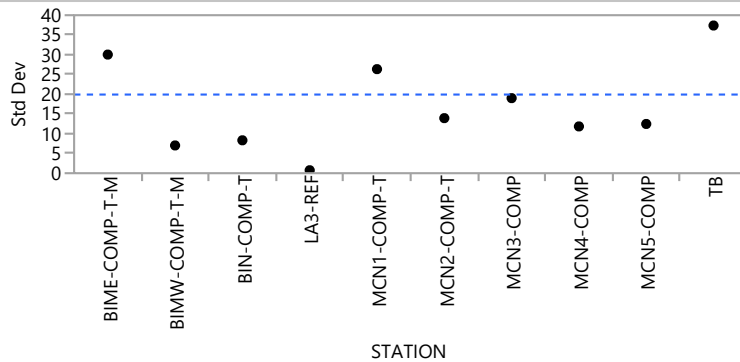
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	112.000	127.500	22.4000	-0.485
BIMW-COMP-T-M	5	113.000	127.500	22.6000	-0.453
BIN-COMP-T	5	99.000	127.500	19.8000	-0.905
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	197.000	127.500	39.4000	2.231
MCN2-COMP-T	5	178.000	127.500	35.6000	1.617
MCN3-COMP	5	135.000	127.500	27.0000	0.226
MCN4-COMP	5	117.000	127.500	23.4000	-0.323
MCN5-COMP	5	69.000	127.500	13.8000	-1.876
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
35.3360	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
BIME-COMP-T-M	5	30.02988	21.61340	20.52617
BIMW-COMP-T-M	5	7.02574	5.22082	5.07788
BIN-COMP-T	5	8.32878	6.61274	6.39926
LA3-REF	5	0.74932	0.56064	0.53094
MCN1-COMP-T	5	26.34447	21.00794	20.25292
MCN2-COMP-T	5	13.93856	11.78782	10.49142
MCN3-COMP	5	19.00294	16.43066	14.46924
MCN4-COMP	5	11.84183	9.17685	8.99940
MCN5-COMP	5	12.46745	9.93082	9.40902
TB	5	37.38672	27.75480	25.58480

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB110**

**Tests that the Variances are Equal**

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.5320	9	40	0.1702
Brown-Forsythe	1.7306	9	40	0.1137
Levene	3.4800	9	40	0.0030*
Bartlett	4.2850	9	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* 1.95996  
Alpha 0.05

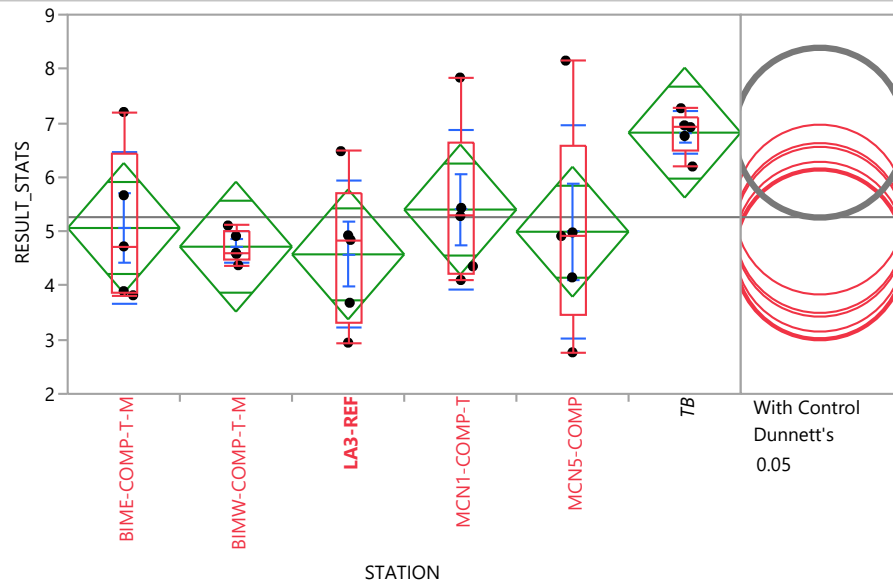
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	39.830	4.167	73.532	
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	42.734	5.952	79.819	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	96.044	63.930	126.941	
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	69.197	59.616	91.376	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	55.374	46.737	86.843	
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	56.133	45.237	74.318	
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	41.310	32.264	62.428	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	187.836	138.234	262.424	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	182.897	148.768	253.637	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	186.602	150.554	259.924	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	236.747	208.532	307.046	
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	151.193	101.591	238.359	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	167.832	119.046	238.258	
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	175.769	123.337	254.091	
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	182.240	145.268	260.254	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	195.769	157.697	273.091	
MCN2-COMP-T	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	22.438	1.639	48.056	
MCN2-COMP-T	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	16.150	-0.147	44.350	
MCN1-COMP-T	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	40.956	-9.515	105.694	
MCN2-COMP-T	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	19.189	-10.681	88.239	
MCN3-COMP	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	8.642	-25.247	83.948	
MCN3-COMP	BIN-COMP-T	1.60000	1.914854	0.83557	0.4034	8.898	-11.241	43.764	
MCN4-COMP	BIN-COMP-T	0.80000	1.914854	0.41779	0.6761	4.363	-15.778	27.197	
MCN3-COMP	BIMW-COMP-T-M	0.40000	1.914854	0.20889	0.8345	2.610	-13.026	40.059	
MCN4-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	1.863	-31.410	62.017	
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	1.126	-25.161	58.517	
MCN4-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.657	-17.379	20.909	
BIN-COMP-T	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-2.500	-31.080	56.731	
BIN-COMP-T	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-2.904	-18.333	12.842	
MCN4-COMP	MCN3-COMP	-1.20000	1.914854	-0.62668	0.5309	-6.471	-40.052	21.364	
MCN2-COMP-T	MCN1-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-16.256	-58.153	25.556	
MCN5-COMP	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-11.667	-44.247	49.588	
MCN3-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-12.769	-42.749	25.578	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB110**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN5-COMP	BIN-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-9.167	-28.615	15.307	
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-12.645	-30.216	9.019	
MCN5-COMP	MCN4-COMP	-2.80000	1.914854	-1.46225	0.1437	-12.837	-40.364	15.636	
MCN3-COMP	MCN1-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-21.258	-73.986	21.264	
MCN4-COMP	MCN2-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-17.057	-44.584	5.530	
MCN5-COMP	MCN3-COMP	-3.20000	1.914854	-1.67115	0.0947	-20.000	-52.931	9.474	
MCN4-COMP	MCN1-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-33.313	-80.149	5.632	
MCN5-COMP	MCN2-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-28.947	-57.421	-6.360	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-55.088	-78.201	-1.247	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-56.214	-64.171	-45.136	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-53.310	-62.570	-41.430	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-45.203	-92.986	-6.258	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB114**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.82022	3.82022	3.858025	4.72222	6.43503	7.20339	7.20339
BIMW-COMP-T-M	4.375	4.375	4.47841	4.60274	5.0115	5.10811	5.10811
LA3-REF	2.94545	2.94545	3.313635	4.84239	5.70284	6.48	6.48
MCN1-COMP-T	4.10127	4.10127	4.228055	5.28261	6.63582	7.83871	7.83871
MCN5-COMP	2.76667	2.76667	3.458335	4.91447	6.565895	8.15179	8.15179
TB	6.19718	6.19718	6.47887	6.92308	7.114625	7.27273	7.27273

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB114**

Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum

**Oneway Anova**

**Summary of Fit**

Rsquare	0.291144
Adj Rsquare	0.143466
Root Mean Square Error	1.300706
Mean of Response	5.261653
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	16.677067	3.33541	1.9715	0.1195
Error	24	40.604056	1.69184		
C. Total	29	57.281124			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.06167	0.58169	3.8611	6.2622
BIMW-COMP-T-M	5	4.71651	0.58169	3.5160	5.9171
LA3-REF	5	4.57507	0.58169	3.3745	5.7756
MCN1-COMP-T	5	5.40207	0.58169	4.2015	6.6026
MCN5-COMP	5	4.99259	0.58169	3.7920	6.1931
TB	5	6.82201	0.58169	5.6215	8.0226

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.06167	1.41144	0.63121	3.3091	6.8142
BIMW-COMP-T-M	5	4.71651	0.29173	0.13046	4.3543	5.0787
LA3-REF	5	4.57507	1.34877	0.60319	2.9004	6.2498
MCN1-COMP-T	5	5.40207	1.47828	0.66111	3.5665	7.2376
MCN5-COMP	5	4.99259	1.97810	0.88463	2.5365	7.4487
TB	5	6.82201	0.39549	0.17687	6.3309	7.3131

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB114**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.03	0.0463*
MCN1-COMP-T	-1.39	0.7709
BIME-COMP-T-M	-1.73	0.9634
MCN5-COMP	-1.8	0.9806
BIMW-COMP-T-M	-2.08	0.9999
LA3-REF	-2.22	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

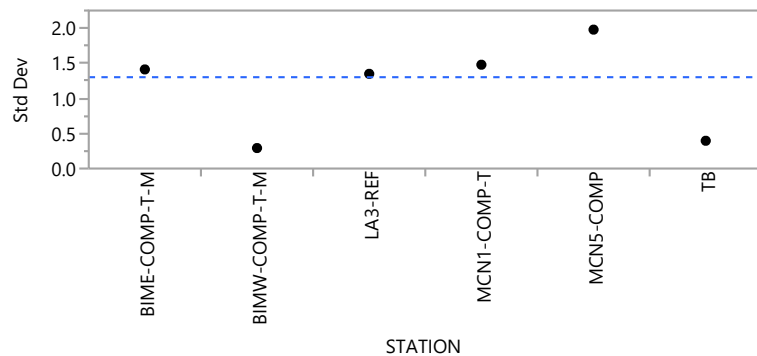
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	69.000	77.500	13.8000	-0.445
BIMW-COMP-T-M	5	63.000	77.500	12.6000	-0.779
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN1-COMP-T	5	82.000	77.500	16.4000	0.223
MCN5-COMP	5	69.000	77.500	13.8000	-0.445
TB	5	125.000	77.500	25.0000	2.615

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.8748	5	0.1633

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB114**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.411435	1.098691	1.030802
BIMW-COMP-T-M	5	0.291727	0.235990	0.213236
LA3-REF	5	1.348768	1.009146	0.955682
MCN1-COMP-T	5	1.478277	0.986998	0.963106
MCN5-COMP	5	1.978098	1.263682	1.243024
TB	5	0.395489	0.274515	0.254302

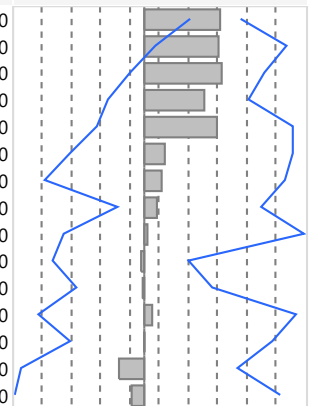
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9391	5	24	0.4737
Brown-Forsythe	1.1888	5	24	0.3440
Levene	1.4677	5	24	0.2371
Bartlett	2.9459	5	.	0.0116*

Warning: Small sample sizes. Use Caution.

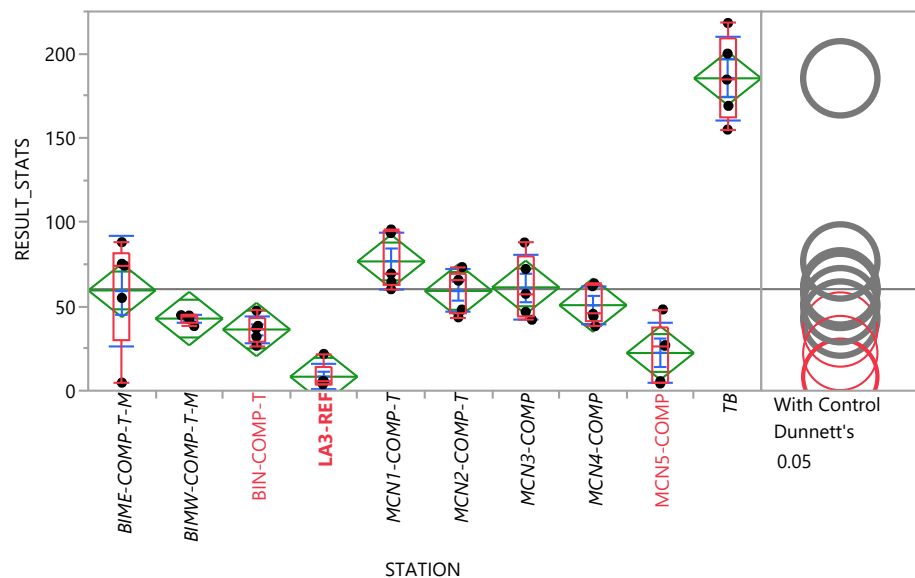
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* Alpha  
1.95996 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	2.16462	1.28229	2.690910
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.11413	0.28056	4.011070
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.20086	-0.44283	3.376900
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.67391	-1.07815	2.917890
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	2.04205	-1.39123	4.189850
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.59054	-2.12516	4.156890
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.45901	-2.84855	3.942880
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.36772	-0.81362	3.256890
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.07208	-2.33000	4.469970
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.11948	-2.62157	1.212280
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.07250	-1.96944	1.898180
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.19225	-3.05339	4.255960
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.00042	-2.14822	3.569970
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.72339	-3.52157	2.584170
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.36814	-3.68871	3.796950



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB118**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.77778	4.77778	29.91699	74.1667	81.7221	88.1356	88.1356
BIMW-COMP-T-M	38.3562	38.3562	40.4547	43.6364	44.69315	44.7917	44.7917
BIN-COMP-T	26.6667	26.6667	29.33335	36.9048	42.98075	47.5	47.5
LA3-REF	3.77273	3.77273	4.19615	5.60811	13.74244	21.8182	21.8182
MCN1-COMP-T	60.2151	60.2151	62.38605	69.5122	94.6003	95.6522	95.6522
MCN2-COMP-T	43.5294	43.5294	45.83875	65.2778	69.5614	73.3333	73.3333
MCN3-COMP	42.1053	42.1053	44.43975	57.5	80.0766	87.931	87.931
MCN4-COMP	38.3721	38.3721	41.24485	45.5882	62.8182	63.6364	63.6364
MCN5-COMP	4.3	4.3	4.978945	26.6667	37.60715	48.2143	48.2143
TB	154.93	154.93	161.972	184.615	209.091	218.182	218.182

**Oneway Anova**

**Summary of Fit**

Rsquare	0.895261
Adj Rsquare	0.871694
Root Mean Square Error	17.53518
Mean of Response	60.2557
Observations (or Sum Wgts)	50

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB118**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	105128.24	11680.9	37.9889	<.0001*
Error	40	12299.30	307.5		
C. Total	49	117427.54			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	59.489	7.8420	43.6	75.34
BIMW-COMP-T-M	5	42.786	7.8420	26.9	58.64
BIN-COMP-T	5	36.307	7.8420	20.5	52.16
LA3-REF	5	8.297	7.8420	-7.6	24.15
MCN1-COMP-T	5	76.697	7.8420	60.8	92.55
MCN2-COMP-T	5	59.216	7.8420	43.4	75.06
MCN3-COMP	5	61.307	7.8420	45.5	77.16
MCN4-COMP	5	50.743	7.8420	34.9	66.59
MCN5-COMP	5	22.368	7.8420	6.5	38.22
TB	5	185.348	7.8420	169.5	201.20

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	59.489	32.7845	14.662	18.8	100.20
BIMW-COMP-T-M	5	42.786	2.6313	1.177	39.5	46.05
BIN-COMP-T	5	36.307	7.7744	3.477	26.7	45.96
LA3-REF	5	8.297	7.5988	3.398	-1.1	17.73
MCN1-COMP-T	5	76.697	16.6877	7.463	56.0	97.42
MCN2-COMP-T	5	59.216	12.7262	5.691	43.4	75.02
MCN3-COMP	5	61.307	18.8572	8.433	37.9	84.72
MCN4-COMP	5	50.743	11.3630	5.082	36.6	64.85
MCN5-COMP	5	22.368	18.1221	8.104	-0.1338	44.87
TB	5	185.348	24.9266	11.148	154.4	216.30

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB118****Means Comparisons****Comparisons with a control using Dunnett's Method****LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	145.9	<.0001*
MCN1-COMP-T	37.22	<.0001*
MCN3-COMP	21.83	0.0002*
BIME-COMP-T-M	20.01	0.0003*
MCN2-COMP-T	19.74	0.0004*
MCN4-COMP	11.26	0.0034*
BIMW-COMP-T-M	3.306	0.0240*
BIN-COMP-T	-3.17	0.0959
MCN5-COMP	-17.1	0.7453
LA3-REF	-31.2	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	157.000	127.500	31.4000	0.938
BIMW-COMP-T-M	5	97.000	127.500	19.4000	-0.970
BIN-COMP-T	5	76.500	127.500	15.3000	-1.633
LA3-REF	5	24.000	127.500	4.8000	-3.331
MCN1-COMP-T	5	191.000	127.500	38.2000	2.037
MCN2-COMP-T	5	156.000	127.500	31.2000	0.905
MCN3-COMP	5	152.000	127.500	30.4000	0.776
MCN4-COMP	5	125.000	127.500	25.0000	-0.065
MCN5-COMP	5	56.500	127.500	11.3000	-2.280
TB	5	240.000	127.500	48.0000	3.622

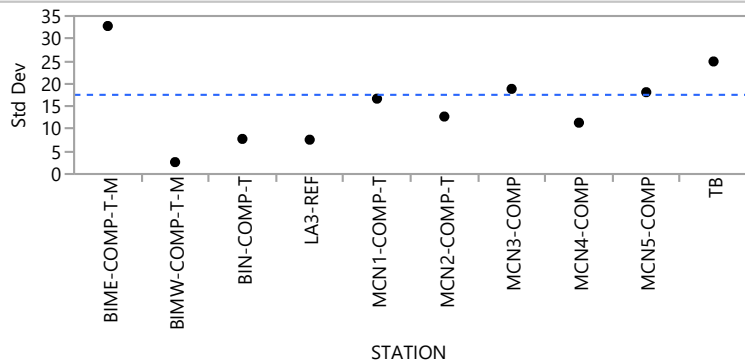
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
36.0130	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB118**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	32.78448	23.65759	20.72204
BIMW-COMP-T-M	5	2.63127	1.86538	1.69538
BIN-COMP-T	5	7.77445	5.57860	5.45896
LA3-REF	5	7.59875	5.40846	3.81851
MCN1-COMP-T	5	16.68774	14.32266	12.88570
MCN2-COMP-T	5	12.72618	10.70150	9.48906
MCN3-COMP	5	18.85723	15.01605	14.25474
MCN4-COMP	5	11.36295	9.66027	8.62934
MCN5-COMP	5	18.12213	13.91107	13.05128
TB	5	24.92661	18.99424	18.84760

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.3041	9	40	0.2653
Brown-Forsythe	1.2039	9	40	0.3196
Levene	2.7447	9	40	0.0135*
Bartlett	2.6603	9	.	0.0044*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

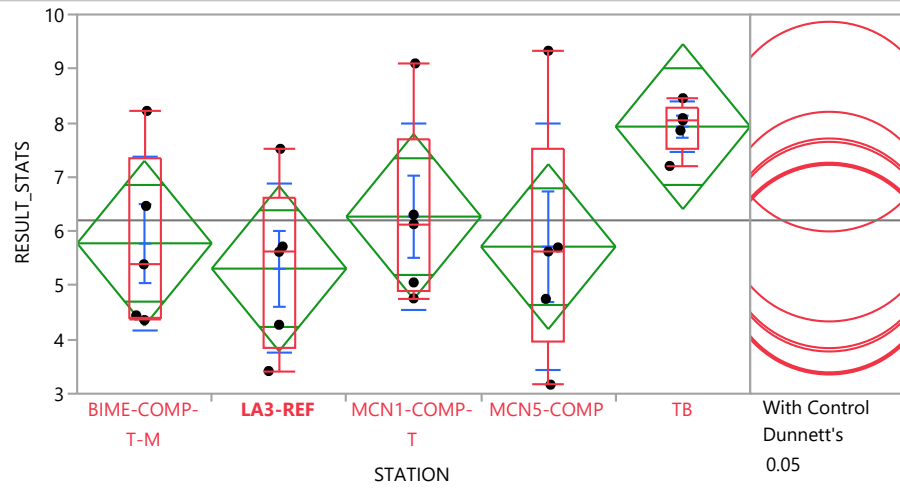
		q*	Alpha						
		1.95996	0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	26.201	15.621	55.192	
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	37.512	17.057	66.882	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	63.904	42.739	91.033	
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	51.515	26.330	68.714	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	51.833	24.956	83.311	
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	40.182	22.299	59.017	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	124.691	79.621	195.222	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB118**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	140.979	110.335	175.629	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	147.710	116.469	186.182	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	178.948	147.196	213.562	
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	106.452	61.382	153.625	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	125.485	89.141	170.034	
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	126.909	81.083	171.408	
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	136.364	92.930	174.064	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	163.356	120.800	212.524	
MCN2-COMP-T	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	25.833	0.648	41.333	
MCN3-COMP	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	20.595	-0.726	55.931	
MCN2-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	20.998	-1.065	30.780	
MCN3-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	13.864	-2.489	45.378	
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	13.588	-3.382	35.333	
MCN4-COMP	BIMW-COMP-T-M	2.40000	1.914854	1.25336	0.2101	3.035	-6.222	23.644	
MCN5-COMP	LA3-REF	2.40000	1.914854	1.25336	0.2101	21.000	-16.160	43.595	
MCN1-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	9.501	-23.579	88.771	
MCN3-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	-1.111	-26.559	39.783	
MCN3-COMP	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-3.086	-41.361	67.444	
MCN2-COMP-T	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-8.889	-39.988	61.012	
MCN4-COMP	MCN3-COMP	-1.60000	1.914854	-0.83557	0.4034	-8.586	-43.813	19.895	
MCN2-COMP-T	MCN1-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-20.215	-50.019	8.776	
MCN4-COMP	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-13.309	-44.018	57.222	
MCN5-COMP	BIN-COMP-T	-2.20000	1.909043	-1.15241	0.2492	-11.795	-41.842	16.214	
BIN-COMP-T	BIMW-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-6.356	-17.928	4.947	
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-17.783	-51.443	23.374	
MCN4-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-5.157	-29.216	18.471	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-30.517	-45.582	39.817	
BIN-COMP-T	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-35.705	-56.136	33.684	
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-17.792	-40.295	5.661	
MCN5-COMP	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-47.500	-82.478	22.222	
LA3-REF	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-66.317	-83.516	0.889	
MCN5-COMP	MCN4-COMP	-3.60000	1.914854	-1.88004	0.0601	-34.072	-57.979	4.097	
MCN4-COMP	MCN1-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-25.395	-55.176	1.785	
MCN5-COMP	MCN2-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-38.790	-67.675	0.066	
MCN5-COMP	MCN3-COMP	-4.00000	1.914854	-2.08893	0.0367*	-39.717	-82.273	1.440	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-37.970	-40.822	-20.735	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-28.227	-42.880	-10.182	
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-55.915	-89.994	-16.343	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB119**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.35955	4.35955	4.40269	5.38889	7.343505	8.22034	8.22034
LA3-REF	3.41818	3.41818	3.845455	5.61957	6.61811	7.52	7.52
MCN1-COMP-T	4.75949	4.75949	4.906625	6.13043	7.700825	9.09677	9.09677
MCN5-COMP	3.16667	3.16667	3.958335	5.625	7.51518	9.33036	9.33036
TB	7.20423	7.20423	7.531695	8.04808	8.270755	8.45455	8.45455

**Oneway Anova**

**Summary of Fit**

Rsquare	0.283044
Adj Rsquare	0.139653
Root Mean Square Error	1.632472
Mean of Response	6.199933
Observations (or Sum Wgts)	25

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	4	21.041842	5.26046	1.9739	0.1375
Error	20	53.299271	2.66496		
C. Total	24	74.341113			



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB119**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.77626	0.73006	4.2534	7.2991
LA3-REF	5	5.30934	0.73006	3.7865	6.8322
MCN1-COMP-T	5	6.26907	0.73006	4.7462	7.7920
MCN5-COMP	5	5.71441	0.73006	4.1915	7.2373
TB	5	7.93060	0.73006	6.4077	9.4535

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.77626	1.61070	0.7203	3.7763	7.7762
LA3-REF	5	5.30934	1.56524	0.7000	3.3658	7.2528
MCN1-COMP-T	5	6.26907	1.71553	0.7672	4.1390	8.3992
MCN5-COMP	5	5.71441	2.26409	1.0125	2.9032	8.5256
TB	5	7.93060	0.45975	0.2056	7.3597	8.5015

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.65103	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.12	0.0629
MCN1-COMP-T	-1.78	0.7609
BIME-COMP-T-M	-2.27	0.9740
MCN5-COMP	-2.33	0.9844
LA3-REF	-2.74	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	56.000	65.000	11.2000	-0.577
LA3-REF	5	46.000	65.000	9.2000	-1.257
MCN1-COMP-T	5	68.000	65.000	13.6000	0.170
MCN5-COMP	5	55.000	65.000	11.0000	-0.645
TB	5	100.000	65.000	20.0000	2.344

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB119**

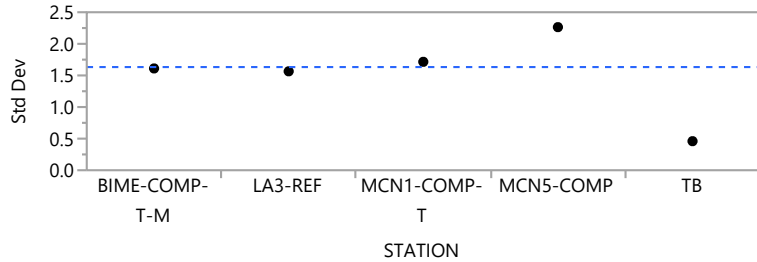
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.5575	4	0.1612

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.610695	1.253799	1.176326
LA3-REF	5	1.565236	1.171108	1.109062
MCN1-COMP-T	5	1.715532	1.145407	1.117680
MCN5-COMP	5	2.264087	1.446382	1.422738
TB	5	0.459753	0.319121	0.295624

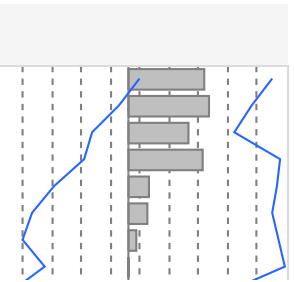
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.6708	4	20	0.6198
Brown-Forsythe	0.7328	4	20	0.5803
Levene	0.8967	4	20	0.4843
Bartlett	1.7199	4	.	0.1424

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.46739	0.33916	4.668780
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.65919	-0.36118	4.008720
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.95653	-1.23761	3.400790
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	2.45423	-1.47120	4.920290
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.68531	-2.46624	4.824040
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.60793	-3.16658	4.650940
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.23611	-3.47034	4.884530
MCN5-COMP	LA3-REF	0.00000	1.914854	0.00000	1.0000	0.00543	-2.77000	5.057630

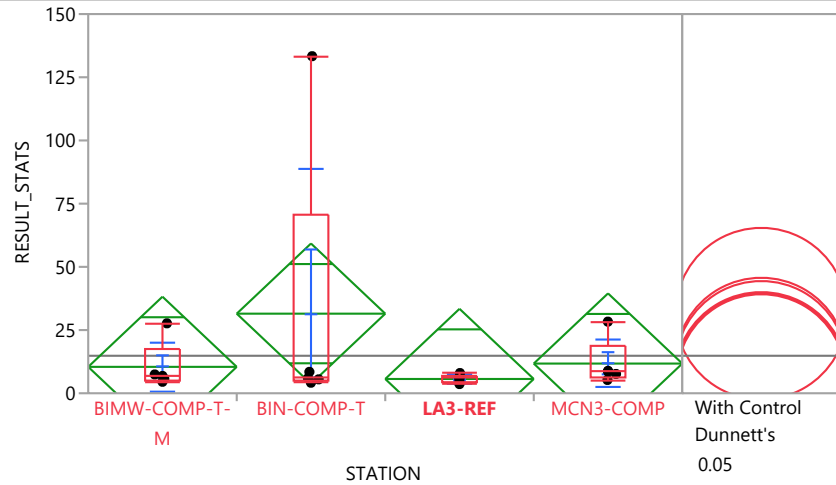


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB119**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.70034	-3.94761	3.074170
MCN5-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-0.50543	-4.34677	4.276600

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB123**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIMW-COMP-T-M	4.54545	4.54545	5.13731	6.84932	17.54602	27.6596	27.6596
BIN-COMP-T	4.16667	4.16667	4.833335	5.95238	70.89727	133.333	133.333
LA3-REF	3.63636	3.63636	4.090905	5.97826	7.04054	8	8
MCN3-COMP	5.26316	5.26316	6.451025	8.62069	18.60214	28.3333	28.3333

**Oneway Anova**

**Summary of Fit**

Rsquare	0.124586
Adj Rsquare	-0.03955
Root Mean Square Error	29.27784
Mean of Response	14.82989
Observations (or Sum Wgts)	20

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	3	1951.884	650.628	0.7590	0.5333
Error	16	13715.070	857.192		
C. Total	19	15666.953			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB123**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIMW-COMP-T-M	5	10.4432	13.093	-17.31	38.200
BIN-COMP-T	5	31.4827	13.093	3.73	59.240
LA3-REF	5	5.6482	13.093	-22.11	33.405
MCN3-COMP	5	11.7454	13.093	-16.01	39.502

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIMW-COMP-T-M	5	10.4432	9.6875	4.332	-1.59	22.47
BIN-COMP-T	5	31.4827	56.9573	25.472	-39.24	102.20
LA3-REF	5	5.6482	1.6651	0.745	3.58	7.72
MCN3-COMP	5	11.7454	9.3817	4.196	0.09645	23.39

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.59232	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
BIN-COMP-T	-22.2	0.3905
MCN3-COMP	-41.9	0.9756
BIMW-COMP-T-M	-43.2	0.9877
LA3-REF	-48	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIMW-COMP-T-M	5	51.500	52.500	10.3000	-0.044
BIN-COMP-T	5	51.000	52.500	10.2000	-0.087
LA3-REF	5	37.500	52.500	7.5000	-1.266
MCN3-COMP	5	70.000	52.500	14.0000	1.484

**1-Way Test, ChiSquare Approximation**

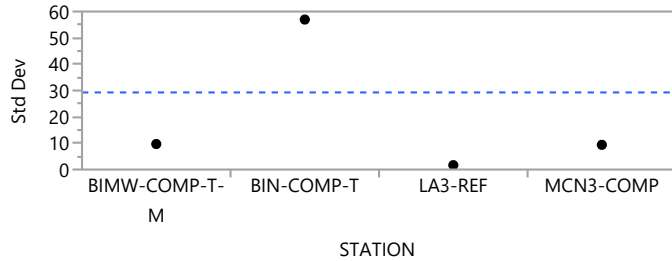
ChiSquare	DF	Prob>ChiSq
3.0566	3	0.3830

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB123**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIMW-COMP-T-M	5	9.68750	6.88656	4.96348
BIN-COMP-T	5	56.95727	40.74011	26.42557
LA3-REF	5	1.66515	1.24586	1.17985
MCN3-COMP	5	9.38173	6.63516	4.86044

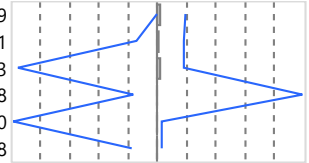
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2581	3	16	0.3221
Brown-Forsythe	0.7946	3	16	0.5147
Levene	5.2915	3	16	0.0100*
Bartlett	10.7363	3	.	<.0001*

Warning: Small sample sizes. Use Caution.

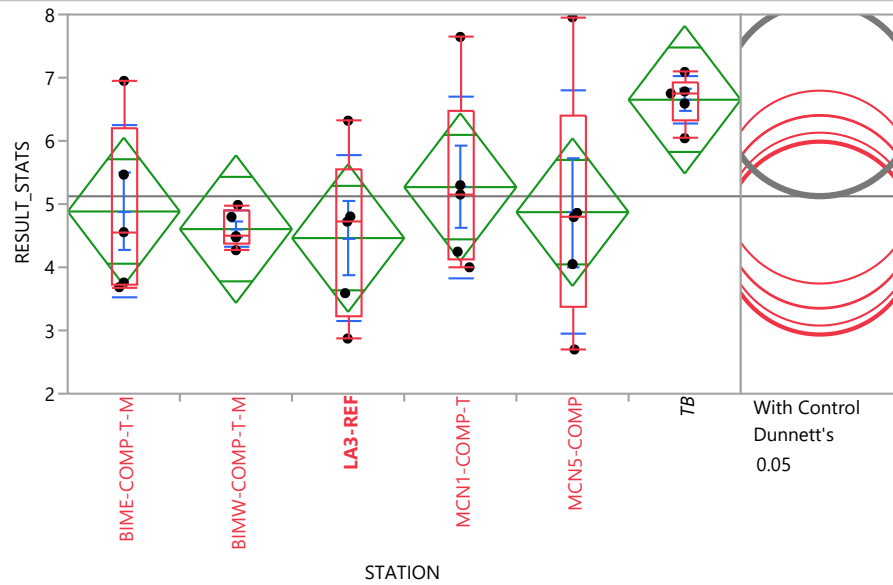
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* 1.95996  
Alpha 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
MCN3-COMP	LA3-REF	3.20000	1.914854	1.67115	0.0947	2.78989	-0.818	23.7879
MCN3-COMP	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	1.43854	-20.021	22.6041
MCN3-COMP	BIN-COMP-T	1.20000	1.914854	0.62668	0.5309	1.68651	-125.694	22.8333
BIN-COMP-T	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.22917	-22.160	127.6038
LA3-REF	BIN-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.95455	-128.788	2.5000
LA3-REF	BIMW-COMP-T-M	-1.40000	1.909043	-0.73335	0.4633	-1.18372	-23.114	2.2708



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB126**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3.68539	3.68539	3.72186	4.55556	6.20791	6.94915	6.94915
BIMW-COMP-T-M	4.27083	4.27083	4.37178	4.49315	4.89218	4.98649	4.98649
LA3-REF	2.87273	2.87273	3.23182	4.72283	5.562025	6.32	6.32
MCN1-COMP-T	4	4	4.123655	5.15217	6.47197	7.64516	7.64516
MCN5-COMP	2.7	2.7	3.375	4.79605	6.40768	7.95536	7.95536
TB	6.04225	6.04225	6.3169	6.75	6.93676	7.09091	7.09091

**Oneway Anova**

**Summary of Fit**

Rsquare	0.292644
Adj Rsquare	0.145278
Root Mean Square Error	1.266197
Mean of Response	5.123628
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	15.918980	3.18380	1.9858	0.1172
Error	24	38.478118	1.60325		
C. Total	29	54.397098			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB126**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.88302	0.56626	3.7143	6.0517
BIMW-COMP-T-M	5	4.60421	0.56626	3.4355	5.7729
LA3-REF	5	4.46210	0.56626	3.2934	5.6308
MCN1-COMP-T	5	5.26868	0.56626	4.1000	6.4374
MCN5-COMP	5	4.87228	0.56626	3.7036	6.0410
TB	5	6.65146	0.56626	5.4828	7.8202

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	4.88302	1.36162	0.60893	3.1923	6.5737
BIMW-COMP-T-M	5	4.60421	0.28478	0.12736	4.2506	4.9578
LA3-REF	5	4.46210	1.31546	0.58829	2.8287	6.0955
MCN1-COMP-T	5	5.26868	1.44178	0.64478	3.4785	7.0589
MCN5-COMP	5	4.87228	1.93043	0.86332	2.4753	7.2692
TB	5	6.65146	0.38560	0.17245	6.1727	7.1303

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.031	0.0460*
MCN1-COMP-T	-1.35	0.7697
BIME-COMP-T-M	-1.74	0.9775
MCN5-COMP	-1.75	0.9798
BIMW-COMP-T-M	-2.02	0.9999
LA3-REF	-2.16	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB126**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

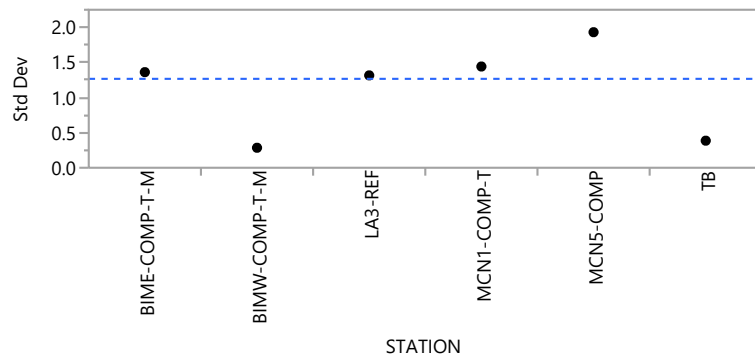
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	69.000	77.500	13.8000	-0.445
BIMW-COMP-T-M	5	63.000	77.500	12.6000	-0.779
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN1-COMP-T	5	82.000	77.500	16.4000	0.223
MCN5-COMP	5	69.000	77.500	13.8000	-0.445
TB	5	125.000	77.500	25.0000	2.615

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.8748	5	0.1633

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.361618	1.059912	0.994420
BIMW-COMP-T-M	5	0.284783	0.230373	0.208160
LA3-REF	5	1.315463	0.984227	0.932082
MCN1-COMP-T	5	1.441777	0.962629	0.939326
MCN5-COMP	5	1.930433	1.233231	1.213072
TB	5	0.385601	0.267651	0.247944

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9416	5	24	0.4723
Brown-Forsythe	1.1862	5	24	0.3452
Levene	1.4613	5	24	0.2392
Bartlett	2.9436	5	.	0.0116*

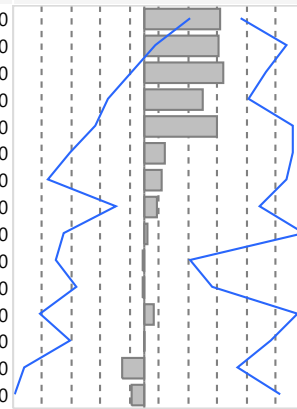
Warning: Small sample sizes. Use Caution.



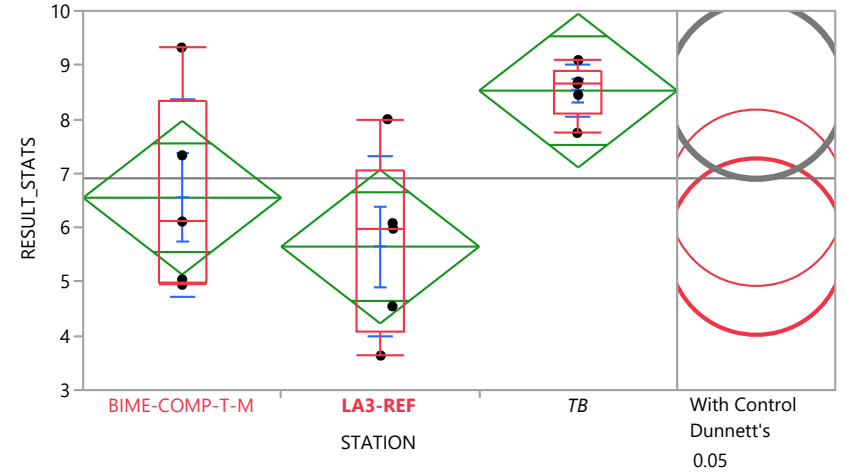
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB126**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha					
		1.95996	0.05					
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	2.10442	1.24438	2.618180
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.05978	0.27155	3.909880
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.19444	-0.35760	3.332580
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.63044	-1.05361	2.843600
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.98656	-1.36381	4.082610
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.57595	-2.07269	4.054250
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.48898	-2.70184	3.886830
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.35430	-0.79787	3.172430
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.07322	-2.27000	4.364450
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.06241	-2.47642	1.228160
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.07504	-1.92514	1.847270
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.24049	-2.89915	4.197030
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.00182	-2.09787	3.482630
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.62915	-3.35824	2.561670
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.35612	-3.59516	3.708050



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB128**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.94382	4.94382	4.992745	6.11111	8.32768	9.32203	9.32203
LA3-REF	3.63636	3.63636	4.090905	5.97826	7.04054	8	8
TB	7.74648	7.74648	8.09859	8.65385	8.89328	9.09091	9.09091

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB128**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.460459
Adj Rsquare	0.370535
Root Mean Square Error	1.455268
Mean of Response	6.908713
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	2	21.688705	10.8444	5.1206	0.0247*
Error	12	25.413659	2.1178		
C. Total	14	47.102364			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	6.55039	0.65082	5.1324	7.9684
LA3-REF	5	5.64823	0.65082	4.2302	7.0662
TB	5	8.52752	0.65082	7.1095	9.9455

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	6.55039	1.82656	0.81686	4.2824	8.8184
LA3-REF	5	5.64823	1.66515	0.74468	3.5807	7.7158
TB	5	8.52752	0.49436	0.22108	7.9137	9.1413

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.576	0.0161*
BIME-COMP-T-M	-1.4	0.5334
LA3-REF	-2.3	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB128**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

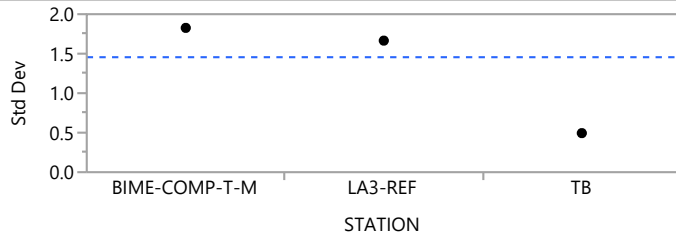
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	37.000	40.000	7.4000	-0.306
LA3-REF	5	24.000	40.000	4.8000	-1.898
TB	5	59.000	40.000	11.8000	2.266

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.2600	2	0.0437*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
BIME-COMP-T-M	5	1.826558	1.421830	1.333974
LA3-REF	5	1.665146	1.245860	1.179854
TB	5	0.494358	0.343142	0.317876

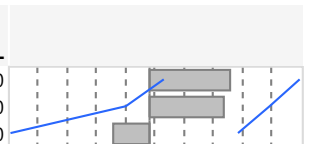
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2787	2	12	0.3138
Brown-Forsythe	1.6910	2	12	0.2254
Levene	2.8887	2	12	0.0946
Bartlett	2.5838	2	.	0.0755

Warning: Small sample sizes. Use Caution.

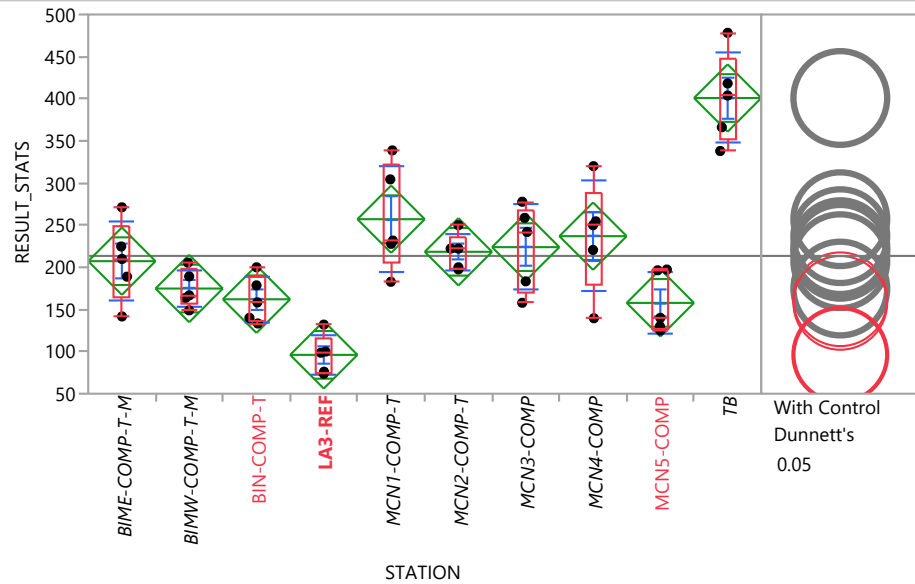
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.71739	0.45070	5.059290
TB	BIME-COMP-T-M	2.80000	1.914854	1.46225	0.1437	2.54274	-0.87133	4.049240
LA3-REF	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-1.25225	-4.77658	2.958330



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB132/153**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	141.667	141.667	165.278	209.877	247.9525	271.186	271.186
BIMW-COMP-T-M	148.936	148.936	156.286	166.667	197.334	205.479	205.479
BIN-COMP-T	133.333	133.333	136.6665	158.333	189.2855	200	200
LA3-REF	73.6364	73.6364	74.8617	98.6487	116	132	132
MCN1-COMP-T	182.796	182.796	205.322	231.707	321.529	338.71	338.71
MCN2-COMP-T	197.531	197.531	198.7655	222.222	236.111	250	250
MCN3-COMP	157.895	157.895	170.614	241.935	268.1995	277.778	277.778
MCN4-COMP	139.535	139.535	180.0615	250	287.2725	320	320
MCN5-COMP	125	125	127.5	140	196.8985	197.368	197.368
TB	338.028	338.028	352.1125	403.846	448.2215	478.261	478.261

**Oneway Anova**

**Summary of Fit**

Rsquare	0.789722
Adj Rsquare	0.742409
Root Mean Square Error	44.23198
Mean of Response	213.5156
Observations (or Sum Wgts)	50

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB132/153**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	293909.09	32656.6	16.6916	<.0001*
Error	40	78258.73	1956.5		
C. Total	49	372167.82			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	207.268	19.781	167.29	247.25
BIMW-COMP-T-M	5	174.781	19.781	134.80	214.76
BIN-COMP-T	5	162.047	19.781	122.07	202.03
LA3-REF	5	96.074	19.781	56.10	136.05
MCN1-COMP-T	5	257.082	19.781	217.10	297.06
MCN2-COMP-T	5	218.395	19.781	178.42	258.37
MCN3-COMP	5	223.912	19.781	183.93	263.89
MCN4-COMP	5	236.934	19.781	196.95	276.91
MCN5-COMP	5	157.759	19.781	117.78	197.74
TB	5	400.903	19.781	360.92	440.88

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	207.268	47.5346	21.258	148.25	266.29
BIMW-COMP-T-M	5	174.781	22.4052	10.020	146.96	202.60
BIN-COMP-T	5	162.047	27.5583	12.324	127.83	196.27
LA3-REF	5	96.074	23.5353	10.525	66.85	125.30
MCN1-COMP-T	5	257.082	63.0756	28.208	178.76	335.40
MCN2-COMP-T	5	218.395	21.2241	9.492	192.04	244.75
MCN3-COMP	5	223.912	51.0783	22.843	160.49	287.33
MCN4-COMP	5	236.934	65.4496	29.270	155.67	318.20
MCN5-COMP	5	157.759	36.1363	16.161	112.89	202.63
TB	5	400.903	53.5006	23.926	334.47	467.33

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB132/153**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	226.2	<.0001*
MCN1-COMP-T	82.35	<.0001*
MCN4-COMP	62.2	<.0001*
MCN3-COMP	49.18	0.0004*
MCN2-COMP-T	43.66	0.0007*
BIME-COMP-T-M	32.54	0.0022*
BIMW-COMP-T-M	0.049	0.0498*
BIN-COMP-T	-12.7	0.1366
MCN5-COMP	-17	0.1855
LA3-REF	-78.7	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	136.000	127.500	27.2000	0.259
BIMW-COMP-T-M	5	96.000	127.500	19.2000	-1.003
BIN-COMP-T	5	78.000	127.500	15.6000	-1.585
LA3-REF	5	17.000	127.500	3.4000	-3.558
MCN1-COMP-T	5	177.000	127.500	35.4000	1.585
MCN2-COMP-T	5	152.000	127.500	30.4000	0.776
MCN3-COMP	5	152.000	127.500	30.4000	0.776
MCN4-COMP	5	159.500	127.500	31.9000	1.019
MCN5-COMP	5	68.500	127.500	13.7000	-1.892
TB	5	239.000	127.500	47.8000	3.590

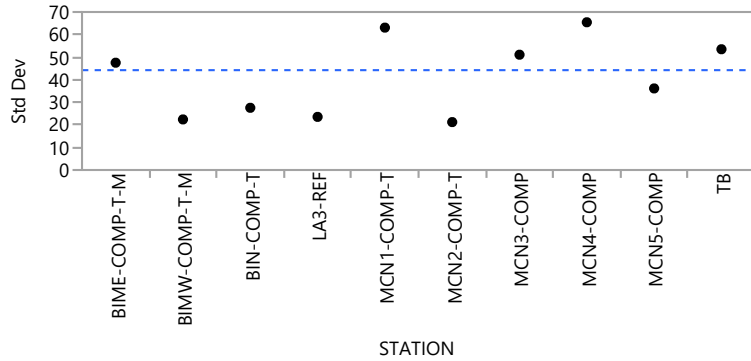
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
34.1835	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB132/153**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	47.53455	33.59168	33.06980
BIMW-COMP-T-M	5	22.40519	18.04208	16.41920
BIN-COMP-T	5	27.55826	21.79048	21.04760
LA3-REF	5	23.53533	16.97018	16.45532
MCN1-COMP-T	5	63.07561	51.55776	46.48280
MCN2-COMP-T	5	21.22410	15.70360	14.93820
MCN3-COMP	5	51.07834	42.63872	39.03420
MCN4-COMP	5	65.44957	45.49768	42.88440
MCN5-COMP	5	36.13633	31.31128	27.75940
TB	5	53.50060	39.03224	38.44360

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.1722	9	40	0.3385
Brown-Forsythe	0.7948	9	40	0.6229
Levene	1.6318	9	40	0.1392
Bartlett	1.2766	9	.	0.2436

Warning: Small sample sizes. Use Caution.

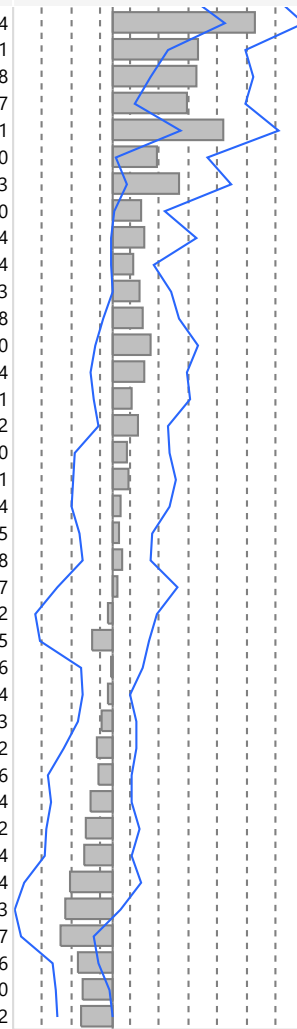
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	154.212	82.796	262.623	
MCN2-COMP-T	LA3-REF	4.80000	1.909043	2.51435	0.0119*	123.573	68.000	173.913	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	141.935	51.333	201.691	
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	150.000	39.535	243.913	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	193.969	95.011	289.372	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	217.261	148.839	314.625	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	232.864	159.457	338.261	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB132/153**

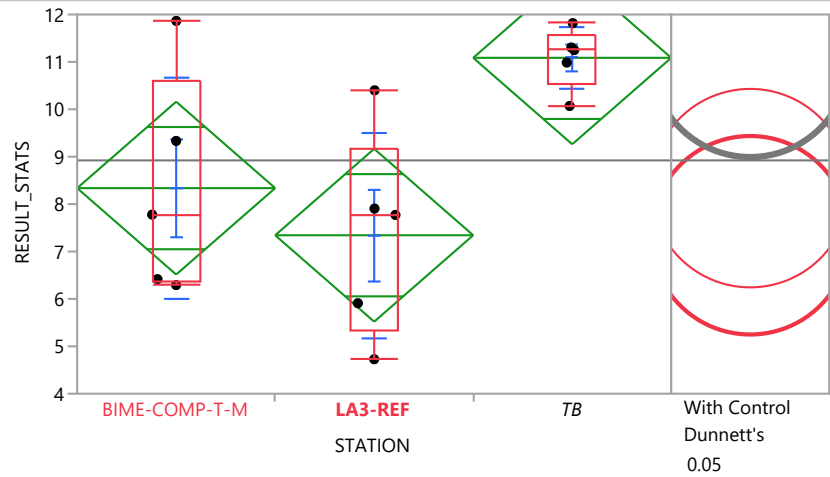
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	303.846	234.197	402.174	
TB	MCN2-COMP-T	4.80000	1.909043	2.51435	0.0119*	181.624	115.806	278.261	
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	176.247	79.407	294.928	
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	158.261	46.197	278.647	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	236.197	141.599	348.261	
MCN1-COMP-T	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	91.707	4.225	198.710	
TB	MCN1-COMP-T	4.40000	1.914854	2.29783	0.0216*	139.551	27.487	250.413	
MCN2-COMP-T	BIN-COMP-T	4.20000	1.903214	2.20679	0.0273*	60.000	0.000	110.000	
MCN1-COMP-T	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	68.071	-6.393	175.074	
MCN2-COMP-T	BIMW-COMP-T-M	4.00000	1.909043	2.09529	0.0361*	44.521	-5.479	86.364	
MCN5-COMP	LA3-REF	4.00000	1.914854	2.08893	0.0367*	56.364	-2.000	122.793	
MCN3-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	63.364	-20.676	137.778	
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	80.588	-39.036	180.000	
MCN4-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	65.356	-49.654	156.364	
MCN1-COMP-T	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	41.129	-43.338	162.681	
MCN3-COMP	BIMW-COMP-T-M	2.40000	1.914854	1.25336	0.2101	53.142	-31.294	114.142	
MCN4-COMP	MCN2-COMP-T	1.40000	1.903214	0.73560	0.4620	27.778	-82.687	120.000	
MCN4-COMP	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	31.699	-85.184	131.111	
MCN3-COMP	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	17.216	-87.853	116.954	
MCN2-COMP-T	BIME-COMP-T-M	0.40000	1.909043	0.20953	0.8340	11.111	-71.186	80.555	
MCN3-COMP	MCN2-COMP-T	0.40000	1.909043	0.20953	0.8340	19.713	-66.667	77.778	
MCN4-COMP	MCN3-COMP	0.00000	1.914854	0.00000	1.0000	8.065	-119.086	136.667	
MCN4-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-11.119	-164.813	92.152	
MCN3-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-44.515	-155.377	75.825	
MCN5-COMP	BIN-COMP-T	-1.00000	1.909043	-0.52382	0.6004	-3.571	-70.000	63.096	
BIN-COMP-T	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-10.618	-65.479	36.364	
MCN5-COMP	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-23.636	-75.479	47.493	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-35.530	-107.550	47.522	
MCN2-COMP-T	MCN1-COMP-T	-2.00000	1.909043	-1.04765	0.2948	-30.317	-138.710	39.426	
BIN-COMP-T	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-48.889	-131.186	36.904	
MCN5-COMP	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-58.889	-141.186	54.762	
MCN5-COMP	MCN3-COMP	-3.20000	1.914854	-1.67115	0.0947	-61.253	-147.778	38.534	
MCN5-COMP	MCN4-COMP	-3.60000	1.914854	-1.88004	0.0601	-90.588	-190.000	56.894	
MCN5-COMP	MCN1-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-101.707	-208.710	13.633	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-112.802	-195.099	-41.667	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-75.300	-129.392	-31.636	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-63.913	-123.913	-8.000	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.909043	-2.51435	0.0119*	-67.531	-120.000	-1.102	





**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB137**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	6.29213	6.29213	6.3544	7.77778	10.59887	11.8644	11.8644
LA3-REF	4.72727	4.72727	5.31818	7.77174	9.152705	10.4	10.4
TB	10.0704	10.0704	10.52815	11.25	11.56125	11.8182	11.8182

**Oneway Anova**

**Summary of Fit**

Rsquare	0.472234
Adj Rsquare	0.384273
Root Mean Square Error	1.871113
Mean of Response	8.921775
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	2	37.592129	18.7961	5.3687	0.0216*
Error	12	42.012755	3.5011		
C. Total	14	79.604885			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.3369	0.83679	6.5137	10.160
LA3-REF	5	7.3427	0.83679	5.5195	9.166
TB	5	11.0858	0.83679	9.2626	12.909

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB137**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.3369	2.32471	1.0396	5.450	11.223
LA3-REF	5	7.3427	2.16469	0.9681	4.655	10.031
TB	5	11.0858	0.64268	0.2874	10.288	11.884

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.782	0.0151*
BIME-COMP-T-M	-1.97	0.6224
LA3-REF	-2.96	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

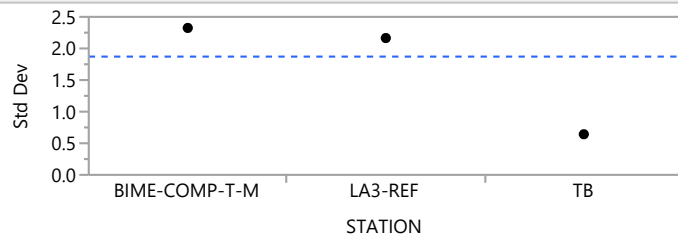
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	36.000	40.000	7.2000	-0.429
LA3-REF	5	25.000	40.000	5.0000	-1.776
TB	5	59.000	40.000	11.8000	2.266

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.0200	2	0.0493*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB137**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	2.324710	1.809602	1.697786
LA3-REF	5	2.164689	1.619618	1.533810
TB	5	0.642676	0.446088	0.413240

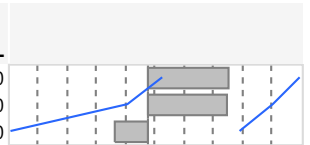
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2633	2	12	0.3178
Brown-Forsythe	1.6661	2	12	0.2299
Levene	2.8385	2	12	0.0979
Bartlett	2.5410	2	.	0.0788

Warning: Small sample sizes. Use Caution.

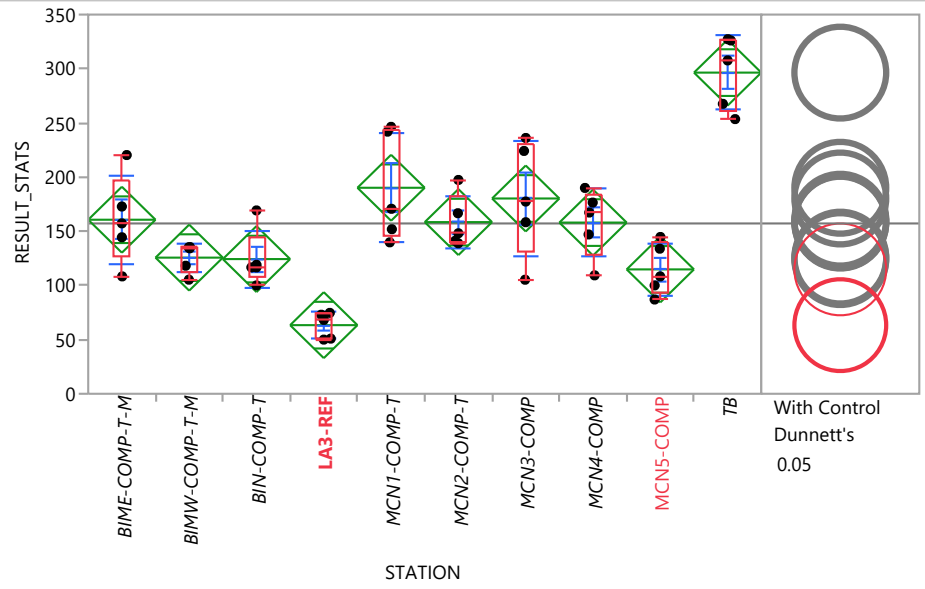
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* Alpha  
1.95996 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	3.53256	0.58590	6.577030
TB	BIME-COMP-T-M	2.80000	1.914854	1.46225	0.1437	3.47222	-0.87850	5.401530
LA3-REF	BIME-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-1.42792	-5.95531	3.983330



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB138/158**



With Control  
Dunnett's  
0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB138/158**

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	108.333	108.333	126.3885	157.303	196.5895	220.339	220.339
BIMW-COMP-T-M	105.319	105.319	111.7505	134.247	135.276	135.417	135.417
BIN-COMP-T	100	100	108.3335	116.667	144.1395	169.231	169.231
LA3-REF	50	50	50.45455	68.1818	73.81985	74.6667	74.6667
MCN1-COMP-T	139.785	139.785	145.842	170.732	244.156	246.377	246.377
MCN2-COMP-T	138.889	138.889	140.0325	148.148	182.0175	197.368	197.368
MCN3-COMP	105.263	105.263	131.798	177.419	230.1245	236.111	236.111
MCN4-COMP	109.302	109.302	128.1805	167.273	183.2355	190	190
MCN5-COMP	87	87	93.5	108.333	139.333	144.737	144.737
TB	253.521	253.521	260.5635	307.692	326.68	327.273	327.273

**Oneway Anova**

**Summary of Fit**

Rsquare	0.787763
Adj Rsquare	0.74001
Root Mean Square Error	33.68837
Mean of Response	157.2085
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	9	168498.12	18722.0	16.4965	<.0001*
Error	40	45396.25	1134.9		
C. Total	49	213894.38			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	160.652	15.066	130.20	191.10
BIMW-COMP-T-M	5	125.660	15.066	95.21	156.11
BIN-COMP-T	5	124.323	15.066	93.87	154.77
LA3-REF	5	63.346	15.066	32.90	93.80
MCN1-COMP-T	5	190.146	15.066	159.70	220.59
MCN2-COMP-T	5	158.450	15.066	128.00	188.90
MCN3-COMP	5	180.253	15.066	149.80	210.70
MCN4-COMP	5	158.021	15.066	127.57	188.47
MCN5-COMP	5	114.800	15.066	84.35	145.25
TB	5	296.436	15.066	265.99	326.89

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB138/158**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	160.652	40.9948	18.333	109.75	211.55
BIMW-COMP-T-M	5	125.660	13.4943	6.035	108.90	142.42
BIN-COMP-T	5	124.323	26.2364	11.733	91.75	156.90
LA3-REF	5	63.346	12.0106	5.371	48.43	78.26
MCN1-COMP-T	5	190.146	50.5470	22.605	127.38	252.91
MCN2-COMP-T	5	158.450	24.3376	10.884	128.23	188.67
MCN3-COMP	5	180.253	52.8158	23.620	114.67	245.83
MCN4-COMP	5	158.021	31.3941	14.040	119.04	197.00
MCN5-COMP	5	114.800	23.9575	10.714	85.05	144.55
TB	5	296.436	34.0208	15.215	254.19	338.68

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	173.2	<.0001*
MCN1-COMP-T	66.89	<.0001*
MCN3-COMP	57	<.0001*
BIME-COMP-T-M	37.4	0.0004*
MCN2-COMP-T	35.2	0.0005*
MCN4-COMP	34.77	0.0006*
BIMW-COMP-T-M	2.406	0.0381*
BIN-COMP-T	1.068	0.0444*
MCN5-COMP	-8.45	0.1214
LA3-REF	-59.9	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	143.500	127.500	28.7000	0.501
BIMW-COMP-T-M	5	86.000	127.500	17.2000	-1.326
BIN-COMP-T	5	87.500	127.500	17.5000	-1.277
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	176.000	127.500	35.2000	1.552
MCN2-COMP-T	5	146.000	127.500	29.2000	0.582
MCN3-COMP	5	163.000	127.500	32.6000	1.132

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB138/158**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

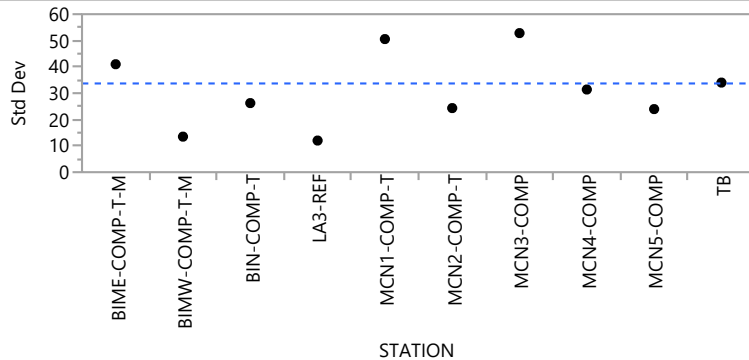
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
MCN4-COMP	5	149.000	127.500	29.8000	0.679
MCN5-COMP	5	69.000	127.500	13.8000	-1.876
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
34.5744	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	40.99475	28.75016	28.08040
BIMW-COMP-T-M	5	13.49433	11.12760	9.41020
BIN-COMP-T	5	26.23638	17.96336	14.32240
LA3-REF	5	12.01056	10.31326	9.34612
MCN1-COMP-T	5	50.54699	43.20832	39.32560
MCN2-COMP-T	5	24.33765	18.85432	16.79400
MCN3-COMP	5	52.81578	39.89736	39.33060
MCN4-COMP	5	31.39413	23.87240	22.02200
MCN5-COMP	5	23.95749	19.62656	18.33320
TB	5	34.02082	28.69784	26.44660

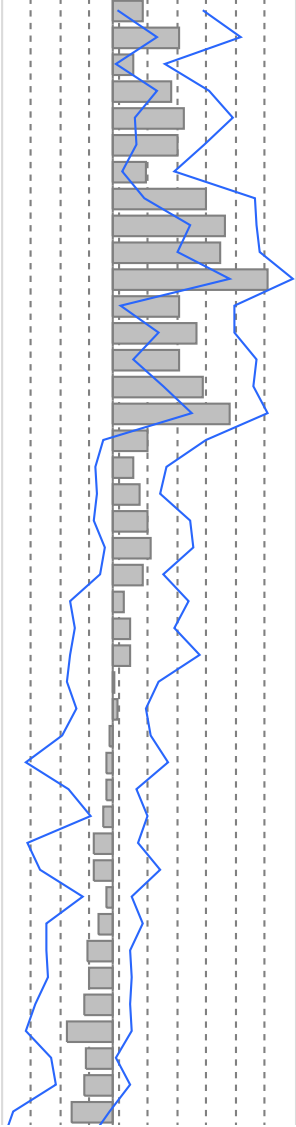
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[5]	1.7347	9	40	0.1128
Brown-Forsythe	1.2161	9	40	0.3126
Levene	2.3223	9	40	0.0329*
Bartlett	1.5237	9	.	0.1329

Warning: Small sample sizes. Use Caution.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB138/158**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha									
		1.95996	0.05									
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL				
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	46.580	4.650	136.616				
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	102.550	66.812	195.468				
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	31.250	3.754	79.186				
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	91.176	65.916	146.459				
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	109.237	32.290	185.202				
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	99.091	36.329	139.091				
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	50.000	14.027	93.828				
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	145.188	47.267	217.754				
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	173.445	118.386	220.768				
TB	BIN-COMP-T	4.80000	1.909043	2.51435	0.0119*	167.606	98.375	226.087				
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	239.510	180.548	276.364				
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	101.622	11.586	186.302				
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	129.905	70.238	187.198				
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	103.135	29.383	220.824				
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	140.419	77.050	216.785				
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	181.350	119.592	239.087				
MCN1-COMP-T	BIN-COMP-T	4.00000	1.909043	2.09529	0.0361*	54.065	-17.332	141.935				
MCN2-COMP-T	BIN-COMP-T	3.20000	1.909043	1.67623	0.0937	31.481	-28.055	80.701				
MCN4-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	41.054	-25.833	71.818				
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	53.014	-29.872	118.819				
MCN3-COMP	BIN-COMP-T	2.80000	1.909043	1.46670	0.1425	58.371	-13.785	124.138				
MCN4-COMP	BIN-COMP-T	2.40000	1.909043	1.25717	0.2087	47.059	-22.172	76.471				
MCN3-COMP	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	15.772	-67.577	115.805				
MCN3-COMP	MCN2-COMP-T	1.60000	1.914854	0.83557	0.4034	26.770	-61.404	94.935				
MCN1-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	26.038	-68.440	133.602				
MCN4-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	2.615	-73.280	68.138				
MCN4-COMP	MCN2-COMP-T	0.40000	1.914854	0.20889	0.8345	5.883	-57.365	48.824				
MCN2-COMP-T	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-5.555	-79.163	58.334				
MCN3-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-10.266	-136.672	84.353				
MCN5-COMP	BIN-COMP-T	-1.00000	1.903214	-0.52543	0.5993	-10.715	-69.231	33.929				
BIN-COMP-T	BIMW-COMP-T-M	-1.20000	1.909043	-0.62859	0.5296	-15.199	-35.135	51.049				
MCN4-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-30.483	-132.633	38.101				
MCN4-COMP	MCN3-COMP	-1.20000	1.914854	-0.62668	0.5309	-30.360	-114.836	71.208				
MCN5-COMP	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-9.849	-48.135	28.610				
MCN2-COMP-T	MCN1-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-22.584	-105.201	45.469				
BIN-COMP-T	BIME-COMP-T-M	-2.40000	1.909043	-1.25717	0.2087	-40.636	-103.672	24.787				
BIMW-COMP-T-M	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-37.423	-102.157	26.802				
MCN5-COMP	BIME-COMP-T-M	-3.40000	1.909043	-1.78100	0.0749	-44.444	-120.339	25.596				
MCN5-COMP	MCN3-COMP	-3.60000	1.914854	-1.88004	0.0601	-71.333	-137.138	28.666				
MCN5-COMP	MCN2-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-41.176	-97.368	3.561				
MCN5-COMP	MCN4-COMP	-4.00000	1.914854	-2.08893	0.0367*	-45.263	-90.000	24.627				
MCN5-COMP	MCN1-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-64.899	-154.935	-5.856				

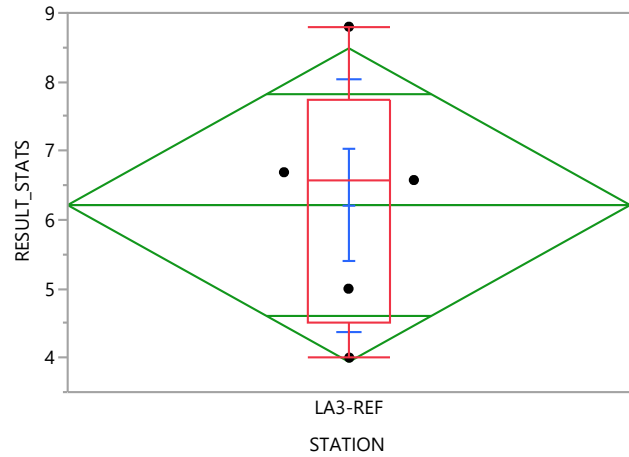


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB138/158**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-94.444	-169.430	-35.360	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-62.162	-85.135	-32.346	
LA3-REF	BIN-COMP-T	-4.80000	1.909043	-2.51435	0.0119*	-50.000	-118.322	-27.027	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB141**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	4	4	4.5	6.57609	7.744595	8.8	8.8

**Oneway Anova**

**Summary of Fit**

Rsquare	0
Adj Rsquare	0
Root Mean Square Error	1.831659
Mean of Response	6.213056
Observations (or Sum Wgts)	5

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	0	0.000000			
Error	4	13.419898	3.35497		
C. Total	4	13.419898			



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB141**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	6.21306	0.81914	3.9388	8.4874

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	6.21306	1.83166	0.81914	3.9388	8.4874

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
LA3-REF	5	15.000	15.000	3.00000	

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.0000	0	

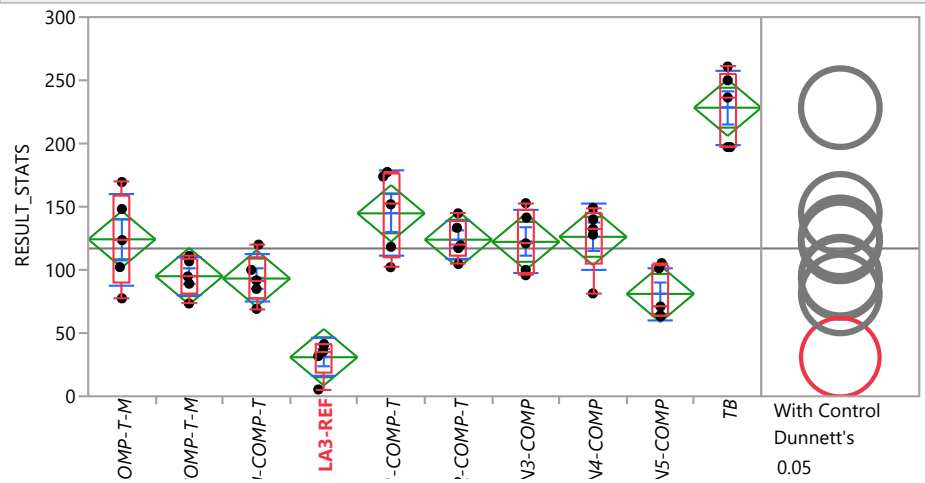
Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
-------	---------	-----------------------	-------------	---	---------	----------------	----------	----------

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB149**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB149**

BIME-C  
BIMW-C  
BIN  
MCN1  
MCN2  
MCN3  
MCN4  
MCN5

STATION

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	77.5	77.5	89.861	123.596	158.82	169.492	169.492
BIMW-COMP-T-M	73.4043	73.4043	81.2476	94.7917	108.858	110.959	110.959
BIN-COMP-T	69.1667	69.1667	77.08335	91.6667	110	120	120
LA3-REF	5.38043	5.38043	18.59932	35.4545	40.9369	41.3333	41.3333
MCN1-COMP-T	102.151	102.151	110.222	151.899	175.666	177.419	177.419
MCN2-COMP-T	104.706	104.706	110.995	119.444	139.035	144.737	144.737
MCN3-COMP	95.7895	95.7895	97.89475	120.968	147.0785	152.778	152.778
MCN4-COMP	81.3953	81.3953	104.6682	132.353	144.5455	149.091	149.091
MCN5-COMP	63.3333	63.3333	63.66665	71	103.3365	105.357	105.357
TB	197.183	197.183	197.183	236.364	255.435	260.87	260.87

**Oneway Anova**

**Summary of Fit**

Rsquare	0.825749
Adj Rsquare	0.786543
Root Mean Square Error	24.70135
Mean of Response	116.956
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	9	115657.91	12850.9	21.0616	<.0001*
Error	40	24406.27	610.2		
C. Total	49	140064.19			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	124.192	11.047	101.87	146.52
BIMW-COMP-T-M	5	95.001	11.047	72.67	117.33
BIN-COMP-T	5	93.167	11.047	70.84	115.49
LA3-REF	5	30.905	11.047	8.58	53.23
MCN1-COMP-T	5	144.735	11.047	122.41	167.06
MCN2-COMP-T	5	123.901	11.047	101.57	146.23
MCN3-COMP	5	122.183	11.047	99.86	144.51
MCN4-COMP	5	126.156	11.047	103.83	148.48
MCN5-COMP	5	81.001	11.047	58.67	103.33
TB	5	228.320	11.047	205.99	250.65

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB149**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	124.192	36.3633	16.262	79.04	169.34
BIMW-COMP-T-M	5	95.001	14.9520	6.687	76.44	113.57
BIN-COMP-T	5	93.167	18.7861	8.401	69.84	116.49
LA3-REF	5	30.905	14.7871	6.613	12.54	49.27
MCN1-COMP-T	5	144.735	33.4795	14.972	103.16	186.31
MCN2-COMP-T	5	123.901	15.4531	6.911	104.71	143.09
MCN3-COMP	5	122.183	24.9736	11.169	91.17	153.19
MCN4-COMP	5	126.156	26.2811	11.753	93.52	158.79
MCN5-COMP	5	81.001	20.6586	9.239	55.35	106.65
TB	5	228.320	29.7206	13.291	191.42	265.22

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	153.5	<.0001*
MCN1-COMP-T	69.9	<.0001*
MCN4-COMP	51.32	<.0001*
BIME-COMP-T-M	49.36	<.0001*
MCN2-COMP-T	49.07	<.0001*
MCN3-COMP	47.35	<.0001*
BIMW-COMP-T-M	20.17	0.0015*
BIN-COMP-T	18.33	0.0022*
MCN5-COMP	6.169	0.0188*
LA3-REF	-43.9	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	147.000	127.500	29.4000	0.614
BIMW-COMP-T-M	5	91.000	127.500	18.2000	-1.164
BIN-COMP-T	5	84.500	127.500	16.9000	-1.374
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	179.000	127.500	35.8000	1.649
MCN2-COMP-T	5	152.000	127.500	30.4000	0.776
MCN3-COMP	5	145.500	127.500	29.1000	0.566

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB149**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

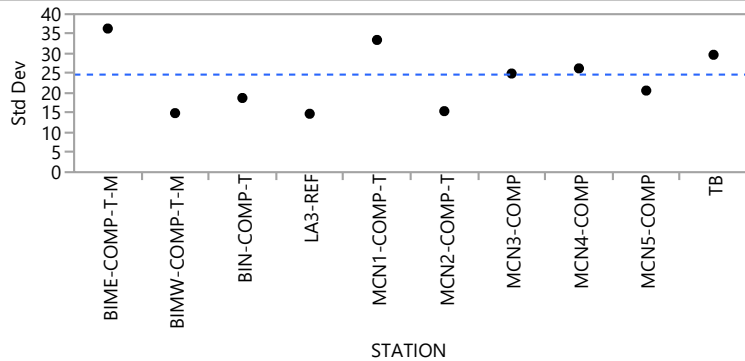
Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
MCN4-COMP	5	155.000	127.500	31.0000	0.873
MCN5-COMP	5	66.000	127.500	13.2000	-1.973
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
34.8165	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	36.36330	27.70272	27.58360
BIMW-COMP-T-M	5	14.95202	11.08594	11.04416
BIN-COMP-T	5	18.78607	13.46666	13.16666
LA3-REF	5	14.78705	10.20998	8.93503
MCN1-COMP-T	5	33.47947	27.61040	26.17760
MCN2-COMP-T	5	15.45315	12.10736	11.21600
MCN3-COMP	5	24.97358	19.91648	19.67350
MCN4-COMP	5	26.28108	17.90430	15.95094
MCN5-COMP	5	20.65863	17.86819	15.86794
TB	5	29.72060	24.90960	23.30080

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.3495	9	40	0.2434
Brown-Forsythe	0.9726	9	40	0.4766
Levene	1.5639	9	40	0.1596
Bartlett	0.8044	9	.	0.6122

Warning: Small sample sizes. Use Caution.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB149**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

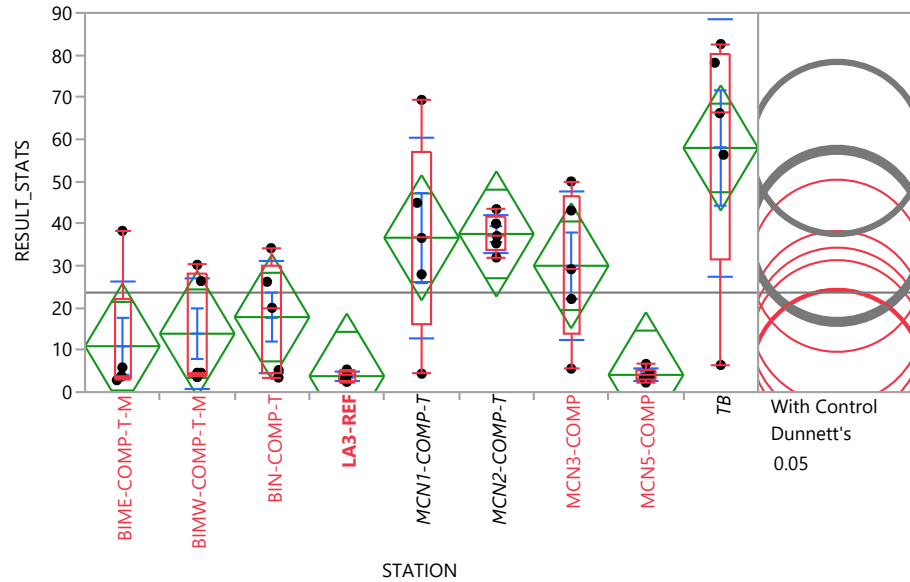
		q*	Alpha								
		1.95996	0.05								
Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL			
		Difference	Std Err Dif								
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	116.445	61.611	168.533			
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	92.000	64.166	127.953			
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	90.409	55.249	135.999			
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	98.667	40.855	134.620			
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	57.953	22.667	95.936			
TB	BIME-COMP-T-M	4.80000	1.909043	2.51435	0.0119*	101.852	27.691	172.500			
TB	BIMW-COMP-T-M	4.80000	1.909043	2.51435	0.0119*	139.041	86.224	176.596			
TB	BIN-COMP-T	4.80000	1.909043	2.51435	0.0119*	136.364	77.183	180.833			
TB	LA3-REF	4.80000	1.909043	2.51435	0.0119*	200.910	155.850	244.620			
TB	MCN1-COMP-T	4.80000	1.909043	2.51435	0.0119*	83.451	19.764	147.849			
TB	MCN2-COMP-T	4.80000	1.909043	2.51435	0.0119*	105.263	52.446	145.294			
TB	MCN3-COMP	4.80000	1.909043	2.51435	0.0119*	101.394	44.405	160.870			
TB	MCN4-COMP	4.80000	1.909043	2.51435	0.0119*	108.423	48.092	168.605			
TB	MCN5-COMP	4.80000	1.909043	2.51435	0.0119*	144.643	91.826	196.870			
MCN1-COMP-T	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	57.107	-4.606	100.509			
MCN1-COMP-T	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	53.913	-1.707	104.746			
MCN2-COMP-T	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	28.193	-2.051	59.929			
MCN2-COMP-T	BIN-COMP-T	3.60000	1.914854	1.88004	0.0601	32.284	-2.716	64.166			
MCN3-COMP	BIN-COMP-T	3.40000	1.909043	1.78100	0.0749	29.301	-20.000	72.212			
MCN3-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	26.596	-10.968	67.975			
MCN4-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	37.561	-25.362	66.596			
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	40.000	-18.605	70.833			
MCN1-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	24.651	-51.199	96.413			
MCN4-COMP	MCN2-COMP-T	0.80000	1.914854	0.41779	0.6761	8.497	-51.938	35.294			
MCN4-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	3.895	-66.753	62.500			
MCN2-COMP-T	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-3.411	-52.208	55.833			
MCN3-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	-3.358	-44.737	36.673			
MCN4-COMP	MCN3-COMP	0.00000	1.914854	0.00000	1.0000	6.973	-59.984	49.091			
BIN-COMP-T	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-4.091	-37.590	30.909			
MCN3-COMP	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-2.628	-69.492	63.879			
MCN5-COMP	BIN-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-14.643	-56.000	32.149			
MCN2-COMP-T	MCN1-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-29.176	-69.207	31.182			
MCN4-COMP	MCN1-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-23.958	-92.518	37.849			
MCN3-COMP	MCN1-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-22.504	-78.124	39.228			
BIMW-COMP-T-M	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-28.818	-80.401	29.257			
MCN5-COMP	BIMW-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-10.071	-46.959	27.912			
BIN-COMP-T	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-31.929	-84.492	22.500			
MCN5-COMP	MCN3-COMP	-3.20000	1.914854	-1.67115	0.0947	-36.667	-88.778	5.526			
MCN5-COMP	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-42.791	-105.492	23.816			
MCN5-COMP	MCN4-COMP	-4.00000	1.914854	-2.08893	0.0367*	-47.775	-85.091	19.921			
MCN5-COMP	MCN1-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-68.556	-113.419	-0.835			
MCN5-COMP	MCN2-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-43.421	-80.737	-3.390			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB149**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-91.778	-142.768	-36.960	
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-65.424	-101.377	-32.864	
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-59.460	-94.620	-28.626	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB151**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.83333	2.83333	3.2706	3.83333	22.05953	38.2716	38.2716
BIMW-COMP-T-M	3.56383	3.56383	4.076435	4.59459	28.28595	30.2083	30.2083
BIN-COMP-T	3.45	3.45	4.340385	20	30.1786	34.1667	34.1667
LA3-REF	2.43636	2.43636	2.740905	4.00543	4.71716	5.36	5.36
MCN1-COMP-T	4.36709	4.36709	16.16205	36.5854	57.14115	69.3548	69.3548
MCN2-COMP-T	31.9444	31.9444	33.61925	37.037	41.71055	43.4211	43.4211
MCN3-COMP	5.56452	5.56452	13.83491	29.1667	46.5517	50	50
MCN5-COMP	2.26667	2.26667	2.833335	4.02632	5.379285	6.67857	6.67857
TB	6.44231	6.44231	31.39016	66.1972	80.39525	82.6087	82.6087

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB151**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.577901
Adj Rsquare	0.484101
Root Mean Square Error	16.39051
Mean of Response	23.61823
Observations (or Sum Wgts)	45

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	8	13241.164	1655.15	6.1610	<.0001*
Error	36	9671.358	268.65		
C. Total	44	22912.522			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	10.8987	7.3301	-3.97	25.765
BIMW-COMP-T-M	5	13.8639	7.3301	-1.00	28.730
BIN-COMP-T	5	17.8076	7.3301	2.94	32.674
LA3-REF	5	3.7843	7.3301	-11.08	18.650
MCN1-COMP-T	5	36.6384	7.3301	21.77	51.504
MCN2-COMP-T	5	37.5393	7.3301	22.67	52.405
MCN3-COMP	5	29.9880	7.3301	15.12	44.854
MCN5-COMP	5	4.0903	7.3301	-10.78	18.956
TB	5	57.9536	7.3301	43.09	72.820

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	10.8987	15.3417	6.861	-8.15	29.948
BIMW-COMP-T-M	5	13.8639	13.2421	5.922	-2.58	30.306
BIN-COMP-T	5	17.8076	13.2949	5.946	1.30	34.315
LA3-REF	5	3.7843	1.1156	0.499	2.40	5.170
MCN1-COMP-T	5	36.6384	23.7480	10.620	7.15	66.125
MCN2-COMP-T	5	37.5393	4.3945	1.965	32.08	42.996
MCN3-COMP	5	29.9880	17.5486	7.848	8.20	51.777
MCN5-COMP	5	4.0903	1.6206	0.725	2.08	6.103
TB	5	57.9536	30.5820	13.677	19.98	95.926

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB151****Means Comparisons****Comparisons with a control using Dunnett's Method****Confidence Quantile**

d	Alpha
2.78823	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	25.27	<.0001*
MCN2-COMP-T	4.851	0.0159*
MCN1-COMP-T	3.95	0.0198*
MCN3-COMP	-2.7	0.0898
BIN-COMP-T	-14.9	0.6557
BIMW-COMP-T-M	-18.8	0.8954
BIME-COMP-T-M	-21.8	0.9826
MCN5-COMP	-28.6	1.0000
LA3-REF	-28.9	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	75.000	115.000	15.0000	-1.427
BIMW-COMP-T-M	5	93.000	115.000	18.6000	-0.776
BIN-COMP-T	5	102.000	115.000	20.4000	-0.451
LA3-REF	5	46.000	115.000	9.2000	-2.474
MCN1-COMP-T	5	156.000	115.000	31.2000	1.463
MCN2-COMP-T	5	170.000	115.000	34.0000	1.968
MCN3-COMP	5	148.000	115.000	29.6000	1.174
MCN5-COMP	5	52.000	115.000	10.4000	-2.257
TB	5	193.000	115.000	38.6000	2.799

**1-Way Test, ChiSquare Approximation**

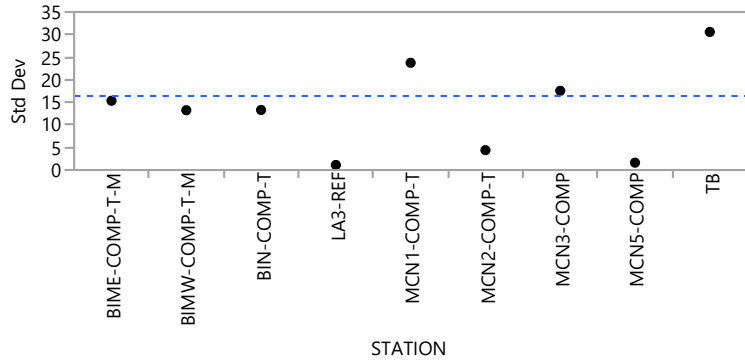
ChiSquare	DF	Prob>ChiSq
26.5067	8	0.0009*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB151**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	15.34168	10.94915	7.51557
BIMW-COMP-T-M	5	13.24213	11.53766	9.68381
BIN-COMP-T	5	13.29490	10.77377	10.33529
LA3-REF	5	1.11565	0.83473	0.79050
MCN1-COMP-T	5	23.74805	16.40223	16.39164
MCN2-COMP-T	5	4.39451	3.33698	3.23652
MCN3-COMP	5	17.54859	13.25097	13.08672
MCN5-COMP	5	1.62061	1.03530	1.01838
TB	5	30.58200	21.25076	19.60204

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.1908	8	36	0.3317
Brown-Forsythe	1.5099	8	36	0.1882
Levene	2.6799	8	36	0.0202*
Bartlett	5.2568	8	.	<.0001*

Warning: Small sample sizes. Use Caution.

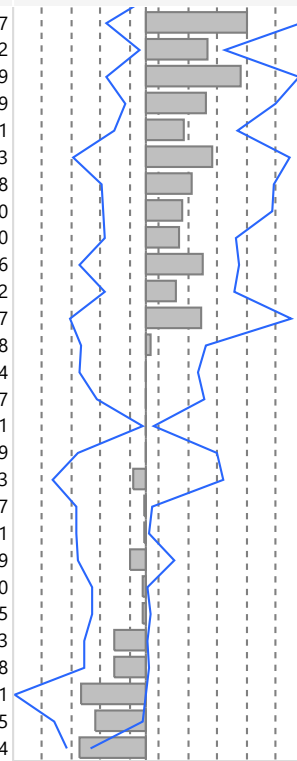
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha	Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
1.95996	0.05	MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	28.3806	5.0858	38.8321	
		MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	33.0316	27.8701	40.3757	
		MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	25.1613	1.4902	46.9546	
		TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	62.1918	2.3680	79.5633	
		MCN1-COMP-T	LA3-REF	4.40000	1.914854	2.29783	0.0216*	32.5800	0.2928	66.3094	
		MCN2-COMP-T	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	17.2306	1.1274	38.1903	
		TB	BIME-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	53.5047	0.5949	78.9008	
		TB	MCN5-COMP	4.40000	1.914854	2.29783	0.0216*	62.1709	2.3623	79.2087	

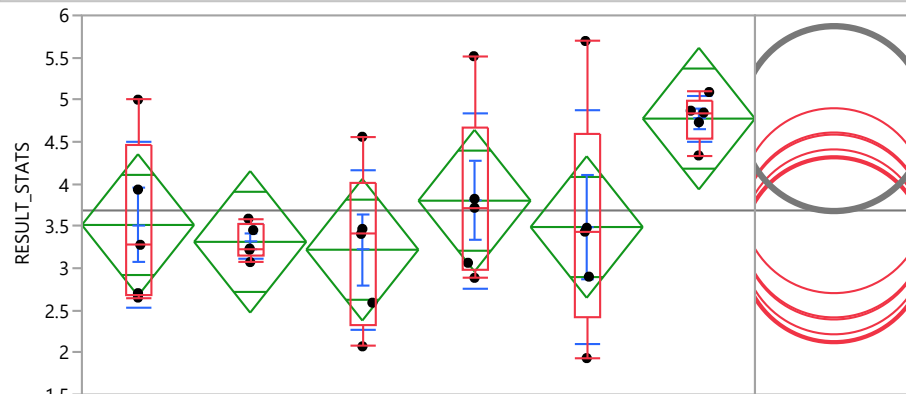
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB151**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	51.8182	-19.9213	78.0197	
MCN2-COMP-T	BIME-COMP-T-M	3.60000	1.914854	1.88004	0.0601	31.5862	-2.9775	39.7132	
TB	BIN-COMP-T	3.60000	1.914854	1.88004	0.0601	48.4420	-19.7482	77.3779	
MCN1-COMP-T	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	30.7379	-10.3146	65.6469	
MCN3-COMP	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	19.2720	-16.1663	46.2921	
TB	MCN3-COMP	3.20000	1.914854	1.67115	0.0947	34.2327	-36.6611	72.6173	
MCN1-COMP-T	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	23.3680	-21.9965	64.7658	
MCN1-COMP-T	BIN-COMP-T	2.80000	1.914854	1.46225	0.1437	18.7370	-21.8234	64.1240	
MCN3-COMP	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	17.5163	-20.7991	45.4110	
TB	MCN2-COMP-T	2.80000	1.914854	1.46225	0.1437	29.1602	-33.5577	47.3146	
MCN3-COMP	BIN-COMP-T	2.40000	1.914854	1.25336	0.2101	15.8333	-20.6260	44.7692	
TB	MCN1-COMP-T	2.40000	1.914854	1.25336	0.2101	28.3810	-38.4852	73.8147	
BIN-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	2.3974	-33.0408	30.4588	
BIMW-COMP-T-M	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.7613	-33.6826	26.5004	
BIN-COMP-T	BIMW-COMP-T-M	0.40000	1.914854	0.20889	0.8345	0.6417	-24.9775	29.5777	
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.0209	-1.9600	3.6331	
MCN2-COMP-T	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	0.4516	-34.0607	35.6329	
MCN3-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-5.8517	-47.2495	38.7363	
MCN5-COMP	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.4333	-34.8716	2.9707	
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.6624	-35.2262	1.6521	
MCN3-COMP	MCN2-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-7.8703	-34.4355	14.7059	
LA3-REF	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-1.5491	-27.1629	0.7710	
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-1.2972	-26.8083	2.0895	
LA3-REF	BIN-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-15.9946	-31.1213	0.6243	
MCN5-COMP	BIN-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-15.9737	-30.7667	1.4478	
MCN5-COMP	MCN1-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-32.5591	-65.9548	-0.2871	
MCN5-COMP	MCN3-COMP	-4.40000	1.914854	-2.29783	0.0216*	-25.1404	-46.6000	-1.4845	
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-33.0274	-40.0211	-27.8644	



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB151**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB156**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.65169	2.65169	2.67793	3.27778	4.466665	5	5
BIMW-COMP-T-M	3.07292	3.07292	3.14555	3.23288	3.519985	3.58784	3.58784
LA3-REF	2.07273	2.07273	2.33182	3.40761	4.01311	4.56	4.56
MCN1-COMP-T	2.88608	2.88608	2.9753	3.71739	4.66965	5.51613	5.51613
MCN5-COMP	1.93333	1.93333	2.416665	3.43421	4.588215	5.69643	5.69643
TB	4.33803	4.33803	4.53521	4.84615	4.98024	5.09091	5.09091

**Oneway Anova**

**Summary of Fit**

Rsquare	0.290131
Adj Rsquare	0.142241
Root Mean Square Error	0.910326
Mean of Response	3.685223
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	5	8.128688	1.62574	1.9618	0.1211
Error	24	19.888636	0.82869		
C. Total	29	28.017325			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.51339	0.40711	2.6732	4.3536
BIMW-COMP-T-M	5	3.31279	0.40711	2.4726	4.1530
LA3-REF	5	3.21949	0.40711	2.3793	4.0597
MCN1-COMP-T	5	3.80146	0.40711	2.9612	4.6417
MCN5-COMP	5	3.48879	0.40711	2.6486	4.3290
TB	5	4.77541	0.40711	3.9352	5.6156

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB156**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.51339	0.97970	0.43813	2.2969	4.7299
BIMW-COMP-T-M	5	3.31279	0.20490	0.09164	3.0584	3.5672
LA3-REF	5	3.21949	0.94913	0.42446	2.0410	4.3980
MCN1-COMP-T	5	3.80146	1.04027	0.46522	2.5098	5.0931
MCN5-COMP	5	3.48879	1.38229	0.61818	1.7725	5.2051
TB	5	4.77541	0.27684	0.12381	4.4317	5.1192

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.004	0.0492*
MCN1-COMP-T	-0.97	0.7674
BIME-COMP-T-M	-1.26	0.9801
MCN5-COMP	-1.28	0.9863
BIMW-COMP-T-M	-1.46	0.9999
LA3-REF	-1.55	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	69.000	77.500	13.8000	-0.445
BIMW-COMP-T-M	5	63.000	77.500	12.6000	-0.779
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN1-COMP-T	5	82.000	77.500	16.4000	0.223
MCN5-COMP	5	69.000	77.500	13.8000	-0.445
TB	5	125.000	77.500	25.0000	2.615

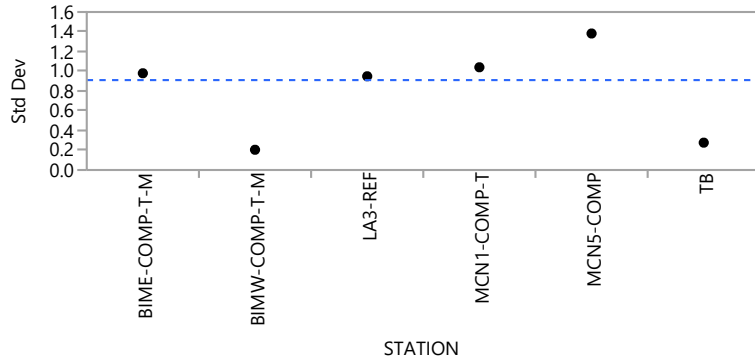
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.8748	5	0.1633

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB156**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	0.979698	0.7626168	0.7154940
BIMW-COMP-T-M	5	0.204904	0.1657560	0.1497740
LA3-REF	5	0.949132	0.7101392	0.6725160
MCN1-COMP-T	5	1.040268	0.6945536	0.6777400
MCN5-COMP	5	1.382286	0.8830544	0.8686200
TB	5	0.276840	0.1921600	0.1780120

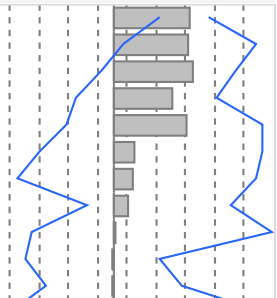
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9359	5	24	0.4756
Brown-Forsythe	1.1847	5	24	0.3459
Levene	1.4610	5	24	0.2393
Bartlett	2.9388	5	.	0.0118*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* 1.95996  
Alpha 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	1.50307	0.88590	1.872730
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.46196	0.17239	2.796840
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.56837	-0.26761	2.386740
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.15218	-0.78374	2.026390
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.43536	-0.96404	2.936240
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.41556	-1.49548	2.925220
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.36035	-1.93548	2.811960
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.26526	-0.56605	2.297950
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.02660	-1.66000	3.105520
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.04490	-1.78182	0.883670
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.04452	-1.37940	1.341820

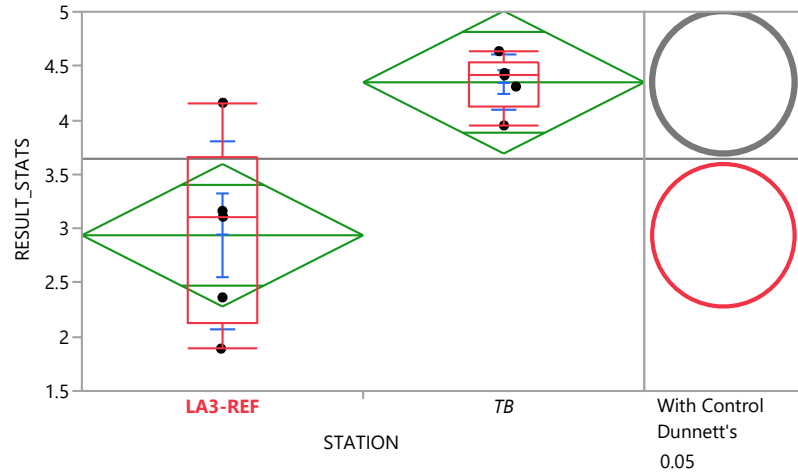


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB156**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.15643	-2.10000	2.992260	
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.01792	-1.51880	2.478250	
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.44000	-2.40909	1.855830	
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.28318	-2.61613	2.631910	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB157**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	1.89091	1.89091	2.127275	3.1087	3.66108	4.16	4.16
TB	3.9507	3.9507	4.13028	4.41346	4.53557	4.63636	4.63636

**Oneway Anova**

**Summary of Fit**

Rsquare	0.605059
Adj Rsquare	0.555691
Root Mean Square Error	0.637693
Mean of Response	3.643057
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

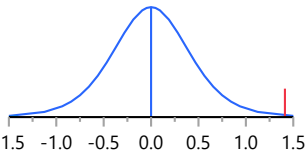
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB157**

**Oneway Anova**

**t Test**

Assuming equal variances

Difference	1.41195	t Ratio	3.500885
Std Err Dif	0.40331	DF	8
Upper CL Dif	2.34199	Prob >  t	0.0081*
Lower CL Dif	0.48191	Prob > t	0.0040*
Confidence	0.95	Prob < t	0.9960



**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	1	4.9840070	4.98401	12.2562	0.0081*
Error	8	3.2532168	0.40665		
C. Total	9	8.2372238			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	2.93708	0.28518	2.2794	3.5947
TB	5	4.34903	0.28518	3.6914	5.0067

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

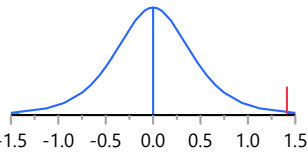
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	2.93708	0.865874	0.38723	1.8620	4.0122
TB	5	4.34903	0.252123	0.11275	4.0360	4.6621

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	1.41195	t Ratio	3.500885
Std Err Dif	0.40331	DF	4.673433
Upper CL Dif	2.47087	Prob >  t	0.0193*
Lower CL Dif	0.35303	Prob > t	0.0096*
Confidence	0.95	Prob < t	0.9904



**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB157**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.482	0.0081*
LA3-REF	-0.93	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	16.000	27.500	3.20000	-2.298
TB	5	39.000	27.500	7.80000	2.298

**2-Sample Test, Normal Approximation**

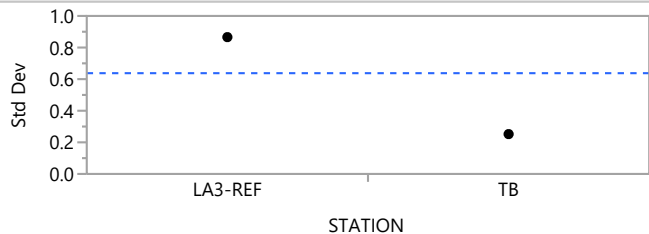
S	Z	Prob> Z
39	2.29783	0.0216*

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.7709	1	0.0163*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
LA3-REF	5	0.8658742	0.6478456	0.6135220
TB	5	0.2521229	0.1750016	0.1621160

Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.5066	1	8	0.1520
Brown-Forsythe	2.8949	1	8	0.1273
Levene	4.4646	1	8	0.0676
Bartlett	4.4235	1	.	0.0354*
F Test 2-sided	11.7946	4	4	0.0347*



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB157**

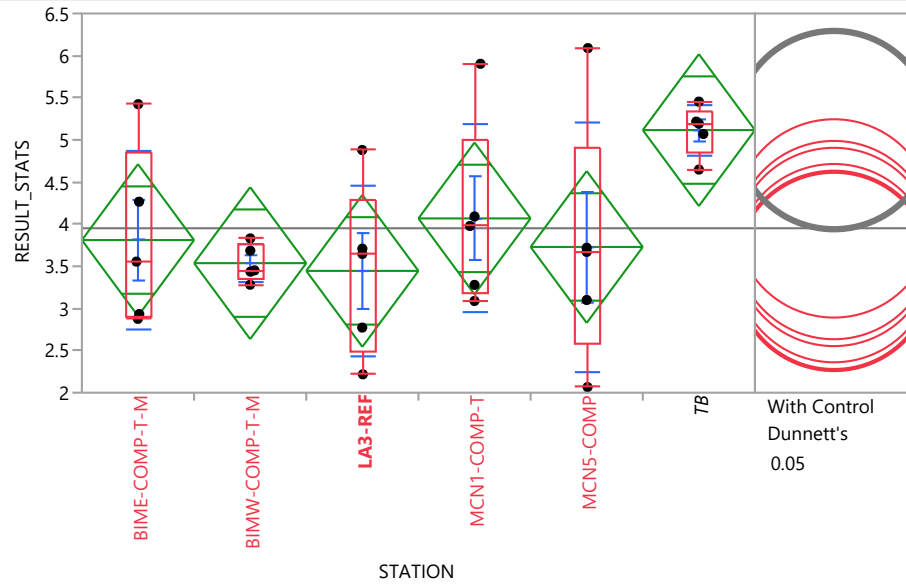
**Tests that the Variances are Equal**

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

<b>q*</b>		<b>Alpha</b>							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	1.326080	0.1498600	2.543870	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB167**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.8764	2.8764	2.904865	3.55556	4.8452	5.42373	5.42373
BIMW-COMP-T-M	3.28125	3.28125	3.358805	3.45205	3.758625	3.83108	3.83108
LA3-REF	2.21818	2.21818	2.495455	3.64674	4.29473	4.88	4.88
MCN1-COMP-T	3.08861	3.08861	3.18409	3.97826	4.997345	5.90323	5.90323
MCN5-COMP	2.06667	2.06667	2.583335	3.67105	4.904645	6.08929	6.08929
TB	4.64789	4.64789	4.859155	5.19231	5.33597	5.45455	5.45455

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB167**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.28984
Adj Rsquare	0.14189
Root Mean Square Error	0.976361
Mean of Response	3.951347
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	9.337577	1.86752	1.9590	0.1216
Error	24	22.878759	0.95328		
C. Total	29	32.216336			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.81114	0.43664	2.9100	4.7123
BIMW-COMP-T-M	5	3.53738	0.43664	2.6362	4.4386
LA3-REF	5	3.44542	0.43664	2.5442	4.3466
MCN1-COMP-T	5	4.06823	0.43664	3.1670	4.9694
MCN5-COMP	5	3.72940	0.43664	2.8282	4.6306
TB	5	5.11651	0.43664	4.2153	6.0177

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.81114	1.06273	0.47527	2.4916	5.1307
BIMW-COMP-T-M	5	3.53738	0.21880	0.09785	3.2657	3.8091
LA3-REF	5	3.44542	1.01574	0.45425	2.1842	4.7066
MCN1-COMP-T	5	4.06823	1.11327	0.49787	2.6859	5.4505
MCN5-COMP	5	3.72940	1.47762	0.66081	1.8947	5.5641
TB	5	5.11651	0.29662	0.13265	4.7482	5.4848

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB167**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.007	0.0488*
MCN1-COMP-T	-1.04	0.7688
BIME-COMP-T-M	-1.3	0.9632
MCN5-COMP	-1.38	0.9873
BIMW-COMP-T-M	-1.57	0.9999
LA3-REF	-1.66	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

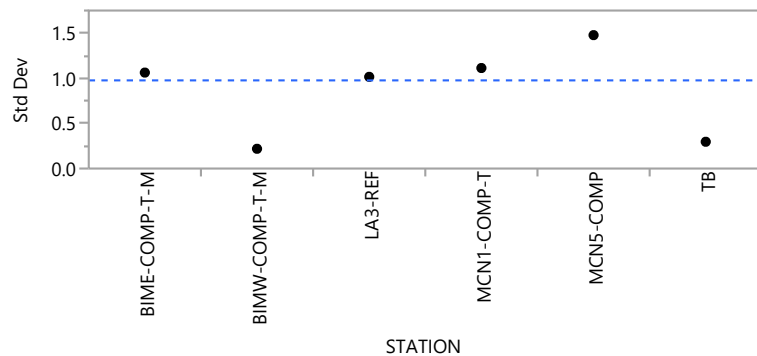
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	69.000	77.500	13.8000	-0.445
BIMW-COMP-T-M	5	63.000	77.500	12.6000	-0.779
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN1-COMP-T	5	82.000	77.500	16.4000	0.223
MCN5-COMP	5	69.000	77.500	13.8000	-0.445
TB	5	125.000	77.500	25.0000	2.615

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.8748	5	0.1633

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB167**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.062728	0.8272496	0.7761340
BIMW-COMP-T-M	5	0.218796	0.1769944	0.1599280
LA3-REF	5	1.015738	0.7599736	0.7197100
MCN1-COMP-T	5	1.113272	0.7432952	0.7253020
MCN5-COMP	5	1.477615	0.9439552	0.9285240
TB	5	0.296615	0.2058856	0.1907260

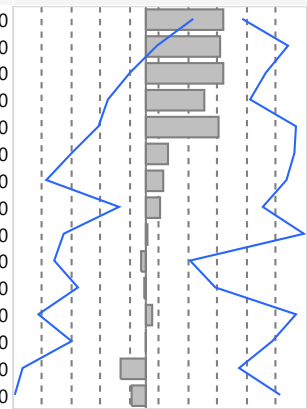
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9326	5	24	0.4775
Brown-Forsythe	1.1879	5	24	0.3445
Levene	1.4689	5	24	0.2367
Bartlett	2.9416	5	.	0.0117*

Warning: Small sample sizes. Use Caution.

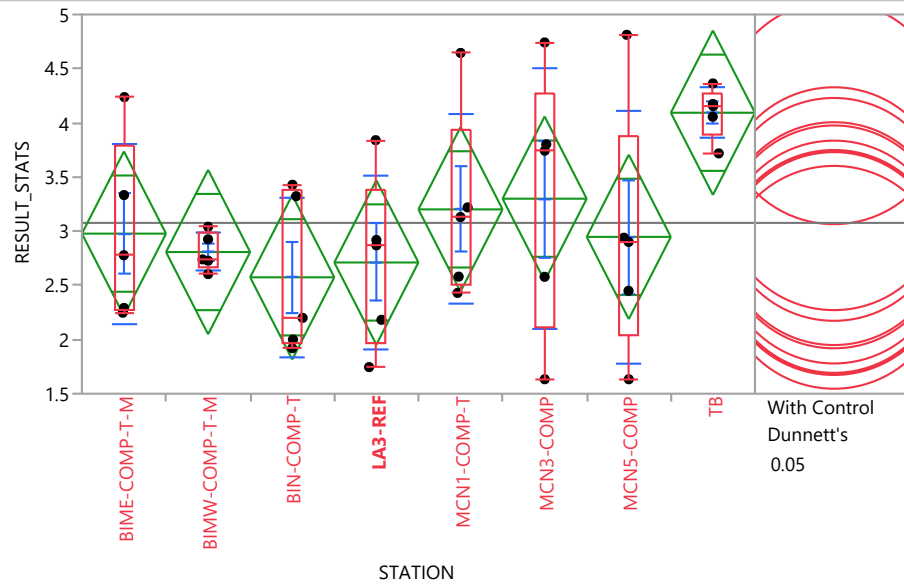
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* Alpha  
1.95996 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	1.62347	0.96172	2.018190
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.57065	0.19042	2.999210
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.63675	-0.35331	2.521220
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.23913	-0.83281	2.174980
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.54634	-1.01887	3.150720
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.44472	-1.60043	3.130500
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.34624	-2.14416	2.969900
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.29209	-0.59756	2.466870
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.02431	-1.78000	3.316560
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.10351	-1.98737	0.897750
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.03943	-1.46799	1.443640
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.11549	-2.32373	3.155960
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.01512	-1.61950	2.652930
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.54373	-2.65100	1.946670
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.30721	-2.80323	2.809720



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB168**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.24719	2.24719	2.26943	2.77778	3.78531	4.23729	4.23729
BIMW-COMP-T-M	2.60417	2.60417	2.66572	2.73973	2.983035	3.04054	3.04054
BIN-COMP-T	1.92	1.92	1.96	2.2	3.375825	3.42857	3.42857
LA3-REF	1.74545	1.74545	1.963635	2.86957	3.37946	3.84	3.84
MCN1-COMP-T	2.43038	2.43038	2.505515	3.13043	3.932335	4.64516	4.64516
MCN3-COMP	1.63333	1.63333	2.10614	3.74306	4.27183	4.74194	4.74194
MCN5-COMP	1.63333	1.63333	2.041665	2.90132	3.87625	4.8125	4.8125
TB	3.71831	3.71831	3.887325	4.15385	4.268775	4.36364	4.36364

**Oneway Anova**

**Summary of Fit**

Rsquare	0.262934
Adj Rsquare	0.101701
Root Mean Square Error	0.83285
Mean of Response	3.076506
Observations (or Sum Wgts)	40

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	7	7.918156	1.13117	1.6308	0.1625
Error	32	22.196435	0.69364		
C. Total	39	30.114591			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB168**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	2.97745	0.37246	2.2188	3.7361
BIMW-COMP-T-M	5	2.80745	0.37246	2.0488	3.5661
BIN-COMP-T	5	2.57433	0.37246	1.8157	3.3330
LA3-REF	5	2.71115	0.37246	1.9525	3.4698
MCN1-COMP-T	5	3.20123	0.37246	2.4425	3.9599
MCN3-COMP	5	3.29980	0.37246	2.5411	4.0585
MCN5-COMP	5	2.94743	0.37246	2.1888	3.7061
TB	5	4.09321	0.37246	3.3345	4.8519

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	2.97745	0.83025	0.37130	1.9466	4.0083
BIMW-COMP-T-M	5	2.80745	0.17365	0.07766	2.5918	3.0231
BIN-COMP-T	5	2.57433	0.73968	0.33079	1.6559	3.4928
LA3-REF	5	2.71115	0.79927	0.35744	1.7187	3.7036
MCN1-COMP-T	5	3.20123	0.87602	0.39177	2.1135	4.2889
MCN3-COMP	5	3.29980	1.20674	0.53967	1.8014	4.7982
MCN5-COMP	5	2.94743	1.16779	0.52225	1.4974	4.3974
TB	5	4.09321	0.23729	0.10612	3.7986	4.3878

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.76173	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.07	0.0681
MCN3-COMP	-0.87	0.7838
MCN1-COMP-T	-0.96	0.8904
BIME-COMP-T-M	-1.19	0.9950
MCN5-COMP	-1.22	0.9976
BIMW-COMP-T-M	-1.36	1.0000
LA3-REF	-1.45	1.0000
BIN-COMP-T	-1.32	0.9999

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB168**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

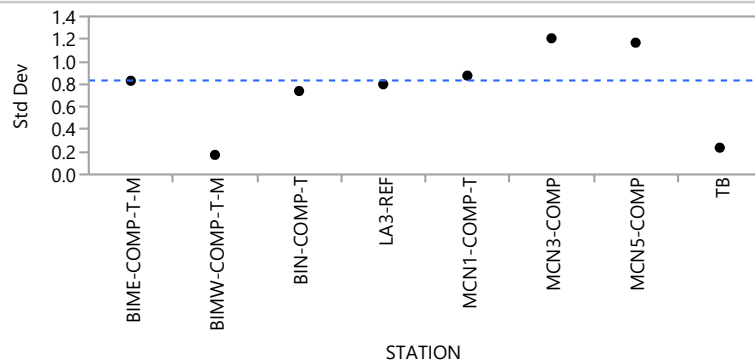
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	97.000	102.500	19.4000	-0.204
BIMW-COMP-T-M	5	89.000	102.500	17.8000	-0.532
BIN-COMP-T	5	70.000	102.500	14.0000	-1.309
LA3-REF	5	79.000	102.500	15.8000	-0.941
MCN1-COMP-T	5	110.000	102.500	22.0000	0.286
MCN3-COMP	5	113.500	102.500	22.7000	0.429
MCN5-COMP	5	93.500	102.500	18.7000	-0.348
TB	5	168.000	102.500	33.6000	2.658

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
9.3221	7	0.2304

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	0.830254	0.6462864	0.6063520
BIMW-COMP-T-M	5	0.173646	0.1404696	0.1269260
BIN-COMP-T	5	0.739675	0.6411960	0.5663300
LA3-REF	5	0.799271	0.5980136	0.5663300
MCN1-COMP-T	5	0.876015	0.5848872	0.5707280
MCN3-COMP	5	1.206743	0.9549280	0.8662760
MCN5-COMP	5	1.167793	0.7460280	0.7338340
TB	5	0.237293	0.1647080	0.1525800

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB168**

**Tests that the Variances are Equal**

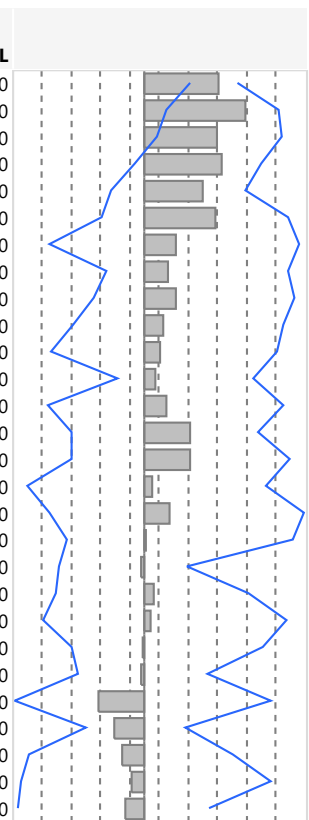
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9859	7	32	0.4587
Brown-Forsythe	0.9784	7	32	0.4638
Levene	1.7655	7	32	0.1290
Bartlett	2.3269	7	.	0.0226*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

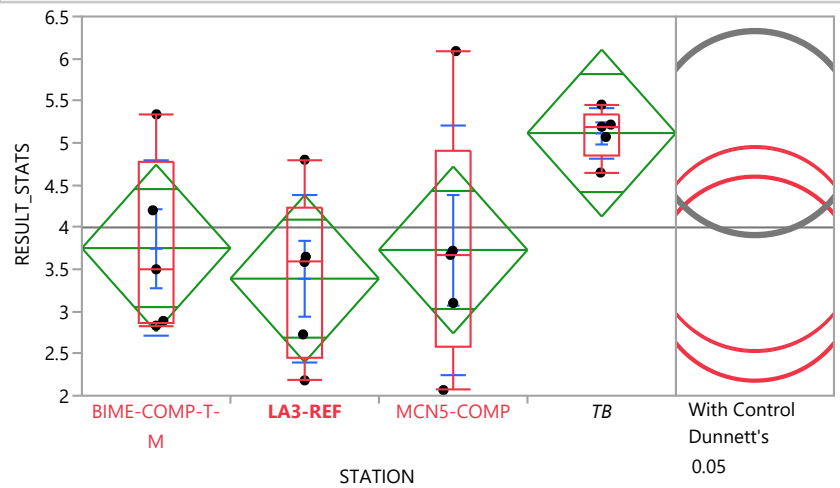
q\* 1.95996  
Alpha 0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	1.32310	0.79278	1.636370
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	1.79831	0.39523	2.363640
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.30434	0.21634	2.428460
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.37607	-0.18095	2.071970
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	1.04348	-0.58882	1.782990
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.26831	-0.75616	2.540580
MCN3-COMP	BIN-COMP-T	2.00000	1.914854	1.04447	0.2963	0.57895	-1.68975	2.741940
TB	MCN3-COMP	2.00000	1.914854	1.04447	0.2963	0.43085	-0.68560	2.540580
MCN1-COMP-T	BIN-COMP-T	1.60000	1.914854	0.83557	0.4034	0.58065	-0.89270	2.645160
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.34994	-1.25935	2.463340
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.28898	-1.65664	2.353490
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.20490	-0.49515	1.917890
MCN3-COMP	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.40973	-1.70000	2.450270
MCN3-COMP	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.81753	-1.29220	2.014670
MCN3-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.83350	-1.28559	2.560120
MCN3-COMP	MCN1-COMP-T	0.40000	1.914854	0.20889	0.8345	0.14857	-2.06621	2.161290
MCN5-COMP	BIN-COMP-T	0.40000	1.914854	0.20889	0.8345	0.45000	-1.68975	2.812500
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.03175	-1.39000	2.630680
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.03805	-1.51002	0.748870
LA3-REF	BIN-COMP-T	0.00000	1.914854	0.00000	1.0000	0.18182	-1.57763	1.840000
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.12354	-1.78729	2.520830
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.02421	-1.29220	2.085230
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.05596	-1.18008	1.112730
MCN5-COMP	MCN3-COMP	-0.60000	1.909043	-0.31429	0.7533	-0.80306	-2.29194	2.233550
BIN-COMP-T	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.53973	-1.04054	0.718910
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.39729	-2.05547	1.548330
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.22911	-2.19516	2.231850
BIN-COMP-T	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-0.32719	-2.23729	1.136900





**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB169**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.83146	2.83146	2.85948	3.5	4.76949	5.33898	5.33898
LA3-REF	2.18182	2.18182	2.454545	3.58696	4.224325	4.8	4.8
MCN5-COMP	2.06667	2.06667	2.583335	3.67105	4.904645	6.08929	6.08929
TB	4.64789	4.64789	4.859155	5.19231	5.33597	5.45455	5.45455

**Oneway Anova**

**Summary of Fit**

Rsquare	0.334519
Adj Rsquare	0.209742
Root Mean Square Error	1.044494
Mean of Response	3.996611
Observations (or Sum Wgts)	20

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	3	8.774396	2.92480	2.6809	0.0818
Error	16	17.455476	1.09097		
C. Total	19	26.229872			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.75159	0.46711	2.7614	4.7418
LA3-REF	5	3.38894	0.46711	2.3987	4.3792
MCN5-COMP	5	3.72940	0.46711	2.7392	4.7196
TB	5	5.11651	0.46711	4.1263	6.1067

Std Error uses a pooled estimate of error variance

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB169**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.75159	1.04612	0.46784	2.4527	5.0505
LA3-REF	5	3.38894	0.99909	0.44681	2.1484	4.6295
MCN5-COMP	5	3.72940	1.47762	0.66081	1.8947	5.5641
TB	5	5.11651	0.29662	0.13265	4.7482	5.4848

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.59232	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.015	0.0478*
BIME-COMP-T-M	-1.35	0.9032
MCN5-COMP	-1.37	0.9176
LA3-REF	-1.71	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	46.000	52.500	9.2000	-0.524
LA3-REF	5	36.000	52.500	7.2000	-1.397
MCN5-COMP	5	48.000	52.500	9.6000	-0.349
TB	5	80.000	52.500	16.0000	2.357

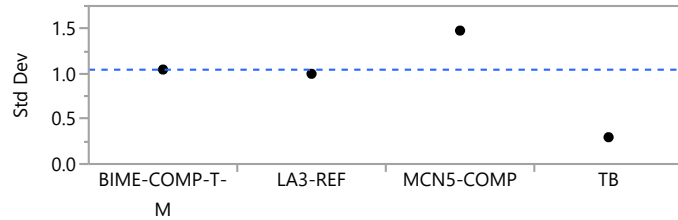
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.2343	3	0.1008

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB169**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.046120	0.8143216	0.7640040
LA3-REF	5	0.999087	0.7475160	0.7079120
MCN5-COMP	5	1.477615	0.9439552	0.9285240
TB	5	0.296615	0.2058856	0.1907260

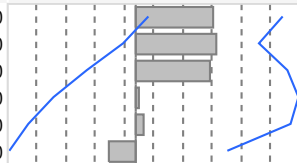
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9068	3	16	0.4596
Brown-Forsythe	1.0040	3	16	0.4166
Levene	1.2659	3	16	0.3195
Bartlett	2.3060	3	.	0.0746

Warning: Small sample sizes. Use Caution.

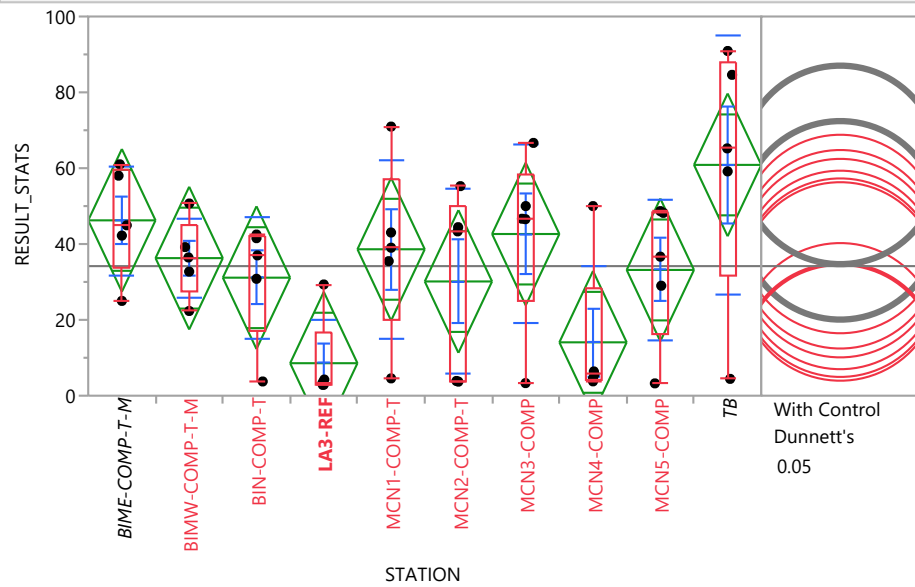
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\*    Alpha  
1.95996    0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.63043	0.27042	3.035570
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.69231	-0.26856	2.567050
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.54634	-1.01887	3.150720
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.08409	-1.70000	3.362020
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.17105	-2.23898	3.201790
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.53898	-2.61171	1.912500



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB170**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	25	25	33.6111	44.9438	59.5208	61.0169	61.0169
BIMW-COMP-T-M	22.3404	22.3404	27.53385	36.4583	44.93705	50.6849	50.6849
BIN-COMP-T	3.75	3.75	17.29165	37	42.01925	42.5	42.5
LA3-REF	2.86364	2.86364	2.886365	3.47826	16.79503	29.3333	29.3333
MCN1-COMP-T	4.56522	4.56522	20.02456	39.0244	57.00285	70.9677	70.9677
MCN2-COMP-T	3.70588	3.70588	3.797385	43.3333	49.8538	55.2632	55.2632
MCN3-COMP	3.31579	3.31579	24.93375	46.6667	58.33335	66.6667	66.6667
MCN4-COMP	3.77907	3.77907	4.168945	5.63636	28.2	50	50
MCN5-COMP	3.25	3.25	16.125	36.6667	48.44925	48.6842	48.6842
TB	4.43662	4.43662	31.79576	65.2174	87.76225	90.9091	90.9091

**Oneway Anova**

**Summary of Fit**

Rsquare	0.370461
Adj Rsquare	0.228814
Root Mean Square Error	20.81815
Mean of Response	34.17018
Observations (or Sum Wgts)	50

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB170****Oneway Anova****Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	10201.488	1133.50	2.6154	0.0177*
Error	40	17335.808	433.40		
C. Total	49	27537.296			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	46.2415	9.3102	27.42	65.058
BIMW-COMP-T-M	5	36.2800	9.3102	17.46	55.097
BIN-COMP-T	5	31.1244	9.3102	12.31	49.941
LA3-REF	5	8.5682	9.3102	-10.25	27.385
MCN1-COMP-T	5	38.6158	9.3102	19.80	57.432
MCN2-COMP-T	5	30.1271	9.3102	11.31	48.944
MCN3-COMP	5	42.6402	9.3102	23.82	61.457
MCN4-COMP	5	14.0749	9.3102	-4.74	32.891
MCN5-COMP	5	33.1630	9.3102	14.35	51.980
TB	5	60.8667	9.3102	42.05	79.683

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	46.2415	14.3718	6.427	28.40	64.09
BIMW-COMP-T-M	5	36.2800	10.2826	4.599	23.51	49.05
BIN-COMP-T	5	31.1244	15.9830	7.148	11.28	50.97
LA3-REF	5	8.5682	11.6217	5.197	-5.86	23.00
MCN1-COMP-T	5	38.6158	23.6412	10.573	9.26	67.97
MCN2-COMP-T	5	30.1271	24.4833	10.949	-0.27	60.53
MCN3-COMP	5	42.6402	23.5019	10.510	13.46	71.82
MCN4-COMP	5	14.0749	20.1077	8.992	-10.89	39.04
MCN5-COMP	5	33.1630	18.6537	8.342	10.00	56.32
TB	5	60.8667	34.1788	15.285	18.43	103.31

**Means Comparisons****Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB170****Means Comparisons****Comparisons with a control using Dunnett's Method****LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	15.28	0.0023*
BIME-COMP-T-M	0.652	0.0444*
MCN3-COMP	-2.95	0.0836
MCN1-COMP-T	-6.97	0.1594
BIMW-COMP-T-M	-9.31	0.2243
MCN5-COMP	-12.4	0.3394
BIN-COMP-T	-14.5	0.4326
MCN2-COMP-T	-15.5	0.4827
MCN4-COMP	-31.5	0.9997
LA3-REF	-37	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	168.000	127.500	33.6000	1.294
BIMW-COMP-T-M	5	128.000	127.500	25.6000	0.000
BIN-COMP-T	5	110.000	127.500	22.0000	-0.550
LA3-REF	5	37.000	127.500	7.4000	-2.910
MCN1-COMP-T	5	140.000	127.500	28.0000	0.388
MCN2-COMP-T	5	122.000	127.500	24.4000	-0.162
MCN3-COMP	5	161.500	127.500	32.3000	1.083
MCN4-COMP	5	88.500	127.500	17.7000	-1.245
MCN5-COMP	5	120.000	127.500	24.0000	-0.226
TB	5	200.000	127.500	40.0000	2.328

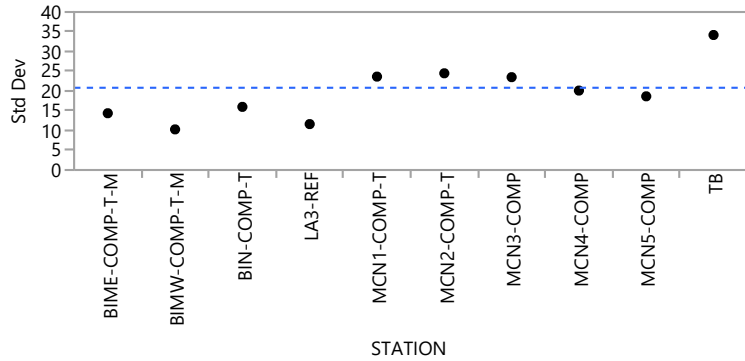
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
17.2366	9	0.0451*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB170**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	14.37182	10.62342	10.36388
BIMW-COMP-T-M	5	10.28264	6.99694	6.96128
BIN-COMP-T	5	15.98298	11.06617	9.89104
LA3-REF	5	11.62167	8.30604	5.56347
MCN1-COMP-T	5	23.64117	14.87303	14.79132
MCN2-COMP-T	5	24.48335	21.06380	18.42257
MCN3-COMP	5	23.50192	15.72976	13.35984
MCN4-COMP	5	20.10775	14.37006	9.61242
MCN5-COMP	5	18.65371	13.63043	12.92970
TB	5	34.17879	23.25674	22.38660

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.7243	9	40	0.6839
Brown-Forsythe	0.5172	9	40	0.8533
Levene	0.8447	9	40	0.5803
Bartlett	0.9456	9	.	0.4836

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	LA3-REF	4.40000	1.914854	2.29783	0.0216*	34.7676	0.3085	68.0586	
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	60.9606	0.1799	88.0000	
MCN3-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	43.1884	-0.9410	63.7576	
TB	MCN2-COMP-T	3.60000	1.914854	1.88004	0.0601	35.6459	-40.0078	87.0202	
MCN2-COMP-T	LA3-REF	3.20000	1.914854	1.67115	0.0947	25.9299	-25.4444	52.3541	
MCN5-COMP	LA3-REF	3.20000	1.914854	1.67115	0.0947	26.1364	-1.0068	45.7751	
TB	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	34.3841	-37.1019	80.8654	

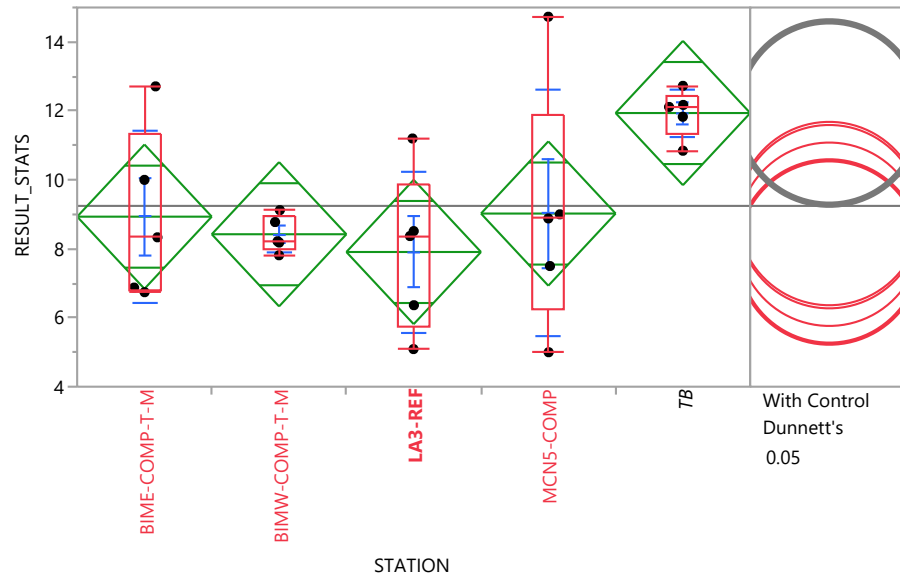
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB170**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	MCN4-COMP	3.20000	1.914854	1.67115	0.0947	55.3758	-1.9634	86.3503	
TB	MCN5-COMP	3.20000	1.914854	1.67115	0.0947	35.9312	-43.7777	81.3654	
MCN3-COMP	BIN-COMP-T	2.80000	1.914854	1.46225	0.1437	9.6667	-38.2227	46.2500	
MCN4-COMP	LA3-REF	2.80000	1.914854	1.46225	0.1437	1.6952	-24.7745	47.0909	
TB	BIMW-COMP-T-M	2.80000	1.914854	1.46225	0.1437	32.4901	-34.7526	62.2750	
TB	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	22.9952	-53.5881	59.6154	
TB	MCN3-COMP	2.40000	1.914854	1.25336	0.2101	18.5507	-45.5634	81.2996	
TB	MCN1-COMP-T	2.00000	1.914854	1.04447	0.2963	23.6710	-38.6014	80.0502	
MCN3-COMP	BIMW-COMP-T-M	1.60000	1.914854	0.83557	0.4034	10.8108	-35.8734	33.9394	
MCN3-COMP	MCN2-COMP-T	1.60000	1.914854	0.83557	0.4034	5.5556	-41.1286	62.7778	
MCN1-COMP-T	BIN-COMP-T	1.20000	1.914854	0.62668	0.5309	2.0244	-36.9733	40.1344	
MCN2-COMP-T	BIN-COMP-T	1.20000	1.914854	0.62668	0.5309	1.9444	-38.6111	40.6944	
MCN3-COMP	MCN1-COMP-T	1.20000	1.914854	0.62668	0.5309	7.5273	-39.7222	45.4348	
MCN5-COMP	MCN4-COMP	1.20000	1.914854	0.62668	0.5309	25.2209	-21.0000	44.4352	
MCN1-COMP-T	BIMW-COMP-T-M	0.40000	1.914854	0.20889	0.8345	2.7566	-34.6240	38.2404	
MCN3-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	1.7229	-54.7089	25.0000	
BIN-COMP-T	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-1.8940	-35.4392	19.1981	
MCN2-COMP-T	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	4.1441	-46.7960	22.5359	
MCN2-COMP-T	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	-0.6763	-67.0788	39.8792	
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-2.0007	-35.9392	25.8739	
MCN5-COMP	BIN-COMP-T	0.00000	1.914854	0.00000	1.0000	5.7143	-38.2885	44.4643	
MCN5-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	-0.4559	-41.1944	44.7953	
MCN4-COMP	MCN2-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-5.2632	-50.7044	46.1111	
MCN5-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-2.3577	-41.9677	43.6491	
MCN1-COMP-T	BIME-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-6.7383	-53.4595	28.7455	
MCN4-COMP	BIN-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-27.0542	-37.9412	19.1667	
MCN5-COMP	BIME-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-12.3327	-54.7747	23.2143	
MCN5-COMP	MCN3-COMP	-1.60000	1.914854	-0.83557	0.4034	-10.0000	-46.7500	44.8985	
MCN4-COMP	MCN3-COMP	-1.80000	1.909043	-0.94288	0.3457	-41.0303	-62.1079	3.4483	
MCN2-COMP-T	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-14.6914	-57.1280	19.4444	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-9.4949	-35.6843	14.1892	
MCN4-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-31.7048	-66.4089	14.5161	
BIN-COMP-T	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-15.5247	-54.2747	16.5385	
MCN4-COMP	BIMW-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-28.9482	-46.1261	17.2727	
MCN4-COMP	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-38.4431	-56.4581	7.7778	
LA3-REF	BIN-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-27.9697	-39.5909	0.5068	
LA3-REF	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-39.3586	-58.1078	-12.8889	
LA3-REF	BIMW-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-29.8637	-47.7758	-3.3940	



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB174**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	6.74157	6.74157	6.808285	8.33333	11.35595	12.7119	12.7119
BIMW-COMP-T-M	7.8125	7.8125	7.99716	8.21918	8.94911	9.12162	9.12162
LA3-REF	5.09091	5.09091	5.727275	8.36957	9.856755	11.2	11.2
MCN5-COMP	5	5	6.25	8.88158	11.86605	14.7321	14.7321
TB	10.8451	10.8451	11.33805	12.1154	12.4506	12.7273	12.7273

**Oneway Anova**

**Summary of Fit**

Rsquare	0.328901
Adj Rsquare	0.194681
Root Mean Square Error	2.243589
Mean of Response	9.244701
Observations (or Sum Wgts)	25

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	4	49.33951	12.3349	2.4505	0.0795
Error	20	100.67382	5.0337		
C. Total	24	150.01333			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB174**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.9324	1.0034	6.8394	11.025
BIMW-COMP-T-M	5	8.4223	1.0034	6.3294	10.515
LA3-REF	5	7.9075	1.0034	5.8145	10.001
MCN5-COMP	5	9.0227	1.0034	6.9298	11.116
TB	5	11.9385	1.0034	9.8456	14.032

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	8.9324	2.49078	1.1139	5.840	12.025
BIMW-COMP-T-M	5	8.4223	0.52094	0.2330	7.776	9.069
LA3-REF	5	7.9075	2.33120	1.0425	5.013	10.802
MCN5-COMP	5	9.0227	3.57486	1.5987	4.584	13.462
TB	5	11.9385	0.69210	0.3095	11.079	12.798

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.65103	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.269	0.0336*
MCN5-COMP	-2.65	0.8467
BIME-COMP-T-M	-2.74	0.8798
BIMW-COMP-T-M	-3.25	0.9883
LA3-REF	-3.76	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	59.000	65.000	11.8000	-0.374
BIMW-COMP-T-M	5	53.000	65.000	10.6000	-0.781
LA3-REF	5	47.000	65.000	9.4000	-1.189
MCN5-COMP	5	61.000	65.000	12.2000	-0.238
TB	5	105.000	65.000	21.0000	2.683

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB174**

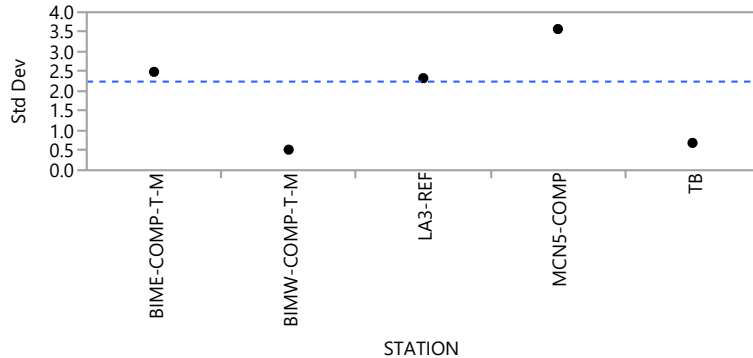
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
7.8277	4	0.0981

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	2.490778	1.938872	1.819066
BIMW-COMP-T-M	5	0.520942	0.421413	0.380780
LA3-REF	5	2.331201	1.744201	1.651792
MCN5-COMP	5	3.574857	2.283746	2.246420
TB	5	0.692097	0.480392	0.445020

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2054	4	20	0.3394
Brown-Forsythe	1.5281	4	20	0.2321
Levene	1.9390	4	20	0.1432
Bartlett	3.6866	4	.	0.0053*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

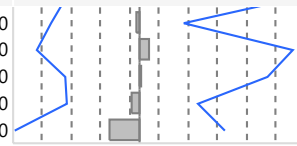
q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	3.61182	2.06850	4.545480	
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	3.80433	0.63100	7.082990	
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	3.78207	-0.88090	5.852300	
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	3.29232	-2.90110	7.173900	
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.51201	-3.70000	8.368460	

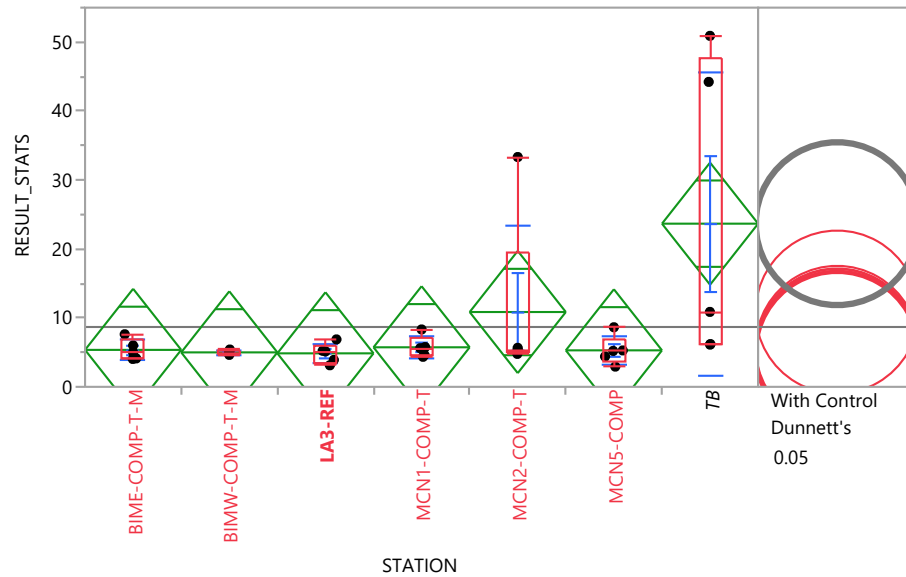
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB174**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.11415	-4.53008	2.246620
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.54825	-5.21190	7.857100
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.10498	-3.77660	6.550280
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.40703	-3.68569	3.018180
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-1.48649	-6.34826	4.325000



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB177**



Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.04494	4.04494	4.08497	5	6.81356	7.62712	7.62712
BIMW-COMP-T-M	4.63542	4.63542	4.744985	4.87671	5.309805	5.41216	5.41216
LA3-REF	3.12727	3.12727	3.51818	5.1413	6.054865	6.88	6.88
MCN1-COMP-T	4.35443	4.35443	4.489045	5.6087	7.045435	8.32258	8.32258
MCN2-COMP-T	4.77778	4.77778	4.947715	5.37037	19.4956	33.3333	33.3333
MCN5-COMP	2.93333	2.93333	3.666665	5.21053	6.96143	8.64286	8.64286
TB	6.12676	6.12676	6.16197	10.8696	47.56995	50.9091	50.9091

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB177**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.355304
Adj Rsquare	0.217155
Root Mean Square Error	9.671037
Mean of Response	8.680159
Observations (or Sum Wgts)	35

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	6	1443.2784	240.546	2.5719	0.0412*
Error	28	2618.8110	93.529		
C. Total	34	4062.0895			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.3594	4.3250	-3.50	14.219
BIMW-COMP-T-M	5	4.9973	4.3250	-3.86	13.857
LA3-REF	5	4.8575	4.3250	-4.00	13.717
MCN1-COMP-T	5	5.7355	4.3250	-3.12	14.595
MCN2-COMP-T	5	10.8514	4.3250	1.99	19.711
MCN5-COMP	5	5.2933	4.3250	-3.57	14.153
TB	5	23.6667	4.3250	14.81	32.526

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.3594	1.4945	0.6683	3.504	7.215
BIMW-COMP-T-M	5	4.9973	0.3091	0.1382	4.613	5.381
LA3-REF	5	4.8575	1.4320	0.6404	3.079	6.636
MCN1-COMP-T	5	5.7355	1.5695	0.7019	3.787	7.684
MCN2-COMP-T	5	10.8514	12.5719	5.6223	-4.759	26.462
MCN5-COMP	5	5.2933	2.0973	0.9379	2.689	7.897
TB	5	23.6667	22.0320	9.8530	-3.690	51.023

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.73128	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB177**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	2.103	0.0227*
MCN2-COMP-T	-10.7	0.8313
MCN1-COMP-T	-15.8	1.0000
BIME-COMP-T-M	-16.2	1.0000
MCN5-COMP	-16.3	1.0000
BIMW-COMP-T-M	-16.6	1.0000
LA3-REF	-16.7	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

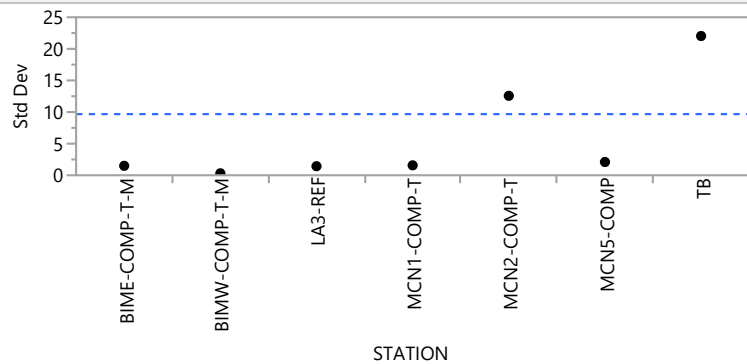
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	76.000	90.000	15.2000	-0.636
BIMW-COMP-T-M	5	69.000	90.000	13.8000	-0.966
LA3-REF	5	66.000	90.000	13.2000	-1.108
MCN1-COMP-T	5	90.000	90.000	18.0000	0.000
MCN2-COMP-T	5	100.000	90.000	20.0000	0.448
MCN5-COMP	5	75.000	90.000	15.0000	-0.684
TB	5	154.000	90.000	30.8000	2.993

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
10.7314	6	0.0970

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB177**

**Tests that the Variances are Equal**

Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.49446	1.16332	1.09144
BIMW-COMP-T-M	5	0.30909	0.25004	0.22593
LA3-REF	5	1.43202	1.07144	1.01467
MCN1-COMP-T	5	1.56953	1.04792	1.02256
MCN2-COMP-T	5	12.57194	8.99276	5.81915
MCN5-COMP	5	2.09726	1.33981	1.31791
TB	5	22.03197	19.12261	16.56319

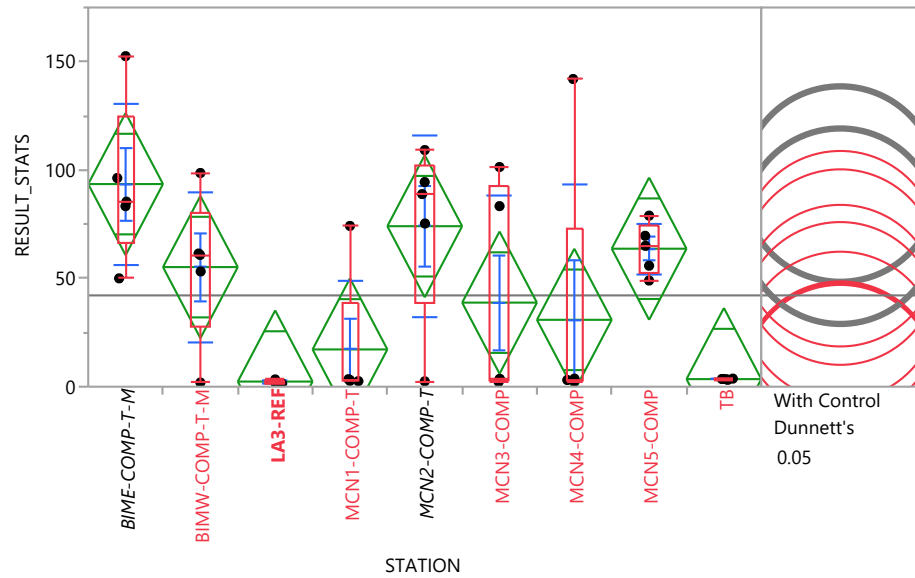
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[5]	5.9130	6	28	0.0004*
Brown-Forsythe	2.4073	6	28	0.0530
Levene	19.2844	6	28	<.0001*
Bartlett	11.5431	6	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	5.99289	0.7850	46.05455	
TB	BIME-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	5.86960	-1.4299	46.78410	
TB	LA3-REF	4.00000	1.914854	2.08893	0.0367*	5.72830	-0.6828	47.00001	
TB	MCN1-COMP-T	4.00000	1.914854	2.08893	0.0367*	5.26090	-2.1254	46.28544	
TB	MCN5-COMP	4.00000	1.914854	2.08893	0.0367*	5.65907	-2.4457	46.50910	
TB	MCN2-COMP-T	3.60000	1.914854	1.88004	0.0601	5.49923	-27.1361	45.79145	
MCN2-COMP-T	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	0.45044	-0.4297	28.47875	
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.62699	-2.2563	4.41349	
MCN2-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.86869	-1.7624	29.42421	
MCN2-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	0.65789	-2.5095	29.20830	
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.49866	-3.0035	4.19758	
MCN1-COMP-T	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.40125	-0.8530	3.46803	
MCN2-COMP-T	MCN1-COMP-T	0.40000	1.914854	0.20889	0.8345	0.15412	-3.2049	28.70964	
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.06923	-2.4800	4.73377	
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.12329	-2.7726	1.28716	
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.06615	-2.0802	2.02545	
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.21053	-3.2271	4.51786	
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.00308	-2.2741	3.78831	
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.74712	-3.7180	2.75500	
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.39817	-3.9226	4.01920	
MCN5-COMP	MCN2-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-0.44736	-28.9333	3.52521	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB180**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	50	50	66.66665	85.3933	124.4192	152.542	152.542
BIMW-COMP-T-M	1.90909	1.90909	27.5503	60.8108	80.0442	98.6301	98.6301
LA3-REF	1.52727	1.52727	1.71818	2.51087	2.957025	3.36	3.36
MCN1-COMP-T	2.56098	2.56098	2.64125	3.04348	38.83067	74.1936	74.1936
MCN2-COMP-T	2.47059	2.47059	38.8896	88.8889	101.8277	109.211	109.211
MCN3-COMP	2.21053	2.21053	2.839135	3.62069	92.36115	101.389	101.389
MCN4-COMP	2.5	2.5	2.757355	3.08824	72.86364	142	142
MCN5-COMP	49	49	52.41665	65	74.29515	78.9474	78.9474
TB	3.17606	3.17606	3.320425	3.54808	3.646245	3.72727	3.72727

**Oneway Anova**

**Summary of Fit**

Rsquare	0.463043
Adj Rsquare	0.343719
Root Mean Square Error	36.18195
Mean of Response	42.13318
Observations (or Sum Wgts)	45



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB180**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	8	40641.381	5080.17	3.8806	0.0022*
Error	36	47128.808	1309.13		
C. Total	44	87770.188			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	93.5130	16.181	60.70	126.33
BIMW-COMP-T-M	5	55.2000	16.181	22.38	88.02
LA3-REF	5	2.3723	16.181	-30.44	35.19
MCN1-COMP-T	5	17.1975	16.181	-15.62	50.01
MCN2-COMP-T	5	74.0647	16.181	41.25	106.88
MCN3-COMP	5	38.8043	16.181	5.99	71.62
MCN4-COMP	5	30.8660	16.181	-1.95	63.68
MCN5-COMP	5	63.6847	16.181	30.87	96.50
TB	5	3.4963	16.181	-29.32	36.31

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	93.5130	37.2663	16.666	47.24	139.79
BIMW-COMP-T-M	5	55.2000	34.6438	15.493	12.18	98.22
LA3-REF	5	2.3723	0.6994	0.313	1.50	3.24
MCN1-COMP-T	5	17.1975	31.8637	14.250	-22.37	56.76
MCN2-COMP-T	5	74.0647	41.8259	18.705	22.13	126.00
MCN3-COMP	5	38.8043	49.3086	22.051	-22.42	100.03
MCN4-COMP	5	30.8660	62.1273	27.784	-46.28	108.01
MCN5-COMP	5	63.6847	11.6990	5.232	49.16	78.21
TB	5	3.4963	0.2027	0.091	3.24	3.75

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.78823	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB180**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
BIME-COMP-T-M	27.34	0.0022*
MCN2-COMP-T	7.888	0.0217*
MCN5-COMP	-2.49	0.0642
BIMW-COMP-T-M	-11	0.1420
MCN3-COMP	-27.4	0.4868
MCN4-COMP	-35.3	0.7319
MCN1-COMP-T	-49	0.9876
TB	-62.7	1.0000
LA3-REF	-63.8	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	182.500	115.000	36.5000	2.420
BIMW-COMP-T-M	5	126.500	115.000	25.3000	0.397
LA3-REF	5	33.500	115.000	6.7000	-2.926
MCN1-COMP-T	5	80.500	115.000	16.1000	-1.228
MCN2-COMP-T	5	158.000	115.000	31.6000	1.535
MCN3-COMP	5	120.000	115.000	24.0000	0.163
MCN4-COMP	5	96.500	115.000	19.3000	-0.650
MCN5-COMP	5	146.000	115.000	29.2000	1.102
TB	5	91.500	115.000	18.3000	-0.831

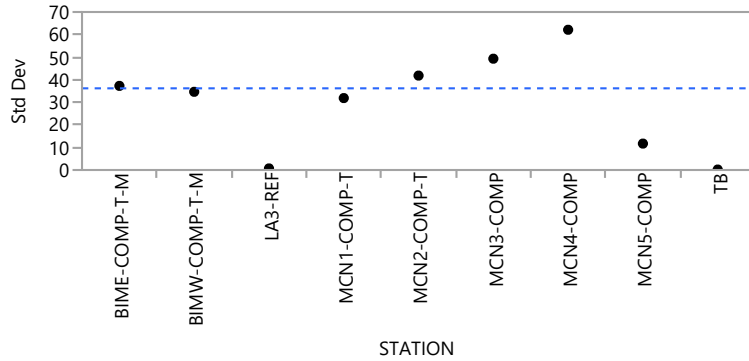
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
18.8461	8	0.0157*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB180**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	37.26629	24.72494	23.10100
BIMW-COMP-T-M	5	34.64382	22.11973	20.99756
LA3-REF	5	0.69936	0.52326	0.49554
MCN1-COMP-T	5	31.86369	22.79845	14.47577
MCN2-COMP-T	5	41.82588	28.63764	25.17524
MCN3-COMP	5	49.30857	42.84552	35.80881
MCN4-COMP	5	62.12730	44.45358	28.04251
MCN5-COMP	5	11.69899	9.01446	8.75140
TB	5	0.20268	0.14069	0.13033

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[5]	0.8793	8	36	0.5430
Brown-Forsythe	0.6900	8	36	0.6975
Levene	3.0531	8	36	0.0100*
Bartlett	8.6087	8	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

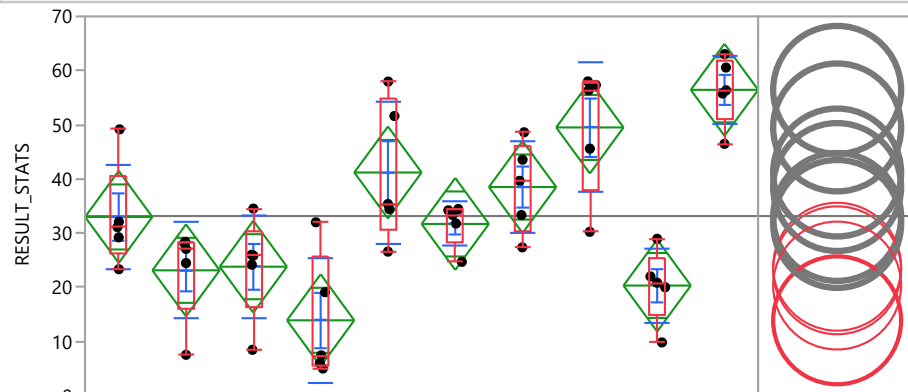
q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	62.4891	46.446	77.038		
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.0544	0.105	2.038		
MCN1-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	0.9137	-0.638	72.285		
MCN2-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	86.3780	-0.083	107.302		
MCN3-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	1.7116	-0.344	99.480		
MCN5-COMP	MCN1-COMP-T	3.20000	1.914854	1.67115	0.0947	53.2723	-18.360	76.226		
MCN2-COMP-T	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	72.7476	-0.997	106.489		
MCN4-COMP	LA3-REF	2.80000	1.914854	1.46225	0.1437	1.1056	-0.345	140.091		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB180**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
MCN5-COMP	MCN4-COMP	2.80000	1.914854	1.46225	0.1437	53.3333	-86.167	75.933	
MCN2-COMP-T	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	27.4306	-58.988	92.535	
TB	MCN1-COMP-T	2.00000	1.914854	1.04447	0.2963	0.4545	-70.729	1.006	
MCN3-COMP	MCN1-COMP-T	1.80000	1.909043	0.94288	0.3457	0.8992	-70.726	98.667	
TB	MCN4-COMP	1.00000	1.909043	0.52382	0.6004	0.3766	-138.535	1.065	
MCN5-COMP	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	4.1892	-42.797	67.734	
MCN5-COMP	MCN3-COMP	0.80000	1.914854	0.41779	0.6761	46.7895	-45.556	75.480	
MCN4-COMP	MCN1-COMP-T	0.40000	1.914854	0.20889	0.8345	0.2595	-71.179	139.278	
MCN3-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-15.2968	-95.162	81.424	
MCN2-COMP-T	BIME-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-7.4074	-93.826	44.444	
MCN4-COMP	MCN3-COMP	-0.40000	1.914854	-0.20889	0.8345	-0.4530	-98.374	138.532	
MCN4-COMP	BIMW-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-50.6915	-95.615	88.809	
MCN4-COMP	MCN2-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-72.8086	-106.196	66.691	
TB	MCN3-COMP	-1.20000	1.914854	-0.62668	0.5309	-0.1559	-97.924	1.355	
MCN1-COMP-T	BIMW-COMP-T-M	-1.60000	1.914854	-0.83557	0.4034	-50.6305	-95.909	21.002	
MCN3-COMP	MCN2-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-25.8777	-105.743	80.863	
BIMW-COMP-T-M	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-32.2018	-99.351	15.297	
MCN5-COMP	MCN2-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-23.8889	-53.378	67.172	
MCN3-COMP	BIME-COMP-T-M	-2.60000	1.909043	-1.36194	0.1732	-69.2087	-149.074	33.333	
TB	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-57.2627	-95.165	1.656	
TB	MCN2-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-85.3408	-105.746	1.095	
MCN4-COMP	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-80.8333	-149.527	58.667	
MCN5-COMP	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-26.6534	-96.709	19.643	
LA3-REF	BIMW-COMP-T-M	-3.40000	1.909043	-1.78100	0.0749	-58.2568	-96.721	0.645	
MCN1-COMP-T	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-80.7723	-149.820	-9.140	
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-82.8824	-150.633	-47.446	
TB	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-81.8452	-149.077	-46.435	
TB	MCN5-COMP	-4.80000	1.914854	-2.50672	0.0122*	-61.4519	-75.483	-45.435	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB183**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB183**

STATION	With Control	Dunnett's	0.05
BIME-COMP-T-M			
BIMW-COMP-T-M			
BIN-COMP-T			
LA3-REF			
MCN1-COMP-T			
MCN2-COMP-T			
MCN3-COMP			
MCN4-COMP			
MCN5-COMP			
TB			

**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	23.3333	23.3333	26.2734	31.1111	40.62565	49.1525	49.1525
BIMW-COMP-T-M	7.53425	7.53425	16.00118	27.0833	28.2801	28.3784	28.3784
BIN-COMP-T	8.46154	8.46154	16.31412	25.8333	30.2619	34.5238	34.5238
LA3-REF	5	5	5.48913	7.43243	25.54545	32	32
MCN1-COMP-T	26.5823	26.5823	30.49545	35.3659	54.79195	57.971	57.971
MCN2-COMP-T	24.6914	24.6914	28.22805	33.3333	34.32745	34.4444	34.4444
MCN3-COMP	27.3684	27.3684	30.35085	39.6552	46.07975	48.6111	48.6111
MCN4-COMP	30.2326	30.2326	37.9104	56.3636	57.67645	58	58
MCN5-COMP	9.82143	9.82143	14.91072	20.8333	25.4737	28.9474	28.9474
TB	46.4789	46.4789	51.12405	56.3636	61.80345	63.0435	63.0435

**Oneway Anova**

**Summary of Fit**

Rsquare	0.697657
Adj Rsquare	0.62963
Root Mean Square Error	9.392833
Mean of Response	33.14603
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	8143.194	904.799	10.2556	<.0001*
Error	40	3529.013	88.225		
C. Total	49	11672.207			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	32.9818	4.2006	24.492	41.472
BIMW-COMP-T-M	5	23.1292	4.2006	14.639	31.619
BIN-COMP-T	5	23.7971	4.2006	15.307	32.287
LA3-REF	5	13.9003	4.2006	5.411	22.390
MCN1-COMP-T	5	41.1881	4.2006	32.698	49.678
MCN2-COMP-T	5	31.6889	4.2006	23.199	40.179
MCN3-COMP	5	38.5033	4.2006	30.014	46.993
MCN4-COMP	5	49.5075	4.2006	41.018	57.997
MCN5-COMP	5	20.3204	4.2006	11.831	28.810
TB	5	56.4437	4.2006	47.954	64.933

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB183**

**Oneway Anova**

**Means for Oneway Anova**

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	32.9818	9.6574	4.3189	20.99	44.973
BIMW-COMP-T-M	5	23.1292	8.8560	3.9605	12.13	34.125
BIN-COMP-T	5	23.7971	9.4786	4.2390	12.03	35.566
LA3-REF	5	13.9003	11.6012	5.1882	-0.50	28.305
MCN1-COMP-T	5	41.1881	13.0722	5.8461	24.96	57.419
MCN2-COMP-T	5	31.6889	4.0505	1.8114	26.66	36.718
MCN3-COMP	5	38.5033	8.3616	3.7394	28.12	48.886
MCN4-COMP	5	49.5075	11.9118	5.3271	34.72	64.298
MCN5-COMP	5	20.3204	6.8527	3.0646	11.81	28.829
TB	5	56.4437	6.3302	2.8310	48.58	64.304

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	25.84	<.0001*
MCN4-COMP	18.9	<.0001*
MCN1-COMP-T	10.58	0.0004*
MCN3-COMP	7.9	0.0014*
BIME-COMP-T-M	2.378	0.0185*
MCN2-COMP-T	1.085	0.0321*
BIN-COMP-T	-6.81	0.4635
BIMW-COMP-T-M	-7.47	0.5409
MCN5-COMP	-10.3	0.8633
LA3-REF	-16.7	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB183**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

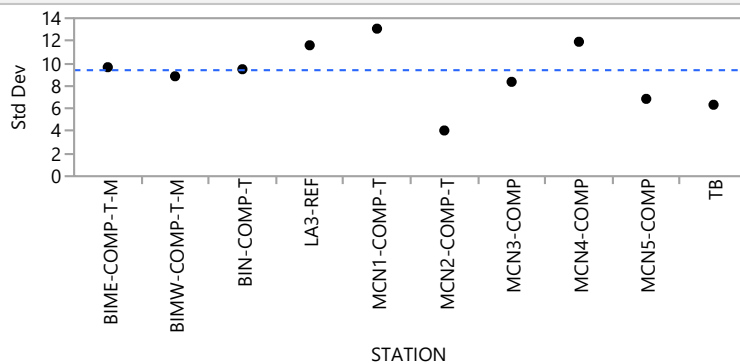
Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	128.000	127.500	25.6000	0.000
BIMW-COMP-T-M	5	76.000	127.500	15.2000	-1.649
BIN-COMP-T	5	82.000	127.500	16.4000	-1.455
LA3-REF	5	40.000	127.500	8.0000	-2.814
MCN1-COMP-T	5	173.000	127.500	34.6000	1.455
MCN2-COMP-T	5	133.500	127.500	26.7000	0.178
MCN3-COMP	5	161.500	127.500	32.3000	1.083
MCN4-COMP	5	200.500	127.500	40.1000	2.345
MCN5-COMP	5	55.000	127.500	11.0000	-2.328
TB	5	225.500	127.500	45.1000	3.153

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
33.7261	9	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	9.65744	6.46826	5.740900
BIMW-COMP-T-M	5	8.85597	6.23797	4.911570
BIN-COMP-T	5	9.47862	6.13421	5.579112
LA3-REF	5	11.60117	9.31611	8.022528
MCN1-COMP-T	5	13.07221	10.88305	9.718600
MCN2-COMP-T	5	4.05050	2.79898	2.439760
MCN3-COMP	5	8.36156	6.52194	6.291560
MCN4-COMP	5	11.91178	9.27765	7.906420
MCN5-COMP	5	6.85274	4.32777	4.225194
TB	5	6.33024	4.28778	4.271760

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB183**

**Tests that the Variances are Equal**

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.6283	9	40	0.7660
Brown-Forsythe	0.3996	9	40	0.9279
Levene	1.2401	9	40	0.2991
Bartlett	0.7410	9	.	0.6716

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* 1.95996  
Alpha 0.05

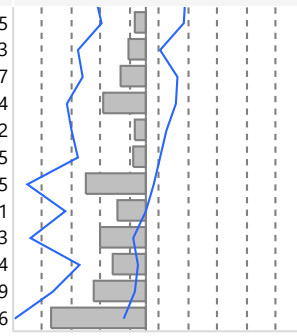
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN4-COMP	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	29.1711	2.0508	49.8187	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	32.1850	18.2971	53.0292	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	31.6025	20.4789	52.1019	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	43.9526	23.7692	57.0652	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	24.5989	12.2684	35.8720	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	35.7692	24.4789	50.7420	
MCN1-COMP-T	LA3-REF	4.40000	1.914854	2.29783	0.0216*	27.9335	2.4086	51.9927	
MCN3-COMP	LA3-REF	4.40000	1.914854	2.29783	0.0216*	25.9009	1.3333	42.6328	
MCN4-COMP	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	30.3636	4.2326	48.8914	
MCN4-COMP	LA3-REF	4.40000	1.914854	2.29783	0.0216*	38.2620	11.1417	52.3529	
TB	BIME-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	25.2525	6.6167	37.2301	
TB	MCN3-COMP	4.40000	1.914854	2.29783	0.0216*	17.0150	2.9305	33.1950	
MCN1-COMP-T	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	17.0891	-0.1152	43.1514	
MCN2-COMP-T	LA3-REF	4.00000	1.914854	2.08893	0.0367*	19.6914	-0.2353	29.2105	
MCN3-COMP	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	15.1871	-0.8134	36.0142	
MCN3-COMP	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	14.0873	-1.1905	35.0869	
MCN1-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	19.0481	-1.5995	44.0787	
MCN2-COMP-T	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	6.2500	-3.4904	26.6763	
MCN4-COMP	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	22.2549	-3.5643	34.0196	
MCN4-COMP	MCN2-COMP-T	3.20000	1.914854	1.67115	0.0947	22.9085	-3.9779	32.6615	
TB	MCN1-COMP-T	3.20000	1.914854	1.67115	0.0947	19.8966	-5.1340	33.9811	
MCN4-COMP	MCN3-COMP	2.80000	1.914854	1.46225	0.1437	12.8152	-13.3158	29.9845	
MCN1-COMP-T	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	5.1951	-14.7439	28.7575	
MCN5-COMP	LA3-REF	2.40000	1.914854	1.25336	0.2101	9.8565	-12.0000	22.9691	
MCN3-COMP	MCN2-COMP-T	2.20000	1.909043	1.15241	0.2492	7.8905	-6.8421	18.8570	
MCN2-COMP-T	BIN-COMP-T	2.00000	1.914854	1.04447	0.2963	7.5980	-2.7591	25.7490	
MCN3-COMP	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	7.5564	-15.8192	20.2151	
MCN4-COMP	MCN1-COMP-T	1.60000	1.914854	0.83557	0.4034	6.3871	-21.3803	30.7706	
TB	MCN4-COMP	1.40000	1.909043	0.73335	0.4633	4.1998	-10.8740	30.3308	
MCN2-COMP-T	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	2.1117	-17.3878	10.8772	
BIN-COMP-T	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-1.0833	-19.7203	18.4658	
MCN3-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-2.0326	-24.6377	16.9661	
MCN5-COMP	BIMW-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-5.0833	-18.3604	14.4658	



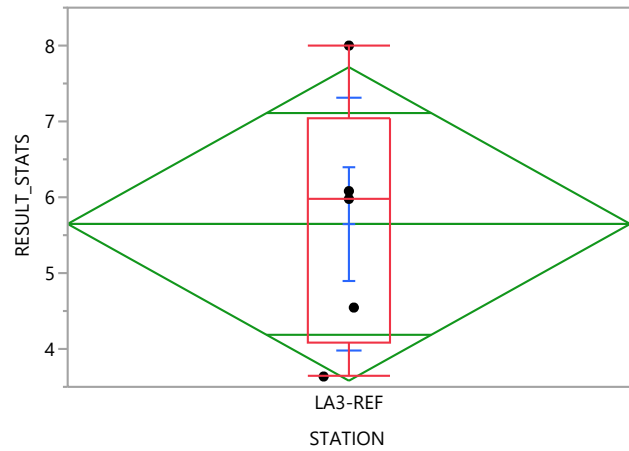
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB183**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
MCN5-COMP	BIN-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-4.1667	-16.1786	13.5385
BIN-COMP-T	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-6.0988	-24.9858	5.3103
LA3-REF	BIMW-COMP-T-M	-2.40000	1.914854	-1.25336	0.2101	-9.2875	-23.1818	11.5567
LA3-REF	BIN-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-15.4329	-28.5455	10.6294
MCN2-COMP-T	MCN1-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-3.6012	-26.9215	7.6282
BIMW-COMP-T-M	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-4.7454	-24.6844	4.8485
LA3-REF	BIME-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-21.7811	-43.1742	2.7865
MCN5-COMP	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-10.2778	-29.1525	-0.2661
MCN5-COMP	MCN1-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-16.7609	-41.7915	-4.5823
MCN5-COMP	MCN2-COMP-T	-4.40000	1.914854	-2.29783	0.0216*	-12.2105	-24.3891	-2.6914
MCN5-COMP	MCN3-COMP	-4.40000	1.914854	-2.29783	0.0216*	-18.8219	-33.7270	-4.3859
MCN5-COMP	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-34.3636	-47.5315	-8.2326



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB184**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	3.63636	3.63636	4.090905	5.97826	7.04054	8	8

**Oneway Anova**

**Summary of Fit**

Rsquare	0
Adj Rsquare	0
Root Mean Square Error	1.665146
Mean of Response	5.64823
Observations (or Sum Wgts)	5

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB184**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	0	0.000000			
Error	4	11.090846	2.77271		
C. Total	4	11.090846			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	5.64823	0.74468	3.5807	7.7158

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	5.64823	1.66515	0.74468	3.5807	7.7158

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
LA3-REF	5	15.000	15.000	3.00000	

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.0000	0	

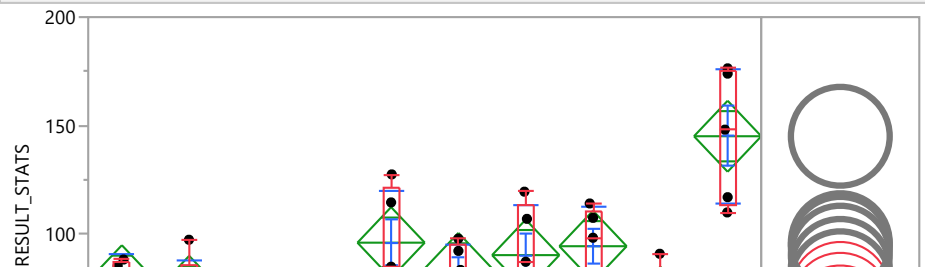
Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

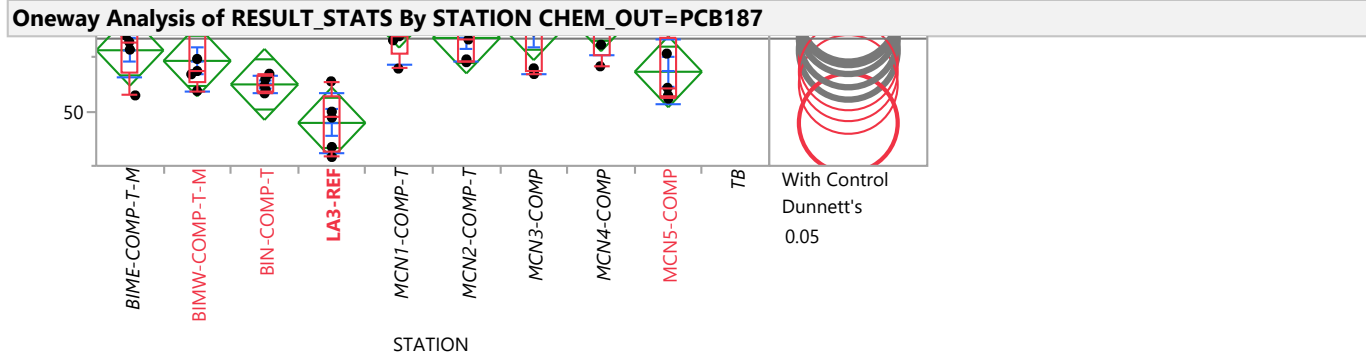
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
		Difference	Std Err Dif					

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB187**





Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	57.5	57.5	68.07585	82.2222	86.6604	88.1356	88.1356
BIMW-COMP-T-M	59.5745	59.5745	63.4236	68.75	85.7923	97.2603	97.2603
BIN-COMP-T	58.4615	58.4615	59.23075	61.9048	66.25	67.5	67.5
LA3-REF	29.0909	29.0909	31.3933	47.2973	57	64	64
MCN1-COMP-T	69.8925	69.8925	76.40965	84.8101	120.956	127.419	127.419
MCN2-COMP-T	72.8395	72.8395	73.47855	83.3333	94.94155	97.7778	97.7778
MCN3-COMP	67.3684	67.3684	68.6842	87.0968	113.1705	119.444	119.444
MCN4-COMP	70.9302	70.9302	75.9063	98.1818	110.6765	114	114
MCN5-COMP	56	56	56.75	61	83.7876	90.7895	90.7895
TB	109.859	109.859	113.38	148.077	175.1385	176.364	176.364

**Oneway Anova**

**Summary of Fit**

Rsquare	0.70841
Adj Rsquare	0.642802
Root Mean Square Error	18.13082
Mean of Response	83.69769
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	31945.293	3549.48	10.7977	<.0001*
Error	40	13149.067	328.73		
C. Total	49	45094.360			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	78.339	8.1083	61.95	94.73
BIMW-COMP-T-M	5	73.436	8.1083	57.05	89.82
BIN-COMP-T	5	62.573	8.1083	46.19	78.96
LA3-REF	5	44.817	8.1083	28.43	61.20
MCN1-COMP-T	5	95.908	8.1083	79.52	112.30

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB187**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MCN2-COMP-T	5	84.035	8.1083	67.65	100.42
MCN3-COMP	5	90.161	8.1083	73.77	106.55
MCN4-COMP	5	94.269	8.1083	77.88	110.66
MCN5-COMP	5	68.415	8.1083	52.03	84.80
TB	5	145.023	8.1083	128.64	161.41

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	78.339	12.1685	5.442	63.23	93.45
BIMW-COMP-T-M	5	73.436	14.3219	6.405	55.65	91.22
BIN-COMP-T	5	62.573	3.6789	1.645	58.01	67.14
LA3-REF	5	44.817	13.8924	6.213	27.57	62.07
MCN1-COMP-T	5	95.908	24.0147	10.740	66.09	125.73
MCN2-COMP-T	5	84.035	10.9337	4.890	70.46	97.61
MCN3-COMP	5	90.161	22.7648	10.181	61.89	118.43
MCN4-COMP	5	94.269	18.0258	8.061	71.89	116.65
MCN5-COMP	5	68.415	14.9912	6.704	49.80	87.03
TB	5	145.023	31.0386	13.881	106.48	183.56

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	67.96	<.0001*
MCN1-COMP-T	18.85	0.0005*
MCN4-COMP	17.21	0.0008*
MCN3-COMP	13.1	0.0024*
MCN2-COMP-T	6.976	0.0107*
BIME-COMP-T-M	1.28	0.0382*
BIMW-COMP-T-M	-3.62	0.1022
MCN5-COMP	-8.64	0.2444
BIN-COMP-T	-14.5	0.5445
LA3-REF	-32.2	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB187**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

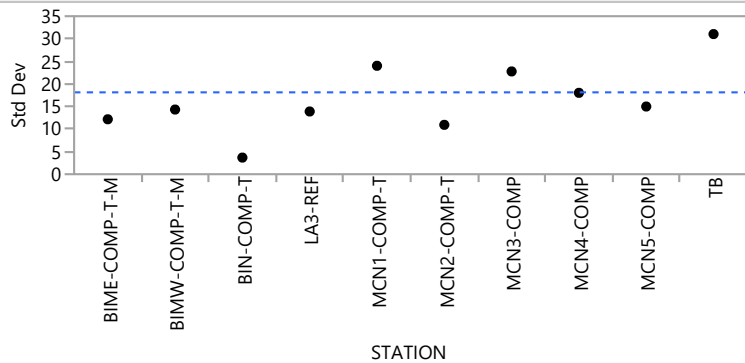
Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	126.500	127.500	25.3000	-0.016
BIMW-COMP-T-M	5	103.000	127.500	20.6000	-0.776
BIN-COMP-T	5	61.000	127.500	12.2000	-2.134
LA3-REF	5	23.000	127.500	4.6000	-3.363
MCN1-COMP-T	5	170.000	127.500	34.0000	1.358
MCN2-COMP-T	5	149.000	127.500	29.8000	0.679
MCN3-COMP	5	155.000	127.500	31.0000	0.873
MCN4-COMP	5	171.000	127.500	34.2000	1.391
MCN5-COMP	5	82.500	127.500	16.5000	-1.439
TB	5	234.000	127.500	46.8000	3.428

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
32.2161	9	0.0002*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	12.16845	8.33558	7.43382
BIMW-COMP-T-M	5	14.32194	9.88475	8.94748
BIN-COMP-T	5	3.67889	2.94139	2.80770
LA3-REF	5	13.89241	10.73878	10.24268
MCN1-COMP-T	5	24.01472	20.03818	17.81854
MCN2-COMP-T	5	10.93367	8.72548	8.58520
MCN3-COMP	5	22.76481	18.40741	17.79452
MCN4-COMP	5	18.02577	14.69054	13.90808
MCN5-COMP	5	14.99115	12.29805	10.81504
TB	5	31.03857	25.31424	24.70340

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB187**

**Tests that the Variances are Equal**

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.9468	9	40	0.0088*
Brown-Forsythe	1.5952	9	40	0.1499
Levene	3.3669	9	40	0.0037*
Bartlett	1.7517	9	.	0.0719

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q\* 1.95996  
Alpha 0.05

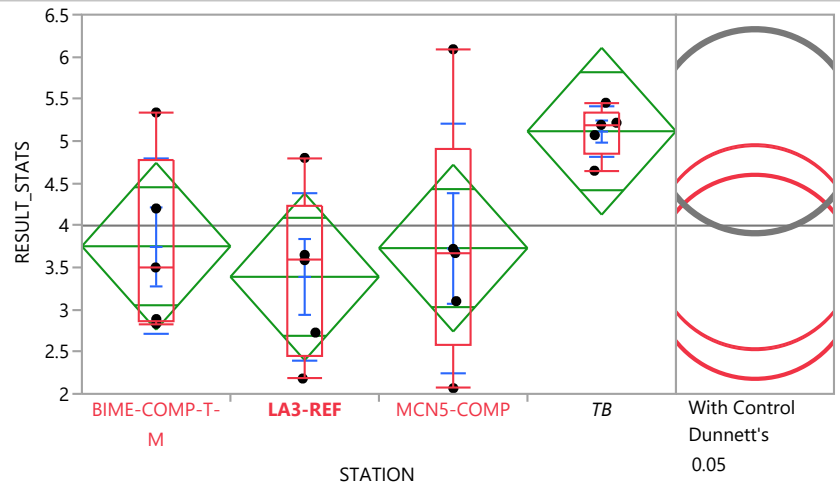
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	24.465	4.8925	67.419	
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	50.493	18.9268	93.723	
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	21.428	6.6176	37.778	
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	40.422	10.1176	64.082	
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	40.909	6.0000	85.748	
MCN4-COMP	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	36.277	5.9302	54.000	
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	50.000	16.8824	80.304	
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	65.855	24.6738	116.413	
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	76.653	19.6407	114.339	
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	86.172	44.8590	116.364	
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	100.780	52.9010	144.822	
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	64.744	17.7537	102.246	
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	83.124	26.1115	118.864	
MCN3-COMP	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	25.192	2.3684	59.444	
TB	MCN4-COMP	4.40000	1.914854	2.29783	0.0216*	49.895	2.5060	102.983	
TB	MCN3-COMP	4.00000	1.914854	2.08893	0.0367*	54.469	-2.5430	106.545	
MCN4-COMP	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	21.308	-16.3779	47.779	
MCN5-COMP	LA3-REF	3.60000	1.914854	1.88004	0.0601	26.786	-6.5000	57.094	
TB	MCN1-COMP-T	3.60000	1.914854	1.88004	0.0601	47.009	-10.5180	104.021	
MCN1-COMP-T	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	17.233	-14.3335	60.146	
MCN2-COMP-T	BIMW-COMP-T-M	2.40000	1.914854	1.25336	0.2101	13.265	-23.1427	32.531	
MCN3-COMP	BIMW-COMP-T-M	2.40000	1.914854	1.25336	0.2101	12.773	-27.2603	52.171	
MCN4-COMP	BIME-COMP-T-M	2.00000	1.914854	1.04447	0.2963	19.217	-14.2550	49.853	
MCN1-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	12.393	-15.2927	56.993	
MCN4-COMP	MCN2-COMP-T	1.60000	1.914854	0.83557	0.4034	9.575	-21.1751	39.882	
MCN3-COMP	BIME-COMP-T-M	1.20000	1.914854	0.62668	0.5309	9.868	-18.1356	49.397	
MCN2-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	4.682	-14.0180	34.605	
MCN4-COMP	MCN3-COMP	0.80000	1.914854	0.41779	0.6761	3.562	-38.5616	44.000	
MCN3-COMP	MCN2-COMP-T	0.00000	1.914854	0.00000	1.0000	3.764	-27.7778	45.326	
MCN5-COMP	BIN-COMP-T	0.00000	1.914854	0.00000	1.0000	-0.905	-10.0000	30.790	
MCN3-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-7.596	-57.4190	37.005	
MCN4-COMP	MCN1-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-2.044	-46.5366	37.461	
MCN2-COMP-T	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-10.087	-53.3014	22.213	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB187**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
BIMW-COMP-T-M	BIME-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-10.861	-25.6107	18.609	
MCN5-COMP	BIMW-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-6.471	-39.7603	23.517	
MCN5-COMP	BIME-COMP-T-M	-1.80000	1.909043	-0.94288	0.3457	-11.350	-30.6356	19.286	
BIN-COMP-T	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-20.185	-28.1356	7.500	
BIN-COMP-T	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-7.273	-37.2603	5.426	
MCN5-COMP	MCN2-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-16.618	-40.2778	16.672	
MCN5-COMP	MCN3-COMP	-2.80000	1.914854	-1.46225	0.1437	-16.108	-61.9440	20.790	
MCN5-COMP	MCN1-COMP-T	-3.20000	1.914854	-1.67115	0.0947	-25.427	-69.9190	7.863	
LA3-REF	BIN-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-17.500	-35.9091	4.000	
MCN5-COMP	MCN4-COMP	-3.60000	1.914854	-1.88004	0.0601	-23.382	-56.5000	9.907	
LA3-REF	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-34.925	-56.0943	-7.500	
LA3-REF	BIMW-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-27.027	-63.5646	-3.273	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB189**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	2.83146	2.83146	2.85948	3.5	4.76949	5.33898	5.33898
LA3-REF	2.18182	2.18182	2.454545	3.58696	4.224325	4.8	4.8
MCN5-COMP	2.06667	2.06667	2.583335	3.67105	4.904645	6.08929	6.08929
TB	4.64789	4.64789	4.859155	5.19231	5.33597	5.45455	5.45455

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB189**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.334519
Adj Rsquare	0.209742
Root Mean Square Error	1.044494
Mean of Response	3.996611
Observations (or Sum Wgts)	20

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	3	8.774396	2.92480	2.6809	0.0818
Error	16	17.455476	1.09097		
C. Total	19	26.229872			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.75159	0.46711	2.7614	4.7418
LA3-REF	5	3.38894	0.46711	2.3987	4.3792
MCN5-COMP	5	3.72940	0.46711	2.7392	4.7196
TB	5	5.11651	0.46711	4.1263	6.1067

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	3.75159	1.04612	0.46784	2.4527	5.0505
LA3-REF	5	3.38894	0.99909	0.44681	2.1484	4.6295
MCN5-COMP	5	3.72940	1.47762	0.66081	1.8947	5.5641
TB	5	5.11651	0.29662	0.13265	4.7482	5.4848

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.59232	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.015	0.0478*
BIME-COMP-T-M	-1.35	0.9032
MCN5-COMP	-1.37	0.9176
LA3-REF	-1.71	1.0000

Positive values show pairs of means that are significantly different.



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB189**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

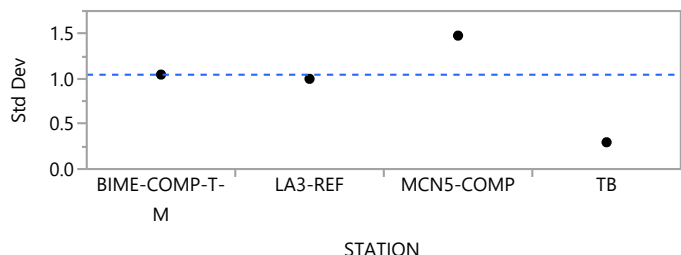
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	46.000	52.500	9.2000	-0.524
LA3-REF	5	36.000	52.500	7.2000	-1.397
MCN5-COMP	5	48.000	52.500	9.6000	-0.349
TB	5	80.000	52.500	16.0000	2.357

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
6.2343	3	0.1008

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.046120	0.8143216	0.7640040
LA3-REF	5	0.999087	0.7475160	0.7079120
MCN5-COMP	5	1.477615	0.9439552	0.9285240
TB	5	0.296615	0.2058856	0.1907260

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9068	3	16	0.4596
Brown-Forsythe	1.0040	3	16	0.4166
Levene	1.2659	3	16	0.3195
Bartlett	2.3060	3	.	0.0746

Warning: Small sample sizes. Use Caution.

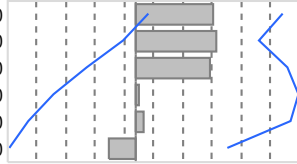
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

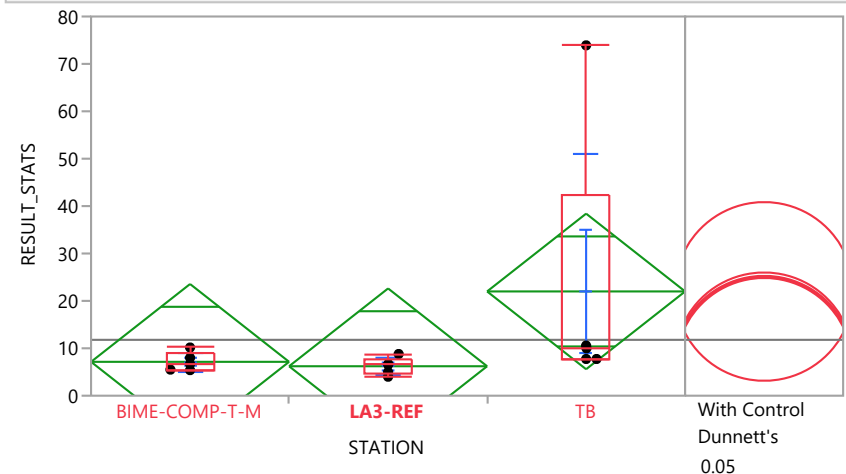
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB189**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	1.63043	0.27042	3.035570
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	1.69231	-0.26856	2.567050
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	1.54634	-1.01887	3.150720
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	0.08409	-1.70000	3.362020
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.17105	-2.23898	3.201790
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.53898	-2.61171	1.912500



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB194**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	5.39326	5.39326	5.44663	6.66667	9.08475	10.1695	10.1695
LA3-REF	4	4	4.5	6.57609	7.744595	8.8	8.8
TB	7.74648	7.74648	7.74648	10	42.24495	73.913	73.913

**Oneway Anova**

**Summary of Fit**

Rsquare	0.187196
Adj Rsquare	0.051729
Root Mean Square Error	16.84506
Mean of Response	11.78517
Observations (or Sum Wgts)	15

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB194**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	2	784.2207	392.110	1.3819	0.2883
Error	12	3405.0743	283.756		
C. Total	14	4189.2950			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	7.1459	7.5333	-9.27	23.560
LA3-REF	5	6.2131	7.5333	-10.20	22.627
TB	5	21.9966	7.5333	5.58	38.410

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	7.1459	1.9926	0.891	4.67	9.620
LA3-REF	5	6.2131	1.8317	0.819	3.94	8.487
TB	5	21.9966	29.0507	12.992	-14.07	58.068

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-10.9	0.2735
BIME-COMP-T-M	-25.7	0.9944
LA3-REF	-26.7	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	36.000	40.000	7.2000	-0.429
LA3-REF	5	26.000	40.000	5.2000	-1.655
TB	5	58.000	40.000	11.6000	2.145

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB194**

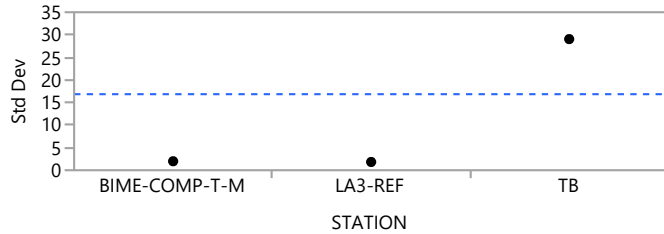
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.3696	2	0.0682

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1.99261	1.55109	1.45525
LA3-REF	5	1.83166	1.37044	1.29784
TB	5	29.05070	20.76657	13.79939

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.3005	2	12	0.3082
Brown-Forsythe	0.9783	2	12	0.4040
Levene	6.0736	2	12	0.0151*
Bartlett	13.7105	2	.	<.0001*

Warning: Small sample sizes. Use Caution.

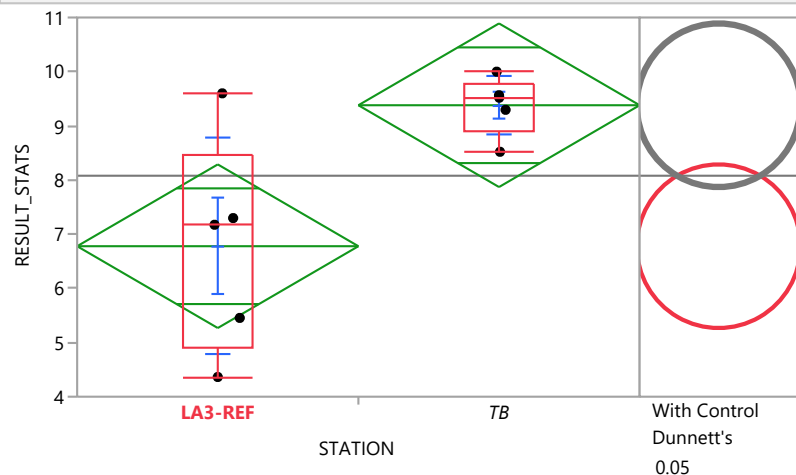
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	4.00000	1.909043	2.09529	0.0361*	3.74648	-1.05352	68.91300
TB	BIME-COMP-T-M	2.80000	1.909043	1.46670	0.1425	2.35322	-2.42302	68.41300
LA3-REF	BIME-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-1.31081	-5.16950	3.30000



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB195**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	4.36364	4.36364	4.909095	7.17391	8.44865	9.6	9.6
TB	8.52113	8.52113	8.908455	9.51923	9.78261	10	10

**Oneway Anova**

**Summary of Fit**

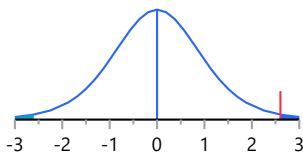
Rsquare	0.496736
Adj Rsquare	0.433828
Root Mean Square Error	1.464309
Mean of Response	8.079076
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	2.60239	t Ratio	2.810025
Std Err Dif	0.92611	DF	8
Upper CL Dif	4.73801	Prob >  t	0.0228*
Lower CL Dif	0.46678	Prob > t	0.0114*
Confidence	0.95	Prob < t	0.9886



**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	1	16.931110	16.9311	7.8962	0.0228*
Error	8	17.153597	2.1442		
C. Total	9	34.084707			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB195**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	6.77788	0.65486	5.2678	8.288
TB	5	9.38027	0.65486	7.8702	10.890

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

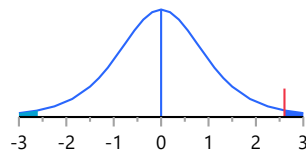
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	6.77788	1.99817	0.89361	4.2968	9.259
TB	5	9.38027	0.54379	0.24319	8.7051	10.055

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	2.60239	t Ratio	2.810025
Std Err Dif	0.92611	DF	4.589272
Upper CL Dif	5.04857	Prob >  t	0.0413*
Lower CL Dif	0.15622	Prob > t	0.0207*
Confidence	0.95	Prob < t	0.9793



**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.467	0.0228*
LA3-REF	-2.14	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
LA3-REF	5	19.000	27.500	3.80000	-1.671
TB	5	36.000	27.500	7.20000	1.671

**2-Sample Test, Normal Approximation**

S	Z	Prob> Z
36	1.67115	0.0947

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB195**

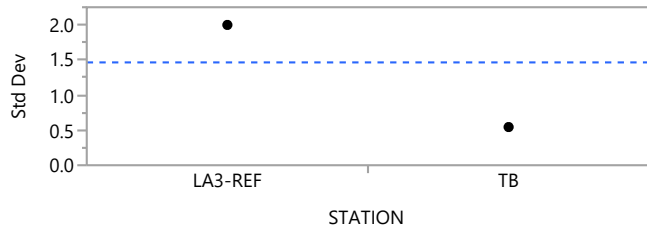
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
3.1527	1	0.0758

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
LA3-REF	5	1.998171	1.495028	1.415822
TB	5	0.543793	0.377454	0.349662

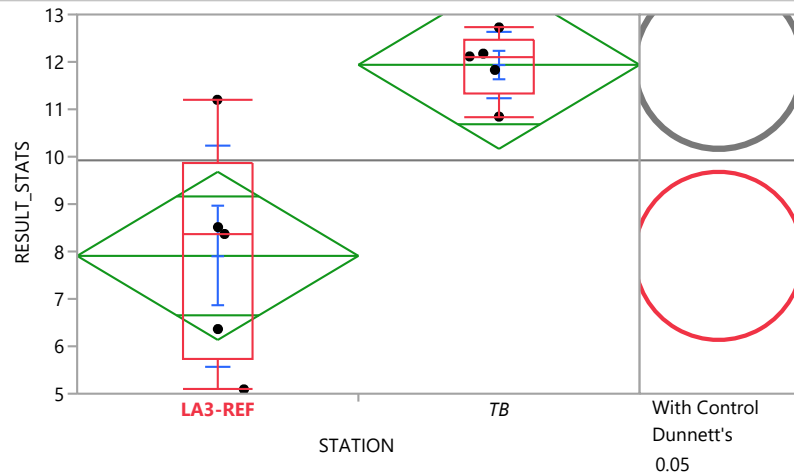
Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.5723	1	8	0.1474
Brown-Forsythe	3.0720	1	8	0.1177
Levene	4.7438	1	8	0.0610
Bartlett	4.8336	1	.	0.0279*
F Test 2-sided	13.5020	4	4	0.0272*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha						
1.95996		0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	LA3-REF	3.200000	1.914854	1.671145	0.0947	2.391310	-0.304220	5.201580

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB200**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	5.09091	5.09091	5.727275	8.36957	9.856755	11.2	11.2
TB	10.8451	10.8451	11.33805	12.1154	12.4506	12.7273	12.7273

**Oneway Anova**

**Summary of Fit**

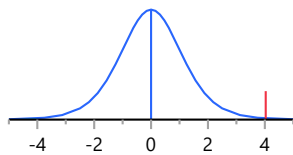
Rsquare	0.631997
Adj Rsquare	0.585997
Root Mean Square Error	1.71952
Mean of Response	9.923033
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	4.03101	t Ratio	3.706612
Std Err Dif	1.08752	DF	8
Upper CL Dif	6.53884	Prob >  t	0.0060*
Lower CL Dif	1.52319	Prob > t	0.0030*
Confidence	0.95	Prob < t	0.9970



**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	1	40.622685	40.6227	13.7390	0.0060*
Error	8	23.653988	2.9567		
C. Total	9	64.276673			



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB200**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	7.9075	0.76899	6.134	9.681
TB	5	11.9385	0.76899	10.165	13.712

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

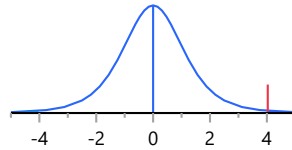
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	7.9075	2.33120	1.0425	5.013	10.802
TB	5	11.9385	0.69210	0.3095	11.079	12.798

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	4.03101	t Ratio	3.706612
Std Err Dif	1.08752	DF	4.699686
Upper CL Dif	6.88117	Prob >  t	0.0155*
Lower CL Dif	1.18086	Prob > t	0.0078*
Confidence	0.95	Prob < t	0.9922



**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	1.523	0.0060*
LA3-REF	-2.51	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
LA3-REF	5	16.000	27.500	3.20000	-2.298
TB	5	39.000	27.500	7.80000	2.298

**2-Sample Test, Normal Approximation**

S	Z	Prob> Z
39	2.29783	0.0216*

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB200**

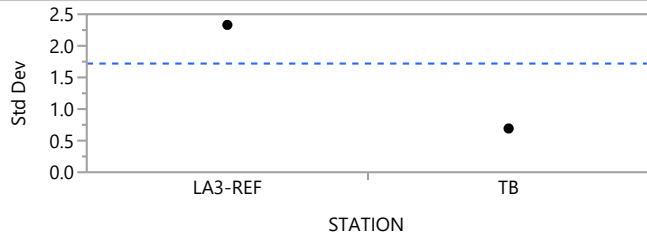
**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.7709	1	0.0163*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
LA3-REF	5	2.331201	1.744201	1.651792
TB	5	0.692097	0.480392	0.445020

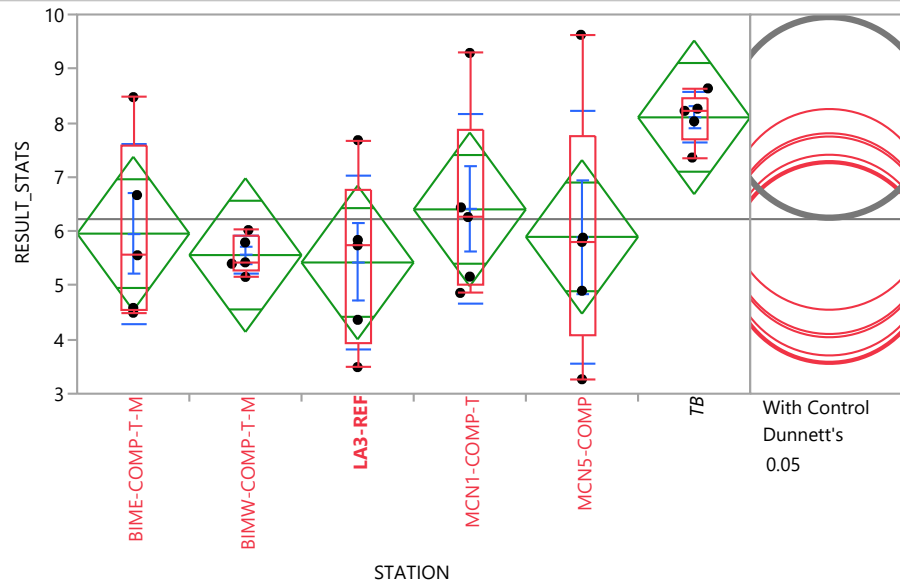
Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	2.4861	1	8	0.1535
Brown-Forsythe	2.8428	1	8	0.1303
Levene	4.3826	1	8	0.0696
Bartlett	4.3075	1	.	0.0379*
F Test 2-sided	11.3456	4	4	0.0372*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	3.804330	0.6310000	7.082990		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB201**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	4.49438	4.49438	4.538855	5.55556	7.570625	8.47458	8.47458
BIMW-COMP-T-M	5.15625	5.15625	5.278125	5.42466	5.90641	6.02027	6.02027
LA3-REF	3.49091	3.49091	3.927275	5.73913	6.75892	7.68	7.68
MCN1-COMP-T	4.86076	4.86076	5.011025	6.26087	7.86467	9.29032	9.29032
MCN5-COMP	3.26667	3.26667	4.083335	5.80263	7.7525	9.625	9.625
TB	7.35916	7.35916	7.693665	8.22115	8.448615	8.63636	8.63636

**Oneway Anova**

**Summary of Fit**

Rsquare	0.298319
Adj Rsquare	0.152135
Root Mean Square Error	1.537095
Mean of Response	6.222401
Observations (or Sum Wgts)	30

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	5	24.107585	4.82152	2.0407	0.1088
Error	24	56.703840	2.36266		
C. Total	29	80.811426			

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB201**

**Oneway Anova**

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.95490	0.68741	4.5362	7.3736
BIMW-COMP-T-M	5	5.55875	0.68741	4.1400	6.9775
LA3-REF	5	5.42230	0.68741	4.0036	6.8410
MCN1-COMP-T	5	6.40245	0.68741	4.9837	7.8212
MCN5-COMP	5	5.89486	0.68741	4.4761	7.3136
TB	5	8.10114	0.68741	6.6824	9.5199

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5.95490	1.66051	0.7426	3.8931	8.0167
BIMW-COMP-T-M	5	5.55875	0.34382	0.1538	5.1318	5.9857
LA3-REF	5	5.42230	1.59854	0.7149	3.4375	7.4072
MCN1-COMP-T	5	6.40245	1.75203	0.7835	4.2270	8.5779
MCN5-COMP	5	5.89486	2.33558	1.0445	2.9949	8.7949
TB	5	8.10114	0.46964	0.2100	7.5180	8.6843

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.69532	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	0.059	0.0439*
MCN1-COMP-T	-1.64	0.7690
BIME-COMP-T-M	-2.09	0.9732
MCN5-COMP	-2.15	0.9838
BIMW-COMP-T-M	-2.48	1.0000
LA3-REF	-2.62	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB201**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

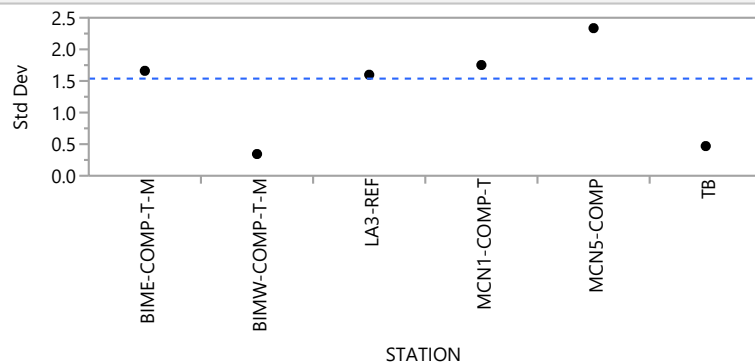
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	69.000	77.500	13.8000	-0.445
BIMW-COMP-T-M	5	61.000	77.500	12.2000	-0.890
LA3-REF	5	57.000	77.500	11.4000	-1.113
MCN1-COMP-T	5	83.000	77.500	16.6000	0.278
MCN5-COMP	5	70.000	77.500	14.0000	-0.390
TB	5	125.000	77.500	25.0000	2.615

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
8.0194	5	0.1552

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	
			to Mean	to Median
BIME-COMP-T-M	5	1.660512	1.292577	1.212708
BIMW-COMP-T-M	5	0.343821	0.278131	0.251314
LA3-REF	5	1.598538	1.196023	1.132658
MCN1-COMP-T	5	1.752032	1.169774	1.141458
MCN5-COMP	5	2.335583	1.492056	1.467666
TB	5	0.469637	0.325982	0.301980

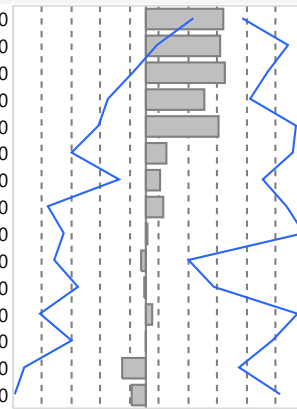
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.9372	5	24	0.4748
Brown-Forsythe	1.1862	5	24	0.3452
Levene	1.4636	5	24	0.2384
Bartlett	2.9420	5	.	0.0117*

Warning: Small sample sizes. Use Caution.

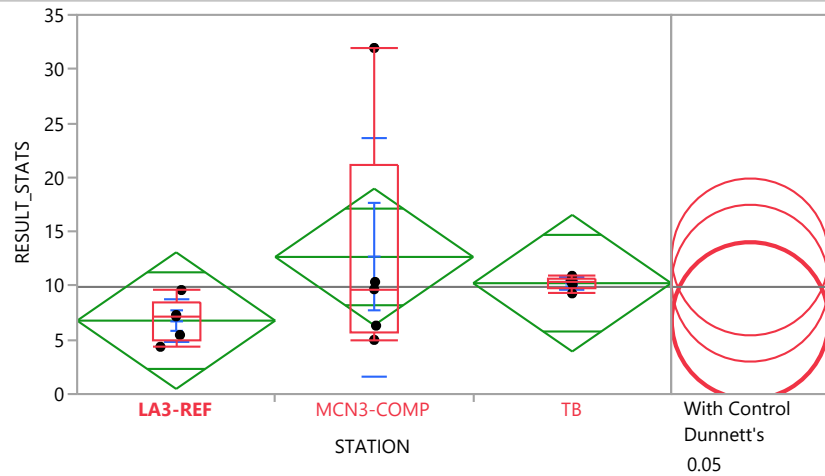
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB201**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

		q*	Alpha					
		1.95996	0.05					
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	2.61609	1.56661	3.236360
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	2.52174	0.34817	4.769960
TB	BIME-COMP-T-M	3.20000	1.914854	1.67115	0.0947	2.66559	-0.44641	4.053030
TB	MCN1-COMP-T	2.80000	1.914854	1.46225	0.1437	2.00000	-1.26215	3.475070
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	2.45824	-1.59683	4.994200
MCN1-COMP-T	LA3-REF	1.60000	1.914854	0.83557	0.4034	0.69989	-2.51871	4.926680
MCN1-COMP-T	BIMW-COMP-T-M	1.20000	1.914854	0.62668	0.5309	0.46832	-0.93179	3.890320
MCN1-COMP-T	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	0.57796	-3.31329	4.706990
MCN5-COMP	LA3-REF	0.40000	1.914854	0.20889	0.8345	0.06350	-2.78000	5.261360
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.13090	-3.07458	1.436940
LA3-REF	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.05342	-2.30164	2.280000
MCN5-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.24707	-3.57458	5.041670
MCN5-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	0.01008	-2.52588	4.225000
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.79458	-4.11094	3.096670
MCN5-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.45824	-4.39032	4.463710



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB203**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	4.36364	4.36364	4.909095	7.17391	8.44865	9.6	9.6
MCN3-COMP	5	5	5.657895	9.67742	21.1446	31.9444	31.9444
TB	9.29577	9.29577	9.718285	10.3846	10.67195	10.9091	10.9091

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB203**

**Oneway Anova**

**Summary of Fit**

Rsquare	0.148003
Adj Rsquare	0.006004
Root Mean Square Error	6.470748
Mean of Response	9.889125
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	2	87.28185	43.6409	1.0423	0.3825
Error	12	502.44703	41.8706		
C. Total	14	589.72888			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	6.7779	2.8938	0.4728	13.083
MCN3-COMP	5	12.6565	2.8938	6.3514	18.962
TB	5	10.2330	2.8938	3.9280	16.538

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	6.7779	1.9982	0.8936	4.297	9.259
MCN3-COMP	5	12.6565	11.0121	4.9248	-1.017	26.330
TB	5	10.2330	0.5932	0.2653	9.496	10.970

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
MCN3-COMP	-4.36	0.2922
TB	-6.79	0.6197
LA3-REF	-10.2	1.0000

Positive values show pairs of means that are significantly different.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB203**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

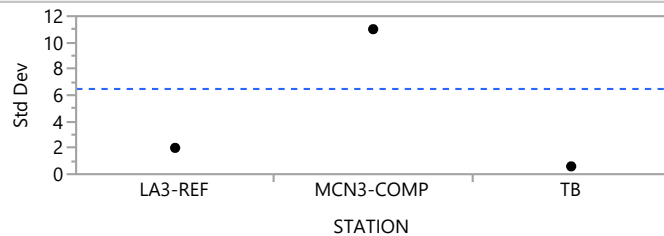
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	23.000	40.000	4.6000	-2.021
MCN3-COMP	5	41.000	40.000	8.2000	0.061
TB	5	56.000	40.000	11.2000	1.898

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
5.4600	2	0.0652

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
LA3-REF	5	1.99817	1.495028	1.415822
MCN3-COMP	5	11.01214	7.715167	6.194682
TB	5	0.59324	0.411783	0.381466

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.3824	2	12	0.2882
Brown-Forsythe	1.6720	2	12	0.2288
Levene	4.8341	2	12	0.0289*
Bartlett	10.9181	2	.	<.0001*

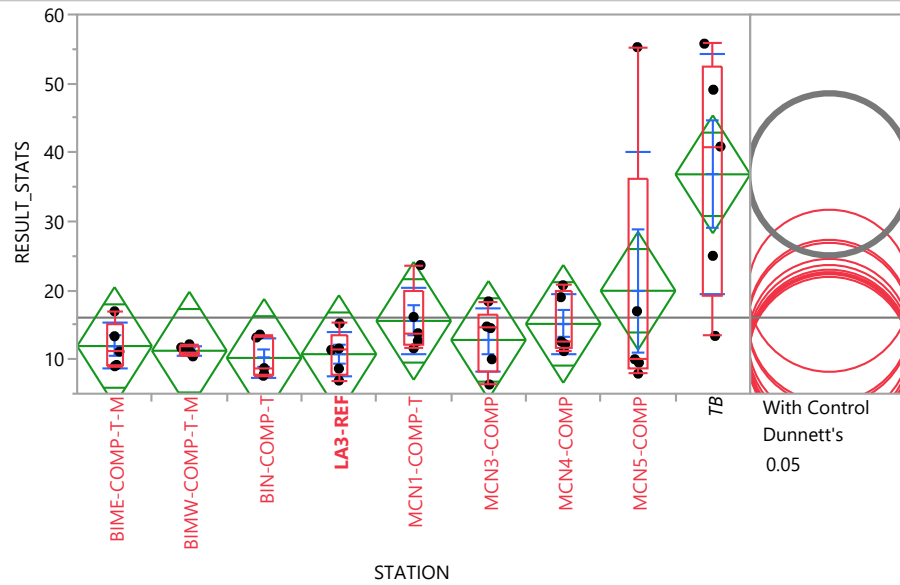
Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	LA3-REF	4.400000	1.914854	2.297825	0.0216*	3.260890	0.5408	6.07116	
MCN3-COMP	LA3-REF	2.000000	1.914854	1.044466	0.2963	2.380120	-3.2842	26.48985	
TB	MCN3-COMP	1.600000	1.914854	0.835573	0.4034	0.707180	-21.8036	5.43480	



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB206**



Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	8.98876	8.98876	9.077715	11.1111	15.14125	16.9492	16.9492
BIMW-COMP-T-M	10.4167	10.4167	10.6629	10.9589	11.93215	12.1622	12.1622
BIN-COMP-T	7.6	7.6	7.758335	8.70833	13.3626	13.5714	13.5714
LA3-REF	6.90909	6.90909	7.772725	11.3587	13.37705	15.2	15.2
MCN1-COMP-T	11.5854	11.5854	12.1218	13.7681	19.89245	23.6559	23.6559
MCN3-COMP	6.33333	6.33333	8.166665	14.5139	16.56425	18.3871	18.3871
MCN4-COMP	11.1765	11.1765	11.66385	12.5735	19.86365	20.7273	20.7273
MCN5-COMP	7.91667	7.91667	8.708335	10	36.11375	55.2632	55.2632
TB	13.3803	13.3803	19.19015	40.8451	52.43005	55.7692	55.7692

**Oneway Anova**

**Summary of Fit**

Rsquare	0.466917
Adj Rsquare	0.348454
Root Mean Square Error	9.431797
Mean of Response	16.03193
Observations (or Sum Wgts)	45

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB206**

**Oneway Anova**

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	8	2805.0177	350.627	3.9415	0.0020*
Error	36	3202.5168	88.959		
C. Total	44	6007.5345			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	11.9098	4.2180	3.355	20.464
BIMW-COMP-T-M	5	11.2298	4.2180	2.675	19.784
BIN-COMP-T	5	10.1900	4.2180	1.635	18.745
LA3-REF	5	10.7317	4.2180	2.177	19.286
MCN1-COMP-T	5	15.5593	4.2180	7.005	24.114
MCN3-COMP	5	12.7951	4.2180	4.241	21.350
MCN4-COMP	5	15.1257	4.2180	6.571	23.680
MCN5-COMP	5	19.9288	4.2180	11.374	28.483
TB	5	36.8171	4.2180	28.263	45.372

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	11.9098	3.3210	1.4852	7.79	16.033
BIMW-COMP-T-M	5	11.2298	0.6946	0.3106	10.37	12.092
BIN-COMP-T	5	10.1900	2.9279	1.3094	6.55	13.825
LA3-REF	5	10.7317	3.1638	1.4149	6.80	14.660
MCN1-COMP-T	5	15.5593	4.8295	2.1598	9.56	21.556
MCN3-COMP	5	12.7951	4.6792	2.0926	6.99	18.605
MCN4-COMP	5	15.1257	4.3973	1.9665	9.67	20.586
MCN5-COMP	5	19.9288	20.0558	8.9692	-4.97	44.831
TB	5	36.8171	17.4283	7.7942	15.18	58.457

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.78823	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB206**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	9.453	0.0007*
MCN5-COMP	-7.44	0.5211
MCN1-COMP-T	-11.8	0.9567
MCN4-COMP	-12.2	0.9739
MCN3-COMP	-14.6	0.9998
BIME-COMP-T-M	-15.5	1.0000
BIMW-COMP-T-M	-16.1	1.0000
LA3-REF	-16.6	1.0000
BIN-COMP-T	-16.1	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	95.000	115.000	19.0000	-0.704
BIMW-COMP-T-M	5	86.000	115.000	17.2000	-1.029
BIN-COMP-T	5	69.500	115.000	13.9000	-1.625
LA3-REF	5	78.000	115.000	15.6000	-1.318
MCN1-COMP-T	5	149.000	115.000	29.8000	1.210
MCN3-COMP	5	112.500	115.000	22.5000	-0.072
MCN4-COMP	5	140.000	115.000	28.0000	0.885
MCN5-COMP	5	106.000	115.000	21.2000	-0.307
TB	5	199.000	115.000	39.8000	3.016

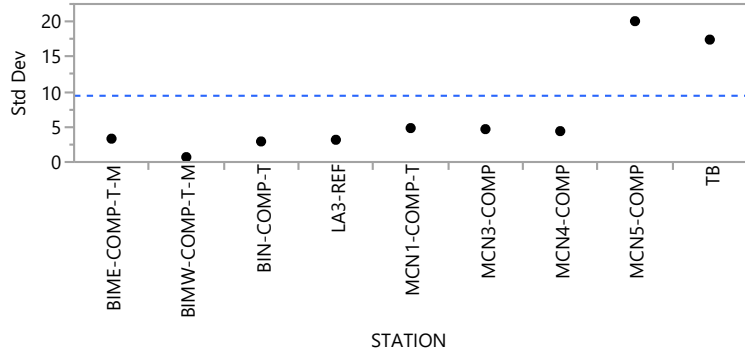
**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
15.7754	8	0.0457*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB206**

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	3.32103	2.58516	2.42541
BIMW-COMP-T-M	5	0.69459	0.56188	0.50770
BIN-COMP-T	5	2.92786	2.53805	2.24171
LA3-REF	5	3.16378	2.36714	2.24173
MCN1-COMP-T	5	4.82950	3.46650	3.10826
MCN3-COMP	5	4.67921	3.70278	3.35903
MCN4-COMP	5	4.39732	3.79036	3.27992
MCN5-COMP	5	20.05580	14.13375	10.96217
TB	5	17.42829	14.10156	13.29596

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.5411	8	36	0.1777
Brown-Forsythe	1.6272	8	36	0.1515
Levene	5.1642	8	36	0.0002*
Bartlett	6.1134	8	.	<.0001*

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

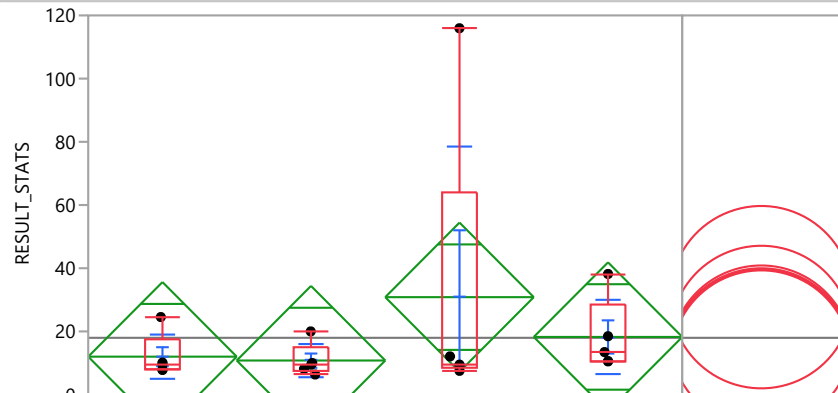
q*		Alpha								
1.95996		0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL		
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	29.8862	1.6782	44.86010		
TB	BIME-COMP-T-M	4.40000	1.914854	2.29783	0.0216*	29.7340	0.0470	46.60253		
TB	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	32.1368	0.2265	47.85253		
TB	LA3-REF	4.40000	1.914854	2.29783	0.0216*	29.4864	1.8262	47.13284		
MCN1-COMP-T	BIMW-COMP-T-M	4.00000	1.914854	2.08893	0.0367*	2.8092	-0.1167	12.74680		
TB	MCN4-COMP	4.00000	1.914854	2.08893	0.0367*	28.2716	-5.6197	43.61800		
MCN1-COMP-T	LA3-REF	3.60000	1.914854	1.88004	0.0601	4.5749	-2.5418	15.01954		
MCN4-COMP	BIMW-COMP-T-M	3.60000	1.914854	1.88004	0.0601	1.6644	-0.5256	9.81820		

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB206**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean		Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
		Difference	Std Err Dif						
TB	MCN1-COMP-T	3.60000	1.914854	1.88004	0.0601	25.4350	-2.7487	43.11100	
TB	MCN3-COMP	3.60000	1.914854	1.88004	0.0601	26.3312	-1.3611	45.76920	
MCN1-COMP-T	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	4.7415	-1.5684	15.73923	
MCN4-COMP	LA3-REF	2.80000	1.914854	1.46225	0.1437	3.9371	-3.0488	12.09094	
TB	MCN5-COMP	2.80000	1.914854	1.46225	0.1437	17.0833	-30.2632	46.26920	
MCN1-COMP-T	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	2.7957	-4.2910	14.48923	
MCN4-COMP	BIME-COMP-T-M	2.40000	1.914854	1.25336	0.2101	2.9845	-4.7980	11.56063	
MCN4-COMP	BIN-COMP-T	2.40000	1.914854	1.25336	0.2101	4.5512	-1.9773	12.81063	
MCN3-COMP	BIN-COMP-T	2.00000	1.914854	1.04447	0.2963	2.0833	-6.8205	10.47043	
MCN5-COMP	BIN-COMP-T	1.80000	1.909043	0.94288	0.3457	1.9000	-5.2371	47.34653	
MCN4-COMP	MCN3-COMP	1.20000	1.914854	0.62668	0.5309	2.3402	-6.2359	12.66667	
MCN3-COMP	BIME-COMP-T-M	0.80000	1.914854	0.41779	0.6761	1.1806	-7.0000	9.22043	
MCN3-COMP	BIMW-COMP-T-M	0.80000	1.914854	0.41779	0.6761	2.8118	-5.3688	7.47800	
MCN3-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	3.0909	-5.2208	9.75074	
MCN5-COMP	LA3-REF	0.80000	1.914854	0.41779	0.6761	1.3636	-5.7000	46.62684	
MCN5-COMP	BIME-COMP-T-M	0.40000	1.914854	0.20889	0.8345	0.3333	-7.4492	46.09653	
BIMW-COMP-T-M	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	-0.1522	-6.0401	2.99553	
LA3-REF	BIN-COMP-T	0.00000	1.914854	0.00000	1.0000	0.7197	-6.2447	7.28333	
MCN5-COMP	MCN3-COMP	0.00000	1.909043	0.00000	1.0000	0.0000	-8.8871	45.26320	
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.3434	-4.7930	4.29090	
BIN-COMP-T	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-2.2506	-4.2455	2.73710	
LA3-REF	BIME-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-1.7492	-8.3128	6.03333	
MCN3-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-1.6151	-13.6559	5.72890	
MCN4-COMP	MCN1-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-0.5070	-11.5047	8.06910	
MCN5-COMP	BIMW-COMP-T-M	-0.80000	1.914854	-0.41779	0.6761	-0.9167	-3.7854	44.35410	
MCN5-COMP	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-3.1582	-14.1559	42.60500	
MCN5-COMP	MCN4-COMP	-1.60000	1.914854	-0.83557	0.4034	-2.5735	-11.2273	43.11200	
BIN-COMP-T	BIME-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-1.3888	-9.0325	4.40473	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB209**



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB209**

BIMW-COMP-T- M LA3-REF MCN1-COMP-T TB With Control  
 M Dunnett's  
 0.05  
 STATION

Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIMW-COMP-T-M	7.8125	7.8125	7.89561	9.58904	17.3403	24.5455	24.5455
LA3-REF	6.36364	6.36364	7.257905	9.45946	15	20	20
MCN1-COMP-T	7.52688	7.52688	8.33661	9.49367	64.0194	115.942	115.942
TB	10.5634	10.5634	10.5634	13.4615	28.33005	38.1818	38.1818

**Oneway Anova**

**Summary of Fit**

Rsquare	0.113027
Adj Rsquare	-0.05328
Root Mean Square Error	24.8948
Mean of Response	17.97451
Observations (or Sum Wgts)	20

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	3	1263.599	421.200	0.6796	0.5772
Error	16	9916.021	619.751		
C. Total	19	11179.620			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIMW-COMP-T-M	5	12.0122	11.133	-11.59	35.614
LA3-REF	5	10.7951	11.133	-12.81	34.397
MCN1-COMP-T	5	30.8411	11.133	7.24	54.443
TB	5	18.2497	11.133	-5.35	41.851

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIMW-COMP-T-M	5	12.0122	7.0779	3.165	3.22	20.801
LA3-REF	5	10.7951	5.3331	2.385	4.17	17.417
MCN1-COMP-T	5	30.8411	47.6011	21.288	-28.26	89.946
TB	5	18.2497	11.6020	5.189	3.84	32.655

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB209**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**Confidence Quantile**

d	Alpha
2.59232	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
MCN1-COMP-T	-20.8	0.4601
TB	-33.4	0.9340
BIMW-COMP-T-M	-39.6	0.9997
LA3-REF	-40.8	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

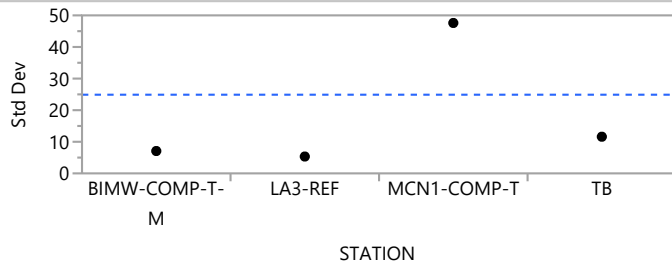
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIMW-COMP-T-M	5	45.000	52.500	9.0000	-0.611
LA3-REF	5	40.000	52.500	8.0000	-1.048
MCN1-COMP-T	5	50.000	52.500	10.0000	-0.175
TB	5	75.000	52.500	15.0000	1.921

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
4.1460	3	0.2461

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
BIMW-COMP-T-M	5	7.07788	5.01333	3.77788
LA3-REF	5	5.33313	3.68198	3.09684
MCN1-COMP-T	5	47.60105	34.04034	22.27312
TB	5	11.60201	8.06430	7.10666

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=PCB209**

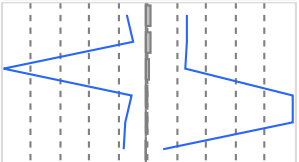
**Tests that the Variances are Equal**

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.2266	3	16	0.3325
Brown-Forsythe	0.6793	3	16	0.5774
Levene	4.5680	3	16	0.0171*
Bartlett	7.0368	3	.	<.0001*

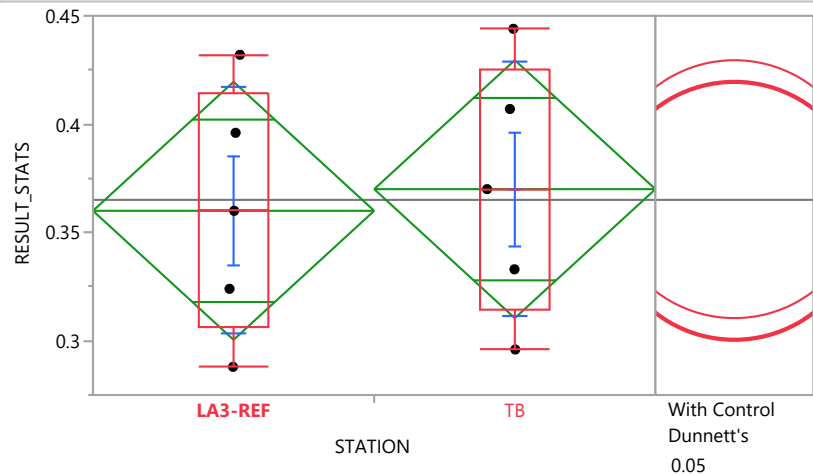
Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha						
1.95996		0.05						
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
TB	BIMW-COMP-T-M	3.20000	1.909043	1.67623	0.0937	3.32640	-13.982	30.2031
TB	LA3-REF	3.20000	1.909043	1.67623	0.0937	4.19976	-9.437	30.0296
TB	MCN1-COMP-T	2.00000	1.909043	1.04765	0.2948	3.03652	-105.379	29.0355
MCN1-COMP-T	LA3-REF	0.80000	1.914854	0.41779	0.6761	1.16324	-10.854	107.7898
MCN1-COMP-T	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	1.16762	-15.399	107.9633
LA3-REF	BIMW-COMP-T-M	-0.40000	1.914854	-0.20889	0.8345	-0.13510	-16.393	12.0213



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total Butyltins (ND = 0)**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	0.288	0.288	0.306	0.36	0.414	0.432	0.432
TB	0.296	0.296	0.3145	0.37	0.4255	0.444	0.444



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total Butyltins (ND = 0)**

**Oneway Anova**

**Summary of Fit**

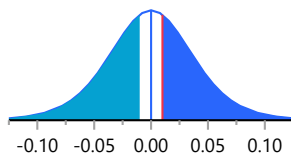
Rsquare	0.009294
Adj Rsquare	-0.11454
Root Mean Square Error	0.057717
Mean of Response	0.365
Observations (or Sum Wgts)	10

**t Test**

TB-LA3-REF

Assuming equal variances

Difference	0.01000	t Ratio	0.273947
Std Err Dif	0.03650	DF	8
Upper CL Dif	0.09418	Prob >  t	0.7911
Lower CL Dif	-0.07418	Prob > t	0.3955
Confidence	0.95	Prob < t	0.6045



**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	1	0.00025000	0.000250	0.0750	0.7911
Error	8	0.02665000	0.003331		
C. Total	9	0.02690000			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	0.360000	0.02581	0.30048	0.41952
TB	5	0.370000	0.02581	0.31048	0.42952

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

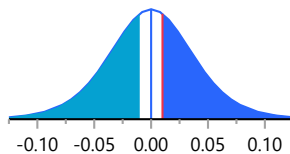
Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	0.360000	0.056921	0.02546	0.28932	0.43068
TB	5	0.370000	0.058502	0.02616	0.29736	0.44264

**t Test**

TB-LA3-REF

Assuming unequal variances

Difference	0.01000	t Ratio	0.273947
Std Err Dif	0.03650	DF	7.994002
Upper CL Dif	0.09419	Prob >  t	0.7911
Lower CL Dif	-0.07419	Prob > t	0.3955
Confidence	0.95	Prob < t	0.6045



**Means Comparisons**

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total Butyltins (ND = 0)**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.30600	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	-0.07	0.7911
LA3-REF	-0.08	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	25.000	27.500	5.00000	-0.418
TB	5	30.000	27.500	6.00000	0.418

**2-Sample Test, Normal Approximation**

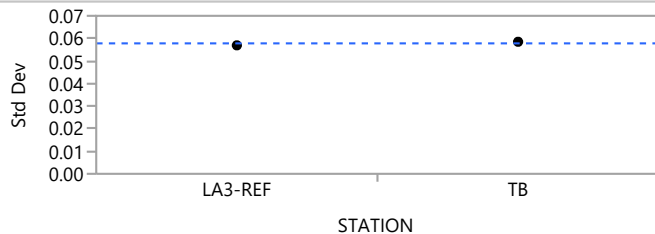
S	Z	Prob> Z
30	0.41779	0.6761

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.2727	1	0.6015

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
LA3-REF	5	0.0569210	0.0432000	0.0432000
TB	5	0.0585021	0.0444000	0.0444000

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total Butyltins (ND = 0)**

**Tests that the Variances are Equal**

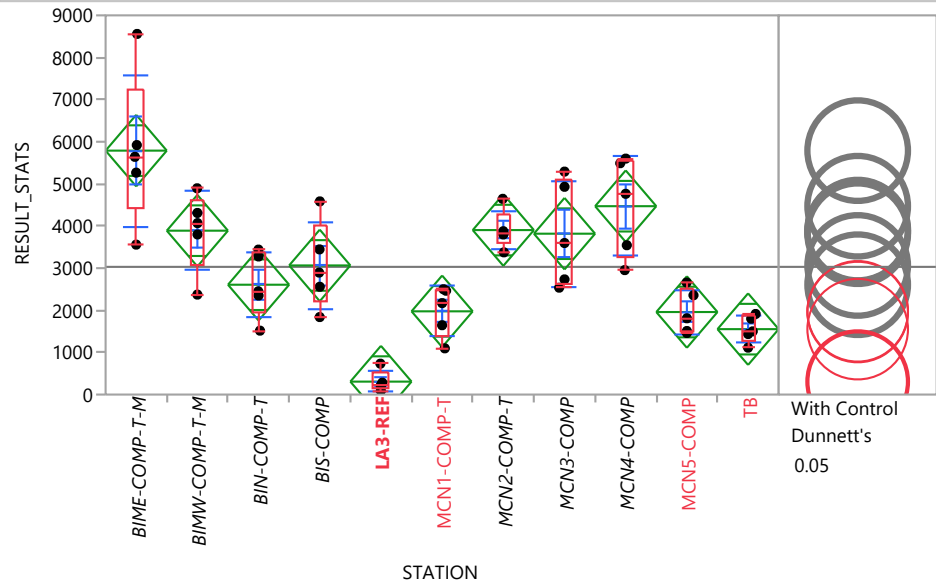
Test	F Ratio	DFNum	DFDen	p-Value
O'Brien[.5]	0.0063	1	8	0.9387
Brown-Forsythe	0.0039	1	8	0.9520
Levene	0.0039	1	8	0.9520
Bartlett	0.0027	1	.	0.9588
F Test 2-sided	1.0563	4	4	0.9589

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*		Alpha							
1.95996		0.05							
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL	
TB	LA3-REF	0.8000000	1.914854	0.4177864	0.6761	0.0100000	-0.100000	0.1200000	

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total DDTs (ND = 0)**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	3558.33	3558.33	4412.5	5641.98	7240.335	8559.32	8559.32
BIMW-COMP-T-M	2372.34	2372.34	3086.17	4068.49	4603.32	4895.83	4895.83
BIN-COMP-T	1516.67	1516.67	1933.335	2450	3358.7	3440.48	3440.48
BIS-COMP	1839.08	1839.08	2198.61	2895.35	4015.035	4584.62	4584.62
LA3-REF	89.0909	89.0909	152.154	216.216	507.5755	733.333	733.333

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total DDTs (ND = 0)**

Quantiles							
Level	Minimum	10%	25%	Median	75%	90%	Maximum
MCN1-COMP-T	1096.77	1096.77	1371.17	2170.73	2481.885	2500	2500
MCN2-COMP-T	3375	3375	3587.5	3822.22	4260.64	4644.74	4644.74
MCN3-COMP	2536.84	2536.84	2635.085	3596.77	5111.35	5291.67	5291.67
MCN4-COMP	2953.49	2953.49	3248.805	4764.71	5545.455	5600	5600
MCN5-COMP	1460	1460	1484.165	1810	2507.515	2657.89	2657.89
TB	1112.68	1112.68	1274.65	1500	1856.52	1913.04	1913.04

**Oneway Anova**

**Summary of Fit**

Rsquare	0.753329
Adj Rsquare	0.697267
Root Mean Square Error	942.0558
Mean of Response	3030.571
Observations (or Sum Wgts)	55

**Analysis of Variance**

Source	DF	Sum of		F Ratio	Prob > F
		Squares	Mean Square		
STATION	10	119253705	11925370	13.4375	<.0001*
Error	44	39048645	887469.2		
C. Total	54	158302350			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5789.53	421.30	4940	6638.6
BIMW-COMP-T-M	5	3889.49	421.30	3040	4738.6
BIN-COMP-T	5	2606.81	421.30	1758	3455.9
BIS-COMP	5	3064.53	421.30	2215	3913.6
LA3-REF	5	307.13	421.30	-542	1156.2
MCN1-COMP-T	5	1975.37	421.30	1126	2824.4
MCN2-COMP-T	5	3903.70	421.30	3055	4752.8
MCN3-COMP	5	3817.93	421.30	2969	4667.0
MCN4-COMP	5	4470.65	421.30	3622	5319.7
MCN5-COMP	5	1958.67	421.30	1110	2807.7
TB	5	1552.47	421.30	703	2401.5

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	5789.53	1800.18	805.06	3554	8024.7
BIMW-COMP-T-M	5	3889.49	939.68	420.24	2723	5056.3
BIN-COMP-T	5	2606.81	778.30	348.07	1640	3573.2
BIS-COMP	5	3064.53	1029.87	460.57	1786	4343.3
LA3-REF	5	307.13	248.27	111.03	-1.128	615.4

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total DDTs (ND = 0)**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
MCN1-COMP-T	5	1975.37	598.47	267.64	1232	2718.5
MCN2-COMP-T	5	3903.70	460.11	205.77	3332	4475.0
MCN3-COMP	5	3817.93	1252.73	560.24	2262	5373.4
MCN4-COMP	5	4470.65	1179.31	527.40	3006	5934.9
MCN5-COMP	5	1958.67	529.45	236.78	1301	2616.1
TB	5	1552.47	316.57	141.58	1159	1945.5

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.83292	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
BIME-COMP-T-M	3795	<.0001*
MCN4-COMP	2476	<.0001*
MCN2-COMP-T	1909	<.0001*
BIMW-COMP-T-M	1894	<.0001*
MCN3-COMP	1823	<.0001*
BIS-COMP	1070	0.0003*
BIN-COMP-T	611.8	0.0031*
MCN1-COMP-T	-19.6	0.0541
MCN5-COMP	-36.3	0.0578
TB	-443	0.2436
LA3-REF	-1688	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		
			Score	Score Mean	(Mean-Mean0)/Std0
BIME-COMP-T-M	5	247.000	140.000	49.4000	3.118
BIMW-COMP-T-M	5	191.500	140.000	38.3000	1.493
BIN-COMP-T	5	117.000	140.000	23.4000	-0.659
BIS-COMP	5	149.000	140.000	29.8000	0.249
LA3-REF	5	15.000	140.000	3.0000	-3.645
MCN1-COMP-T	5	84.000	140.000	16.8000	-1.625
MCN2-COMP-T	5	196.500	140.000	39.3000	1.640
MCN3-COMP	5	188.000	140.000	37.6000	1.391
MCN4-COMP	5	214.000	140.000	42.8000	2.152
MCN5-COMP	5	82.000	140.000	16.4000	-1.683

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total DDTs (ND = 0)**

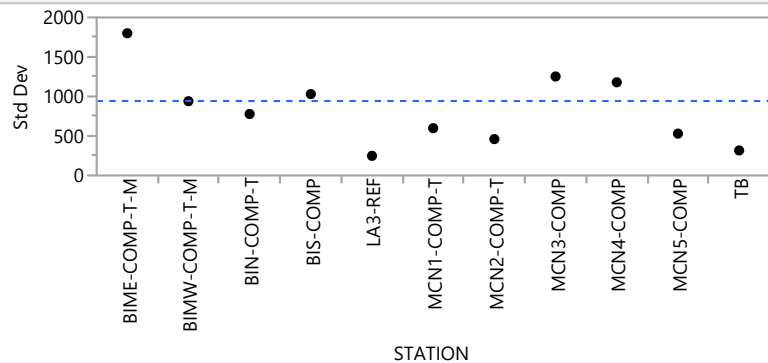
Wilcoxon / Kruskal-Wallis Tests (Rank Sums)					
Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
TB	5	56.000	140.000	11.2000	-2.445

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
42.7531	10	<.0001*

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	1800.175	1160.644	1131.134
BIMW-COMP-T-M	5	939.684	642.659	606.860
BIN-COMP-T	5	778.299	601.509	570.146
BIS-COMP	5	1029.873	760.406	726.570
LA3-REF	5	248.266	170.479	142.169
MCN1-COMP-T	5	598.465	483.358	444.286
MCN2-COMP-T	5	460.107	296.416	269.256
MCN3-COMP	5	1252.733	1034.738	990.506
MCN4-COMP	5	1179.308	977.473	918.660
MCN5-COMP	5	529.450	439.074	409.340
TB	5	316.572	243.242	232.748

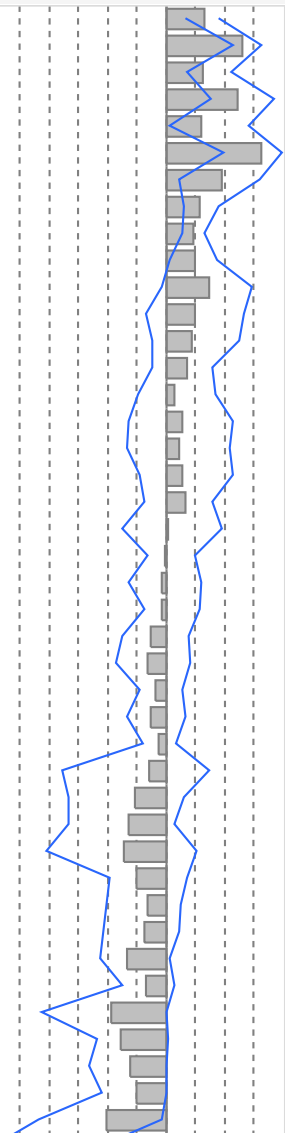
Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	1.4019	10	44	0.2112
Brown-Forsythe	1.4236	10	44	0.2019
Levene	1.9735	10	44	0.0601
Bartlett	2.2863	10	.	0.0113*

Warning: Small sample sizes. Use Caution.

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total DDTs (ND = 0)**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

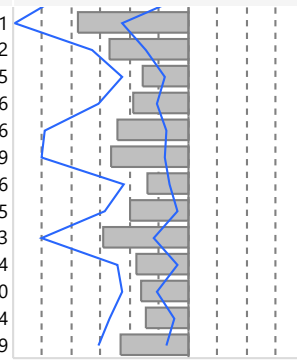
		q*	Alpha								
		1.95996	0.05								
Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL			
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1766.67	814.95	2374.68			
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	3594.72	3066.67	4429.52			
MCN2-COMP-T	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	1729.43	911.23	2999.17			
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	3380.55	2000.00	5076.45			
MCN3-COMP	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	1636.56	73.07	3834.26			
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	4548.49	2671.67	5401.82			
MCN4-COMP	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	2593.98	489.72	4394.14			
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1593.78	775.00	2442.67			
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1221.40	703.29	1710.91			
MCN2-COMP-T	BIN-COMP-T	4.40000	1.914854	2.29783	0.0216*	1367.82	98.08	2359.87			
MCN4-COMP	BIN-COMP-T	4.00000	1.914854	2.08893	0.0367*	2050.43	-323.43	3974.24			
MCN4-COMP	BIS-COMP	3.60000	1.914854	1.88004	0.0601	1319.26	-1040.50	3651.83			
MCN3-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	1216.66	-740.08	3414.36			
MCN2-COMP-T	BIS-COMP	2.80000	1.914854	1.46225	0.1437	926.87	-784.62	2086.60			
BIS-COMP	BIN-COMP-T	1.60000	1.914854	0.83557	0.4034	322.41	-1437.84	2234.62			
MCN3-COMP	BIS-COMP	1.60000	1.914854	0.83557	0.4034	701.42	-1851.29	3091.95			
MCN4-COMP	MCN3-COMP	1.60000	1.914854	0.83557	0.4034	559.88	-1977.54	2954.07			
MCN4-COMP	BIMW-COMP-T-M	1.20000	1.914854	0.62668	0.5309	696.22	-1357.32	3118.57			
MCN4-COMP	MCN2-COMP-T	1.20000	1.914854	0.62668	0.5309	888.17	-1100.62	2115.91			
MCN3-COMP	BIMW-COMP-T-M	0.00000	1.914854	0.00000	1.0000	35.20	-2162.50	2558.69			
MCN5-COMP	MCN1-COMP-T	0.00000	1.914854	0.00000	1.0000	-106.63	-1003.77	1260.37			
MCN3-COMP	MCN2-COMP-T	-0.40000	1.914854	-0.20889	0.8345	-225.45	-1911.41	1556.03			
MCN2-COMP-T	BIMW-COMP-T-M	-0.60000	1.909043	-0.31429	0.7533	-246.27	-1095.83	1504.20			
MCN1-COMP-T	BIN-COMP-T	-1.60000	1.914854	-0.83557	0.4034	-776.92	-2180.15	947.10			
BIS-COMP	BIMW-COMP-T-M	-2.00000	1.914854	-1.04447	0.2963	-904.65	-2471.73	1073.11			
TB	MCN1-COMP-T	-2.00000	1.914854	-1.04447	0.2963	-550.73	-1351.09	703.23			
MCN5-COMP	BIN-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-782.59	-1932.15	840.47			
TB	MCN5-COMP	-2.40000	1.914854	-1.25336	0.2101	-373.38	-1244.46	404.71			
MCN4-COMP	BIME-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-877.27	-5015.20	1932.58			
BIMW-COMP-T-M	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-1573.49	-4759.32	752.48			
MCN2-COMP-T	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-1819.76	-4759.32	318.21			
MCN3-COMP	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-2045.21	-5825.99	1372.70			
BIN-COMP-T	BIMW-COMP-T-M	-3.60000	1.914854	-1.88004	0.0601	-1450.00	-2794.14	904.58			
MCN1-COMP-T	BIS-COMP	-3.60000	1.914854	-1.88004	0.0601	-945.45	-2939.05	624.69			
MCN5-COMP	BIS-COMP	-3.60000	1.914854	-1.88004	0.0601	-1085.35	-3076.29	518.06			
MCN1-COMP-T	BIMW-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-1897.76	-3250.26	91.43			
TB	BIN-COMP-T	-4.00000	1.914854	-2.08893	0.0367*	-1013.38	-2164.24	283.33			
BIS-COMP	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-2708.53	-6001.18	-112.88			
MCN5-COMP	BIMW-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-2237.94	-3387.50	-15.20			
MCN5-COMP	MCN3-COMP	-4.40000	1.914854	-2.29783	0.0216*	-1786.77	-3783.34	-75.44			
TB	BIS-COMP	-4.40000	1.914854	-2.29783	0.0216*	-1445.46	-3148.00	-39.08			
BIN-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2916.67	-6209.32	-281.41			



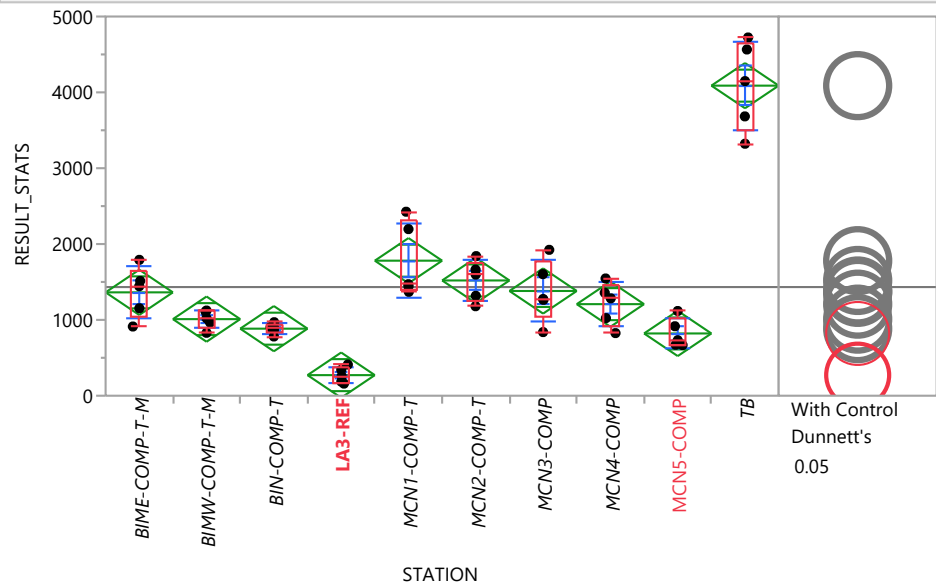
**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total DDTs (ND = 0)**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-5360.16	-8344.10	-3276.51
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-3786.67	-4680.61	-2090.52
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-2234.78	-3225.26	-1234.85
LA3-REF	BIS-COMP	-4.80000	1.914854	-2.50672	0.0122*	-2679.13	-4369.40	-1557.26
MCN1-COMP-T	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-3471.25	-6913.75	-1094.56
MCN5-COMP	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-3758.34	-7050.99	-1201.19
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-1990.00	-3136.41	-1017.86
MCN5-COMP	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-2833.02	-4091.67	-596.35
TB	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-4121.35	-7122.70	-1758.33
TB	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-2510.81	-3459.21	-572.34
TB	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-2322.22	-3208.12	-1575.00
TB	MCN3-COMP	-4.80000	1.914854	-2.50672	0.0122*	-2096.77	-3855.05	-736.84
TB	MCN4-COMP	-4.80000	1.914854	-2.50672	0.0122*	-3264.71	-4378.23	-1153.49



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total PCB Congeners (ND = 0)**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
BIME-COMP-T-M	912.5	912.5	1032.915	1443.82	1652.555	1791.53	1791.53
BIMW-COMP-T-M	829.787	829.787	897.621	1020.83	1116.375	1123.29	1123.29
BIN-COMP-T	781	781	823.4165	901.19	936.282	969.231	969.231
LA3-REF	159.783	159.783	172.619	259.459	376.2425	410.667	410.667
MCN1-COMP-T	1369.89	1369.89	1404.565	1470.73	2311.43	2426.09	2426.09



**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total PCB Congeners (ND = 0)****Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
MCN2-COMP-T	1180	1180	1248.64	1597.22	1752.06	1840.79	1840.79
MCN3-COMP	838.947	838.947	1051.734	1275	1763.53	1923.61	1923.61
MCN4-COMP	825.581	825.581	924.5555	1283.82	1452.09	1546	1546
MCN5-COMP	668	668	670	731.667	1016.591	1117.11	1117.11
TB	3322.54	3322.54	3502.82	4148.08	4644.43	4723.64	4723.64

**Oneway Anova****Summary of Fit**

Rsquare	0.91549
Adj Rsquare	0.896475
Root Mean Square Error	330.0904
Mean of Response	1432.655
Observations (or Sum Wgts)	50

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	9	47213844	5245983	48.1461	<.0001*
Error	40	4358388	108960		
C. Total	49	51572231			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
BIME-COMP-T-M	5	1362.95	147.62	1065	1661.3
BIMW-COMP-T-M	5	1009.76	147.62	711	1308.1
BIN-COMP-T	5	884.12	147.62	586	1182.5
LA3-REF	5	271.44	147.62	-27	569.8
MCN1-COMP-T	5	1780.54	147.62	1482	2078.9
MCN2-COMP-T	5	1519.72	147.62	1221	1818.1
MCN3-COMP	5	1381.11	147.62	1083	1679.5
MCN4-COMP	5	1207.42	147.62	909	1505.8
MCN5-COMP	5	820.97	147.62	523	1119.3
TB	5	4088.52	147.62	3790	4386.9

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
BIME-COMP-T-M	5	1362.95	339.027	151.62	942.0	1783.9
BIMW-COMP-T-M	5	1009.76	119.692	53.53	861.1	1158.4
BIN-COMP-T	5	884.12	68.689	30.72	798.8	969.4
LA3-REF	5	271.44	105.287	47.09	140.7	402.2
MCN1-COMP-T	5	1780.54	492.718	220.35	1168.8	2392.3
MCN2-COMP-T	5	1519.72	267.445	119.61	1187.6	1851.8
MCN3-COMP	5	1381.11	406.981	182.01	875.8	1886.4

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total PCB Congeners (ND = 0)**

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
MCN4-COMP	5	1207.42	284.086	127.05	854.7	1560.2
MCN5-COMP	5	820.97	193.849	86.69	580.3	1061.7
TB	5	4088.52	588.485	263.18	3357.8	4819.2

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.81175	0.05

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
TB	3230	<.0001*
MCN1-COMP-T	922.1	<.0001*
MCN2-COMP-T	661.3	<.0001*
MCN3-COMP	522.7	<.0001*
BIME-COMP-T-M	504.5	<.0001*
MCN4-COMP	349	0.0005*
BIMW-COMP-T-M	151.3	0.0078*
BIN-COMP-T	25.68	0.0372*
MCN5-COMP	-37.5	0.0757
LA3-REF	-587	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
BIME-COMP-T-M	5	152.000	127.500	30.4000	0.776
BIMW-COMP-T-M	5	95.000	127.500	19.0000	-1.035
BIN-COMP-T	5	70.000	127.500	14.0000	-1.843
LA3-REF	5	15.000	127.500	3.0000	-3.622
MCN1-COMP-T	5	189.000	127.500	37.8000	1.973
MCN2-COMP-T	5	176.000	127.500	35.2000	1.552
MCN3-COMP	5	149.000	127.500	29.8000	0.679
MCN4-COMP	5	128.000	127.500	25.6000	0.000
MCN5-COMP	5	61.000	127.500	12.2000	-2.134
TB	5	240.000	127.500	48.0000	3.622

**1-Way Test, ChiSquare Approximation**

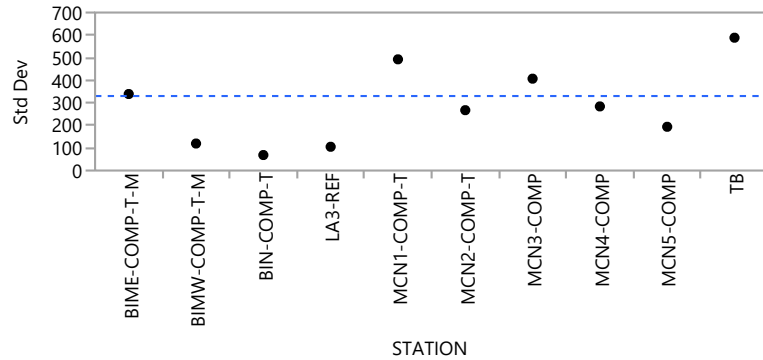
ChiSquare	DF	Prob>ChiSq
38.8654	9	<.0001*

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total PCB Congeners (ND = 0)**

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif to Mean	MeanAbsDif to Median
BIME-COMP-T-M	5	339.0265	264.0296	247.8560
BIMW-COMP-T-M	5	119.6922	89.7147	87.5016
BIN-COMP-T	5	68.6887	48.5607	45.1462
LA3-REF	5	105.2871	83.8449	81.4494
MCN1-COMP-T	5	492.7179	424.7088	362.7460
MCN2-COMP-T	5	267.4452	216.8672	201.3680
MCN3-COMP	5	406.9811	305.9397	284.7186
MCN4-COMP	5	284.0856	226.2934	211.0138
MCN5-COMP	5	193.8492	156.4967	138.6362
TB	5	588.4850	468.5568	456.6440

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	2.8304	9	40	0.0113*
Brown-Forsythe	1.6964	9	40	0.1220
Levene	4.7877	9	40	0.0002*
Bartlett	2.7724	9	.	0.0030*

Warning: Small sample sizes. Use Caution.

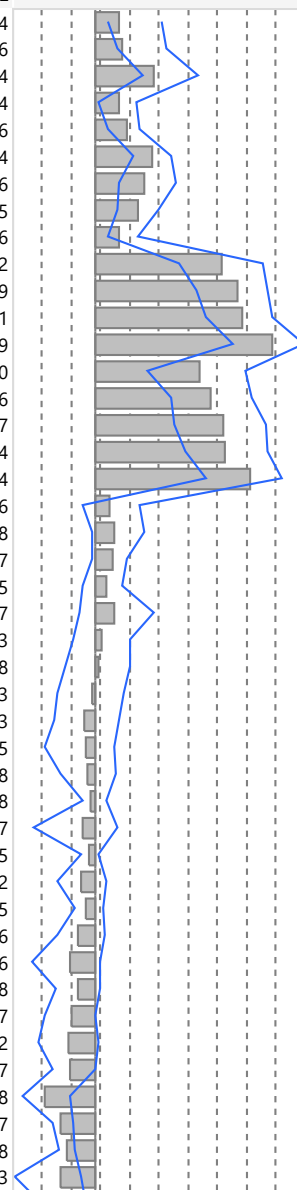
**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total PCB Congeners (ND = 0)**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
MCN1-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	540.10	260.43	1460.64
MCN1-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	604.90	466.56	1560.26
MCN1-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1279.46	1028.07	2240.64
MCN2-COMP-T	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	540.04	70.54	875.34
MCN2-COMP-T	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	694.10	276.67	974.96
MCN2-COMP-T	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1255.40	838.18	1655.34
MCN3-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	1089.55	497.13	1738.16
MCN4-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	947.51	483.76	1360.55
MCN5-COMP	LA3-REF	4.80000	1.914854	2.50672	0.0122*	508.22	261.33	931.66
TB	BIME-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	2770.60	1808.96	3652.72
TB	BIMW-COMP-T-M	4.80000	1.914854	2.50672	0.0122*	3127.25	2213.08	3758.19
TB	BIN-COMP-T	4.80000	1.914854	2.50672	0.0122*	3246.89	2419.21	3857.81
TB	LA3-REF	4.80000	1.914854	2.50672	0.0122*	3888.62	2980.72	4538.19
TB	MCN1-COMP-T	4.80000	1.914854	2.50672	0.0122*	2297.55	1125.77	3284.40
TB	MCN2-COMP-T	4.80000	1.914854	2.50672	0.0122*	2550.86	1659.21	3406.36
TB	MCN3-COMP	4.80000	1.914854	2.50672	0.0122*	2800.03	1719.09	3726.27
TB	MCN4-COMP	4.80000	1.914854	2.50672	0.0122*	2864.26	1964.36	3739.64
TB	MCN5-COMP	4.80000	1.914854	2.50672	0.0122*	3416.41	2406.47	4051.64
MCN3-COMP	BIMW-COMP-T-M	3.20000	1.914854	1.67115	0.0947	309.55	-270.51	958.16
MCN3-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	409.17	-64.39	1057.78
MCN4-COMP	BIN-COMP-T	3.20000	1.914854	1.67115	0.0947	382.63	-77.75	680.17
MCN4-COMP	BIMW-COMP-T-M	2.00000	1.914854	1.04447	0.2963	234.89	-283.88	580.55
MCN1-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	405.24	-352.29	1284.27
MCN2-COMP-T	BIME-COMP-T-M	1.60000	1.914854	0.83557	0.4034	153.40	-474.25	750.83
MCN3-COMP	BIME-COMP-T-M	0.00000	1.914854	0.00000	1.0000	89.87	-674.63	770.28
MCN3-COMP	MCN2-COMP-T	-0.80000	1.914854	-0.41779	0.6761	-59.88	-824.38	606.33
MCN4-COMP	MCN3-COMP	-0.80000	1.914854	-0.41779	0.6761	-240.99	-900.08	519.23
MCN2-COMP-T	MCN1-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-189.89	-1108.81	401.55
MCN4-COMP	BIME-COMP-T-M	-1.20000	1.914854	-0.62668	0.5309	-155.40	-768.00	445.68
MCN5-COMP	BIN-COMP-T	-1.20000	1.914854	-0.62668	0.5309	-113.00	-297.23	251.28
MCN3-COMP	MCN1-COMP-T	-2.40000	1.914854	-1.25336	0.2101	-273.16	-1357.82	484.37
BIN-COMP-T	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-140.23	-328.46	73.55
MCN4-COMP	MCN2-COMP-T	-2.80000	1.914854	-1.46225	0.1437	-305.15	-837.75	228.72
MCN5-COMP	BIMW-COMP-T-M	-2.80000	1.914854	-1.46225	0.1437	-207.22	-451.29	151.65
BIMW-COMP-T-M	BIME-COMP-T-M	-3.20000	1.914854	-1.67115	0.0947	-390.29	-826.08	196.96
MCN4-COMP	MCN1-COMP-T	-3.60000	1.914854	-1.88004	0.0601	-544.31	-1402.56	106.76
MCN5-COMP	MCN4-COMP	-3.60000	1.914854	-1.88004	0.0601	-367.75	-874.00	93.58
MCN5-COMP	BIME-COMP-T-M	-4.00000	1.914854	-2.08893	0.0367*	-527.75	-1119.53	3.57
MCN5-COMP	MCN3-COMP	-4.00000	1.914854	-2.08893	0.0367*	-592.52	-1251.61	77.12
BIN-COMP-T	BIME-COMP-T-M	-4.40000	1.914854	-2.29783	0.0216*	-542.63	-925.70	-9.17
LA3-REF	BIME-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-1102.91	-1606.08	-570.68
LA3-REF	BIMW-COMP-T-M	-4.80000	1.914854	-2.50672	0.0122*	-761.37	-949.68	-487.97
LA3-REF	BIN-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-621.22	-783.78	-439.18
MCN5-COMP	MCN1-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-771.24	-1754.09	-322.13

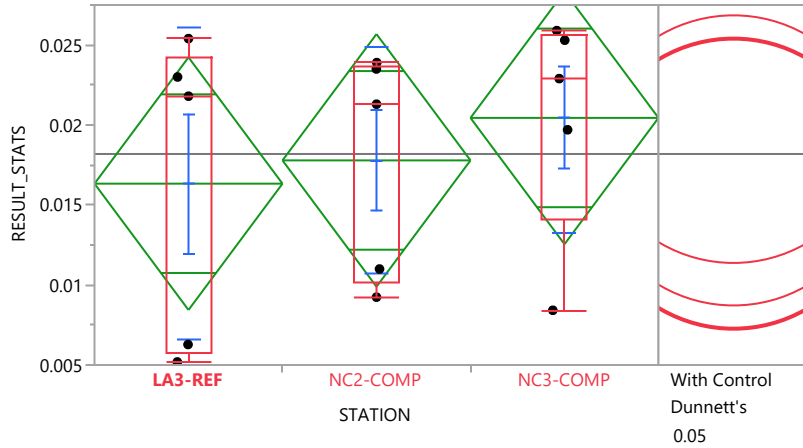


**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Total PCB Congeners (ND = 0)**

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges- Lehmann	Lower CL	Upper CL
MCN5-COMP	MCN2-COMP-T	-4.80000	1.914854	-2.50672	0.0122*	-681.15	-1168.79	-200.17

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury**



**Quantiles**

Level	Minimum	10%	25%	Median	75%	90%	Maximum
LA3-REF	0.00519	0.00519	0.005735	0.0218	0.0242	0.0254	0.0254
NC2-COMP	0.00924	0.00924	0.01012	0.0213	0.0237	0.0239	0.0239
NC3-COMP	0.00842	0.00842	0.01406	0.0229	0.0256	0.0259	0.0259

**Oneway Anova**

**Summary of Fit**

Rsquare	0.052256
Adj Rsquare	-0.1057
Root Mean Square Error	0.008102
Mean of Response	0.018189
Observations (or Sum Wgts)	15

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
STATION	2	0.00004343	0.000022	0.3308	0.7247
Error	12	0.00078775	0.000066		
C. Total	14	0.00083118			

**Means for Oneway Anova**

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
LA3-REF	5	0.016334	0.00362	0.00844	0.02423
NC2-COMP	5	0.017788	0.00362	0.00989	0.02568
NC3-COMP	5	0.020444	0.00362	0.01255	0.02834

Std Error uses a pooled estimate of error variance

**Means and Std Deviations**

Level	Number	Mean	Std Dev	Std Err		
				Mean	Lower 95%	Upper 95%
LA3-REF	5	0.016334	0.0097696	0.0043691	0.0042035	0.0284645
NC2-COMP	5	0.017788	0.0070969	0.0031738	0.0089761	0.0265999
NC3-COMP	5	0.020444	0.0071504	0.0031977	0.0115657	0.0293223

**Means Comparisons**

**Comparisons with a control using Dunnnett's Method**

Control Group = LA3-REF

**Confidence Quantile**

d	Alpha
2.50237	0.05

**Oneway Analysis of RESULT\_STATS By STATION CHEM\_OUT=Mercury**

**Means Comparisons**

**Comparisons with a control using Dunnett's Method**

**LSD Threshold Matrix**

Level	Abs(Dif)-	
	LSD	p-Value
NC3-COMP	-0.01	0.6472
NC2-COMP	-0.01	0.9432
LA3-REF	-0.01	1.0000

Positive values show pairs of means that are significantly different.

**Wilcoxon / Kruskal-Wallis Tests (Rank Sums)**

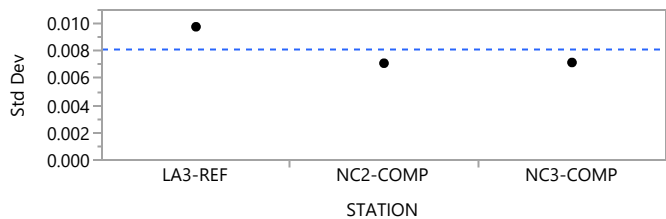
Level	Count	Score Sum	Expected		(Mean-Mean0)/Std0
			Score	Score Mean	
LA3-REF	5	35.000	40.000	7.00000	-0.551
NC2-COMP	5	39.000	40.000	7.80000	-0.061
NC3-COMP	5	46.000	40.000	9.20000	0.674

**1-Way Test, ChiSquare Approximation**

ChiSquare	DF	Prob>ChiSq
0.6200	2	0.7334

Small sample sizes. Refer to statistical tables for tests, rather than large-sample approximations.

**Tests that the Variances are Equal**



Level	Count	Std Dev	MeanAbsDif	MeanAbsDif
			to Mean	to Median
LA3-REF	5	0.0097696	0.0084792	0.0073860
NC2-COMP	5	0.0070969	0.0061344	0.0054320
NC3-COMP	5	0.0071504	0.0051072	0.0046160

Test	F Ratio	DFNum	DFDen	Prob > F
O'Brien[.5]	0.8509	2	12	0.4513
Brown-Forsythe	0.2421	2	12	0.7887
Levene	1.6340	2	12	0.2357
Bartlett	0.2532	2	.	0.7763

Warning: Small sample sizes. Use Caution.

**Nonparametric Comparisons For Each Pair Using Wilcoxon Method**

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean	Std Err Dif	Z	p-Value	Hodges-	Lower CL	Upper CL	Difference Plot
		Difference				Lehmann			
NC3-COMP	LA3-REF	1.200000	1.914854	0.6266796	0.5309	0.0023000	-0.014580	0.0201100	
NC3-COMP	NC2-COMP	0.800000	1.914854	0.4177864	0.6761	0.0018000	-0.015080	0.0160600	
NC2-COMP	LA3-REF	0.400000	1.914854	0.2088932	0.8345	0.0009000	-0.014400	0.0183100	

Appendix G  
Data Validation Reports

---



# Data Validation Report – EPA Stage 2A

February 27, 2018

Project: City of Newport Beach, Lower Newport Bay Sediment Characterization

Project Number: 170243-02.01

This report summarizes the review of analytical results for 14 sediment composites collected January 6, 10, 12 and 15 to 19, 2018. The samples were collected by Anchor QEA, LLC, and submitted to Eurofins Calscience, Inc (ECI). The following analytical parameters were reviewed in this report:

- Total organic carbon (TOC) United States Environmental Protection Agency (USEPA) method 9060A
- Total solids (TS) by Standard Method (SM) 2540B
- Organotins by Krone et. al (1989)
- Organochlorine pesticides by USEPA method 8081A
- Polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyl congeners (PCBs) by USEPA 8270C in selective ion mode
- Pyrethroids by USEPA method 8270D (modified by triple quadrupole with electron ionization)
- Metals by USEPA methods 6020 and 7471A

ECI sample data groups (SDGs) 18-01-0375, 18-01-0689, 18-01-0886, 18-01-0888, 18-01-0948, 18-01-1094, 18-01-1208, and 18-01-1437 were reviewed in this report. Sample IDs, associated SDGs, matrices, and analyses are presented in Table 1.

**Table 1**  
**Sample IDs, Matrices, and Analyses**

Sample ID	Lab Sample ID	Matrix	Analyses
BIME-COMP-M-011218	18-01-0886-2	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
BIME-COMP-T-011218	18-01-0886-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
BIMW-COMP-M-011018	18-01-0689-2	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
BIMW-COMP-T-011018	18-01-0689-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
BIN-COMP-T-011718	18-01-1208-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
BIS-COMP-011218	18-01-0888-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
LA3-REF-010618	18-01-0375-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
MCN1-COMP-T-011518	18-01-1094-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals

Sample ID	Lab Sample ID	Matrix	Analyses
MCN2-COMP-T-011618	18-01-1094-2	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
TB-COMP-011218	18-01-0948-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
MCN5-COMP-011818	18-01-1437-1	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
EC-COMP-011718	18-01-1437-2	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
MCN4-COMP-011918	18-01-1437-3	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals
MCN3-COMP-011918	18-01-1437-4	Sediment	TOC, TS, organotins, pesticides, PAHs, PCBs, pyrethroids, particle size, metals

## Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Sampling and Analysis Plan, Lower Newport Bay Federal Channels Dredging* (Anchor QEA 2017)
- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, Third Edition; USEPA 1986)
- *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2017a)
- *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2017b)

Unless noted in this report, laboratory results for the samples listed above were within QC criteria.

## Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI at the time of sample receipt. Samples were received in good condition and within the recommended temperature range.

## Holding Times and Sample Preservation

Samples were appropriately preserved and analyzed within holding times.

## Laboratory Method Blanks

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes, except selenium in SDG 18-01-0375 and chromium in SDG 18-01-1208. Both selenium and chromium were detected above the method detection limit but associated detected

results were significantly greater than (five times) the concentrations in the method blanks, so no data have been qualified.

## **Field Quality Control**

No field QC samples were required with this sample set.

## **Surrogate Recoveries**

Surrogate recoveries were within the laboratory control limits except for one surrogate in SDG 18-01-1208 associated with the analysis of pyrethroids. The surrogate dibutyl chlorendate recovered below the laboratory control limit for sample BIN-COMP-T-011718. Associated results were qualified "UJ" to indicate a potentially low bias.

## **Column Confirmation**

All detected pesticide results were confirmed by a second column, and results were within method control limits.

## **Laboratory Control Samples and Laboratory Control Duplicate Samples**

Laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs) were analyzed at the required frequency. Some pesticide, PCB, and organotin analytes were not spiked in the LCS/LCSD, so instrument accuracy could not be evaluated for these analytes. All LCS/LCSD analyses resulted in recoveries and relative percent difference (RPD) values within project-required control limits.

## **Matrix Spike and Matrix Spike Duplicate Samples**

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequency or LCS/LCSDs were analyzed in place of MS/MSD samples. Some pesticide, PCB, and organotin analytes were not spiked in the MS/MSD, so instrument accuracy could not be evaluated for these analytes. No results were qualified for MS/MSD recoveries outside of control limits when the spike concentration was greater than four times the sample concentration, or when the MS/MSD was analyzed on a non-project sample.

MS and MSD recoveries were within project-required control limits, with the following exceptions:

- SDG 18-01-0375
  - Pesticides – Methoxychlor and 4,4'-DDT recovered below the control limit in the MSD, and the MS/MSD RPD values were above the control limit analyzed on sample LA3-REF-010618. 4,4'-DDD also recovered above the control limit in the MS/MSD RPD. Parent sample results were qualified "UJ" or "J" to indicate a potentially low bias.

- SDG 18-01-0689
  - Organotin – Tributyltin recovered below the control limit in the MS and MSD analyzed on sample BIMW-COMP-T-011018. The parent sample result was qualified "UJ" to indicate a potentially low bias.
- SDG 18-01-0888
  - Pyrethroids – Several compounds recovered in the MS and/or MSD above the control limit in the MS and MSD analyzed on sample BIS-COMP-011218. Cyfluthrin was detected in the parent sample and has been qualified "J" to indicate a potentially high bias.
  - Pesticides – 4,4'-DDE did not recover in the MS or MSD analyzed on sample BIS-COMP-011218, but the sample concentration was greater than four times the spike concentration, so no data were qualified. Endrin aldehyde also did not recover in the MS, MSD, or the parent sample. This result has been rejected.
- SDGs 18-01-1208, 18-01-1094, 18-01-1437
  - Conventionals – TOC recovered above the control limit in the MS analyzed on sample BIN-COMP-T-011718. Associated results were qualified "J" to indicate a potentially high bias. These results were from several SDGs.
- SDG 18-01-1208
  - Pesticides – 4,4'-DDD, 4,4'-DDE and heptachlor epoxide recovered above the control limit in the MS and MSD analyzed on sample BIN-COMP-T-011718. The parent sample result for 4,4'-DDD was qualified "J" to indicate a potentially high bias. 4,4'-DDE was not qualified because the sample concentration was greater than four times the spike concentration. Heptachlor epoxide was not detected in the sample, so no data were qualified.
- SDG 18-01-1437
  - Pyrethroids – The RPD values for allethrin and resmethrin/bioresmethrin in the MS/MSD analyzed on sample EC-COMP-011718 were above the control limit, but because these compounds were not detected in the parent sample, no data were qualified. Fluvinate recovered below the control limit, and the parent sample result was qualified "UJ" to indicate a potentially low bias.

See Table 2 for qualified data.

## Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency for total solids. No duplicates were analyzed for grain size. All duplicate results were within project-required control limits.

## Method Reporting Limits

Detection limits were acceptable as reported. All values were reported using the laboratory detection limit. Values were reported as undiluted, or when diluted, the reporting limit reflects the dilution factor. Some detection limits were elevated due to dry weight correction.

## Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values, with the exceptions noted above. Precision was acceptable as demonstrated by the LCS/LCSD, MS/MSD, and laboratory duplicate RPD values, with the exceptions noted above. Most data are acceptable as reported; all other data are acceptable as qualified. Table 2 summarizes the qualifiers applied to the sample results reviewed in this report.

## Data Qualifier Definitions

- U Indicates the compound or analyte was analyzed for but not detected at or above the specified limit
- J Indicates an estimated value
- UJ Indicates the compound or analyte was analyzed for but not detected and the specified limit reported is estimated

**Table 2**  
**Data Qualification Summary**

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
BIMW-COMP-T-011018	Organotins	Tributyltin	3U µg/kg	3UJ µg/kg	MS/MSD %R below control limit
BIN-COMP-T-011718	Pesticides	4,4'-DDD	27 µg/kg	27J µg/kg	MS and MSD %R above control limit
	Pyrethroids	Allethrin	0.48U µg/kg	0.48UJ µg/kg	Surrogate %R below control limit
		Bifenthrin	0.57U µg/kg	0.57UJ µg/kg	
		Cyfluthrin	0.48U µg/kg	0.48UJ µg/kg	
		Cypermethrin	0.48U µg/kg	0.48UJ µg/kg	
		Deltamethrin/ Tralomethrin	0.48U µg/kg	0.48UJ µg/kg	
		Fenpropathrin	0.48U µg/kg	0.48UJ µg/kg	
		Fenvalerate	0.48U µg/kg	0.48UJ µg/kg	
		Fluvalinate	0.48U µg/kg	0.48UJ µg/kg	
		Lambda- cyhalothrin	0.48U µg/kg	0.48UJ µg/kg	
		Permethrin	0.95U µg/kg	0.95UJ µg/kg	
		Phenothrin	0.48U µg/kg	0.48UJ µg/kg	
		Resmethrin/ Bioresmethrin	0.81U µg/kg	0.81UJ µg/kg	
Tetramethrin	0.57U µg/kg	0.57UJ µg/kg			

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
	Conventionals	TOC	0.66%	0.66J%	MS %R above control limit
BIS-COMP-011218	Pesticides	Endrin aldehyde	1.3U µg/kg	R	No MS/MSD recovery
	Pyrethroids	Cyfluthrin	0.63J µg/kg	0.63J µg/kg	MS %R above control limit
EC-COMP-011718	Pyrethroids	Fluvalinate	0.3U µg/kg	0.3UJ µg/kg	MSD %R below control limit
	Conventionals	TOC	0.089%	0.089J%	MS %R above control limit
LA3-REF-010618	Pesticides	4,4'-DDD	1.2J µg/kg	1.2J µg/kg	MS/MSD RPD above control limit
	Pesticides	4,4'-DDT	0.83U µg/kg	0.83UJ µg/kg	MSD %R below control limit, MS/MSD RPD above control limit
		Methoxychlor	1.1U µg/kg	1.1UJ µg/kg	MSD %R below control limit
MCN3-COMP-011918	Conventionals	TOC	1.1%	1.1J%	MS %R above control limit
MCN5-COMP-011818	Conventionals	TOC	1.1%	1.1J%	MS %R above control limit

Notes:

%R: percent recovery

µg/kg: micrograms per kilogram

## References

Anchor QEA (Anchor QEA, LLC), 2017. *Sampling and Analysis Plan, Lower Newport Bay Federal Channels Dredging*. Prepared for City of Newport Beach. December 2017.

Krone, C.A., D.W. Brown, D.G. Burrows, R.G. Bogar, S.L. Chan, and U. Varanasi, 1989. "A method for analysis of butyltin species in measurement of butyltins in sediment and English sole livers from Puget Sound." *Marine Environmental Research* 27:1–18.

USEPA (U.S. Environmental Protection Agency), 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. Office of Solid Waste and Emergency Response. EPA-530/SW-846.

USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.

USEPA, 2017b. *National Functional Guidelines for Organic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA 540 R 2017-002. January 2017.

# Data Validation Report – EPA Stage 2A

April 3, 2018

Project: City of Newport Beach, Lower Newport Bay Sediment Characterization

Project Number: 170243-02.01

This report summarizes the review of analytical results for 112 bioaccumulation tissue samples collected January 24 and February 22, 2018. The samples were prepared by Nautilus Environmental in San Diego, California, and submitted to Eurofins Calscience, Inc (ECI) in Garden Grove, California. The following analytical parameters were reviewed in this report:

- Lipids by National Oceanic and Atmospheric Administration (NOAA) 1993
- Mercury by U.S. Environmental Protection Agency (USEPA) method 7471A
- Dibutyltin by Krone et al. 1989
- DDTs by USEPA method 8081A
- Polychlorinated biphenyl congeners (PCBs) by USEPA method 8270C – select ion monitoring

ECI sample data group (SDG) 18-02-1671 was reviewed in this report. Sample IDs, associated SDGs, matrices, and analyses are presented in Table 1.

**Table 1**  
**Sample IDs, Matrices, and Analyses**

Sample ID	Lab Sample ID	Matrix	Analyses
T0-A-MACOMA-012418	18-02-1671-1	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
T0-A-NEREIS-012418	18-02-1671-4	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-A-MACOMA-022218	18-02-1671-12	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-B-MACOMA-022218	18-02-1671-13	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-C-MACOMA-022218	18-02-1671-14	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-D-MACOMA-022218	18-02-1671-15	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-E-MACOMA-022218	18-02-1671-16	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-A-MACOMA-022218	18-02-1671-17	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-B-MACOMA-022218	18-02-1671-18	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-C-MACOMA-022218	18-02-1671-19	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-D-MACOMA-022218	18-02-1671-20	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-E-MACOMA-022218	18-02-1671-21	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
MCN1-COMP-T-A-MACOMA-022218	18-02-1671-22	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-B-MACOMA-022218	18-02-1671-23	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-C-MACOMA-022218	18-02-1671-24	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-D-MACOMA-022218	18-02-1671-25	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-E-MACOMA-022218	18-02-1671-26	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-A-MACOMA-022218	18-02-1671-27	Tissue	Lipids, mercury, DDTs, PCBs

Sample ID	Lab Sample ID	Matrix	Analyses
MCN2-COMP-T-B-MACOMA-022218	18-02-1671-28	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-C-MACOMA-022218	18-02-1671-29	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-D-MACOMA-022218	18-02-1671-30	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-E-MACOMA-022218	18-02-1671-31	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-A-MACOMA-022218	18-02-1671-32	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-B-MACOMA-022218	18-02-1671-33	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-C-MACOMA-022218	18-02-1671-34	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-D-MACOMA-022218	18-02-1671-35	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-E-MACOMA-022218	18-02-1671-36	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-A-MACOMA-022218	18-02-1671-37	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-B-MACOMA-022218	18-02-1671-38	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-C-MACOMA-022218	18-02-1671-39	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-D-MACOMA-022218	18-02-1671-40	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-E-MACOMA-022218	18-02-1671-41	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-A-MACOMA-022218	18-02-1671-42	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-B-MACOMA-022218	18-02-1671-43	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-C-MACOMA-022218	18-02-1671-44	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-D-MACOMA-022218	18-02-1671-45	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-E-MACOMA-022218	18-02-1671-46	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-A-MACOMA-022218	18-02-1671-52	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-B-MACOMA-022218	18-02-1671-53	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-C-MACOMA-022218	18-02-1671-54	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-D-MACOMA-022218	18-02-1671-55	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-E-MACOMA-022218	18-02-1671-56	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-A-MACOMA-022218	18-02-1671-57	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-B-MACOMA-022218	18-02-1671-58	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-C-MACOMA-022218	18-02-1671-59	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-D-MACOMA-022218	18-02-1671-60	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-E-MACOMA-022218	18-02-1671-61	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-A-MACOMA-022218	18-02-1671-62	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-B-MACOMA-022218	18-02-1671-63	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-C-MACOMA-022218	18-02-1671-64	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-D-MACOMA-022218	18-02-1671-65	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-E-MACOMA-022218	18-02-1671-66	Tissue	Lipids, mercury, DDTs, PCBs
BIS-COMP-A-MACOMA-022218	18-02-1671-67	Tissue	Lipids, mercury, DDTs
BIS-COMP-B-MACOMA-022218	18-02-1671-68	Tissue	Lipids, mercury, DDTs
BIS-COMP-C-MACOMA-022218	18-02-1671-69	Tissue	Lipids, mercury, DDTs
BIS-COMP-D-MACOMA-022218	18-02-1671-70	Tissue	Lipids, mercury, DDTs
BIS-COMP-E-MACOMA-022218	18-02-1671-71	Tissue	Lipids, mercury, DDTs



Sample ID	Lab Sample ID	Matrix	Analyses
LA3-REF-A-NEREIS-022218	18-02-1671-77	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-B-NEREIS-022218	18-02-1671-78	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-C-NEREIS-022218	18-02-1671-79	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-D-NEREIS-022218	18-02-1671-80	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
LA3-REF-E-NEREIS-022218	18-02-1671-81	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-A-NEREIS-022218	18-02-1671-82	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-B-NEREIS-022218	18-02-1671-83	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-C-NEREIS-022218	18-02-1671-84	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-D-NEREIS-022218	18-02-1671-85	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
TB-COMP-E-NEREIS-022218	18-02-1671-86	Tissue	Lipids, mercury, dibutyltin, DDTs, PCBs
MCN1-COMP-T-A-NEREIS-022218	18-02-1671-87	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-B-NEREIS-022218	18-02-1671-88	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-C-NEREIS-022218	18-02-1671-89	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-D-NEREIS-022218	18-02-1671-90	Tissue	Lipids, mercury, DDTs, PCBs
MCN1-COMP-T-E-NEREIS-022218	18-02-1671-91	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-A-NEREIS-022218	18-02-1671-92	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-B-NEREIS-022218	18-02-1671-93	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-C-NEREIS-022218	18-02-1671-94	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-D-NEREIS-022218	18-02-1671-95	Tissue	Lipids, mercury, DDTs, PCBs
MCN2-COMP-T-E-NEREIS-022218	18-02-1671-96	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-A-NEREIS-022218	18-02-1671-97	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-B-NEREIS-022218	18-02-1671-98	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-C-NEREIS-022218	18-02-1671-99	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-D-NEREIS-022218	18-02-1671-100	Tissue	Lipids, mercury, DDTs, PCBs
MCN3-COMP-E-NEREIS-022218	18-02-1671-101	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-A-NEREIS-022218	18-02-1671-102	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-B-NEREIS-022218	18-02-1671-103	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-C-NEREIS-022218	18-02-1671-104	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-D-NEREIS-022218	18-02-1671-105	Tissue	Lipids, mercury, DDTs, PCBs
MCN4-COMP-E-NEREIS-022218	18-02-1671-106	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-A-NEREIS-022218	18-02-1671-107	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-B-NEREIS-022218	18-02-1671-108	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-C-NEREIS-022218	18-02-1671-109	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-D-NEREIS-022218	18-02-1671-110	Tissue	Lipids, mercury, DDTs, PCBs
MCN5-COMP-E-NEREIS-022218	18-02-1671-111	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-A-NEREIS-022218	18-02-1671-117	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-B-NEREIS-022218	18-02-1671-118	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-C-NEREIS-022218	18-02-1671-119	Tissue	Lipids, mercury, DDTs, PCBs
BIME-COMP-T-M-D-NEREIS-022218	18-02-1671-120	Tissue	Lipids, mercury, DDTs, PCBs

Sample ID	Lab Sample ID	Matrix	Analyses
BIME-COMP-T-M-E-NEREIS-022218	18-02-1671-121	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-A-NEREIS-022218	18-02-1671-122	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-B-NEREIS-022218	18-02-1671-123	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-C-NEREIS-022218	18-02-1671-124	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-D-NEREIS-022218	18-02-1671-125	Tissue	Lipids, mercury, DDTs, PCBs
BIMW-COMP-T-M-E-NEREIS-022218	18-02-1671-126	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-A-NEREIS-022218	18-02-1671-127	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-B-NEREIS-022218	18-02-1671-128	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-C-NEREIS-022218	18-02-1671-129	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-D-NEREIS-022218	18-02-1671-130	Tissue	Lipids, mercury, DDTs, PCBs
BIN-COMP-T-E-NEREIS-022218	18-02-1671-131	Tissue	Lipids, mercury, DDTs, PCBs
BIS-COMP-A-NEREIS-022218	18-02-1671-132	Tissue	Lipids, mercury, DDTs
BIS-COMP-B-NEREIS-022218	18-02-1671-133	Tissue	Lipids, mercury, DDTs
BIS-COMP-C-NEREIS-022218	18-02-1671-134	Tissue	Lipids, mercury, DDTs
BIS-COMP-D-NEREIS-022218	18-02-1671-135	Tissue	Lipids, mercury, DDTs
BIS-COMP-E-NEREIS-022218	18-02-1671-136	Tissue	Lipids, mercury, DDTs

## Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Sampling and Analysis Plan, Lower Newport Bay Federal Channels Dredging* (Anchor QEA 2017)
- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, Third Edition; USEPA 1986)
- *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2017a)
- *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2017b)

Unless noted in this report, laboratory results for the samples listed above were within QC criteria.

## Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI at the time of sample receipt. Samples were received in good condition and within the recommended temperature range.

## Holding Times and Sample Preservation

Samples were stored frozen from the time of sample receipt at the laboratory until extraction. Although USEPA method 7471A designates a 28-day hold time, the State Water Resources Control

Board Surface Water Ambient Monitoring Program (SWRCB 2017) Quality Assurance Program Plan's Measurement Quality Objectives allows for a 1-year hold time for mercury, if samples are preserved by freezing to  $\leq -20^{\circ}\text{C}$  and samples are analyzed within 14 days of thawing. Based on this most recent guidance, mercury results were not qualified for hold time exceedances.

## **Laboratory Method Blanks**

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes.

## **Field Quality Control**

No field QC samples were required with this sample set.

## **Surrogate Recoveries**

Surrogate recoveries were within the laboratory control limits.

## **Column Confirmation**

All detected pesticide results were confirmed by a second column, and results were within method control limits.

## **Laboratory Control Samples and Laboratory Control Duplicate Samples**

Laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs) were analyzed at the required frequency. Some pesticide, PCB, and organotin analytes were not spiked in the LCS/LCSD, so instrument accuracy could not be evaluated for these analytes. All LCS/LCSD analyses resulted in recoveries and relative percent difference (RPD) values within project-required control limits.

## **Matrix Spike and Matrix Spike Duplicate Samples**

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequency or LCS/LCSDs were analyzed in place of MS/MSD samples. Some pesticide, PCB, and organotin analytes were not spiked in the MS/MSD, so instrument accuracy could not be evaluated for these analytes. No results were qualified for MS/MSD recoveries outside of control limits when the sample concentration was greater than four times the spike concentration, or when the MS/MSD was analyzed on a non-project sample.

MS and MSD recoveries were within project-required control limits, with the following exceptions:

- Mercury – Mercury recovered below the control limit in the MS and MSDs analyzed on samples MCN3-COMP-D-NEREIS-022218 and BIMW-COMP-T-M-D-NEREIS-022218. Associated sample results were qualified "UJ" or "J" to indicate a potentially low bias.
- Pesticides

- 4,4'-DDD did not recover in the MS and MSD analyzed on sample MCN4-COMP-B-MACOMA-022218. The associated 4,4'-DDD parent sample result was qualified "J" to indicate a potentially low bias.
- 4,4'-DDD recovered above the control limit in the MS and did not recover in the MSD analyzed on sample MCN4-COMP-E-MACOMA. 4,4'-DDT also recovered above the control limit in the MS. The associated 4,4'-DDT result was non-detect, so no data were qualified. The associated 4,4'-DDD result was qualified "J" to indicate that it is estimated.
- 4,4'-DDT recovered above the control limit in the MS and MSD analyzed on sample BIMW-COMP-T-M-D-MACOMA. The associated parent sample result was non-detect, so no data were qualified.
- 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT recovered above the control limits in the MS and MSD analyzed on sample BIS-COMP-D-MACOMA-022218. Associated 4,4'-DDD and 4,4'-DDE parent sample results were qualified "J" to indicate a potentially high bias. The associated 4,4'-DDT parent sample result was non-detect, so no data were qualified.
- 4,4'-DDT recovered above the control limit in the MS analyzed on sample BIS-COMP-E-MACOMA-022218. The associated parent sample result was non-detect, so no data were qualified.

See Table 2 for qualified data.

## Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency for lipids. All duplicate results were within project-required control limits.

## Method Reporting Limits

Detection limits were acceptable as reported. All values were reported using the laboratory detection limit. Values were reported as undiluted, or when diluted, the reporting limit reflects the dilution factor.

## Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values, with the exceptions noted above. Precision was acceptable as demonstrated by the LCS/LCSD, MS/MSD, and laboratory duplicate RPD values, with the exceptions noted above. Most data are acceptable as reported; all other data are acceptable as qualified. Table 2 summarizes the qualifiers applied to the sample results reviewed in this report.

## Data Qualifier Definitions

J Indicates an estimated value

U Indicates the compound or analyte was analyzed for but not detected at or above the specified limit

UJ Indicates the compound or analyte was analyzed for but not detected and the specified limit reported is estimated

**Table 2**  
**Data Qualification Summary**

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
MCN4-COMP-B-MACOMA-022218	Pesticides	4,4'-DDD	15 µg/kg	15J µg/kg	No MS/MSD %R
MCN4-COMP-E-MACOMA-022218		4,4'-DDD	16 µg/kg	16J µg/kg	MS %R above control limit; no MSD %R
BIS-COMP-D-MACOMA-022218		4,4'-DDD	6.2 µg/kg	6.2J µg/kg	MS/MSD %R above control limit
		4,4'-DDE	17 µg/kg	17J µg/kg	
MCN3-COMP-D-NEREIS-022218	Metals	Mercury	0.0191 mg/kg	0.0191J mg/kg	MS/MSD %R below control limit
MCN3-COMP-E-NEREIS-022218			0.0148 mg/kg	0.0148J mg/kg	
MCN4-COMP-A-NEREIS-022218			0.00339U mg/kg	0.00339UJ mg/kg	
MCN4-COMP-B-NEREIS-022218			0.00459J mg/kg	0.00459J mg/kg	
MCN4-COMP-C-NEREIS-022218			0.00726J mg/kg	0.00726J mg/kg	
MCN4-COMP-D-NEREIS-022218			0.0182 mg/kg	0.0182J mg/kg	
MCN4-COMP-E-NEREIS-022218			0.00356U mg/kg	0.00356UJ mg/kg	
MCN5-COMP-A-NEREIS-022218			0.0109 mg/kg	0.0109J mg/kg	
MCN5-COMP-B-NEREIS-022218			0.00754J mg/kg	0.00754J mg/kg	
MCN5-COMP-C-NEREIS-022218			0.00381J mg/kg	0.00381J mg/kg	
MCN5-COMP-D-NEREIS-022218			0.0182 mg/kg	0.0182J mg/kg	
MCN5-COMP-E-NEREIS-022218			0.00358J mg/kg	0.00358J mg/kg	
BIME-COMP-T-M-A-NEREIS-022218			0.00336U mg/kg	0.00336UJ mg/kg	
BIME-COMP-T-M-B-NEREIS-022218			0.00349U mg/kg	0.00349UJ mg/kg	
BIME-COMP-T-M-C-NEREIS-022218			0.00356U mg/kg	0.00356UJ mg/kg	
BIME-COMP-T-M-D-NEREIS-022218			0.00637J mg/kg	0.00637J mg/kg	
BIME-COMP-T-M-E-NEREIS-022218			0.00345U mg/kg	0.00345UJ mg/kg	
BIMW-COMP-T-M-A-NEREIS-022218			0.00434J mg/kg	0.00434J mg/kg	
BIMW-COMP-T-M-B-NEREIS-022218			0.00746J mg/kg	0.00746J mg/kg	
BIMW-COMP-T-M-C-NEREIS-022218			0.0118 mg/kg	0.0118J mg/kg	
BIMW-COMP-T-M-D-NEREIS-022218			0.0228 mg/kg	0.0228J mg/kg	
BIMW-COMP-T-M-E-NEREIS-022218			0.0238 mg/kg	0.0238J mg/kg	
BIN-COMP-T-A-NEREIS-022218			0.0219 mg/kg	0.0219J mg/kg	
BIN-COMP-T-B-NEREIS-022218	0.0123 mg/kg	0.0123J mg/kg			

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
BIN-COMP-T-C-NEREIS-022218			0.0247 mg/kg	0.0247J mg/kg	
BIN-COMP-T-D-NEREIS-022218			0.0273 mg/kg	0.0273J mg/kg	
BIN-COMP-T-E-NEREIS-022218			0.0173 mg/kg	0.0173J mg/kg	
BIS-COMP-A-NEREIS-022218			0.0125 mg/kg	0.0125J mg/kg	
BIS-COMP-B-NEREIS-022218			0.0214 mg/kg	0.0214J mg/kg	
BIS-COMP-C-NEREIS-022218			0.0227 mg/kg	0.0227J mg/kg	
BIS-COMP-D-NEREIS-022218			0.026 mg/kg	0.026J mg/kg	
BIS-COMP-E-NEREIS-022218			0.0144 mg/kg	0.0144J mg/kg	

Notes:

%R: percent recovery

µg/kg: microgram per kilogram

mg/kg: milligram per kilogram

## References

Anchor QEA (Anchor QEA, LLC), 2017. *Sampling and Analysis Plan, Lower Newport Bay Federal Channels Dredging*. Prepared for City of Newport Beach. December 2017.

Krone, C.A., D.W. Brown, D.G. Burrows, R.G. Bogar, S.L. Chan, and U. Varanasi, 1989. "A method for analysis of butyltin species in measurement of butyltins in sediment and English sole livers from Puget Sound." *Marine Environmental Research* 27:1–18.

NOAA (National Oceanic and Atmospheric Administration), 1993. *Sampling and Analytical Methods of the National Status and Trends Program, National Benthic Surveillance and Mussel Watch Projects, 1984-1992 Volume I. Overview and Summary of Methods*. Coastal Monitoring and Bioeffects Assessment Division, Office of Ocean Resources Conservation and Assessment, National Ocean Service. July 1993.

SWRCB (State Water Resources Control Board), 2017. Measurement Quality Objectives Table 2. Surface Water Ambient Monitoring Program Quality Assurance Program Plan. Final Draft. May 2017.

USEPA (U.S. Environmental Protection Agency), 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. Office of Solid Waste and Emergency Response. EPA-530/SW-846.

USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.

USEPA, 2017b. *National Functional Guidelines for Organic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA 540 R 2017-002. January 2017.

# Data Validation Report – EPA Stage 2A

March 23, 2018

Project: City of Newport Beach, Lower Newport Bay Archived Sediment Characterization

Project Number: 170243-02.01

This report summarizes the review of analytical results for 40 sediments collected January 11, 12, 15, 16, 17, 18, and 19 and March 5, 2018. The samples were collected by Anchor QEA, LLC, and submitted to Eurofins Calscience, Inc (ECI). The following analytical parameters were reviewed in this report:

- Total solids (TS) by Standard Method (SM) 2540B
- Mercury by United States Environmental Protection Agency (USEPA) method 7471A
- Organochlorine pesticides by USEPA method 8081A
- Polychlorinated biphenyl congeners (PCBs) by USEPA 8270C in selective ion mode

ECI sample data group (SDG) 18-03-0357 was reviewed in this report. Sample IDs, associated SDGs, matrices, and analyses are presented in Table 1.

**Table 1**  
**Sample IDs, Matrices, and Analyses**

Sample ID	Lab Sample ID	Matrix	Analyses
BIME-01-T-M-030518	18-03-0357-1	Sediment	Pesticides, TS
BIME-02-T-M-030518	18-03-0357-2	Sediment	Pesticides, TS
BIME-03-T-M-030518	18-03-0357-3	Sediment	Pesticides, TS
BIME-04-T-M-030518	18-03-0357-4	Sediment	Pesticides, TS
BIMW-01-T-M-030518	18-03-0357-5	Sediment	Pesticides, TS
BIMW-02-T-M-030518	18-03-0357-6	Sediment	Pesticides, TS
BIMW-03-T-M-030518	18-03-0357-7	Sediment	Pesticides, TS
BIMW-04-T-M-030518	18-03-0357-8	Sediment	Pesticides, TS
TB-01-011218	18-03-0357-9	Sediment	Mercury, PCBs, TS
TB-02-011218	18-03-0357-10	Sediment	Mercury, PCBs, TS
TB-03-011218	18-03-0357-11	Sediment	Mercury, PCBs, TS
TB-04-011218	18-03-0357-12	Sediment	Mercury, PCBs, TS
TB-05-011218	18-03-0357-13	Sediment	Mercury, PCBs, TS
TB-06-011218	18-03-0357-14	Sediment	Mercury, PCBs, TS
BIN-01-T-011618	18-03-0357-15	Sediment	Pesticides, TS
BIN-02-T-011618	18-03-0357-16	Sediment	Pesticides, TS
BIN-03-T-011618	18-03-0357-17	Sediment	Pesticides, TS
BIN-04-T-011618	18-03-0357-18	Sediment	Pesticides, TS
BIN-05-T-011618	18-03-0357-19	Sediment	Pesticides, TS
BIN-06-T-011718	18-03-0357-20	Sediment	Pesticides, TS

Sample ID	Lab Sample ID	Matrix	Analyses
MCN1-01-T-011518	18-03-0357-21	Sediment	Mercury, pesticides, TS
MCN1-02-T-011518	18-03-0357-22	Sediment	Mercury, pesticides, TS
MCN1-03-T-011518	18-03-0357-23	Sediment	Mercury, pesticides, TS
MCN1-04-T-011518	18-03-0357-24	Sediment	Mercury, pesticides, TS
MCN2-01-T-011518	18-03-0357-25	Sediment	Mercury, pesticides, TS
MCN2-02-T-011518	18-03-0357-26	Sediment	Mercury, pesticides, TS
MCN2-03-T-011518	18-03-0357-27	Sediment	Mercury, pesticides, TS
MCN2-04-T-011618	18-03-0357-28	Sediment	Mercury, pesticides, TS
MCN3-01-011918	18-03-0357-29	Sediment	Mercury, pesticides, TS
MCN3-02-011918	18-03-0357-30	Sediment	Mercury, pesticides, TS
MCN3-03-011918	18-03-0357-31	Sediment	Mercury, pesticides, TS
MCN3-04-011918	18-03-0357-32	Sediment	Mercury, pesticides, TS
MCN4-01-011918	18-03-0357-33	Sediment	Pesticides, TS
MCN4-02-011818	18-03-0357-34	Sediment	Pesticides, TS
MCN4-03-011818	18-03-0357-35	Sediment	Pesticides, TS
MCN4-04-011818	18-03-0357-36	Sediment	Pesticides, TS
BIS-01-011118	18-03-0357-37	Sediment	Pesticides, TS
BIS-02-011118	18-03-0357-38	Sediment	Pesticides, TS
BIS-03-011118	18-03-0357-39	Sediment	Pesticides, TS
BIS-04-011118	18-03-0357-40	Sediment	Pesticides, TS

## Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Sampling and Analysis Plan, Lower Newport Bay Federal Channel Dredging* (Anchor QEA 2017)
- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, Third Edition; USEPA 1986)
- *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2017a)
- *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2017b)

Unless noted in this report, laboratory results for the samples listed above were within QC criteria.

## Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI at the time of sample receipt. Samples were received in good condition and within the recommended temperature range.



## **Holding Times and Sample Preservation**

Samples were stored frozen from the time of sample receipt at the laboratory until extraction. Although USEPA method 7471A designates a 28-day hold time, the State Water Resources Control Board Surface Water Ambient Monitoring Program (SWRCB 2017) Quality Assurance Program Plan's Measurement Quality Objectives allows for a 1-year hold time for mercury, if samples are preserved by freezing to  $\leq -20^{\circ}\text{C}$  and samples are analyzed within 14 days of thawing. Based on this most recent guidance, mercury results were not qualified for hold time exceedances.

## **Laboratory Method Blanks**

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes.

## **Field Quality Control**

No field QC samples were required with this sample set.

## **Surrogate Recoveries**

Surrogate recoveries samples were within the laboratory control limits, except the pesticide surrogate decachlorobiphenyl in the analysis of sample BIN-06-T-011718. No data were qualified because the sample was analyzed at a high dilution.

## **Column Confirmation**

All detected pesticide results were confirmed by a second column, and results were within method control limits.

## **Laboratory Control Samples and Laboratory Control Duplicate Samples**

Laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs) were analyzed at the required frequency. Some pesticide and PCB analytes were not spiked in the LCS/LCSD, so instrument accuracy could not be evaluated for these analytes. All LCS/LCSD analyses resulted in recoveries and relative percent difference (RPD) values within project-required control limits.

## **Matrix Spike and Matrix Spike Duplicate Samples**

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequency or LCS/LCSDs were analyzed in place of MS/MSD samples. Some pesticide, PCB, and organotin analytes were not spiked in the MS/MSD, so instrument accuracy could not be evaluated for these analytes. No results were qualified for MS/MSD recoveries outside of control limits when the spike concentration was greater than four times the sample concentration, or when the MS/MSD was analyzed on a non-project sample.

MS and MSD recoveries were within project-required control limits, except the pesticide 4,4'-DDT, which recovered below the project control limit in the MSD, and the MS/MSD RPD was above the control limit. The parent sample result was qualified "J" to indicate a potentially low bias. In the MS/MSD analyzed on sample BIS-03-011118, 4,4'-DDT recovered below 20% and the parent sample result was qualified "J" to indicate a potentially low bias.

See Table 2 for qualified data.

## Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency. All duplicate results were within project-required control limits.

## Method Reporting Limits

Detection limits were acceptable as reported. All values were reported using the laboratory detection limit. Values were reported as undiluted, or when diluted, the reporting limit reflects the dilution factor. Some detection limits were elevated due to dry weight correction.

## Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values, with the exceptions noted above. Precision was acceptable as demonstrated by the LCS/LCSD, MS/MSD, and laboratory and field duplicate RPD values, with the exceptions noted above. Most data are acceptable as reported; all other data are acceptable as qualified. Table 2 summarizes the qualifiers applied to the sample results reviewed in this report.

## Data Qualifier Definition

J Indicates an estimated value

**Table 2**  
**Data Qualification Summary**

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
MCN1-03-T-0111518	Pesticide	4,4'-DDT	5.1 µg/kg	5.1J µg/kg	MSD %R below control limit; MS/MSD RPD above control limit
BIS-03-011118	Pesticide	4,4'-DDT	4.5 µg/kg	4.5J µg/kg	MS/MSD %R below control limit

Notes:

%R: percent recovery

µg/mg: micrograms per kilogram

## References

- Anchor QEA (Anchor QEA, LLC), 2017. *Sampling and Analysis Plan, Lower Newport Bay Federal Channels Dredging*. Prepared for City of Newport Beach. December 2017.
- Krone, C.A., D.W. Brown, D.G. Burrows, R.G. Bogar, S.L. Chan, and U. Varanasi, 1989. "A method for analysis of butyltin species in measurement of butyltins in sediment and English sole livers from Puget Sound." *Marine Environmental Research* 27:1–18.
- SWRCB (State Water Resources Control Board), 2017. Measurement Quality Objectives Table 2. Surface Water Ambient Monitoring Program Quality Assurance Program Plan. Final Draft. May 2017.
- USEPA (U.S. Environmental Protection Agency), 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. Office of Solid Waste and Emergency Response. EPA-530/SW-846.
- USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.
- USEPA, 2017b. *National Functional Guidelines for Organic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA 540-R-2017-002. January 2017.

# Data Validation Report – USEPA Stage 2A

March 5, 2019

Project: Lower Newport Bay Federal Channels Dredging

Project Number: 180243-02.01

This report summarizes the review of analytical results for 15 sediment samples collected January 22, 23, and 24 and February 12 and 26, 2019. Samples were collected by Anchor QEA, LLC, and submitted to Eurofins Calscience, Inc. (ECI). The following analytical parameters are reviewed in this report:

- Total organic carbon (TOC) by U.S. Environmental Protection Agency (USEPA) Method 9060A
- Total solids (TS) by Standard Method (SM) 2540B
- Pyrethroids by USEPA Method 8270D (modified by triple quadrupole with electron ionization)
- Metals by USEPA Methods 6020 and 7471A
- Particle size by ASTM D4464 (modified)
- Organochlorine pesticides by USEPA Method 8081A
- PAHs and PCBs by USEPA Method 8270C in selective ion mode
- Organotins by Krone et. al (1989)

ECI sample data groups (SDGs) 19-01-1422, 19-01-1512, 19-01-1600, 19-02-0812, and 19-02-1994 are reviewed in this report. Sample identifiers, matrices, and analyses are presented in Table 1.

**Table 1**  
**Sample IDs, Matrices, and Analyses**

Sample ID	Laboratory Sample ID	Matrix	Analyses
LA3-REF-021219	19-02-0812-1	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC1-01-012319	19-01-1512-3	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC1-02-012319	19-01-1512-5	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC1-03-012319	19-01-1512-7	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC1-04-012319	19-01-1512-9	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC2-01-012419	19-01-1600-1	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC2-02-012419	19-01-1600-3	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC2-03-012419	19-01-1600-5	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins

Sample ID	Laboratory Sample ID	Matrix	Analyses
NC2-04-012219	19-01-1422-7	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC3-01-012219	19-01-1422-5	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC3-02-012219	19-01-1422-3	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC3-03-012219	19-01-1422-1	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC3-04-012319	19-01-1512-1	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC2-COMP	19-02-1944	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins
NC3-COMP	19-02-1944	Sediment	TOC, TS, pyrethroids, metals, particle size, pesticides, PAHs, PCBs, organotins

## Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QA/QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Sampling and Analysis Plan for Lower Newport Bay Federal Channels Dredging (Anchor QEA 2017)*
- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (USEPA 1986)*
- *National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2017a)*
- *National Functional Guidelines for Organic Superfund Methods Data Review (USEPA 2017b)*

Unless noted in this report, laboratory results for the samples listed above were within QC criteria.

## Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI at the time of sample receipt. Samples were received in good condition and within the recommended temperature range.

## Holding Times and Sample Preservation

Samples were appropriately preserved and analyzed within holding times.

## **Laboratory Method Blanks**

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes, except PCB 194 in SDG 19-02-0812. PCB 194 was not detected in the associated sample, and no data were qualified.

## **Field Quality Control**

No field QC samples were required for this sample set.

## **Surrogate Recoveries**

Surrogate recoveries were within the laboratory control limits.

## **Column Confirmation**

All detected pesticide results were confirmed by a second column, and results were within method control limits.

## **Laboratory Control Samples and Laboratory Control Duplicate Samples**

Laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs) were analyzed at the required frequency. Consistent with the method, some pesticide, PCB, and organotin analytes were not spiked in the LCS/LCSD, and instrument accuracy could not be evaluated for these analytes. All LCS/LCSD analyses resulted in recoveries and relative percent difference (RPD) values within project-required control limits, except for the following:

- SDGs 19-01-1422, 19-01-1512, 19-01-1600, and 19-02-0812 Organotins: Tributyltin recovered less than the control limit in the LCS and/or LCSD.
- SDG 19-01-1512 and 19-01-1600 PAHs: Benzo(k)fluoranthene, 1-methylnaphthalene, and pyrene recovered less than the control limit in the LCS.

Associated results were qualified "J" or "UJ" to indicate a potentially low bias. Qualified results are presented in Table 2.

**Table 2**  
**Data Qualification Summary**

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
LA3-REF-021219	Organotins	Tributyltin	3.1U µg/kg	3.1UJ µg/kg	LCS and LCSD %R less than control limit
	Metals	Chromium	38.6 mg/kg	38.6J mg/kg	MS and MSD %R above control limit
		Zinc	81.4 mg/kg	81.4J mg/kg	
		Lead	10.1 mg/kg	10.1J mg/kg	
	Pesticides	4,4'-DDE (p,p'-DDE)	17 µg/kg	17J µg/kg	MS and MSD %R value above control limit
		4,4'-DDD (p,p'-DDD)	1.8J µg/kg	1.8J µg/kg	MS and MSD %R value above control limit
NC1-01-012319	PAHs	1-Methylnaphthalene	0.0041U mg/kg	0.0041UJ mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.015J mg/kg	0.015J mg/kg	
		Pyrene	0.015J mg/kg	0.015J mg/kg	
	Organotins	Tributyltin	3.8J µg/kg	3.8J µg/kg	LCSD %R value less than control limit
	Metals	Zinc	151 mg/kg	151J mg/kg	MS and MSD %R value above control limit
NC1-02-012319	PAHs	1-Methylnaphthalene	0.0039U mg/kg	0.0039UJ mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.02 mg/kg	0.02J mg/kg	
		Pyrene	0.025 mg/kg	0.025J mg/kg	
	Organotins	Tributyltin	2.5U µg/kg	2.5UJ µg/kg	LCSD %R value below control limit
	Metals	Zinc	130 mg/kg	130J mg/kg	MS and MSD %R value above control limit
NC1-03-012319	PAHs	1-Methylnaphthalene	0.0035U mg/kg	0.0035UJ mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.0042U mg/kg	0.0042UJ mg/kg	
		Pyrene	0.011J mg/kg	0.011J mg/kg	
	Organotins	Tributyltin	2.8J µg/kg	2.8J µg/kg	LCSD %R value less than control limit
	Metals	Zinc	95.8 mg/kg	95.8J mg/kg	MS and MSD %R value greater than control limit

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
NC1-04-012319	PAHs	1-Methylnaphthalene	0.081 mg/kg	0.081J mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.089 mg/kg	0.089J mg/kg	
		Pyrene	0.087 mg/kg	0.087J mg/kg	
	Organotins	Tributyltin	3.9J µg/kg	3.9J µg/kg	LCSD %R value less than control limit
	Metals	Zinc	92.3 mg/kg	92.3J mg/kg	MS and MSD %R value greater than control limit
NC2-01-012419	PAHs	1-Methylnaphthalene	0.0037U mg/kg	0.0037UJ mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.0044U mg/kg	0.0044UJ mg/kg	
		Pyrene	0.013J mg/kg	0.013J mg/kg	
	Organotins	Tributyltin	7 µg/kg	7J µg/kg	LCSD %R value less than control limit
	Metals	Zinc	87.4 mg/kg	87.4J mg/kg	MS and MSD %R value greater than control limit
NC2-02-012419	PAHs	1-Methylnaphthalene	0.004U mg/kg	0.004UJ mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.0048U mg/kg	0.0048UJ mg/kg	
		Pyrene	0.0074J mg/kg	0.0074J mg/kg	
	Organotins	Tributyltin	2.5U µg/kg	2.5UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	102 mg/kg	102J mg/kg	MS and MSD %R value greater than control limit
NC2-03-012419	PAHs	1-Methylnaphthalene	0.0033U mg/kg	0.0033UJ mg/kg	LCS % R value less than control limit
		Benzo(k)fluoranthene	0.0039U mg/kg	0.0039UJ mg/kg	
		Pyrene	0.0064J mg/kg	0.0064J mg/kg	
	Organotins	Tributyltin	2.1U µg/kg	2.1UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	48.2 mg/kg	48.2J mg/kg	MS and MSD %R value greater than control limit
NC2-04-012219	Organotins	Tributyltin	2.5U µg/kg	2.5UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	100 mg/kg	100J mg/kg	MS and MSD %R value greater than control limit
	PAHs	Naphthalene	0.0059U mg/kg	0.0059UJ mg/kg	MS %R value less than control limit
NC3-01-012219	Organotins	Tributyltin	2.1U µg/kg	2.1UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	59.8 mg/kg	59.8J mg/kg	MS and MSD %R value greater than control limit
NC3-02-012219	Organotins	Tributyltin	2.3U µg/kg	2.3UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	49.5 mg/kg	49.5J mg/kg	MS and MSD %R value greater than control limit



Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
NC3-03-012219	Organotins	Tributyltin	1.9U µg/kg	1.9UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	25.3 mg/kg	25.3J mg/kg	MS and MSD %R value greater than control limit
NC3-04-012319	Organotins	Tributyltin	1.9U µg/kg	1.9UJ µg/kg	LCSD %R value less than control limit
	Metals	Zinc	23.5 mg/kg	23.5J mg/kg	MS and MSD %R value greater than control limit
	Pesticides	Aldrin	0.55U µg/kg	0.55UJ µg/kg	MS %R value less than control limit
		4,4'-DDE (p,p'-DDE)	6.4 µg/kg	6.4J µg/kg	MSD %R value less than control limit
	PAHs	1-Methylnaphthalene	0.0029U mg/kg	0.0029UJ mg/kg	LCS, MS and MSD %R value less than control limit
		Benzo(k)fluoranthene	0.0048J mg/kg	0.0048J mg/kg	LCS %R value less than control limit
		Pyrene	0.0064J mg/kg	0.0064J mg/kg	
		2-Methylnaphthalene	0.0029U mg/kg	0.0029UJ mg/kg	MS %R value less than control limit
		Benzo(g,h,i)perylene	0.0039J mg/kg	0.0039J mg/kg	MS and MSD %R value less than control limit
		Indeno(1,2,3-c,d)pyrene	0.0035J mg/kg	0.0035J mg/kg	
Naphthalene		0.0043U mg/kg	0.0043UJ mg/kg		
	Dibenzo(a,h)anthracene	0.0024U mg/kg	0.0024UJ mg/kg	MSD %R value less than control limit	
NC2-COMP	Pesticides	4,4'-DDE (p,p'-DDE)	14 µg/kg	14J µg/kg	MSD %R value greater than control limit
		Methoxychlor	0.85U µg/kg	0.85UJ µg/kg	MS and MSD %R value less than control limit
	PAHs	Benzo(g,h,i)perylene	7.2J µg/kg	7.2J µg/kg	MS %R value less than control limit

## Notes:

%R: percent recovery

µg/kg: micrograms per kilogram

mg/kg: milligrams per kilogram

J: indicates an estimated value

U: indicates the compound or analyte was analyzed for but not detected at or greater than the specified limit

UJ: indicates the compound or analyte was analyzed for but not detected and the specified limit reported is estimated

## Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequency or LCS/LCSDs were analyzed in place of MS/MSD samples. Consistent with the method, some pesticide, PCB, and organotin analytes were not spiked in the MS/MSD, and instrument accuracy could not be evaluated for these analytes. No results were qualified for MS/MSD recoveries outside of control limits when the spike concentration was greater than four times the sample concentration, or when the MS/MSD was analyzed on a non-project sample.

MS/MSD recoveries were within project-required control limits, except for the following:

- SDG 19-01-1422
  - PAHs: Naphthalene recovered less than the control limit in the MS analyzed on sample NC2-04-012219. The parent sample result was qualified "UJ" to indicate a potentially low bias.
- SDG 19-01-1512
  - Pyrethroids: Several compounds recovered greater than the control limit in the MS and/or MSD analyzed on sample NC3-04-012319 but were not detected in the parent sample, and no data were qualified.
  - Metals: Zinc recovered greater than the control limit in the MS and MSD analyzed on sample NC3-04-012319. Associated results were qualified "J" to indicate a potentially high bias.
  - Pesticides: Aldrin recovered less than the control limit in the MS analyzed on sample NC3-04-012319. The parent sample result was qualified "UJ" to indicate a potentially low bias. 4,4'-DDE recovered less than the control limit in the MSD, and the parent sample result was qualified "J" to indicate a potentially low bias.
  - PAHs: Several PAHs recovered less than the control limit in the MS and/or MSD analyzed on sample NC3-04-012319. Parent sample results were qualified "J" or "UJ" to indicate a potentially low bias.
- SDG 19-02-0812
  - Pyrethroids: Several compounds recovered greater than the control limit in the MS and/or MSD analyzed on sample LA-3-021219 but were not detected in the parent sample, and no data were qualified.
  - Pesticides: Several compounds recovered greater than the control limit in the MS and/or MSD analyzed on sample LA-3-021219. 4,4'-DDD and 4,4'-DDE were detected in the sample, and the results were qualified "J" to indicate a potentially high bias.
  - Metals: Chromium and zinc recovered greater than the control limit in the MS and MSD analyzed on sample LA-3-021219, and lead recovered greater than the control limit in the MSD. Associated results were qualified "J" to indicate a potentially high bias. All metals either recovered very low levels or did not recover in the post-digestion spike

(PDS), which appears to not have been spiked. No data were qualified based on PDS results.

- SDG 19-02-1944
  - Pyrethroids: Fenvalerate/esfenvalerate recovered greater than the control limits in the MS and MSD analyzed on sample NC2-COMP. The associated parent sample result was non-detect, and no data were qualified.
  - Pesticides: Methoxychlor recovered less than the control limit in the MS and MSD analyzed on sample NC2-COMP. 4,4'-DDE recovered greater than the control limit in the MSD analyzed on the same sample. Parent sample results were qualified "J" or "UJ" to indicate estimated values.
  - PAHs: Benzo(g,h,i)perylene recovered less than the control limit in the MS analyzed on sample NC2-COMP. The associated parent sample result was qualified "J" to indicate a potentially low bias.

Qualified results are presented in Table 2.

## Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency for TS. No duplicates were analyzed for particle size. All duplicate results were within project-required control limits.

## Method Detection Limits

Detection limits were acceptable as reported. All values were reported using the laboratory detection limits. Values were reported as undiluted, or when diluted, the detection limit reflects the dilution factor. Some detection limits were elevated due to dry weight correction.

## Overall Assessment

As determined by this evaluation, the laboratory followed the specified analytical methods, and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values, with the exceptions previously noted in this report. Precision was acceptable as demonstrated by the LCS/LCSD, MS/MSD, and laboratory duplicate RPD values. Most data are acceptable as reported; all other data are acceptable as qualified. Table 2 summarizes the qualifiers applied to the sample results reviewed in this report.

## References

- Anchor QEA (Anchor QEA, LLC), 2017. *Sampling and Analysis Plan*. Lower Newport Bay Federal Channels Dredging. Prepared for City of Newport Beach. December 2017.
- Krone, C.A., D.W. Brown, D.G. Burrows, R.G. Bogar, S.L. Chan, and U. Varanasi, 1989. "A method for analysis of butyltin species in measurement of butyltins in sediment and English sole livers from Puget Sound." *Marine Environmental Research* 27:1–18.
- USEPA (U.S. Environmental Protection Agency), 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. Office of Solid Waste and Emergency Response. EPA-530/SW-846.
- USEPA, 2017a. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.
- USEPA, 2017b. *National Functional Guidelines for Organic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA 540 R 2017-002. January 2017.

# Data Validation Report – USEPA Stage 2A

May 10, 2019

Project: Lower Newport Bay Federal Channels Dredging

Project Number: 180243-02.01

This report summarizes the review of analytical results for 32 samples collected February 26 and March 27, 2019. Samples were collected by Nautilus Environmental and submitted to Eurofins Calscience, Inc. (ECI). The following analytical parameters are reviewed in this report:

- Lipids by National Oceanic and Atmospheric Administration (NOAA; 1993)
- Mercury by U.S. Environmental Protection Agency (USEPA) Method 7471A

ECI sample data group (SDG) 19-03-2269 is reviewed in this report. Sample identifiers, the matrix, and analyses are presented in Table 1.

**Table 1**  
**Sample IDs, Matrices, an Analyses**

Sample ID	Laboratory Sample ID	Matrix	Analyses
T0-A-MACOMA-022619	19-03-2269-1	Tissue	Lipids, Mercury
T0-A-NEREIS-022619	19-03-2269-4	Tissue	Lipids, Mercury
LA-3-REF-A-MACOMA-032719	19-03-2269-12	Tissue	Lipids, Mercury
LA-3-REF-B-MACOMA-032719	19-03-2269-13	Tissue	Lipids, Mercury
LA-3-REF-C-MACOMA-032719	19-03-2269-14	Tissue	Lipids, Mercury
LA-3-REF-D-MACOMA-032719	19-03-2269-15	Tissue	Lipids, Mercury
LA-3-REF-E-MACOMA-032719	19-03-2269-16	Tissue	Lipids, Mercury
NC2-COMP-A-MACOMA-032719	19-03-2269-17	Tissue	Lipids, Mercury
NC2-COMP-B-MACOMA-032719	19-03-2269-18	Tissue	Lipids, Mercury
NC2-COMP-C-MACOMA-032719	19-03-2269-19	Tissue	Lipids, Mercury
NC2-COMP-D-MACOMA-032719	19-03-2269-20	Tissue	Lipids, Mercury
NC2-COMP-E-MACOMA-032719	19-03-2269-21	Tissue	Lipids, Mercury
NC3-COMP-A-MACOMA-032719	19-03-2269-22	Tissue	Lipids, Mercury
NC3-COMP-B-MACOMA-032719	19-03-2269-23	Tissue	Lipids, Mercury
NC3-COMP-C-MACOMA-032719	19-03-2269-24	Tissue	Lipids, Mercury
NC3-COMP-D-MACOMA-032719	19-03-2269-25	Tissue	Lipids, Mercury
NC3-COMP-E-MACOMA-032719	19-03-2269-26	Tissue	Lipids, Mercury
LA-3-REF-A-NEREIS-032719	19-03-2269-32	Tissue	Lipids, Mercury
LA-3-REF-B-NEREIS-032719	19-03-2269-33	Tissue	Lipids, Mercury
LA-3-REF-C-NEREIS-032719	19-03-2269-34	Tissue	Lipids, Mercury
LA-3-REF-D-NEREIS-032719	19-03-2269-35	Tissue	Lipids, Mercury

Sample ID	Laboratory Sample ID	Matrix	Analyses
LA-3-REF-E-NEREIS-032719	19-03-2269-36	Tissue	Lipids, Mercury
NC2-COMP-A-NEREIS-032719	19-03-2269-37	Tissue	Lipids, Mercury
NC2-COMP-B-NEREIS-032719	19-03-2269-38	Tissue	Lipids, Mercury
NC2-COMP-C-NEREIS-032719	19-03-2269-39	Tissue	Lipids, Mercury
NC2-COMP-D-NEREIS-032719	19-03-2269-40	Tissue	Lipids, Mercury
NC2-COMP-E-NEREIS-032719	19-03-2269-41	Tissue	Lipids, Mercury
NC3-COMP-A-NEREIS-032719	19-03-2269-37	Tissue	Lipids, Mercury
NC3-COMP-B-NEREIS-032719	19-03-2269-38	Tissue	Lipids, Mercury
NC3-COMP-C-NEREIS-032719	19-03-2269-39	Tissue	Lipids, Mercury
NC3-COMP-D-NEREIS-032719	19-03-2269-40	Tissue	Lipids, Mercury
NC3-COMP-E-NEREIS-032719	19-03-2269-41	Tissue	Lipids, Mercury

## Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QA/QC) guidelines outlined in the analytical procedures. Laboratory results were reviewed using the laboratory control limits and the following guidelines:

- *Sampling and Analysis Plan for Lower Newport Bay Federal Channels Dredging (Anchor QEA 2017)*
- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (USEPA 1986)*
- *National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2017)*

Unless noted in this report, laboratory results for the samples listed above were within QC criteria.

## Field Documentation

Field documentation was checked for completeness and accuracy. The chain-of-custody forms were signed by ECI at the time of sample receipt. Samples were received in good condition and within the recommended temperature range.

## Holding Times and Sample Preservation

Samples were appropriately preserved and analyzed within holding times.

## Laboratory Method Blanks

Laboratory method blanks were analyzed at the required frequencies. All method blanks were free of target analytes.

## Field Quality Control

No field QC samples were required for this sample set.

## Laboratory Control Samples

Laboratory control samples (LCSs) were analyzed at the required frequency. All LCS analyses resulted in recoveries within project-required control limits.

## Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed at the required frequency. MS and/or MSD recoveries were less than control limits for all samples. The MS recovery for sample TO-A-NEREIS-022819 and the MS/MSD recovery for sample NC3-COMP-D-NEREIS-032718 were less than control limits. Associated batch samples were qualified as estimated. Qualified results are presented in Table 2.

**Table 2**  
**Data Qualification Summary**

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
LA3-REF-A-MACOMA-032719	Metals	Mercury	0.00721J mg/kg	0.00721J mg/kg	MS %R less than control limit
LA3-REF-A-NEREIS-032719	Metals	Mercury	0.00628J mg/kg	0.00628J mg/kg	MS %R less than control limit
LA3-REF-B-MACOMA-032719	Metals	Mercury	0.00707J mg/kg	0.00707J mg/kg	MS %R less than control limit
LA3-REF-B-NEREIS-032719	Metals	Mercury	0.0218 mg/kg	0.0218J mg/kg	MS %R less than control limit
LA3-REF-C-MACOMA-032719	Metals	Mercury	0.0175 mg/kg	0.0175J mg/kg	MS %R less than control limit
LA3-REF-C-NEREIS-032719	Metals	Mercury	0.00519J mg/kg	0.00519J mg/kg	MS %R less than control limit
LA3-REF-D-MACOMA-032719	Metals	Mercury	0.00919J mg/kg	0.00919J mg/kg	MS %R less than control limit
LA3-REF-E-MACOMA-032719	Metals	Mercury	0.0143 mg/kg	0.0143J mg/kg	MS %R less than control limit
NC2-COMP-A-MACOMA-032719	Metals	Mercury	0.0197 mg/kg	0.0197J mg/kg	MS %R less than control limit
NC2-COMP-B-MACOMA-032719	Metals	Mercury	0.0155 mg/kg	0.0155J mg/kg	MS %R less than control limit
NC2-COMP-C-MACOMA-032719	Metals	Mercury	0.0224 mg/kg	0.0224J mg/kg	MS %R less than control limit
NC2-COMP-D-MACOMA-032719	Metals	Mercury	0.0137 mg/kg	0.0137J mg/kg	MS %R less than control limit

Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
NC2-COMP-E-MACOMA-032719	Metals	Mercury	0.0228 mg/kg	0.0228J mg/kg	MS %R less than control limit
NC3-COMP-A-MACOMA-032719	Metals	Mercury	0.0122 mg/kg	0.0122J mg/kg	MS %R less than control limit
NC3-COMP-B-MACOMA-032719	Metals	Mercury	0.0127 mg/kg	0.0127J mg/kg	MS %R less than control limit
NC3-COMP-C-MACOMA-032719	Metals	Mercury	0.015 mg/kg	0.015J mg/kg	MS %R less than control limit
NC3-COMP-D-MACOMA-032719	Metals	Mercury	0.0124 mg/kg	0.0124J mg/kg	MS %R less than control limit
NC3-COMP-E-MACOMA-032719	Metals	Mercury	0.0144 mg/kg	0.0144J mg/kg	MS %R less than control limit
T0-A-MACOMA-022619	Metals	Mercury	0.00535J mg/kg	0.00535J mg/kg	MS %R less than control limit
T0-A-NEREIS-022619	Metals	Mercury	0.0302 mg/kg	0.0302J mg/kg	MS %R less than control limit
LA3-REF-D-NEREIS-032719	Metals	Mercury	0.023 mg/kg	0.023J mg/kg	MS/MSD %R less than project control limits
LA3-REF-E-NEREIS-032719	Metals	Mercury	0.0254 mg/kg	0.0254J mg/kg	MS/MSD %R less than project control limits
NC2-COMP-A-NEREIS-032719	Metals	Mercury	0.0239 mg/kg	0.0239J mg/kg	MS/MSD %R less than project control limits
NC2-COMP-B-NEREIS-032719	Metals	Mercury	0.0213 mg/kg	0.0213J mg/kg	MS/MSD %R less than project control limits
NC2-COMP-C-NEREIS-032719	Metals	Mercury	0.00924J mg/kg	0.00924J mg/kg	MS/MSD %R less than project control limits
NC2-COMP-D-NEREIS-032719	Metals	Mercury	0.0235 mg/kg	0.0235J mg/kg	MS/MSD %R less than project control limits
NC2-COMP-E-NEREIS-032719	Metals	Mercury	0.011 mg/kg	0.011J mg/kg	MS/MSD %R less than project control limits
NC3-COMP-A-NEREIS-032719	Metals	Mercury	0.0197 mg/kg	0.0197J mg/kg	MS/MSD %R less than project control limits
NC3-COMP-B-NEREIS-032719	Metals	Mercury	0.0229 mg/kg	0.0229J mg/kg	MS/MSD %R less than project control limits
NC3-COMP-C-NEREIS-032719	Metals	Mercury	0.0253 mg/kg	0.0253J mg/kg	MS/MSD %R less than project control limits



Sample ID	Parameter	Analyte	Reported Result	Qualified Result	Reason
NC3-COMP-D-NEREIS-032719	Metals	Mercury	0.00842J mg/kg	0.00842J mg/kg	MS/MSD %R less than project control limits
NC3-COMP-E-NEREIS-032719	Metals	Mercury	0.0259 mg/kg	0.0259J mg/kg	MS/MSD %R less than project control limits

Notes:

%R: percent recovery

J: indicates an estimated value

mg/kg: milligrams per kilogram

## Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency for lipids. All duplicate results were within project-required control limits.

## Method Detection Limits

Detection limits were acceptable as reported. All values were reported using the laboratory detection limits. Values were reported as undiluted, or when diluted, the detection limit reflects the dilution factor.

## Overall Assessment

As was determined by this evaluation, the laboratory followed the specified analytical methods, and all requested sample analyses were completed. Accuracy was acceptable as demonstrated by the surrogate, LCS, and MS/MSD recovery values. Precision was acceptable as demonstrated by the MS/MSD and laboratory duplicate relative percent difference (RPD) values. Most data are acceptable as reported.

## References

Anchor QEA (Anchor QEA, LLC), 2017. *Sampling and Analysis Plan*. Lower Newport Bay Federal Channels Dredging. Prepared for City of Newport Beach. December 2017.

NOAA (National Oceanic and Atmospheric Administration), 1993. *Sampling and Analytical Methods of the National Status and Trends Program, National Benthic Surveillance and Mussel Watch Projects, 1984-1992 Volume I. Overview and Summary of Methods*. Coastal Monitoring and Bioeffects Assessment Division, Office of Ocean Resources Conservation and Assessment, National Ocean Service. July 1993.

USEPA (U.S. Environmental Protection Agency), 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. Office of Solid Waste and Emergency Response. EPA-530/SW-846.

USEPA, 2017. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-001. January 2017.

## Appendix H

# Lower Newport Bay Data Compilation

---

# Memorandum

April 12, 2019

To: Melissa Scianni and Allan Ota, U.S. Environmental Protection Agency

From: Chris Osuch and Adam Gale, Anchor QEA, LLC

cc: Chris Miller, City of Newport Beach

## Re: Lower Newport Bay Data Compilation

The City of Newport Beach and U.S. Army Corps of Engineers (USACE) are proposing to conduct maintenance dredging within the federal channels in Lower Newport Bay, California. Sediment core sampling was conducted in January 2018, and composite samples and individual cores were submitted for analysis. All composite samples passed bioassay and bioaccumulation testing; however, elevated concentrations of mercury, DDTs, and polychlorinated biphenyls (PCBs) were measured in sediment. Testing results were presented in a Sampling and Analysis Report (SAR) to the Dredged Material Management Team on July 25, 2018. Following this meeting, USEPA requested a comprehensive summary of past data from Newport Bay to support the suitability determination, including historical sediment mercury, DDT, and PCB data; bioassay testing data; and bioaccumulation tissue data. This memorandum presents the data compilation.

Historical sediment and tissue chemistry and bioassay testing results are presented in Table 1. Sampling locations are presented in Attachment A. The data compilation was developed using available historical data from 2003 to 2019, including dredge material evaluations, post-dredge sediment sampling investigations, and a feasibility study (i.e., Rhine Channel). The data compilation consisted of the following studies:

- Lower Newport Federal Channel Tier III evaluation in 2003 (Weston 2007)
- Rhine Channel sediment remediation feasibility study in 2004 and 2005 (Anchor 2006)
  - Sediment cores were segmented into multiple intervals to delineate contamination and aid in the remediation design. Contaminated material was later dredged in 2011.
- Regional General Permit (RGP) 54 dredged material evaluation in 2005 (Weston 2005)
- Lower Newport Federal Channel Tier IV evaluation in 2006 (Weston 2007)
  - Testing included side-by-side amphipod testing to further evaluate toxicity observed in 2003.
- Balboa Marina dock replacement dredged material evaluation in 2007 (Newfields 2007)
- Marina Park Master Plan dredged material evaluation in 2008 (Newfields 2009a)
- Lower Newport Federal Channels dredged material evaluation in 2009 (Newfields 2009b)
  - Due to the large number of individual core samples analyzed as part of this project, individual core data are presented separately in Attachment B.
- Harbor Island and Linda Isle Channels dredged material evaluation in 2011 (Newfields 2012a)

- RGP 54 dredged material evaluation in 2011 (Newfields 2012b)
- 43 Linda Isle dredged material evaluation in 2011 (Anchor QEA 2012)
- Rhine Channel post-dredge confirmatory sampling in 2012 (Anchor QEA 2013a)
- Lower Newport Federal Channels post-dredge sampling in 2012 and 2013 (Anchor QEA 2013b)
- RGP 54 dredged material evaluation in 2013, including preliminary testing to determine compositing scheme (Anchor QEA 2013c, 2013d)
- Balboa Marina West expansion dredged material evaluation (Newfields 2014)
- Balboa Marina West Tier I evaluation with confirmatory chemistry (Anchor QEA 2017)
- RGP 54 dredged material evaluation in 2018 (Anchor QEA 2018a)
- Lower Newport Federal Channels dredged material evaluation in 2018 (Anchor QEA 2018b)
- Newport Channel sampling in 2019, conducted as part of the Lower Newport Federal Channels project (Nautilus 2019; Anchor QEA 2019)
  - Tissue chemistry is currently underway. All data will be incorporated into an updated Lower Newport Federal Channels SAR.

## References

Anchor (Anchor Environmental), 2006. *Rhine Channel Sediment Remediation Feasibility Study and Alternatives Evaluation, Newport Bay, California*. January 2006.

Anchor QEA (Anchor QEA, LLC), 2012. *Sampling and Analysis Report 43 Linda Isle Maintenance Dredging*. January 2012.

Anchor QEA, 2013a. Technical Memorandum to: Chris Miller, City of Newport Beach. Regarding: Post Dredge Confirmatory Sampling Results and Environmental Benefits of Dredging for the Rhine Channel Contaminated Sediment Cleanup Project. December 17, 2013.

Anchor QEA, 2013b. *Water Quality and Sediment Monitoring Report Lower Newport Bay Federal Dredging*. July 2013.

Anchor QEA, 2013c. Memorandum to: Allan Ota, U.S. Environmental Protection Agency; Cori Farrar, U.S. Army Corps of Engineers; Jack Gregg, California Coastal Commission. Regarding: RGP 54 Sediment Characterization: Preliminary Results for Sampling Compositing. July 22, 2013.

Anchor QEA, 2013d. *Sampling and Analysis Report Regional General Permit 54 Sediment Characterization*. October 2013.

Anchor QEA, 2017. *Sampling and Analysis Report Balboa Marina West Dredging and Public/Transient Dock Development*. December 2017.

Anchor QEA, 2018a. *RGP 54 Sediment Characterization Sampling and Analysis Report*. June 2018.

Anchor QEA, 2018b. *Lower Newport Bay Federal Channels Dredging Sampling and Analysis Program Report*. July 2018.

Anchor QEA, 2019. Validated Chemistry Tables for Newport Channel.

Nautilus, 2019. Preliminary Bioassay Tables for Newport Channel.

Newfields, 2007. *Dredged Material Evaluation for the Balboa Marina Dock Replacement Project*. November 2007.

Newfields, 2009a. *Dredged Material Evaluation for the Marina Park Master Plan Newport Beach, California*. November 2009.

Newfields, 2009b. *Dredged Material Evaluation of Lower Newport Bay, Newport Beach, California*. November 2009.

Newfields, 2012a. *Harbor Island and Linda Isle Channels Dredged Material Evaluation*. March 21, 2012.

Newfields, 2012b. *Dredged Material Evaluation to Support the Renewal of Regional General Permit - 54*. March 5, 2012.

Newfields, 2014. *Balboa Marina West Expansion Project Dredged Material Evaluation Sampling and Analysis Report*. February 7, 2014.

Weston (Weston Solutions, Inc.), 2005. *Dredged Material Evaluation for the Renewal of Regional General Permit-54, Newport Beach, California*. November 2005.

Weston, 2007. *Tier IV Evaluation of the Lower Newport Bay Federal Newport Beach, California*. February 2007.

## Table

---

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2003				2004-2005																				
	Project		Lower Newport Federal Channel Tier III (Weston 2007)				Rhine Channel Sediment Remediation Feasibility Study (Anchor QEA 2006)																				
	Sample ID	Area 1	Area 2	Area 3	Area 4	RS04-01-0-60	RS04-01-60-120	RS04-01-120-140	RS04-01-140-150	RS04-01-150-200	RS04-02-0-30	RS04-02-30-45	RS04-02-45-59	RS04-02-65-72	RS04-03-0-30	RS04-03-30-38	RS04-03-38-68	RS04-03-68-86	RS04-04-0-25	RS04-04-25-50	RS04-04-50-99	RS04-05-0-60	RS04-05-60-134	RS04-06-0-40	RS04-06-40-120	RS04-06-120-200	
	Sample Date	2003	2003	2003	2003	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004
ERL	ERM																										
<b>Metals (mg/kg, dry weight)</b>																											
Mercury	0.15	0.71	0.09	0.72	0.34	0.39	3.66	5.29	2.3	1.39	0.23	2.43	2.38	1.31	0.23	2.29	2.02	1.1	0.29	3.68	2.82	0.94	2.98	0.25	3.18	1.2	0.45
<b>PCBs (µg/kg, dry weight)</b>																											
Total PCB Aroclors (U = 0)	22.7	180	10 U	10 U	10 U	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	--	--	--	--	51.6	364	0.0	0.0	0.0	75.2	0.0	0.0	0.0	122	0.0	0.0	0.0	151.8	0.0	0.0	0.0	0.0	75.1	0.0	0.0
<b>Pesticides (µg/kg, dry weight)</b>																											
Total DDx (U = 0)	1.58	46.1	29.6	67.3	38.9	162	0.0	193	0.0	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Solid Phase Toxicity (% Survival)</b>																											
<i>Eohaustorius estuarius</i>	--	--	41	54	51 / 23 <sup>2</sup>	28 / 31 <sup>3</sup> / 15 <sup>4</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	94	94	100	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	No	No	No	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																											
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	>100 / >100	>100 / >100	>100 / >100	>100 / 79.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	>100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	>100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	Yes	Yes	Yes	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																											
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2004-2005																							
	Project		Rhine Channel Sediment Remediation Feasibility Study (Anchor QEA 2006)																							
	Sample ID	RS04-07-0-60	RS04-07-60-171	RS04-08-0-30	RS04-08-30-90	RS04-09-0-35	RS04-09-35-110	RS04-10-0-55	RS04-10-55-83	RS04-11-0-43	RS04-11-50-63	RS04-12-0-45	RS04-12-66-99	RS04-13-0-50	RS04-13-50-83	RS04-14-0-40	RS04-14-40-59	RS04-15-0-40	RS04-15-40-80	RS04-15-80-95	RS04-16-0-50	RS04-16-50-100	RS04-16-100-150	RS2-14-0-47	RS2-14-70-86	
		Sample Date	0-60 cm	60-171 cm	0-30 cm	30-90 cm	0-35 cm	35-110 cm	0-55 cm	55-83 cm	0-43 cm	50-63 cm	0-45 cm	66-99 cm	0-50 cm	50-83 cm	0-40 cm	40-59 cm	0-40 cm	40-80 cm	80-95 cm	0-50 cm	50-100 cm	cm	0-47 cm	70-86 cm
ERM	ERM																									
<b>Metals (mg/kg, dry weight)</b>																										
Mercury	0.15	0.71	3.63	0.15	2.87	0.19	1.74	0.11	1.12	0.12	1.75	0.35	1.77	0.07	2.76	0.44	1.95	2.14	2.07	0.7	0.08	2.42	2.8	0.73	10	0.007
<b>PCBs (µg/kg, dry weight)</b>																										
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congener (U = 0)	22.7	180	35.2	0.0	0.0	0.0	37	0.0	49.4	0.0	116	0.0	47.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	382	0.0	0.0	--	--
<b>Pesticides (µg/kg, dry weight)</b>																										
Total DDX (U = 0)	1.58	46.1	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--
<b>Solid Phase Toxicity (% Survival)</b>																										
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Suspended Particulate Phase Toxicity (%)</b>																										
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Sediment-Water Interface (% Normal Alive)</b>																										
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2004-2005				2005																	2006									
	Project		Rhine Channel Sediment Remediation Feasibility Study (Anchor QEA 2006)				Regional General Permit 54 (Weston 2005)																	Lower Newport Federal Channel Tier IV Evaluation (Weston 2007)									
	Sample ID	RS2-14-104-118	RS2-16-0-53	RS2-16-70-90	RS2-16-130-140	Area 1 Comp	Area 2 Comp	Area 3a Comp	Area 3b Comp	Area 4a Comp	Area 4b Comp	Station 2-1	Station 2-2	Station 2-3	Station 2-4	Station 2-5	Station 2-6	Station 2-7	Station 3-1	Station 3-2	Station 3-3	Station 3-4	Station 3-5	Station 3-6	Area 1	Area 2	Area 2b	Area 2c	Area 3	Area 3b	Area 4	Area 4b	
		Sample Date	cm	cm	cm	cm	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	5/2005	7/24-26/2006	7/24-26/2006	7/24-26/2006	7/24-26/2006	7/24-26/2006	7/24-26/2006	7/24-26/2006	7/24-26/2006
ERL	ERM																																
<b>Metals (mg/kg, dry weight)</b>																																	
Mercury	0.15	0.71	0.064	4.81	0.132	0.063	0.82	0.29	0.14	0.35	0.18	0.13	0.31	0.31	0.57	0.47	0.3	0.32	0.12	0.06 U	0.8	0.10 U	0.2	0.18	0.2	0.21	0.73	1.42	0.2	0.6	0.15	0.25	0.12
<b>PCBs (µg/kg, dry weight)</b>																																	
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	32	20 U	20 U	22	20 U	20 U	19 U	26	25	20 U	20 U	19 U	20 U	19 U	37	39 U	20 U	39 U	19 U	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Pesticides (µg/kg, dry weight)</b>																																	
Total DDx (U = 0)	1.58	46.1	--	--	--	--	28	34.5	48.4	34.8	24	16.3	3.1	73.2	35.2	58	18.1	29.3	10	25.4	25	29.4	24.1	92	64.4	60.4	42.5	61	67.2	55.6	46.8	95.6	76.8
<b>Solid Phase Toxicity (% Survival)</b>																																	
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	75	66 / 53	8 / 7	58 / 58	74	82	--	--	--	--	--	--	--	--	--	--	--	--	--	51	60	38	75	36	64	26	49
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	86	82	84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	63	61	74	57	61	59	50	47
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	90	94	87	91	93	91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	No	No	No	Yes (LA-3 only)	No	Yes (LA-3 only)	No	No
<b>Suspended Particulate Phase Toxicity (%)</b>																																	
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	>100 / >100	>100 / >100	>100 / 67	>100 / 91	>100 / >100	>100 / >100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	>100	>100	>100	74.1	>100	>100	57.9	62.8
Meets LPC (Yes/No)	--	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--	--	--	--	--	--	--	Yes	Yes	Yes	No STFATE	Yes	Yes	No STFATE	No STFATE	
<b>Sediment-Water Interface (% Normal Alive)</b>																																	
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																																	
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	0.0049 U	0.005 U	0.0047 U	0.0046 U	0.0047 U	0.0049 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	0.009 U - 0.01 U	0.01 U - 0.01 U	0.009 U - 0.01 U	0.009 U - 0.01 U	0.009 U - 0.01 U	0.009 U - 0.01 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	12.2	9.7	13.8	17.8	6.7	9.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	11 - 14	7.9 - 11	11 - 19	12 - 25	5.5 - 8.4	5 U - 17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																																	
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	0.005 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.0049 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	0.01 U - 0.01 U	0.01 U - 0.01 U	0.009 U - 0.01 U	0.01 U - 0.01 U	0.009 U - 0.01 U	0.009 U - 0.01 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	33.2	29.6	30.5	32.4	20	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	28 - 35	23.9 - 36	24.8 - 42.5	28.2 - 35.1	16 - 22	15 - 17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2007				2008										2008							
	Project		Balboa Marina (Newfields 2007)				Marina Park (Newfields 2009a)										Marina Park (Newfields 2009a)							
	Sample ID	CH COMP	WM COMP	CM COMP	EM COMP	A-U COMP	A-L COMP	B-U COMP	B-L COMP	C-U COMP	C-L COMP	MP-10 Upper	MP-10 Lower	MP-12 Upper	MP-12 Lower	MP-14 Upper	MP-14 Lower	MP-16 Upper	MP-16 Lower	MP-13 Upper	MP-13 Lower	MP-15 Upper	MP-15 Lower	
	Sample Date	5/30-31/07	5/30-31/07	5/30-31/07	5/30-31/07	11/28/2008	11/28/2008	11/28/2008	11/28/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	12/12/2008	
ERL	ERM																							
<b>Metals (mg/kg, dry weight)</b>																								
Mercury	0.15	0.71	0.23	0.29	0.24	0.2	0.05 U	0.06 U	0.05	0.05 U	0.36	0.05 U	0.1	0.06 U	0.31	0.07 U	0.85	0.06 U	0.07	0.05 U	1.11	0.05 U	3.35	0.05 U
<b>PCBs (µg/kg, dry weight)</b>																								
Total PCB Aroclors (U = 0)	22.7	180	53	198	110	55	20 U	20 U	20 U	20 U	20 U	19 U	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	--	--	--	--																		
<b>Pesticides (µg/kg, dry weight)</b>																								
Total DDx (U = 0)	1.58	46.1	124	117	55.3	84	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.9 U	--	--	--	--	--	--	--	--	--	--	--	--
<b>Solid Phase Toxicity (% Survival)</b>																								
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	90	88	87	92	--	--	--	--	87	89	--	--	--	--	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	84	84	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	88	88	82	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	Yes	Yes	Yes	Yes	--	--	--	--	Yes	Yes	--	--	--	--	--	--	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																								
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	-- / 78.3	-- / >100	-- / >100	-- / >100	--	--	--	--	-- / >100	-- / >100	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	>100	--	--	--	--	>100	>100	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	>100	--	--	--	--	>100	>100	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	Yes	Yes	Yes	Yes	--	--	--	--	Yes	Yes	--	--	--	--	--	--	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																								
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																								
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	0.011	0.009	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	0.010 - 0.013	0.009 U - 0.01 U	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	30.4	27.1	20.8	24.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	0	8.81	7.68	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																								
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	0.01	0.009	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	0.009 U - 0.011	0.009 U - 0.01 U	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	103	105	70.1	77.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	10.9	52.3	10.2	7.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	NA <sup>5</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2009													2011									
	Project		Lower Newport Bay (Newfields 2009b) <sup>6</sup>													Harbor Island and Linda Isle Channels (Newfields 2012a)									
	Sample ID	BR	HIR	LIN	LIS	WLB	YAN	YAM-U	YAM-L	YAS-U	YAS-L	UNC	BICI	BC	HILI-A	HILI-B	HT-5	HT-6	HT-7	HT-8	HT-9	HT-10			
	Sample Date	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	5/12-18/09	10/12/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011		
ERL	ERM																								
<b>Metals (mg/kg, dry weight)</b>																									
Mercury	0.15	0.71	0.23	0.25	1.06	0.46	0.58	0.29	0.16	0.56	0.26	0.46	0.26	0.42	1.62	0.56	1.15	0.27	0.59	0.91	0.99	0.48	1.82		
<b>PCBs (µg/kg, dry weight)</b>																									
Total PCB Aroclors (U = 0)	22.7	180	28.9	31.8	50.0	35.4	38.5	42.9	24.0	67.0	35.6	69.0	27.5	35.8	85.0	--	--	--	--	--	--	--	--	--	
Total PCB Congener (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	24.4	34.4	--	--	--	--	--	--	--	
<b>Pesticides (µg/kg, dry weight)</b>																									
Total DDx (U = 0)	1.58	46.1	63	115	57	47	69	107	71	152	77	126	39.3	67.9	86	73.3	43.7	--	--	--	--	--	--	--	
<b>Solid Phase Toxicity (% Survival)</b>																									
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Ampelisca abdita</i>	--	--	93	90	90	92	91	96	95	93	94	84	94	93	93	92	94	--	--	--	--	--	--	--	
<i>Neanthes arenaceodentata</i>	--	--	96	96	96	100	96	76 / 98	100	92	100	92	96	100	92	92	100	--	--	--	--	--	--	--	
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Pass benthic test (Yes/No)	--	--	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--	--	
<b>Suspended Particulate Phase Toxicity (%)</b>																									
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- / >100	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	>100	>100	>100	--	>100	--	--	--	--	--	--	
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	>100	>100	>100	--	>100	--	--	--	--	--	--	
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	>100	>100	>100	--	>100	--	--	--	--	--	--	
Meets LPC (Yes/No)	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--	--	
<b>Sediment-Water Interface (% Normal Alive)</b>																									
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																									
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	0.021	0.017	--	--	--	0.017	--	0.014	0.017	0.019	0.024	0.013	0.019	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	0.019 - 0.023	0.015 - 0.021	--	--	--	0.015 - 0.018	--	0.011 - 0.016	0.014 - 0.02	0.017 - 0.02	0.016 - 0.03	0.012 - 0.014	0.017 - 0.021	--	--	--	--	--	--	--	
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	23.9	42.1	34.4	25.7	25.5	55.2	36.4	79.8	47.7	78.4	22.8	40.7	23.4	--	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	19 - 29	34 - 48	25.6 - 42	21.2 - 30.9	18.5 - 33.6	36.3 - 66	28 - 40.6	62 - 89.6	39.8 - 53	57 - 96	21.9 - 25.5	21.7 - 62	19.2 - 34	--	--	--	--	--	--	--	--	--	
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																									
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	0.010	0.009	--	--	--	0.009	--	0.009	0.01	0.008	0.009	0.006	0.006	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	0.008 - 0.012	0.007 - 0.01	--	--	--	0.008 - 0.009	--	0.008 - 0.01	0.008 - 0.011			0.005 - 0.006	0.006 - 0.007	--	--	--	--	--	--	--	
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	43.2	62.2	63.6	26.1	37.4	61.5	35.5	94.2	52.4	113.4	29.7	40.7	21.5	--	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	27 - 53	55 - 70	59 - 67	13 - 51	22 - 61.6	22.6 - 84	23.5 - 65.3	59 - 140	34.5 - 73	98 - 131	15.5 - 44.5	28.7 - 48	13 - 36	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	2.0 U <sup>7</sup>	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2011											2012													
	Project		Regional General Permit 54 (Newfields 2012b)									43 Linda Isle (Anchor QEA 2012)		Rhine Channel Post-Dredge Confirmatory Sampling (Anchor QEA 2013a)													
	Sample ID	Area 1a	Area 2	Area 4	Area 1	A2	A3	A4	A1	A5	A6	LI-DU1-COMP	RC-01-SC-0.0-0.5	RC-01-SC_0.5-1.0	RC-01-SC_1.0-1.5	RC-02-SC_0.0-0.5	RC-02-SC_0.5-1.0	RC-02-SC_1.0-1.5	RC-03-SC-0.0-0.5	RC-03-SC_0.5-1.0	RC-03-SC_1.0-1.5	RC-04-SC_0.0-0.5	RC-04-SC_0.5-1.0	RC-04-SC_1.0-1.5	RC-05-SC-0.0-0.5	RC-05-SC_0.5-1.0	
	Sample Date	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	5/3-6/2011	8/30/2011	12/12/2012	12/12/2012	12/12/2012	12/11/2012	12/11/2012	12/11/2012	12/12/2012	12/12/2012	12/12/2012	12/11/2012	12/11/2012	12/11/2012	12/19/2012	12/19/2012	
ERL	ERM																										
<b>Metals (mg/kg, dry weight)</b>																											
Mercury	0.15	0.71	0.18	0.6	0.06	0.19	0.07	0.52	0.18	1.36	1.07	1.67	0.171	8.6	0.686	0.202	1.2	3.52	12.4	3.2	0.53	0.997	3.6	1.87	1.96	1.3	0.738
<b>PCBs (µg/kg, dry weight)</b>																											
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	2.3	25.2	25.5	0.9 U	0.9 U	89.7	12.3	--	--	--	0.1 U	94.22 J	15.46 J	8.95 J	15.78 J	177.84 J	604.4	203.0	26.06 J	40.97 J	37.95 J	75.48 J	108.23 J	35.18 J	34.34 J
<b>Pesticides (µg/kg, dry weight)</b>																											
Total DDX (U = 0)	1.58	46.1	2.2	15.6	2.7	2.0	1.8 U	1.8	5.2	--	--	--	12.2	9.8	2.5	0.89 J	2.1	12.5	27.0	9.9	2.3	4.48 J	18.1	10.1 J	13.3J	5.49 J	4.42 J
<b>Solid Phase Toxicity (% Survival)</b>																											
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	93	94	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	98	98	98	--	--	--	--	--	--	--	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	Yes	Yes	Yes	--	--	--	--	--	--	--	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																											
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	-- / >100	-- / >100	-- / >100	--	--	--	--	--	--	--	-- / 50.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	--	--	--	--	--	--	--	>100	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	--	--	--	--	--	--	--	>100	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	Yes	Yes	Yes	--	--	--	--	--	--	--	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																											
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	0.025	0.021	0.009	--	--	--	--	--	--	--	0.022	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	0.013 - 0.016	0.018 - 0.023	0.01 - 0.015	--	--	--	--	--	--	--	0.019 - 0.024	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	67.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	28.8 - 52.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	0.010	0.011	0.012	--	--	--	--	--	--	--	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	0.009 - 0.012	0.009 - 0.012	0.01 - 0.015	--	--	--	--	--	--	--	0.002 - 0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	1 U - 4.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2012																							
	Project		Rhine Channel Post-Dredge Confirmatory Sampling (Anchor QEA 2013a)																							
	Sample ID	RC-05-SC_1.0-1.5	RC-06-SC_0.0-0.5	RC-06-SC_0.5-1.0	RC-06-SC_1.0-1.5	RC-07-SC_0.0-0.5	RC-07-SC_0.5-1.0	RC-07-SC_1.0-1.5	RC-08-SC_0.0-0.5	RC-08-SC_0.5-1.0	RC-08-SC_1.0-1.5	RC-09-SC_0.0-0.5	RC-09-SC_0.5-1.0	RC-09-SC_1.0-1.5	RC-10-SC_0.0-0.5	RC-10-SC_0.5-1.0	RC-10-SC_1.0-1.5	RC-11-SC_0.0-0.5	RC-11-SC_0.5-1.0	RC-11-SC_1.0-1.5	RC-02-SG	RC-04-SG	RC-06-SG	RC-08-SG		
	Sample Date	12/19/2012	12/11/2012	12/11/2012	12/11/2012	12/19/2012	12/19/2012	12/19/2012	12/11/2012	12/11/2012	12/11/2012	12/19/2012	12/19/2012	12/19/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	12/11/2012	
ERL	ERM																									
<b>Metals (mg/kg, dry weight)</b>																										
Mercury	0.15	0.71	0.813	0.68	0.49	0.557	0.49	0.258	1.29	3	0.372	0.204	1.8	1.39	1.09	1.3	0.101	0.827	0.37	0.202	0.0307	5.2	3.9	2.8	2.3	
<b>PCBs (µg/kg, dry weight)</b>																										
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congener (U = 0)	22.7	180	30.83 J	16.53 J	20.42 J	21.26 J	37.223 J	8.85 J	41.94 J	23.21 J	31.61 J	13.41 J	39.69 J	83.85 J	45.86 J	9.53 J	5.04 J	39.18 J	2.37 J	0.25 U	0.24 U	31.36 J	43.5 J	21.18 J	22.49 J	
<b>Pesticides (µg/kg, dry weight)</b>																										
Total DDX (U = 0)	1.58	46.1	2.5	1.3	4.7 J	1.2 J	2.4	0.67 J	3.44 J	2.2	1 J	0.55	6.34 J	10.5 J	14.3 J	1.8	1.51 J	4.79 J	1.7 J	0.42 U	0.41 U	11.0	1.1 U	0.96 U	4.3	
<b>Solid Phase Toxicity (% Survival)</b>																										
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Suspended Particulate Phase Toxicity (%)</b>																										
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Sediment-Water Interface (% Normal Alive)</b>																										
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2012								2012-2013										2013						
	Project		Rhine Channel Post-Dredge Confirmatory Sampling (Anchor QEA 2013a)								Lower Newport Federal Channels Post-Dredge Sampling (Anchor QEA 2013b)										Regional General Permit 54 - Preliminary Testing for Sample Compositing (Anchor QEA 2013c)						
	Sample ID	RC-10-SG	RC-11-SG	RC-12-SG	RC-13-SG	RC-14-SG	RC-15-SG	RC-16-SG	RC-17-SG	LW	LE	Y1	Y2	NC	WL	BR	CG	BE	LS	Y3	RGP-1-1b	RGP-1-1-t	RGP-1-4-b	RGP-1-4-t	RGP-1-5-b		
	Sample Date	12/11/2012	12/11/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012	11/29/2012	11/29/2012	11/29/2012	11/29/2012	11/29/2012	11/29/2012	11/29/2012	11/29/2012	11/29/2012	2/28/2013	2/28/2013	7/10/2013	7/10/2013	7/10/2013	7/10/2013	7/10/2013		
ERL	ERM																										
<b>Metals (mg/kg, dry weight)</b>																											
Mercury	0.15	0.71	1.6	1.1	5.6	6.3	4.9	4.3	3	1.3	0.15	0.15	0.11	0.096	0.013	0.22	0.1	0.12	1	0.282	0.117	ND	0.35	0.153	0.709	1.4	
<b>PCBs (µg/kg, dry weight)</b>																											
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	14.57 J	10.35 J	69.93 J	86.79 J	79.33 J	53.4 J	14.08 J	3.76 J	2.37 J	6.50 J	0.25 U	5.83 J	0.24 U	3.45 J	5.13 J	10.57 J	32.53 J	20.04 J	28.83 J	--	--	--	--	--	
<b>Pesticides (µg/kg, dry weight)</b>																											
Total DDX (U = 0)	1.58	46.1	4.1	9.6	10.0	13.0	12.0	13.0	6.5	5.5	21.23 J	17.8 J	21.52 J	19.15 J	20.1 J	13.56 J	28.1 J	8.1	28.1	7.3	7.4	--	--	--	--	--	
<b>Solid Phase Toxicity (% Survival)</b>																											
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																											
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																											
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	83.9	76.7	77.1	69.5	81.5	89.6	75.5	75.2	73.0	93.3	73.5	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2013										2013											
	Project		Regional General Permit 54 - Preliminary Testing for Sample Compositing (Anchor QEA 2013c)																					
	Sample ID		RGP-1-5-t	RGP-4-12-b	RGP-4-12-t	RGP-4-14-b	RGP-4-14-t	RGP-4-15-b	RGP-4-15-t	RGP-4-16-b	RGP-4-16-t	RGP-1a-COMP-b	RGP-1a-COMP-t	RGP-1b-COMP-b	RGP-1b-COMP-t	RGP-2-COMP-b	RGP-2-COMP-t	RGP-3-COMP-b	RGP-3-COMP-t	RGP-4a-COMP-b	RGP-4a-COMP-t	RGP-4b-COMP-b	RGP-4b-COMP-t	RGP-5-COMP
	Sample Date		7/10/2013	7/12/2013	7/12/2013	7/12/2013	7/12/2013	7/12/2013	7/12/2013	7/12/2013	7/10/2013	7/10/2013	7/10/2013	7/10/2013	7/10/2013	7/15/2013	7/15/2013	7/15/2013	7/15/2013	7/12/2013	7/12/2013	7/12/2013	7/12/2013	7/18/2013
ERL	ERM																							
<b>Metals (mg/kg, dry weight)</b>																								
Mercury	0.15	0.71	0.408	1.19	0.232	0.376	1.91	0.098	0.649	1.39	0.913	0.104	0.425	0.347	0.193	0.352	0.192	0.184	0.304	0.474	0.277	0.344	0.41	0.937
<b>PCBs (µg/kg, dry weight)</b>																								
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Pesticides (µg/kg, dry weight)</b>																								
Total DDX (U = 0)	1.58	46.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Solid Phase Toxicity (% Survival)</b>																								
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																								
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																								
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																								
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																								
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDX - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2013										2017	2017-2018									
	Project		Regional General Permit 54 (Anchor QEA 2013d)					Balboa Marina West (Newfields 2014)					Balboa Marina West (Anchor QEA 2017)	Regional General Permit 54 (Anchor QEA 2018a)									
	Sample ID	RGP-1-COMP	RGP-2-COMP	RGP-3-COMP	RGP-4-COMP	RGP-5-COMP	Area A	Area B	Station B-1	Station B-3	BMW-COMP-100917	RGP-1-COMP-092817	RGP-2-COMP-092917	RGP-3-COMP-100317	RGP-4-COMP-100517	RGP-5-COMP-100617	RGP-1-1-092617	RGP-1-2-092617	RGP-1-3-092617	RGP-1-4-092617	RGP-1-4a-041118	RGP-1-5-092617	
		Sample Date	7/10/2013	7/15/2013	7/15/2013	7/12/2013	7/18/2013	7/10-19/2013	7/10-19/2013	7/10-19/2013	7/10-19/2013	10/9/2017	09/28/2018	09/29/2017	10/3/2017	10/5/2017	10/6/2017	09/26/2017	09/26/2017	09/26/2017	09/26/2017	4/11/2018	09/26/2017
ERL	ERM																						
<b>Metals (mg/kg, dry weight)</b>																							
Mercury	0.15	0.71	0.35	0.4	0.18	0.41	0.94	0.17	0.03 U	0.03 U	0.06	0.249	0.966	0.569 J	0.109	0.308	1.07	0.827 J	0.776 J	0.0555 J	3.92 J	0.668 J	1.03 J
<b>PCBs (µg/kg, dry weight)</b>																							
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	40.6	13.5	17.72	14.55	6.35	20.7	0.5 U	0.5 U	7.0	17.87	100	33.7	29.2	25.9	31.7	45.03	33.56	0.4 U	54.96	--	11.5
<b>Pesticides (µg/kg, dry weight)</b>																							
Total DDx (U = 0)	1.58	46.1	21.4	39.2	59.1	12.4	1.9	20.0	6.5	0.98 U	5.0	21.54 J	25.7	57.5	78.4 J	10.8 J	7.0	--	--	--	--	--	--
<b>Solid Phase Toxicity (% Survival)</b>																							
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	78	88	85	64 / 95 / 95 <sup>9</sup>	83	88	0.0	--	--	--	90	93	92	96	93	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	100	100	100	94	98	96	100	--	--	--	96	96	96	100	100	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	Yes	Yes	Yes	Yes	Yes	Yes	No	--	--	--	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																							
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	>100 / >100	>100 / >100	>100 / >100	>100 / >100	>100 / >100	-- / >100	-- / >100	--	--	--	>100 / >100	>100 / >100	>100 / 76.0	>100 / >100	>100 / >100	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	>100	>100	>100	>100	--	--	--	>100	>100	>100	>100	>100	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	>100	>100	>100	>100	>100	>100	>100	--	--	--	>100	>100	>100	>100	>100	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	Yes	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																							
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																							
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	0.003	0.00221	0.00315	0.00226	0.00817	0.012	--	--	--	--	0.0205	0.00484	27.55	0.01644	0.02338	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	0.00352 U - 0.00499 J	0.00352 U - 0.00403 J	0.00352 U - 0.00550 J	0.00352 U - 0.00424 J	0.00454 J - 0.01150	0.010 - 0.013	--	--	--	--	0.01600 - 0.02370	0.00339 U - 0.00731 J	24.22 J - 34.26 J	0.00919 J - 0.03740	0.01740 - 0.03760	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	5.17	19.11	31.83	6.61	2.14	--	--	--	--	--	--	23.07	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	4.40 - 5.78	17.55 - 23.85	26.34 - 35.10	5.41 - 7.81	1.40 - 2.96	--	--	--	--	--	--	19.48 J - 29.04 J	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	17.06	--	--	--	--	--	--	--	--	--	25.55	9.53	7.07	5.54	6.19	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	15.09 - 19.74	--	--	--	--	--	--	--	--	--	22.98 - 28.65	8.67 - 10.01	4.64 - 8.73	4.70 J - 7.16	5.92 J - 6.48	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																							
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	0.02506	0.02342	0.02074	0.02048	0.02302	0.009	--	--	--	--	0.00922	0.00622	--	0.00748	0.00772	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	0.02190 - 0.02840	0.01950 - 0.02730	0.01810 - 0.02330	0.01330 - 0.02700	0.02040 - 0.02740	0.008 - 0.009	--	--	--	--	0.00707 J - 0.01200	0.00349 U - 0.00890 J	--	0.00342 U - 0.01390	0.00541 J - 0.00912 J	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	0.28	5.91	7.91	1.16	0.21	--	--	--	--	--	--	22.62	19.11	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	0.30 - 0.52	4.74 - 6.91	6.52 - 9.45	0.27 - 2.34	0.26 - 0.40 U	--	--	--	--	--	--	12.20 - 36.80	14.30 - 26.00 J	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	18	--	--	--	--	--	--	--	--	--	20.25	10.93	9.13	7.06	10.18	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	10.52 - 26.27	--	--	--	--	--	--	--	--	--	14.38 - 25.01	5.91 - 13.70	2.96 - 12.39	2.29 J - 11.68	7.69 - 12.32	--	--	--	--	--	--

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2017-2018																							
	Project		Regional General Permit 54 (Anchor QEA 2018a)																							
	Sample ID		RGP-1-6-092617	RGP-1-7-092617	RGP-1-8-092617	RGP-1-9-092617	RGP-1-10-092717	RGP-1-11-092717	RGP-1-11a-041118	RGP-1-12-092717	RGP-1-13-092817	RGP-1-14-092817	RGP-1-14a-041018	RGP-1-14b-041018	RGP-1-14c-041018	RGP-1-15-092817	RGP-1-16-092817	RGP-1-17-092817	RGP-1-17a-041018	RGP-1-17b-041018	RGP-1-17c-041018	RGP-1-18-092817	RGP-5-1-100617	RGP-5-1a-041118		
	Sample Date		09/26/2017	09/26/2017	09/26/2017	09/26/2017	09/27/2017	09/27/2017	4/11/2018	09/27/2017	09/28/2017	09/28/2017	4/10/2018	4/10/2018	4/10/2018	09/28/2017	09/28/2017	09/28/2017	04/10/2018	04/10/2018	04/10/2018	09/28/2017	10/06/2017	4/11/2018		
ERM	ERM																									
<b>Metals (mg/kg, dry weight)</b>																										
Mercury	0.15	0.71	0.268 J	0.246 J	0.189 J	0.193 J	0.335 J	5.77 J	0.646 J	0.163 J	0.142 J	1.58 J	0.357 J	9.48 J	0.526 J	0.105 J	0.175 J	2.78 J	2.87 J	0.975 J	0.153 J	0.634 J	1.72	2.37		
<b>PCBs (µg/kg, dry weight)</b>																										
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congener (U = 0)	22.7	180	11.02	7.66	4.6	0.54	24.31	505.7	100 J	6.51	1.13 J	95.35	--	--	--	0.62	29.87	266.1	--	26	1.8 J	94.5	--	--		
<b>Pesticides (µg/kg, dry weight)</b>																										
Total DDx (U = 0)	1.58	46.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Solid Phase Toxicity (% Survival)</b>																										
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Suspended Particulate Phase Toxicity (%)</b>																										
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Sediment-Water Interface (% Normal Alive)</b>																										
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2017-2018					2018																		
	Project		Regional General Permit 54 (Anchor QEA 2018a)					Lower Newport Federal Channels (Anchor QEA 2018b)																		
	Sample ID		RGP-5-2-100617	RGP-5-3-100617	RGP-5-4-100617	RGP-5-5-100617	RGP-5-5a-041118	TB-COMP-011218	MCN1-COMP-T-011518	MCN2-COMP-T-011618	MCN3-COMP-011918	MCN4-COMP-011918	MCN5-COMP-011818	BIN-COMP-T-011718	BIME-COMP-T-011218	BIME-COMP-M-011218	BIMW-COMP-T-011018	BIMW-COMP-M-011018	BIS-COMP-011218	EC-COMP-011718	TB-01-011218	TB-02-011218	TB-03-011218	TB-04-011218	TB-05-011218	
	Sample Date		10/06/2017	10/06/2017	10/06/2017	10/06/2017	4/11/2018	1/12/2018	1/15/2018	1/16/2018	1/19/2018	1/19/2018	1/18/2018	1/17/2018	1/12/2018	1/12/2018	1/10/2018	1/10/2018	1/12/2018	1/18/2018	1/12/2018	1/12/2018	1/12/2018	1/12/2018	1/12/2018	
ERL		ERM																								
<b>Metals (mg/kg, dry weight)</b>																										
Mercury	0.15	0.71	0.783	0.15	0.183	1.57	2.15 J	3.64	1.18	1.04	0.797	0.181	0.205	0.431	0.142	0.69	0.153	0.658	0.233	0.0125 J	2.54	2.72	5	0.776	1.4	
<b>PCBs (µg/kg, dry weight)</b>																										
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	--	--	--	--	--	195	41.7	53.4	44.1	29	30.6	30.4	23.0	40.4	24.1	41	22.7	0.42 U	239	138	403	106	75	
<b>Pesticides (µg/kg, dry weight)</b>																										
Total DDx (U = 0)	1.58	46.1	--	--	--	--	--	59.8	103	121	103	121	96.8	121 J	125 J	208	165	160	155 J	0.88 J	--	--	--	--	--	--
<b>Solid Phase Toxicity (% Survival)</b>																										
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	99	98	98	99	92	95	95	94	98	83	95	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	100	100	100	100	100	100	96	100	100	100	100	92	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																										
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	>100 / >100	>100 / >100	>100 / >100	>100 / 73.4	>100 / 77.2	>100 / >100	>100 / >100	>100 / 74.4	>100 / 75.9	>100 / 75.0	>100 / >100	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																										
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	0.04142	0.01738	0.0166	0.00991	0.00271	0.00452	0.00176	0.00388	0.00173	0.00172	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	0.03620 - 0.04820	0.01110 - 0.02270	0.01200 - 0.02060	0.00713 J - 0.01250	0.00336 U - 0.00469 J	0.00369 J - 0.00542 J	0.00336 U - 0.00371 U	0.00339 U - 0.00850 J	0.00342 U - 0.00352 U	0.00336 U - 0.00359 U	--	--	--	--	--	--	--	--	
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	9.45	23.71	52.29	45.32	50.74	36.34	50.4	81.09	74.62	43.19	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	5.06 J - 12.30	6.60 - 36.68 J	24.78 J - 85.60	31.73 J - 61.50	41.97 J - 68.60	18.90 - 50.73 J	27.90 - 95.00	54.17 J - 102.00	49.98 J - 100.00	23.20 - 77.10	--	--	--	--	--	--	--	--	
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	30.9	12.96	14.04	9.82	6.82	6.08	6.57	9.62	7.8	--	--	--	--	--	--	--	--	--	
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	27.99 J - 39.04	9.83 - 17.76 J	10.27 - 19.64	8.71 J - 11.00	5.75 J - 7.50	4.88 - 7.25	4.83 J - 8.58	7.68 - 10.53	4.63 - 9.94	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	0.01574	0.01794	0.02248	0.01728	0.00671	0.00881	0.0207	0.00266	0.01404	0.0194	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	0.01240 - 0.01870	0.01180 - 0.03010	0.01480 - 0.02700	0.01340 - 0.02310	0.00339 U - 0.01820	0.00358 J - 0.01820	0.01230 - 0.02730	0.00336 U - 0.00637 J	0.00434 J - 0.02380	0.01250 - 0.02600	--	--	--	--	--	--	--	--	
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	8.92	14.7	31.54	29.18	28.02	16.84	24.26	47.8	34.54	26.12	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	7.80 - 10.20	10.20 - 17.80 J	24.30 - 35.30	22.30 J - 38.10	24.10 J - 32.40 J	13.20 J - 20.20 J	18.20 - 29.40	42.70 - 52.70	22.30 J - 47.00	16.00 J - 37.90	--	--	--	--	--	--	--	--	
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	23.66	13.31	12.23	10.85	7.6	7.16	8.58	11.4	8.93	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	21.00 - 26.15	11.37 - 16.74	10.03 - 14.97	7.84 - 15.30	6.96 - 8.73	5.13 - 8.78	6.30 J - 10.84	10.38 - 12.85	7.80 - 10.62	--	--	--	--	--	--	--	--	--	

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2018																							
	Project		Lower Newport Federal Channels (Anchor QEA 2018b)																							
	Sample ID	Sample Date	TB-06-011218	MCN1-01-T-011518	MCN1-02-T-011518	MCN1-03-T-011518	MCN1-04-T-011518	MCN2-01-T-011518	MCN2-02-T-011518	MCN2-03-T-011518	MCN2-04-T-011618	MCN3-01-011918	MCN3-02-011918	MCN3-03-011918	MCN3-04-011918	MCN4-01-011918	MCN4-02-011818	MCN4-03-011818	MCN4-04-011818	BIME-01-T-M-030518	BIME-02-T-M-030518	BIME-03-T-M-030518	BIME-04-T-M-030518	BIMW-01-T-M-030518	BIMW-02-T-M-030518	BIMW-03-T-M-030518
			ERL	ERM	1/12/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018	1/15/2018
<b>Metals (mg/kg, dry weight)</b>																										
Mercury	0.15	0.71	3.37	1.66	1.41	0.525	0.547	1.67	0.603	2.2	0.775	1.15	1.57	0.4	0.088	--	--	--	--	--	--	--	--	--	--	--
<b>PCBs (µg/kg, dry weight)</b>																										
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	187	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Pesticides (µg/kg, dry weight)</b>																										
Total DDx (U = 0)	1.58	46.1	--	70.6 J	84.8	90.9 J	97.6	118.3	115.1 J	48.4 J	141	115	104	101 J	25.9 J	128	107.7 J	88.1 J	121	174.7 J	131	128	161	206	177	148
<b>Solid Phase Toxicity (% Survival)</b>																										
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Suspended Particulate Phase Toxicity (%)</b>																										
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Sediment-Water Interface (% Normal Alive)</b>																										
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																										
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Parameter	Year		2018											2019													
	Project		Lower Newport Federal Channels (Anchor QEA 2018b)											Newport Channel (Nautilus 2019; Anchor QEA 2019)													
	Sample ID	BIMW-04-T-M-030518	BIN-01-T-011618	BIN-02-T-011618	BIN-03-T-011618	BIN-04-T-011618	BIN-05-T-011618	BIN-06-T-011718	BIS-01-011118	BIS-02-011118	BIS-03-011118	BIS-04-011118	NC1-01-012319	NC1-02-012319	NC1-03-012319	NC1-04-012319	NC2-01-012419	NC2-02-012419	NC2-03-012419	NC2-04-012219	NC3-01-012219	NC3-02-012219	NC3-03-012219	NC3-04-012319	NC2-COMP	NC3-COMP	
		Sample Date	3/5/2018	1/16/2018	1/16/2018	1/16/2018	1/16/2018	1/16/2018	1/17/2018	1/11/2018	1/11/2018	1/11/2018	1/11/2018	1/23/2019	1/23/2019	1/23/2019	1/23/2019	1/24/2019	1/24/2019	1/24/2019	1/22/2019	1/22/2019	1/22/2019	1/22/2019	1/23/2019	3/1/2019	3/1/2019
ERL	ERM																										
<b>Metals (mg/kg, dry weight)</b>																											
Mercury	0.15	0.71	--	--	--	--	--	--	--	--	--	--	2	2.49	0.708	0.81	0.402	1.52	1.26	0.267	0.245	0.19	0.144	0.0905	0.529	0.173	
<b>PCBs (µg/kg, dry weight)</b>																											
Total PCB Aroclors (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Congener (U = 0)	22.7	180	--	--	--	--	--	--	--	--	--	--	41.68	26.84	10.23	3.6	13.5	18.9	8.3	3.55	6.5 J	4.53 J	1.07	1.45 J	22.75	8 J	
<b>Pesticides (µg/kg, dry weight)</b>																											
Total DDx (U = 0)	1.58	46.1	261	199	157	43.5 J	161	200	299	150	232	107.8 J	127.9 J	14	8.8	11	18.5	18.3 J	52.5	21.5 J	21.2	18.3	35.4 J	12	6.4 J	21	17.9
<b>Solid Phase Toxicity (% Survival)</b>																											
<i>Eohaustorius estuarius</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ampelisca abdita</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	97	94	
<i>Neanthes arenaceodentata</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	96	96	
<i>Americamysis bahia</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Pass benthic test (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Suspended Particulate Phase Toxicity (%)</b>																											
<i>Mytilus galloprovincialis</i> (LC <sub>50</sub> /EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	>100/ >100	>100/ >100
<i>Americamysis bahia</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	>100	>100
<i>Menidia beryllina</i> (LC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	>100	>100
<i>Crassostrea gigas</i> (EC <sub>50</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Meets LPC (Yes/No)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Sediment-Water Interface (% Normal Alive)</b>																											
<i>Mytilus galloprovincialis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Macoma nasuta</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- <sup>9</sup>	-- <sup>9</sup>
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- <sup>9</sup>	-- <sup>9</sup>
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>Tissue Chemistry - <i>Nereis virens</i> or <i>Nephtys caecoides</i></b>																											
Mercury - Mean (mg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- <sup>9</sup>	-- <sup>9</sup>
Mercury - Range (mg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- <sup>9</sup>	-- <sup>9</sup>
Total DDx - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total DDx - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Mean (µg/kg, wet weight) <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCB Congeners - Range (µg/kg, wet weight)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 1**  
**Summary of Newport Bay Testing Results from 2003 to 2019**

Notes:

1. Mean tissue concentrations provided in source document or calculated by Anchor QEA using 1/2 detection limit for non-detect results
2. Station 14 only
3. Station 8, subsection 8-1
4. Station 8, subsection 8-2
5. No replicate data
6. Mercury results from individual stations presented in Newfields 2009 Table 3-3.
7. PCB screening performed on one replicate per composite area; replicate data presented; no mean or range.
8. Feeding study conducted due to low TOC in sediment
9. Tissue chemistry currently in progress

■ Detected concentration is greater than ERL screening level

■ Detected concentration is greater than ERM screening level

*Italicized*: non-detected concentration is above one or more identified screening levels

**Bold**: detected result

**Red** : statistically different from reference site

-- : results not tested or not applicable

µg/kg: microgram per kilogram

cm: centimeter

EC<sub>50</sub>: median effective concentration

ERL: effects range low

ERM: effects range median

J: estimated value

LC<sub>50</sub>: median lethal concentration

LPC: limiting permissible concentration

MDL: method detection limit

mg/kg: milligram per kilogram

NA: not available

ND: non-detect

PCB: polychlorinated biphenyl

STFATE: Short-Term Fate

TOC: total organic carbon

U: compound analyzed but not detected above detection limit

For totals, zeros were used for non-detect samples for summing. If all samples were non-detect, the highest MDL of all samples was used as the total result. For some projects, zeros were used for total result.

Total DDTs are the sum of: 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, 2,4'-DDD, 2,4'-DDE, and 2,4'-DDT

Total PCB Aroclors are the sum of: 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

Total PCB congeners is the sum of all PCB congeners listed in report.

Sources:

Anchor (Anchor Environmental), 2006. *Rhine Channel Sediment Remediation Feasibility Study and Alternatives Evaluation, Newport Bay, California*. January 2006.

Anchor QEA (Anchor QEA, LLC), 2012. *Sampling and Analysis Report 43 Linda Isle Maintenance Dredging*. January 2012.

Anchor QEA, 2013a. *Technical Memorandum: Post Dredge Confirmatory Sampling Results and Environmental Benefits of Dredging for the Rhine Channel Contaminated Sediment Cleanup Project*. December 17, 2013.

Anchor QEA, 2013b. *Water Quality and Sediment Monitoring Report Lower Newport Bay Federal Dredging*. July 2013.

Anchor QEA, 2013c. *Memorandum: RGP 54 Sediment Characterization: Preliminary Results for Sampling Compositing*. July 22, 2013.

Anchor QEA, 2013d. *Sampling and Analysis Report Regional General Permit 54 Sediment Characterization*. October 2013.

Anchor QEA, 2017. *Sampling and Analysis Report Balboa Marina West Dredging and Public/Transient Dock Development*. December 2017.

Anchor QEA, 2018a. *RGP 54 Sediment Characterization Sampling and Analysis Report*. June 2018.

Anchor QEA, 2018b. *Lower Newport Bay Federal Channels Dredging Sampling and Analysis Program Report*. July 2018.

Anchor QEA, 2019. Validated Chemistry Tables for Newport Channel.

Nautilus, 2019. Preliminary Bioassay Tables for Newport Channel.

Newfields, 2007. *Dredged Material Evaluation for the Balboa Marina Dock Replacement Project*. November 2007.

Newfields, 2009a. *Dredged Material Evaluation for the Marina Park Master Plan Newport Beach, California*. November 2009.

Newfields, 2009b. *Dredged Material Evaluation of Lower Newport Bay, Newport Beach, California*. November 2009.

Newfields, 2012a. *Harbor Island and Linda Isle Channels Dredged Material Evaluation*. March 21, 2012.

Newfields, 2012b. *Dredged Material Evaluation to Support the Renewal of Regional General Permit -54*. March 5, 2012.

Newfields, 2014. *Balboa Marina West Expansion Project Dredged Material Evaluation Sampling and Analysis Report*. February 7, 2014.

Weston (Weston Solutions, Inc.), 2005. *Dredged Material Evaluation for the Renewal of Regional General Permit-54, Newport Beach, California*. November 2005.

Weston, 2007. *Tier IV Evaluation of the Lower Newport Bay Federal Newport Beach, California*. February 2007.

# Attachment A

## Sampling Locations

---

## Tier III and IV Evaluation (Weston 2007)

---



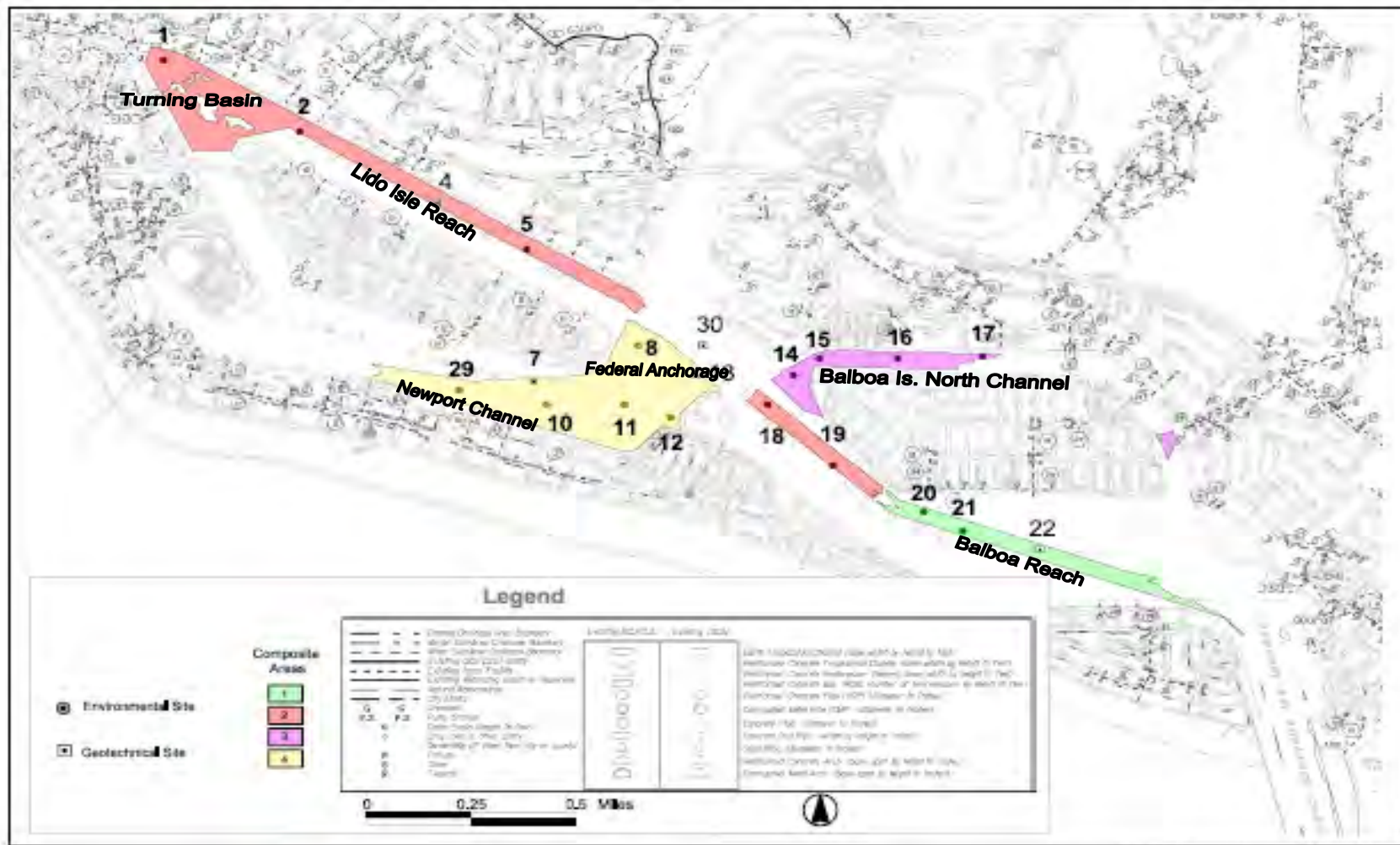
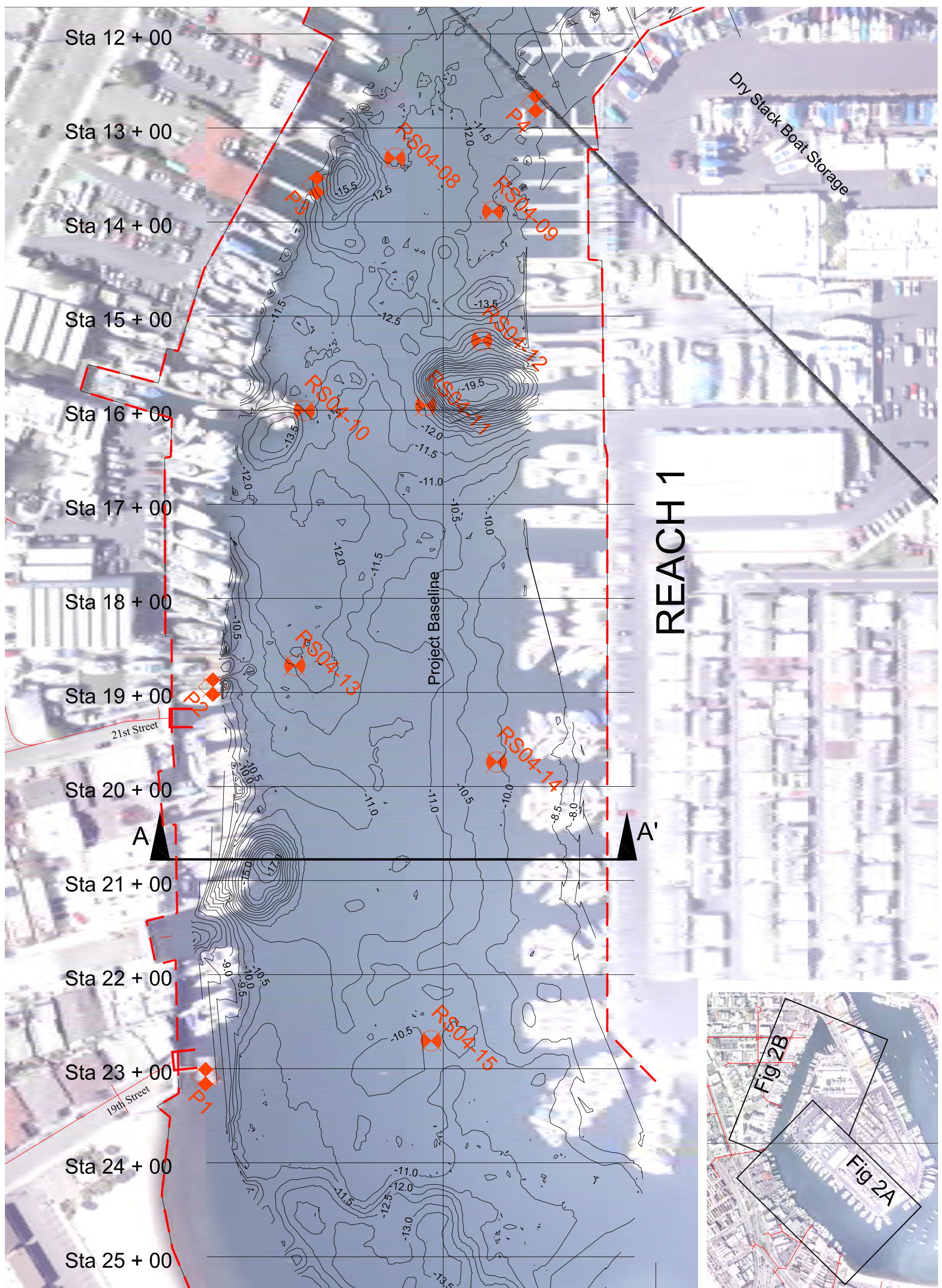


Figure 1-1. Map of Federal Channel dredge area sites.

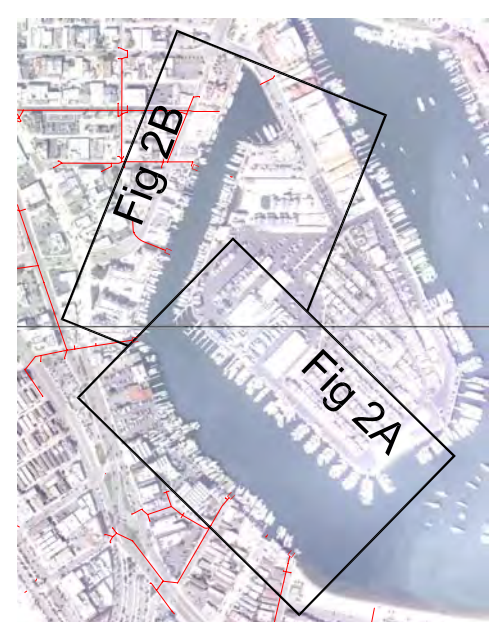
# Rhine Channel Sediment Remediation Feasibility Study (Anchor 2006)

---

K:\Jobs\040279-RHINE\_CHANNEL\04027901-03.dwg Rhine Channel Fig 2A  
Apr 22, 2005 1:36pm bdelabar



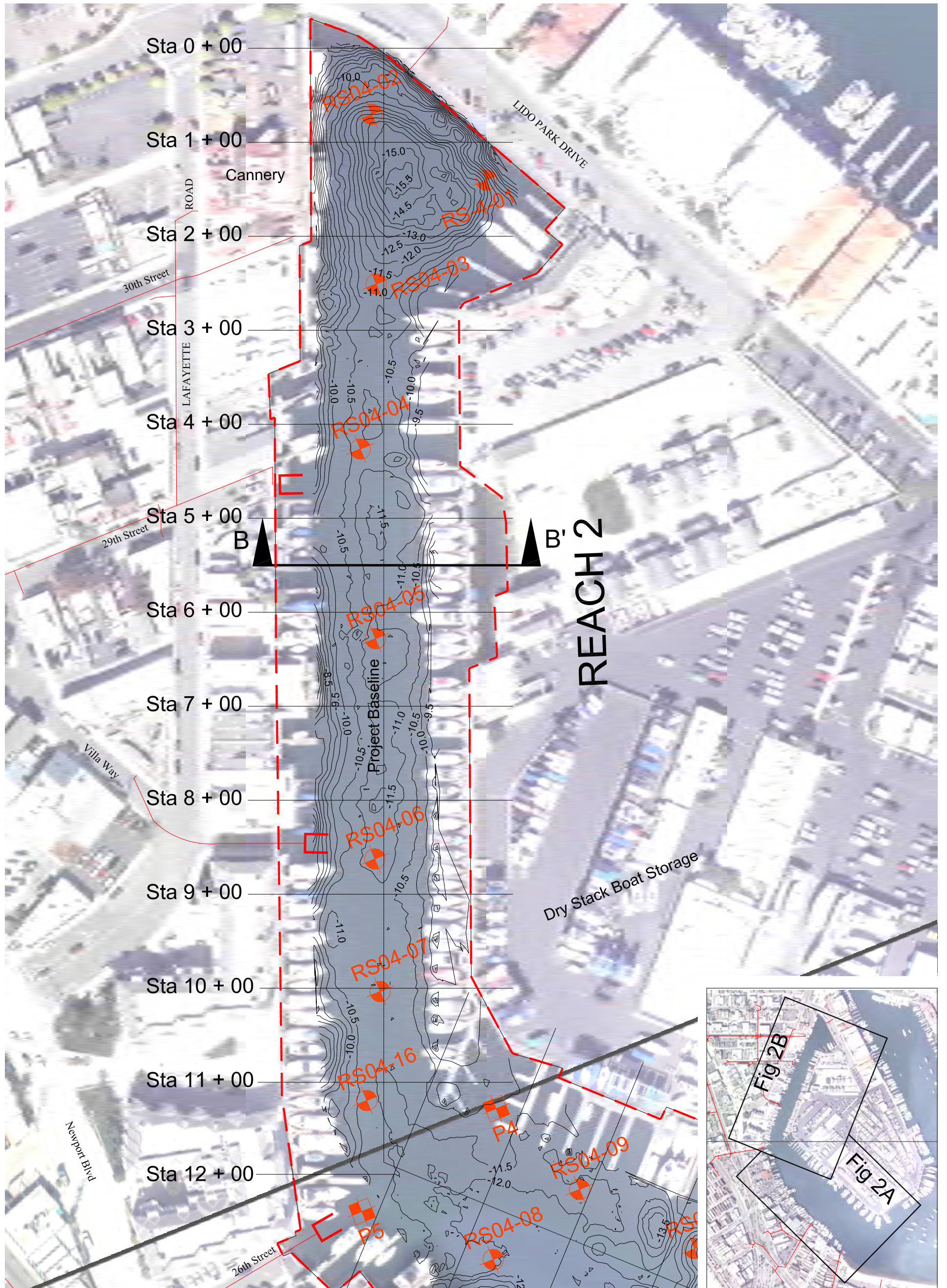
REACH 1



- RS04-01 Sampling station location and designation
- P1 Probe to native material location and designation
- Bathymetric contour in feet MLLW (0.5 ft interval)
- Bulkhead/Shoreline
- Storm Drain
- Inferred Location of Storm Drain Outfall

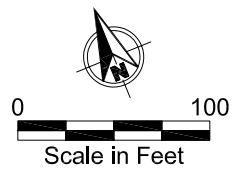
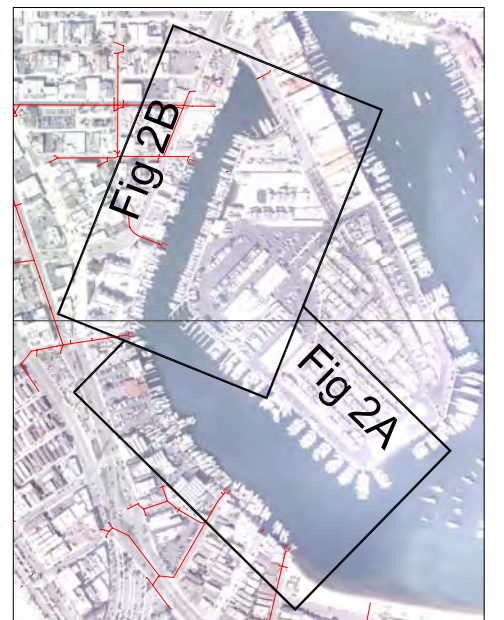


**Figure 2A**  
Rhine Channel Sediment Remediation  
Site Map - Reach 1



- RS04-01 Sampling station location and designation
- P1 Probe to native material location and designation
- 11.0 Bathymetric contour in feet MLLW (0.5 ft interval)

- Bulkhead/Shoreline
- Storm Drain
- Inferred Location of Storm Drain Outfall



**Figure 2B**  
 Rhine Channel Sediment Remediation  
 Site Map Reach 2

## Regional General Permit 54 (Weston 2005)

## 2.0 Methods

Sampling and analysis methods followed those outlined in OTM/ITM protocols. This section summarizes the methods used during this investigation.

### 2.1 Station Locations

Samples were collected from 33 stations throughout the six proposed dredging areas in Newport Bay between May 24 and May 31, 2005. Station locations within each area were selected based on the erosional and depositional patterns in Newport Bay, dredging history of the area, the perceived need for future dredging (based on depositional patterns and past dredging), and previous chemistry and/or biological data. Actual station coordinates are provided in the results section.

**Area 1:** Area 1 included Lido Island, the north shore of Lido Isle Reach, the western portion of the Balboa Peninsula to, but not including Bay Island (Figure 2.1). With the exception of the Rhine Channel, all areas were included in the previous RGP-54 permit. A total of ten stations were sampled in Area 1, focusing on the south shore of Lido Island, but also representing the north shore of Balboa Peninsula and Lido Island.



Figure 2.1. Map Showing Area 1, RGP-54 boundary, and Station Locations.

**Area 2:** Area 2 included those areas south of the US 101 bridge, but north of the Harbor Island Reach, including all shoreline of Linda Isle and Harbor Island (Figure 2.2). No dredging has occurred in Promontory Bay following its construction in 1980 and while part of the RGP, was not a part of the sampling design or planned dredging events. A total of seven stations were sampled in Area 2 representing both Linda Isle, Harbor Island, and the western shoreline of the Newport River, immediately south of the US 101 bridge.



**Figure 2.2. Map Showing Area 2, RGP-54 Boundary, and Station Locations.**

**Area 3:** Area 3 included those portions of Upper Newport Bay, immediately above the US 101 Bridge. Previous investigations found some evidence of biological effects in the composites from this area. Station by station analysis indicated increased levels of DDE and amphipod toxicity in the western portion of the Bayside Village Marina. Because of these previous results Area 3 was been split into two areas, Area 3a and 3b (Figure 2.3). Area 3a (Stations 3-3, 3-4, and 3-5) included the channel and a marina immediately north of Galaxie View Park. Area 3b (Stations 3-1, 3-2, and 3-6) included the Bayside Village Marina. The Dunes Lagoon and bluffs on the western shore of the river were not included in the RGP.



**Figure 2.3. Map Showing Area 3, RGP-54 Boundary, and Station Locations**



**Area 4:** Area 4 included Balboa Island, the eastern portion of Balboa Peninsula to the mouth of Newport Bay, and Bay Island (Figure 2.4). Previous investigations have indicated differences in sediment grain size between Balboa Island and the Balboa Peninsula and for this reason these areas were analyzed separately. Area 4a (Stations 4-1 through 4-7) included Balboa Island and Bay Island. Area 4b (Stations 4-8 through 4-10) included the northern shore of Balboa Peninsula and the western entrance. Seven stations were sampled in Area 4a and three stations were sampled in Area 4b.



**Figure 2.4. Map Showing Area 4, RGP-54 boundary, and Station Locations.**

# Balboa Marina (Newfields 2007)

---



Figure 2-1. Proposed Study Unit Boundaries and Station Locations with The Existing Site Plan.

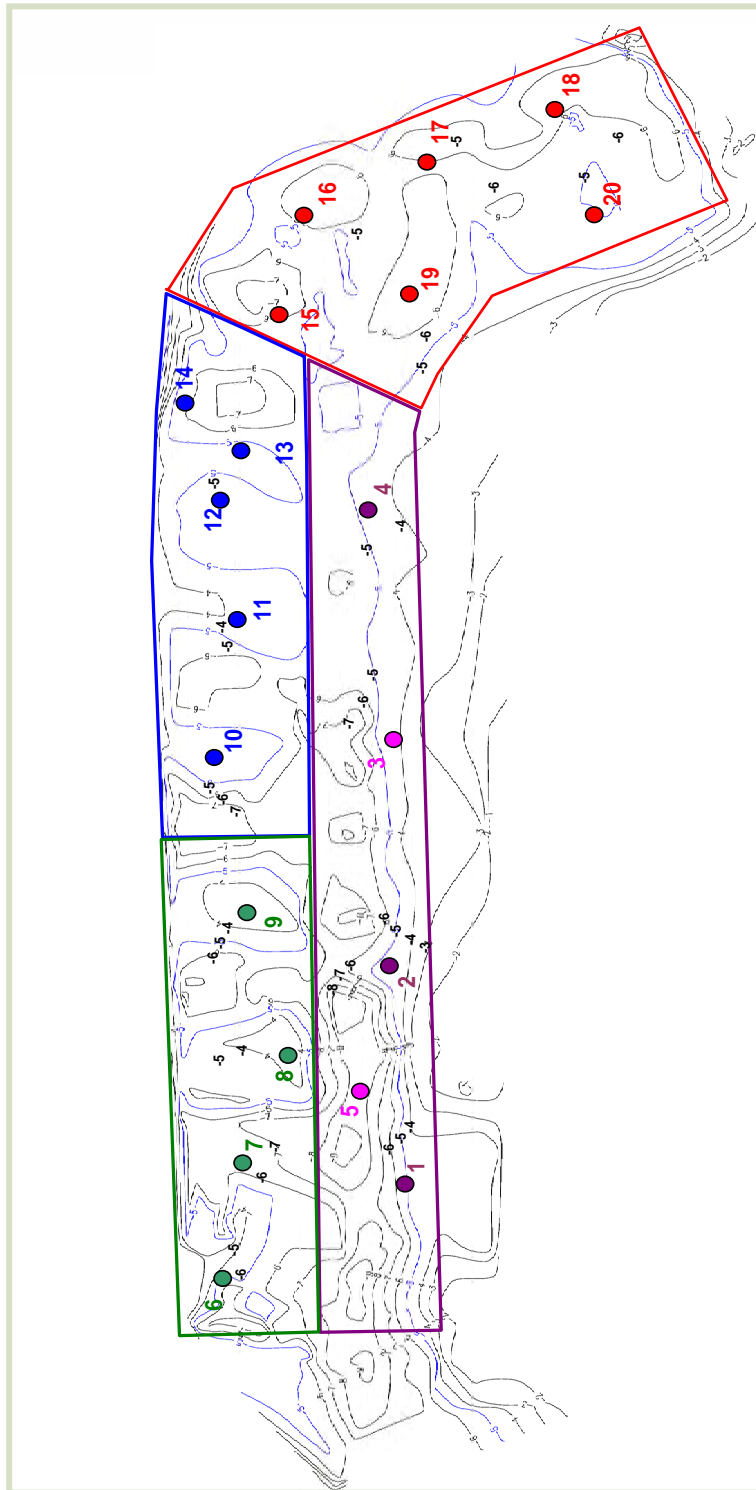


Figure 2-2. Existing Bathymetry with Proposed Sample Areas and Station Locations.

# Marina Park Dredged Material Evaluation (Newfields 2009a)

---

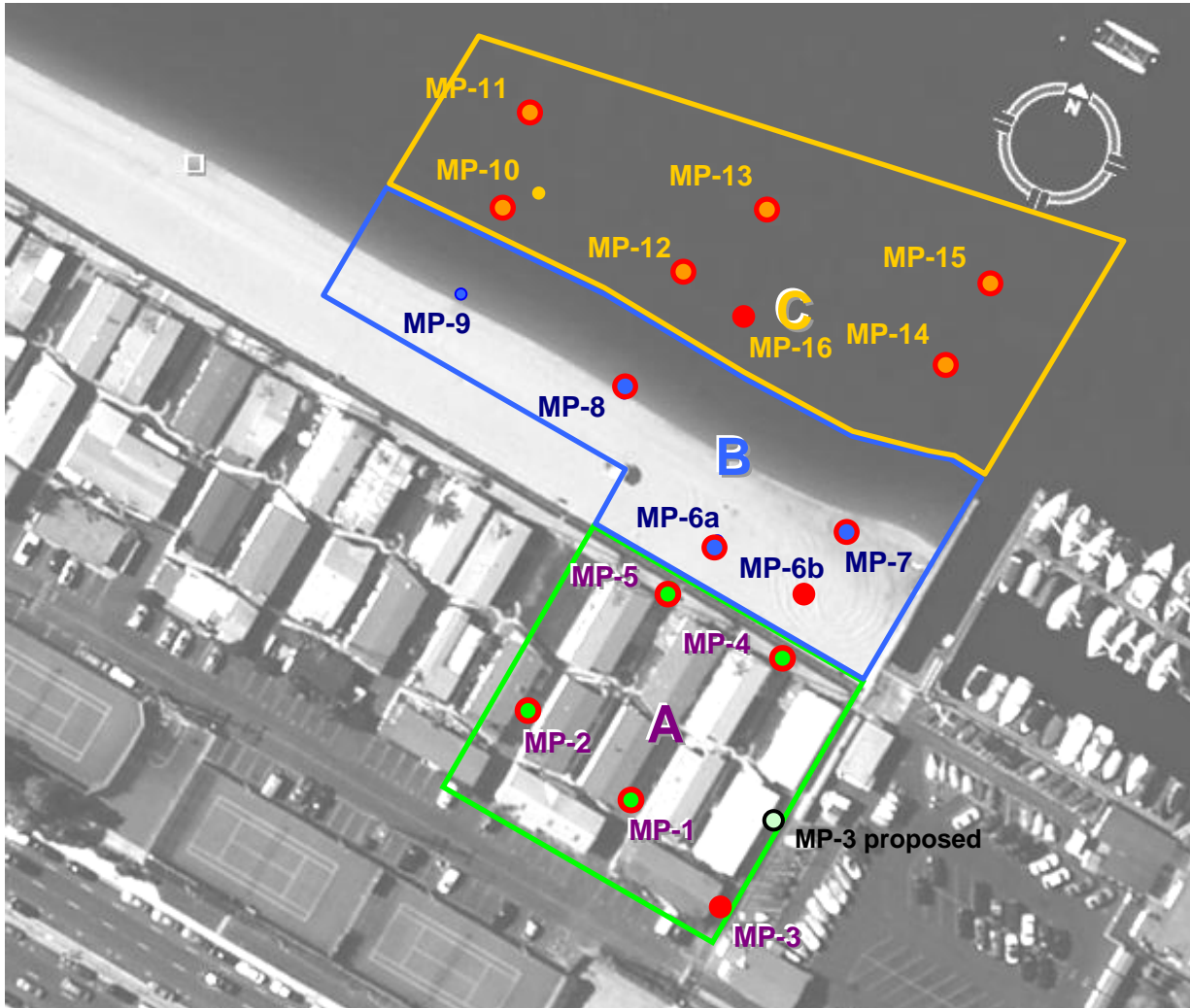


Figure 3. Area and Station Locations. Proposed locations denoted by green, blue and orange symbols. Actual locations denoted by red symbols.

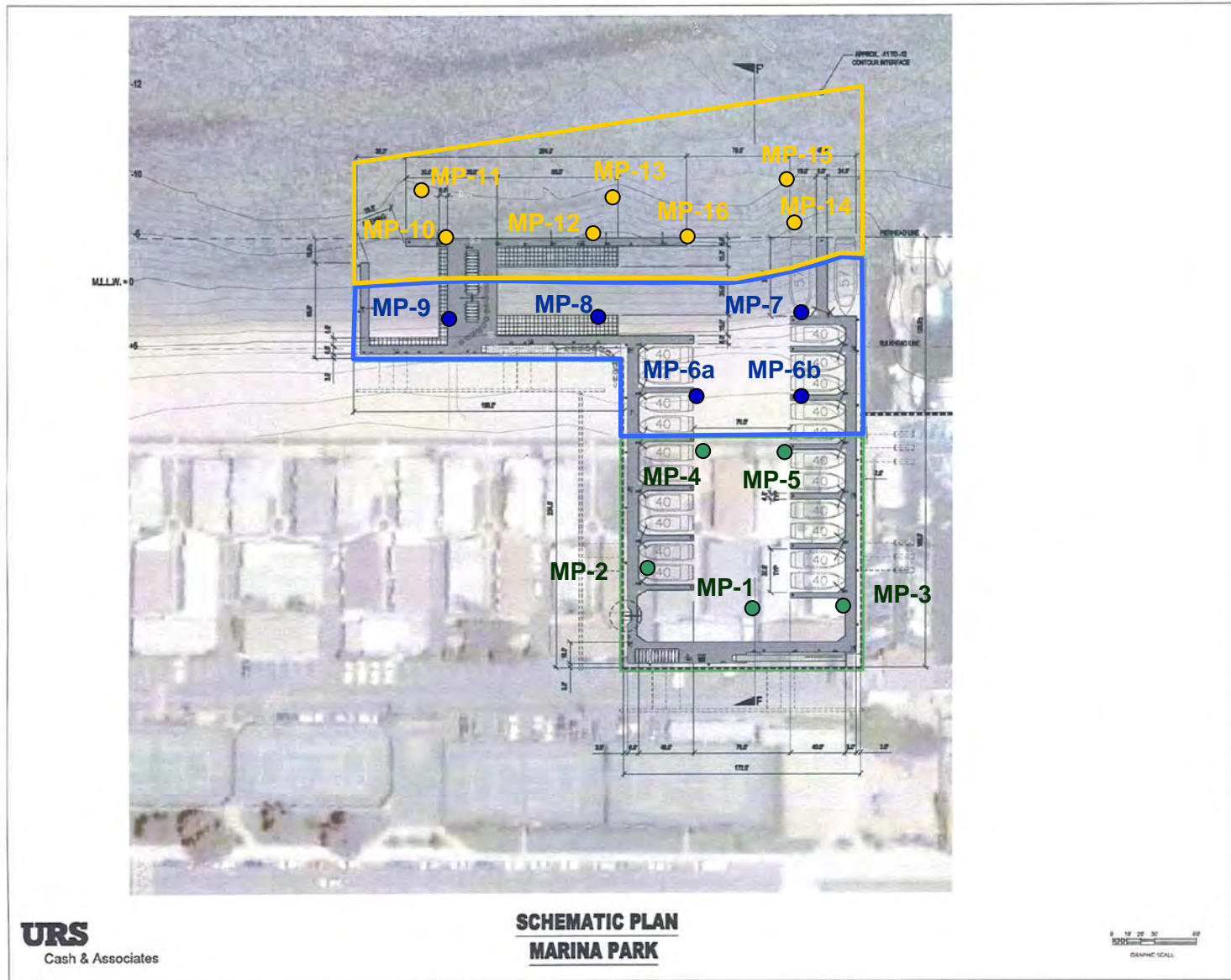


Figure 4. Project Areas and Station Locations with Proposed Project Plan and Current Bathymetry

# Lower Newport Bay Dredged Material Evaluation (Newfields 2009b)

---



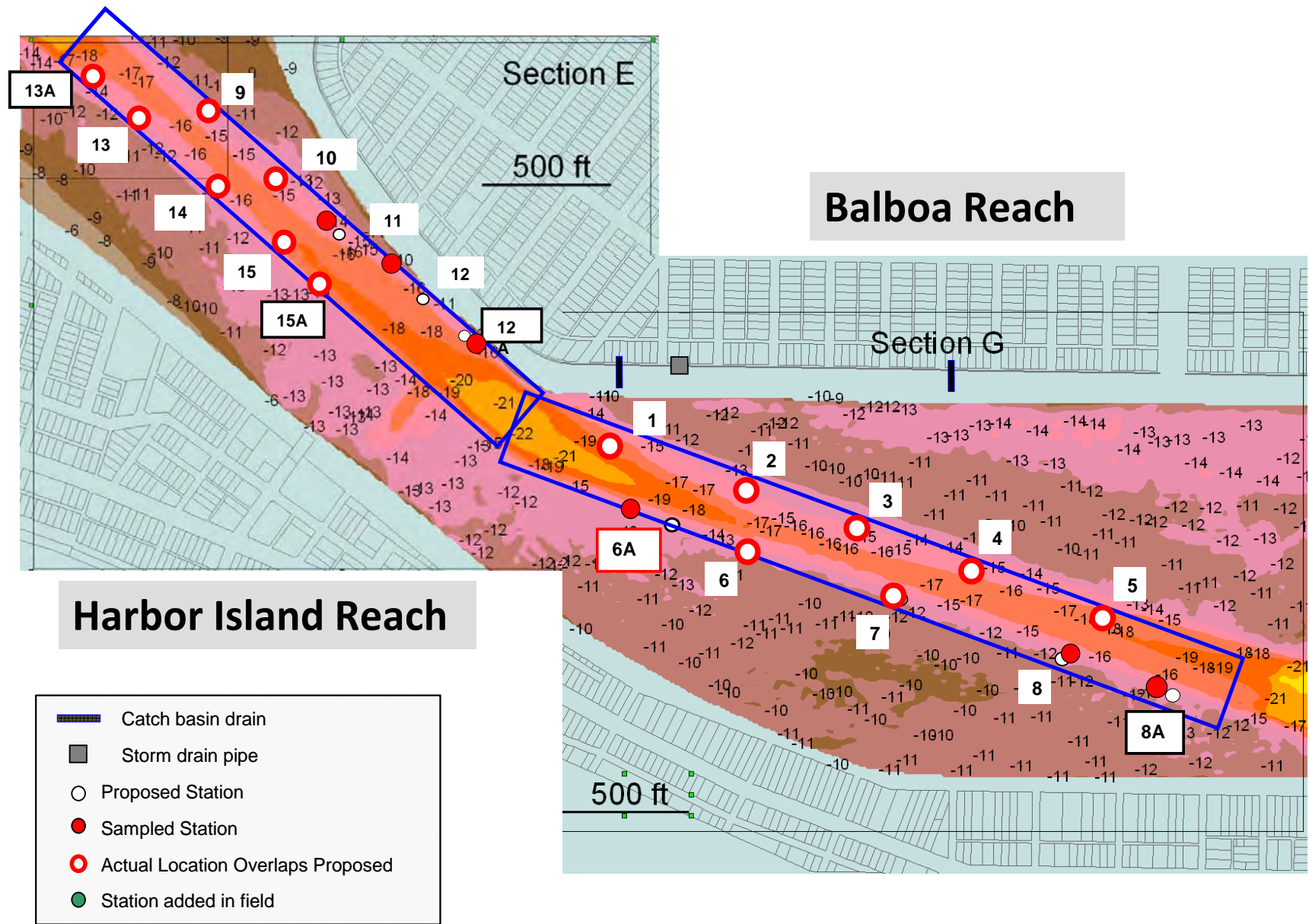


Figure 6-1. Station locations for the Balboa Reach (BR) and Harbor Island Reach (HIR)

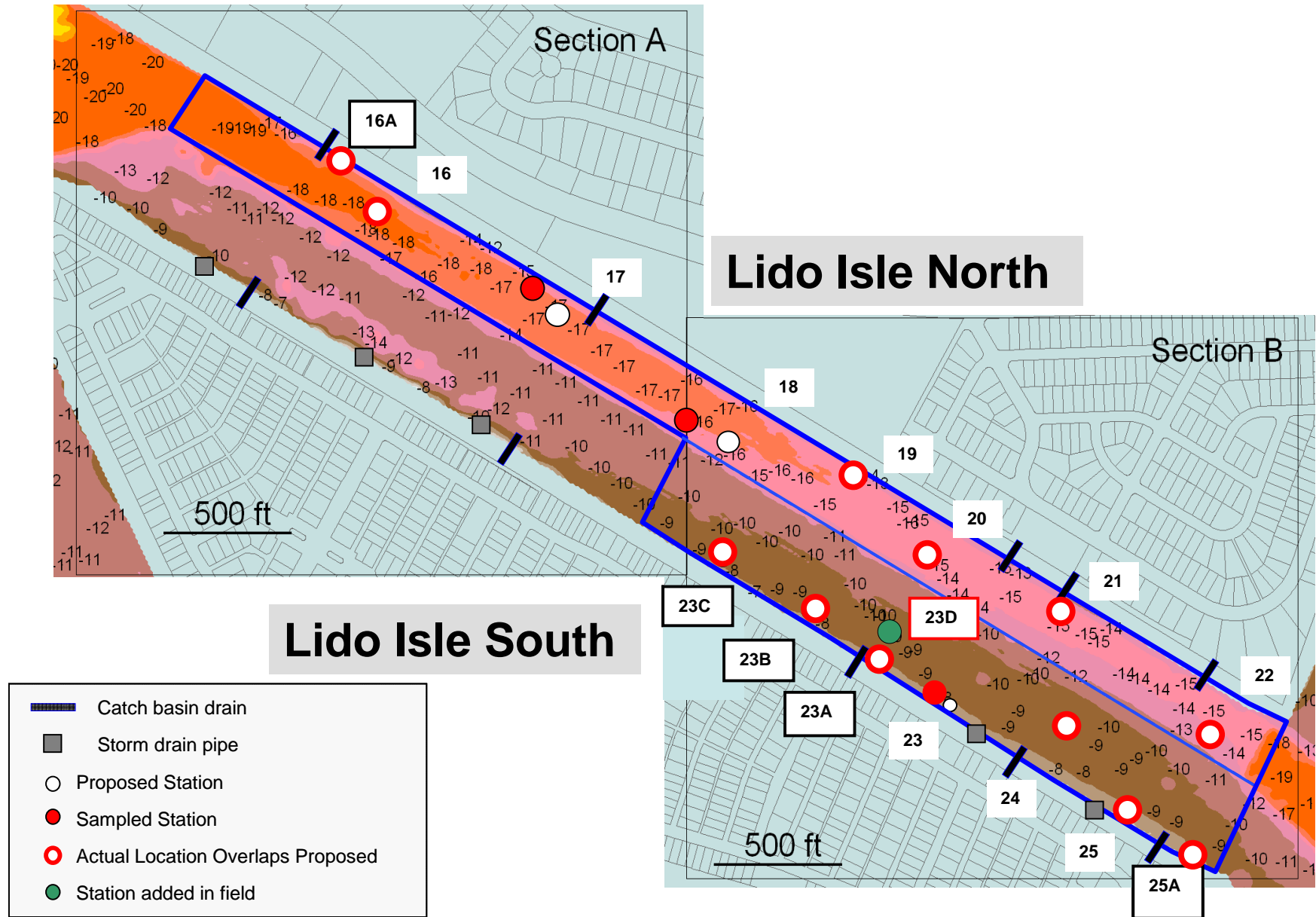


Figure 6-2. Station locations for the Lido Isle Reach –North (LIN) and Lido Isle Reach – South (LIS)

# West Lido "B"

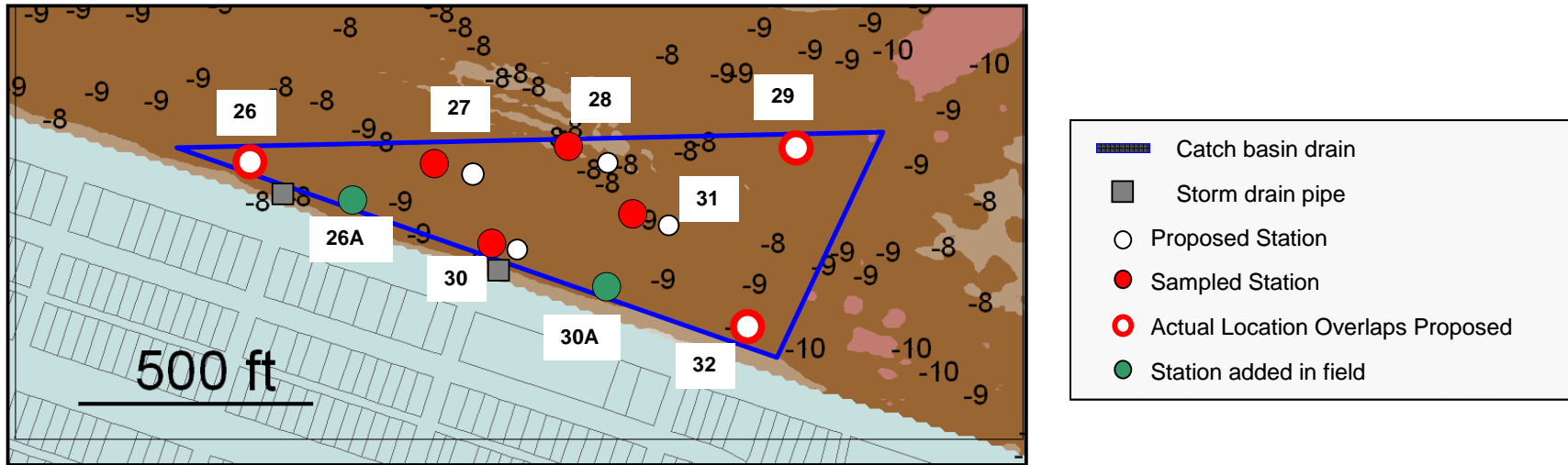


Figure 6-5. Station locations for the West Lido Area "B" (WLB)

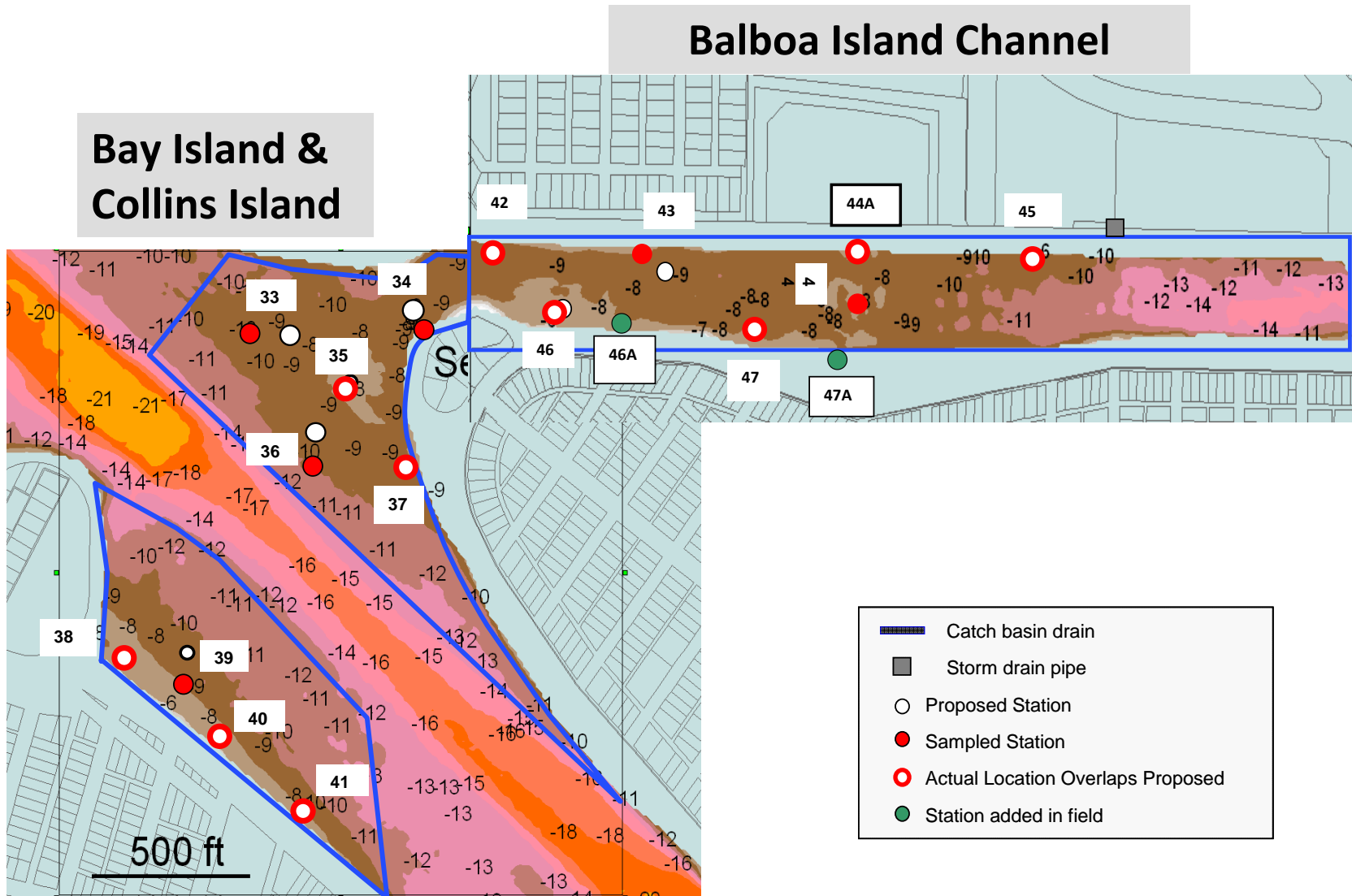


Figure 6-4. Station locations for the Bay Island Anchorage and Collins Island Subarea (BICI) and Balboa Island Channel

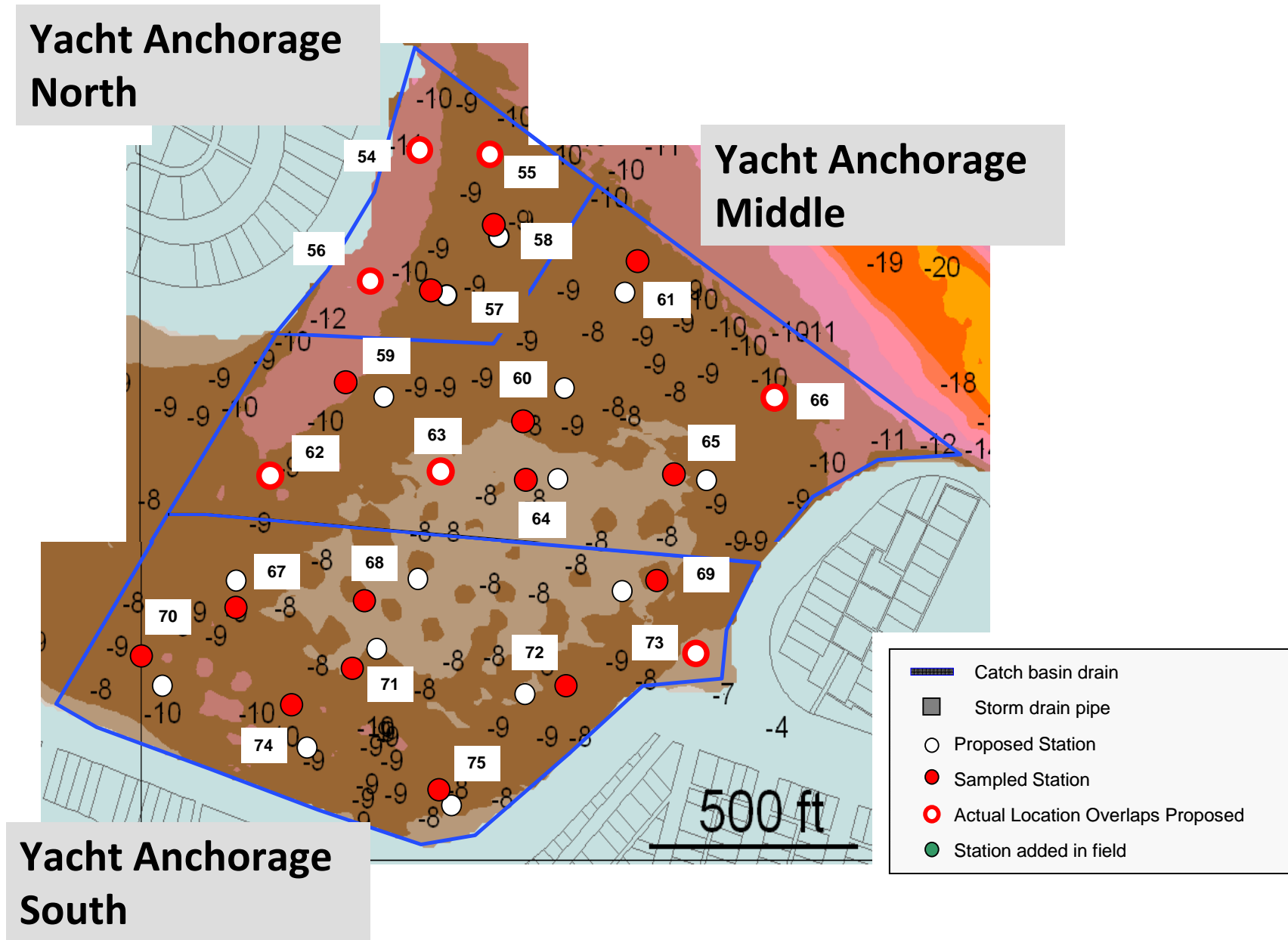


Figure 6-5. Station locations for Yacht Anchorage North (YAN), Middle, (YAM), and South (YAS)

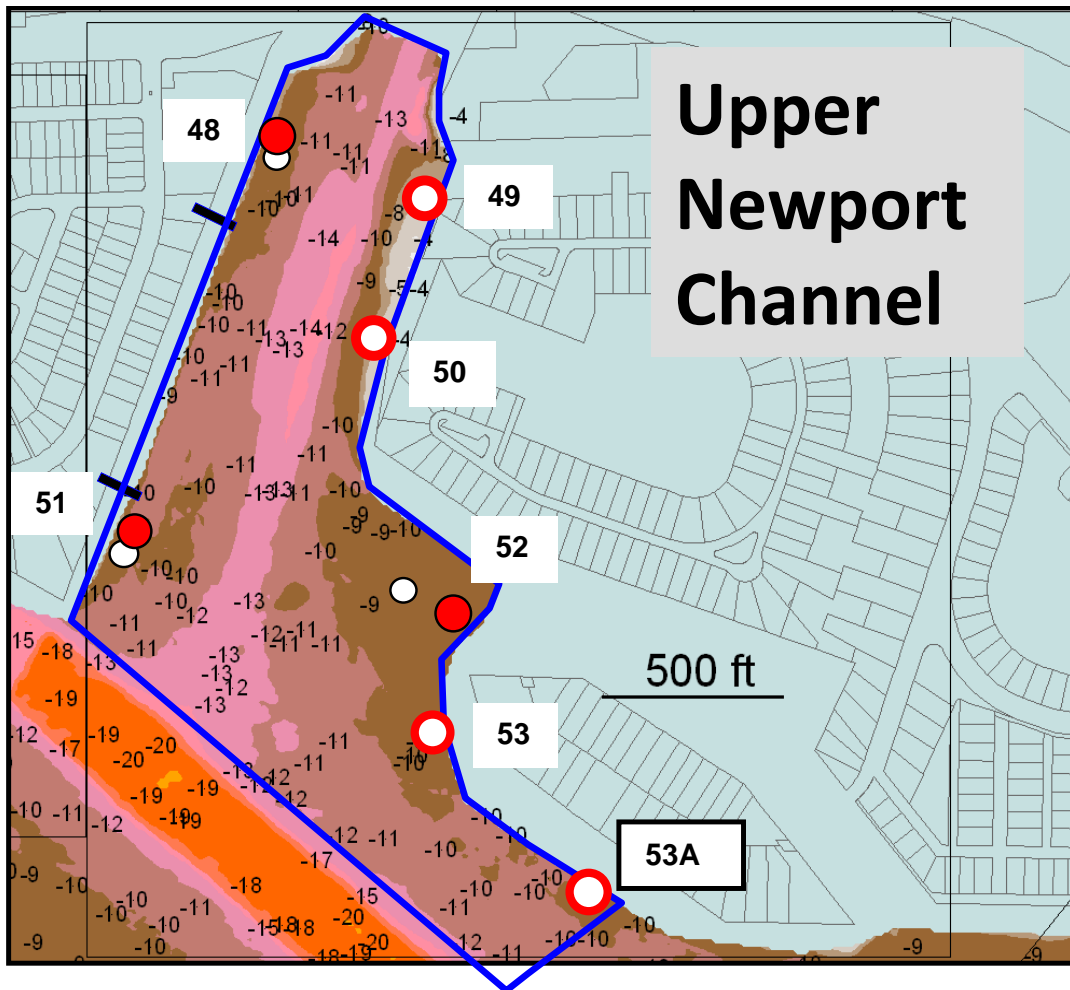


Figure 6-6. Station locations for Upper Newport Channel (UNC)

# Harbor Island and Linda Isle Channels (Newfields 2012a)

---



Figure 3-1. Stations Locations within the Harbor Island/Linda Isle Proposed Dredge Area

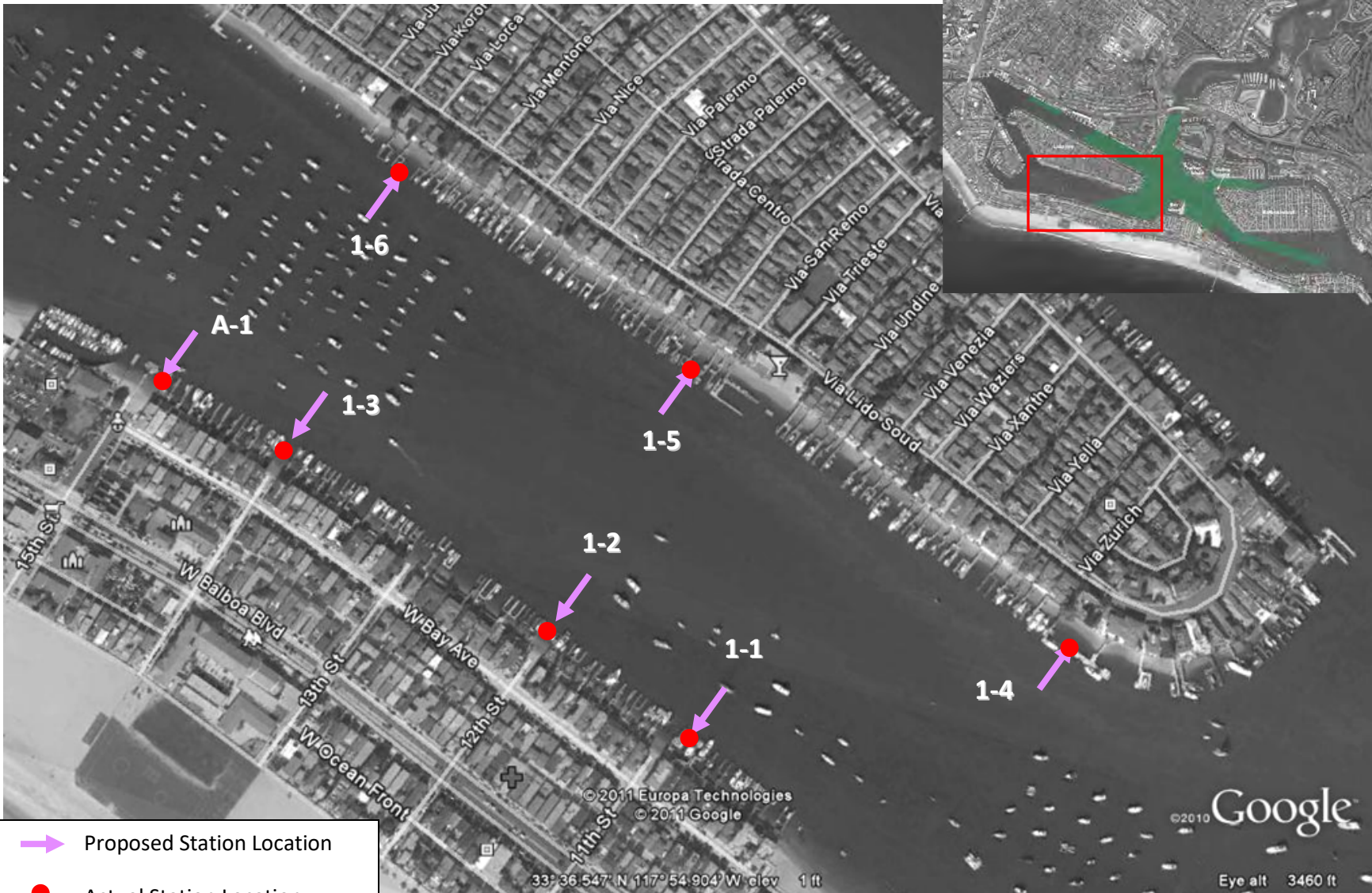


# Regional General Permit 54 (Newfields 2012b)

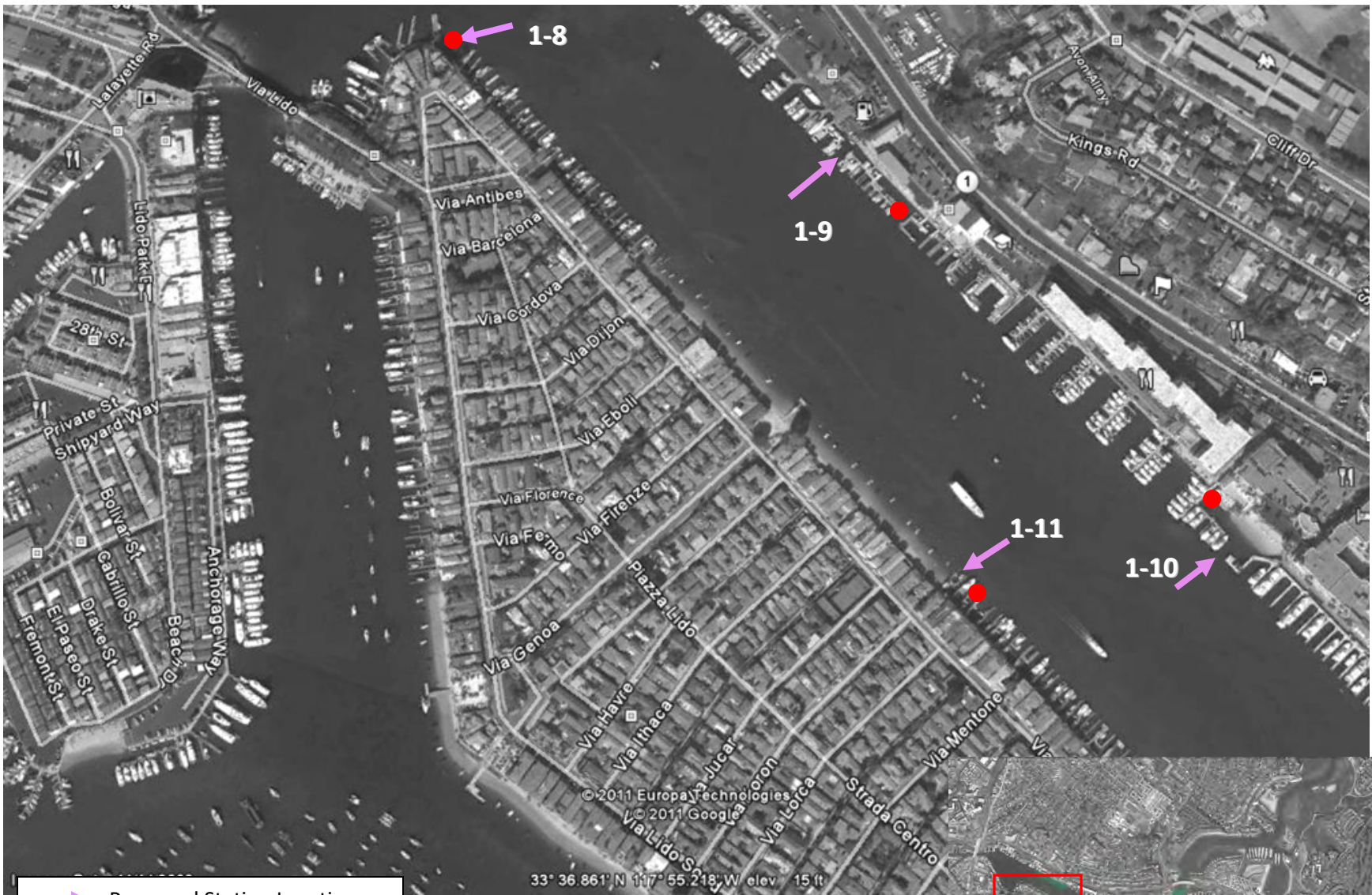
---



Proposed Study Areas and Station Locations for the Interim RGP-54 Permit Renewal



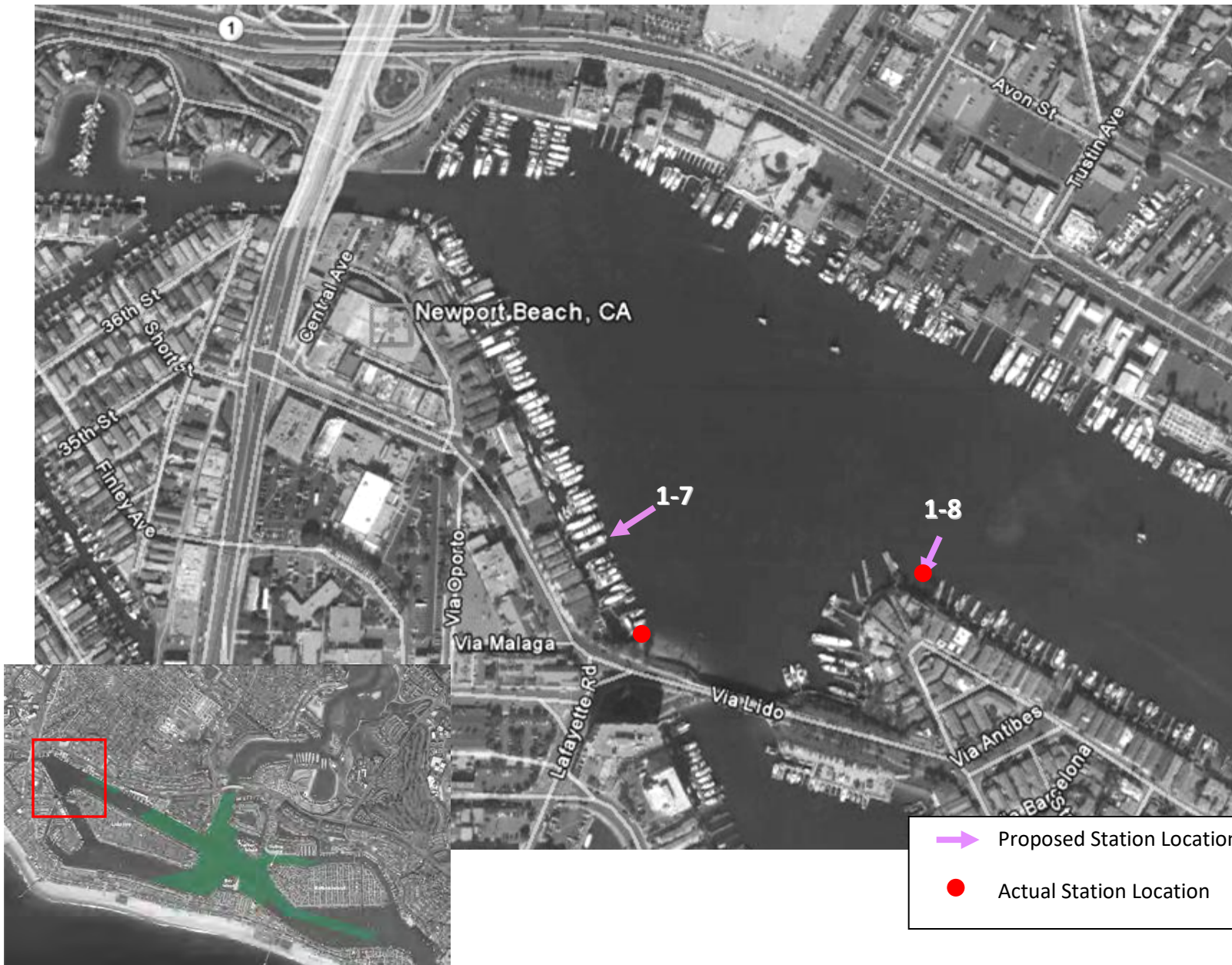
- ➡ Proposed Station Location
- Actual Station Location

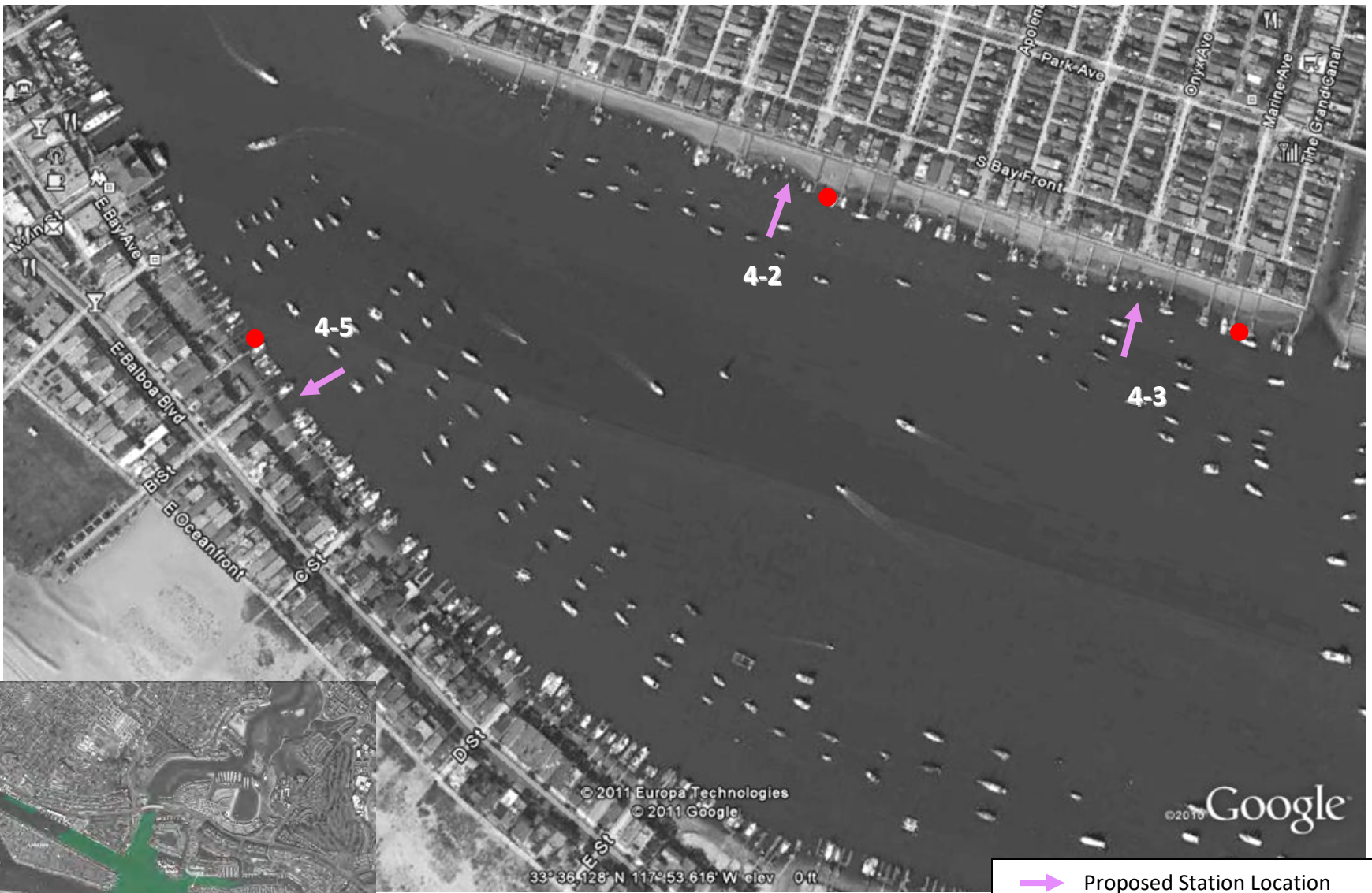


33° 36.861' N 117° 55.218' W elev 15 ft

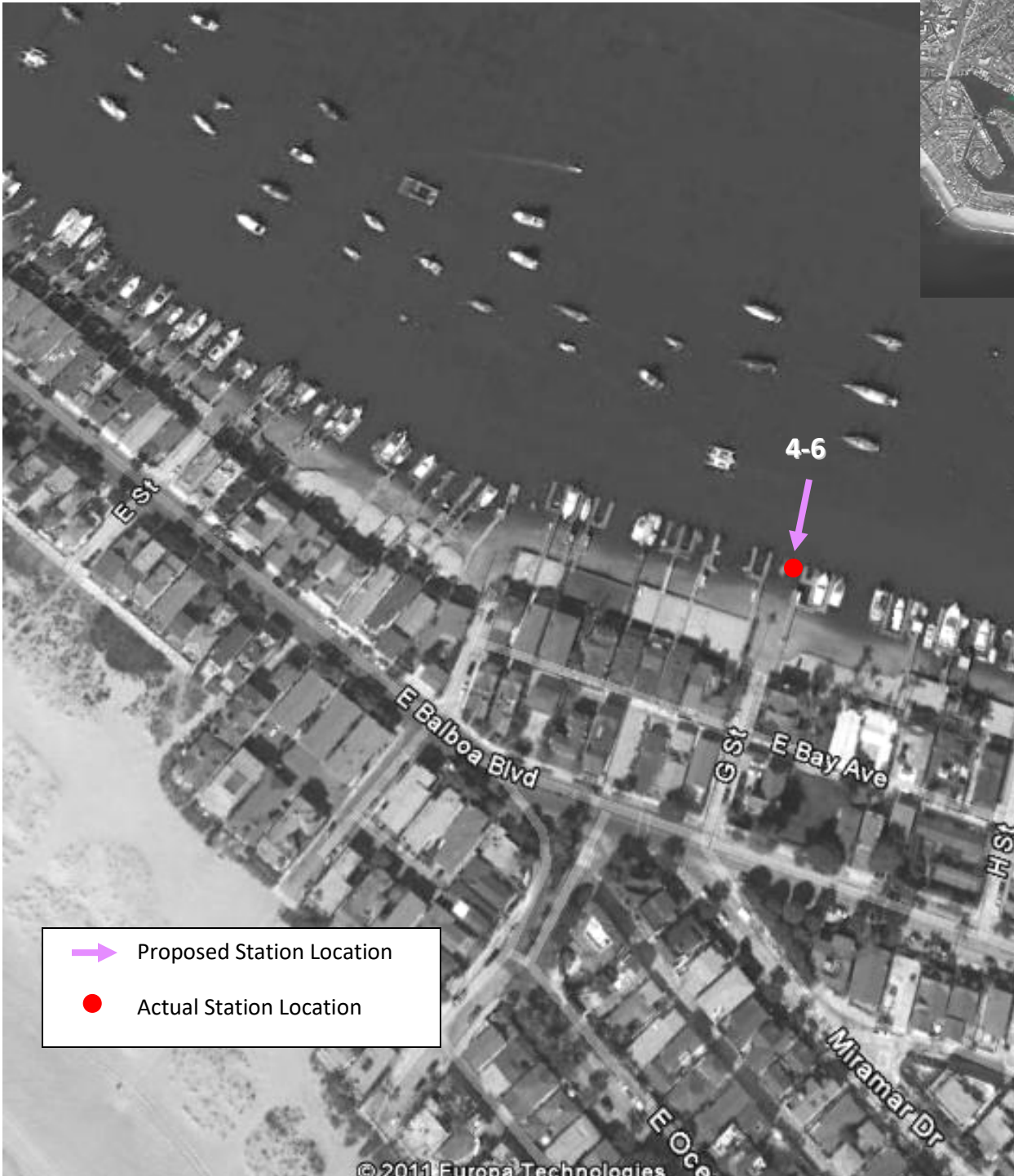
- ➡ Proposed Station Location
- Actual Station Location







- Proposed Station Location
- Actual Station Location



→ Proposed Station Location  
● Actual Station Location







- ➡ Proposed Station Location
- Actual Station Location



- Proposed Station Location
- Actual Station Location



- Proposed Station Location
- Actual Station Location



→ Proposed Station Location  
● Actual Station Location