

Appendix F1

ProUCL Output: Calculation of 95UCLs by COI by Medium by Exposure Reach

	A	B	C	D	E	F	G	H	I	J	K	L				
1	General UCL Statistics for Data Sets with Non-Detects															
2	User Selected Options															
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Air_ProUCL\Air_Reach1.wst													
4	Full Precision		OFF													
5	Confidence Coefficient		95%													
6	Number of Bootstrap Operations		2000													
7																
8																
9	Arsenic															
10																
11	General Statistics															
12	Number of Valid Data				359				Number of Detected Data				244			
13	Number of Distinct Detected Data				21				Number of Non-Detect Data				115			
14									Percent Non-Detects				32.03%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0005			Minimum Detected			-7.601						
18	Maximum Detected			0.042			Maximum Detected			-3.17						
19	Mean of Detected			0.00378			Mean of Detected			-5.973						
20	SD of Detected			0.00476			SD of Detected			0.818						
21	Minimum Non-Detect			0.001			Minimum Non-Detect			-6.908						
22	Maximum Non-Detect			0.001			Maximum Non-Detect			-6.908						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Lilliefors Test Statistic			0.277			Lilliefors Test Statistic			0.169						
28	5% Lilliefors Critical Value			0.0567			5% Lilliefors Critical Value			0.0567						
29	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.00273			Mean			-6.494						
34	SD			0.00421			SD			1.016						
35	95% DL/2 (t) UCL			0.0031			95% H-Stat (DL/2) UCL			0.00251						
36																
37	Maximum Likelihood Estimate(MLE) Method						Log ROS Method									
38	Mean			0.00158			Mean in Log Scale			-6.583						
39	SD			0.00537			SD in Log Scale			1.166						
40	95% MLE (t) UCL			0.00204			Mean in Original Scale			0.00271						
41	95% MLE (Tiku) UCL			0.00207			SD in Original Scale			0.00422						
42							95% Percentile Bootstrap UCL			0.00311						
43							95% BCA Bootstrap UCL			0.00316						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			1.392			Data do not follow a Discernable Distribution (0.05)									
47	Theta Star			0.00272												
48	nu star			679.1												
49																
50	A-D Test Statistic			10.69			Nonparametric Statistics									
51	5% A-D Critical Value			0.774			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.774			Mean			0.00273						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.0598	SD					0.0042	
54	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0002224	
55							95% KM (t) UCL					0.0031	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0031	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00303	
58	Minimum						1E-09	95% KM (bootstrap t) UCL					0.00314
59	Maximum						0.042	95% KM (BCA) UCL					0.00327
60	Mean						0.00303	95% KM (Percentile Bootstrap) UCL					0.00318
61	Median						0.002	95% KM (Chebyshev) UCL					0.0037
62	SD						0.00414	97.5% KM (Chebyshev) UCL					0.00412
63	k star						0.392	99% KM (Chebyshev) UCL					0.00495
64	Theta star						0.00773						
65	Nu star						281.1	Potential UCLs to Use					
66	AppChi2						243.3	95% KM (BCA) UCL					0.00327
67	95% Gamma Approximate UCL						0.0035						
68	95% Adjusted Gamma UCL						0.0035						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	Cadmium												
73													
74	General Statistics												
75	Number of Valid Data					359	Number of Detected Data					107	
76	Number of Distinct Detected Data					11	Number of Non-Detect Data					252	
77							Percent Non-Detects					70.19%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.0005	Minimum Detected					-7.601	
81	Maximum Detected					0.019	Maximum Detected					-3.963	
82	Mean of Detected					0.00231	Mean of Detected					-6.462	
83	SD of Detected					0.0033	SD of Detected					0.724	
84	Minimum Non-Detect					0.001	Minimum Non-Detect					-6.908	
85	Maximum Non-Detect					0.001	Maximum Non-Detect					-6.908	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Lilliefors Test Statistic					0.388	Lilliefors Test Statistic					0.338	
91	5% Lilliefors Critical Value					0.0857	5% Lilliefors Critical Value					0.0857	
92	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.00104	Mean					-7.262	
97	SD					0.00198	SD					0.654	
98	95% DL/2 (t) UCL					0.00121	95% H-Stat (DL/2) UCL					0.0008676	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE yields a negative mean						Mean in Log Scale					-7.963	
102							SD in Log Scale					1.301	
103							Mean in Original Scale					0.000869	
104							SD in Original Scale					0.00203	

	A	B	C	D	E	F	G	H	I	J	K	L
105										95% Percentile Bootstrap UCL		0.00106
106										95% BCA Bootstrap UCL		0.0011
107												
108	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
109					k star (bias corrected)	1.381	Data do not follow a Discernable Distribution (0.05)					
110					Theta Star	0.00167						
111					nu star	295.6						
112												
113					A-D Test Statistic	15.79	Nonparametric Statistics					
114					5% A-D Critical Value	0.772	Kaplan-Meier (KM) Method					
115					K-S Test Statistic	0.772	Mean				0.00104	
116					5% K-S Critical Value	0.0894	SD				0.00198	
117	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.0001048	
118							95% KM (t) UCL				0.00121	
119	Assuming Gamma Distribution						95% KM (z) UCL				0.00121	
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0013	
121					Minimum	1E-09	95% KM (bootstrap t) UCL				0.00124	
122					Maximum	0.019	95% KM (BCA) UCL				0.00156	
123					Mean	0.00452	95% KM (Percentile Bootstrap) UCL				0.0015	
124					Median	0.00399	95% KM (Chebyshev) UCL				0.0015	
125					SD	0.00346	97.5% KM (Chebyshev) UCL				0.00169	
126					k star	0.718	99% KM (Chebyshev) UCL				0.00208	
127					Theta star	0.0063						
128					Nu star	515.3	Potential UCLs to Use					
129					AppChi2	463.6	95% KM (t) UCL				0.00121	
130					95% Gamma Approximate UCL	0.00502	95% KM (% Bootstrap) UCL				0.0015	
131					95% Adjusted Gamma UCL	0.00502						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	Lead											
136												
137	General Statistics											
138					Number of Valid Data	359				Number of Detected Data		230
139					Number of Distinct Detected Data	18				Number of Non-Detect Data		129
140										Percent Non-Detects		35.93%
141												
142	Raw Statistics					Log-transformed Statistics						
143					Minimum Detected	0.005				Minimum Detected		-5.298
144					Maximum Detected	0.45				Maximum Detected		-0.799
145					Mean of Detected	0.0286				Mean of Detected		-3.91
146					SD of Detected	0.0404				SD of Detected		0.731
147					Minimum Non-Detect	0.01				Minimum Non-Detect		-4.605
148					Maximum Non-Detect	0.01				Maximum Non-Detect		-4.605
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
153					Lilliefors Test Statistic	0.314				Lilliefors Test Statistic		0.208
154					5% Lilliefors Critical Value	0.0584				5% Lilliefors Critical Value		0.0584
155	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.0201	Mean						-4.409
160	SD						0.0342	SD						0.887
161	95% DL/2 (t) UCL						0.0231	95% H-Stat (DL/2) UCL						0.0186
162														
163	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
164	Mean						0.0087	Mean in Log Scale						-4.518
165	SD						0.0448	SD in Log Scale						1.056
166	95% MLE (t) UCL						0.0126	Mean in Original Scale						0.0198
167	95% MLE (Tiku) UCL						0.013	SD in Original Scale						0.0344
168								95% Percentile Bootstrap UCL						0.0231
169								95% BCA Bootstrap UCL						0.0237
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						1.54	Data do not follow a Discernable Distribution (0.05)						
173	Theta Star						0.0185							
174	nu star						708.6							
175														
176	A-D Test Statistic						15.16	Nonparametric Statistics						
177	5% A-D Critical Value						0.771	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.771	Mean						0.0201
179	5% K-S Critical Value						0.0613	SD						0.0342
180	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.00181
181								95% KM (t) UCL						0.0231
182	Assuming Gamma Distribution							95% KM (z) UCL						0.0231
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0231
184	Minimum						1E-09	95% KM (bootstrap t) UCL						0.024
185	Maximum						0.45	95% KM (BCA) UCL						0.0245
186	Mean						0.0238	95% KM (Percentile Bootstrap) UCL						0.0238
187	Median						0.02	95% KM (Chebyshev) UCL						0.028
188	SD						0.0337	97.5% KM (Chebyshev) UCL						0.0314
189	k star						0.427	99% KM (Chebyshev) UCL						0.0381
190	Theta star						0.0556							
191	Nu star						306.8	Potential UCLs to Use						
192	AppChi2						267.2	95% KM (BCA) UCL						0.0245
193	95% Gamma Approximate UCL						0.0273							
194	95% Adjusted Gamma UCL						0.0273							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Zinc													
199														
200	General Statistics													
201	Number of Valid Data						359	Number of Detected Data						303
202	Number of Distinct Detected Data						23	Number of Non-Detect Data						56
203								Percent Non-Detects						15.60%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						0.01	Minimum Detected						-4.605
207	Maximum Detected						2.37	Maximum Detected						0.863
208	Mean of Detected						0.0572	Mean of Detected						-3.475

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					0.18	SD of Detected					0.891
210	Minimum Non-Detect					0.01	Minimum Non-Detect					-4.605
211	Maximum Non-Detect					0.01	Maximum Non-Detect					-4.605
212												
213												
214	UCL Statistics											
215	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
216	Lilliefors Test Statistic					0.397	Lilliefors Test Statistic					0.129
217	5% Lilliefors Critical Value					0.0509	5% Lilliefors Critical Value					0.0509
218	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
219												
220	Assuming Normal Distribution						Assuming Lognormal Distribution					
221	DL/2 Substitution Method						DL/2 Substitution Method					
222	Mean					0.0491	Mean					-3.76
223	SD					0.166	SD					1.053
224	95% DL/2 (t) UCL					0.0636	95% H-Stat (DL/2) UCL					0.0427
225												
226	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
227	Mean					0.028	Mean in Log Scale					-3.786
228	SD					0.184	SD in Log Scale					1.107
229	95% MLE (t) UCL					0.044	Mean in Original Scale					0.049
230	95% MLE (Tiku) UCL					0.0431	SD in Original Scale					0.167
231							95% Percentile Bootstrap UCL					0.0655
232							95% BCA Bootstrap UCL					0.0745
233												
234	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
235	k star (bias corrected)					0.938	Data do not follow a Discernable Distribution (0.05)					
236	Theta Star					0.0611						
237	nu star					568.2						
238												
239	A-D Test Statistic					3.3E+28	Nonparametric Statistics					
240	5% A-D Critical Value					0.787	Kaplan-Meier (KM) Method					
241	K-S Test Statistic					0.787	Mean					0.0499
242	5% K-S Critical Value					0.0536	SD					0.166
243	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00878
244							95% KM (t) UCL					0.0644
245	Assuming Gamma Distribution						95% KM (z) UCL					0.0643
246	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0644
247	Minimum					1E-09	95% KM (bootstrap t) UCL					0.0997
248	Maximum					2.37	95% KM (BCA) UCL					0.0664
249	Mean					0.0483	95% KM (Percentile Bootstrap) UCL					0.0667
250	Median					0.02	95% KM (Chebyshev) UCL					0.0881
251	SD					0.167	97.5% KM (Chebyshev) UCL					0.105
252	k star					0.23	99% KM (Chebyshev) UCL					0.137
253	Theta star					0.21						
254	Nu star					164.8	Potential UCLs to Use					
255	AppChi2					136.1	95% KM (BCA) UCL					0.0664
256	95% Gamma Approximate UCL					0.0585						
257	95% Adjusted Gamma UCL					0.0585						
258	Note: DL/2 is not a recommended method.											
259												

	A	B	C	D	E	F	G	H	I	J	K	L				
1	General UCL Statistics for Data Sets with Non-Detects															
2	User Selected Options															
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Air_ProUCL\Air_Reach3.wst													
4	Full Precision		OFF													
5	Confidence Coefficient		95%													
6	Number of Bootstrap Operations		2000													
7																
8																
9	Antimony															
10																
11	General Statistics															
12	Number of Valid Data				127				Number of Detected Data				127			
13	Number of Distinct Detected Data				102				Number of Non-Detect Data				0			
14	Number of Missing Values				29				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.00001			Minimum Detected			-11.51						
18	Maximum Detected			0.0145			Maximum Detected			-4.236						
19	Mean of Detected			0.0005747			Mean of Detected			-8.441						
20	SD of Detected			0.0014			SD of Detected			1.356						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Lilliefors Test Statistic			0.343			Lilliefors Test Statistic			0.074						
28	5% Lilliefors Critical Value			0.0786			5% Lilliefors Critical Value			0.0786						
29	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0005747			Mean			-8.441						
34	SD			0.0014			SD			1.356						
35	95% DL/2 (t) UCL			0.0007799			95% H-Stat (DL/2) UCL			0.0007337						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			0.617			Data appear Lognormal at 5% Significance Level									
47	Theta Star			0.0009309												
48	nu star			156.8												
49																
50	A-D Test Statistic			4.249			Nonparametric Statistics									
51	5% A-D Critical Value			0.807			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.807			Mean			0.0005747						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.0865	SD					0.00139	
54	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0001238	
55							95% KM (t) UCL					0.0007799	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0007783	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0007799	
58	Minimum						0.00001	95% KM (bootstrap t) UCL					0.001
59	Maximum						0.0145	95% KM (BCA) UCL					0.0008268
60	Mean						0.0005747	95% KM (Percentile Bootstrap) UCL					0.0008069
61	Median						0.000183	95% KM (Chebyshev) UCL					0.00111
62	SD						0.0014	97.5% KM (Chebyshev) UCL					0.00135
63	k star						0.617	99% KM (Chebyshev) UCL					0.00181
64	Theta star						0.0009309						
65	Nu star						156.8	Potential UCLs to Use					
66	AppChi2						128.8	95% KM (Chebyshev) UCL					0.00111
67	95% Gamma Approximate UCL						0.0006993						
68	95% Adjusted Gamma UCL						0.0007009						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	Arsenic												
73													
74	General Statistics												
75	Number of Valid Data					119	Number of Detected Data					110	
76	Number of Distinct Detected Data					74	Number of Non-Detect Data					9	
77	Number of Missing Values					38	Percent Non-Detects					7.56%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00006	Minimum Detected					-9.721	
81	Maximum Detected					0.00547	Maximum Detected					-5.208	
82	Mean of Detected					0.0006789	Mean of Detected					-7.862	
83	SD of Detected					0.0009321	SD of Detected					0.995	
84	Minimum Non-Detect					8.194E-05	Minimum Non-Detect					-9.41	
85	Maximum Non-Detect					0.00122	Maximum Non-Detect					-6.713	
86													
87	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					103	
88	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					16	
89	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					86.55%	
90													
91	UCL Statistics												
92	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
93	Lilliefors Test Statistic					0.26	Lilliefors Test Statistic					0.09	
94	5% Lilliefors Critical Value					0.0845	5% Lilliefors Critical Value					0.0845	
95	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
96													
97	Assuming Normal Distribution						Assuming Lognormal Distribution						
98	DL/2 Substitution Method						DL/2 Substitution Method						
99	Mean					0.0006456	Mean					-7.919	
100	SD					0.0009046	SD					1.002	
101	95% DL/2 (t) UCL					0.000783	95% H-Stat (DL/2) UCL					0.0007903	
102													
103	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
104	MLE yields a negative mean						Mean in Log Scale					-7.925	

	A	B	C	D	E	F	G	H	I	J	K	L
105						SD in Log Scale					0.998	
106						Mean in Original Scale					0.0006424	
107						SD in Original Scale					0.0009053	
108						95% Percentile Bootstrap UCL					0.0007865	
109						95% BCA Bootstrap UCL					0.0008176	
110												
111	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
112	k star (bias corrected)				0.995		Data do not follow a Discernable Distribution (0.05)					
113	Theta Star				0.0006825							
114	nu star				218.9							
115												
116	A-D Test Statistic				4.872		Nonparametric Statistics					
117	5% A-D Critical Value				0.783		Kaplan-Meier (KM) Method					
118	K-S Test Statistic				0.783		Mean				0.0006431	
119	5% K-S Critical Value				0.0895		SD				0.0009017	
120	Data not Gamma Distributed at 5% Significance Level						SE of Mean				8.31E-05	
121							95% KM (t) UCL				0.0007808	
122	Assuming Gamma Distribution						95% KM (z) UCL				0.0007798	
123	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0007808	
124	Minimum				1E-09		95% KM (bootstrap t) UCL				0.0008128	
125	Maximum				0.00547		95% KM (BCA) UCL				0.0007873	
126	Mean				0.000649		95% KM (Percentile Bootstrap) UCL				0.00079	
127	Median				0.00031		95% KM (Chebyshev) UCL				0.00101	
128	SD				0.0009045		97.5% KM (Chebyshev) UCL				0.00116	
129	k star				0.77		99% KM (Chebyshev) UCL				0.00147	
130	Theta star				0.0008427							
131	Nu star				183.3		Potential UCLs to Use					
132	AppChi2				153		95% KM (BCA) UCL				0.0007873	
133	95% Gamma Approximate UCL				0.0007776							
134	95% Adjusted Gamma UCL				0.0007793							
135	Note: DL/2 is not a recommended method.											
136												
137												
138	Barium											
139												
140	General Statistics											
141	Number of Valid Data				79		Number of Detected Data				79	
142	Number of Distinct Detected Data				68		Number of Non-Detect Data				0	
143	Number of Missing Values				71		Percent Non-Detects				0.00%	
144												
145	Raw Statistics						Log-transformed Statistics					
146	Minimum Detected				0.000853		Minimum Detected				-7.067	
147	Maximum Detected				3.99		Maximum Detected				1.384	
148	Mean of Detected				0.103		Mean of Detected				-4.03	
149	SD of Detected				0.524		SD of Detected				1.2	
150	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
151	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
152												
153												
154	UCL Statistics											
155	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
156	Lilliefors Test Statistic				0.488		Lilliefors Test Statistic				0.167	

	A	B	C	D	E	F	G	H	I	J	K	L
157	5% Lilliefors Critical Value					0.0997	5% Lilliefors Critical Value					0.0997
158	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
159												
160	Assuming Normal Distribution					Assuming Lognormal Distribution						
161	DL/2 Substitution Method					DL/2 Substitution Method						
162	Mean					0.103	Mean					-4.03
163	SD					0.524	SD					1.2
164	95% DL/2 (t) UCL					0.201	95% H-Stat (DL/2) UCL					0.0508
165												
166	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
167	MLE method failed to converge properly					Mean in Log Scale					N/A	
168						SD in Log Scale					N/A	
169						Mean in Original Scale					N/A	
170						SD in Original Scale					N/A	
171						95% Percentile Bootstrap UCL					N/A	
172						95% BCA Bootstrap UCL					N/A	
173												
174	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
175	k star (bias corrected)					0.372	Data do not follow a Discernable Distribution (0.05)					
176	Theta Star					0.276						
177	nu star					58.83						
178												
179	A-D Test Statistic					15.51	Nonparametric Statistics					
180	5% A-D Critical Value					0.847	Kaplan-Meier (KM) Method					
181	K-S Test Statistic					0.847	Mean					0.103
182	5% K-S Critical Value					0.108	SD					0.52
183	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.0589	
184						95% KM (t) UCL					0.201	
185	Assuming Gamma Distribution					95% KM (z) UCL					0.2	
186	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.201	
187	Minimum					0.000853	95% KM (bootstrap t) UCL					2.809
188	Maximum					3.99	95% KM (BCA) UCL					0.222
189	Mean					0.103	95% KM (Percentile Bootstrap) UCL					0.205
190	Median					0.0167	95% KM (Chebyshev) UCL					0.36
191	SD					0.524	97.5% KM (Chebyshev) UCL					0.471
192	k star					0.372	99% KM (Chebyshev) UCL					0.689
193	Theta star					0.276						
194	Nu star					58.83	Potential UCLs to Use					
195	AppChi2					42.19	95% KM (Chebyshev) UCL					0.36
196	95% Gamma Approximate UCL					0.143						
197	95% Adjusted Gamma UCL					0.144						
198	Note: DL/2 is not a recommended method.											
199												
200												
201	Beryllium											
202												
203	General Statistics											
204	Number of Valid Data					103	Number of Detected Data					101
205	Number of Distinct Detected Data					35	Number of Non-Detect Data					2
206	Number of Missing Values					55	Percent Non-Detects					1.94%
207												
208	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
209				Minimum Detected		0.000002				Minimum Detected		-13.12	
210				Maximum Detected		0.00041				Maximum Detected		-7.799	
211				Mean of Detected		2.123E-05				Mean of Detected		-11.46	
212				SD of Detected		5.085E-05				SD of Detected		1.029	
213				Minimum Non-Detect		1.823E-05				Minimum Non-Detect		-10.91	
214				Maximum Non-Detect		4.245E-05				Maximum Non-Detect		-10.07	
215													
216	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		96
217	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		7
218	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		93.20%
219													
220	UCL Statistics												
221	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
222				Lilliefors Test Statistic		0.36				Lilliefors Test Statistic		0.117	
223				5% Lilliefors Critical Value		0.0882				5% Lilliefors Critical Value		0.0882	
224	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
225													
226	Assuming Normal Distribution						Assuming Lognormal Distribution						
227				DL/2 Substitution Method						DL/2 Substitution Method			
228				Mean		2.112E-05				Mean		-11.45	
229				SD		5.036E-05				SD		1.021	
230				95% DL/2 (t) UCL		2.935E-05				95% H-Stat (DL/2) UCL		2.326E-05	
231													
232	Maximum Likelihood Estimate(MLE) Method										Log ROS Method		
233	MLE yields a negative mean										Mean in Log Scale		-11.46
234											SD in Log Scale		1.02
235											Mean in Original Scale		2.098E-05
236											SD in Original Scale		5.038E-05
237											95% Percentile Bootstrap UCL		2.998E-05
238											95% BCA Bootstrap UCL		3.51E-05
239													
240	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
241				k star (bias corrected)		0.824	Data do not follow a Discernable Distribution (0.05)						
242				Theta Star		2.577E-05							
243				nu star		166.5							
244													
245				A-D Test Statistic		5.127	Nonparametric Statistics						
246				5% A-D Critical Value		0.791	Kaplan-Meier (KM) Method						
247				K-S Test Statistic		0.791	Mean						2.101E-05
248				5% K-S Critical Value		0.0924	SD						5.014E-05
249	Data not Gamma Distributed at 5% Significance Level						SE of Mean						4.966E-06
250							95% KM (t) UCL						2.926E-05
251	Assuming Gamma Distribution						95% KM (z) UCL						2.918E-05
252	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						2.926E-05
253				Minimum		0.000002	95% KM (bootstrap t) UCL						4.821E-05
254				Maximum		0.00041	95% KM (BCA) UCL						3.04E-05
255				Mean		2.107E-05	95% KM (Percentile Bootstrap) UCL						2.981E-05
256				Median		1.017E-05	95% KM (Chebyshev) UCL						4.266E-05
257				SD		5.037E-05	97.5% KM (Chebyshev) UCL						5.202E-05
258				k star		0.835	99% KM (Chebyshev) UCL						7.042E-05
259				Theta star		2.523E-05							
260				Nu star		172	Potential UCLs to Use						

	A	B	C	D	E	F	G	H	I	J	K	L
261	AppChi2					142.7	95% KM (Chebyshev) UCL					4.266E-05
262	95% Gamma Approximate UCL					2.54E-05						
263	95% Adjusted Gamma UCL					2.547E-05						
264	Note: DL/2 is not a recommended method.											
265												
266												
267	Bismuth											
268												
269	General Statistics											
270	Number of Valid Data					112	Number of Detected Data					106
271	Number of Distinct Detected Data					66	Number of Non-Detect Data					6
272	Number of Missing Values					46	Percent Non-Detects					5.36%
273												
274	Raw Statistics						Log-transformed Statistics					
275	Minimum Detected					0.000004	Minimum Detected					-12.43
276	Maximum Detected					0.00638	Maximum Detected					-5.055
277	Mean of Detected					0.000225	Mean of Detected					-9.682
278	SD of Detected					0.0006555	SD of Detected					1.556
279	Minimum Non-Detect					0.0000122	Minimum Non-Detect					-11.31
280	Maximum Non-Detect					0.0006126	Maximum Non-Detect					-7.398
281												
282	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					104
283	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					8
284	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					92.86%
285												
286	UCL Statistics											
287	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
288	Lilliefors Test Statistic					0.368	Lilliefors Test Statistic					0.0879
289	5% Lilliefors Critical Value					0.0861	5% Lilliefors Critical Value					0.0861
290	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
291												
292	Assuming Normal Distribution						Assuming Lognormal Distribution					
293	DL/2 Substitution Method						DL/2 Substitution Method					
294	Mean					0.0002171	Mean					-9.713
295	SD					0.0006389	SD					1.547
296	95% DL/2 (t) UCL					0.0003173	95% H-Stat (DL/2) UCL					0.0003285
297												
298	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
299	MLE yields a negative mean						Mean in Log Scale					-9.738
300							SD in Log Scale					1.537
301							Mean in Original Scale					0.0002143
302							SD in Original Scale					0.0006392
303							95% Percentile Bootstrap UCL					0.000321
304							95% BCA Bootstrap UCL					0.0004107
305												
306	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
307	k star (bias corrected)					0.488	Data do not follow a Discernable Distribution (0.05)					
308	Theta Star					0.000461						
309	nu star					103.5						
310												
311	A-D Test Statistic					4.191	Nonparametric Statistics					
312	5% A-D Critical Value					0.82	Kaplan-Meier (KM) Method					

	A	B	C	D	E	F	G	H	I	J	K	L
313	K-S Test Statistic					0.82	Mean					0.0002149
314	5% K-S Critical Value					0.093	SD					0.0006364
315	Data not Gamma Distributed at 5% Significance Level						SE of Mean					6.043E-05
316							95% KM (t) UCL					0.0003151
317	Assuming Gamma Distribution						95% KM (z) UCL					0.0003143
318	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0003151
319	Minimum					1E-09	95% KM (bootstrap t) UCL					0.0004623
320	Maximum					0.00638	95% KM (BCA) UCL					0.0003408
321	Mean					0.0002141	95% KM (Percentile Bootstrap) UCL					0.0003279
322	Median					0.000046	95% KM (Chebyshev) UCL					0.0004783
323	SD					0.0006393	97.5% KM (Chebyshev) UCL					0.0005923
324	k star					0.396	99% KM (Chebyshev) UCL					0.0008162
325	Theta star					0.0005401						
326	Nu star					88.81	Potential UCLs to Use					
327	AppChi2					68.08	97.5% KM (Chebyshev) UCL					0.0005923
328	95% Gamma Approximate UCL					0.0002793						
329	95% Adjusted Gamma UCL					0.0002803						
330	Note: DL/2 is not a recommended method.											
331												
332												
333	Cadmium											
334												
335	General Statistics											
336	Number of Valid Data					134	Number of Detected Data					126
337	Number of Distinct Detected Data					83	Number of Non-Detect Data					8
338	Number of Missing Values					24	Percent Non-Detects					5.97%
339												
340	Raw Statistics						Log-transformed Statistics					
341	Minimum Detected					0.00002	Minimum Detected					-10.82
342	Maximum Detected					0.00175	Maximum Detected					-6.348
343	Mean of Detected					0.0002866	Mean of Detected					-8.68
344	SD of Detected					0.0003472	SD of Detected					0.989
345	Minimum Non-Detect					0.0000387	Minimum Non-Detect					-10.16
346	Maximum Non-Detect					0.0002228	Maximum Non-Detect					-8.409
347												
348	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					89
349	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					45
350	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					66.42%
351												
352	UCL Statistics											
353	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
354	Lilliefors Test Statistic					0.264	Lilliefors Test Statistic					0.0744
355	5% Lilliefors Critical Value					0.0789	5% Lilliefors Critical Value					0.0789
356	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
357												
358	Assuming Normal Distribution						Assuming Lognormal Distribution					
359	DL/2 Substitution Method						DL/2 Substitution Method					
360	Mean					0.0002733	Mean					-8.749
361	SD					0.0003408	SD					1.011
362	95% DL/2 (t) UCL					0.000322	95% H-Stat (DL/2) UCL					0.0003363
363												
364	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					

	A	B	C	D	E	F	G	H	I	J	K	L
365	MLE yields a negative mean						Mean in Log Scale					-8.744
366							SD in Log Scale					1.003
367							Mean in Original Scale					0.0002735
368							SD in Original Scale					0.0003407
369							95% Percentile Bootstrap UCL					0.0003239
370							95% BCA Bootstrap UCL					0.0003339
371												
372	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
373	k star (bias corrected)				1.074		Data appear Lognormal at 5% Significance Level					
374	Theta Star				0.0002669							
375	nu star				270.6							
376												
377	A-D Test Statistic				4.15		Nonparametric Statistics					
378	5% A-D Critical Value				0.781		Kaplan-Meier (KM) Method					
379	K-S Test Statistic				0.781		Mean					0.0002736
380	5% K-S Critical Value				0.085		SD					0.0003394
381	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.945E-05
382							95% KM (t) UCL					0.0003224
383	Assuming Gamma Distribution						95% KM (z) UCL					0.0003221
384	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0003224
385	Minimum				1E-09		95% KM (bootstrap t) UCL					0.0003322
386	Maximum				0.00175		95% KM (BCA) UCL					0.0003284
387	Mean				0.0002737		95% KM (Percentile Bootstrap) UCL					0.0003207
388	Median				0.00015		95% KM (Chebyshev) UCL					0.000402
389	SD				0.0003409		97.5% KM (Chebyshev) UCL					0.0004575
390	k star				0.705		99% KM (Chebyshev) UCL					0.0005666
391	Theta star				0.0003881							
392	Nu star				189		Potential UCLs to Use					
393	AppChi2				158.2		95% KM (BCA) UCL					0.0003284
394	95% Gamma Approximate UCL				0.000327							
395	95% Adjusted Gamma UCL				0.0003276							
396	Note: DL/2 is not a recommended method.											
397												
398												
399	Cerium											
400												
401	General Statistics											
402	Number of Valid Data				115		Number of Detected Data				115	
403	Number of Distinct Detected Data				81		Number of Non-Detect Data				0	
404	Number of Missing Values				42		Percent Non-Detects				0.00%	
405												
406	Raw Statistics						Log-transformed Statistics					
407	Minimum Detected				0.00004		Minimum Detected				-10.13	
408	Maximum Detected				0.0158		Maximum Detected				-4.15	
409	Mean of Detected				0.0006459		Mean of Detected				-8.052	
410	SD of Detected				0.00173		SD of Detected				0.994	
411	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
412	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
413												
414												
415	UCL Statistics											
416	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
417	Lilliefors Test Statistic					0.363	Lilliefors Test Statistic					0.0607
418	5% Lilliefors Critical Value					0.0826	5% Lilliefors Critical Value					0.0826
419	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
420												
421	Assuming Normal Distribution					Assuming Lognormal Distribution						
422	DL/2 Substitution Method						DL/2 Substitution Method					
423	Mean					0.0006459	Mean					-8.052
424	SD					0.00173	SD					0.994
425	95% DL/2 (t) UCL					0.0009132	95% H-Stat (DL/2) UCL					0.00064
426												
427	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
428	MLE method failed to converge properly						Mean in Log Scale					N/A
429							SD in Log Scale					N/A
430							Mean in Original Scale					N/A
431							SD in Original Scale					N/A
432							95% Percentile Bootstrap UCL					N/A
433							95% BCA Bootstrap UCL					N/A
434												
435	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
436	k star (bias corrected)					0.818	Data appear Lognormal at 5% Significance Level					
437	Theta Star					0.0007891						
438	nu star					188.2						
439												
440	A-D Test Statistic					6.151	Nonparametric Statistics					
441	5% A-D Critical Value					0.791	Kaplan-Meier (KM) Method					
442	K-S Test Statistic					0.791	Mean					0.0006459
443	5% K-S Critical Value					0.0887	SD					0.00172
444	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0001612
445							95% KM (t) UCL					0.0009132
446	Assuming Gamma Distribution						95% KM (z) UCL					0.000911
447	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0009132
448	Minimum					0.00004	95% KM (bootstrap t) UCL					0.00172
449	Maximum					0.0158	95% KM (BCA) UCL					0.0009437
450	Mean					0.0006459	95% KM (Percentile Bootstrap) UCL					0.0009502
451	Median					0.0002852	95% KM (Chebyshev) UCL					0.00135
452	SD					0.00173	97.5% KM (Chebyshev) UCL					0.00165
453	k star					0.818	99% KM (Chebyshev) UCL					0.00225
454	Theta star					0.0007891						
455	Nu star					188.2	Potential UCLs to Use					
456	AppChi2					157.5	95% KM (BCA) UCL					0.0009437
457	95% Gamma Approximate UCL					0.0007719						
458	95% Adjusted Gamma UCL					0.0007737						
459	Note: DL/2 is not a recommended method.											
460												
461												
462	Cesium											
463												
464	General Statistics											
465	Number of Valid Data					117	Number of Detected Data					117
466	Number of Distinct Detected Data					45	Number of Non-Detect Data					0
467	Number of Missing Values					41	Percent Non-Detects					0.00%
468												

	A	B	C	D	E	F	G	H	I	J	K	L
469	Raw Statistics						Log-transformed Statistics					
470	Minimum Detected				0.000001		Minimum Detected				-13.82	
471	Maximum Detected				0.00015		Maximum Detected				-8.805	
472	Mean of Detected				3.244E-05		Mean of Detected				-10.71	
473	SD of Detected				3.042E-05		SD of Detected				0.888	
474	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
475	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
476												
477												
478	UCL Statistics											
479	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
480	Lilliefors Test Statistic				0.2		Lilliefors Test Statistic				0.108	
481	5% Lilliefors Critical Value				0.0819		5% Lilliefors Critical Value				0.0819	
482	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
483												
484	Assuming Normal Distribution						Assuming Lognormal Distribution					
485	DL/2 Substitution Method						DL/2 Substitution Method					
486	Mean				3.244E-05		Mean				-10.71	
487	SD				3.042E-05		SD				0.888	
488	95% DL/2 (t) UCL				3.71E-05		95% H-Stat (DL/2) UCL				3.942E-05	
489												
490	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
491	MLE method failed to converge properly						Mean in Log Scale				N/A	
492							SD in Log Scale				N/A	
493							Mean in Original Scale				N/A	
494							SD in Original Scale				N/A	
495							95% Percentile Bootstrap UCL				N/A	
496							95% BCA Bootstrap UCL				N/A	
497												
498	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
499	k star (bias corrected)				1.457		Data do not follow a Discernable Distribution (0.05)					
500	Theta Star				2.226E-05							
501	nu star				341							
502												
503	A-D Test Statistic				2.036		Nonparametric Statistics					
504	5% A-D Critical Value				0.77		Kaplan-Meier (KM) Method					
505	K-S Test Statistic				0.77		Mean				3.244E-05	
506	5% K-S Critical Value				0.0867		SD				3.028E-05	
507	Data not Gamma Distributed at 5% Significance Level						SE of Mean				2.812E-06	
508							95% KM (t) UCL				3.71E-05	
509	Assuming Gamma Distribution						95% KM (z) UCL				3.706E-05	
510	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				3.71E-05	
511	Minimum				0.000001		95% KM (bootstrap t) UCL				3.806E-05	
512	Maximum				0.00015		95% KM (BCA) UCL				3.729E-05	
513	Mean				3.244E-05		95% KM (Percentile Bootstrap) UCL				3.717E-05	
514	Median				0.00002		95% KM (Chebyshev) UCL				4.469E-05	
515	SD				3.042E-05		97.5% KM (Chebyshev) UCL				5E-05	
516	k star				1.457		99% KM (Chebyshev) UCL				6.041E-05	
517	Theta star				2.226E-05							
518	Nu star				341		Potential UCLs to Use					
519	AppChi2				299.3		95% KM (BCA) UCL				3.729E-05	
520	95% Gamma Approximate UCL				3.697E-05							

	A	B	C	D	E	F	G	H	I	J	K	L
521	95% Adjusted Gamma UCL					3.703E-05						
522	Note: DL/2 is not a recommended method.											
523												
524												
525	Chromium											
526												
527	General Statistics											
528	Number of Valid Data					108	Number of Detected Data					108
529	Number of Distinct Detected Data					93	Number of Non-Detect Data					0
530	Number of Missing Values					42	Percent Non-Detects					0.00%
531												
532	Raw Statistics						Log-transformed Statistics					
533	Minimum Detected					0.00006	Minimum Detected					-9.721
534	Maximum Detected					0.107	Maximum Detected					-2.237
535	Mean of Detected					0.0033	Mean of Detected					-6.811
536	SD of Detected					0.012	SD of Detected					1.195
537	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
538	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
539												
540												
541	UCL Statistics											
542	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
543	Lilliefors Test Statistic					0.403	Lilliefors Test Statistic					0.0729
544	5% Lilliefors Critical Value					0.0853	5% Lilliefors Critical Value					0.0853
545	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
546												
547	Assuming Normal Distribution						Assuming Lognormal Distribution					
548	DL/2 Substitution Method						DL/2 Substitution Method					
549	Mean					0.0033	Mean					-6.811
550	SD					0.012	SD					1.195
551	95% DL/2 (t) UCL					0.00522	95% H-Stat (DL/2) UCL					0.00296
552												
553	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
554	MLE method failed to converge properly						Mean in Log Scale					N/A
555							SD in Log Scale					N/A
556							Mean in Original Scale					N/A
557							SD in Original Scale					N/A
558							95% Percentile Bootstrap UCL					N/A
559							95% BCA Bootstrap UCL					N/A
560												
561	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
562	k star (bias corrected)					0.558	Data appear Lognormal at 5% Significance Level					
563	Theta Star					0.00592						
564	nu star					120.5						
565												
566	A-D Test Statistic					9.284	Nonparametric Statistics					
567	5% A-D Critical Value					0.812	Kaplan-Meier (KM) Method					
568	K-S Test Statistic					0.812	Mean					0.0033
569	5% K-S Critical Value					0.092	SD					0.0119
570	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00116
571							95% KM (t) UCL					0.00522
572	Assuming Gamma Distribution						95% KM (z) UCL					0.0052

	A	B	C	D	E	F	G	H	I	J	K	L
573	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00522
574					Minimum	0.00006				95% KM (bootstrap t) UCL		0.0132
575					Maximum	0.107				95% KM (BCA) UCL		0.00546
576					Mean	0.0033				95% KM (Percentile Bootstrap) UCL		0.00531
577					Median	0.00103				95% KM (Chebyshev) UCL		0.00834
578					SD	0.012				97.5% KM (Chebyshev) UCL		0.0105
579					k star	0.558				99% KM (Chebyshev) UCL		0.0148
580					Theta star	0.00592						
581					Nu star	120.5				Potential UCLs to Use		
582					AppChi2	96.16				95% KM (Chebyshev) UCL		0.00834
583					95% Gamma Approximate UCL	0.00414						
584					95% Adjusted Gamma UCL	0.00415						
585	Note: DL/2 is not a recommended method.											
586												
587												
588	Cobalt											
589												
590	General Statistics											
591					Number of Valid Data	129				Number of Detected Data		127
592					Number of Distinct Detected Data	74				Number of Non-Detect Data		2
593					Number of Missing Values	29				Percent Non-Detects		1.55%
594												
595	Raw Statistics					Log-transformed Statistics						
596					Minimum Detected	0.00001				Minimum Detected		-11.51
597					Maximum Detected	0.00125				Maximum Detected		-6.684
598					Mean of Detected	0.000151				Mean of Detected		-9.346
599					SD of Detected	0.0001768				SD of Detected		1.108
600					Minimum Non-Detect	0.0002746				Minimum Non-Detect		-8.2
601					Maximum Non-Detect	0.0003336				Maximum Non-Detect		-8.006
602												
603	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect		114
604	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		15
605	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		88.37%
606												
607	UCL Statistics											
608	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
609					Lilliefors Test Statistic	0.213				Lilliefors Test Statistic		0.0828
610					5% Lilliefors Critical Value	0.0786				5% Lilliefors Critical Value		0.0786
611	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
612												
613	Assuming Normal Distribution					Assuming Lognormal Distribution						
614					DL/2 Substitution Method					DL/2 Substitution Method		
615					Mean	0.000151				Mean		-9.338
616					SD	0.0001754				SD		1.101
617					95% DL/2 (t) UCL	0.0001766				95% H-Stat (DL/2) UCL		0.0002072
618												
619					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
620	MLE yields a negative mean									Mean in Log Scale		-9.349
621										SD in Log Scale		1.099
622										Mean in Original Scale		0.0001498
623										SD in Original Scale		0.0001757
624										95% Percentile Bootstrap UCL		0.0001754

	A	B	C	D	E	F	G	H	I	J	K	L	
625										95% BCA Bootstrap UCL		0.0001796	
626													
627	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
628				k star (bias corrected)		1.028	Data Follow Appr. Gamma Distribution at 5% Significance Level						
629				Theta Star		0.0001468							
630				nu star		261.2							
631													
632				A-D Test Statistic		1.001	Nonparametric Statistics						
633				5% A-D Critical Value		0.782	Kaplan-Meier (KM) Method						
634				K-S Test Statistic		0.782				Mean		0.0001502	
635				5% K-S Critical Value		0.0849				SD		0.0001751	
636	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean		1.55E-05
637										95% KM (t) UCL		0.0001758	
638	Assuming Gamma Distribution										95% KM (z) UCL		0.0001757
639	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.0001758
640				Minimum		0.00001				95% KM (bootstrap t) UCL		0.0001804	
641				Maximum		0.00125				95% KM (BCA) UCL		0.0001774	
642				Mean		0.0001506				95% KM (Percentile Bootstrap) UCL		0.000176	
643				Median		0.0001				95% KM (Chebyshev) UCL		0.0002177	
644				SD		0.0001755				97.5% KM (Chebyshev) UCL		0.0002469	
645				k star		1.043				99% KM (Chebyshev) UCL		0.0003044	
646				Theta star		0.0001445							
647				Nu star		269	Potential UCLs to Use						
648				AppChi2		232				95% KM (Chebyshev) UCL		0.0002177	
649				95% Gamma Approximate UCL		0.0001746							
650				95% Adjusted Gamma UCL		0.0001749							
651	Note: DL/2 is not a recommended method.												
652													
653													
654	Copper												
655													
656	General Statistics												
657				Number of Valid Data		135				Number of Detected Data		130	
658				Number of Distinct Detected Data		105				Number of Non-Detect Data		5	
659				Number of Missing Values		23				Percent Non-Detects		3.70%	
660													
661	Raw Statistics						Log-transformed Statistics						
662				Minimum Detected		0.00293				Minimum Detected		-5.833	
663				Maximum Detected		0.449				Maximum Detected		-0.8	
664				Mean of Detected		0.0155				Mean of Detected		-4.598	
665				SD of Detected		0.0396				SD of Detected		0.704	
666				Minimum Non-Detect		0.00911				Minimum Non-Detect		-4.699	
667				Maximum Non-Detect		0.659				Maximum Non-Detect		-0.417	
668													
669	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		135
670	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
671	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
672													
673	UCL Statistics												
674	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
675				Lilliefors Test Statistic		0.376				Lilliefors Test Statistic		0.12	
676				5% Lilliefors Critical Value		0.0777				5% Lilliefors Critical Value		0.0777	

	A	B	C	D	E	F	G	H	I	J	K	L		
677	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
678														
679	Assuming Normal Distribution						Assuming Lognormal Distribution							
680	DL/2 Substitution Method						DL/2 Substitution Method							
681	Mean						0.0232	Mean						-4.506
682	SD						0.06	SD						0.894
683	95% DL/2 (t) UCL						0.0317	95% H-Stat (DL/2) UCL						0.022
684														
685	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
686	MLE method failed to converge properly							Mean in Log Scale						-4.602
687								SD in Log Scale						0.692
688								Mean in Original Scale						0.0152
689								SD in Original Scale						0.0388
690								95% Percentile Bootstrap UCL						0.0218
691								95% BCA Bootstrap UCL						0.0263
692														
693	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
694	k star (bias corrected)						1.279	Data do not follow a Discernable Distribution (0.05)						
695	Theta Star						0.0121							
696	nu star						332.6							
697														
698	A-D Test Statistic						8.553	Nonparametric Statistics						
699	5% A-D Critical Value						0.775	Kaplan-Meier (KM) Method						
700	K-S Test Statistic						0.775	Mean						0.0154
701	5% K-S Critical Value						0.0836	SD						0.0391
702	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.00342
703								95% KM (t) UCL						0.021
704	Assuming Gamma Distribution							95% KM (z) UCL						0.021
705	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.021
706	Minimum						0.00293	95% KM (bootstrap t) UCL						0.0363
707	Maximum						0.449	95% KM (BCA) UCL						0.0225
708	Mean						0.0154	95% KM (Percentile Bootstrap) UCL						0.022
709	Median						0.009	95% KM (Chebyshev) UCL						0.0303
710	SD						0.0388	97.5% KM (Chebyshev) UCL						0.0367
711	k star						1.317	99% KM (Chebyshev) UCL						0.0494
712	Theta star						0.0117							
713	Nu star						355.5	Potential UCLs to Use						
714	AppChi2						312.8	95% KM (BCA) UCL						0.0225
715	95% Gamma Approximate UCL						0.0175							
716	95% Adjusted Gamma UCL						0.0176							
717	Note: DL/2 is not a recommended method.													
718														
719														
720	Gallium													
721														
722	General Statistics													
723	Number of Valid Data						105	Number of Detected Data						105
724	Number of Distinct Detected Data						46	Number of Non-Detect Data						0
725	Number of Missing Values						51	Percent Non-Detects						0.00%
726														
727	Raw Statistics						Log-transformed Statistics							
728	Minimum Detected						0.00002	Minimum Detected						-10.82

	A	B	C	D	E	F	G	H	I	J	K	L	
729				Maximum Detected		0.00712				Maximum Detected		-4.945	
730				Mean of Detected		0.0002893				Mean of Detected		-9.117	
731				SD of Detected		0.0008727				SD of Detected		1.1	
732				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
733				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
734													
735													
736				UCL Statistics									
737	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
738				Lilliefors Test Statistic		0.405				Lilliefors Test Statistic		0.158	
739				5% Lilliefors Critical Value		0.0865				5% Lilliefors Critical Value		0.0865	
740	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
741													
742	Assuming Normal Distribution						Assuming Lognormal Distribution						
743				DL/2 Substitution Method						DL/2 Substitution Method			
744				Mean		0.0002893				Mean		-9.117	
745				SD		0.0008727				SD		1.1	
746				95% DL/2 (t) UCL		0.0004306				95% H-Stat (DL/2) UCL		0.0002573	
747													
748				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
749	MLE method failed to converge properly										Mean in Log Scale		N/A
750										SD in Log Scale		N/A	
751										Mean in Original Scale		N/A	
752										SD in Original Scale		N/A	
753										95% Percentile Bootstrap UCL		N/A	
754										95% BCA Bootstrap UCL		N/A	
755													
756	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
757				k star (bias corrected)		0.621				Data do not follow a Discernable Distribution (0.05)			
758				Theta Star		0.0004658							
759				nu star		130.4							
760													
761				A-D Test Statistic		11.32				Nonparametric Statistics			
762				5% A-D Critical Value		0.806				Kaplan-Meier (KM) Method			
763				K-S Test Statistic		0.806				Mean		0.0002893	
764				5% K-S Critical Value		0.0924				SD		0.0008685	
765	Data not Gamma Distributed at 5% Significance Level										SE of Mean		8.516E-05
766										95% KM (t) UCL		0.0004306	
767	Assuming Gamma Distribution										95% KM (z) UCL		0.0004294
768	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.0004306
769				Minimum		0.00002				95% KM (bootstrap t) UCL		0.0006553	
770				Maximum		0.00712				95% KM (BCA) UCL		0.0004507	
771				Mean		0.0002893				95% KM (Percentile Bootstrap) UCL		0.0004341	
772				Median		0.0001				95% KM (Chebyshev) UCL		0.0006605	
773				SD		0.0008727				97.5% KM (Chebyshev) UCL		0.0008211	
774				k star		0.621				99% KM (Chebyshev) UCL		0.00114	
775				Theta star		0.0004658							
776				Nu star		130.4				Potential UCLs to Use			
777				AppChi2		105				95% KM (Chebyshev) UCL		0.0006605	
778				95% Gamma Approximate UCL		0.0003592							
779				95% Adjusted Gamma UCL		0.0003603							
780	Note: DL/2 is not a recommended method.												

	A	B	C	D	E	F	G	H	I	J	K	L		
781														
782														
783	Iron													
784														
785	General Statistics													
786	Number of Valid Data					129		Number of Detected Data					129	
787	Number of Distinct Detected Data					128		Number of Non-Detect Data					0	
788	Number of Missing Values					29		Percent Non-Detects					0.00%	
789														
790	Raw Statistics						Log-transformed Statistics							
791	Minimum Detected					0.0134		Minimum Detected					-4.314	
792	Maximum Detected					1.556		Maximum Detected					0.442	
793	Mean of Detected					0.256		Mean of Detected					-1.83	
794	SD of Detected					0.271		SD of Detected					1.003	
795	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
796	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
797														
798														
799	UCL Statistics													
800	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
801	Lilliefors Test Statistic					0.185		Lilliefors Test Statistic					0.0625	
802	5% Lilliefors Critical Value					0.078		5% Lilliefors Critical Value					0.078	
803	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
804														
805	Assuming Normal Distribution						Assuming Lognormal Distribution							
806	DL/2 Substitution Method							DL/2 Substitution Method						
807	Mean					0.256		Mean					-1.83	
808	SD					0.271		SD					1.003	
809	95% DL/2 (t) UCL					0.295		95% H-Stat (DL/2) UCL					0.322	
810														
811	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
812	MLE method failed to converge properly						Mean in Log Scale						N/A	
813														
814														
815														
816														
817														
818														
819	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
820	k star (bias corrected)					1.188		Data Follow Appr. Gamma Distribution at 5% Significance Level						
821	Theta Star					0.215								
822	nu star					306.4								
823														
824	A-D Test Statistic					1.021		Nonparametric Statistics						
825	5% A-D Critical Value					0.778		Kaplan-Meier (KM) Method						
826	K-S Test Statistic					0.778		Mean					0.256	
827	5% K-S Critical Value					0.084		SD					0.27	
828	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean						0.0238	
829														
830	Assuming Gamma Distribution						95% KM (t) UCL						0.295	
831	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					0.295	
832	Minimum					0.0134		95% KM (bootstrap t) UCL					0.301	

	A	B	C	D	E	F	G	H	I	J	K	L	
833					Maximum	1.556				95% KM (BCA) UCL		0.295	
834					Mean	0.256				95% KM (Percentile Bootstrap) UCL		0.294	
835					Median	0.173				95% KM (Chebyshev) UCL		0.36	
836					SD	0.271				97.5% KM (Chebyshev) UCL		0.405	
837					k star	1.188				99% KM (Chebyshev) UCL		0.493	
838					Theta star	0.215							
839					Nu star	306.4				Potential UCLs to Use			
840					AppChi2	266.8				95% KM (Chebyshev) UCL		0.36	
841					95% Gamma Approximate UCL	0.294							
842					95% Adjusted Gamma UCL	0.294							
843	Note: DL/2 is not a recommended method.												
844													
845													
846	Lanthanum												
847													
848	General Statistics												
849					Number of Valid Data	122				Number of Detected Data		109	
850					Number of Distinct Detected Data	65				Number of Non-Detect Data		13	
851					Number of Missing Values	36				Percent Non-Detects		10.66%	
852													
853	Raw Statistics						Log-transformed Statistics						
854					Minimum Detected	0.00002				Minimum Detected		-10.82	
855					Maximum Detected	0.00865				Maximum Detected		-4.75	
856					Mean of Detected	0.0003824				Mean of Detected		-8.639	
857					SD of Detected	0.0009854				SD of Detected		1.062	
858					Minimum Non-Detect	3.032E-05				Minimum Non-Detect		-10.4	
859					Maximum Non-Detect	0.0009453				Maximum Non-Detect		-6.964	
860													
861	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						116
862	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						6
863	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						95.08%
864													
865	UCL Statistics												
866	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
867					Lilliefors Test Statistic	0.357				Lilliefors Test Statistic		0.0654	
868					5% Lilliefors Critical Value	0.0849				5% Lilliefors Critical Value		0.0849	
869	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
870													
871	Assuming Normal Distribution						Assuming Lognormal Distribution						
872					DL/2 Substitution Method					DL/2 Substitution Method			
873					Mean	0.0003649				Mean		-8.649	
874					SD	0.0009335				SD		1.05	
875					95% DL/2 (t) UCL	0.000505				95% H-Stat (DL/2) UCL		0.0004402	
876													
877					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
878	MLE yields a negative mean						Mean in Log Scale						-8.692
879							SD in Log Scale						1.029
880							Mean in Original Scale						0.0003542
881							SD in Original Scale						0.0009347
882							95% Percentile Bootstrap UCL						0.0005011
883							95% BCA Bootstrap UCL						0.0005879
884													

	A	B	C	D	E	F	G	H	I	J	K	L
885	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
886	k star (bias corrected)				0.759		Data appear Lognormal at 5% Significance Level					
887	Theta Star				0.0005036							
888	nu star				165.5							
889												
890	A-D Test Statistic				5.867		Nonparametric Statistics					
891	5% A-D Critical Value				0.794		Kaplan-Meier (KM) Method					
892	K-S Test Statistic				0.794						Mean	0.0003565
893	5% K-S Critical Value				0.0905						SD	0.000931
894	Data not Gamma Distributed at 5% Significance Level										SE of Mean	8.474E-05
895											95% KM (t) UCL	0.000497
896	Assuming Gamma Distribution										95% KM (z) UCL	0.0004959
897	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0004969
898	Minimum				1E-09						95% KM (bootstrap t) UCL	0.0007903
899	Maximum				0.00865						95% KM (BCA) UCL	0.0005411
900	Mean				0.0003677						95% KM (Percentile Bootstrap) UCL	0.0005109
901	Median				0.00018						95% KM (Chebyshev) UCL	0.0007259
902	SD				0.0009329						97.5% KM (Chebyshev) UCL	0.0008858
903	k star				0.67						99% KM (Chebyshev) UCL	0.0012
904	Theta star				0.0005488							
905	Nu star				163.5		Potential UCLs to Use					
906	AppChi2				134.9						95% KM (Chebyshev) UCL	0.0007259
907	95% Gamma Approximate UCL				0.0004456							
908	95% Adjusted Gamma UCL				0.0004466							
909	Note: DL/2 is not a recommended method.											
910												
911												
912	Lead											
913												
914	General Statistics											
915	Number of Valid Data				127		Number of Detected Data				116	
916	Number of Distinct Detected Data				105		Number of Non-Detect Data				11	
917	Number of Missing Values				31		Percent Non-Detects				8.66%	
918												
919	Raw Statistics						Log-transformed Statistics					
920	Minimum Detected				0.0003		Minimum Detected				-8.112	
921	Maximum Detected				0.0759		Maximum Detected				-2.579	
922	Mean of Detected				0.0059		Mean of Detected				-5.744	
923	SD of Detected				0.00915		SD of Detected				1.049	
924	Minimum Non-Detect				0.0005928		Minimum Non-Detect				-7.431	
925	Maximum Non-Detect				0.00489		Maximum Non-Detect				-5.32	
926												
927	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				88	
928	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				39	
929	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				69.29%	
930												
931	UCL Statistics											
932	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
933	Lilliefors Test Statistic				0.27		Lilliefors Test Statistic				0.0708	
934	5% Lilliefors Critical Value				0.0823		5% Lilliefors Critical Value				0.0823	
935	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
936												

	A	B	C	D	E	F	G	H	I	J	K	L		
937	Assuming Normal Distribution						Assuming Lognormal Distribution							
938	DL/2 Substitution Method						DL/2 Substitution Method							
939	Mean						0.00547	Mean						-5.872
940	SD						0.00886	SD						1.101
941	95% DL/2 (t) UCL						0.00677	95% H-Stat (DL/2) UCL						0.00661
942														
943	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
944	MLE yields a negative mean							Mean in Log Scale						-5.866
945								SD in Log Scale						1.089
946								Mean in Original Scale						0.00547
947								SD in Original Scale						0.00886
948								95% Percentile Bootstrap UCL						0.00691
949								95% BCA Bootstrap UCL						0.0072
950														
951	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
952	k star (bias corrected)						0.931	Data appear Lognormal at 5% Significance Level						
953	Theta Star						0.00634							
954	nu star						215.9							
955														
956	A-D Test Statistic						3.756	Nonparametric Statistics						
957	5% A-D Critical Value						0.786	Kaplan-Meier (KM) Method						
958	K-S Test Statistic						0.786	Mean						0.00548
959	5% K-S Critical Value						0.088	SD						0.00882
960	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.0007861
961								95% KM (t) UCL						0.00678
962	Assuming Gamma Distribution							95% KM (z) UCL						0.00677
963	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.00678
964	Minimum						1E-09	95% KM (bootstrap t) UCL						0.00749
965	Maximum						0.0759	95% KM (BCA) UCL						0.00689
966	Mean						0.00544	95% KM (Percentile Bootstrap) UCL						0.00673
967	Median						0.0025	95% KM (Chebyshev) UCL						0.0089
968	SD						0.00888	97.5% KM (Chebyshev) UCL						0.0104
969	k star						0.454	99% KM (Chebyshev) UCL						0.0133
970	Theta star						0.012							
971	Nu star						115.2	Potential UCLs to Use						
972	AppChi2						91.44	95% KM (Chebyshev) UCL						0.0089
973	95% Gamma Approximate UCL						0.00685							
974	95% Adjusted Gamma UCL						0.00687							
975	Note: DL/2 is not a recommended method.													
976														
977														
978	Lithium													
979														
980	General Statistics													
981	Number of Valid Data						113	Number of Detected Data						113
982	Number of Distinct Detected Data						65	Number of Non-Detect Data						0
983	Number of Missing Values						45	Percent Non-Detects						0.00%
984														
985	Raw Statistics						Log-transformed Statistics							
986	Minimum Detected						0.000037	Minimum Detected						-10.2
987	Maximum Detected						0.00195	Maximum Detected						-6.24
988	Mean of Detected						0.0002535	Mean of Detected						-8.577

	A	B	C	D	E	F	G	H	I	J	K	L
989	SD of Detected					0.0002382	SD of Detected					0.768
990	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
991	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
992												
993												
994	UCL Statistics											
995	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
996	Lilliefors Test Statistic					0.182	Lilliefors Test Statistic					0.105
997	5% Lilliefors Critical Value					0.0833	5% Lilliefors Critical Value					0.0833
998	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
999												
1000	Assuming Normal Distribution						Assuming Lognormal Distribution					
1001	DL/2 Substitution Method						DL/2 Substitution Method					
1002	Mean					0.0002535	Mean					-8.577
1003	SD					0.0002382	SD					0.768
1004	95% DL/2 (t) UCL					0.0002907	95% H-Stat (DL/2) UCL					0.0002924
1005												
1006	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1007	MLE method failed to converge properly						Mean in Log Scale					N/A
1008							SD in Log Scale					N/A
1009							Mean in Original Scale					N/A
1010							SD in Original Scale					N/A
1011							95% Percentile Bootstrap UCL					N/A
1012							95% BCA Bootstrap UCL					N/A
1013												
1014	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1015	k star (bias corrected)					1.788	Data do not follow a Discernable Distribution (0.05)					
1016	Theta Star					0.0001418						
1017	nu star					404.1						
1018												
1019	A-D Test Statistic					1.258	Nonparametric Statistics					
1020	5% A-D Critical Value					0.767	Kaplan-Meier (KM) Method					
1021	K-S Test Statistic					0.767	Mean					0.0002535
1022	5% K-S Critical Value					0.0874	SD					0.0002371
1023	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.24E-05
1024							95% KM (t) UCL					0.0002907
1025	Assuming Gamma Distribution						95% KM (z) UCL					0.0002904
1026	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0002907
1027	Minimum					0.000037	95% KM (bootstrap t) UCL					0.0003016
1028	Maximum					0.00195	95% KM (BCA) UCL					0.0002922
1029	Mean					0.0002535	95% KM (Percentile Bootstrap) UCL					0.0002917
1030	Median					0.0002	95% KM (Chebyshev) UCL					0.0003512
1031	SD					0.0002382	97.5% KM (Chebyshev) UCL					0.0003934
1032	k star					1.788	99% KM (Chebyshev) UCL					0.0004764
1033	Theta star					0.0001418						
1034	Nu star					404.1	Potential UCLs to Use					
1035	AppChi2					358.5	95% KM (BCA) UCL					0.0002922
1036	95% Gamma Approximate UCL					0.0002858						
1037	95% Adjusted Gamma UCL					0.0002862						
1038	Note: DL/2 is not a recommended method.											
1039												
1040												

	A	B	C	D	E	F	G	H	I	J	K	L		
1041	Manganese													
1042														
1043	General Statistics													
1044	Number of Valid Data					131		Number of Detected Data					128	
1045	Number of Distinct Detected Data					100		Number of Non-Detect Data					3	
1046	Number of Missing Values					27		Percent Non-Detects					2.29%	
1047														
1048	Raw Statistics						Log-transformed Statistics							
1049	Minimum Detected					0.000611		Minimum Detected					-7.4	
1050	Maximum Detected					0.0514		Maximum Detected					-2.969	
1051	Mean of Detected					0.00754		Mean of Detected					-5.334	
1052	SD of Detected					0.00809		SD of Detected					0.963	
1053	Minimum Non-Detect					0.00336		Minimum Non-Detect					-5.697	
1054	Maximum Non-Detect					0.0107		Maximum Non-Detect					-4.534	
1055														
1056	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						104	
1057	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						27	
1058	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						79.39%	
1059														
1060	UCL Statistics													
1061	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1062	Lilliefors Test Statistic					0.196		Lilliefors Test Statistic					0.0619	
1063	5% Lilliefors Critical Value					0.0783		5% Lilliefors Critical Value					0.0783	
1064	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1065														
1066	Assuming Normal Distribution						Assuming Lognormal Distribution							
1067	DL/2 Substitution Method							DL/2 Substitution Method						
1068	Mean					0.00746		Mean					-5.342	
1069	SD					0.00802		SD					0.956	
1070	95% DL/2 (t) UCL					0.00862		95% H-Stat (DL/2) UCL					0.00928	
1071														
1072	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1073	MLE yields a negative mean						Mean in Log Scale					-5.346		
1074							SD in Log Scale					0.956		
1075							Mean in Original Scale					0.00744		
1076							SD in Original Scale					0.00802		
1077							95% Percentile Bootstrap UCL					0.00867		
1078							95% BCA Bootstrap UCL					0.00876		
1079														
1080	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1081	k star (bias corrected)					1.234		Data Follow Appr. Gamma Distribution at 5% Significance Level						
1082	Theta Star					0.00611								
1083	nu star					316								
1084														
1085	A-D Test Statistic					1.272		Nonparametric Statistics						
1086	5% A-D Critical Value					0.776		Kaplan-Meier (KM) Method						
1087	K-S Test Statistic					0.776		Mean					0.00745	
1088	5% K-S Critical Value					0.0842		SD					0.008	
1089	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.0007019		
1090							95% KM (t) UCL					0.00861		
1091	Assuming Gamma Distribution						95% KM (z) UCL					0.0086		
1092	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					0.00861	

	A	B	C	D	E	F	G	H	I	J	K	L	
1093					Minimum	0.000611				95% KM (bootstrap t) UCL		0.0088	
1094					Maximum	0.0514				95% KM (BCA) UCL		0.0086	
1095					Mean	0.00746				95% KM (Percentile Bootstrap) UCL		0.00863	
1096					Median	0.00503				95% KM (Chebyshev) UCL		0.0105	
1097					SD	0.00802				97.5% KM (Chebyshev) UCL		0.0118	
1098					k star	1.23				99% KM (Chebyshev) UCL		0.0144	
1099					Theta star	0.00606							
1100					Nu star	322.3				Potential UCLs to Use			
1101					AppChi2	281.7				95% KM (Chebyshev) UCL		0.0105	
1102					95% Gamma Approximate UCL	0.00853							
1103					95% Adjusted Gamma UCL	0.00855							
1104	Note: DL/2 is not a recommended method.												
1105													
1106													
1107	Mercury												
1108													
1109	General Statistics												
1110					Number of Valid Data	23				Number of Detected Data		15	
1111					Number of Distinct Detected Data	15				Number of Non-Detect Data		8	
1112					Number of Missing Values	126				Percent Non-Detects		34.78%	
1113													
1114	Raw Statistics						Log-transformed Statistics						
1115					Minimum Detected	1.096				Minimum Detected		0.0913	
1116					Maximum Detected	15.17				Maximum Detected		2.719	
1117					Mean of Detected	6.431				Mean of Detected		1.619	
1118					SD of Detected	4.073				SD of Detected		0.795	
1119					Minimum Non-Detect	0.0022				Minimum Non-Detect		-6.119	
1120					Maximum Non-Detect	0.00221				Maximum Non-Detect		-6.115	
1121													
1122	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						8
1123	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						15
1124	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						34.78%
1125													
1126	UCL Statistics												
1127	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1128					Shapiro Wilk Test Statistic	0.944				Shapiro Wilk Test Statistic		0.918	
1129					5% Shapiro Wilk Critical Value	0.881				5% Shapiro Wilk Critical Value		0.881	
1130	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1131													
1132	Assuming Normal Distribution						Assuming Lognormal Distribution						
1133					DL/2 Substitution Method					DL/2 Substitution Method			
1134					Mean	4.195				Mean		-1.314	
1135					SD	4.512				SD		4.154	
1136					95% DL/2 (t) UCL	5.81				95% H-Stat (DL/2) UCL		144381	
1137													
1138					Maximum Likelihood Estimate(MLE) Method					Log ROS Method			
1139					Mean	2.768				Mean in Log Scale		0.969	
1140					SD	6.248				SD in Log Scale		1.138	
1141					95% MLE (t) UCL	5.005				Mean in Original Scale		4.489	
1142					95% MLE (Tiku) UCL	5.222				SD in Original Scale		4.242	
1143										95% Percentile Bootstrap UCL		5.937	
1144										95% BCA Bootstrap UCL		6.142	

	A	B	C	D	E	F	G	H	I	J	K	L
1145												
1146	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1147	k star (bias corrected)				1.815		Data appear Normal at 5% Significance Level					
1148	Theta Star				3.544							
1149	nu star				54.44							
1150												
1151	A-D Test Statistic				0.313		Nonparametric Statistics					
1152	5% A-D Critical Value				0.746		Kaplan-Meier (KM) Method					
1153	K-S Test Statistic				0.746						Mean	4.575
1154	5% K-S Critical Value				0.224						SD	4.069
1155	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.878
1156											95% KM (t) UCL	6.083
1157	Assuming Gamma Distribution										95% KM (z) UCL	6.02
1158	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	6.064
1159	Minimum				1E-09						95% KM (bootstrap t) UCL	6.392
1160	Maximum				15.17						95% KM (BCA) UCL	6.472
1161	Mean				5.38						95% KM (Percentile Bootstrap) UCL	6.23
1162	Median				4.751						95% KM (Chebyshev) UCL	8.403
1163	SD				3.76						97.5% KM (Chebyshev) UCL	10.06
1164	k star				0.505						99% KM (Chebyshev) UCL	13.31
1165	Theta star				10.66							
1166	Nu star				23.22		Potential UCLs to Use					
1167	AppChi2				13.26						95% KM (t) UCL	6.083
1168	95% Gamma Approximate UCL				9.424						95% KM (Percentile Bootstrap) UCL	6.23
1169	95% Adjusted Gamma UCL				9.828							
1170	Note: DL/2 is not a recommended method.											
1171												
1172												
1173	Molybdenum											
1174												
1175	General Statistics											
1176	Number of Valid Data				74		Number of Detected Data				62	
1177	Number of Distinct Detected Data				61		Number of Non-Detect Data				12	
1178	Number of Missing Values				84		Percent Non-Detects				16.22%	
1179												
1180	Raw Statistics						Log-transformed Statistics					
1181	Minimum Detected				0.00006		Minimum Detected				-9.721	
1182	Maximum Detected				0.357		Maximum Detected				-1.031	
1183	Mean of Detected				0.0121		Mean of Detected				-6.141	
1184	SD of Detected				0.052		SD of Detected				1.391	
1185	Minimum Non-Detect				0.0000061		Minimum Non-Detect				-12.01	
1186	Maximum Non-Detect				0.0001222		Maximum Non-Detect				-9.01	
1187												
1188	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				15	
1189	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				59	
1190	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				20.27%	
1191												
1192	UCL Statistics											
1193	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1194	Lilliefors Test Statistic				0.451		Lilliefors Test Statistic				0.167	
1195	5% Lilliefors Critical Value				0.113		5% Lilliefors Critical Value				0.113	
1196	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L		
1197														
1198	Assuming Normal Distribution						Assuming Lognormal Distribution							
1199	DL/2 Substitution Method						DL/2 Substitution Method							
1200	Mean						0.0102	Mean						-6.872
1201	SD						0.0477	SD						2.125
1202	95% DL/2 (t) UCL						0.0194	95% H-Stat (DL/2) UCL						0.0186
1203														
1204	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
1205	Mean						0.00153	Mean in Log Scale						-6.594
1206	SD						0.0541	SD in Log Scale						1.641
1207	95% MLE (t) UCL						0.012	Mean in Original Scale						0.0102
1208	95% MLE (Tiku) UCL						0.0117	SD in Original Scale						0.0477
1209							95% Percentile Bootstrap UCL						0.0205	
1210							95% BCA Bootstrap UCL						0.0257	
1211														
1212	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1213	k star (bias corrected)						0.376	Data do not follow a Discernable Distribution (0.05)						
1214	Theta Star						0.0322							
1215	nu star						46.59							
1216														
1217	A-D Test Statistic						9.987	Nonparametric Statistics						
1218	5% A-D Critical Value						0.844	Kaplan-Meier (KM) Method						
1219	K-S Test Statistic						0.844	Mean						0.0102
1220	5% K-S Critical Value						0.121	SD						0.0474
1221	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.00555	
1222							95% KM (t) UCL						0.0194	
1223	Assuming Gamma Distribution						95% KM (z) UCL						0.0193	
1224	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0194	
1225	Minimum						1E-09	95% KM (bootstrap t) UCL						0.126
1226	Maximum						0.357	95% KM (BCA) UCL						0.0208
1227	Mean						0.0102	95% KM (Percentile Bootstrap) UCL						0.0202
1228	Median						0.00163	95% KM (Chebyshev) UCL						0.0344
1229	SD						0.0477	97.5% KM (Chebyshev) UCL						0.0448
1230	k star						0.191	99% KM (Chebyshev) UCL						0.0654
1231	Theta star						0.0532							
1232	Nu star						28.25	Potential UCLs to Use						
1233	AppChi2						17.12	95% KM (Chebyshev) UCL						0.0344
1234	95% Gamma Approximate UCL						0.0167							
1235	95% Adjusted Gamma UCL						0.0169							
1236	Note: DL/2 is not a recommended method.													
1237														
1238														
1239	Nickel													
1240														
1241	General Statistics													
1242	Number of Valid Data						114	Number of Detected Data						114
1243	Number of Distinct Detected Data						91	Number of Non-Detect Data						0
1244	Number of Missing Values						44	Percent Non-Detects						0.00%
1245														
1246	Raw Statistics						Log-transformed Statistics							
1247	Minimum Detected						0.00003	Minimum Detected						-10.41
1248	Maximum Detected						0.0277	Maximum Detected						-3.586

	A	B	C	D	E	F	G	H	I	J	K	L	
1249	Mean of Detected					0.00102	Mean of Detected					-7.8	
1250	SD of Detected					0.00309	SD of Detected					1.132	
1251	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1252	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1253													
1254													
1255	UCL Statistics												
1256	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1257	Lilliefors Test Statistic					0.375	Lilliefors Test Statistic					0.0767	
1258	5% Lilliefors Critical Value					0.083	5% Lilliefors Critical Value					0.083	
1259	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1260													
1261	Assuming Normal Distribution						Assuming Lognormal Distribution						
1262	DL/2 Substitution Method						DL/2 Substitution Method						
1263	Mean					0.00102	Mean					-7.8	
1264	SD					0.00309	SD					1.132	
1265	95% DL/2 (t) UCL					0.0015	95% H-Stat (DL/2) UCL					0.000995	
1266													
1267	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1268	MLE method failed to converge properly						Mean in Log Scale					N/A	
1269							SD in Log Scale					N/A	
1270							Mean in Original Scale					N/A	
1271							SD in Original Scale					N/A	
1272							95% Percentile Bootstrap UCL					N/A	
1273							95% BCA Bootstrap UCL					N/A	
1274													
1275	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1276	k star (bias corrected)					0.656	Data appear Lognormal at 5% Significance Level						
1277	Theta Star					0.00155							
1278	nu star					149.6							
1279													
1280	A-D Test Statistic					7.844	Nonparametric Statistics						
1281	5% A-D Critical Value					0.803	Kaplan-Meier (KM) Method						
1282	K-S Test Statistic					0.803	Mean					0.00102	
1283	5% K-S Critical Value					0.0897	SD					0.00308	
1284	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0002894	
1285							95% KM (t) UCL					0.0015	
1286	Assuming Gamma Distribution						95% KM (z) UCL					0.00149	
1287	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0015	
1288	Minimum					0.00003	95% KM (bootstrap t) UCL					0.00265	
1289	Maximum					0.0277	95% KM (BCA) UCL					0.00155	
1290	Mean					0.00102	95% KM (Percentile Bootstrap) UCL					0.00157	
1291	Median					0.0004535	95% KM (Chebyshev) UCL					0.00228	
1292	SD					0.00309	97.5% KM (Chebyshev) UCL					0.00283	
1293	k star					0.656	99% KM (Chebyshev) UCL					0.0039	
1294	Theta star					0.00155							
1295	Nu star					149.6	Potential UCLs to Use						
1296	AppChi2					122.3	95% KM (Chebyshev) UCL					0.00228	
1297	95% Gamma Approximate UCL					0.00125							
1298	95% Adjusted Gamma UCL					0.00125							
1299	Note: DL/2 is not a recommended method.												
1300													

	A	B	C	D	E	F	G	H	I	J	K	L
1301												
1302	Niobium											
1303												
1304	General Statistics											
1305	Number of Valid Data				103		Number of Detected Data				103	
1306	Number of Distinct Detected Data				75		Number of Non-Detect Data				0	
1307	Number of Missing Values				55		Percent Non-Detects				0.00%	
1308												
1309	Raw Statistics						Log-transformed Statistics					
1310	Minimum Detected				8.12E-06		Minimum Detected				-11.72	
1311	Maximum Detected				0.00566		Maximum Detected				-5.174	
1312	Mean of Detected				0.0003922		Mean of Detected				-8.752	
1313	SD of Detected				0.0008543		SD of Detected				1.279	
1314	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1315	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1316												
1317												
1318	UCL Statistics											
1319	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1320	Lilliefors Test Statistic				0.344		Lilliefors Test Statistic				0.0869	
1321	5% Lilliefors Critical Value				0.0873		5% Lilliefors Critical Value				0.0873	
1322	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1323												
1324	Assuming Normal Distribution						Assuming Lognormal Distribution					
1325	DL/2 Substitution Method						DL/2 Substitution Method					
1326	Mean				0.0003922		Mean				-8.752	
1327	SD				0.0008543		SD				1.279	
1328	95% DL/2 (t) UCL				0.000532		95% H-Stat (DL/2) UCL				0.0004901	
1329												
1330	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1331	MLE method failed to converge properly						Mean in Log Scale				N/A	
1332							SD in Log Scale				N/A	
1333							Mean in Original Scale				N/A	
1334							SD in Original Scale				N/A	
1335							95% Percentile Bootstrap UCL				N/A	
1336							95% BCA Bootstrap UCL				N/A	
1337												
1338	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1339	k star (bias corrected)				0.656		Data appear Lognormal at 5% Significance Level					
1340	Theta Star				0.0005975							
1341	nu star				135.2							
1342												
1343	A-D Test Statistic				4.717		Nonparametric Statistics					
1344	5% A-D Critical Value				0.803		Kaplan-Meier (KM) Method					
1345	K-S Test Statistic				0.803		Mean				0.0003922	
1346	5% K-S Critical Value				0.0927		SD				0.0008502	
1347	Data not Gamma Distributed at 5% Significance Level						SE of Mean				8.418E-05	
1348							95% KM (t) UCL				0.000532	
1349	Assuming Gamma Distribution						95% KM (z) UCL				0.0005307	
1350	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.000532	
1351	Minimum				8.12E-06		95% KM (bootstrap t) UCL				0.0006357	
1352	Maximum				0.00566		95% KM (BCA) UCL				0.000537	

	A	B	C	D	E	F	G	H	I	J	K	L	
1353					Mean	0.0003922					95% KM (Percentile Bootstrap) UCL	0.0005357	
1354					Median	0.00016					95% KM (Chebyshev) UCL	0.0007592	
1355					SD	0.0008543					97.5% KM (Chebyshev) UCL	0.0009179	
1356					k star	0.656					99% KM (Chebyshev) UCL	0.00123	
1357					Theta star	0.0005975							
1358					Nu star	135.2				Potential UCLs to Use			
1359					AppChi2	109.4					95% KM (Chebyshev) UCL	0.0007592	
1360					95% Gamma Approximate UCL	0.000485							
1361					95% Adjusted Gamma UCL	0.0004865							
1362	Note: DL/2 is not a recommended method.												
1363													
1364													
1365	Phosphorous (white)												
1366													
1367	General Statistics												
1368					Number of Valid Data	94					Number of Detected Data	85	
1369					Number of Distinct Detected Data	80					Number of Non-Detect Data	9	
1370					Number of Missing Values	64					Percent Non-Detects	9.57%	
1371													
1372	Raw Statistics						Log-transformed Statistics						
1373					Minimum Detected	0.00487					Minimum Detected	-5.324	
1374					Maximum Detected	4.151					Maximum Detected	1.423	
1375					Mean of Detected	0.27					Mean of Detected	-2.531	
1376					SD of Detected	0.637					SD of Detected	1.463	
1377					Minimum Non-Detect	0.00101					Minimum Non-Detect	-6.901	
1378					Maximum Non-Detect	0.129					Maximum Non-Detect	-2.048	
1379													
1380	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						66
1381	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						28
1382	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						70.21%
1383													
1384	UCL Statistics												
1385	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1386					Lilliefors Test Statistic	0.338					Lilliefors Test Statistic	0.0832	
1387					5% Lilliefors Critical Value	0.0961					5% Lilliefors Critical Value	0.0961	
1388	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1389													
1390	Assuming Normal Distribution						Assuming Lognormal Distribution						
1391					DL/2 Substitution Method						DL/2 Substitution Method		
1392					Mean	0.246					Mean	-2.802	
1393					SD	0.61					SD	1.691	
1394					95% DL/2 (t) UCL	0.35					95% H-Stat (DL/2) UCL	0.405	
1395													
1396					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1397	MLE yields a negative mean						Log ROS Method						
1398											Mean in Log Scale	-2.789	
1399											SD in Log Scale	1.631	
1400											Mean in Original Scale	0.245	
1401											SD in Original Scale	0.61	
1402											95% Percentile Bootstrap UCL	0.352	
1403											95% BCA Bootstrap UCL	0.398	
1404	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						

	A	B	C	D	E	F	G	H	I	J	K	L
1405	k star (bias corrected)					0.506	Data appear Lognormal at 5% Significance Level					
1406	Theta Star					0.534						
1407	nu star					86.09						
1408												
1409	A-D Test Statistic					4.765	Nonparametric Statistics					
1410	5% A-D Critical Value					0.817	Kaplan-Meier (KM) Method					
1411	K-S Test Statistic					0.817	Mean					0.246
1412	5% K-S Critical Value					0.102	SD					0.607
1413	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0629
1414							95% KM (t) UCL					0.35
1415	Assuming Gamma Distribution						95% KM (z) UCL					0.349
1416	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.35
1417	Minimum					1E-09	95% KM (bootstrap t) UCL					0.416
1418	Maximum					4.151	95% KM (BCA) UCL					0.359
1419	Mean					0.245	95% KM (Percentile Bootstrap) UCL					0.36
1420	Median					0.0698	95% KM (Chebyshev) UCL					0.52
1421	SD					0.61	97.5% KM (Chebyshev) UCL					0.639
1422	k star					0.261	99% KM (Chebyshev) UCL					0.872
1423	Theta star					0.937						
1424	Nu star					49.08	Potential UCLs to Use					
1425	AppChi2					34	95% KM (Chebyshev) UCL					0.52
1426	95% Gamma Approximate UCL					0.353						
1427	95% Adjusted Gamma UCL					0.355						
1428	Note: DL/2 is not a recommended method.											
1429												
1430												
1431	Rubidium											
1432												
1433	General Statistics											
1434	Number of Valid Data					123	Number of Detected Data					116
1435	Number of Distinct Detected Data					75	Number of Non-Detect Data					7
1436	Number of Missing Values					34	Percent Non-Detects					5.69%
1437												
1438	Raw Statistics						Log-transformed Statistics					
1439	Minimum Detected					0.00005	Minimum Detected					-9.903
1440	Maximum Detected					0.0168	Maximum Detected					-4.088
1441	Mean of Detected					0.0008728	Mean of Detected					-7.634
1442	SD of Detected					0.00184	SD of Detected					0.961
1443	Minimum Non-Detect					0.0001221	Minimum Non-Detect					-9.011
1444	Maximum Non-Detect					0.0009548	Maximum Non-Detect					-6.954
1445												
1446	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					97
1447	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					26
1448	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					78.86%
1449												
1450	UCL Statistics											
1451	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1452	Lilliefors Test Statistic					0.328	Lilliefors Test Statistic					0.0666
1453	5% Lilliefors Critical Value					0.0823	5% Lilliefors Critical Value					0.0823
1454	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1455												
1456	Assuming Normal Distribution						Assuming Lognormal Distribution					

	A	B	C	D	E	F	G	H	I	J	K	L
1457	DL/2 Substitution Method					DL/2 Substitution Method						
1458	Mean					0.0008356	Mean					-7.692
1459	SD					0.0018	SD					0.977
1460	95% DL/2 (t) UCL					0.0011	95% H-Stat (DL/2) UCL					0.0009451
1461												
1462	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1463	MLE yields a negative mean					Mean in Log Scale					-7.688	
1464						SD in Log Scale					0.966	
1465						Mean in Original Scale					0.000835	
1466						SD in Original Scale					0.0018	
1467						95% Percentile Bootstrap UCL					0.00114	
1468						95% BCA Bootstrap UCL					0.00127	
1469												
1470	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1471	k star (bias corrected)					0.961	Data appear Lognormal at 5% Significance Level					
1472	Theta Star					0.000908						
1473	nu star					223						
1474												
1475	A-D Test Statistic					4.379	Nonparametric Statistics					
1476	5% A-D Critical Value					0.784	Kaplan-Meier (KM) Method					
1477	K-S Test Statistic					0.784	Mean					0.0008357
1478	5% K-S Critical Value					0.0879	SD					0.00179
1479	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.0001621	
1480						95% KM (t) UCL					0.0011	
1481	Assuming Gamma Distribution					95% KM (z) UCL					0.0011	
1482	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.0011	
1483	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00158
1484	Maximum					0.0168	95% KM (BCA) UCL					0.00114
1485	Mean					0.0008346	95% KM (Percentile Bootstrap) UCL					0.00111
1486	Median					0.0004852	95% KM (Chebyshev) UCL					0.00154
1487	SD					0.0018	97.5% KM (Chebyshev) UCL					0.00185
1488	k star					0.621	99% KM (Chebyshev) UCL					0.00245
1489	Theta star					0.00134						
1490	Nu star					152.8	Potential UCLs to Use					
1491	AppChi2					125.2	95% KM (BCA) UCL					0.00114
1492	95% Gamma Approximate UCL					0.00102						
1493	95% Adjusted Gamma UCL					0.00102						
1494	Note: DL/2 is not a recommended method.											
1495												
1496												
1497	Scandium											
1498												
1499	General Statistics											
1500	Number of Valid Data					104	Number of Detected Data					103
1501	Number of Distinct Detected Data					54	Number of Non-Detect Data					1
1502	Number of Missing Values					53	Percent Non-Detects					0.96%
1503												
1504	Raw Statistics					Log-transformed Statistics						
1505	Minimum Detected					0.000004	Minimum Detected					-12.43
1506	Maximum Detected					0.00071	Maximum Detected					-7.25
1507	Mean of Detected					0.0001218	Mean of Detected					-9.377
1508	SD of Detected					0.0001125	SD of Detected					0.948

	A	B	C	D	E	F	G	H	I	J	K	L	
1509				Minimum Non-Detect		6.111E-05				Minimum Non-Detect		-9.703	
1510				Maximum Non-Detect		6.111E-05				Maximum Non-Detect		-9.703	
1511													
1512													
1513				UCL Statistics									
1514				Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only					
1515				Lilliefors Test Statistic		0.197				Lilliefors Test Statistic		0.193	
1516				5% Lilliefors Critical Value		0.0873				5% Lilliefors Critical Value		0.0873	
1517				Data not Normal at 5% Significance Level				Data not Lognormal at 5% Significance Level					
1518													
1519				Assuming Normal Distribution				Assuming Lognormal Distribution					
1520				DL/2 Substitution Method						DL/2 Substitution Method			
1521				Mean		0.0001209				Mean		-9.387	
1522				SD		0.0001123				SD		0.948	
1523				95% DL/2 (t) UCL		0.0001392				95% H-Stat (DL/2) UCL		0.0001623	
1524													
1525				Maximum Likelihood Estimate(MLE) Method				Log ROS Method					
1526				Mean		8.594E-05				Mean in Log Scale		-9.385	
1527				SD		0.0001504				SD in Log Scale		0.947	
1528				95% MLE (t) UCL		0.0001104				Mean in Original Scale		0.000121	
1529				95% MLE (Tiku) UCL		0.0001129				SD in Original Scale		0.0001123	
1530										95% Percentile Bootstrap UCL		0.0001406	
1531										95% BCA Bootstrap UCL		0.0001424	
1532													
1533				Gamma Distribution Test with Detected Values Only				Data Distribution Test with Detected Values Only					
1534				k star (bias corrected)		1.481				Data do not follow a Discernable Distribution (0.05)			
1535				Theta Star		8.222E-05							
1536				nu star		305.1							
1537													
1538				A-D Test Statistic		1.447				Nonparametric Statistics			
1539				5% A-D Critical Value		0.77				Kaplan-Meier (KM) Method			
1540				K-S Test Statistic		0.77				Mean		0.000121	
1541				5% K-S Critical Value		0.0903				SD		0.0001117	
1542				Data not Gamma Distributed at 5% Significance Level							SE of Mean		1.101E-05
1543										95% KM (t) UCL		0.0001393	
1544				Assuming Gamma Distribution							95% KM (z) UCL		0.0001391
1545				Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL		0.0001393
1546				Minimum		0.000004				95% KM (bootstrap t) UCL		0.0001441	
1547				Maximum		0.00071				95% KM (BCA) UCL		0.0001417	
1548				Mean		0.0001209				95% KM (Percentile Bootstrap) UCL		0.0001402	
1549				Median		9.558E-05				95% KM (Chebyshev) UCL		0.000169	
1550				SD		0.0001123				97.5% KM (Chebyshev) UCL		0.0001898	
1551				k star		1.474				99% KM (Chebyshev) UCL		0.0002305	
1552				Theta star		8.205E-05							
1553				Nu star		306.5				Potential UCLs to Use			
1554				AppChi2		267				95% KM (BCA) UCL		0.0001417	
1555				95% Gamma Approximate UCL		0.0001389							
1556				95% Adjusted Gamma UCL		0.0001391							
1557				Note: DL/2 is not a recommended method.									
1558													
1559													
1560				Silver									

	A	B	C	D	E	F	G	H	I	J	K	L
1561												
1562	General Statistics											
1563	Number of Valid Data					109	Number of Detected Data					104
1564	Number of Distinct Detected Data					54	Number of Non-Detect Data					5
1565	Number of Missing Values					49	Percent Non-Detects					4.59%
1566												
1567	Raw Statistics						Log-transformed Statistics					
1568	Minimum Detected					6.11E-06	Minimum Detected					-12.01
1569	Maximum Detected					0.0009583	Maximum Detected					-6.95
1570	Mean of Detected					7.17E-05	Mean of Detected					-10.17
1571	SD of Detected					0.0001172	SD of Detected					1.072
1572	Minimum Non-Detect					1.423E-05	Minimum Non-Detect					-11.16
1573	Maximum Non-Detect					0.000903	Maximum Non-Detect					-7.01
1574												
1575	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					108
1576	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1577	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					99.08%
1578												
1579	UCL Statistics											
1580	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1581	Lilliefors Test Statistic					0.288	Lilliefors Test Statistic					0.14
1582	5% Lilliefors Critical Value					0.0869	5% Lilliefors Critical Value					0.0869
1583	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1584												
1585	Assuming Normal Distribution						Assuming Lognormal Distribution					
1586	DL/2 Substitution Method						DL/2 Substitution Method					
1587	Mean					7.836E-05	Mean					-10.12
1588	SD					0.0001225	SD					1.12
1589	95% DL/2 (t) UCL					9.783E-05	95% H-Stat (DL/2) UCL					0.0001104
1590												
1591	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1592	MLE method failed to converge properly						Mean in Log Scale					-10.19
1593							SD in Log Scale					1.054
1594							Mean in Original Scale					6.985E-05
1595							SD in Original Scale					0.0001148
1596							95% Percentile Bootstrap UCL					8.907E-05
1597							95% BCA Bootstrap UCL					9.533E-05
1598												
1599	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1600	k star (bias corrected)					0.903	Data do not follow a Discernable Distribution (0.05)					
1601	Theta Star					7.94E-05						
1602	nu star					187.8						
1603												
1604	A-D Test Statistic					3.034	Nonparametric Statistics					
1605	5% A-D Critical Value					0.787	Kaplan-Meier (KM) Method					
1606	K-S Test Statistic					0.787	Mean					7.067E-05
1607	5% K-S Critical Value					0.0913	SD					0.0001148
1608	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.112E-05
1609							95% KM (t) UCL					8.911E-05
1610	Assuming Gamma Distribution						95% KM (z) UCL					8.896E-05
1611	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					8.911E-05
1612	Minimum					1E-09	95% KM (bootstrap t) UCL					0.0001031

	A	B	C	D	E	F	G	H	I	J	K	L	
1613					Maximum	0.0009583				95% KM (BCA) UCL		8.996E-05	
1614					Mean	7.097E-05				95% KM (Percentile Bootstrap) UCL		9.129E-05	
1615					Median	0.00004				95% KM (Chebyshev) UCL		0.0001191	
1616					SD	0.0001147				97.5% KM (Chebyshev) UCL		0.0001401	
1617					k star	0.83				99% KM (Chebyshev) UCL		0.0001813	
1618					Theta star	8.554E-05							
1619					Nu star	180.9				Potential UCLs to Use			
1620					AppChi2	150.8				95% KM (Chebyshev) UCL		0.0001191	
1621					95% Gamma Approximate UCL	8.515E-05							
1622					95% Adjusted Gamma UCL	8.535E-05							
1623	Note: DL/2 is not a recommended method.												
1624													
1625													
1626	Strontium, stable												
1627													
1628	General Statistics												
1629					Number of Valid Data	127				Number of Detected Data		124	
1630					Number of Distinct Detected Data	103				Number of Non-Detect Data		3	
1631					Number of Missing Values	30				Percent Non-Detects		2.36%	
1632													
1633	Raw Statistics						Log-transformed Statistics						
1634					Minimum Detected	0.00008				Minimum Detected		-9.433	
1635					Maximum Detected	0.0549				Maximum Detected		-2.902	
1636					Mean of Detected	0.00298				Mean of Detected		-6.441	
1637					SD of Detected	0.00596				SD of Detected		1.027	
1638					Minimum Non-Detect	0.0048				Minimum Non-Detect		-5.339	
1639					Maximum Non-Detect	0.00997				Maximum Non-Detect		-4.608	
1640													
1641	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						124
1642	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						3
1643	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						97.64%
1644													
1645	UCL Statistics												
1646	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1647					Lilliefors Test Statistic	0.313				Lilliefors Test Statistic		0.0471	
1648					5% Lilliefors Critical Value	0.0796				5% Lilliefors Critical Value		0.0796	
1649	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1650													
1651	Assuming Normal Distribution						Assuming Lognormal Distribution						
1652					DL/2 Substitution Method					DL/2 Substitution Method			
1653					Mean	0.00299				Mean		-6.424	
1654					SD	0.00589				SD		1.022	
1655					95% DL/2 (t) UCL	0.00386				95% H-Stat (DL/2) UCL		0.00352	
1656													
1657					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1658	MLE yields a negative mean						Mean in Log Scale						-6.444
1659							SD in Log Scale						1.015
1660							Mean in Original Scale						0.00294
1661							SD in Original Scale						0.00589
1662							95% Percentile Bootstrap UCL						0.00382
1663							95% BCA Bootstrap UCL						0.00432
1664													

	A	B	C	D	E	F	G	H	I	J	K	L
1665	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1666	k star (bias corrected)				0.914		Data appear Lognormal at 5% Significance Level					
1667	Theta Star				0.00326							
1668	nu star				226.8							
1669												
1670	A-D Test Statistic				3.861		Nonparametric Statistics					
1671	5% A-D Critical Value				0.787		Kaplan-Meier (KM) Method					
1672	K-S Test Statistic				0.787						Mean	0.00295
1673	5% K-S Critical Value				0.086						SD	0.00587
1674	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.0005233
1675											95% KM (t) UCL	0.00382
1676	Assuming Gamma Distribution										95% KM (z) UCL	0.00381
1677	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.00382
1678	Minimum				0.00008						95% KM (bootstrap t) UCL	0.00482
1679	Maximum				0.0549						95% KM (BCA) UCL	0.00394
1680	Mean				0.00297						95% KM (Percentile Bootstrap) UCL	0.00392
1681	Median				0.0016						95% KM (Chebyshev) UCL	0.00523
1682	SD				0.00588						97.5% KM (Chebyshev) UCL	0.00622
1683	k star				0.934						99% KM (Chebyshev) UCL	0.00816
1684	Theta star				0.00318							
1685	Nu star				237.3		Potential UCLs to Use					
1686	AppChi2				202.6						95% KM (Chebyshev) UCL	0.00523
1687	95% Gamma Approximate UCL				0.00348							
1688	95% Adjusted Gamma UCL				0.00349							
1689	Note: DL/2 is not a recommended method.											
1690												
1691												
1692	Thallium											
1693												
1694	General Statistics											
1695	Number of Valid Data				107		Number of Detected Data				106	
1696	Number of Distinct Detected Data				31		Number of Non-Detect Data				1	
1697	Number of Missing Values				51		Percent Non-Detects				0.93%	
1698												
1699	Raw Statistics						Log-transformed Statistics					
1700	Minimum Detected				0.000006		Minimum Detected				-12.02	
1701	Maximum Detected				0.00024		Maximum Detected				-8.335	
1702	Mean of Detected				2.761E-05		Mean of Detected				-10.88	
1703	SD of Detected				3.361E-05		SD of Detected				0.792	
1704	Minimum Non-Detect				9.15E-06		Minimum Non-Detect				-11.6	
1705	Maximum Non-Detect				9.15E-06		Maximum Non-Detect				-11.6	
1706												
1707												
1708	UCL Statistics											
1709	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1710	Lilliefors Test Statistic				0.26		Lilliefors Test Statistic				0.195	
1711	5% Lilliefors Critical Value				0.0861		5% Lilliefors Critical Value				0.0861	
1712	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1713												
1714	Assuming Normal Distribution						Assuming Lognormal Distribution					
1715	DL/2 Substitution Method						DL/2 Substitution Method					
1716	Mean				2.74E-05		Mean				-10.89	

	A	B	C	D	E	F	G	H	I	J	K	L		
1717					SD	3.352E-05					SD	0.8		
1718					95% DL/2 (t) UCL	3.277E-05				95% H-Stat (DL/2) UCL		3.017E-05		
1719														
1720					Maximum Likelihood Estimate(MLE) Method						Log ROS Method			
1721					Mean	2.492E-05					Mean in Log Scale	-10.89		
1722					SD	3.607E-05					SD in Log Scale	0.797		
1723					95% MLE (t) UCL	3.071E-05					Mean in Original Scale	2.74E-05		
1724					95% MLE (Tiku) UCL	3.036E-05					SD in Original Scale	3.352E-05		
1725											95% Percentile Bootstrap UCL	3.278E-05		
1726											95% BCA Bootstrap UCL	3.391E-05		
1727														
1728					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only			
1729					k star (bias corrected)	1.427					Data do not follow a Discernable Distribution (0.05)			
1730					Theta Star	1.935E-05								
1731					nu star	302.6								
1732														
1733					A-D Test Statistic	5.871					Nonparametric Statistics			
1734					5% A-D Critical Value	0.771					Kaplan-Meier (KM) Method			
1735					K-S Test Statistic	0.771					Mean	2.743E-05		
1736					5% K-S Critical Value	0.0896					SD	3.335E-05		
1737					Data not Gamma Distributed at 5% Significance Level						SE of Mean	3.239E-06		
1738											95% KM (t) UCL	0.0000328		
1739					Assuming Gamma Distribution						95% KM (z) UCL	3.275E-05		
1740					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.0000328		
1741					Minimum	1E-09					95% KM (bootstrap t) UCL	3.475E-05		
1742					Maximum	0.00024					95% KM (BCA) UCL	3.315E-05		
1743					Mean	2.735E-05					95% KM (Percentile Bootstrap) UCL	3.296E-05		
1744					Median	1.527E-05					95% KM (Chebyshev) UCL	4.155E-05		
1745					SD	3.356E-05					97.5% KM (Chebyshev) UCL	4.765E-05		
1746					k star	1.194					99% KM (Chebyshev) UCL	5.966E-05		
1747					Theta star	2.291E-05								
1748					Nu star	255.5					Potential UCLs to Use			
1749					AppChi2	219.5					95% KM (BCA) UCL	3.315E-05		
1750					95% Gamma Approximate UCL	3.184E-05								
1751					95% Adjusted Gamma UCL	3.191E-05								
1752					Note: DL/2 is not a recommended method.									
1753														
1754														
1755					Thorium									
1756														
1757					General Statistics									
1758					Number of Valid Data	86					Number of Detected Data	76		
1759					Number of Distinct Detected Data	42					Number of Non-Detect Data	10		
1760					Number of Missing Values	70					Percent Non-Detects	11.63%		
1761														
1762					Raw Statistics						Log-transformed Statistics			
1763					Minimum Detected	0.00001					Minimum Detected	-11.51		
1764					Maximum Detected	0.00371					Maximum Detected	-5.597		
1765					Mean of Detected	0.0001559					Mean of Detected	-9.63		
1766					SD of Detected	0.000494					SD of Detected	0.973		
1767					Minimum Non-Detect	9.13E-06					Minimum Non-Detect	-11.6		
1768					Maximum Non-Detect	0.0001261					Maximum Non-Detect	-8.978		

	A	B	C	D	E	F	G	H	I	J	K	L
1769												
1770	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				72	
1771	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				14	
1772	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				83.72%	
1773												
1774	UCL Statistics											
1775	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1776	Lilliefors Test Statistic			0.401			Lilliefors Test Statistic			0.136		
1777	5% Lilliefors Critical Value			0.102			5% Lilliefors Critical Value			0.102		
1778	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1779												
1780	Assuming Normal Distribution						Assuming Lognormal Distribution					
1781	DL/2 Substitution Method						DL/2 Substitution Method					
1782	Mean			0.000141			Mean			-9.775		
1783	SD			0.0004659			SD			1.051		
1784	95% DL/2 (t) UCL			0.0002246			95% H-Stat (DL/2) UCL			0.0001373		
1785												
1786	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1787	MLE yields a negative mean						Mean in Log Scale			-9.772		
1788							SD in Log Scale			1.029		
1789							Mean in Original Scale			0.0001407		
1790							SD in Original Scale			0.000466		
1791							95% Percentile Bootstrap UCL			0.0002311		
1792							95% BCA Bootstrap UCL			0.000291		
1793												
1794	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1795	k star (bias corrected)			0.681			Data do not follow a Discernable Distribution (0.05)					
1796	Theta Star			0.0002289								
1797	nu star			103.5								
1798												
1799	A-D Test Statistic			8.219			Nonparametric Statistics					
1800	5% A-D Critical Value			0.798			Kaplan-Meier (KM) Method					
1801	K-S Test Statistic			0.798			Mean			0.000141		
1802	5% K-S Critical Value			0.107			SD			0.0004632		
1803	Data not Gamma Distributed at 5% Significance Level						SE of Mean			5.029E-05		
1804							95% KM (t) UCL			0.0002247		
1805	Assuming Gamma Distribution						95% KM (z) UCL			0.0002238		
1806	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			0.0002245		
1807	Minimum			1E-09			95% KM (bootstrap t) UCL			0.0007167		
1808	Maximum			0.00371			95% KM (BCA) UCL			0.0002354		
1809	Mean			0.0001423			95% KM (Percentile Bootstrap) UCL			0.0002336		
1810	Median			0.00006			95% KM (Chebyshev) UCL			0.0003602		
1811	SD			0.0004659			97.5% KM (Chebyshev) UCL			0.0004551		
1812	k star			0.419			99% KM (Chebyshev) UCL			0.0006414		
1813	Theta star			0.0003395								
1814	Nu star			72.08			Potential UCLs to Use					
1815	AppChi2			53.53			95% KM (BCA) UCL			0.0002354		
1816	95% Gamma Approximate UCL			0.0001916								
1817	95% Adjusted Gamma UCL			0.0001925								
1818	Note: DL/2 is not a recommended method.											
1819												
1820												

	A	B	C	D	E	F	G	H	I	J	K	L
1821	Titanium											
1822												
1823	General Statistics											
1824	Number of Valid Data				105		Number of Detected Data				100	
1825	Number of Distinct Detected Data				84		Number of Non-Detect Data				5	
1826	Number of Missing Values				52		Percent Non-Detects				4.76%	
1827												
1828	Raw Statistics						Log-transformed Statistics					
1829	Minimum Detected				0.00292		Minimum Detected				-5.836	
1830	Maximum Detected				0.15		Maximum Detected				-1.897	
1831	Mean of Detected				0.0265		Mean of Detected				-4.054	
1832	SD of Detected				0.0275		SD of Detected				0.947	
1833	Minimum Non-Detect				0.00568		Minimum Non-Detect				-5.17	
1834	Maximum Non-Detect				0.0107		Maximum Non-Detect				-4.54	
1835												
1836	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				37	
1837	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				68	
1838	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				35.24%	
1839												
1840	UCL Statistics											
1841	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1842	Lilliefors Test Statistic				0.195		Lilliefors Test Statistic				0.0625	
1843	5% Lilliefors Critical Value				0.0886		5% Lilliefors Critical Value				0.0886	
1844	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1845												
1846	Assuming Normal Distribution						Assuming Lognormal Distribution					
1847	DL/2 Substitution Method						DL/2 Substitution Method					
1848	Mean				0.0255		Mean				-4.124	
1849	SD				0.0273		SD				0.977	
1850	95% DL/2 (t) UCL				0.0299		95% H-Stat (DL/2) UCL				0.0331	
1851												
1852	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1853	Mean				0.0181		Mean in Log Scale				-4.108	
1854	SD				0.0356		SD in Log Scale				0.956	
1855	95% MLE (t) UCL				0.0238		Mean in Original Scale				0.0255	
1856	95% MLE (Tiku) UCL				0.0243		SD in Original Scale				0.0272	
1857							95% Percentile Bootstrap UCL				0.0299	
1858							95% BCA Bootstrap UCL				0.0311	
1859												
1860	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1861	k star (bias corrected)				1.286		Data Follow Appr. Gamma Distribution at 5% Significance Level					
1862	Theta Star				0.0206							
1863	nu star				257.2							
1864												
1865	A-D Test Statistic				0.819		Nonparametric Statistics					
1866	5% A-D Critical Value				0.775		Kaplan-Meier (KM) Method					
1867	K-S Test Statistic				0.775		Mean				0.0255	
1868	5% K-S Critical Value				0.0915		SD				0.0271	
1869	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean				0.00266	
1870							95% KM (t) UCL				0.0299	
1871	Assuming Gamma Distribution						95% KM (z) UCL				0.0299	
1872	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0299	

	A	B	C	D	E	F	G	H	I	J	K	L	
1873					Minimum	1E-09				95% KM (bootstrap t) UCL		0.0309	
1874					Maximum	0.15				95% KM (BCA) UCL		0.0299	
1875					Mean	0.0253				95% KM (Percentile Bootstrap) UCL		0.0299	
1876					Median	0.0172				95% KM (Chebyshev) UCL		0.0371	
1877					SD	0.0274				97.5% KM (Chebyshev) UCL		0.0421	
1878					k star	0.671				99% KM (Chebyshev) UCL		0.052	
1879					Theta star	0.0378							
1880					Nu star	140.9				Potential UCLs to Use			
1881					AppChi2	114.5				95% KM (Chebyshev) UCL		0.0371	
1882					95% Gamma Approximate UCL	0.0312							
1883					95% Adjusted Gamma UCL	0.0313							
1884	Note: DL/2 is not a recommended method.												
1885													
1886													
1887	Uranium												
1888													
1889	General Statistics												
1890					Number of Valid Data	75				Number of Detected Data		70	
1891					Number of Distinct Detected Data	39				Number of Non-Detect Data		5	
1892					Number of Missing Values	75				Percent Non-Detects		6.67%	
1893													
1894	Raw Statistics						Log-transformed Statistics						
1895					Minimum Detected	4.06E-06				Minimum Detected		-12.41	
1896					Maximum Detected	0.00783				Maximum Detected		-4.85	
1897					Mean of Detected	0.0002184				Mean of Detected		-10.35	
1898					SD of Detected	0.00109				SD of Detected		1.214	
1899					Minimum Non-Detect	1.214E-05				Minimum Non-Detect		-11.32	
1900					Maximum Non-Detect	0.000372				Maximum Non-Detect		-7.897	
1901													
1902	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		73
1903	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		2
1904	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		97.33%
1905													
1906	UCL Statistics												
1907	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1908					Lilliefors Test Statistic	0.485				Lilliefors Test Statistic		0.151	
1909					5% Lilliefors Critical Value	0.106				5% Lilliefors Critical Value		0.106	
1910	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1911													
1912	Assuming Normal Distribution						Assuming Lognormal Distribution						
1913					DL/2 Substitution Method					DL/2 Substitution Method			
1914					Mean	0.0002087				Mean		-10.33	
1915					SD	0.00105				SD		1.214	
1916					95% DL/2 (t) UCL	0.0004113				95% H-Stat (DL/2) UCL		0.0001115	
1917													
1918					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1919	MLE method failed to converge properly										Mean in Log Scale		-10.38
1920										SD in Log Scale		1.183	
1921										Mean in Original Scale		0.0002054	
1922										SD in Original Scale		0.00105	
1923										95% Percentile Bootstrap UCL		0.0004313	
1924										95% BCA Bootstrap UCL		0.0005121	

	A	B	C	D	E	F	G	H	I	J	K	L
1925												
1926	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1927	k star (bias corrected)					0.345	Data do not follow a Discernable Distribution (0.05)					
1928	Theta Star					0.0006333						
1929	nu star					48.28						
1930												
1931	A-D Test Statistic					14.59	Nonparametric Statistics					
1932	5% A-D Critical Value					0.853	Kaplan-Meier (KM) Method					
1933	K-S Test Statistic					0.853	Mean					0.0002057
1934	5% K-S Critical Value					0.115	SD					0.00105
1935	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0001217
1936							95% KM (t) UCL					0.0004084
1937	Assuming Gamma Distribution						95% KM (z) UCL					0.0004059
1938	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0004083
1939	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00561
1940	Maximum					0.00783	95% KM (BCA) UCL					0.0004642
1941	Mean					0.0002046	95% KM (Percentile Bootstrap) UCL					0.0004412
1942	Median					2.852E-05	95% KM (Chebyshev) UCL					0.0007362
1943	SD					0.00105	97.5% KM (Chebyshev) UCL					0.0009658
1944	k star					0.3	99% KM (Chebyshev) UCL					0.00142
1945	Theta star					0.0006825						
1946	Nu star					44.97	Potential UCLs to Use					
1947	AppChi2					30.59	95% KM (Chebyshev) UCL					0.0007362
1948	95% Gamma Approximate UCL					0.0003008						
1949	95% Adjusted Gamma UCL					0.0003031						
1950	Note: DL/2 is not a recommended method.											
1951												
1952												
1953	Vanadium											
1954												
1955	General Statistics											
1956	Number of Valid Data					130	Number of Detected Data					122
1957	Number of Distinct Detected Data					109	Number of Non-Detect Data					8
1958	Number of Missing Values					28	Percent Non-Detects					6.15%
1959												
1960	Raw Statistics						Log-transformed Statistics					
1961	Minimum Detected					0.000033	Minimum Detected					-10.32
1962	Maximum Detected					0.00362	Maximum Detected					-5.621
1963	Mean of Detected					0.0008644	Mean of Detected					-7.428
1964	SD of Detected					0.0007408	SD of Detected					0.935
1965	Minimum Non-Detect					0.0001831	Minimum Non-Detect					-8.606
1966	Maximum Non-Detect					0.00248	Maximum Non-Detect					-6.001
1967												
1968	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					124
1969	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					6
1970	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					95.38%
1971												
1972	UCL Statistics											
1973	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1974	Lilliefors Test Statistic					0.139	Lilliefors Test Statistic					0.0735
1975	5% Lilliefors Critical Value					0.0802	5% Lilliefors Critical Value					0.0802
1976	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
1977												
1978	Assuming Normal Distribution						Assuming Lognormal Distribution					
1979	DL/2 Substitution Method						DL/2 Substitution Method					
1980	Mean 0.0008466						Mean -7.445					
1981	SD 0.0007266						SD 0.928					
1982	95% DL/2 (t) UCL 0.0009522						95% H-Stat (DL/2) UCL 0.00117					
1983												
1984	Maximum Likelihood Estimate(MLE) Method N/A						Log ROS Method					
1985	MLE method failed to converge properly						Mean in Log Scale -7.461					
1986							SD in Log Scale 0.92					
1987							Mean in Original Scale 0.0008343					
1988							SD in Original Scale 0.0007278					
1989							95% Percentile Bootstrap UCL 0.0009442					
1990							95% BCA Bootstrap UCL 0.0009514					
1991												
1992	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1993	k star (bias corrected) 1.448						Data appear Gamma Distributed at 5% Significance Level					
1994	Theta Star 0.000597											
1995	nu star 353.3											
1996												
1997	A-D Test Statistic 0.322						Nonparametric Statistics					
1998	5% A-D Critical Value 0.771						Kaplan-Meier (KM) Method					
1999	K-S Test Statistic 0.771						Mean 0.0008386					
2000	5% K-S Critical Value 0.0854						SD 0.0007275					
2001	Data appear Gamma Distributed at 5% Significance Level						SE of Mean 6.446E-05					
2002							95% KM (t) UCL 0.0009454					
2003	Assuming Gamma Distribution						95% KM (z) UCL 0.0009447					
2004	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL 0.0009454					
2005	Minimum 1E-09						95% KM (bootstrap t) UCL 0.0009551					
2006	Maximum 0.00362						95% KM (BCA) UCL 0.0009483					
2007	Mean 0.0008467						95% KM (Percentile Bootstrap) UCL 0.0009459					
2008	Median 0.0006815						95% KM (Chebyshev) UCL 0.00112					
2009	SD 0.0007244						97.5% KM (Chebyshev) UCL 0.00124					
2010	k star 1.219						99% KM (Chebyshev) UCL 0.00148					
2011	Theta star 0.0006943											
2012	Nu star 317.1						Potential UCLs to Use					
2013	AppChi2 276.8						95% KM (Chebyshev) UCL 0.00112					
2014	95% Gamma Approximate UCL 0.0009698											
2015	95% Adjusted Gamma UCL 0.0009713											
2016	Note: DL/2 is not a recommended method.											
2017												
2018												
2019	Ytterbium											
2020												
2021	General Statistics											
2022	Number of Valid Data 104						Number of Detected Data 103					
2023	Number of Distinct Detected Data 62						Number of Non-Detect Data 1					
2024	Number of Missing Values 46						Percent Non-Detects 0.96%					
2025												
2026	Raw Statistics						Log-transformed Statistics					
2027	Minimum Detected 0.00002						Minimum Detected -10.82					
2028	Maximum Detected 0.0326						Maximum Detected -3.425					

	A	B	C	D	E	F	G	H	I	J	K	L		
2029	Mean of Detected					0.00108	Mean of Detected					-8.261		
2030	SD of Detected					0.00381	SD of Detected					1.379		
2031	Minimum Non-Detect					0.00114	Minimum Non-Detect					-6.779		
2032	Maximum Non-Detect					0.00114	Maximum Non-Detect					-6.779		
2033														
2034														
2035	UCL Statistics													
2036	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2037	Lilliefors Test Statistic					0.391	Lilliefors Test Statistic					0.171		
2038	5% Lilliefors Critical Value					0.0873	5% Lilliefors Critical Value					0.0873		
2039	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
2040														
2041	Assuming Normal Distribution						Assuming Lognormal Distribution							
2042	DL/2 Substitution Method						DL/2 Substitution Method							
2043	Mean					0.00107	Mean					-8.253		
2044	SD					0.00379	SD					1.374		
2045	95% DL/2 (t) UCL					0.00169	95% H-Stat (DL/2) UCL					0.0009692		
2046														
2047	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
2048	MLE yields a negative mean						Mean in Log Scale					-8.263		
2049							SD in Log Scale					1.372		
2050							Mean in Original Scale					0.00107		
2051							SD in Original Scale					0.00379		
2052							95% Percentile Bootstrap UCL					0.00176		
2053							95% BCA Bootstrap UCL					0.00207		
2054														
2055	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2056	k star (bias corrected)					0.446	Data do not follow a Discernable Distribution (0.05)							
2057	Theta Star					0.00241								
2058	nu star					91.87								
2059														
2060	A-D Test Statistic					11.17	Nonparametric Statistics							
2061	5% A-D Critical Value					0.83	Kaplan-Meier (KM) Method							
2062	K-S Test Statistic					0.83	Mean					0.00107		
2063	5% K-S Critical Value					0.0944	SD					0.00377		
2064	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0003719		
2065							95% KM (t) UCL					0.00168		
2066	Assuming Gamma Distribution						95% KM (z) UCL					0.00168		
2067	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00168		
2068	Minimum					0.00002	95% KM (bootstrap t) UCL					0.0031		
2069	Maximum					0.0326	95% KM (BCA) UCL					0.00173		
2070	Mean					0.00107	95% KM (Percentile Bootstrap) UCL					0.00172		
2071	Median					0.000202	95% KM (Chebyshev) UCL					0.00269		
2072	SD					0.00379	97.5% KM (Chebyshev) UCL					0.00339		
2073	k star					0.446	99% KM (Chebyshev) UCL					0.00477		
2074	Theta star					0.00239								
2075	Nu star					92.67	Potential UCLs to Use							
2076	AppChi2					71.47	95% KM (Chebyshev) UCL					0.00269		
2077	95% Gamma Approximate UCL					0.00138								
2078	95% Adjusted Gamma UCL					0.00139								
2079	Note: DL/2 is not a recommended method.													
2080														

	A	B	C	D	E	F	G	H	I	J	K	L		
2081														
2082	Zinc													
2083														
2084	General Statistics													
2085	Number of Valid Data				131		Number of Detected Data				131			
2086	Number of Distinct Detected Data				117		Number of Non-Detect Data				0			
2087	Number of Missing Values				27		Percent Non-Detects				0.00%			
2088														
2089	Raw Statistics						Log-transformed Statistics							
2090	Minimum Detected				0.00214		Minimum Detected				-6.147			
2091	Maximum Detected				0.215		Maximum Detected				-1.537			
2092	Mean of Detected				0.0246		Mean of Detected				-4.144			
2093	SD of Detected				0.0285		SD of Detected				0.916			
2094	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A			
2095	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A			
2096														
2097														
2098	UCL Statistics													
2099	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2100	Lilliefors Test Statistic				0.22		Lilliefors Test Statistic				0.0709			
2101	5% Lilliefors Critical Value				0.0774		5% Lilliefors Critical Value				0.0774			
2102	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
2103														
2104	Assuming Normal Distribution						Assuming Lognormal Distribution							
2105	DL/2 Substitution Method						DL/2 Substitution Method							
2106	Mean				0.0246		Mean				-4.144			
2107	SD				0.0285		SD				0.916			
2108	95% DL/2 (t) UCL				0.0287		95% H-Stat (DL/2) UCL				0.0286			
2109														
2110	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method							
2111	MLE method failed to converge properly						Mean in Log Scale						N/A	
2112							SD in Log Scale						N/A	
2113							Mean in Original Scale						N/A	
2114							SD in Original Scale						N/A	
2115							95% Percentile Bootstrap UCL						N/A	
2116							95% BCA Bootstrap UCL						N/A	
2117														
2118	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2119	k star (bias corrected)				1.253		Data appear Lognormal at 5% Significance Level							
2120	Theta Star				0.0196									
2121	nu star				328.3									
2122														
2123	A-D Test Statistic				2.737		Nonparametric Statistics							
2124	5% A-D Critical Value				0.776		Kaplan-Meier (KM) Method							
2125	K-S Test Statistic				0.776		Mean				0.0246			
2126	5% K-S Critical Value				0.0834		SD				0.0284			
2127	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.00249	
2128							95% KM (t) UCL						0.0287	
2129	Assuming Gamma Distribution						95% KM (z) UCL						0.0287	
2130	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0287	
2131	Minimum				0.00214		95% KM (bootstrap t) UCL						0.0299	
2132	Maximum				0.215		95% KM (BCA) UCL						0.0289	

	A	B	C	D	E	F	G	H	I	J	K	L
2133					Mean	0.0246					95% KM (Percentile Bootstrap) UCL	0.0289
2134					Median	0.015					95% KM (Chebyshev) UCL	0.0355
2135					SD	0.0285					97.5% KM (Chebyshev) UCL	0.0402
2136					k star	1.253					99% KM (Chebyshev) UCL	0.0494
2137					Theta star	0.0196						
2138					Nu star	328.3					Potential UCLs to Use	
2139					AppChi2	287.4					95% KM (BCA) UCL	0.0289
2140					95% Gamma Approximate UCL	0.0281						
2141					95% Adjusted Gamma UCL	0.0282						
2142	Note: DL/2 is not a recommended method.											
2143												

	A	B	C	D	E	F	G	H	I	J	K	L				
1	General UCL Statistics for Data Sets with Non-Detects															
2	User Selected Options															
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Air_ProUCL\Air_Reach4b.wst													
4	Full Precision		OFF													
5	Confidence Coefficient		95%													
6	Number of Bootstrap Operations		2000													
7																
8																
9	Antimony															
10																
11	General Statistics															
12	Number of Valid Data				124				Number of Detected Data				123			
13	Number of Distinct Detected Data				81				Number of Non-Detect Data				1			
14	Number of Missing Values				34				Percent Non-Detects				0.81%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.00001			Minimum Detected			-11.51						
18	Maximum Detected			0.00253			Maximum Detected			-5.98						
19	Mean of Detected			0.0002292			Mean of Detected			-8.943						
20	SD of Detected			0.000313			SD of Detected			1.053						
21	Minimum Non-Detect			4.097E-05			Minimum Non-Detect			-10.1						
22	Maximum Non-Detect			4.097E-05			Maximum Non-Detect			-10.1						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Lilliefors Test Statistic			0.261			Lilliefors Test Statistic			0.0869						
28	5% Lilliefors Critical Value			0.0799			5% Lilliefors Critical Value			0.0799						
29	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0002275			Mean			-8.958						
34	SD			0.0003123			SD			1.061						
35	95% DL/2 (t) UCL			0.000274			95% H-Stat (DL/2) UCL			0.0002743						
36																
37	Maximum Likelihood Estimate(MLE) Method						Log ROS Method									
38	Mean			0.0002032			Mean in Log Scale			-8.957						
39	SD			0.0003387			SD in Log Scale			1.059						
40	95% MLE (t) UCL			0.0002536			Mean in Original Scale			0.0002276						
41	95% MLE (Tiku) UCL			0.000251			SD in Original Scale			0.0003123						
42							95% Percentile Bootstrap UCL			0.0002789						
43							95% BCA Bootstrap UCL			0.0002889						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			1.004			Data do not follow a Discernable Distribution (0.05)									
47	Theta Star			0.0002283												
48	nu star			247												
49																
50	A-D Test Statistic			3.388			Nonparametric Statistics									
51	5% A-D Critical Value			0.783			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.783			Mean			0.0002276						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.086	SD					0.000311	
54	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.804E-05	
55							95% KM (t) UCL					0.000274	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0002737	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.000274	
58	Minimum						1E-09	95% KM (bootstrap t) UCL					0.0002891
59	Maximum						0.00253	95% KM (BCA) UCL					0.0002758
60	Mean						0.0002274	95% KM (Percentile Bootstrap) UCL					0.0002728
61	Median						0.00012	95% KM (Chebyshev) UCL					0.0003498
62	SD						0.0003124	97.5% KM (Chebyshev) UCL					0.0004027
63	k star						0.884	99% KM (Chebyshev) UCL					0.0005066
64	Theta star						0.0002573						
65	Nu star						219.2	Potential UCLs to Use					
66	AppChi2						185.9	95% KM (Chebyshev) UCL					0.0003498
67	95% Gamma Approximate UCL						0.0002681						
68	95% Adjusted Gamma UCL						0.0002686						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	Arsenic												
73													
74	General Statistics												
75	Number of Valid Data					119	Number of Detected Data					108	
76	Number of Distinct Detected Data					66	Number of Non-Detect Data					11	
77	Number of Missing Values					39	Percent Non-Detects					9.24%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00006	Minimum Detected					-9.721	
81	Maximum Detected					0.00401	Maximum Detected					-5.519	
82	Mean of Detected					0.0004526	Mean of Detected					-8.164	
83	SD of Detected					0.0005905	SD of Detected					0.918	
84	Minimum Non-Detect					0.0001848	Minimum Non-Detect					-8.597	
85	Maximum Non-Detect					0.0011	Maximum Non-Detect					-6.814	
86													
87	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					109	
88	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					10	
89	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					91.60%	
90													
91	UCL Statistics												
92	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
93	Lilliefors Test Statistic					0.255	Lilliefors Test Statistic					0.0576	
94	5% Lilliefors Critical Value					0.0853	5% Lilliefors Critical Value					0.0853	
95	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
96													
97	Assuming Normal Distribution						Assuming Lognormal Distribution						
98	DL/2 Substitution Method						DL/2 Substitution Method						
99	Mean					0.000435	Mean					-8.182	
100	SD					0.0005663	SD					0.887	
101	95% DL/2 (t) UCL					0.000521	95% H-Stat (DL/2) UCL					0.0004527	
102													
103	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
104	MLE yields a negative mean						Mean in Log Scale					-8.2	

	A	B	C	D	E	F	G	H	I	J	K	L
105											SD in Log Scale	0.884
106											Mean in Original Scale	0.0004291
107											SD in Original Scale	0.0005673
108											95% Percentile Bootstrap UCL	0.0005206
109											95% BCA Bootstrap UCL	0.0005344
110												
111	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
112					k star (bias corrected)	1.19	Data appear Lognormal at 5% Significance Level					
113					Theta Star	0.0003803						
114					nu star	257.1						
115												
116					A-D Test Statistic	2.889	Nonparametric Statistics					
117					5% A-D Critical Value	0.777	Kaplan-Meier (KM) Method					
118					K-S Test Statistic	0.777	Mean					
119					5% K-S Critical Value	0.0896	SD					
120	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
121							95% KM (t) UCL					
122	Assuming Gamma Distribution						95% KM (z) UCL					
123	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
124					Minimum	5.195E-05	95% KM (bootstrap t) UCL					
125					Maximum	0.00401	95% KM (BCA) UCL					
126					Mean	0.0004423	95% KM (Percentile Bootstrap) UCL					
127					Median	0.0003	95% KM (Chebyshev) UCL					
128					SD	0.0005644	97.5% KM (Chebyshev) UCL					
129					k star	1.264	99% KM (Chebyshev) UCL					
130					Theta star	0.00035						
131					Nu star	300.8	Potential UCLs to Use					
132					AppChi2	261.6	95% KM (BCA) UCL					
133					95% Gamma Approximate UCL	0.0005086						
134					95% Adjusted Gamma UCL	0.0005094						
135	Note: DL/2 is not a recommended method.											
136												
137												
138	Barium											
139												
140	General Statistics											
141					Number of Valid Data	88					Number of Detected Data	85
142					Number of Distinct Detected Data	74					Number of Non-Detect Data	3
143					Number of Missing Values	63					Percent Non-Detects	3.41%
144												
145	Raw Statistics						Log-transformed Statistics					
146					Minimum Detected	0.00031					Minimum Detected	-8.079
147					Maximum Detected	1.51					Maximum Detected	0.412
148					Mean of Detected	0.0492					Mean of Detected	-4.097
149					SD of Detected	0.185					SD of Detected	1.208
150					Minimum Non-Detect	0.136					Minimum Non-Detect	-1.998
151					Maximum Non-Detect	2.699					Maximum Non-Detect	0.993
152												
153	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
154	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
155	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
156												

	A	B	C	D	E	F	G	H	I	J	K	L	
157	UCL Statistics												
158	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
159	Lilliefors Test Statistic					0.437	Lilliefors Test Statistic					0.0994	
160	5% Lilliefors Critical Value					0.0961	5% Lilliefors Critical Value					0.0961	
161	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
162													
163	Assuming Normal Distribution						Assuming Lognormal Distribution						
164	DL/2 Substitution Method						DL/2 Substitution Method						
165	Mean					0.0702	Mean					-3.991	
166	SD					0.235	SD					1.337	
167	95% DL/2 (t) UCL					0.112	95% H-Stat (DL/2) UCL					0.0693	
168													
169	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
170	MLE method failed to converge properly						Mean in Log Scale					-4.098	
171							SD in Log Scale					1.187	
172							Mean in Original Scale					0.0481	
173							SD in Original Scale					0.181	
174							95% Percentile Bootstrap UCL					0.0835	
175							95% BCA Bootstrap UCL					0.1	
176													
177	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
178	k star (bias corrected)					0.561	Data do not follow a Discernable Distribution (0.05)						
179	Theta Star					0.0877							
180	nu star					95.33							
181													
182	A-D Test Statistic					8.004	Nonparametric Statistics						
183	5% A-D Critical Value					0.811	Kaplan-Meier (KM) Method						
184	K-S Test Statistic					0.811	Mean					0.0487	
185	5% K-S Critical Value					0.102	SD					0.182	
186	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0196	
187							95% KM (t) UCL					0.0813	
188	Assuming Gamma Distribution						95% KM (z) UCL					0.0809	
189	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0813	
190	Minimum					0.00031	95% KM (bootstrap t) UCL					0.347	
191	Maximum					1.51	95% KM (BCA) UCL					0.0858	
192	Mean					0.0488	95% KM (Percentile Bootstrap) UCL					0.0851	
193	Median					0.02	95% KM (Chebyshev) UCL					0.134	
194	SD					0.181	97.5% KM (Chebyshev) UCL					0.171	
195	k star					0.578	99% KM (Chebyshev) UCL					0.244	
196	Theta star					0.0845							
197	Nu star					101.7	Potential UCLs to Use						
198	AppChi2					79.4	95% KM (Chebyshev) UCL					0.134	
199	95% Gamma Approximate UCL					0.0625							
200	95% Adjusted Gamma UCL					0.0627							
201	Note: DL/2 is not a recommended method.												
202													
203													
204	Beryllium												
205													
206	General Statistics												
207	Number of Valid Data					117	Number of Detected Data					112	
208	Number of Distinct Detected Data					50	Number of Non-Detect Data					5	

	A	B	C	D	E	F	G	H	I	J	K	L
209	Number of Missing Values					37	Percent Non-Detects					4.27%
210												
211	Raw Statistics						Log-transformed Statistics					
212	Minimum Detected					0.000002	Minimum Detected					-13.12
213	Maximum Detected					0.00019	Maximum Detected					-8.568
214	Mean of Detected					2.298E-05	Mean of Detected					-11.06
215	SD of Detected					2.37E-05	SD of Detected					0.906
216	Minimum Non-Detect					3.07E-06	Minimum Non-Detect					-12.69
217	Maximum Non-Detect					0.0000675	Maximum Non-Detect					-9.603
218												
219	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					114
220	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
221	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.44%
222												
223	UCL Statistics											
224	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
225	Lilliefors Test Statistic					0.188	Lilliefors Test Statistic					0.111
226	5% Lilliefors Critical Value					0.0837	5% Lilliefors Critical Value					0.0837
227	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
228												
229	Assuming Normal Distribution						Assuming Lognormal Distribution					
230	DL/2 Substitution Method						DL/2 Substitution Method					
231	Mean					2.264E-05	Mean					-11.07
232	SD					2.335E-05	SD					0.917
233	95% DL/2 (t) UCL					2.622E-05	95% H-Stat (DL/2) UCL					2.735E-05
234												
235	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
236	MLE yields a negative mean						Mean in Log Scale					-11.08
237							SD in Log Scale					0.901
238							Mean in Original Scale					2.242E-05
239							SD in Original Scale					2.336E-05
240							95% Percentile Bootstrap UCL					2.613E-05
241							95% BCA Bootstrap UCL					2.71E-05
242												
243	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
244	k star (bias corrected)					1.447	Data appear Gamma Distributed at 5% Significance Level					
245	Theta Star					1.588E-05						
246	nu star					324.1						
247												
248	A-D Test Statistic					0.625	Nonparametric Statistics					
249	5% A-D Critical Value					0.77	Kaplan-Meier (KM) Method					
250	K-S Test Statistic					0.77	Mean					2.249E-05
251	5% K-S Critical Value					0.088	SD					2.33E-05
252	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2.169E-06
253							95% KM (t) UCL					2.609E-05
254	Assuming Gamma Distribution						95% KM (z) UCL					2.606E-05
255	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.609E-05
256	Minimum					1E-09	95% KM (bootstrap t) UCL					2.707E-05
257	Maximum					0.00019	95% KM (BCA) UCL					2.619E-05
258	Mean					2.26E-05	95% KM (Percentile Bootstrap) UCL					2.632E-05
259	Median					0.00002	95% KM (Chebyshev) UCL					3.195E-05
260	SD					2.333E-05	97.5% KM (Chebyshev) UCL					3.604E-05

	A	B	C	D	E	F	G	H	I	J	K	L	
261					k star	1.254					99% KM (Chebyshev) UCL	4.408E-05	
262					Theta star	1.802E-05							
263					Nu star	293.5					Potential UCLs to Use		
264					AppChi2	254.8					95% KM (Chebyshev) UCL	3.195E-05	
265					95% Gamma Approximate UCL	2.604E-05							
266					95% Adjusted Gamma UCL	2.608E-05							
267	Note: DL/2 is not a recommended method.												
268													
269													
270	Bismuth												
271													
272	General Statistics												
273					Number of Valid Data	110					Number of Detected Data	104	
274					Number of Distinct Detected Data	54					Number of Non-Detect Data	6	
275					Number of Missing Values	48					Percent Non-Detects	5.45%	
276													
277	Raw Statistics						Log-transformed Statistics						
278					Minimum Detected	0.000004					Minimum Detected	-12.43	
279					Maximum Detected	0.00068					Maximum Detected	-7.293	
280					Mean of Detected	8.536E-05					Mean of Detected	-10.32	
281					SD of Detected	0.0001445					SD of Detected	1.313	
282					Minimum Non-Detect	5.12E-06					Minimum Non-Detect	-12.18	
283					Maximum Non-Detect	0.0003418					Maximum Non-Detect	-7.981	
284													
285	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						102
286	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						8
287	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						92.73%
288													
289	UCL Statistics												
290	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
291					Lilliefors Test Statistic	0.313					Lilliefors Test Statistic	0.106	
292					5% Lilliefors Critical Value	0.0869					5% Lilliefors Critical Value	0.0869	
293	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
294													
295	Assuming Normal Distribution						Assuming Lognormal Distribution						
296					DL/2 Substitution Method						DL/2 Substitution Method		
297					Mean	8.293E-05					Mean	-10.36	
298					SD	0.0001415					SD	1.332	
299					95% DL/2 (t) UCL	0.0001053					95% H-Stat (DL/2) UCL	9.596E-05	
300													
301					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
302	MLE yields a negative mean						Mean in Log Scale						-10.38
303							SD in Log Scale						1.316
304							Mean in Original Scale						8.143E-05
305							SD in Original Scale						0.0001414
306							95% Percentile Bootstrap UCL						0.0001046
307							95% BCA Bootstrap UCL						0.0001068
308													
309	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
310					k star (bias corrected)	0.631	Data do not follow a Discernable Distribution (0.05)						
311					Theta Star	0.0001352							
312					nu star	131.3							

	A	B	C	D	E	F	G	H	I	J	K	L
313												
314				A-D Test Statistic		5.883	Nonparametric Statistics					
315				5% A-D Critical Value		0.805	Kaplan-Meier (KM) Method					
316				K-S Test Statistic		0.805					Mean	8.167E-05
317				5% K-S Critical Value		0.0926					SD	0.0001409
318	Data not Gamma Distributed at 5% Significance Level										SE of Mean	1.351E-05
319											95% KM (t) UCL	0.0001041
320	Assuming Gamma Distribution										95% KM (z) UCL	0.0001039
321	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0001041
322				Minimum		1E-09					95% KM (bootstrap t) UCL	0.0001085
323				Maximum		0.00068					95% KM (BCA) UCL	0.0001061
324				Mean		8.167E-05					95% KM (Percentile Bootstrap) UCL	0.0001053
325				Median		2.877E-05					95% KM (Chebyshev) UCL	0.0001406
326				SD		0.0001414					97.5% KM (Chebyshev) UCL	0.0001661
327				k star		0.491					99% KM (Chebyshev) UCL	0.0002161
328				Theta star		0.0001665						
329				Nu star		107.9	Potential UCLs to Use					
330				AppChi2		84.94					95% KM (Chebyshev) UCL	0.0001406
331				95% Gamma Approximate UCL		0.0001038						
332				95% Adjusted Gamma UCL		0.0001041						
333	Note: DL/2 is not a recommended method.											
334												
335												
336	Cadmium											
337												
338	General Statistics											
339				Number of Valid Data		127					Number of Detected Data	119
340				Number of Distinct Detected Data		66					Number of Non-Detect Data	8
341				Number of Missing Values		31					Percent Non-Detects	6.30%
342												
343	Raw Statistics						Log-transformed Statistics					
344				Minimum Detected		0.000006					Minimum Detected	-12.02
345				Maximum Detected		0.00096					Maximum Detected	-6.949
346				Mean of Detected		0.0001047					Mean of Detected	-9.641
347				SD of Detected		0.0001268					SD of Detected	0.973
348				Minimum Non-Detect		1.735E-05					Minimum Non-Detect	-10.96
349				Maximum Non-Detect		9.449E-05					Maximum Non-Detect	-9.267
350												
351	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	88
352	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	39
353	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	69.29%
354												
355	UCL Statistics											
356	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
357				Lilliefors Test Statistic		0.233					Lilliefors Test Statistic	0.071
358				5% Lilliefors Critical Value		0.0812					5% Lilliefors Critical Value	0.0812
359	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
360												
361	Assuming Normal Distribution						Assuming Lognormal Distribution					
362				DL/2 Substitution Method							DL/2 Substitution Method	
363				Mean		9.94E-05					Mean	-9.724
364				SD		0.0001245					SD	1.003

	A	B	C	D	E	F	G	H	I	J	K	L
365	95% DL/2 (t) UCL					0.0001177	95% H-Stat (DL/2) UCL					0.0001245
366												
367	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method				
368	MLE yields a negative mean					Mean in Log Scale					-9.715	
369						SD in Log Scale					0.989	
370						Mean in Original Scale					9.952E-05	
371						SD in Original Scale					0.0001244	
372						95% Percentile Bootstrap UCL					0.0001183	
373						95% BCA Bootstrap UCL					0.0001209	
374												
375	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
376	k star (bias corrected)				1.163		Data appear Lognormal at 5% Significance Level					
377	Theta Star				9.01E-05							
378	nu star				276.7							
379												
380	A-D Test Statistic				1.974		Nonparametric Statistics					
381	5% A-D Critical Value				0.778		Kaplan-Meier (KM) Method					
382	K-S Test Statistic				0.778		Mean					9.955E-05
383	5% K-S Critical Value				0.0867		SD					0.0001239
384	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.105E-05	
385						95% KM (t) UCL					0.0001179	
386	Assuming Gamma Distribution					95% KM (z) UCL					0.0001177	
387	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.0001179	
388	Minimum				1E-09		95% KM (bootstrap t) UCL					0.0001239
389	Maximum				0.00096		95% KM (BCA) UCL					0.0001192
390	Mean				9.895E-05		95% KM (Percentile Bootstrap) UCL					0.0001199
391	Median				0.00006		95% KM (Chebyshev) UCL					0.0001477
392	SD				0.0001249		97.5% KM (Chebyshev) UCL					0.0001685
393	k star				0.679		99% KM (Chebyshev) UCL					0.0002095
394	Theta star				0.0001457							
395	Nu star				172.5		Potential UCLs to Use					
396	AppChi2				143.1		95% KM (BCA) UCL					0.0001192
397	95% Gamma Approximate UCL				0.0001193							
398	95% Adjusted Gamma UCL				0.0001195							
399	Note: DL/2 is not a recommended method.											
400												
401												
402	Cerium											
403												
404	General Statistics											
405	Number of Valid Data				123		Number of Detected Data				122	
406	Number of Distinct Detected Data				97		Number of Non-Detect Data				1	
407	Number of Missing Values				35		Percent Non-Detects				0.81%	
408												
409	Raw Statistics					Log-transformed Statistics						
410	Minimum Detected				0.00002		Minimum Detected				-10.82	
411	Maximum Detected				0.00611		Maximum Detected				-5.098	
412	Mean of Detected				0.0007044		Mean of Detected				-7.701	
413	SD of Detected				0.0007715		SD of Detected				1.012	
414	Minimum Non-Detect				0.000205		Minimum Non-Detect				-8.493	
415	Maximum Non-Detect				0.000205		Maximum Non-Detect				-8.493	
416												

	A	B	C	D	E	F	G	H	I	J	K	L	
417													
418	UCL Statistics												
419	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
420	Lilliefors Test Statistic					0.187	Lilliefors Test Statistic					0.0985	
421	5% Lilliefors Critical Value					0.0802	5% Lilliefors Critical Value					0.0802	
422	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
423													
424	Assuming Normal Distribution						Assuming Lognormal Distribution						
425	DL/2 Substitution Method						DL/2 Substitution Method						
426	Mean					0.0006996	Mean					-7.713	
427	SD					0.0007702	SD					1.016	
428	95% DL/2 (t) UCL					0.0008147	95% H-Stat (DL/2) UCL					0.0009036	
429													
430	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
431	Mean					0.0006008	Mean in Log Scale					-7.711	
432	SD					0.0008872	SD in Log Scale					1.014	
433	95% MLE (t) UCL					0.0007334	Mean in Original Scale					0.0006997	
434	95% MLE (Tiku) UCL					0.0007325	SD in Original Scale					0.0007701	
435							95% Percentile Bootstrap UCL					0.0008195	
436							95% BCA Bootstrap UCL					0.0008408	
437													
438	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
439	k star (bias corrected)					1.245	Data appear Gamma Distributed at 5% Significance Level						
440	Theta Star					0.000566							
441	nu star					303.7							
442													
443	A-D Test Statistic					0.635	Nonparametric Statistics						
444	5% A-D Critical Value					0.776	Kaplan-Meier (KM) Method						
445	K-S Test Statistic					0.776	Mean					0.0006996	
446	5% K-S Critical Value					0.0858	SD					0.000767	
447	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						6.945E-05
448							95% KM (t) UCL					0.0008147	
449	Assuming Gamma Distribution						95% KM (z) UCL						0.0008138
450	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0008147
451	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00086	
452	Maximum					0.00611	95% KM (BCA) UCL					0.0008117	
453	Mean					0.0006987	95% KM (Percentile Bootstrap) UCL					0.0008198	
454	Median					0.00057	95% KM (Chebyshev) UCL					0.001	
455	SD					0.0007709	97.5% KM (Chebyshev) UCL					0.00113	
456	k star					1.04	99% KM (Chebyshev) UCL					0.00139	
457	Theta star					0.0006716							
458	Nu star					256	Potential UCLs to Use						
459	AppChi2					219.9	95% KM (Chebyshev) UCL					0.001	
460	95% Gamma Approximate UCL					0.0008132							
461	95% Adjusted Gamma UCL					0.0008147							
462	Note: DL/2 is not a recommended method.												
463													
464													
465	Cesium												
466													
467	General Statistics												
468	Number of Valid Data					120	Number of Detected Data					119	

	A	B	C	D	E	F	G	H	I	J	K	L
469	Number of Distinct Detected Data					52	Number of Non-Detect Data					1
470	Number of Missing Values					26	Percent Non-Detects					0.83%
471												
472	Raw Statistics						Log-transformed Statistics					
473	Minimum Detected					0.000001	Minimum Detected					-13.82
474	Maximum Detected					0.000216	Maximum Detected					-8.44
475	Mean of Detected					5.31E-05	Mean of Detected					-10.21
476	SD of Detected					4.214E-05	SD of Detected					0.98
477	Minimum Non-Detect					6.15E-06	Minimum Non-Detect					-12
478	Maximum Non-Detect					6.15E-06	Maximum Non-Detect					-12
479												
480												
481	UCL Statistics											
482	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
483	Lilliefors Test Statistic					0.112	Lilliefors Test Statistic					0.123
484	5% Lilliefors Critical Value					0.0812	5% Lilliefors Critical Value					0.0812
485	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
486												
487	Assuming Normal Distribution						Assuming Lognormal Distribution					
488	DL/2 Substitution Method						DL/2 Substitution Method					
489	Mean					5.268E-05	Mean					-10.23
490	SD					4.221E-05	SD					1.002
491	95% DL/2 (t) UCL					5.907E-05	95% H-Stat (DL/2) UCL					7.231E-05
492												
493	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
494	Mean					5.189E-05	Mean in Log Scale					-10.23
495	SD					4.33E-05	SD in Log Scale					0.994
496	95% MLE (t) UCL					5.845E-05	Mean in Original Scale					5.27E-05
497	95% MLE (Tiku) UCL					5.819E-05	SD in Original Scale					4.219E-05
498							95% Percentile Bootstrap UCL					5.905E-05
499							95% BCA Bootstrap UCL					5.977E-05
500												
501	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
502	k star (bias corrected)					1.464	Data Follow Appr. Gamma Distribution at 5% Significance Level					
503	Theta Star					3.626E-05						
504	nu star					348.5						
505												
506	A-D Test Statistic					0.793	Nonparametric Statistics					
507	5% A-D Critical Value					0.77	Kaplan-Meier (KM) Method					
508	K-S Test Statistic					0.77	Mean					5.268E-05
509	5% K-S Critical Value					0.0861	SD					4.204E-05
510	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					3.854E-06
511							95% KM (t) UCL					5.907E-05
512	Assuming Gamma Distribution						95% KM (z) UCL					5.902E-05
513	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5.907E-05
514	Minimum					1E-09	95% KM (bootstrap t) UCL					5.964E-05
515	Maximum					0.000216	95% KM (BCA) UCL					5.905E-05
516	Mean					5.266E-05	95% KM (Percentile Bootstrap) UCL					5.902E-05
517	Median					4.615E-05	95% KM (Chebyshev) UCL					6.948E-05
518	SD					4.224E-05	97.5% KM (Chebyshev) UCL					7.675E-05
519	k star					1.228	99% KM (Chebyshev) UCL					9.102E-05
520	Theta star					4.288E-05						

	A	B	C	D	E	F	G	H	I	J	K	L
521					Nu star	294.7	Potential UCLs to Use					
522					AppChi2	255.9	95% KM (Chebyshev) UCL					6.948E-05
523			95% Gamma Approximate UCL			6.063E-05						
524			95% Adjusted Gamma UCL			6.073E-05						
525	Note: DL/2 is not a recommended method.											
526												
527												
528	Chromium											
529												
530	General Statistics											
531	Number of Valid Data					105	Number of Detected Data					105
532	Number of Distinct Detected Data					91	Number of Non-Detect Data					0
533	Number of Missing Values					49	Percent Non-Detects					0.00%
534												
535	Raw Statistics						Log-transformed Statistics					
536	Minimum Detected					0.00007	Minimum Detected					-9.567
537	Maximum Detected					0.0409	Maximum Detected					-3.196
538	Mean of Detected					0.00242	Mean of Detected					-6.655
539	SD of Detected					0.0047	SD of Detected					1.066
540	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
541	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
542												
543												
544	UCL Statistics											
545	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
546	Lilliefors Test Statistic					0.309	Lilliefors Test Statistic					0.0705
547	5% Lilliefors Critical Value					0.0865	5% Lilliefors Critical Value					0.0865
548	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
549												
550	Assuming Normal Distribution						Assuming Lognormal Distribution					
551	DL/2 Substitution Method						DL/2 Substitution Method					
552	Mean					0.00242	Mean					-6.655
553	SD					0.0047	SD					1.066
554	95% DL/2 (t) UCL					0.00318	95% H-Stat (DL/2) UCL					0.00288
555												
556	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
557	MLE method failed to converge properly						Mean in Log Scale					N/A
558							SD in Log Scale					N/A
559							Mean in Original Scale					N/A
560							SD in Original Scale					N/A
561							95% Percentile Bootstrap UCL					N/A
562							95% BCA Bootstrap UCL					N/A
563												
564	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
565	k star (bias corrected)					0.904	Data appear Lognormal at 5% Significance Level					
566	Theta Star					0.00268						
567	nu star					189.8						
568												
569	A-D Test Statistic					2.879	Nonparametric Statistics					
570	5% A-D Critical Value					0.787	Kaplan-Meier (KM) Method					
571	K-S Test Statistic					0.787	Mean					0.00242
572	5% K-S Critical Value					0.0911	SD					0.00468

	A	B	C	D	E	F	G	H	I	J	K	L
573	Data not Gamma Distributed at 5% Significance Level							SE of Mean				0.0004587
574								95% KM (t) UCL				0.00318
575	Assuming Gamma Distribution							95% KM (z) UCL				0.00317
576	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.00318	
577	Minimum					0.00007	95% KM (bootstrap t) UCL				0.00422	
578	Maximum					0.0409	95% KM (BCA) UCL				0.00325	
579	Mean					0.00242	95% KM (Percentile Bootstrap) UCL				0.00325	
580	Median					0.0013	95% KM (Chebyshev) UCL				0.00442	
581	SD					0.0047	97.5% KM (Chebyshev) UCL				0.00528	
582	k star					0.904	99% KM (Chebyshev) UCL				0.00698	
583	Theta star					0.00268						
584	Nu star					189.8	Potential UCLs to Use					
585	AppChi2					158.9	95% KM (Chebyshev) UCL				0.00442	
586	95% Gamma Approximate UCL					0.00289						
587	95% Adjusted Gamma UCL					0.0029						
588	Note: DL/2 is not a recommended method.											
589												
590												
591	Cobalt											
592												
593	General Statistics											
594	Number of Valid Data					131	Number of Detected Data					124
595	Number of Distinct Detected Data					80	Number of Non-Detect Data					7
596	Number of Missing Values					27	Percent Non-Detects					5.34%
597												
598	Raw Statistics						Log-transformed Statistics					
599	Minimum Detected					0.00001	Minimum Detected					-11.51
600	Maximum Detected					0.0006989	Maximum Detected					-7.266
601	Mean of Detected					0.000201	Mean of Detected					-8.925
602	SD of Detected					0.0001625	SD of Detected					1.047
603	Minimum Non-Detect					3.072E-05	Minimum Non-Detect					-10.39
604	Maximum Non-Detect					0.00116	Maximum Non-Detect					-6.76
605												
606	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					131
607	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
608	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
609												
610	UCL Statistics											
611	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
612	Lilliefors Test Statistic					0.122	Lilliefors Test Statistic					0.117
613	5% Lilliefors Critical Value					0.0796	5% Lilliefors Critical Value					0.0796
614	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
615												
616	Assuming Normal Distribution						Assuming Lognormal Distribution					
617	DL/2 Substitution Method						DL/2 Substitution Method					
618	Mean					0.0001992	Mean					-8.948
619	SD					0.0001637	SD					1.064
620	95% DL/2 (t) UCL					0.0002229	95% H-Stat (DL/2) UCL					0.000272
621												
622	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
623	MLE method failed to converge properly						Mean in Log Scale					-8.964
624							SD in Log Scale					1.042

	A	B	C	D	E	F	G	H	I	J	K	L	
625										Mean in Original Scale		0.0001943	
626										SD in Original Scale		0.0001608	
627										95% Percentile Bootstrap UCL		0.0002185	
628										95% BCA Bootstrap UCL		0.000221	
629													
630	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
631					k star (bias corrected)	1.327	Data appear Gamma Distributed at 5% Significance Level						
632					Theta Star	0.0001515							
633					nu star	329							
634													
635					A-D Test Statistic	0.358	Nonparametric Statistics						
636					5% A-D Critical Value	0.774	Kaplan-Meier (KM) Method						
637					K-S Test Statistic	0.774	Mean					0.0001955	
638					5% K-S Critical Value	0.0851	SD					0.0001611	
639	Data appear Gamma Distributed at 5% Significance Level					SE of Mean							1.424E-05
640							95% KM (t) UCL					0.0002191	
641	Assuming Gamma Distribution					95% KM (z) UCL							0.0002189
642					Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL					0.0002191	
643					Minimum	1E-09	95% KM (bootstrap t) UCL					0.00022	
644					Maximum	0.0006989	95% KM (BCA) UCL					0.0002209	
645					Mean	0.0001965	95% KM (Percentile Bootstrap) UCL					0.0002185	
646					Median	0.00017	95% KM (Chebyshev) UCL					0.0002576	
647					SD	0.0001605	97.5% KM (Chebyshev) UCL					0.0002844	
648					k star	1	99% KM (Chebyshev) UCL					0.0003372	
649					Theta star	0.0001966							
650					Nu star	261.9	Potential UCLs to Use						
651					AppChi2	225.4	95% KM (Chebyshev) UCL					0.0002576	
652					95% Gamma Approximate UCL	0.0002283							
653					95% Adjusted Gamma UCL	0.0002287							
654	Note: DL/2 is not a recommended method.												
655													
656													
657	Copper												
658													
659	General Statistics												
660					Number of Valid Data	136				Number of Detected Data		130	
661					Number of Distinct Detected Data	101				Number of Non-Detect Data		6	
662					Number of Missing Values	22				Percent Non-Detects		4.41%	
663													
664	Raw Statistics						Log-transformed Statistics						
665					Minimum Detected	0.001				Minimum Detected		-6.908	
666					Maximum Detected	1.379				Maximum Detected		0.321	
667					Mean of Detected	0.0195				Mean of Detected		-4.987	
668					SD of Detected	0.121				SD of Detected		0.862	
669					Minimum Non-Detect	0.0005546				Minimum Non-Detect		-7.497	
670					Maximum Non-Detect	3.799				Maximum Non-Detect		1.335	
671													
672	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						136
673	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
674	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
675													
676	UCL Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
677	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
678	Lilliefors Test Statistic					0.457	Lilliefors Test Statistic					0.119
679	5% Lilliefors Critical Value					0.0777	5% Lilliefors Critical Value					0.0777
680	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
681												
682	Assuming Normal Distribution						Assuming Lognormal Distribution					
683	DL/2 Substitution Method						DL/2 Substitution Method					
684	Mean					0.0544	Mean					-4.862
685	SD					0.246	SD					1.245
686	95% DL/2 (t) UCL					0.0893	95% H-Stat (DL/2) UCL					0.0245
687												
688	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
689	MLE method failed to converge properly						Mean in Log Scale					-5.005
690							SD in Log Scale					0.864
691							Mean in Original Scale					0.0189
692							SD in Original Scale					0.118
693							95% Percentile Bootstrap UCL					0.0391
694							95% BCA Bootstrap UCL					0.0509
695												
696	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
697	k star (bias corrected)					0.581	Data do not follow a Discernable Distribution (0.05)					
698	Theta Star					0.0336						
699	nu star					151						
700												
701	A-D Test Statistic					7.692E+28	Nonparametric Statistics					
702	5% A-D Critical Value					0.811	Kaplan-Meier (KM) Method					
703	K-S Test Statistic					0.811	Mean					0.0193
704	5% K-S Critical Value					0.0859	SD					0.119
705	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0104
706							95% KM (t) UCL					0.0366
707	Assuming Gamma Distribution						95% KM (z) UCL					0.0364
708	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0366
709	Minimum					1E-09	95% KM (bootstrap t) UCL					0.187
710	Maximum					1.379	95% KM (BCA) UCL					0.0415
711	Mean					0.0191	95% KM (Percentile Bootstrap) UCL					0.0396
712	Median					0.00633	95% KM (Chebyshev) UCL					0.0647
713	SD					0.118	97.5% KM (Chebyshev) UCL					0.0844
714	k star					0.547	99% KM (Chebyshev) UCL					0.123
715	Theta star					0.035						
716	Nu star					148.8	Potential UCLs to Use					
717	AppChi2					121.6	95% KM (BCA) UCL					0.0415
718	95% Gamma Approximate UCL					0.0234						
719	95% Adjusted Gamma UCL					0.0235						
720	Note: DL/2 is not a recommended method.											
721												
722												
723	Gallium											
724												
725	General Statistics											
726	Number of Valid Data					110	Number of Detected Data					110
727	Number of Distinct Detected Data					55	Number of Non-Detect Data					0
728	Number of Missing Values					44	Percent Non-Detects					0.00%

	A	B	C	D	E	F	G	H	I	J	K	L
729												
730	Raw Statistics						Log-transformed Statistics					
731	Minimum Detected				0.00002		Minimum Detected				-10.82	
732	Maximum Detected				0.00278		Maximum Detected				-5.885	
733	Mean of Detected				0.0002514		Mean of Detected				-8.826	
734	SD of Detected				0.0003756		SD of Detected				1.013	
735	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
736	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
737												
738												
739	UCL Statistics											
740	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
741	Lilliefors Test Statistic				0.299		Lilliefors Test Statistic				0.12	
742	5% Lilliefors Critical Value				0.0845		5% Lilliefors Critical Value				0.0845	
743	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
744												
745	Assuming Normal Distribution						Assuming Lognormal Distribution					
746	DL/2 Substitution Method						DL/2 Substitution Method					
747	Mean				0.0002514		Mean				-8.826	
748	SD				0.0003756		SD				1.013	
749	95% DL/2 (t) UCL				0.0003108		95% H-Stat (DL/2) UCL				0.0003037	
750												
751	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
752	MLE method failed to converge properly						Mean in Log Scale				N/A	
753							SD in Log Scale				N/A	
754							Mean in Original Scale				N/A	
755							SD in Original Scale				N/A	
756							95% Percentile Bootstrap UCL				N/A	
757							95% BCA Bootstrap UCL				N/A	
758												
759	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
760	k star (bias corrected)				1.043		Data do not follow a Discernable Distribution (0.05)					
761	Theta Star				0.0002411							
762	nu star				229.4							
763												
764	A-D Test Statistic				3.382		Nonparametric Statistics					
765	5% A-D Critical Value				0.781		Kaplan-Meier (KM) Method					
766	K-S Test Statistic				0.781		Mean				0.0002514	
767	5% K-S Critical Value				0.0894		SD				0.0003738	
768	Data not Gamma Distributed at 5% Significance Level						SE of Mean				3.581E-05	
769							95% KM (t) UCL				0.0003108	
770	Assuming Gamma Distribution						95% KM (z) UCL				0.0003103	
771	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0003108	
772	Minimum				0.00002		95% KM (bootstrap t) UCL				0.000344	
773	Maximum				0.00278		95% KM (BCA) UCL				0.000318	
774	Mean				0.0002514		95% KM (Percentile Bootstrap) UCL				0.0003111	
775	Median				0.00015		95% KM (Chebyshev) UCL				0.0004075	
776	SD				0.0003756		97.5% KM (Chebyshev) UCL				0.000475	
777	k star				1.043		99% KM (Chebyshev) UCL				0.0006077	
778	Theta star				0.0002411							
779	Nu star				229.4		Potential UCLs to Use					
780	AppChi2				195.3		95% KM (Chebyshev) UCL				0.0004075	

	A	B	C	D	E	F	G	H	I	J	K	L
781	95% Gamma Approximate UCL					0.0002952						
782	95% Adjusted Gamma UCL					0.0002958						
783	Note: DL/2 is not a recommended method.											
784												
785												
786	Iron											
787												
788	General Statistics											
789	Number of Valid Data					126	Number of Detected Data					125
790	Number of Distinct Detected Data					125	Number of Non-Detect Data					1
791	Number of Missing Values					30	Percent Non-Detects					0.79%
792												
793	Raw Statistics						Log-transformed Statistics					
794	Minimum Detected					0.017	Minimum Detected					-4.075
795	Maximum Detected					1.766	Maximum Detected					0.569
796	Mean of Detected					0.429	Mean of Detected					-1.273
797	SD of Detected					0.354	SD of Detected					1.065
798	Minimum Non-Detect					0.0878	Minimum Non-Detect					-2.433
799	Maximum Non-Detect					0.0878	Maximum Non-Detect					-2.433
800												
801												
802	UCL Statistics											
803	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
804	Lilliefors Test Statistic					0.122	Lilliefors Test Statistic					0.118
805	5% Lilliefors Critical Value					0.0792	5% Lilliefors Critical Value					0.0792
806	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
807												
808	Assuming Normal Distribution						Assuming Lognormal Distribution					
809	DL/2 Substitution Method						DL/2 Substitution Method					
810	Mean					0.426	Mean					-1.288
811	SD					0.354	SD					1.074
812	95% DL/2 (t) UCL					0.478	95% H-Stat (DL/2) UCL					0.597
813												
814	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
815	Mean					0.401	Mean in Log Scale					-1.286
816	SD					0.39	SD in Log Scale					1.07
817	95% MLE (t) UCL					0.458	Mean in Original Scale					0.426
818	95% MLE (Tiku) UCL					0.458	SD in Original Scale					0.354
819							95% Percentile Bootstrap UCL					0.48
820							95% BCA Bootstrap UCL					0.482
821												
822	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
823	k star (bias corrected)					1.286	Data appear Gamma Distributed at 5% Significance Level					
824	Theta Star					0.333						
825	nu star					321.6						
826												
827	A-D Test Statistic					0.561	Nonparametric Statistics					
828	5% A-D Critical Value					0.775	Kaplan-Meier (KM) Method					
829	K-S Test Statistic					0.775	Mean					0.426
830	5% K-S Critical Value					0.0849	SD					0.353
831	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0316
832							95% KM (t) UCL					0.478

	A	B	C	D	E	F	G	H	I	J	K	L		
833	Assuming Gamma Distribution						95% KM (z) UCL					0.478		
834	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.478		
835	Minimum						1E-09	95% KM (bootstrap t) UCL					0.483	
836	Maximum						1.766	95% KM (BCA) UCL					0.477	
837	Mean						0.426	95% KM (Percentile Bootstrap) UCL					0.479	
838	Median						0.352	95% KM (Chebyshev) UCL					0.563	
839	SD						0.355	97.5% KM (Chebyshev) UCL					0.623	
840	k star						0.987	99% KM (Chebyshev) UCL					0.74	
841	Theta star						0.431							
842	Nu star						248.8	Potential UCLs to Use						
843	AppChi2						213.3	95% KM (Chebyshev) UCL					0.563	
844	95% Gamma Approximate UCL						0.496							
845	95% Adjusted Gamma UCL						0.497							
846	Note: DL/2 is not a recommended method.													
847														
848														
849	Lanthanum													
850														
851	General Statistics													
852	Number of Valid Data						127	Number of Detected Data						118
853	Number of Distinct Detected Data						86	Number of Non-Detect Data						9
854	Number of Missing Values						31	Percent Non-Detects						7.09%
855														
856	Raw Statistics						Log-transformed Statistics							
857	Minimum Detected						0.00002	Minimum Detected						-10.82
858	Maximum Detected						0.00333	Maximum Detected						-5.705
859	Mean of Detected						0.0004097	Mean of Detected						-8.248
860	SD of Detected						0.0004362	SD of Detected						1.012
861	Minimum Non-Detect						9.218E-05	Minimum Non-Detect						-9.292
862	Maximum Non-Detect						0.0008899	Maximum Non-Detect						-7.024
863														
864	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						117	
865	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						10	
866	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						92.13%	
867														
868	UCL Statistics													
869	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
870	Lilliefors Test Statistic						0.186	Lilliefors Test Statistic						0.103
871	5% Lilliefors Critical Value						0.0816	5% Lilliefors Critical Value						0.0816
872	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
873														
874	Assuming Normal Distribution						Assuming Lognormal Distribution							
875	DL/2 Substitution Method						DL/2 Substitution Method							
876	Mean						0.0003942	Mean						-8.282
877	SD						0.0004251	SD						0.996
878	95% DL/2 (t) UCL						0.0004567	95% H-Stat (DL/2) UCL						0.0004961
879														
880	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
881	MLE yields a negative mean						Mean in Log Scale						-8.297	
882							SD in Log Scale						0.995	
883							Mean in Original Scale						0.0003905	
884							SD in Original Scale						0.0004263	

	A	B	C	D	E	F	G	H	I	J	K	L	
885												95% Percentile Bootstrap UCL	0.0004566
886												95% BCA Bootstrap UCL	0.0004619
887													
888	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
889					k star (bias corrected)	1.231	Data appear Gamma Distributed at 5% Significance Level						
890					Theta Star	0.0003329							
891					nu star	290.5							
892													
893					A-D Test Statistic	0.55	Nonparametric Statistics						
894					5% A-D Critical Value	0.776	Kaplan-Meier (KM) Method						
895					K-S Test Statistic	0.776					Mean	0.000392	
896					5% K-S Critical Value	0.0869					SD	0.000425	
897	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	3.798E-05	
898											95% KM (t) UCL	0.0004549	
899	Assuming Gamma Distribution											95% KM (z) UCL	0.0004544
900	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.0004549
901					Minimum	1E-09						95% KM (bootstrap t) UCL	0.0004756
902					Maximum	0.00333						95% KM (BCA) UCL	0.00046
903					Mean	0.0003956						95% KM (Percentile Bootstrap) UCL	0.0004607
904					Median	0.0003079						95% KM (Chebyshev) UCL	0.0005575
905					SD	0.0004246						97.5% KM (Chebyshev) UCL	0.0006291
906					k star	1.073						99% KM (Chebyshev) UCL	0.0007698
907					Theta star	0.0003687							
908					Nu star	272.5	Potential UCLs to Use						
909					AppChi2	235.3						95% KM (Chebyshev) UCL	0.0005575
910					95% Gamma Approximate UCL	0.0004582							
911					95% Adjusted Gamma UCL	0.000459							
912	Note: DL/2 is not a recommended method.												
913													
914													
915	Lead												
916													
917	General Statistics												
918					Number of Valid Data	127						Number of Detected Data	118
919					Number of Distinct Detected Data	96						Number of Non-Detect Data	9
920					Number of Missing Values	27						Percent Non-Detects	7.09%
921													
922	Raw Statistics						Log-transformed Statistics						
923					Minimum Detected	0.0001						Minimum Detected	-9.21
924					Maximum Detected	0.0146						Maximum Detected	-4.226
925					Mean of Detected	0.00234						Mean of Detected	-6.387
926					SD of Detected	0.00217						SD of Detected	0.824
927					Minimum Non-Detect	0.0004065						Minimum Non-Detect	-7.808
928					Maximum Non-Detect	0.00762						Maximum Non-Detect	-4.877
929													
930	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	122
931	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	5
932	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	96.06%
933													
934	UCL Statistics												
935	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
936					Lilliefors Test Statistic	0.193						Lilliefors Test Statistic	0.0599

	A	B	C	D	E	F	G	H	I	J	K	L
937	5% Lilliefors Critical Value					0.0816	5% Lilliefors Critical Value					0.0816
938	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
939												
940	Assuming Normal Distribution					Assuming Lognormal Distribution						
941	DL/2 Substitution Method					DL/2 Substitution Method						
942	Mean					0.00226	Mean					-6.43
943	SD					0.00212	SD					0.841
944	95% DL/2 (t) UCL					0.00258	95% H-Stat (DL/2) UCL					0.00264
945												
946	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
947	MLE yields a negative mean					Mean in Log Scale					-6.433	
948						SD in Log Scale					0.823	
949						Mean in Original Scale					0.00224	
950						SD in Original Scale					0.00212	
951						95% Percentile Bootstrap UCL					0.00255	
952						95% BCA Bootstrap UCL					0.00262	
953												
954	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
955	k star (bias corrected)					1.63	Data appear Lognormal at 5% Significance Level					
956	Theta Star					0.00143						
957	nu star					384.7						
958												
959	A-D Test Statistic					1.101	Nonparametric Statistics					
960	5% A-D Critical Value					0.768	Kaplan-Meier (KM) Method					
961	K-S Test Statistic					0.768	Mean					0.00225
962	5% K-S Critical Value					0.0862	SD					0.00212
963	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.0001895	
964						95% KM (t) UCL					0.00256	
965	Assuming Gamma Distribution					95% KM (z) UCL					0.00256	
966	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.00256	
967	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00263
968	Maximum					0.0146	95% KM (BCA) UCL					0.00258
969	Mean					0.00227	95% KM (Percentile Bootstrap) UCL					0.00255
970	Median					0.00174	95% KM (Chebyshev) UCL					0.00308
971	SD					0.00212	97.5% KM (Chebyshev) UCL					0.00343
972	k star					1.056	99% KM (Chebyshev) UCL					0.00414
973	Theta star					0.00215						
974	Nu star					268.3	Potential UCLs to Use					
975	AppChi2					231.3	95% KM (BCA) UCL					0.00258
976	95% Gamma Approximate UCL					0.00263						
977	95% Adjusted Gamma UCL					0.00264						
978	Note: DL/2 is not a recommended method.											
979												
980												
981	Lithium											
982												
983	General Statistics											
984	Number of Valid Data					117	Number of Detected Data					117
985	Number of Distinct Detected Data					76	Number of Non-Detect Data					0
986	Number of Missing Values					29	Percent Non-Detects					0.00%
987												
988	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
989				Minimum Detected		0.000037				Minimum Detected		-10.2	
990				Maximum Detected		0.00221				Maximum Detected		-6.115	
991				Mean of Detected		0.0004049				Mean of Detected		-8.118	
992				SD of Detected		0.0003333				SD of Detected		0.819	
993				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
994				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
995													
996													
997				UCL Statistics									
998	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
999				Lilliefors Test Statistic		0.139				Lilliefors Test Statistic		0.112	
1000				5% Lilliefors Critical Value		0.0819				5% Lilliefors Critical Value		0.0819	
1001	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1002													
1003	Assuming Normal Distribution						Assuming Lognormal Distribution						
1004				DL/2 Substitution Method						DL/2 Substitution Method			
1005				Mean		0.0004049				Mean		-8.118	
1006				SD		0.0003333				SD		0.819	
1007				95% DL/2 (t) UCL		0.000456				95% H-Stat (DL/2) UCL		0.0004868	
1008													
1009				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1010	MLE method failed to converge properly										Mean in Log Scale		N/A
1011										SD in Log Scale		N/A	
1012										Mean in Original Scale		N/A	
1013										SD in Original Scale		N/A	
1014										95% Percentile Bootstrap UCL		N/A	
1015										95% BCA Bootstrap UCL		N/A	
1016													
1017	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1018				k star (bias corrected)		1.739				Data Follow Appr. Gamma Distribution at 5% Significance Level			
1019				Theta Star		0.0002328							
1020				nu star		407							
1021													
1022				A-D Test Statistic		0.861				Nonparametric Statistics			
1023				5% A-D Critical Value		0.767				Kaplan-Meier (KM) Method			
1024				K-S Test Statistic		0.767				Mean		0.0004049	
1025				5% K-S Critical Value		0.0864				SD		0.0003319	
1026	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean		3.082E-05
1027										95% KM (t) UCL		0.000456	
1028	Assuming Gamma Distribution										95% KM (z) UCL		0.0004556
1029	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.000456
1030				Minimum		0.000037				95% KM (bootstrap t) UCL		0.000466	
1031				Maximum		0.00221				95% KM (BCA) UCL		0.0004627	
1032				Mean		0.0004049				95% KM (Percentile Bootstrap) UCL		0.0004582	
1033				Median		0.000369				95% KM (Chebyshev) UCL		0.0005393	
1034				SD		0.0003333				97.5% KM (Chebyshev) UCL		0.0005974	
1035				k star		1.739				99% KM (Chebyshev) UCL		0.0007115	
1036				Theta star		0.0002328							
1037				Nu star		407				Potential UCLs to Use			
1038				AppChi2		361.3				95% KM (Chebyshev) UCL		0.0005393	
1039				95% Gamma Approximate UCL		0.0004562							
1040				95% Adjusted Gamma UCL		0.0004569							

	A	B	C	D	E	F	G	H	I	J	K	L	
1041	Note: DL/2 is not a recommended method.												
1042													
1043													
1044	Manganese												
1045													
1046	General Statistics												
1047	Number of Valid Data					128		Number of Detected Data					121
1048	Number of Distinct Detected Data					104		Number of Non-Detect Data					7
1049	Number of Missing Values					30		Percent Non-Detects					5.47%
1050													
1051	Raw Statistics						Log-transformed Statistics						
1052	Minimum Detected					0.00064		Minimum Detected					-7.354
1053	Maximum Detected					0.0397		Maximum Detected					-3.228
1054	Mean of Detected					0.0102		Mean of Detected					-4.959
1055	SD of Detected					0.0081		SD of Detected					0.958
1056	Minimum Non-Detect					0.000832		Minimum Non-Detect					-7.092
1057	Maximum Non-Detect					0.0153		Maximum Non-Detect					-4.183
1058													
1059	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					101	
1060	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					27	
1061	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					78.91%	
1062													
1063	UCL Statistics												
1064	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1065	Lilliefors Test Statistic					0.119		Lilliefors Test Statistic					0.104
1066	5% Lilliefors Critical Value					0.0805		5% Lilliefors Critical Value					0.0805
1067	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1068													
1069	Assuming Normal Distribution						Assuming Lognormal Distribution						
1070	DL/2 Substitution Method							DL/2 Substitution Method					
1071	Mean					0.00986		Mean					-5.006
1072	SD					0.00802		SD					0.976
1073	95% DL/2 (t) UCL					0.011		95% H-Stat (DL/2) UCL					0.0126
1074													
1075	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1076	Mean					0.00504		Mean in Log Scale					-5.008
1077	SD					0.0127		SD in Log Scale					0.964
1078	95% MLE (t) UCL					0.00691		Mean in Original Scale					0.00982
1079	95% MLE (Tiku) UCL					0.00933		SD in Original Scale					0.00803
1080							95% Percentile Bootstrap UCL					0.0111	
1081							95% BCA Bootstrap UCL					0.0112	
1082													
1083	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1084	k star (bias corrected)					1.452		Data appear Gamma Distributed at 5% Significance Level					
1085	Theta Star					0.00703							
1086	nu star					351.3							
1087													
1088	A-D Test Statistic					0.473		Nonparametric Statistics					
1089	5% A-D Critical Value					0.771		Kaplan-Meier (KM) Method					
1090	K-S Test Statistic					0.771		Mean					0.00984
1091	5% K-S Critical Value					0.0856		SD					0.00801
1092	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0007131	

	A	B	C	D	E	F	G	H	I	J	K	L	
1093											95% KM (t) UCL	0.011	
1094	Assuming Gamma Distribution										95% KM (z) UCL	0.011	
1095	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.011	
1096	Minimum					1E-09						95% KM (bootstrap t) UCL	0.0111
1097	Maximum					0.0397						95% KM (BCA) UCL	0.0111
1098	Mean					0.0099						95% KM (Percentile Bootstrap) UCL	0.0111
1099	Median					0.0083						95% KM (Chebyshev) UCL	0.013
1100	SD					0.008						97.5% KM (Chebyshev) UCL	0.0143
1101	k star					1.148						99% KM (Chebyshev) UCL	0.0169
1102	Theta star					0.00862							
1103	Nu star					293.8						Potential UCLs to Use	
1104	AppChi2					255.1						95% KM (Chebyshev) UCL	0.013
1105	95% Gamma Approximate UCL					0.0114							
1106	95% Adjusted Gamma UCL					0.0114							
1107	Note: DL/2 is not a recommended method.												
1108													
1109													
1110	Mercury												
1111													
1112	General Statistics												
1113	Number of Valid Data					22	Number of Detected Data					11	
1114	Number of Distinct Detected Data					11	Number of Non-Detect Data					11	
1115	Number of Missing Values					115	Percent Non-Detects					50.00%	
1116													
1117	Raw Statistics					Log-transformed Statistics							
1118	Minimum Detected					1.9	Minimum Detected					0.642	
1119	Maximum Detected					9.683	Maximum Detected					2.27	
1120	Mean of Detected					5.721	Mean of Detected					1.644	
1121	SD of Detected					2.451	SD of Detected					0.495	
1122	Minimum Non-Detect					0.0022	Minimum Non-Detect					-6.119	
1123	Maximum Non-Detect					0.00221	Maximum Non-Detect					-6.115	
1124													
1125	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					11		
1126	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					11		
1127	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					50.00%		
1128													
1129	UCL Statistics												
1130	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1131	Shapiro Wilk Test Statistic					0.904	Shapiro Wilk Test Statistic					0.88	
1132	5% Shapiro Wilk Critical Value					0.85	5% Shapiro Wilk Critical Value					0.85	
1133	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1134													
1135	Assuming Normal Distribution					Assuming Lognormal Distribution							
1136	DL/2 Substitution Method					DL/2 Substitution Method							
1137	Mean					2.861	Mean					-2.584	
1138	SD					3.381	SD					4.341	
1139	95% DL/2 (t) UCL					4.102	95% H-Stat (DL/2) UCL					252794	
1140													
1141	Maximum Likelihood Estimate(MLE) Method					Log ROS Method							
1142	Mean					0.624	Mean in Log Scale					0.999	
1143	SD					5.883	SD in Log Scale					0.791	
1144	95% MLE (t) UCL					2.783	Mean in Original Scale					3.62	

	A	B	C	D	E	F	G	H	I	J	K	L
1145	95% MLE (Tiku) UCL					3.279	SD in Original Scale					2.761
1146							95% Percentile Bootstrap UCL					4.645
1147							95% BCA Bootstrap UCL					4.662
1148												
1149	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1150	k star (bias corrected)					3.806	Data appear Normal at 5% Significance Level					
1151	Theta Star					1.503						
1152	nu star					83.74						
1153												
1154	A-D Test Statistic					0.692	Nonparametric Statistics					
1155	5% A-D Critical Value					0.731	Kaplan-Meier (KM) Method					
1156	K-S Test Statistic					0.731	Mean					3.811
1157	5% K-S Critical Value					0.256	SD					2.526
1158	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.565
1159							95% KM (t) UCL					4.783
1160	Assuming Gamma Distribution						95% KM (z) UCL					4.74
1161	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					4.838
1162	Minimum					1.9	95% KM (bootstrap t) UCL					4.848
1163	Maximum					9.683	95% KM (BCA) UCL					5.693
1164	Mean					5.721	95% KM (Percentile Bootstrap) UCL					5.315
1165	Median					6.15	95% KM (Chebyshev) UCL					6.273
1166	SD					2.05	97.5% KM (Chebyshev) UCL					7.338
1167	k star					6.007	99% KM (Chebyshev) UCL					9.431
1168	Theta star					0.952						
1169	Nu star					264.3	Potential UCLs to Use					
1170	AppChi2					227.7	95% KM (t) UCL					4.783
1171	95% Gamma Approximate UCL					6.642	95% KM (Percentile Bootstrap) UCL					5.315
1172	95% Adjusted Gamma UCL					6.717						
1173	Note: DL/2 is not a recommended method.											
1174												
1175												
1176	Molybdenum											
1177												
1178	General Statistics											
1179	Number of Valid Data					71	Number of Detected Data					63
1180	Number of Distinct Detected Data					59	Number of Non-Detect Data					8
1181	Number of Missing Values					85	Percent Non-Detects					11.27%
1182												
1183	Raw Statistics						Log-transformed Statistics					
1184	Minimum Detected					7.671E-05	Minimum Detected					-9.475
1185	Maximum Detected					0.132	Maximum Detected					-2.028
1186	Mean of Detected					0.00601	Mean of Detected					-6.235
1187	SD of Detected					0.0188	SD of Detected					1.276
1188	Minimum Non-Detect					1.536E-05	Minimum Non-Detect					-11.08
1189	Maximum Non-Detect					0.00105	Maximum Non-Detect					-6.862
1190												
1191	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					26
1192	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					45
1193	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					36.62%
1194												
1195	UCL Statistics											
1196	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
1197	Lilliefors Test Statistic					0.4	Lilliefors Test Statistic					0.116
1198	5% Lilliefors Critical Value					0.112	5% Lilliefors Critical Value					0.112
1199	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1200												
1201	Assuming Normal Distribution						Assuming Lognormal Distribution					
1202	DL/2 Substitution Method						DL/2 Substitution Method					
1203	Mean					0.00534	Mean					-6.733
1204	SD					0.0178	SD					1.9
1205	95% DL/2 (t) UCL					0.00886	95% H-Stat (DL/2) UCL					0.0102
1206												
1207	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1208	MLE yields a negative mean						Mean in Log Scale					-6.53
1209							SD in Log Scale					1.467
1210							Mean in Original Scale					0.00535
1211							SD in Original Scale					0.0178
1212							95% Percentile Bootstrap UCL					0.00927
1213							95% BCA Bootstrap UCL					0.0112
1214												
1215	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1216	k star (bias corrected)					0.541	Data do not follow a Discernable Distribution (0.05)					
1217	Theta Star					0.0111						
1218	nu star					68.22						
1219												
1220	A-D Test Statistic					5.347	Nonparametric Statistics					
1221	5% A-D Critical Value					0.811	Kaplan-Meier (KM) Method					
1222	K-S Test Statistic					0.811	Mean					0.00535
1223	5% K-S Critical Value					0.118	SD					0.0176
1224	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00211
1225							95% KM (t) UCL					0.00887
1226	Assuming Gamma Distribution						95% KM (z) UCL					0.00882
1227	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00886
1228	Minimum					1E-09	95% KM (bootstrap t) UCL					0.0251
1229	Maximum					0.132	95% KM (BCA) UCL					0.00911
1230	Mean					0.00533	95% KM (Percentile Bootstrap) UCL					0.00902
1231	Median					0.00166	95% KM (Chebyshev) UCL					0.0145
1232	SD					0.0178	97.5% KM (Chebyshev) UCL					0.0185
1233	k star					0.265	99% KM (Chebyshev) UCL					0.0263
1234	Theta star					0.0201						
1235	Nu star					37.63	Potential UCLs to Use					
1236	AppChi2					24.58	95% KM (Chebyshev) UCL					0.0145
1237	95% Gamma Approximate UCL					0.00817						
1238	95% Adjusted Gamma UCL					0.00824						
1239	Note: DL/2 is not a recommended method.											
1240												
1241												
1242	Nickel											
1243												
1244	General Statistics											
1245	Number of Valid Data					114	Number of Detected Data					114
1246	Number of Distinct Detected Data					98	Number of Non-Detect Data					0
1247	Number of Missing Values					44	Percent Non-Detects					0.00%
1248												

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Raw Statistics						Log-transformed Statistics					
1250	Minimum Detected				0.00003		Minimum Detected				-10.41	
1251	Maximum Detected				0.0107		Maximum Detected				-4.539	
1252	Mean of Detected				0.0008191		Mean of Detected				-7.613	
1253	SD of Detected				0.00122		SD of Detected				0.991	
1254	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1255	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1256												
1257												
1258	UCL Statistics											
1259	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1260	Lilliefors Test Statistic				0.259		Lilliefors Test Statistic				0.0756	
1261	5% Lilliefors Critical Value				0.083		5% Lilliefors Critical Value				0.083	
1262	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1263												
1264	Assuming Normal Distribution						Assuming Lognormal Distribution					
1265	DL/2 Substitution Method						DL/2 Substitution Method					
1266	Mean				0.0008191		Mean				-7.613	
1267	SD				0.00122		SD				0.991	
1268	95% DL/2 (t) UCL				0.00101		95% H-Stat (DL/2) UCL				0.0009897	
1269												
1270	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1271	MLE method failed to converge properly						Mean in Log Scale				N/A	
1272							SD in Log Scale				N/A	
1273							Mean in Original Scale				N/A	
1274							SD in Original Scale				N/A	
1275							95% Percentile Bootstrap UCL				N/A	
1276							95% BCA Bootstrap UCL				N/A	
1277												
1278	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1279	k star (bias corrected)				1.103		Data appear Lognormal at 5% Significance Level					
1280	Theta Star				0.0007427							
1281	nu star				251.5							
1282												
1283	A-D Test Statistic				1.601		Nonparametric Statistics					
1284	5% A-D Critical Value				0.78		Kaplan-Meier (KM) Method					
1285	K-S Test Statistic				0.78		Mean				0.0008191	
1286	5% K-S Critical Value				0.0882		SD				0.00122	
1287	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.0001144	
1288							95% KM (t) UCL				0.00101	
1289	Assuming Gamma Distribution						95% KM (z) UCL				0.00101	
1290	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.00101	
1291	Minimum				0.00003		95% KM (bootstrap t) UCL				0.00115	
1292	Maximum				0.0107		95% KM (BCA) UCL				0.00102	
1293	Mean				0.0008191		95% KM (Percentile Bootstrap) UCL				0.00102	
1294	Median				0.0005321		95% KM (Chebyshev) UCL				0.00132	
1295	SD				0.00122		97.5% KM (Chebyshev) UCL				0.00153	
1296	k star				1.103		99% KM (Chebyshev) UCL				0.00196	
1297	Theta star				0.0007427							
1298	Nu star				251.5		Potential UCLs to Use					
1299	AppChi2				215.7		95% KM (BCA) UCL				0.00102	
1300	95% Gamma Approximate UCL				0.0009547							

	A	B	C	D	E	F	G	H	I	J	K	L
1301	95% Adjusted Gamma UCL					0.0009566						
1302	Note: DL/2 is not a recommended method.											
1303												
1304												
1305	Niobium											
1306												
1307	General Statistics											
1308	Number of Valid Data					109	Number of Detected Data					109
1309	Number of Distinct Detected Data					86	Number of Non-Detect Data					0
1310	Number of Missing Values					45	Percent Non-Detects					0.00%
1311												
1312	Raw Statistics						Log-transformed Statistics					
1313	Minimum Detected					0.00001	Minimum Detected					-11.51
1314	Maximum Detected					0.00504	Maximum Detected					-5.29
1315	Mean of Detected					0.0004831	Mean of Detected					-8.309
1316	SD of Detected					0.0007733	SD of Detected					1.188
1317	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1318	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1319												
1320												
1321	UCL Statistics											
1322	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1323	Lilliefors Test Statistic					0.287	Lilliefors Test Statistic					0.077
1324	5% Lilliefors Critical Value					0.0849	5% Lilliefors Critical Value					0.0849
1325	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1326												
1327	Assuming Normal Distribution						Assuming Lognormal Distribution					
1328	DL/2 Substitution Method						DL/2 Substitution Method					
1329	Mean					0.0004831	Mean					-8.309
1330	SD					0.0007733	SD					1.188
1331	95% DL/2 (t) UCL					0.000606	95% H-Stat (DL/2) UCL					0.0006545
1332												
1333	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1334	MLE method failed to converge properly						Mean in Log Scale					N/A
1335							SD in Log Scale					N/A
1336							Mean in Original Scale					N/A
1337							SD in Original Scale					N/A
1338							95% Percentile Bootstrap UCL					N/A
1339							95% BCA Bootstrap UCL					N/A
1340												
1341	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1342	k star (bias corrected)					0.853	Data appear Lognormal at 5% Significance Level					
1343	Theta Star					0.0005665						
1344	nu star					185.9						
1345												
1346	A-D Test Statistic					3.261	Nonparametric Statistics					
1347	5% A-D Critical Value					0.789	Kaplan-Meier (KM) Method					
1348	K-S Test Statistic					0.789	Mean					0.0004831
1349	5% K-S Critical Value					0.0902	SD					0.0007698
1350	Data not Gamma Distributed at 5% Significance Level						SE of Mean					7.407E-05
1351							95% KM (t) UCL					0.000606
1352	Assuming Gamma Distribution						95% KM (z) UCL					0.000605

	A	B	C	D	E	F	G	H	I	J	K	L	
1353	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.000606	
1354					Minimum	0.00001		95% KM (bootstrap t) UCL					0.0006503
1355					Maximum	0.00504		95% KM (BCA) UCL					0.0006222
1356					Mean	0.0004831		95% KM (Percentile Bootstrap) UCL					0.0006181
1357					Median	0.0002762		95% KM (Chebyshev) UCL					0.000806
1358					SD	0.0007733		97.5% KM (Chebyshev) UCL					0.0009457
1359					k star	0.853		99% KM (Chebyshev) UCL					0.00122
1360					Theta star	0.0005665							
1361					Nu star	185.9		Potential UCLs to Use					
1362					AppChi2	155.4		95% KM (Chebyshev) UCL					0.000806
1363					95% Gamma Approximate UCL	0.0005781							
1364					95% Adjusted Gamma UCL	0.0005795							
1365	Note: DL/2 is not a recommended method.												
1366													
1367													
1368	Phosphorous (white)												
1369													
1370	General Statistics												
1371					Number of Valid Data	94					Number of Detected Data	90	
1372					Number of Distinct Detected Data	86					Number of Non-Detect Data	4	
1373					Number of Missing Values	63					Percent Non-Detects	4.26%	
1374													
1375	Raw Statistics						Log-transformed Statistics						
1376					Minimum Detected	0.00461					Minimum Detected	-5.379	
1377					Maximum Detected	4.131					Maximum Detected	1.419	
1378					Mean of Detected	0.205					Mean of Detected	-2.635	
1379					SD of Detected	0.483					SD of Detected	1.397	
1380					Minimum Non-Detect	0.00178					Minimum Non-Detect	-6.33	
1381					Maximum Non-Detect	0.0677					Maximum Non-Detect	-2.692	
1382													
1383	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						46
1384	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						48
1385	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						48.94%
1386													
1387	UCL Statistics												
1388	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1389					Lilliefors Test Statistic	0.339					Lilliefors Test Statistic	0.079	
1390					5% Lilliefors Critical Value	0.0934					5% Lilliefors Critical Value	0.0934	
1391	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1392													
1393	Assuming Normal Distribution						Assuming Lognormal Distribution						
1394					DL/2 Substitution Method						DL/2 Substitution Method		
1395					Mean	0.197					Mean	-2.758	
1396					SD	0.474					SD	1.514	
1397					95% DL/2 (t) UCL	0.278					95% H-Stat (DL/2) UCL	0.261	
1398													
1399					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1400	MLE yields a negative mean						Mean in Log Scale						-2.753
1401							SD in Log Scale						1.491
1402							Mean in Original Scale						0.197
1403							SD in Original Scale						0.474
1404							95% Percentile Bootstrap UCL						0.289

	A	B	C	D	E	F	G	H	I	J	K	L
1405										95% BCA Bootstrap UCL		0.324
1406												
1407	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1408					k star (bias corrected)	0.577	Data appear Lognormal at 5% Significance Level					
1409					Theta Star	0.355						
1410					nu star	103.9						
1411												
1412					A-D Test Statistic	3.627	Nonparametric Statistics					
1413					5% A-D Critical Value	0.81	Kaplan-Meier (KM) Method					
1414					K-S Test Statistic	0.81	Mean					0.197
1415					5% K-S Critical Value	0.099	SD					0.471
1416	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0489
1417							95% KM (t) UCL					0.278
1418	Assuming Gamma Distribution						95% KM (z) UCL					0.277
1419	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.278
1420					Minimum	1E-09	95% KM (bootstrap t) UCL					0.366
1421					Maximum	4.131	95% KM (BCA) UCL					0.29
1422					Mean	0.196	95% KM (Percentile Bootstrap) UCL					0.282
1423					Median	0.0767	95% KM (Chebyshev) UCL					0.41
1424					SD	0.474	97.5% KM (Chebyshev) UCL					0.502
1425					k star	0.369	99% KM (Chebyshev) UCL					0.683
1426					Theta star	0.532						
1427					Nu star	69.46	Potential UCLs to Use					
1428					AppChi2	51.27	95% KM (Chebyshev) UCL					0.41
1429					95% Gamma Approximate UCL	0.266						
1430					95% Adjusted Gamma UCL	0.267						
1431	Note: DL/2 is not a recommended method.											
1432												
1433												
1434	Rubidium											
1435												
1436	General Statistics											
1437					Number of Valid Data	126					Number of Detected Data	120
1438					Number of Distinct Detected Data	87					Number of Non-Detect Data	6
1439					Number of Missing Values	32					Percent Non-Detects	4.76%
1440												
1441	Raw Statistics						Log-transformed Statistics					
1442					Minimum Detected	0.000061					Minimum Detected	-9.705
1443					Maximum Detected	0.00744					Maximum Detected	-4.901
1444					Mean of Detected	0.00119					Mean of Detected	-7.189
1445					SD of Detected	0.00118					SD of Detected	1.034
1446					Minimum Non-Detect	6.145E-05					Minimum Non-Detect	-9.697
1447					Maximum Non-Detect	0.0024					Maximum Non-Detect	-6.031
1448												
1449	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					116
1450	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					10
1451	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					92.06%
1452												
1453	UCL Statistics											
1454	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1455					Lilliefors Test Statistic	0.171					Lilliefors Test Statistic	0.109
1456					5% Lilliefors Critical Value	0.0809					5% Lilliefors Critical Value	0.0809

	A	B	C	D	E	F	G	H	I	J	K	L
1457	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1458												
1459	Assuming Normal Distribution						Assuming Lognormal Distribution					
1460	DL/2 Substitution Method						DL/2 Substitution Method					
1461				Mean	0.00116					Mean	-7.225	
1462				SD	0.00117					SD	1.055	
1463				95% DL/2 (t) UCL	0.00133					95% H-Stat (DL/2) UCL	0.00169	
1464												
1465	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1466				Mean	0.00478					Mean in Log Scale	-7.233	
1467				SD	0.00149					SD in Log Scale	1.043	
1468				95% MLE (t) UCL	0.005					Mean in Original Scale	0.00115	
1469				95% MLE (Tiku) UCL	0.00554					SD in Original Scale	0.00117	
1470							95% Percentile Bootstrap UCL					
1471							95% BCA Bootstrap UCL					
1472												
1473	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1474				k star (bias corrected)	1.218		Data appear Gamma Distributed at 5% Significance Level					
1475				Theta Star	0.0009748							
1476				nu star	292.4							
1477												
1478				A-D Test Statistic	0.641		Nonparametric Statistics					
1479				5% A-D Critical Value	0.777					Kaplan-Meier (KM) Method		
1480				K-S Test Statistic	0.777					Mean	0.00115	
1481				5% K-S Critical Value	0.0863					SD	0.00116	
1482	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
1483							95% KM (t) UCL					
1484	Assuming Gamma Distribution						95% KM (z) UCL					
1485	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
1486				Minimum	1E-09					95% KM (bootstrap t) UCL	0.00136	
1487				Maximum	0.00744					95% KM (BCA) UCL	0.00133	
1488				Mean	0.00116					95% KM (Percentile Bootstrap) UCL	0.00133	
1489				Median	0.0009169					95% KM (Chebyshev) UCL	0.00161	
1490				SD	0.00117					97.5% KM (Chebyshev) UCL	0.00181	
1491				k star	1.032					99% KM (Chebyshev) UCL	0.00219	
1492				Theta star	0.00112							
1493				Nu star	260		Potential UCLs to Use					
1494				AppChi2	223.7					95% KM (Chebyshev) UCL	0.00161	
1495				95% Gamma Approximate UCL	0.00135							
1496				95% Adjusted Gamma UCL	0.00135							
1497	Note: DL/2 is not a recommended method.											
1498												
1499												
1500	Scandium											
1501												
1502	General Statistics											
1503				Number of Valid Data	116					Number of Detected Data	111	
1504				Number of Distinct Detected Data	60					Number of Non-Detect Data	5	
1505				Number of Missing Values	42					Percent Non-Detects	4.31%	
1506												
1507	Raw Statistics						Log-transformed Statistics					
1508				Minimum Detected	0.000004					Minimum Detected	-12.43	

	A	B	C	D	E	F	G	H	I	J	K	L	
1509				Maximum Detected		0.0006732				Maximum Detected		-7.303	
1510				Mean of Detected		0.0001761				Mean of Detected		-8.98	
1511				SD of Detected		0.0001362				SD of Detected		0.928	
1512				Minimum Non-Detect		3.074E-05				Minimum Non-Detect		-10.39	
1513				Maximum Non-Detect		0.0004272				Maximum Non-Detect		-7.758	
1514													
1515	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				110	
1516	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				6	
1517	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				94.83%	
1518													
1519	UCL Statistics												
1520	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1521				Lilliefors Test Statistic		0.144				Lilliefors Test Statistic		0.155	
1522				5% Lilliefors Critical Value		0.0841				5% Lilliefors Critical Value		0.0841	
1523	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1524													
1525	Assuming Normal Distribution						Assuming Lognormal Distribution						
1526				DL/2 Substitution Method						DL/2 Substitution Method			
1527				Mean		0.0001718				Mean		-9.02	
1528				SD		0.0001357				SD		0.948	
1529				95% DL/2 (t) UCL		0.0001927				95% H-Stat (DL/2) UCL		0.0002263	
1530													
1531				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1532	MLE yields a negative mean										Mean in Log Scale		-9.017
1533										SD in Log Scale		0.931	
1534										Mean in Original Scale		0.0001711	
1535										SD in Original Scale		0.0001355	
1536										95% Percentile Bootstrap UCL		0.0001927	
1537										95% BCA Bootstrap UCL		0.0001936	
1538													
1539	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1540				k star (bias corrected)		1.601	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1541				Theta Star		0.00011							
1542				nu star		355.4							
1543													
1544				A-D Test Statistic		0.545	Nonparametric Statistics						
1545				5% A-D Critical Value		0.769	Kaplan-Meier (KM) Method						
1546				K-S Test Statistic		0.769				Mean		0.0001715	
1547				5% K-S Critical Value		0.0881				SD		0.0001352	
1548	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean		1.265E-05
1549											95% KM (t) UCL		0.0001925
1550	Assuming Gamma Distribution										95% KM (z) UCL		0.0001923
1551	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.0001925
1552				Minimum		1E-09				95% KM (bootstrap t) UCL		0.0001957	
1553				Maximum		0.0006732				95% KM (BCA) UCL		0.000193	
1554				Mean		0.0001717				95% KM (Percentile Bootstrap) UCL		0.0001939	
1555				Median		0.00014				95% KM (Chebyshev) UCL		0.0002266	
1556				SD		0.0001356				97.5% KM (Chebyshev) UCL		0.0002505	
1557				k star		1.27				99% KM (Chebyshev) UCL		0.0002974	
1558				Theta star		0.0001353							
1559				Nu star		294.6	Potential UCLs to Use						
1560				AppChi2		255.8				95% KM (Chebyshev) UCL		0.0002266	

	A	B	C	D	E	F	G	H	I	J	K	L
1561	95% Gamma Approximate UCL					0.0001978						
1562	95% Adjusted Gamma UCL					0.0001981						
1563	Note: DL/2 is not a recommended method.											
1564												
1565												
1566	Silver											
1567												
1568	General Statistics											
1569	Number of Valid Data				108		Number of Detected Data				98	
1570	Number of Distinct Detected Data				43		Number of Non-Detect Data				10	
1571	Number of Missing Values				50		Percent Non-Detects				9.26%	
1572												
1573	Raw Statistics						Log-transformed Statistics					
1574	Minimum Detected				0.000004		Minimum Detected				-12.43	
1575	Maximum Detected				0.000971		Maximum Detected				-6.937	
1576	Mean of Detected				5.501E-05		Mean of Detected				-10.42	
1577	SD of Detected				0.0001089		SD of Detected				0.985	
1578	Minimum Non-Detect				8.21E-06		Minimum Non-Detect				-11.71	
1579	Maximum Non-Detect				0.00453		Maximum Non-Detect				-5.397	
1580												
1581	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				108	
1582	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
1583	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
1584												
1585	UCL Statistics											
1586	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1587	Lilliefors Test Statistic				0.32		Lilliefors Test Statistic				0.111	
1588	5% Lilliefors Critical Value				0.0895		5% Lilliefors Critical Value				0.0895	
1589	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1590												
1591	Assuming Normal Distribution						Assuming Lognormal Distribution					
1592	DL/2 Substitution Method						DL/2 Substitution Method					
1593	Mean				0.0001018		Mean				-10.34	
1594	SD				0.0002937		SD				1.231	
1595	95% DL/2 (t) UCL				0.0001486		95% H-Stat (DL/2) UCL				9.502E-05	
1596												
1597	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1598	MLE method failed to converge properly						Mean in Log Scale				-10.48	
1599							SD in Log Scale				0.979	
1600							Mean in Original Scale				5.161E-05	
1601							SD in Original Scale				0.0001043	
1602							95% Percentile Bootstrap UCL				6.931E-05	
1603							95% BCA Bootstrap UCL				8.11E-05	
1604												
1605	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1606	k star (bias corrected)				0.926		Data do not follow a Discernable Distribution (0.05)					
1607	Theta Star				0.0000594							
1608	nu star				181.5							
1609												
1610	A-D Test Statistic				4.196		Nonparametric Statistics					
1611	5% A-D Critical Value				0.785		Kaplan-Meier (KM) Method					
1612	K-S Test Statistic				0.785		Mean				5.261E-05	

	A	B	C	D	E	F	G	H	I	J	K	L
1613	5% K-S Critical Value					0.0933	SD					0.0001057
1614	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.042E-05	
1615						95% KM (t) UCL					6.99E-05	
1616	Assuming Gamma Distribution					95% KM (z) UCL					6.975E-05	
1617	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					6.99E-05	
1618	Minimum					1E-09	95% KM (bootstrap t) UCL					9.055E-05
1619	Maximum					0.000971	95% KM (BCA) UCL					7.171E-05
1620	Mean					5.293E-05	95% KM (Percentile Bootstrap) UCL					7.173E-05
1621	Median					0.00003	95% KM (Chebyshev) UCL					9.803E-05
1622	SD					0.0001042	97.5% KM (Chebyshev) UCL					0.0001177
1623	k star					0.84	99% KM (Chebyshev) UCL					0.0001563
1624	Theta star					6.299E-05						
1625	Nu star					181.5	Potential UCLs to Use					
1626	AppChi2					151.3	95% KM (BCA) UCL					7.171E-05
1627	95% Gamma Approximate UCL					6.348E-05						
1628	95% Adjusted Gamma UCL					6.364E-05						
1629	Note: DL/2 is not a recommended method.											
1630												
1631												
1632	Strontium, stable											
1633												
1634	General Statistics											
1635	Number of Valid Data					125	Number of Detected Data					124
1636	Number of Distinct Detected Data					99	Number of Non-Detect Data					1
1637	Number of Missing Values					33	Percent Non-Detects					0.80%
1638												
1639	Raw Statistics					Log-transformed Statistics						
1640	Minimum Detected					0.00008	Minimum Detected					-9.433
1641	Maximum Detected					0.0206	Maximum Detected					-3.885
1642	Mean of Detected					0.00304	Mean of Detected					-6.242
1643	SD of Detected					0.0032	SD of Detected					1.015
1644	Minimum Non-Detect					0.0064	Minimum Non-Detect					-5.052
1645	Maximum Non-Detect					0.0064	Maximum Non-Detect					-5.052
1646												
1647												
1648	UCL Statistics											
1649	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1650	Lilliefors Test Statistic					0.177	Lilliefors Test Statistic					0.0901
1651	5% Lilliefors Critical Value					0.0796	5% Lilliefors Critical Value					0.0796
1652	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1653												
1654	Assuming Normal Distribution					Assuming Lognormal Distribution						
1655	DL/2 Substitution Method					DL/2 Substitution Method						
1656	Mean					0.00305	Mean					-6.238
1657	SD					0.00319	SD					1.011
1658	95% DL/2 (t) UCL					0.00352	95% H-Stat (DL/2) UCL					0.00397
1659												
1660	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
1661	Mean					0.0126	Mean in Log Scale					-6.243
1662	SD					0.0042	SD in Log Scale					1.011
1663	95% MLE (t) UCL					0.0132	Mean in Original Scale					0.00303
1664	95% MLE (Tiku) UCL					0.0146	SD in Original Scale					0.00319

	A	B	C	D	E	F	G	H	I	J	K	L
1665											95% Percentile Bootstrap UCL	0.0035
1666											95% BCA Bootstrap UCL	0.00358
1667												
1668	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1669					k star (bias corrected)	1.232	Data appear Gamma Distributed at 5% Significance Level					
1670					Theta Star	0.00247						
1671					nu star	305.5						
1672												
1673					A-D Test Statistic	0.658	Nonparametric Statistics					
1674					5% A-D Critical Value	0.776	Kaplan-Meier (KM) Method					
1675					K-S Test Statistic	0.776	Mean					
1676					5% K-S Critical Value	0.0853	SD					
1677	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
1678							95% KM (t) UCL					
1679	Assuming Gamma Distribution						95% KM (z) UCL					
1680	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
1681					Minimum	0.00008	95% KM (bootstrap t) UCL					
1682					Maximum	0.0206	95% KM (BCA) UCL					
1683					Mean	0.00304	95% KM (Percentile Bootstrap) UCL					
1684					Median	0.00231	95% KM (Chebyshev) UCL					
1685					SD	0.00319	97.5% KM (Chebyshev) UCL					
1686					k star	1.241	99% KM (Chebyshev) UCL					
1687					Theta star	0.00245						
1688					Nu star	310.2	Potential UCLs to Use					
1689					AppChi2	270.4	95% KM (Chebyshev) UCL					
1690					95% Gamma Approximate UCL	0.00349						
1691					95% Adjusted Gamma UCL	0.0035						
1692	Note: DL/2 is not a recommended method.											
1693												
1694												
1695	Thallium											
1696												
1697	General Statistics											
1698					Number of Valid Data	106					Number of Detected Data	105
1699					Number of Distinct Detected Data	31					Number of Non-Detect Data	1
1700					Number of Missing Values	40					Percent Non-Detects	0.94%
1701												
1702	Raw Statistics						Log-transformed Statistics					
1703					Minimum Detected	0.000005					Minimum Detected	-12.21
1704					Maximum Detected	0.00012					Maximum Detected	-9.028
1705					Mean of Detected	2.266E-05					Mean of Detected	-11.01
1706					SD of Detected	2.312E-05					SD of Detected	0.728
1707					Minimum Non-Detect	1.536E-05					Minimum Non-Detect	-11.08
1708					Maximum Non-Detect	1.536E-05					Maximum Non-Detect	-11.08
1709												
1710												
1711	UCL Statistics											
1712	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1713					Lilliefors Test Statistic	0.241					Lilliefors Test Statistic	0.222
1714					5% Lilliefors Critical Value	0.0865					5% Lilliefors Critical Value	0.0865
1715	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1716												

	A	B	C	D	E	F	G	H	I	J	K	L
1717	Assuming Normal Distribution						Assuming Lognormal Distribution					
1718	DL/2 Substitution Method						DL/2 Substitution Method					
1719	Mean						Mean					
1720	SD						SD					
1721	95% DL/2 (t) UCL						95% H-Stat (DL/2) UCL					
1722												
1723	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1724	Mean						Mean in Log Scale					
1725	SD						SD in Log Scale					
1726	95% MLE (t) UCL						Mean in Original Scale					
1727	95% MLE (Tiku) UCL						SD in Original Scale					
1728							95% Percentile Bootstrap UCL					
1729							95% BCA Bootstrap UCL					
1730												
1731	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1732	k star (bias corrected)						1.69					
1733	Theta Star						1.341E-05					
1734	nu star						354.8					
1735												
1736	A-D Test Statistic						6.419					
1737	5% A-D Critical Value						0.768					
1738	K-S Test Statistic						0.768					
1739	5% K-S Critical Value						0.0896					
1740	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
1741							95% KM (t) UCL					
1742	Assuming Gamma Distribution						95% KM (z) UCL					
1743	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
1744	Minimum						0.000005					
1745	Maximum						0.00012					
1746	Mean						2.257E-05					
1747	Median						0.000012					
1748	SD						2.303E-05					
1749	k star						1.698					
1750	Theta star						1.329E-05					
1751	Nu star						360					
1752	AppChi2						317					
1753	95% Gamma Approximate UCL						2.563E-05					
1754	95% Adjusted Gamma UCL						2.567E-05					
1755	Note: DL/2 is not a recommended method.											
1756												
1757												
1758	Thorium											
1759												
1760	General Statistics											
1761	Number of Valid Data						101					
1762	Number of Distinct Detected Data						56					
1763	Number of Missing Values						43					
1764												
1765	Raw Statistics						Log-transformed Statistics					
1766	Minimum Detected						0.000006					
1767	Maximum Detected						0.00148					
1768	Mean of Detected						0.0001529					

	A	B	C	D	E	F	G	H	I	J	K	L
1769	SD of Detected					0.0001845	SD of Detected					0.871
1770	Minimum Non-Detect					1.642E-05	Minimum Non-Detect					-11.02
1771	Maximum Non-Detect					0.0003926	Maximum Non-Detect					-7.843
1772												
1773	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				98	
1774	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				3	
1775	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				97.03%	
1776												
1777	UCL Statistics											
1778	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1779	Lilliefors Test Statistic					0.217	Lilliefors Test Statistic					0.0958
1780	5% Lilliefors Critical Value					0.0924	5% Lilliefors Critical Value					0.0924
1781	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1782												
1783	Assuming Normal Distribution						Assuming Lognormal Distribution					
1784	DL/2 Substitution Method						DL/2 Substitution Method					
1785	Mean					0.0001448	Mean					-9.232
1786	SD					0.0001785	SD					0.897
1787	95% DL/2 (t) UCL					0.0001743	95% H-Stat (DL/2) UCL					0.0001866
1788												
1789	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1790	MLE yields a negative mean						Mean in Log Scale				-9.232	
1791							SD in Log Scale				0.876	
1792							Mean in Original Scale				0.0001438	
1793							SD in Original Scale				0.0001785	
1794							95% Percentile Bootstrap UCL				0.0001746	
1795							95% BCA Bootstrap UCL				0.0001886	
1796												
1797	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1798	k star (bias corrected)					1.446	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1799	Theta Star					0.0001057						
1800	nu star					266.1						
1801												
1802	A-D Test Statistic					1.21	Nonparametric Statistics					
1803	5% A-D Critical Value					0.771	Kaplan-Meier (KM) Method					
1804	K-S Test Statistic					0.771	Mean				0.0001442	
1805	5% K-S Critical Value					0.095	SD				0.0001778	
1806	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean				1.782E-05	
1807							95% KM (t) UCL				0.0001738	
1808	Assuming Gamma Distribution						95% KM (z) UCL				0.0001736	
1809	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0001738	
1810	Minimum					1E-09	95% KM (bootstrap t) UCL				0.000196	
1811	Maximum					0.00148	95% KM (BCA) UCL				0.0001778	
1812	Mean					0.0001451	95% KM (Percentile Bootstrap) UCL				0.0001744	
1813	Median					0.00011	95% KM (Chebyshev) UCL				0.0002219	
1814	SD					0.0001784	97.5% KM (Chebyshev) UCL				0.0002555	
1815	k star					1.13	99% KM (Chebyshev) UCL				0.0003216	
1816	Theta star					0.0001285						
1817	Nu star					228.2	Potential UCLs to Use					
1818	AppChi2					194.2	95% KM (Chebyshev) UCL				0.0002219	
1819	95% Gamma Approximate UCL					0.0001705						
1820	95% Adjusted Gamma UCL					0.0001709						

	A	B	C	D	E	F	G	H	I	J	K	L	
1821	Note: DL/2 is not a recommended method.												
1822													
1823													
1824	Titanium												
1825													
1826	General Statistics												
1827	Number of Valid Data					115		Number of Detected Data					112
1828	Number of Distinct Detected Data					105		Number of Non-Detect Data					3
1829	Number of Missing Values					41		Percent Non-Detects					2.61%
1830													
1831	Raw Statistics						Log-transformed Statistics						
1832	Minimum Detected					0.00331		Minimum Detected					-5.71
1833	Maximum Detected					0.162		Maximum Detected					-1.82
1834	Mean of Detected					0.0451		Mean of Detected					-3.491
1835	SD of Detected					0.0371		SD of Detected					0.969
1836	Minimum Non-Detect					0.0143		Minimum Non-Detect					-4.248
1837	Maximum Non-Detect					0.0424		Maximum Non-Detect					-3.161
1838													
1839	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					65	
1840	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					50	
1841	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					56.52%	
1842													
1843	UCL Statistics												
1844	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1845	Lilliefors Test Statistic					0.13		Lilliefors Test Statistic					0.0949
1846	5% Lilliefors Critical Value					0.0837		5% Lilliefors Critical Value					0.0837
1847	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1848													
1849	Assuming Normal Distribution						Assuming Lognormal Distribution						
1850	DL/2 Substitution Method							DL/2 Substitution Method					
1851	Mean					0.0442		Mean					-3.52
1852	SD					0.037		SD					0.975
1853	95% DL/2 (t) UCL					0.0499		95% H-Stat (DL/2) UCL					0.0591
1854													
1855	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1856	Mean					0.0328		Mean in Log Scale					-3.516
1857	SD					0.0506		SD in Log Scale					0.969
1858	95% MLE (t) UCL					0.0406		Mean in Original Scale					0.0442
1859	95% MLE (Tiku) UCL					0.0433		SD in Original Scale					0.037
1860								95% Percentile Bootstrap UCL					0.0499
1861								95% BCA Bootstrap UCL					0.0503
1862													
1863	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1864	k star (bias corrected)					1.388		Data appear Gamma Distributed at 5% Significance Level					
1865	Theta Star					0.0325							
1866	nu star					310.9							
1867													
1868	A-D Test Statistic					0.62		Nonparametric Statistics					
1869	5% A-D Critical Value					0.772		Kaplan-Meier (KM) Method					
1870	K-S Test Statistic					0.772		Mean					0.0442
1871	5% K-S Critical Value					0.0881		SD					0.0368
1872	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00345	

	A	B	C	D	E	F	G	H	I	J	K	L	
1873											95% KM (t) UCL	0.0499	
1874	Assuming Gamma Distribution										95% KM (z) UCL	0.0499	
1875	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0499	
1876	Minimum					0.00141						95% KM (bootstrap t) UCL	0.0506
1877	Maximum					0.162						95% KM (BCA) UCL	0.0499
1878	Mean					0.0441						95% KM (Percentile Bootstrap) UCL	0.0499
1879	Median					0.0355						95% KM (Chebyshev) UCL	0.0592
1880	SD					0.0371						97.5% KM (Chebyshev) UCL	0.0658
1881	k star					1.296						99% KM (Chebyshev) UCL	0.0785
1882	Theta star					0.0341							
1883	Nu star					298						Potential UCLs to Use	
1884	AppChi2					259.1						95% KM (Chebyshev) UCL	0.0592
1885	95% Gamma Approximate UCL					0.0508							
1886	95% Adjusted Gamma UCL					0.0509							
1887	Note: DL/2 is not a recommended method.												
1888													
1889													
1890	Uranium												
1891													
1892	General Statistics												
1893	Number of Valid Data					79	Number of Detected Data					75	
1894	Number of Distinct Detected Data					39	Number of Non-Detect Data					4	
1895	Number of Missing Values					73	Percent Non-Detects					5.06%	
1896													
1897	Raw Statistics					Log-transformed Statistics							
1898	Minimum Detected					0.000004	Minimum Detected					-12.43	
1899	Maximum Detected					0.00298	Maximum Detected					-5.816	
1900	Mean of Detected					0.0001052	Mean of Detected					-10.24	
1901	SD of Detected					0.0003869	SD of Detected					1.09	
1902	Minimum Non-Detect					1.231E-05	Minimum Non-Detect					-11.31	
1903	Maximum Non-Detect					0.0001598	Maximum Non-Detect					-8.742	
1904													
1905	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					76		
1906	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					3		
1907	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					96.20%		
1908													
1909	UCL Statistics												
1910	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1911	Lilliefors Test Statistic					0.424	Lilliefors Test Statistic					0.095	
1912	5% Lilliefors Critical Value					0.102	5% Lilliefors Critical Value					0.102	
1913	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1914													
1915	Assuming Normal Distribution					Assuming Lognormal Distribution							
1916	DL/2 Substitution Method					DL/2 Substitution Method							
1917	Mean					0.0001017	Mean					-10.26	
1918	SD					0.0003772	SD					1.084	
1919	95% DL/2 (t) UCL					0.0001724	95% H-Stat (DL/2) UCL					8.048E-05	
1920													
1921	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1922	MLE yields a negative mean					Mean in Log Scale					-10.27		
1923						SD in Log Scale					1.074		
1924						Mean in Original Scale					0.000101		

	A	B	C	D	E	F	G	H	I	J	K	L	
1925							SD in Original Scale					0.0003773	
1926							95% Percentile Bootstrap UCL					0.0001799	
1927							95% BCA Bootstrap UCL					0.000227	
1928													
1929	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1930	k star (bias corrected)				0.561		Data appear Lognormal at 5% Significance Level						
1931	Theta Star				0.0001877								
1932	nu star				84.09								
1933													
1934	A-D Test Statistic				8.376		Nonparametric Statistics						
1935	5% A-D Critical Value				0.81		Kaplan-Meier (KM) Method						
1936	K-S Test Statistic				0.81		Mean						0.0001012
1937	5% K-S Critical Value				0.108		SD						0.0003749
1938	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4.247E-05	
1939							95% KM (t) UCL					0.0001719	
1940	Assuming Gamma Distribution						95% KM (z) UCL					0.0001711	
1941	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0001719	
1942	Minimum				1E-09		95% KM (bootstrap t) UCL					0.0007559	
1943	Maximum				0.00298		95% KM (BCA) UCL					0.0001832	
1944	Mean				0.0001011		95% KM (Percentile Bootstrap) UCL					0.0001779	
1945	Median				0.00003		95% KM (Chebyshev) UCL					0.0002863	
1946	SD				0.0003774		97.5% KM (Chebyshev) UCL					0.0003664	
1947	k star				0.479		99% KM (Chebyshev) UCL					0.0005238	
1948	Theta star				0.0002112								
1949	Nu star				75.63		Potential UCLs to Use						
1950	AppChi2				56.6		95% KM (Chebyshev) UCL					0.0002863	
1951	95% Gamma Approximate UCL				0.0001351								
1952	95% Adjusted Gamma UCL				0.0001358								
1953	Note: DL/2 is not a recommended method.												
1954													
1955													
1956	Vanadium												
1957													
1958	General Statistics												
1959	Number of Valid Data				132		Number of Detected Data				125		
1960	Number of Distinct Detected Data				115		Number of Non-Detect Data				7		
1961	Number of Missing Values				26		Percent Non-Detects				5.30%		
1962													
1963	Raw Statistics						Log-transformed Statistics						
1964	Minimum Detected				0.00003		Minimum Detected				-10.41		
1965	Maximum Detected				0.00622		Maximum Detected				-5.081		
1966	Mean of Detected				0.00145		Mean of Detected				-6.92		
1967	SD of Detected				0.00113		SD of Detected				1.013		
1968	Minimum Non-Detect				0.0001844		Minimum Non-Detect				-8.599		
1969	Maximum Non-Detect				0.00122		Maximum Non-Detect				-6.708		
1970													
1971	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				71		
1972	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				61		
1973	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				53.79%		
1974													
1975	UCL Statistics												
1976	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						

	A	B	C	D	E	F	G	H	I	J	K	L
1977	Lilliefors Test Statistic					0.106	Lilliefors Test Statistic					0.113
1978	5% Lilliefors Critical Value					0.0792	5% Lilliefors Critical Value					0.0792
1979	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1980												
1981	Assuming Normal Distribution						Assuming Lognormal Distribution					
1982	DL/2 Substitution Method						DL/2 Substitution Method					
1983	Mean					0.00139	Mean					-6.989
1984	SD					0.00113	SD					1.037
1985	95% DL/2 (t) UCL					0.00155	95% H-Stat (DL/2) UCL					0.0018
1986												
1987	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1988	Mean					0.00103	Mean in Log Scale					-6.985
1989	SD					0.00155	SD in Log Scale					1.027
1990	95% MLE (t) UCL					0.00125	Mean in Original Scale					0.00139
1991	95% MLE (Tiku) UCL					0.00132	SD in Original Scale					0.00113
1992							95% Percentile Bootstrap UCL					0.00155
1993							95% BCA Bootstrap UCL					0.00157
1994												
1995	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1996	k star (bias corrected)					1.427	Data appear Gamma Distributed at 5% Significance Level					
1997	Theta Star					0.00101						
1998	nu star					356.9						
1999												
2000	A-D Test Statistic					0.403	Nonparametric Statistics					
2001	5% A-D Critical Value					0.771	Kaplan-Meier (KM) Method					
2002	K-S Test Statistic					0.771	Mean					0.00138
2003	5% K-S Critical Value					0.0846	SD					0.00113
2004	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					9.866E-05
2005							95% KM (t) UCL					0.00155
2006	Assuming Gamma Distribution						95% KM (z) UCL					0.00155
2007	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00155
2008	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00156
2009	Maximum					0.00622	95% KM (BCA) UCL					0.00155
2010	Mean					0.00138	95% KM (Percentile Bootstrap) UCL					0.00154
2011	Median					0.00116	95% KM (Chebyshev) UCL					0.00181
2012	SD					0.00113	97.5% KM (Chebyshev) UCL					0.002
2013	k star					0.964	99% KM (Chebyshev) UCL					0.00237
2014	Theta star					0.00143						
2015	Nu star					254.6	Potential UCLs to Use					
2016	AppChi2					218.6	95% KM (Chebyshev) UCL					0.00181
2017	95% Gamma Approximate UCL					0.00161						
2018	95% Adjusted Gamma UCL					0.00161						
2019	Note: DL/2 is not a recommended method.											
2020												
2021												
2022	Ytterbium											
2023												
2024	General Statistics											
2025	Number of Valid Data					105	Number of Detected Data					103
2026	Number of Distinct Detected Data					67	Number of Non-Detect Data					2
2027	Number of Missing Values					53	Percent Non-Detects					1.90%
2028												

	A	B	C	D	E	F	G	H	I	J	K	L
2029	Raw Statistics						Log-transformed Statistics					
2030	Minimum Detected				0.00004		Minimum Detected				-10.13	
2031	Maximum Detected				0.012		Maximum Detected				-4.42	
2032	Mean of Detected				0.0007275		Mean of Detected				-8.027	
2033	SD of Detected				0.0016		SD of Detected				1.093	
2034	Minimum Non-Detect				0.00224		Minimum Non-Detect				-6.1	
2035	Maximum Non-Detect				0.00415		Maximum Non-Detect				-5.484	
2036												
2037	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				102	
2038	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				3	
2039	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				97.14%	
2040												
2041	UCL Statistics											
2042	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2043	Lilliefors Test Statistic				0.341		Lilliefors Test Statistic				0.0976	
2044	5% Lilliefors Critical Value				0.0873		5% Lilliefors Critical Value				0.0873	
2045	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2046												
2047	Assuming Normal Distribution						Assuming Lognormal Distribution					
2048	DL/2 Substitution Method						DL/2 Substitution Method					
2049	Mean				0.0007441		Mean				-7.998	
2050	SD				0.00159		SD				1.104	
2051	95% DL/2 (t) UCL				0.001		95% H-Stat (DL/2) UCL				0.0007991	
2052												
2053	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2054	MLE yields a negative mean						Mean in Log Scale				-8.028	
2055							SD in Log Scale				1.082	
2056							Mean in Original Scale				0.0007194	
2057							SD in Original Scale				0.00158	
2058							95% Percentile Bootstrap UCL				0.0009896	
2059							95% BCA Bootstrap UCL				0.00104	
2060												
2061	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2062	k star (bias corrected)				0.732		Data do not follow a Discernable Distribution (0.05)					
2063	Theta Star				0.0009934							
2064	nu star				150.9							
2065												
2066	A-D Test Statistic				7.121		Nonparametric Statistics					
2067	5% A-D Critical Value				0.795		Kaplan-Meier (KM) Method					
2068	K-S Test Statistic				0.795		Mean				0.0007218	
2069	5% K-S Critical Value				0.0922		SD				0.00157	
2070	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.0001546	
2071							95% KM (t) UCL				0.0009783	
2072	Assuming Gamma Distribution						95% KM (z) UCL				0.000976	
2073	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0009783	
2074	Minimum				0.00004		95% KM (bootstrap t) UCL				0.00117	
2075	Maximum				0.012		95% KM (BCA) UCL				0.001	
2076	Mean				0.0007252		95% KM (Percentile Bootstrap) UCL				0.0009864	
2077	Median				0.000307		95% KM (Chebyshev) UCL				0.0014	
2078	SD				0.00158		97.5% KM (Chebyshev) UCL				0.00169	
2079	k star				0.745		99% KM (Chebyshev) UCL				0.00226	
2080	Theta star				0.0009737							

	A	B	C	D	E	F	G	H	I	J	K	L	
2081					Nu star	156.4	Potential UCLs to Use						
2082					AppChi2	128.5	95% KM (Chebyshev) UCL					0.0014	
2083					95% Gamma Approximate UCL	0.0008827							
2084					95% Adjusted Gamma UCL	0.0008851							
2085	Note: DL/2 is not a recommended method.												
2086													
2087													
2088	Zinc												
2089													
2090	General Statistics												
2091					Number of Valid Data	131					Number of Detected Data	131	
2092					Number of Distinct Detected Data	114					Number of Non-Detect Data	0	
2093					Number of Missing Values	27					Percent Non-Detects	0.00%	
2094													
2095	Raw Statistics						Log-transformed Statistics						
2096					Minimum Detected	0.000735					Minimum Detected	-7.216	
2097					Maximum Detected	0.0885					Maximum Detected	-2.425	
2098					Mean of Detected	0.0133					Mean of Detected	-4.708	
2099					SD of Detected	0.0146					SD of Detected	0.852	
2100					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
2101					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
2102													
2103													
2104	UCL Statistics												
2105	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2106					Lilliefors Test Statistic	0.237					Lilliefors Test Statistic	0.0603	
2107					5% Lilliefors Critical Value	0.0774					5% Lilliefors Critical Value	0.0774	
2108	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2109													
2110	Assuming Normal Distribution						Assuming Lognormal Distribution						
2111					DL/2 Substitution Method						DL/2 Substitution Method		
2112					Mean	0.0133					Mean	-4.708	
2113					SD	0.0146					SD	0.852	
2114					95% DL/2 (t) UCL	0.0154					95% H-Stat (DL/2) UCL	0.0151	
2115													
2116					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
2117	MLE method failed to converge properly											Mean in Log Scale	N/A
2118											SD in Log Scale	N/A	
2119											Mean in Original Scale	N/A	
2120											SD in Original Scale	N/A	
2121											95% Percentile Bootstrap UCL	N/A	
2122											95% BCA Bootstrap UCL	N/A	
2123													
2124	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2125					k star (bias corrected)	1.415	Data appear Lognormal at 5% Significance Level						
2126					Theta Star	0.00938							
2127					nu star	370.6							
2128													
2129					A-D Test Statistic	3.224	Nonparametric Statistics						
2130					5% A-D Critical Value	0.772	Kaplan-Meier (KM) Method						
2131					K-S Test Statistic	0.772	Mean					0.0133	
2132					5% K-S Critical Value	0.0831	SD					0.0145	

	A	B	C	D	E	F	G	H	I	J	K	L	
2133	Data not Gamma Distributed at 5% Significance Level											SE of Mean	0.00127
2134											95% KM (t) UCL	0.0154	
2135	Assuming Gamma Distribution											95% KM (z) UCL	0.0154
2136	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.0154
2137					Minimum	0.000735						95% KM (bootstrap t) UCL	0.0157
2138					Maximum	0.0885						95% KM (BCA) UCL	0.0154
2139					Mean	0.0133						95% KM (Percentile Bootstrap) UCL	0.0156
2140					Median	0.008						95% KM (Chebyshev) UCL	0.0188
2141					SD	0.0146						97.5% KM (Chebyshev) UCL	0.0212
2142					k star	1.415						99% KM (Chebyshev) UCL	0.0259
2143					Theta star	0.00938							
2144					Nu star	370.6					Potential UCLs to Use		
2145					AppChi2	327					95% KM (BCA) UCL	0.0154	
2146					95% Gamma Approximate UCL	0.015							
2147					95% Adjusted Gamma UCL	0.0151							
2148	Note: DL/2 is not a recommended method.												
2149													

	A	B	C	D	E	F	G	H	I	J	K	L				
1	General UCL Statistics for Data Sets with Non-Detects															
2	User Selected Options															
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Air_ProUCL\Air_Reach5.wst													
4	Full Precision		OFF													
5	Confidence Coefficient		95%													
6	Number of Bootstrap Operations		2000													
7																
8																
9	Antimony															
10																
11	General Statistics															
12	Number of Valid Data				120				Number of Detected Data				119			
13	Number of Distinct Detected Data				72				Number of Non-Detect Data				1			
14	Number of Missing Values				33				Percent Non-Detects				0.83%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.00001			Minimum Detected			-11.51						
18	Maximum Detected			0.00064			Maximum Detected			-7.354						
19	Mean of Detected			0.000138			Mean of Detected			-9.305						
20	SD of Detected			0.0001286			SD of Detected			0.971						
21	Minimum Non-Detect			0.0001629			Minimum Non-Detect			-8.723						
22	Maximum Non-Detect			0.0001629			Maximum Non-Detect			-8.723						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Lilliefors Test Statistic			0.2			Lilliefors Test Statistic			0.0986						
28	5% Lilliefors Critical Value			0.0812			5% Lilliefors Critical Value			0.0812						
29	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0001376			Mean			-9.306						
34	SD			0.0001282			SD			0.967						
35	95% DL/2 (t) UCL			0.000157			95% H-Stat (DL/2) UCL			0.0001745						
36																
37	Maximum Likelihood Estimate(MLE) Method						Log ROS Method									
38	Mean			1.201E-05			Mean in Log Scale			-9.308						
39	SD			0.0002444			SD in Log Scale			0.967						
40	95% MLE (t) UCL			4.899E-05			Mean in Original Scale			0.0001374						
41	95% MLE (Tiku) UCL			8.233E-05			SD in Original Scale			0.0001282						
42							95% Percentile Bootstrap UCL			0.0001564						
43							95% BCA Bootstrap UCL			0.0001576						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			1.314			Data do not follow a Discernable Distribution (0.05)									
47	Theta Star			0.0001051												
48	nu star			312.7												
49																
50	A-D Test Statistic			0.974			Nonparametric Statistics									
51	5% A-D Critical Value			0.774			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.774			Mean			0.0001375						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.0864	SD					0.0001277	
54	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.171E-05	
55							95% KM (t) UCL					0.0001569	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0001568	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0001569	
58	Minimum						0.00001	95% KM (bootstrap t) UCL					0.0001586
59	Maximum						0.00064	95% KM (BCA) UCL					0.000157
60	Mean						0.0001377	95% KM (Percentile Bootstrap) UCL					0.0001575
61	Median						9.164E-05	95% KM (Chebyshev) UCL					0.0001886
62	SD						0.0001281	97.5% KM (Chebyshev) UCL					0.0002106
63	k star						1.323	99% KM (Chebyshev) UCL					0.000254
64	Theta star						0.0001041						
65	Nu star						317.5	Potential UCLs to Use					
66	AppChi2						277.2	95% KM (BCA) UCL					0.000157
67	95% Gamma Approximate UCL						0.0001577						
68	95% Adjusted Gamma UCL						0.000158						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	Arsenic												
73													
74	General Statistics												
75	Number of Valid Data					109	Number of Detected Data					101	
76	Number of Distinct Detected Data					57	Number of Non-Detect Data					8	
77	Number of Missing Values					44	Percent Non-Detects					7.34%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00006	Minimum Detected					-9.721	
81	Maximum Detected					0.00155	Maximum Detected					-6.468	
82	Mean of Detected					0.0002898	Mean of Detected					-8.46	
83	SD of Detected					0.000265	SD of Detected					0.783	
84	Minimum Non-Detect					6.111E-05	Minimum Non-Detect					-9.703	
85	Maximum Non-Detect					0.00106	Maximum Non-Detect					-6.851	
86													
87	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					106	
88	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3	
89	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.25%	
90													
91	UCL Statistics												
92	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
93	Lilliefors Test Statistic					0.193	Lilliefors Test Statistic					0.0872	
94	5% Lilliefors Critical Value					0.0882	5% Lilliefors Critical Value					0.0882	
95	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
96													
97	Assuming Normal Distribution						Assuming Lognormal Distribution						
98	DL/2 Substitution Method						DL/2 Substitution Method						
99	Mean					0.0002857	Mean					-8.472	
100	SD					0.0002584	SD					0.787	
101	95% DL/2 (t) UCL					0.0003267	95% H-Stat (DL/2) UCL					0.0003165	
102													
103	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
104	MLE yields a negative mean						Mean in Log Scale					-8.487	

	A	B	C	D	E	F	G	H	I	J	K	L
105											SD in Log Scale	0.767
106											Mean in Original Scale	0.00028
107											SD in Original Scale	0.0002576
108											95% Percentile Bootstrap UCL	0.0003221
109											95% BCA Bootstrap UCL	0.0003269
110												
111	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
112					k star (bias corrected)	1.698	Data appear Lognormal at 5% Significance Level					
113					Theta Star	0.0001707						
114					nu star	342.9						
115												
116					A-D Test Statistic	1.615	Nonparametric Statistics					
117					5% A-D Critical Value	0.767	Kaplan-Meier (KM) Method					
118					K-S Test Statistic	0.767				Mean	0.0002814	
119					5% K-S Critical Value	0.0906				SD	0.0002578	
120	Data not Gamma Distributed at 5% Significance Level									SE of Mean	0.000025	
121										95% KM (t) UCL	0.0003229	
122	Assuming Gamma Distribution									95% KM (z) UCL	0.0003225	
123	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	0.0003229	
124					Minimum	1E-09				95% KM (bootstrap t) UCL	0.0003301	
125					Maximum	0.00155				95% KM (BCA) UCL	0.0003207	
126					Mean	0.0002859				95% KM (Percentile Bootstrap) UCL	0.0003239	
127					Median	0.0002				95% KM (Chebyshev) UCL	0.0003904	
128					SD	0.0002568				97.5% KM (Chebyshev) UCL	0.0004375	
129					k star	1.367				99% KM (Chebyshev) UCL	0.0005302	
130					Theta star	0.0002092						
131					Nu star	297.9	Potential UCLs to Use					
132					AppChi2	258.9				95% KM (BCA) UCL	0.0003207	
133					95% Gamma Approximate UCL	0.000329						
134					95% Adjusted Gamma UCL	0.0003296						
135	Note: DL/2 is not a recommended method.											
136												
137												
138	Barium											
139												
140	General Statistics											
141					Number of Valid Data	72				Number of Detected Data	68	
142					Number of Distinct Detected Data	62				Number of Non-Detect Data	4	
143					Number of Missing Values	81				Percent Non-Detects	5.56%	
144												
145	Raw Statistics						Log-transformed Statistics					
146					Minimum Detected	0.00031				Minimum Detected	-8.079	
147					Maximum Detected	1.14				Maximum Detected	0.131	
148					Mean of Detected	0.0466				Mean of Detected	-4.224	
149					SD of Detected	0.147				SD of Detected	1.403	
150					Minimum Non-Detect	0.0429				Minimum Non-Detect	-3.15	
151					Maximum Non-Detect	2.336				Maximum Non-Detect	0.848	
152												
153	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	72	
154	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	0	
155	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	100.00%	
156												

	A	B	C	D	E	F	G	H	I	J	K	L	
157	UCL Statistics												
158	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
159	Lilliefors Test Statistic					0.394	Lilliefors Test Statistic					0.091	
160	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107	
161	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
162													
163	Assuming Normal Distribution						Assuming Lognormal Distribution						
164	DL/2 Substitution Method						DL/2 Substitution Method						
165	Mean					0.0831	Mean					-4.048	
166	SD					0.235	SD					1.595	
167	95% DL/2 (t) UCL					0.129	95% H-Stat (DL/2) UCL					0.115	
168													
169	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
170	MLE method failed to converge properly						Mean in Log Scale					-4.23	
171							SD in Log Scale					1.363	
172							Mean in Original Scale					0.0447	
173							SD in Original Scale					0.143	
174							95% Percentile Bootstrap UCL					0.0752	
175							95% BCA Bootstrap UCL					0.0972	
176													
177	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
178	k star (bias corrected)					0.528	Data appear Lognormal at 5% Significance Level						
179	Theta Star					0.0882							
180	nu star					71.82							
181													
182	A-D Test Statistic					4.104	Nonparametric Statistics						
183	5% A-D Critical Value					0.813	Kaplan-Meier (KM) Method						
184	K-S Test Statistic					0.813	Mean					0.0459	
185	5% K-S Critical Value					0.114	SD					0.144	
186	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0174	
187							95% KM (t) UCL					0.0748	
188	Assuming Gamma Distribution						95% KM (z) UCL					0.0744	
189	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0748	
190	Minimum					0.00031	95% KM (bootstrap t) UCL					0.173	
191	Maximum					1.14	95% KM (BCA) UCL					0.0803	
192	Mean					0.0454	95% KM (Percentile Bootstrap) UCL					0.0783	
193	Median					0.0181	95% KM (Chebyshev) UCL					0.122	
194	SD					0.143	97.5% KM (Chebyshev) UCL					0.154	
195	k star					0.549	99% KM (Chebyshev) UCL					0.219	
196	Theta star					0.0826							
197	Nu star					79.12	Potential UCLs to Use						
198	AppChi2					59.63	95% KM (Chebyshev) UCL					0.122	
199	95% Gamma Approximate UCL					0.0602							
200	95% Adjusted Gamma UCL					0.0606							
201	Note: DL/2 is not a recommended method.												
202													
203													
204	Beryllium												
205													
206	General Statistics												
207	Number of Valid Data					100	Number of Detected Data					97	
208	Number of Distinct Detected Data					38	Number of Non-Detect Data					3	

	A	B	C	D	E	F	G	H	I	J	K	L
209	Number of Missing Values					49	Percent Non-Detects					3.00%
210												
211	Raw Statistics						Log-transformed Statistics					
212	Minimum Detected					0.000002	Minimum Detected					-13.12
213	Maximum Detected					0.000163	Maximum Detected					-8.722
214	Mean of Detected					2.015E-05	Mean of Detected					-11.33
215	SD of Detected					2.607E-05	SD of Detected					0.996
216	Minimum Non-Detect					1.527E-05	Minimum Non-Detect					-11.09
217	Maximum Non-Detect					2.442E-05	Maximum Non-Detect					-10.62
218												
219	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					80
220	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					20
221	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					80.00%
222												
223	UCL Statistics											
224	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
225	Lilliefors Test Statistic					0.254	Lilliefors Test Statistic					0.0838
226	5% Lilliefors Critical Value					0.09	5% Lilliefors Critical Value					0.09
227	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
228												
229	Assuming Normal Distribution						Assuming Lognormal Distribution					
230	DL/2 Substitution Method						DL/2 Substitution Method					
231	Mean					1.983E-05	Mean					-11.34
232	SD					2.574E-05	SD					0.983
233	95% DL/2 (t) UCL					2.411E-05	95% H-Stat (DL/2) UCL					2.36E-05
234												
235	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
236	MLE yields a negative mean						Mean in Log Scale					-11.34
237							SD in Log Scale					0.984
238							Mean in Original Scale					1.978E-05
239							SD in Original Scale					2.576E-05
240							95% Percentile Bootstrap UCL					2.394E-05
241							95% BCA Bootstrap UCL					2.49E-05
242												
243	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
244	k star (bias corrected)					1.077	Data appear Lognormal at 5% Significance Level					
245	Theta Star					1.87E-05						
246	nu star					209						
247												
248	A-D Test Statistic					2.202	Nonparametric Statistics					
249	5% A-D Critical Value					0.78	Kaplan-Meier (KM) Method					
250	K-S Test Statistic					0.78	Mean					1.98E-05
251	5% K-S Critical Value					0.0934	SD					2.563E-05
252	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.578E-06
253							95% KM (t) UCL					2.408E-05
254	Assuming Gamma Distribution						95% KM (z) UCL					2.404E-05
255	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.408E-05
256	Minimum					0.000002	95% KM (bootstrap t) UCL					2.568E-05
257	Maximum					0.000163	95% KM (BCA) UCL					2.5E-05
258	Mean					1.988E-05	95% KM (Percentile Bootstrap) UCL					2.389E-05
259	Median					0.000012	95% KM (Chebyshev) UCL					3.104E-05
260	SD					2.572E-05	97.5% KM (Chebyshev) UCL					3.59E-05

	A	B	C	D	E	F	G	H	I	J	K	L	
261					k star	1.098				99% KM (Chebyshev) UCL		4.546E-05	
262					Theta star	1.81E-05							
263					Nu star	219.6				Potential UCLs to Use			
264					AppChi2	186.3				95% KM (BCA) UCL		2.5E-05	
265					95% Gamma Approximate UCL	2.343E-05							
266					95% Adjusted Gamma UCL	2.349E-05							
267	Note: DL/2 is not a recommended method.												
268													
269													
270	Bismuth												
271													
272	General Statistics												
273					Number of Valid Data	98				Number of Detected Data		93	
274					Number of Distinct Detected Data	42				Number of Non-Detect Data		5	
275					Number of Missing Values	55				Percent Non-Detects		5.10%	
276													
277	Raw Statistics						Log-transformed Statistics						
278					Minimum Detected	0.000004				Minimum Detected		-12.43	
279					Maximum Detected	0.00257				Maximum Detected		-5.964	
280					Mean of Detected	0.0001038				Mean of Detected		-10.48	
281					SD of Detected	0.0003326				SD of Detected		1.289	
282					Minimum Non-Detect	6.09E-06				Minimum Non-Detect		-12.01	
283					Maximum Non-Detect	0.00031				Maximum Non-Detect		-8.079	
284													
285	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						90
286	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						8
287	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						91.84%
288													
289	UCL Statistics												
290	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
291					Lilliefors Test Statistic	0.411				Lilliefors Test Statistic		0.126	
292					5% Lilliefors Critical Value	0.0919				5% Lilliefors Critical Value		0.0919	
293	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
294													
295	Assuming Normal Distribution						Assuming Lognormal Distribution						
296					DL/2 Substitution Method					DL/2 Substitution Method			
297					Mean	0.0001006				Mean		-10.51	
298					SD	0.0003244				SD		1.295	
299					95% DL/2 (t) UCL	0.000155				95% H-Stat (DL/2) UCL		7.984E-05	
300													
301					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
302	MLE yields a negative mean						Mean in Log Scale						-10.53
303							SD in Log Scale						1.284
304							Mean in Original Scale						9.914E-05
305							SD in Original Scale						0.0003245
306							95% Percentile Bootstrap UCL						0.0001564
307							95% BCA Bootstrap UCL						0.0001843
308													
309	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
310					k star (bias corrected)	0.478				Data do not follow a Discernable Distribution (0.05)			
311					Theta Star	0.0002169							
312					nu star	88.99							

	A	B	C	D	E	F	G	H	I	J	K	L
313												
314				A-D Test Statistic		10.66	Nonparametric Statistics					
315				5% A-D Critical Value		0.822	Kaplan-Meier (KM) Method					
316				K-S Test Statistic		0.822					Mean	9.924E-05
317				5% K-S Critical Value		0.0983					SD	0.0003228
318	Data not Gamma Distributed at 5% Significance Level										SE of Mean	3.279E-05
319											95% KM (t) UCL	0.0001537
320	Assuming Gamma Distribution										95% KM (z) UCL	0.0001532
321	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0001537
322				Minimum		1E-09					95% KM (bootstrap t) UCL	0.0002464
323				Maximum		0.00257					95% KM (BCA) UCL	0.0001628
324				Mean		9.896E-05					95% KM (Percentile Bootstrap) UCL	0.0001578
325				Median		0.00002					95% KM (Chebyshev) UCL	0.0002422
326				SD		0.0003246					97.5% KM (Chebyshev) UCL	0.000304
327				k star		0.389					99% KM (Chebyshev) UCL	0.0004255
328				Theta star		0.0002547						
329				Nu star		76.16	Potential UCLs to Use					
330				AppChi2		57.06					95% KM (Chebyshev) UCL	0.0002422
331				95% Gamma Approximate UCL		0.0001321						
332				95% Adjusted Gamma UCL		0.0001327						
333	Note: DL/2 is not a recommended method.											
334												
335												
336	Cadmium											
337												
338	General Statistics											
339				Number of Valid Data		124	Number of Detected Data				112	
340				Number of Distinct Detected Data		55	Number of Non-Detect Data				12	
341				Number of Missing Values		29	Percent Non-Detects				9.68%	
342												
343	Raw Statistics						Log-transformed Statistics					
344				Minimum Detected		3.04E-06	Minimum Detected				-12.7	
345				Maximum Detected		0.00064	Maximum Detected				-7.354	
346				Mean of Detected		6.623E-05	Mean of Detected				-10.05	
347				SD of Detected		7.819E-05	SD of Detected				0.923	
348				Minimum Non-Detect		1.428E-05	Minimum Non-Detect				-11.16	
349				Maximum Non-Detect		0.0001448	Maximum Non-Detect				-8.84	
350												
351	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				112	
352	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				12	
353	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				90.32%	
354												
355	UCL Statistics											
356	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
357				Lilliefors Test Statistic		0.225	Lilliefors Test Statistic				0.0805	
358				5% Lilliefors Critical Value		0.0837	5% Lilliefors Critical Value				0.0837	
359	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
360												
361	Assuming Normal Distribution						Assuming Lognormal Distribution					
362				DL/2 Substitution Method			DL/2 Substitution Method					
363				Mean		6.263E-05	Mean				-10.12	
364				SD		7.544E-05	SD				0.935	

	A	B	C	D	E	F	G	H	I	J	K	L	
365	95% DL/2 (t) UCL				7.386E-05	95% H-Stat (DL/2) UCL				8.224E-05			
366													
367	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
368	MLE yields a negative mean					Mean in Log Scale					-10.12		
369						SD in Log Scale					0.919		
370						Mean in Original Scale					6.193E-05		
371						SD in Original Scale					7.55E-05		
372						95% Percentile Bootstrap UCL					7.361E-05		
373						95% BCA Bootstrap UCL					7.717E-05		
374													
375	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
376	k star (bias corrected)				1.286	Data appear Lognormal at 5% Significance Level							
377	Theta Star				5.152E-05								
378	nu star				288								
379													
380	A-D Test Statistic				1.496	Nonparametric Statistics							
381	5% A-D Critical Value				0.775	Kaplan-Meier (KM) Method							
382	K-S Test Statistic				0.775	Mean					6.214E-05		
383	5% K-S Critical Value				0.0883	SD					7.532E-05		
384	Data not Gamma Distributed at 5% Significance Level					SE of Mean					6.813E-06		
385						95% KM (t) UCL					7.343E-05		
386	Assuming Gamma Distribution					95% KM (z) UCL					7.334E-05		
387	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					7.342E-05		
388	Minimum				1E-09	95% KM (bootstrap t) UCL					7.801E-05		
389	Maximum				0.00064	95% KM (BCA) UCL					7.438E-05		
390	Mean				6.314E-05	95% KM (Percentile Bootstrap) UCL					7.409E-05		
391	Median				0.00004	95% KM (Chebyshev) UCL					9.183E-05		
392	SD				7.531E-05	97.5% KM (Chebyshev) UCL					0.0001047		
393	k star				1.112	99% KM (Chebyshev) UCL					0.0001299		
394	Theta star				5.68E-05								
395	Nu star				275.7	Potential UCLs to Use							
396	AppChi2				238.2	95% KM (BCA) UCL					7.438E-05		
397	95% Gamma Approximate UCL				7.307E-05								
398	95% Adjusted Gamma UCL				7.319E-05								
399	Note: DL/2 is not a recommended method.												
400													
401													
402	Cerium												
403													
404	General Statistics												
405	Number of Valid Data				114	Number of Detected Data				113			
406	Number of Distinct Detected Data				77	Number of Non-Detect Data				1			
407	Number of Missing Values				38	Percent Non-Detects				0.88%			
408													
409	Raw Statistics					Log-transformed Statistics							
410	Minimum Detected				0.00002	Minimum Detected				-10.82			
411	Maximum Detected				0.00666	Maximum Detected				-5.012			
412	Mean of Detected				0.0006178	Mean of Detected				-8.02			
413	SD of Detected				0.000942	SD of Detected				1.132			
414	Minimum Non-Detect				2.035E-05	Minimum Non-Detect				-10.8			
415	Maximum Non-Detect				2.035E-05	Maximum Non-Detect				-10.8			
416													

	A	B	C	D	E	F	G	H	I	J	K	L
417												
418	UCL Statistics											
419	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
420	Lilliefors Test Statistic					0.265	Lilliefors Test Statistic					0.0999
421	5% Lilliefors Critical Value					0.0833	5% Lilliefors Critical Value					0.0833
422	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
423												
424	Assuming Normal Distribution						Assuming Lognormal Distribution					
425	DL/2 Substitution Method						DL/2 Substitution Method					
426	Mean					0.0006125	Mean					-8.051
427	SD					0.0009396	SD					1.173
428	95% DL/2 (t) UCL					0.0007584	95% H-Stat (DL/2) UCL					0.0007923
429												
430	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
431	Mean					0.0005972	Mean in Log Scale					-8.043
432	SD					0.0009529	SD in Log Scale					1.153
433	95% MLE (t) UCL					0.0007452	Mean in Original Scale					0.0006126
434	95% MLE (Tiku) UCL					0.0007322	SD in Original Scale					0.0009395
435							95% Percentile Bootstrap UCL					0.0007603
436							95% BCA Bootstrap UCL					0.0007994
437												
438	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
439	k star (bias corrected)					0.905	Data do not follow a Discernable Distribution (0.05)					
440	Theta Star					0.0006828						
441	nu star					204.5						
442												
443	A-D Test Statistic					2.438	Nonparametric Statistics					
444	5% A-D Critical Value					0.787	Kaplan-Meier (KM) Method					
445	K-S Test Statistic					0.787	Mean					0.0006126
446	5% K-S Critical Value					0.0889	SD					0.0009354
447	Data not Gamma Distributed at 5% Significance Level						SE of Mean					8.8E-05
448							95% KM (t) UCL					0.0007585
449	Assuming Gamma Distribution						95% KM (z) UCL					0.0007573
450	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0007585
451	Minimum					1E-09	95% KM (bootstrap t) UCL					0.0008159
452	Maximum					0.00666	95% KM (BCA) UCL					0.0007801
453	Mean					0.0006124	95% KM (Percentile Bootstrap) UCL					0.0007571
454	Median					0.0004	95% KM (Chebyshev) UCL					0.0009962
455	SD					0.0009396	97.5% KM (Chebyshev) UCL					0.00116
456	k star					0.792	99% KM (Chebyshev) UCL					0.00149
457	Theta star					0.0007728						
458	Nu star					180.7	Potential UCLs to Use					
459	AppChi2					150.6	95% KM (Chebyshev) UCL					0.0009962
460	95% Gamma Approximate UCL					0.0007348						
461	95% Adjusted Gamma UCL					0.0007365						
462	Note: DL/2 is not a recommended method.											
463												
464												
465	Cesium											
466												
467	General Statistics											
468	Number of Valid Data					113	Number of Detected Data					111

	A	B	C	D	E	F	G	H	I	J	K	L
469	Number of Distinct Detected Data					45	Number of Non-Detect Data					2
470	Number of Missing Values					29	Percent Non-Detects					1.77%
471												
472	Raw Statistics						Log-transformed Statistics					
473	Minimum Detected					0.000001	Minimum Detected					-13.82
474	Maximum Detected					0.000508	Maximum Detected					-7.585
475	Mean of Detected					5.685E-05	Mean of Detected					-10.38
476	SD of Detected					7.937E-05	SD of Detected					1.148
477	Minimum Non-Detect					1.224E-05	Minimum Non-Detect					-11.31
478	Maximum Non-Detect					1.224E-05	Maximum Non-Detect					-11.31
479												
480												
481	UCL Statistics											
482	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
483	Lilliefors Test Statistic					0.254	Lilliefors Test Statistic					0.109
484	5% Lilliefors Critical Value					0.0841	5% Lilliefors Critical Value					0.0841
485	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
486												
487	Assuming Normal Distribution						Assuming Lognormal Distribution					
488	DL/2 Substitution Method						DL/2 Substitution Method					
489	Mean					5.595E-05	Mean					-10.41
490	SD					7.894E-05	SD					1.158
491	95% DL/2 (t) UCL					6.827E-05	95% H-Stat (DL/2) UCL					7.668E-05
492												
493	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
494	Mean					4.048E-05	Mean in Log Scale					-10.4
495	SD					9.52E-05	SD in Log Scale					1.153
496	95% MLE (t) UCL					5.533E-05	Mean in Original Scale					5.598E-05
497	95% MLE (Tiku) UCL					5.548E-05	SD in Original Scale					7.892E-05
498							95% Percentile Bootstrap UCL					6.851E-05
499							95% BCA Bootstrap UCL					7.171E-05
500												
501	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
502	k star (bias corrected)					0.943	Data do not follow a Discernable Distribution (0.05)					
503	Theta Star					6.026E-05						
504	nu star					209.4						
505												
506	A-D Test Statistic					2.099	Nonparametric Statistics					
507	5% A-D Critical Value					0.785	Kaplan-Meier (KM) Method					
508	K-S Test Statistic					0.785	Mean					5.599E-05
509	5% K-S Critical Value					0.0893	SD					7.857E-05
510	Data not Gamma Distributed at 5% Significance Level						SE of Mean					7.425E-06
511							95% KM (t) UCL					6.83E-05
512	Assuming Gamma Distribution						95% KM (z) UCL					0.0000682
513	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.83E-05
514	Minimum					1E-09	95% KM (bootstrap t) UCL					7.411E-05
515	Maximum					0.000508	95% KM (BCA) UCL					6.929E-05
516	Mean					5.584E-05	95% KM (Percentile Bootstrap) UCL					6.864E-05
517	Median					0.000033	95% KM (Chebyshev) UCL					8.835E-05
518	SD					7.901E-05	97.5% KM (Chebyshev) UCL					0.0001024
519	k star					0.762	99% KM (Chebyshev) UCL					0.0001299
520	Theta star					7.328E-05						

	A	B	C	D	E	F	G	H	I	J	K	L
521					Nu star	172.2	Potential UCLs to Use					
522					AppChi2	142.9	95% KM (Chebyshev) UCL					8.835E-05
523			95% Gamma Approximate UCL			6.731E-05						
524			95% Adjusted Gamma UCL			6.747E-05						
525	Note: DL/2 is not a recommended method.											
526												
527												
528	Chromium											
529												
530	General Statistics											
531	Number of Valid Data					100	Number of Detected Data					100
532	Number of Distinct Detected Data					85	Number of Non-Detect Data					0
533	Number of Missing Values					52	Percent Non-Detects					0.00%
534												
535	Raw Statistics						Log-transformed Statistics					
536	Minimum Detected					0.00004	Minimum Detected					-10.13
537	Maximum Detected					0.0305	Maximum Detected					-3.489
538	Mean of Detected					0.00184	Mean of Detected					-6.956
539	SD of Detected					0.00337	SD of Detected					1.174
540	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
541	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
542												
543												
544	UCL Statistics											
545	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
546	Lilliefors Test Statistic					0.296	Lilliefors Test Statistic					0.0907
547	5% Lilliefors Critical Value					0.0886	5% Lilliefors Critical Value					0.0886
548	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
549												
550	Assuming Normal Distribution						Assuming Lognormal Distribution					
551	DL/2 Substitution Method						DL/2 Substitution Method					
552	Mean					0.00184	Mean					-6.956
553	SD					0.00337	SD					1.174
554	95% DL/2 (t) UCL					0.0024	95% H-Stat (DL/2) UCL					0.00251
555												
556	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
557	MLE method failed to converge properly						Mean in Log Scale					N/A
558							SD in Log Scale					N/A
559							Mean in Original Scale					N/A
560							SD in Original Scale					N/A
561							95% Percentile Bootstrap UCL					N/A
562							95% BCA Bootstrap UCL					N/A
563												
564	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
565	k star (bias corrected)					0.87	Data do not follow a Discernable Distribution (0.05)					
566	Theta Star					0.00212						
567	nu star					173.9						
568												
569	A-D Test Statistic					1.46	Nonparametric Statistics					
570	5% A-D Critical Value					0.788	Kaplan-Meier (KM) Method					
571	K-S Test Statistic					0.788	Mean					0.00184
572	5% K-S Critical Value					0.0925	SD					0.00335

	A	B	C	D	E	F	G	H	I	J	K	L
573	Data not Gamma Distributed at 5% Significance Level							SE of Mean				0.0003366
574								95% KM (t) UCL				0.0024
575	Assuming Gamma Distribution							95% KM (z) UCL				0.00239
576	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL				0.0024
577	Minimum						0.00004	95% KM (bootstrap t) UCL				0.00302
578	Maximum						0.0305	95% KM (BCA) UCL				0.0025
579	Mean						0.00184	95% KM (Percentile Bootstrap) UCL				0.00246
580	Median						0.00107	95% KM (Chebyshev) UCL				0.00331
581	SD						0.00337	97.5% KM (Chebyshev) UCL				0.00394
582	k star						0.87	99% KM (Chebyshev) UCL				0.00519
583	Theta star						0.00212					
584	Nu star						173.9	Potential UCLs to Use				
585	AppChi2						144.4	95% KM (Chebyshev) UCL				0.00331
586	95% Gamma Approximate UCL						0.00222					
587	95% Adjusted Gamma UCL						0.00222					
588	Note: DL/2 is not a recommended method.											
589												
590												
591	Cobalt											
592												
593	General Statistics											
594	Number of Valid Data						128	Number of Detected Data				121
595	Number of Distinct Detected Data						71	Number of Non-Detect Data				7
596	Number of Missing Values						25	Percent Non-Detects				5.47%
597												
598	Raw Statistics						Log-transformed Statistics					
599	Minimum Detected						0.00001	Minimum Detected				-11.51
600	Maximum Detected						0.00191	Maximum Detected				-6.259
601	Mean of Detected						0.0001772	Mean of Detected				-9.277
602	SD of Detected						0.0002442	SD of Detected				1.197
603	Minimum Non-Detect						5.089E-05	Minimum Non-Detect				-9.886
604	Maximum Non-Detect						0.0005166	Maximum Non-Detect				-7.568
605												
606	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				121	
607	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				7	
608	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				94.53%	
609												
610	UCL Statistics											
611	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
612	Lilliefors Test Statistic						0.247	Lilliefors Test Statistic				0.0841
613	5% Lilliefors Critical Value						0.0805	5% Lilliefors Critical Value				0.0805
614	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
615												
616	Assuming Normal Distribution						Assuming Lognormal Distribution					
617	DL/2 Substitution Method						DL/2 Substitution Method					
618	Mean						0.0001743	Mean				-9.273
619	SD						0.0002383	SD				1.176
620	95% DL/2 (t) UCL						0.0002091	95% H-Stat (DL/2) UCL				0.0002237
621												
622	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method				
623	MLE yields a negative mean						Mean in Log Scale				-9.304	
624							SD in Log Scale				1.173	

	A	B	C	D	E	F	G	H	I	J	K	L	
625										Mean in Original Scale		0.0001709	
626										SD in Original Scale		0.0002389	
627										95% Percentile Bootstrap UCL		0.0002091	
628										95% BCA Bootstrap UCL		0.0002163	
629													
630	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
631					k star (bias corrected)	0.896	Data Follow Appr. Gamma Distribution at 5% Significance Level						
632					Theta Star	0.0001977							
633					nu star	216.9							
634													
635					A-D Test Statistic	1.084	Nonparametric Statistics						
636					5% A-D Critical Value	0.787	Kaplan-Meier (KM) Method						
637					K-S Test Statistic	0.787				Mean		0.000172	
638					5% K-S Critical Value	0.0868				SD		0.0002381	
639	Data follow Appr. Gamma Distribution at 5% Significance Level									SE of Mean		2.118E-05	
640										95% KM (t) UCL		0.0002071	
641	Assuming Gamma Distribution										95% KM (z) UCL		0.0002069
642					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		0.0002071
643					Minimum	0.00001					95% KM (bootstrap t) UCL		0.0002173
644					Maximum	0.00191					95% KM (BCA) UCL		0.0002084
645					Mean	0.0001738					95% KM (Percentile Bootstrap) UCL		0.0002094
646					Median	0.0001192					95% KM (Chebyshev) UCL		0.0002644
647					SD	0.0002381					97.5% KM (Chebyshev) UCL		0.0003043
648					k star	0.919					99% KM (Chebyshev) UCL		0.0003828
649					Theta star	0.000189							
650					Nu star	235.3	Potential UCLs to Use						
651					AppChi2	200.8					95% KM (Chebyshev) UCL		0.0002644
652					95% Gamma Approximate UCL	0.0002036							
653					95% Adjusted Gamma UCL	0.000204							
654	Note: DL/2 is not a recommended method.												
655													
656													
657	Copper												
658													
659	General Statistics												
660					Number of Valid Data	132				Number of Detected Data		126	
661					Number of Distinct Detected Data	102				Number of Non-Detect Data		6	
662					Number of Missing Values	21				Percent Non-Detects		4.55%	
663													
664	Raw Statistics						Log-transformed Statistics						
665					Minimum Detected	0.0022				Minimum Detected		-6.119	
666					Maximum Detected	0.735				Maximum Detected		-0.308	
667					Mean of Detected	0.0173				Mean of Detected		-4.658	
668					SD of Detected	0.0661				SD of Detected		0.712	
669					Minimum Non-Detect	0.0156				Minimum Non-Detect		-4.158	
670					Maximum Non-Detect	0.911				Maximum Non-Detect		-0.0937	
671													
672	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		132
673	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
674	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
675													
676	UCL Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
677	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
678	Lilliefors Test Statistic					0.41	Lilliefors Test Statistic					0.0936
679	5% Lilliefors Critical Value					0.0789	5% Lilliefors Critical Value					0.0789
680	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
681												
682	Assuming Normal Distribution						Assuming Lognormal Distribution					
683	DL/2 Substitution Method						DL/2 Substitution Method					
684	Mean					0.0281	Mean					-4.543
685	SD					0.0896	SD					0.941
686	95% DL/2 (t) UCL					0.041	95% H-Stat (DL/2) UCL					0.022
687												
688	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
689	MLE method failed to converge properly						Mean in Log Scale					-4.66
690							SD in Log Scale					0.696
691							Mean in Original Scale					0.017
692							SD in Original Scale					0.0646
693							95% Percentile Bootstrap UCL					0.0279
694							95% BCA Bootstrap UCL					0.0368
695												
696	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
697	k star (bias corrected)					0.945	Data do not follow a Discernable Distribution (0.05)					
698	Theta Star					0.0183						
699	nu star					238						
700												
701	A-D Test Statistic					7.937E+28	Nonparametric Statistics					
702	5% A-D Critical Value					0.785	Kaplan-Meier (KM) Method					
703	K-S Test Statistic					0.785	Mean					0.0171
704	5% K-S Critical Value					0.0853	SD					0.0649
705	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00571
706							95% KM (t) UCL					0.0266
707	Assuming Gamma Distribution						95% KM (z) UCL					0.0265
708	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0266
709	Minimum					0.0022	95% KM (bootstrap t) UCL					0.0904
710	Maximum					0.735	95% KM (BCA) UCL					0.0295
711	Mean					0.0173	95% KM (Percentile Bootstrap) UCL					0.0281
712	Median					0.009	95% KM (Chebyshev) UCL					0.042
713	SD					0.0646	97.5% KM (Chebyshev) UCL					0.0528
714	k star					0.985	99% KM (Chebyshev) UCL					0.074
715	Theta star					0.0176						
716	Nu star					260.1	Potential UCLs to Use					
717	AppChi2					223.8	95% KM (BCA) UCL					0.0295
718	95% Gamma Approximate UCL					0.0201						
719	95% Adjusted Gamma UCL					0.0201						
720	Note: DL/2 is not a recommended method.											
721												
722												
723	Gallium											
724												
725	General Statistics											
726	Number of Valid Data					99	Number of Detected Data					99
727	Number of Distinct Detected Data					46	Number of Non-Detect Data					0
728	Number of Missing Values					48	Percent Non-Detects					0.00%

	A	B	C	D	E	F	G	H	I	J	K	L	
729													
730	Raw Statistics						Log-transformed Statistics						
731				Minimum Detected		0.00002				Minimum Detected		-10.82	
732				Maximum Detected		0.00218				Maximum Detected		-6.128	
733				Mean of Detected		0.0002176				Mean of Detected		-9.042	
734				SD of Detected		0.0003392				SD of Detected		1.046	
735				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
736				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
737													
738													
739	UCL Statistics												
740	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
741				Lilliefors Test Statistic		0.287				Lilliefors Test Statistic		0.152	
742				5% Lilliefors Critical Value		0.089				5% Lilliefors Critical Value		0.089	
743	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
744													
745	Assuming Normal Distribution						Assuming Lognormal Distribution						
746				DL/2 Substitution Method						DL/2 Substitution Method			
747				Mean		0.0002176				Mean		-9.042	
748				SD		0.0003392				SD		1.046	
749				95% DL/2 (t) UCL		0.0002742				95% H-Stat (DL/2) UCL		0.0002595	
750													
751				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
752	MLE method failed to converge properly										Mean in Log Scale		N/A
753										SD in Log Scale		N/A	
754										Mean in Original Scale		N/A	
755										SD in Original Scale		N/A	
756										95% Percentile Bootstrap UCL		N/A	
757										95% BCA Bootstrap UCL		N/A	
758													
759	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
760				k star (bias corrected)		0.931				Data do not follow a Discernable Distribution (0.05)			
761				Theta Star		0.0002337							
762				nu star		184.3							
763													
764				A-D Test Statistic		4.62				Nonparametric Statistics			
765				5% A-D Critical Value		0.785				Kaplan-Meier (KM) Method			
766				K-S Test Statistic		0.785				Mean		0.0002176	
767				5% K-S Critical Value		0.0928				SD		0.0003375	
768	Data not Gamma Distributed at 5% Significance Level										SE of Mean		3.409E-05
769										95% KM (t) UCL		0.0002742	
770	Assuming Gamma Distribution										95% KM (z) UCL		0.0002736
771				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		0.0002742	
772				Minimum		0.00002				95% KM (bootstrap t) UCL		0.0003038	
773				Maximum		0.00218				95% KM (BCA) UCL		0.0002776	
774				Mean		0.0002176				95% KM (Percentile Bootstrap) UCL		0.0002769	
775				Median		0.0001				95% KM (Chebyshev) UCL		0.0003662	
776				SD		0.0003392				97.5% KM (Chebyshev) UCL		0.0004305	
777				k star		0.931				99% KM (Chebyshev) UCL		0.0005568	
778				Theta star		0.0002337							
779				Nu star		184.3				Potential UCLs to Use			
780				AppChi2		153.9				95% KM (Chebyshev) UCL		0.0003662	

	A	B	C	D	E	F	G	H	I	J	K	L
781	95% Gamma Approximate UCL					0.0002605						
782	95% Adjusted Gamma UCL					0.0002612						
783	Note: DL/2 is not a recommended method.											
784												
785												
786	Iron											
787												
788	General Statistics											
789	Number of Valid Data					122	Number of Detected Data					122
790	Number of Distinct Detected Data					119	Number of Non-Detect Data					0
791	Number of Missing Values					27	Percent Non-Detects					0.00%
792												
793	Raw Statistics						Log-transformed Statistics					
794	Minimum Detected					0.005	Minimum Detected					-5.298
795	Maximum Detected					4.99	Maximum Detected					1.607
796	Mean of Detected					0.4	Mean of Detected					-1.584
797	SD of Detected					0.601	SD of Detected					1.241
798	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
799	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
800												
801												
802	UCL Statistics											
803	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
804	Lilliefors Test Statistic					0.255	Lilliefors Test Statistic					0.107
805	5% Lilliefors Critical Value					0.0802	5% Lilliefors Critical Value					0.0802
806	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
807												
808	Assuming Normal Distribution						Assuming Lognormal Distribution					
809	DL/2 Substitution Method						DL/2 Substitution Method					
810	Mean					0.4	Mean					-1.584
811	SD					0.601	SD					1.241
812	95% DL/2 (t) UCL					0.49	95% H-Stat (DL/2) UCL					0.581
813												
814	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
815	MLE method failed to converge properly						Mean in Log Scale					N/A
816							SD in Log Scale					N/A
817							Mean in Original Scale					N/A
818							SD in Original Scale					N/A
819							95% Percentile Bootstrap UCL					N/A
820							95% BCA Bootstrap UCL					N/A
821												
822	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
823	k star (bias corrected)					0.861	Data Follow Appr. Gamma Distribution at 5% Significance Level					
824	Theta Star					0.465						
825	nu star					210.2						
826												
827	A-D Test Statistic					1.091	Nonparametric Statistics					
828	5% A-D Critical Value					0.789	Kaplan-Meier (KM) Method					
829	K-S Test Statistic					0.789	Mean					0.4
830	5% K-S Critical Value					0.0867	SD					0.598
831	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.0544
832							95% KM (t) UCL					0.49

	A	B	C	D	E	F	G	H	I	J	K	L
833	Assuming Gamma Distribution						95% KM (z) UCL					0.49
834	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.49
835	Minimum				0.005		95% KM (bootstrap t) UCL					0.523
836	Maximum				4.99		95% KM (BCA) UCL					0.487
837	Mean				0.4		95% KM (Percentile Bootstrap) UCL					0.493
838	Median				0.273		95% KM (Chebyshev) UCL					0.637
839	SD				0.601		97.5% KM (Chebyshev) UCL					0.74
840	k star				0.861		99% KM (Chebyshev) UCL					0.941
841	Theta star				0.465							
842	Nu star				210.2		Potential UCLs to Use					
843	AppChi2				177.6		95% KM (Chebyshev) UCL					0.637
844	95% Gamma Approximate UCL				0.474							
845	95% Adjusted Gamma UCL				0.475							
846	Note: DL/2 is not a recommended method.											
847												
848												
849	Lanthanum											
850												
851	General Statistics											
852	Number of Valid Data				117		Number of Detected Data				108	
853	Number of Distinct Detected Data				66		Number of Non-Detect Data				9	
854	Number of Missing Values				35		Percent Non-Detects				7.69%	
855												
856	Raw Statistics						Log-transformed Statistics					
857	Minimum Detected				0.00002		Minimum Detected				-10.82	
858	Maximum Detected				0.00357		Maximum Detected				-5.635	
859	Mean of Detected				0.0003919		Mean of Detected				-8.435	
860	SD of Detected				0.0005587		SD of Detected				1.06	
861	Minimum Non-Detect				5.085E-05		Minimum Non-Detect				-9.887	
862	Maximum Non-Detect				0.000397		Maximum Non-Detect				-7.832	
863												
864	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				91	
865	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				26	
866	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				77.78%	
867												
868	UCL Statistics											
869	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
870	Lilliefors Test Statistic				0.266		Lilliefors Test Statistic				0.0939	
871	5% Lilliefors Critical Value				0.0853		5% Lilliefors Critical Value				0.0853	
872	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
873												
874	Assuming Normal Distribution						Assuming Lognormal Distribution					
875	DL/2 Substitution Method						DL/2 Substitution Method					
876	Mean				0.0003687		Mean				-8.522	
877	SD				0.000543		SD				1.08	
878	95% DL/2 (t) UCL				0.0004519		95% H-Stat (DL/2) UCL				0.0004075	
879												
880	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
881	MLE yields a negative mean						Mean in Log Scale				-8.521	
882							SD in Log Scale				1.07	
883							Mean in Original Scale				0.000368	
884							SD in Original Scale				0.0005431	

	A	B	C	D	E	F	G	H	I	J	K	L	
885												95% Percentile Bootstrap UCL	0.0004588
886												95% BCA Bootstrap UCL	0.0004703
887													
888	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
889					k star (bias corrected)	0.959	Data do not follow a Discernable Distribution (0.05)						
890					Theta Star	0.0004088							
891					nu star	207.1							
892													
893					A-D Test Statistic	3.062	Nonparametric Statistics						
894					5% A-D Critical Value	0.784	Kaplan-Meier (KM) Method						
895					K-S Test Statistic	0.784	Mean						0.0003685
896					5% K-S Critical Value	0.0901	SD						0.0005408
897	Data not Gamma Distributed at 5% Significance Level						SE of Mean						5.025E-05
898							95% KM (t) UCL						0.0004518
899	Assuming Gamma Distribution						95% KM (z) UCL						0.0004512
900	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0004518
901					Minimum	1E-09	95% KM (bootstrap t) UCL						0.0004799
902					Maximum	0.00357	95% KM (BCA) UCL						0.0004601
903					Mean	0.0003676	95% KM (Percentile Bootstrap) UCL						0.0004542
904					Median	0.00021	95% KM (Chebyshev) UCL						0.0005875
905					SD	0.0005442	97.5% KM (Chebyshev) UCL						0.0006823
906					k star	0.593	99% KM (Chebyshev) UCL						0.0008685
907					Theta star	0.0006194							
908					Nu star	138.9	Potential UCLs to Use						
909					AppChi2	112.6	95% KM (Chebyshev) UCL						0.0005875
910					95% Gamma Approximate UCL	0.0004532							
911					95% Adjusted Gamma UCL	0.0004543							
912	Note: DL/2 is not a recommended method.												
913													
914													
915	Lead												
916													
917	General Statistics												
918					Number of Valid Data	123						Number of Detected Data	113
919					Number of Distinct Detected Data	94						Number of Non-Detect Data	10
920					Number of Missing Values	30						Percent Non-Detects	8.13%
921													
922	Raw Statistics						Log-transformed Statistics						
923					Minimum Detected	0.0003						Minimum Detected	-8.112
924					Maximum Detected	0.0101						Maximum Detected	-4.594
925					Mean of Detected	0.00163						Mean of Detected	-6.676
926					SD of Detected	0.00137						SD of Detected	0.702
927					Minimum Non-Detect	0.0004529						Minimum Non-Detect	-7.7
928					Maximum Non-Detect	0.00818						Maximum Non-Detect	-4.806
929													
930	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						122
931	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1
932	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						99.19%
933													
934	UCL Statistics												
935	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
936					Lilliefors Test Statistic	0.178						Lilliefors Test Statistic	0.0503

	A	B	C	D	E	F	G	H	I	J	K	L
937	5% Lilliefors Critical Value					0.0833	5% Lilliefors Critical Value					0.0833
938	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
939												
940	Assuming Normal Distribution					Assuming Lognormal Distribution						
941	DL/2 Substitution Method					DL/2 Substitution Method						
942	Mean					0.0016	Mean					-6.723
943	SD					0.00137	SD					0.755
944	95% DL/2 (t) UCL					0.0018	95% H-Stat (DL/2) UCL					0.00181
945												
946	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
947	MLE method failed to converge properly					Mean in Log Scale					-6.732	
948						SD in Log Scale					0.715	
949						Mean in Original Scale					0.00155	
950						SD in Original Scale					0.00134	
951						95% Percentile Bootstrap UCL					0.00176	
952						95% BCA Bootstrap UCL					0.00179	
953												
954	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
955	k star (bias corrected)					2.055	Data appear Lognormal at 5% Significance Level					
956	Theta Star					0.0007922						
957	nu star					464.4						
958												
959	A-D Test Statistic					1.449	Nonparametric Statistics					
960	5% A-D Critical Value					0.765	Kaplan-Meier (KM) Method					
961	K-S Test Statistic					0.765	Mean					0.00156
962	5% K-S Critical Value					0.0872	SD					0.00134
963	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.0001228	
964						95% KM (t) UCL					0.00177	
965	Assuming Gamma Distribution					95% KM (z) UCL					0.00176	
966	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.00177	
967	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00181
968	Maximum					0.0101	95% KM (BCA) UCL					0.00178
969	Mean					0.00157	95% KM (Percentile Bootstrap) UCL					0.00176
970	Median					0.0012	95% KM (Chebyshev) UCL					0.0021
971	SD					0.00135	97.5% KM (Chebyshev) UCL					0.00233
972	k star					0.85	99% KM (Chebyshev) UCL					0.00278
973	Theta star					0.00184						
974	Nu star					209	Potential UCLs to Use					
975	AppChi2					176.6	95% KM (BCA) UCL					0.00178
976	95% Gamma Approximate UCL					0.00185						
977	95% Adjusted Gamma UCL					0.00186						
978	Note: DL/2 is not a recommended method.											
979												
980												
981	Lithium											
982												
983	General Statistics											
984	Number of Valid Data					108	Number of Detected Data					108
985	Number of Distinct Detected Data					67	Number of Non-Detect Data					0
986	Number of Missing Values					34	Percent Non-Detects					0.00%
987												
988	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
989				Minimum Detected		0.00002				Minimum Detected		-10.82	
990				Maximum Detected		0.00315				Maximum Detected		-5.761	
991				Mean of Detected		0.0003466				Mean of Detected		-8.425	
992				SD of Detected		0.0004439				SD of Detected		0.92	
993				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
994				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
995													
996													
997				UCL Statistics									
998				Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only					
999				Lilliefors Test Statistic		0.234				Lilliefors Test Statistic		0.0841	
1000				5% Lilliefors Critical Value		0.0853				5% Lilliefors Critical Value		0.0853	
1001				Data not Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level					
1002													
1003				Assuming Normal Distribution				Assuming Lognormal Distribution					
1004				DL/2 Substitution Method						DL/2 Substitution Method			
1005				Mean		0.0003466				Mean		-8.425	
1006				SD		0.0004439				SD		0.92	
1007				95% DL/2 (t) UCL		0.0004175				95% H-Stat (DL/2) UCL		0.0004043	
1008													
1009				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1010				MLE method failed to converge properly							Mean in Log Scale		N/A
1011										SD in Log Scale		N/A	
1012										Mean in Original Scale		N/A	
1013										SD in Original Scale		N/A	
1014										95% Percentile Bootstrap UCL		N/A	
1015										95% BCA Bootstrap UCL		N/A	
1016													
1017				Gamma Distribution Test with Detected Values Only				Data Distribution Test with Detected Values Only					
1018				k star (bias corrected)		1.203				Data appear Lognormal at 5% Significance Level			
1019				Theta Star		0.000288							
1020				nu star		259.9							
1021													
1022				A-D Test Statistic		2.641				Nonparametric Statistics			
1023				5% A-D Critical Value		0.777				Kaplan-Meier (KM) Method			
1024				K-S Test Statistic		0.777				Mean		0.0003466	
1025				5% K-S Critical Value		0.0895				SD		0.0004419	
1026				Data not Gamma Distributed at 5% Significance Level							SE of Mean		4.272E-05
1027										95% KM (t) UCL		0.0004175	
1028				Assuming Gamma Distribution							95% KM (z) UCL		0.0004169
1029				Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL		0.0004175
1030				Minimum		0.00002				95% KM (bootstrap t) UCL		0.0004438	
1031				Maximum		0.00315				95% KM (BCA) UCL		0.0004239	
1032				Mean		0.0003466				95% KM (Percentile Bootstrap) UCL		0.0004177	
1033				Median		0.0002009				95% KM (Chebyshev) UCL		0.0005328	
1034				SD		0.0004439				97.5% KM (Chebyshev) UCL		0.0006134	
1035				k star		1.203				99% KM (Chebyshev) UCL		0.0007716	
1036				Theta star		0.000288							
1037				Nu star		259.9				Potential UCLs to Use			
1038				AppChi2		223.6				95% KM (BCA) UCL		0.0004239	
1039				95% Gamma Approximate UCL		0.0004029							
1040				95% Adjusted Gamma UCL		0.0004037							

	A	B	C	D	E	F	G	H	I	J	K	L	
1041	Note: DL/2 is not a recommended method.												
1042													
1043													
1044	Manganese												
1045													
1046	General Statistics												
1047	Number of Valid Data					124		Number of Detected Data					121
1048	Number of Distinct Detected Data					97		Number of Non-Detect Data					3
1049	Number of Missing Values					29		Percent Non-Detects					2.42%
1050													
1051	Raw Statistics						Log-transformed Statistics						
1052	Minimum Detected					0.00044		Minimum Detected					-7.729
1053	Maximum Detected					0.114		Maximum Detected					-2.175
1054	Mean of Detected					0.00991		Mean of Detected					-5.19
1055	SD of Detected					0.0141		SD of Detected					1.086
1056	Minimum Non-Detect					0.00232		Minimum Non-Detect					-6.067
1057	Maximum Non-Detect					0.00751		Maximum Non-Detect					-4.892
1058													
1059	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					73	
1060	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					51	
1061	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					58.87%	
1062													
1063	UCL Statistics												
1064	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1065	Lilliefors Test Statistic					0.25		Lilliefors Test Statistic					0.0809
1066	5% Lilliefors Critical Value					0.0805		5% Lilliefors Critical Value					0.0805
1067	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1068													
1069	Assuming Normal Distribution						Assuming Lognormal Distribution						
1070	DL/2 Substitution Method							DL/2 Substitution Method					
1071	Mean					0.00973		Mean					-5.215
1072	SD					0.0139		SD					1.087
1073	95% DL/2 (t) UCL					0.0118		95% H-Stat (DL/2) UCL					0.0115
1074													
1075	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1076	MLE yields a negative mean						Mean in Log Scale					-5.214	
1077							SD in Log Scale					1.085	
1078							Mean in Original Scale					0.00972	
1079							SD in Original Scale					0.0139	
1080							95% Percentile Bootstrap UCL					0.0119	
1081							95% BCA Bootstrap UCL					0.0125	
1082													
1083	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1084	k star (bias corrected)					0.983		Data do not follow a Discernable Distribution (0.05)					
1085	Theta Star					0.0101							
1086	nu star					237.8							
1087													
1088	A-D Test Statistic					1.554		Nonparametric Statistics					
1089	5% A-D Critical Value					0.783		Kaplan-Meier (KM) Method					
1090	K-S Test Statistic					0.783		Mean					0.00972
1091	5% K-S Critical Value					0.0865		SD					0.0139
1092	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00125	

	A	B	C	D	E	F	G	H	I	J	K	L	
1093											95% KM (t) UCL	0.0118	
1094	Assuming Gamma Distribution										95% KM (z) UCL	0.0118	
1095	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0118	
1096	Minimum					1E-09						95% KM (bootstrap t) UCL	0.0127
1097	Maximum					0.114						95% KM (BCA) UCL	0.0119
1098	Mean					0.0097						95% KM (Percentile Bootstrap) UCL	0.012
1099	Median					0.00619						95% KM (Chebyshev) UCL	0.0152
1100	SD					0.0139						97.5% KM (Chebyshev) UCL	0.0175
1101	k star					0.729						99% KM (Chebyshev) UCL	0.0222
1102	Theta star					0.0133							
1103	Nu star					180.8						Potential UCLs to Use	
1104	AppChi2					150.7						95% KM (Chebyshev) UCL	0.0152
1105	95% Gamma Approximate UCL					0.0116							
1106	95% Adjusted Gamma UCL					0.0117							
1107	Note: DL/2 is not a recommended method.												
1108													
1109													
1110	Mercury												
1111													
1112	General Statistics												
1113	Number of Valid Data					21	Number of Detected Data					10	
1114	Number of Distinct Detected Data					10	Number of Non-Detect Data					11	
1115	Number of Missing Values					110	Percent Non-Detects					52.38%	
1116													
1117	Raw Statistics					Log-transformed Statistics							
1118	Minimum Detected					0.612	Minimum Detected					-0.491	
1119	Maximum Detected					9.161	Maximum Detected					2.215	
1120	Mean of Detected					5.078	Mean of Detected					1.433	
1121	SD of Detected					2.562	SD of Detected					0.778	
1122	Minimum Non-Detect					0.0022	Minimum Non-Detect					-6.119	
1123	Maximum Non-Detect					0.00221	Maximum Non-Detect					-6.115	
1124													
1125	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					11		
1126	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					10		
1127	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					52.38%		
1128													
1129	UCL Statistics												
1130	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1131	Shapiro Wilk Test Statistic					0.982	Shapiro Wilk Test Statistic					0.821	
1132	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842	
1133	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
1134													
1135	Assuming Normal Distribution					Assuming Lognormal Distribution							
1136	DL/2 Substitution Method					DL/2 Substitution Method							
1137	Mean					2.418	Mean					-2.885	
1138	SD					3.115	SD					4.251	
1139	95% DL/2 (t) UCL					3.591	95% H-Stat (DL/2) UCL					118416	
1140													
1141	Maximum Likelihood Estimate(MLE) Method					Log ROS Method							
1142	Mean					0.107	Mean in Log Scale					0.441	
1143	SD					5.58	SD in Log Scale					1.176	
1144	95% MLE (t) UCL					2.207	Mean in Original Scale					2.798	

	A	B	C	D	E	F	G	H	I	J	K	L
1145	95% MLE (Tiku) UCL					2.756	SD in Original Scale					2.825
1146							95% Percentile Bootstrap UCL					3.824
1147							95% BCA Bootstrap UCL					3.989
1148												
1149	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1150	k star (bias corrected)					2.003	Data appear Normal at 5% Significance Level					
1151	Theta Star					2.535						
1152	nu star					40.06						
1153												
1154	A-D Test Statistic					0.412	Nonparametric Statistics					
1155	5% A-D Critical Value					0.733	Kaplan-Meier (KM) Method					
1156	K-S Test Statistic					0.733	Mean					2.738
1157	5% K-S Critical Value					0.269	SD					2.791
1158	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.642
1159							95% KM (t) UCL					3.846
1160	Assuming Gamma Distribution						95% KM (z) UCL					3.794
1161	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.951
1162	Minimum					0.612	95% KM (bootstrap t) UCL					3.831
1163	Maximum					9.161	95% KM (BCA) UCL					5.134
1164	Mean					5.157	95% KM (Percentile Bootstrap) UCL					4.785
1165	Median					5.41	95% KM (Chebyshev) UCL					5.536
1166	SD					2.058	97.5% KM (Chebyshev) UCL					6.747
1167	k star					3.814	99% KM (Chebyshev) UCL					9.125
1168	Theta star					1.352						
1169	Nu star					160.2	Potential UCLs to Use					
1170	AppChi2					131.9	95% KM (t) UCL					3.846
1171	95% Gamma Approximate UCL					6.262	95% KM (Percentile Bootstrap) UCL					4.785
1172	95% Adjusted Gamma UCL					6.357						
1173	Note: DL/2 is not a recommended method.											
1174												
1175												
1176	Molybdenum											
1177												
1178	General Statistics											
1179	Number of Valid Data					69	Number of Detected Data					61
1180	Number of Distinct Detected Data					56	Number of Non-Detect Data					8
1181	Number of Missing Values					83	Percent Non-Detects					11.59%
1182												
1183	Raw Statistics						Log-transformed Statistics					
1184	Minimum Detected					0.00006	Minimum Detected					-9.721
1185	Maximum Detected					0.099	Maximum Detected					-2.313
1186	Mean of Detected					0.00525	Mean of Detected					-6.342
1187	SD of Detected					0.0137	SD of Detected					1.372
1188	Minimum Non-Detect					3.05E-06	Minimum Non-Detect					-12.7
1189	Maximum Non-Detect					0.00984	Maximum Non-Detect					-4.621
1190												
1191	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					62
1192	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					7
1193	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					89.86%
1194												
1195	UCL Statistics											
1196	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
1197	Lilliefors Test Statistic					0.352	Lilliefors Test Statistic					0.0822
1198	5% Lilliefors Critical Value					0.113	5% Lilliefors Critical Value					0.113
1199	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1200												
1201	Assuming Normal Distribution						Assuming Lognormal Distribution					
1202	DL/2 Substitution Method						DL/2 Substitution Method					
1203	Mean					0.00472	Mean					-6.77
1204	SD					0.0129	SD					1.947
1205	95% DL/2 (t) UCL					0.00731	95% H-Stat (DL/2) UCL					0.0116
1206												
1207	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1208	MLE yields a negative mean						Mean in Log Scale					-6.636
1209							SD in Log Scale					1.556
1210							Mean in Original Scale					0.00466
1211							SD in Original Scale					0.0129
1212							95% Percentile Bootstrap UCL					0.00752
1213							95% BCA Bootstrap UCL					0.00947
1214												
1215	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1216	k star (bias corrected)					0.553	Data appear Lognormal at 5% Significance Level					
1217	Theta Star					0.00948						
1218	nu star					67.5						
1219												
1220	A-D Test Statistic					3.215	Nonparametric Statistics					
1221	5% A-D Critical Value					0.809	Kaplan-Meier (KM) Method					
1222	K-S Test Statistic					0.809	Mean					0.00467
1223	5% K-S Critical Value					0.12	SD					0.0128
1224	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00156
1225							95% KM (t) UCL					0.00727
1226	Assuming Gamma Distribution						95% KM (z) UCL					0.00724
1227	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00727
1228	Minimum					1E-09	95% KM (bootstrap t) UCL					0.013
1229	Maximum					0.099	95% KM (BCA) UCL					0.00763
1230	Mean					0.00469	95% KM (Percentile Bootstrap) UCL					0.00739
1231	Median					0.00143	95% KM (Chebyshev) UCL					0.0115
1232	SD					0.0129	97.5% KM (Chebyshev) UCL					0.0144
1233	k star					0.283	99% KM (Chebyshev) UCL					0.0202
1234	Theta star					0.0165						
1235	Nu star					39.11	Potential UCLs to Use					
1236	AppChi2					25.78	95% KM (Chebyshev) UCL					0.0115
1237	95% Gamma Approximate UCL					0.00711						
1238	95% Adjusted Gamma UCL					0.00717						
1239	Note: DL/2 is not a recommended method.											
1240												
1241												
1242	Nickel											
1243												
1244	General Statistics											
1245	Number of Valid Data					105	Number of Detected Data					105
1246	Number of Distinct Detected Data					83	Number of Non-Detect Data					0
1247	Number of Missing Values					48	Percent Non-Detects					0.00%
1248												

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Raw Statistics						Log-transformed Statistics					
1250	Minimum Detected				0.00002		Minimum Detected				-10.82	
1251	Maximum Detected				0.00873		Maximum Detected				-4.741	
1252	Mean of Detected				0.0007716		Mean of Detected				-7.913	
1253	SD of Detected				0.00139		SD of Detected				1.164	
1254	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1255	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1256												
1257												
1258	UCL Statistics											
1259	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1260	Lilliefors Test Statistic				0.294		Lilliefors Test Statistic				0.0789	
1261	5% Lilliefors Critical Value				0.0865		5% Lilliefors Critical Value				0.0865	
1262	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1263												
1264	Assuming Normal Distribution						Assuming Lognormal Distribution					
1265	DL/2 Substitution Method						DL/2 Substitution Method					
1266	Mean				0.0007716		Mean				-7.913	
1267	SD				0.00139		SD				1.164	
1268	95% DL/2 (t) UCL				0.0009964		95% H-Stat (DL/2) UCL				0.0009427	
1269												
1270	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1271	MLE method failed to converge properly						Mean in Log Scale				N/A	
1272							SD in Log Scale				N/A	
1273							Mean in Original Scale				N/A	
1274							SD in Original Scale				N/A	
1275							95% Percentile Bootstrap UCL				N/A	
1276							95% BCA Bootstrap UCL				N/A	
1277												
1278	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1279	k star (bias corrected)				0.78		Data appear Lognormal at 5% Significance Level					
1280	Theta Star				0.0009897							
1281	nu star				163.7							
1282												
1283	A-D Test Statistic				3.78		Nonparametric Statistics					
1284	5% A-D Critical Value				0.793		Kaplan-Meier (KM) Method					
1285	K-S Test Statistic				0.793		Mean				0.0007716	
1286	5% K-S Critical Value				0.0915		SD				0.00138	
1287	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.0001354	
1288							95% KM (t) UCL				0.0009964	
1289	Assuming Gamma Distribution						95% KM (z) UCL				0.0009944	
1290	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0009964	
1291	Minimum				0.00002		95% KM (bootstrap t) UCL				0.00112	
1292	Maximum				0.00873		95% KM (BCA) UCL				0.00102	
1293	Mean				0.0007716		95% KM (Percentile Bootstrap) UCL				0.0009943	
1294	Median				0.00034		95% KM (Chebyshev) UCL				0.00136	
1295	SD				0.00139		97.5% KM (Chebyshev) UCL				0.00162	
1296	k star				0.78		99% KM (Chebyshev) UCL				0.00212	
1297	Theta star				0.0009897							
1298	Nu star				163.7		Potential UCLs to Use					
1299	AppChi2				135.2		95% KM (Chebyshev) UCL				0.00136	
1300	95% Gamma Approximate UCL				0.0009349							

	A	B	C	D	E	F	G	H	I	J	K	L
1301	95% Adjusted Gamma UCL					0.0009373						
1302	Note: DL/2 is not a recommended method.											
1303												
1304												
1305	Niobium											
1306												
1307	General Statistics											
1308	Number of Valid Data					98	Number of Detected Data					97
1309	Number of Distinct Detected Data					75	Number of Non-Detect Data					1
1310	Number of Missing Values					44	Percent Non-Detects					1.02%
1311												
1312	Raw Statistics						Log-transformed Statistics					
1313	Minimum Detected					0.000018	Minimum Detected					-10.93
1314	Maximum Detected					0.00358	Maximum Detected					-5.632
1315	Mean of Detected					0.0004685	Mean of Detected					-8.368
1316	SD of Detected					0.0007035	SD of Detected					1.143
1317	Minimum Non-Detect					0.0001265	Minimum Non-Detect					-8.975
1318	Maximum Non-Detect					0.0001265	Maximum Non-Detect					-8.975
1319												
1320												
1321	UCL Statistics											
1322	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1323	Lilliefors Test Statistic					0.3	Lilliefors Test Statistic					0.0893
1324	5% Lilliefors Critical Value					0.09	5% Lilliefors Critical Value					0.09
1325	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1326												
1327	Assuming Normal Distribution						Assuming Lognormal Distribution					
1328	DL/2 Substitution Method						DL/2 Substitution Method					
1329	Mean					0.0004644	Mean					-8.382
1330	SD					0.000701	SD					1.145
1331	95% DL/2 (t) UCL					0.000582	95% H-Stat (DL/2) UCL					0.0005802
1332												
1333	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1334	Mean					0.0002805	Mean in Log Scale					-8.381
1335	SD					0.0008862	SD in Log Scale					1.144
1336	95% MLE (t) UCL					0.0004292	Mean in Original Scale					0.0004645
1337	95% MLE (Tiku) UCL					0.0004359	SD in Original Scale					0.000701
1338							95% Percentile Bootstrap UCL					0.0005924
1339							95% BCA Bootstrap UCL					0.0005976
1340												
1341	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1342	k star (bias corrected)					0.821	Data appear Lognormal at 5% Significance Level					
1343	Theta Star					0.000571						
1344	nu star					159.2						
1345												
1346	A-D Test Statistic					3.866	Nonparametric Statistics					
1347	5% A-D Critical Value					0.79	Kaplan-Meier (KM) Method					
1348	K-S Test Statistic					0.79	Mean					0.0004645
1349	5% K-S Critical Value					0.0941	SD					0.0006974
1350	Data not Gamma Distributed at 5% Significance Level						SE of Mean					7.081E-05
1351							95% KM (t) UCL					0.0005821
1352	Assuming Gamma Distribution						95% KM (z) UCL					0.000581

	A	B	C	D	E	F	G	H	I	J	K	L
1353	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0005821
1354					Minimum	1E-09				95% KM (bootstrap t) UCL		0.0006094
1355					Maximum	0.00358				95% KM (BCA) UCL		0.000593
1356					Mean	0.0004638				95% KM (Percentile Bootstrap) UCL		0.0005835
1357					Median	0.00022				95% KM (Chebyshev) UCL		0.0007732
1358					SD	0.0007014				97.5% KM (Chebyshev) UCL		0.0009067
1359					k star	0.718				99% KM (Chebyshev) UCL		0.00117
1360					Theta star	0.0006458						
1361					Nu star	140.8				Potential UCLs to Use		
1362					AppChi2	114.3				95% KM (Chebyshev) UCL		0.0007732
1363					95% Gamma Approximate UCL		0.0005709					
1364					95% Adjusted Gamma UCL		0.0005727					
1365	Note: DL/2 is not a recommended method.											
1366												
1367												
1368	Phosphorous (white)											
1369												
1370	General Statistics											
1371					Number of Valid Data		87			Number of Detected Data		82
1372					Number of Distinct Detected Data		80			Number of Non-Detect Data		5
1373					Number of Missing Values		63			Percent Non-Detects		5.75%
1374												
1375	Raw Statistics					Log-transformed Statistics						
1376					Minimum Detected		0.00122			Minimum Detected		-6.707
1377					Maximum Detected		3.885			Maximum Detected		1.357
1378					Mean of Detected		0.245			Mean of Detected		-2.691
1379					SD of Detected		0.6			SD of Detected		1.585
1380					Minimum Non-Detect		0.00247			Minimum Non-Detect		-6.004
1381					Maximum Non-Detect		0.0919			Maximum Non-Detect		-2.387
1382												
1383	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect		50
1384	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		37
1385	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		57.47%
1386												
1387	UCL Statistics											
1388	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1389					Lilliefors Test Statistic		0.381			Lilliefors Test Statistic		0.127
1390					5% Lilliefors Critical Value		0.0978			5% Lilliefors Critical Value		0.0978
1391	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1392												
1393	Assuming Normal Distribution					Assuming Lognormal Distribution						
1394					DL/2 Substitution Method					DL/2 Substitution Method		
1395					Mean		0.231			Mean		-2.851
1396					SD		0.584			SD		1.697
1397					95% DL/2 (t) UCL		0.336			95% H-Stat (DL/2) UCL		0.375
1398												
1399					Maximum Likelihood Estimate(MLE) Method		N/A			Log ROS Method		
1400	MLE yields a negative mean									Mean in Log Scale		-2.841
1401										SD in Log Scale		1.665
1402										Mean in Original Scale		0.231
1403										SD in Original Scale		0.584
1404										95% Percentile Bootstrap UCL		0.346

	A	B	C	D	E	F	G	H	I	J	K	L
1405							95% BCA Bootstrap UCL					0.379
1406												
1407	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1408	k star (bias corrected)					0.485	Data do not follow a Discernable Distribution (0.05)					
1409	Theta Star					0.504						
1410	nu star					79.62						
1411												
1412	A-D Test Statistic					4.373	Nonparametric Statistics					
1413	5% A-D Critical Value					0.82	Kaplan-Meier (KM) Method					
1414	K-S Test Statistic					0.82	Mean					0.231
1415	5% K-S Critical Value					0.104	SD					0.581
1416	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0627
1417							95% KM (t) UCL					0.336
1418	Assuming Gamma Distribution						95% KM (z) UCL					0.334
1419	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.335
1420	Minimum					1E-09	95% KM (bootstrap t) UCL					0.437
1421	Maximum					3.885	95% KM (BCA) UCL					0.347
1422	Mean					0.231	95% KM (Percentile Bootstrap) UCL					0.338
1423	Median					0.0782	95% KM (Chebyshev) UCL					0.505
1424	SD					0.585	97.5% KM (Chebyshev) UCL					0.623
1425	k star					0.301	99% KM (Chebyshev) UCL					0.855
1426	Theta star					0.766						
1427	Nu star					52.45	Potential UCLs to Use					
1428	AppChi2					36.82	97.5% KM (Chebyshev) UCL					0.623
1429	95% Gamma Approximate UCL					0.329						
1430	95% Adjusted Gamma UCL					0.331						
1431	Note: DL/2 is not a recommended method.											
1432												
1433												
1434	Rubidium											
1435												
1436	General Statistics											
1437	Number of Valid Data					117	Number of Detected Data					109
1438	Number of Distinct Detected Data					74	Number of Non-Detect Data					8
1439	Number of Missing Values					36	Percent Non-Detects					6.84%
1440												
1441	Raw Statistics						Log-transformed Statistics					
1442	Minimum Detected					0.00005	Minimum Detected					-9.903
1443	Maximum Detected					0.00962	Maximum Detected					-4.643
1444	Mean of Detected					0.0011	Mean of Detected					-7.438
1445	SD of Detected					0.00157	SD of Detected					1.102
1446	Minimum Non-Detect					0.0001632	Minimum Non-Detect					-8.721
1447	Maximum Non-Detect					0.00675	Maximum Non-Detect					-4.998
1448												
1449	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					115
1450	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					2
1451	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					98.29%
1452												
1453	UCL Statistics											
1454	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1455	Lilliefors Test Statistic					0.28	Lilliefors Test Statistic					0.0778
1456	5% Lilliefors Critical Value					0.0849	5% Lilliefors Critical Value					0.0849

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1458													
1459	Assuming Normal Distribution						Assuming Lognormal Distribution						
1460	DL/2 Substitution Method						DL/2 Substitution Method						
1461					Mean	0.00108					Mean	-7.47	
1462					SD	0.00155					SD	1.12	
1463					95% DL/2 (t) UCL	0.00132					95% H-Stat (DL/2) UCL	0.00143	
1464													
1465	Maximum Likelihood Estimate(MLE) Method						N/A						
1466	MLE method failed to converge properly						Log ROS Method						
1467							Mean in Log Scale						-7.496
1468							SD in Log Scale						1.095
1469							Mean in Original Scale						0.00104
1470							SD in Original Scale						0.00153
1471							95% Percentile Bootstrap UCL						0.00129
1472							95% BCA Bootstrap UCL						0.00133
1473	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1474					k star (bias corrected)	0.911	Data appear Lognormal at 5% Significance Level						
1475					Theta Star	0.00121							
1476					nu star	198.7							
1477													
1478					A-D Test Statistic	2.973	Nonparametric Statistics						
1479					5% A-D Critical Value	0.786	Kaplan-Meier (KM) Method						
1480					K-S Test Statistic	0.786					Mean	0.00105	
1481					5% K-S Critical Value	0.09					SD	0.00153	
1482	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.0001426
1483							95% KM (t) UCL						0.00129
1484	Assuming Gamma Distribution						95% KM (z) UCL						0.00129
1485	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.00129
1486					Minimum	1E-09					95% KM (bootstrap t) UCL	0.00134	
1487					Maximum	0.00962					95% KM (BCA) UCL	0.00132	
1488					Mean	0.00105					95% KM (Percentile Bootstrap) UCL	0.0013	
1489					Median	0.0006					95% KM (Chebyshev) UCL	0.00167	
1490					SD	0.00153					97.5% KM (Chebyshev) UCL	0.00194	
1491					k star	0.639					99% KM (Chebyshev) UCL	0.00247	
1492					Theta star	0.00165							
1493					Nu star	149.6	Potential UCLs to Use						
1494					AppChi2	122.3					95% KM (Chebyshev) UCL	0.00167	
1495					95% Gamma Approximate UCL	0.00129							
1496					95% Adjusted Gamma UCL	0.00129							
1497	Note: DL/2 is not a recommended method.												
1498													
1499													
1500	Scandium												
1501													
1502	General Statistics												
1503					Number of Valid Data	110					Number of Detected Data	103	
1504					Number of Distinct Detected Data	54					Number of Non-Detect Data	7	
1505					Number of Missing Values	43					Percent Non-Detects	6.36%	
1506													
1507	Raw Statistics						Log-transformed Statistics						
1508					Minimum Detected	0.000004					Minimum Detected	-12.43	

	A	B	C	D	E	F	G	H	I	J	K	L	
1509				Maximum Detected		0.00188				Maximum Detected		-6.279	
1510				Mean of Detected		0.0001607				Mean of Detected		-9.331	
1511				SD of Detected		0.0002329				SD of Detected		1.178	
1512				Minimum Non-Detect		0.0000612				Minimum Non-Detect		-9.701	
1513				Maximum Non-Detect		0.0002735				Maximum Non-Detect		-8.204	
1514													
1515	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				100	
1516	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				10	
1517	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				90.91%	
1518													
1519	UCL Statistics												
1520	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1521				Lilliefors Test Statistic		0.251				Lilliefors Test Statistic		0.166	
1522				5% Lilliefors Critical Value		0.0873				5% Lilliefors Critical Value		0.0873	
1523	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1524													
1525	Assuming Normal Distribution						Assuming Lognormal Distribution						
1526				DL/2 Substitution Method						DL/2 Substitution Method			
1527				Mean		0.0001553				Mean		-9.349	
1528				SD		0.0002265				SD		1.15	
1529				95% DL/2 (t) UCL		0.0001911				95% H-Stat (DL/2) UCL		0.0002138	
1530													
1531				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1532	MLE yields a negative mean										Mean in Log Scale		-9.369
1533										SD in Log Scale		1.152	
1534										Mean in Original Scale		0.0001537	
1535										SD in Original Scale		0.0002269	
1536										95% Percentile Bootstrap UCL		0.0001912	
1537										95% BCA Bootstrap UCL		0.000205	
1538													
1539	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1540				k star (bias corrected)		0.952	Data do not follow a Discernable Distribution (0.05)						
1541				Theta Star		0.0001688							
1542				nu star		196.1							
1543													
1544				A-D Test Statistic		1.874	Nonparametric Statistics						
1545				5% A-D Critical Value		0.784	Kaplan-Meier (KM) Method						
1546				K-S Test Statistic		0.784				Mean		0.0001547	
1547				5% K-S Critical Value		0.0914				SD		0.0002258	
1548	Data not Gamma Distributed at 5% Significance Level										SE of Mean		2.167E-05
1549											95% KM (t) UCL		0.0001907
1550	Assuming Gamma Distribution										95% KM (z) UCL		0.0001904
1551				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		0.0001907	
1552				Minimum		1E-09				95% KM (bootstrap t) UCL		0.000212	
1553				Maximum		0.00188				95% KM (BCA) UCL		0.0001957	
1554				Mean		0.0001559				95% KM (Percentile Bootstrap) UCL		0.0001922	
1555				Median		0.000101				95% KM (Chebyshev) UCL		0.0002492	
1556				SD		0.0002264				97.5% KM (Chebyshev) UCL		0.0002901	
1557				k star		0.863				99% KM (Chebyshev) UCL		0.0003703	
1558				Theta star		0.0001807							
1559				Nu star		189.9	Potential UCLs to Use						
1560				AppChi2		159				95% KM (Chebyshev) UCL		0.0002492	

	A	B	C	D	E	F	G	H	I	J	K	L
1561	95% Gamma Approximate UCL					0.0001862						
1562	95% Adjusted Gamma UCL					0.0001867						
1563	Note: DL/2 is not a recommended method.											
1564												
1565												
1566	Silver											
1567												
1568	General Statistics											
1569	Number of Valid Data					105	Number of Detected Data					97
1570	Number of Distinct Detected Data					35	Number of Non-Detect Data					8
1571	Number of Missing Values					48	Percent Non-Detects					7.62%
1572												
1573	Raw Statistics						Log-transformed Statistics					
1574	Minimum Detected					6.11E-06	Minimum Detected					-12.01
1575	Maximum Detected					0.00046	Maximum Detected					-7.684
1576	Mean of Detected					4.827E-05	Mean of Detected					-10.53
1577	SD of Detected					7.8E-05	SD of Detected					0.964
1578	Minimum Non-Detect					2.136E-05	Minimum Non-Detect					-10.75
1579	Maximum Non-Detect					0.0008351	Maximum Non-Detect					-7.088
1580												
1581	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					105
1582	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
1583	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
1584												
1585	UCL Statistics											
1586	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1587	Lilliefors Test Statistic					0.298	Lilliefors Test Statistic					0.134
1588	5% Lilliefors Critical Value					0.09	5% Lilliefors Critical Value					0.09
1589	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1590												
1591	Assuming Normal Distribution						Assuming Lognormal Distribution					
1592	DL/2 Substitution Method						DL/2 Substitution Method					
1593	Mean					5.776E-05	Mean					-10.45
1594	SD					9.301E-05	SD					1.052
1595	95% DL/2 (t) UCL					7.283E-05	95% H-Stat (DL/2) UCL					6.187E-05
1596												
1597	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1598	MLE method failed to converge properly						Mean in Log Scale					-10.55
1599							SD in Log Scale					0.931
1600							Mean in Original Scale					4.624E-05
1601							SD in Original Scale					7.528E-05
1602							95% Percentile Bootstrap UCL					5.855E-05
1603							95% BCA Bootstrap UCL					6.271E-05
1604												
1605	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1606	k star (bias corrected)					0.953	Data do not follow a Discernable Distribution (0.05)					
1607	Theta Star					5.067E-05						
1608	nu star					184.8						
1609												
1610	A-D Test Statistic					5.969	Nonparametric Statistics					
1611	5% A-D Critical Value					0.784	Kaplan-Meier (KM) Method					
1612	K-S Test Statistic					0.784	Mean					4.703E-05

	A	B	C	D	E	F	G	H	I	J	K	L		
1613	5% K-S Critical Value					0.0937	SD					7.631E-05		
1614	Data not Gamma Distributed at 5% Significance Level						SE of Mean					7.635E-06		
1615							95% KM (t) UCL					5.97E-05		
1616	Assuming Gamma Distribution						95% KM (z) UCL					5.959E-05		
1617	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5.97E-05		
1618					Minimum	6.11E-06	95% KM (bootstrap t) UCL					6.524E-05		
1619					Maximum	0.00046	95% KM (BCA) UCL					6.038E-05		
1620					Mean	4.73E-05	95% KM (Percentile Bootstrap) UCL					6.089E-05		
1621					Median	2.522E-05	95% KM (Chebyshev) UCL					8.031E-05		
1622					SD	7.517E-05	97.5% KM (Chebyshev) UCL					9.471E-05		
1623					k star	0.994	99% KM (Chebyshev) UCL					0.000123		
1624					Theta star	4.757E-05								
1625					Nu star	208.8	Potential UCLs to Use							
1626					AppChi2	176.4	95% KM (BCA) UCL					6.038E-05		
1627	95% Gamma Approximate UCL					5.6E-05								
1628	95% Adjusted Gamma UCL					5.613E-05								
1629	Note: DL/2 is not a recommended method.													
1630														
1631														
1632	Strontium, stable													
1633														
1634	General Statistics													
1635	Number of Valid Data					122	Number of Detected Data					120		
1636	Number of Distinct Detected Data					101	Number of Non-Detect Data					2		
1637	Number of Missing Values					31	Percent Non-Detects					1.64%		
1638														
1639	Raw Statistics						Log-transformed Statistics							
1640					Minimum Detected	0.0001					Minimum Detected	-9.21		
1641					Maximum Detected	0.0263					Maximum Detected	-3.637		
1642					Mean of Detected	0.00246					Mean of Detected	-6.569		
1643					SD of Detected	0.00336					SD of Detected	1.081		
1644					Minimum Non-Detect	0.0008268					Minimum Non-Detect	-7.098		
1645					Maximum Non-Detect	0.00647					Maximum Non-Detect	-5.04		
1646														
1647	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					113		
1648	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					9		
1649	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					92.62%		
1650														
1651	UCL Statistics													
1652	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1653					Lilliefors Test Statistic	0.242					Lilliefors Test Statistic	0.0697		
1654					5% Lilliefors Critical Value	0.0809					5% Lilliefors Critical Value	0.0809		
1655	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1656														
1657	Assuming Normal Distribution						Assuming Lognormal Distribution							
1658	DL/2 Substitution Method						DL/2 Substitution Method							
1659					Mean	0.00245					Mean	-6.572		
1660					SD	0.00334					SD	1.08		
1661					95% DL/2 (t) UCL	0.00295					95% H-Stat (DL/2) UCL	0.00316		
1662														
1663	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
1664	MLE yields a negative mean												Mean in Log Scale	-6.579

	A	B	C	D	E	F	G	H	I	J	K	L
1665											SD in Log Scale	1.077
1666											Mean in Original Scale	0.00243
1667											SD in Original Scale	0.00334
1668											95% Percentile Bootstrap UCL	0.00297
1669											95% BCA Bootstrap UCL	0.00309
1670												
1671	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1672	k star (bias corrected)					1.006	Data appear Lognormal at 5% Significance Level					
1673	Theta Star					0.00244						
1674	nu star					241.4						
1675												
1676	A-D Test Statistic					1.657	Nonparametric Statistics					
1677	5% A-D Critical Value					0.782	Kaplan-Meier (KM) Method					
1678	K-S Test Statistic					0.782	Mean					0.00244
1679	5% K-S Critical Value					0.0868	SD					0.00333
1680	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.0003029
1681											95% KM (t) UCL	0.00294
1682	Assuming Gamma Distribution										95% KM (z) UCL	0.00293
1683	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.00294
1684	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00313
1685	Maximum					0.0263	95% KM (BCA) UCL					0.00301
1686	Mean					0.00244	95% KM (Percentile Bootstrap) UCL					0.00297
1687	Median					0.00149	95% KM (Chebyshev) UCL					0.00376
1688	SD					0.00334	97.5% KM (Chebyshev) UCL					0.00433
1689	k star					0.866	99% KM (Chebyshev) UCL					0.00545
1690	Theta star					0.00281						
1691	Nu star					211.4	Potential UCLs to Use					
1692	AppChi2					178.7	95% KM (Chebyshev) UCL					0.00376
1693	95% Gamma Approximate UCL					0.00288						
1694	95% Adjusted Gamma UCL					0.00289						
1695	Note: DL/2 is not a recommended method.											
1696												
1697												
1698	Thallium											
1699												
1700	General Statistics											
1701	Number of Valid Data					94	Number of Detected Data					91
1702	Number of Distinct Detected Data					30	Number of Non-Detect Data					3
1703	Number of Missing Values					51	Percent Non-Detects					3.19%
1704												
1705	Raw Statistics					Log-transformed Statistics						
1706	Minimum Detected					0.000006	Minimum Detected					-12.02
1707	Maximum Detected					0.00013	Maximum Detected					-8.948
1708	Mean of Detected					2.172E-05	Mean of Detected					-11.07
1709	SD of Detected					2.315E-05	SD of Detected					0.74
1710	Minimum Non-Detect					9.18E-06	Minimum Non-Detect					-11.6
1711	Maximum Non-Detect					2.137E-05	Maximum Non-Detect					-10.75
1712												
1713	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	70
1714	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	24
1715	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	74.47%
1716												

	A	B	C	D	E	F	G	H	I	J	K	L	
1717	UCL Statistics												
1718	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1719	Lilliefors Test Statistic					0.274	Lilliefors Test Statistic					0.263	
1720	5% Lilliefors Critical Value					0.0929	5% Lilliefors Critical Value					0.0929	
1721	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1722													
1723	Assuming Normal Distribution						Assuming Lognormal Distribution						
1724	DL/2 Substitution Method						DL/2 Substitution Method						
1725	Mean					2.127E-05	Mean					-11.1	
1726	SD					2.292E-05	SD					0.743	
1727	95% DL/2 (t) UCL					2.52E-05	95% H-Stat (DL/2) UCL					2.395E-05	
1728													
1729	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1730	MLE yields a negative mean						Mean in Log Scale						-11.09
1731							SD in Log Scale						0.737
1732							Mean in Original Scale						2.133E-05
1733							SD in Original Scale						2.288E-05
1734							95% Percentile Bootstrap UCL						2.515E-05
1735							95% BCA Bootstrap UCL						2.609E-05
1736													
1737	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1738	k star (bias corrected)					1.593	Data do not follow a Discernable Distribution (0.05)						
1739	Theta Star					1.363E-05							
1740	nu star					290							
1741													
1742	A-D Test Statistic					7.591	Nonparametric Statistics						
1743	5% A-D Critical Value					0.77	Kaplan-Meier (KM) Method						
1744	K-S Test Statistic					0.77	Mean					2.133E-05	
1745	5% K-S Critical Value					0.0953	SD					2.277E-05	
1746	Data not Gamma Distributed at 5% Significance Level						SE of Mean						2.362E-06
1747							95% KM (t) UCL						2.525E-05
1748	Assuming Gamma Distribution						95% KM (z) UCL						2.521E-05
1749	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						2.525E-05
1750	Minimum					1E-09	95% KM (bootstrap t) UCL						2.653E-05
1751	Maximum					0.00013	95% KM (BCA) UCL						2.592E-05
1752	Mean					2.137E-05	95% KM (Percentile Bootstrap) UCL						2.544E-05
1753	Median					0.00001	95% KM (Chebyshev) UCL						3.162E-05
1754	SD					2.29E-05	97.5% KM (Chebyshev) UCL						3.607E-05
1755	k star					1.295	99% KM (Chebyshev) UCL						4.482E-05
1756	Theta star					1.649E-05							
1757	Nu star					243.5	Potential UCLs to Use						
1758	AppChi2					208.4	95% KM (BCA) UCL						2.592E-05
1759	95% Gamma Approximate UCL					2.497E-05							
1760	95% Adjusted Gamma UCL					2.503E-05							
1761	Note: DL/2 is not a recommended method.												
1762													
1763													
1764	Thorium												
1765													
1766	General Statistics												
1767	Number of Valid Data					95	Number of Detected Data					86	
1768	Number of Distinct Detected Data					51	Number of Non-Detect Data					9	

	A	B	C	D	E	F	G	H	I	J	K	L
1769	Number of Missing Values					51	Percent Non-Detects					9.47%
1770												
1771	Raw Statistics						Log-transformed Statistics					
1772	Minimum Detected				0.000006		Minimum Detected				-12.02	
1773	Maximum Detected				0.00115		Maximum Detected				-6.768	
1774	Mean of Detected				0.0001371		Mean of Detected				-9.379	
1775	SD of Detected				0.0001907		SD of Detected				0.941	
1776	Minimum Non-Detect				2.233E-05		Minimum Non-Detect				-10.71	
1777	Maximum Non-Detect				0.000494		Maximum Non-Detect				-7.613	
1778												
1779	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				89	
1780	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				6	
1781	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				93.68%	
1782												
1783	UCL Statistics											
1784	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1785	Lilliefors Test Statistic				0.273		Lilliefors Test Statistic				0.0906	
1786	5% Lilliefors Critical Value				0.0955		5% Lilliefors Critical Value				0.0955	
1787	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1788												
1789	Assuming Normal Distribution						Assuming Lognormal Distribution					
1790	DL/2 Substitution Method						DL/2 Substitution Method					
1791	Mean				0.000132		Mean				-9.432	
1792	SD				0.0001837		SD				0.971	
1793	95% DL/2 (t) UCL				0.0001633		95% H-Stat (DL/2) UCL				0.0001664	
1794												
1795	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1796	Mean				0.0008642		Mean in Log Scale				-9.454	
1797	SD				0.0002402		SD in Log Scale				0.944	
1798	95% MLE (t) UCL				0.0009051		Mean in Original Scale				0.0001284	
1799	95% MLE (Tiku) UCL				0.00102		SD in Original Scale				0.0001835	
1800							95% Percentile Bootstrap UCL				0.000161	
1801							95% BCA Bootstrap UCL				0.0001714	
1802												
1803	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1804	k star (bias corrected)				1.137		Data appear Lognormal at 5% Significance Level					
1805	Theta Star				0.0001206							
1806	nu star				195.6							
1807												
1808	A-D Test Statistic				3.219		Nonparametric Statistics					
1809	5% A-D Critical Value				0.779		Kaplan-Meier (KM) Method					
1810	K-S Test Statistic				0.779		Mean				0.000129	
1811	5% K-S Critical Value				0.0989		SD				0.0001827	
1812	Data not Gamma Distributed at 5% Significance Level						SE of Mean				1.89E-05	
1813							95% KM (t) UCL				0.0001604	
1814	Assuming Gamma Distribution						95% KM (z) UCL				0.0001601	
1815	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0001604	
1816	Minimum				1E-09		95% KM (bootstrap t) UCL				0.000175	
1817	Maximum				0.00115		95% KM (BCA) UCL				0.0001611	
1818	Mean				0.0001305		95% KM (Percentile Bootstrap) UCL				0.0001614	
1819	Median				8.364E-05		95% KM (Chebyshev) UCL				0.0002114	
1820	SD				0.0001836		97.5% KM (Chebyshev) UCL				0.000247	

	A	B	C	D	E	F	G	H	I	J	K	L	
1821					k star	0.734					99% KM (Chebyshev) UCL	0.000317	
1822					Theta star	0.0001778							
1823					Nu star	139.4				Potential UCLs to Use			
1824					AppChi2	113.1					95% KM (BCA) UCL	0.0001611	
1825					95% Gamma Approximate UCL	0.0001608							
1826					95% Adjusted Gamma UCL	0.0001614							
1827	Note: DL/2 is not a recommended method.												
1828													
1829													
1830	Titanium												
1831													
1832	General Statistics												
1833					Number of Valid Data	103					Number of Detected Data	101	
1834					Number of Distinct Detected Data	98					Number of Non-Detect Data	2	
1835					Number of Missing Values	45					Percent Non-Detects	1.94%	
1836													
1837	Raw Statistics						Log-transformed Statistics						
1838					Minimum Detected	0.00273					Minimum Detected	-5.903	
1839					Maximum Detected	0.618					Maximum Detected	-0.481	
1840					Mean of Detected	0.0527					Mean of Detected	-3.478	
1841					SD of Detected	0.076					SD of Detected	1.038	
1842					Minimum Non-Detect	0.00765					Minimum Non-Detect	-4.873	
1843					Maximum Non-Detect	0.00838					Maximum Non-Detect	-4.781	
1844													
1845	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	17
1846	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	86
1847	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	16.50%
1848													
1849	UCL Statistics												
1850	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1851					Lilliefors Test Statistic	0.255					Lilliefors Test Statistic	0.0854	
1852					5% Lilliefors Critical Value	0.0882					5% Lilliefors Critical Value	0.0882	
1853	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1854													
1855	Assuming Normal Distribution						Assuming Lognormal Distribution						
1856					DL/2 Substitution Method						DL/2 Substitution Method		
1857					Mean	0.0518					Mean	-3.518	
1858					SD	0.0756					SD	1.066	
1859					95% DL/2 (t) UCL	0.0642					95% H-Stat (DL/2) UCL	0.0658	
1860													
1861					Maximum Likelihood Estimate(MLE) Method						Log ROS Method		
1862					Mean	0.0429					Mean in Log Scale	-3.508	
1863					SD	0.085					SD in Log Scale	1.05	
1864					95% MLE (t) UCL	0.0568					Mean in Original Scale	0.0518	
1865					95% MLE (Tiku) UCL	0.0563					SD in Original Scale	0.0756	
1866											95% Percentile Bootstrap UCL	0.065	
1867											95% BCA Bootstrap UCL	0.0702	
1868													
1869	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1870					k star (bias corrected)	1.044					Data appear Lognormal at 5% Significance Level		
1871					Theta Star	0.0505							
1872					nu star	210.9							

	A	B	C	D	E	F	G	H	I	J	K	L
1873												
1874	A-D Test Statistic					1.452	Nonparametric Statistics					
1875	5% A-D Critical Value					0.781	Kaplan-Meier (KM) Method					
1876	K-S Test Statistic					0.781	Mean					0.0518
1877	5% K-S Critical Value					0.0917	SD					0.0752
1878	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00745
1879							95% KM (t) UCL					0.0642
1880	Assuming Gamma Distribution						95% KM (z) UCL					0.0641
1881	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0642
1882	Minimum					1E-09	95% KM (bootstrap t) UCL					0.073
1883	Maximum					0.618	95% KM (BCA) UCL					0.0657
1884	Mean					0.0517	95% KM (Percentile Bootstrap) UCL					0.0652
1885	Median					0.0341	95% KM (Chebyshev) UCL					0.0843
1886	SD					0.0757	97.5% KM (Chebyshev) UCL					0.0983
1887	k star					0.695	99% KM (Chebyshev) UCL					0.126
1888	Theta star					0.0744						
1889	Nu star					143.1	Potential UCLs to Use					
1890	AppChi2					116.5	95% KM (Chebyshev) UCL					0.0843
1891	95% Gamma Approximate UCL					0.0635						
1892	95% Adjusted Gamma UCL					0.0637						
1893	Note: DL/2 is not a recommended method.											
1894												
1895												
1896	Uranium											
1897												
1898	General Statistics											
1899	Number of Valid Data					72	Number of Detected Data					65
1900	Number of Distinct Detected Data					40	Number of Non-Detect Data					7
1901	Number of Missing Values					76	Percent Non-Detects					9.72%
1902												
1903	Raw Statistics						Log-transformed Statistics					
1904	Minimum Detected					0.000002	Minimum Detected					-13.12
1905	Maximum Detected					0.00227	Maximum Detected					-6.088
1906	Mean of Detected					0.0001007	Mean of Detected					-10.14
1907	SD of Detected					0.0002957	SD of Detected					1.195
1908	Minimum Non-Detect					4.278E-05	Minimum Non-Detect					-10.06
1909	Maximum Non-Detect					0.0002687	Maximum Non-Detect					-8.222
1910												
1911	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					69
1912	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
1913	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					95.83%
1914												
1915	UCL Statistics											
1916	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1917	Lilliefors Test Statistic					0.38	Lilliefors Test Statistic					0.105
1918	5% Lilliefors Critical Value					0.11	5% Lilliefors Critical Value					0.11
1919	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1920												
1921	Assuming Normal Distribution						Assuming Lognormal Distribution					
1922	DL/2 Substitution Method						DL/2 Substitution Method					
1923	Mean					9.555E-05	Mean					-10.14
1924	SD					0.0002814	SD					1.149

	A	B	C	D	E	F	G	H	I	J	K	L	
1925	95% DL/2 (t) UCL					0.0001508	95% H-Stat (DL/2) UCL					0.000118	
1926													
1927	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1928	MLE yields a negative mean					Mean in Log Scale					-10.19		
1929						SD in Log Scale					1.148		
1930						Mean in Original Scale					9.332E-05		
1931						SD in Original Scale					0.0002816		
1932						95% Percentile Bootstrap UCL					0.0001522		
1933						95% BCA Bootstrap UCL					0.0001919		
1934													
1935	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
1936	k star (bias corrected)					0.63		Data appear Lognormal at 5% Significance Level					
1937	Theta Star					0.0001597							
1938	nu star					81.95							
1939													
1940	A-D Test Statistic					4.026		Nonparametric Statistics					
1941	5% A-D Critical Value					0.802		Kaplan-Meier (KM) Method					
1942	K-S Test Statistic					0.802		Mean					9.394E-05
1943	5% K-S Critical Value					0.116		SD					0.0002796
1944	Data not Gamma Distributed at 5% Significance Level					SE of Mean					3.322E-05		
1945						95% KM (t) UCL					0.0001493		
1946	Assuming Gamma Distribution					95% KM (z) UCL					0.0001486		
1947	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.0001493		
1948	Minimum					1E-09		95% KM (bootstrap t) UCL					0.00035
1949	Maximum					0.00227		95% KM (BCA) UCL					0.0001506
1950	Mean					9.491E-05		95% KM (Percentile Bootstrap) UCL					0.0001545
1951	Median					4.317E-05		95% KM (Chebyshev) UCL					0.0002388
1952	SD					0.0002814		97.5% KM (Chebyshev) UCL					0.0003014
1953	k star					0.59		99% KM (Chebyshev) UCL					0.0004245
1954	Theta star					0.0001608							
1955	Nu star					85.01		Potential UCLs to Use					
1956	AppChi2					64.76		95% KM (Chebyshev) UCL					0.0002388
1957	95% Gamma Approximate UCL					0.0001246							
1958	95% Adjusted Gamma UCL					0.0001253							
1959	Note: DL/2 is not a recommended method.												
1960													
1961													
1962	Vanadium												
1963													
1964	General Statistics												
1965	Number of Valid Data					125		Number of Detected Data					119
1966	Number of Distinct Detected Data					105		Number of Non-Detect Data					6
1967	Number of Missing Values					27		Percent Non-Detects					4.80%
1968													
1969	Raw Statistics					Log-transformed Statistics							
1970	Minimum Detected					0.00004		Minimum Detected					-10.13
1971	Maximum Detected					0.0118		Maximum Detected					-4.443
1972	Mean of Detected					0.00112		Mean of Detected					-7.28
1973	SD of Detected					0.00143		SD of Detected					1.019
1974	Minimum Non-Detect					0.0003049		Minimum Non-Detect					-8.095
1975	Maximum Non-Detect					0.00162		Maximum Non-Detect					-6.426
1976													

	A	B	C	D	E	F	G	H	I	J	K	L	
1977	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					102	
1978	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					23	
1979	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					81.60%	
1980													
1981	UCL Statistics												
1982	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1983	Lilliefors Test Statistic			0.224			Lilliefors Test Statistic			0.067			
1984	5% Lilliefors Critical Value			0.0812			5% Lilliefors Critical Value			0.0812			
1985	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1986													
1987	Assuming Normal Distribution						Assuming Lognormal Distribution						
1988	DL/2 Substitution Method						DL/2 Substitution Method						
1989	Mean			0.00109			Mean			-7.317			
1990	SD			0.0014			SD			1.015			
1991	95% DL/2 (t) UCL			0.0013			95% H-Stat (DL/2) UCL			0.00132			
1992													
1993	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method
1994	MLE yields a negative mean						Mean in Log Scale			-7.32			
1995							SD in Log Scale			1.013			
1996							Mean in Original Scale			0.00109			
1997							SD in Original Scale			0.0014			
1998							95% Percentile Bootstrap UCL			0.00131			
1999							95% BCA Bootstrap UCL			0.00136			
2000													
2001	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2002	k star (bias corrected)			1.136			Data Follow Appr. Gamma Distribution at 5% Significance Level						
2003	Theta Star			0.0009896									
2004	nu star			270.4									
2005													
2006	A-D Test Statistic			1.021			Nonparametric Statistics						
2007	5% A-D Critical Value			0.779			Kaplan-Meier (KM) Method						
2008	K-S Test Statistic			0.779			Mean			0.00109			
2009	5% K-S Critical Value			0.0868			SD			0.0014			
2010	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean			0.0001256			
2011							95% KM (t) UCL			0.0013			
2012	Assuming Gamma Distribution						95% KM (z) UCL			0.00129			
2013	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			0.0013			
2014	Minimum			1E-09			95% KM (bootstrap t) UCL			0.00137			
2015	Maximum			0.0118			95% KM (BCA) UCL			0.00132			
2016	Mean			0.00109			95% KM (Percentile Bootstrap) UCL			0.0013			
2017	Median			0.00076			95% KM (Chebyshev) UCL			0.00163			
2018	SD			0.0014			97.5% KM (Chebyshev) UCL			0.00187			
2019	k star			0.939			99% KM (Chebyshev) UCL			0.00234			
2020	Theta star			0.00116									
2021	Nu star			234.8			Potential UCLs to Use						
2022	AppChi2			200.3			95% KM (Chebyshev) UCL			0.00163			
2023	95% Gamma Approximate UCL			0.00127									
2024	95% Adjusted Gamma UCL			0.00127									
2025	Note: DL/2 is not a recommended method.												
2026													
2027													
2028	Ytterbium												

	A	B	C	D	E	F	G	H	I	J	K	L	
2029													
2030	General Statistics												
2031	Number of Valid Data					100		Number of Detected Data					97
2032	Number of Distinct Detected Data					57		Number of Non-Detect Data					3
2033	Number of Missing Values					53		Percent Non-Detects					3.00%
2034													
2035	Raw Statistics						Log-transformed Statistics						
2036	Minimum Detected					0.00002		Minimum Detected					-10.82
2037	Maximum Detected					0.00915		Maximum Detected					-4.694
2038	Mean of Detected					0.0006584		Mean of Detected					-8.106
2039	SD of Detected					0.00124		SD of Detected					1.131
2040	Minimum Non-Detect					0.00122		Minimum Non-Detect					-6.707
2041	Maximum Non-Detect					0.00424		Maximum Non-Detect					-5.462
2042													
2043	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						98
2044	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						2
2045	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						98.00%
2046													
2047	UCL Statistics												
2048	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2049	Lilliefors Test Statistic					0.334		Lilliefors Test Statistic					0.0987
2050	5% Lilliefors Critical Value					0.09		5% Lilliefors Critical Value					0.09
2051	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2052													
2053	Assuming Normal Distribution						Assuming Lognormal Distribution						
2054	DL/2 Substitution Method							DL/2 Substitution Method					
2055	Mean					0.0006771		Mean					-8.066
2056	SD					0.00123		SD					1.14
2057	95% DL/2 (t) UCL					0.0008807		95% H-Stat (DL/2) UCL					0.0008106
2058													
2059	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
2060	MLE method failed to converge properly						Mean in Log Scale						-8.109
2061							SD in Log Scale						1.114
2062							Mean in Original Scale						0.0006467
2063							SD in Original Scale						0.00122
2064							95% Percentile Bootstrap UCL						0.0008561
2065							95% BCA Bootstrap UCL						0.0009308
2066													
2067	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2068	k star (bias corrected)					0.748		Data do not follow a Discernable Distribution (0.05)					
2069	Theta Star					0.0008799							
2070	nu star					145.2							
2071													
2072	A-D Test Statistic					5.857		Nonparametric Statistics					
2073	5% A-D Critical Value					0.794		Kaplan-Meier (KM) Method					
2074	K-S Test Statistic					0.794		Mean					0.0006505
2075	5% K-S Critical Value					0.0944		SD					0.00121
2076	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.0001224
2077							95% KM (t) UCL						0.0008538
2078	Assuming Gamma Distribution						95% KM (z) UCL						0.0008519
2079	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0008537
2080	Minimum					0.00002		95% KM (bootstrap t) UCL					0.0009728

	A	B	C	D	E	F	G	H	I	J	K	L	
2081					Maximum	0.00915				95% KM (BCA) UCL		0.0008549	
2082					Mean	0.000654				95% KM (Percentile Bootstrap) UCL		0.0008682	
2083					Median	0.0003				95% KM (Chebyshev) UCL		0.00118	
2084					SD	0.00122				97.5% KM (Chebyshev) UCL		0.00142	
2085					k star	0.768				99% KM (Chebyshev) UCL		0.00187	
2086					Theta star	0.0008515							
2087					Nu star	153.6				Potential UCLs to Use			
2088					AppChi2	126				95% KM (Chebyshev) UCL		0.00118	
2089					95% Gamma Approximate UCL	0.0007976							
2090					95% Adjusted Gamma UCL	0.0007999							
2091	Note: DL/2 is not a recommended method.												
2092													
2093													
2094	Zinc												
2095													
2096	General Statistics												
2097					Number of Valid Data	124				Number of Detected Data		124	
2098					Number of Distinct Detected Data	105				Number of Non-Detect Data		0	
2099					Number of Missing Values	29				Percent Non-Detects		0.00%	
2100													
2101	Raw Statistics						Log-transformed Statistics						
2102					Minimum Detected	0.00035				Minimum Detected		-7.958	
2103					Maximum Detected	0.106				Maximum Detected		-2.244	
2104					Mean of Detected	0.011				Mean of Detected		-5.005	
2105					SD of Detected	0.0151				SD of Detected		0.98	
2106					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
2107					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
2108													
2109													
2110	UCL Statistics												
2111	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2112					Lilliefors Test Statistic	0.25				Lilliefors Test Statistic		0.0865	
2113					5% Lilliefors Critical Value	0.0796				5% Lilliefors Critical Value		0.0796	
2114	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2115													
2116	Assuming Normal Distribution						Assuming Lognormal Distribution						
2117					DL/2 Substitution Method					DL/2 Substitution Method			
2118					Mean	0.011				Mean		-5.005	
2119					SD	0.0151				SD		0.98	
2120					95% DL/2 (t) UCL	0.0133				95% H-Stat (DL/2) UCL		0.0131	
2121													
2122					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
2123	MLE method failed to converge properly										Mean in Log Scale		N/A
2124											SD in Log Scale		N/A
2125											Mean in Original Scale		N/A
2126											SD in Original Scale		N/A
2127											95% Percentile Bootstrap UCL		N/A
2128											95% BCA Bootstrap UCL		N/A
2129													
2130	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2131					k star (bias corrected)	1.122				Data do not follow a Discernable Distribution (0.05)			
2132					Theta Star	0.00982							

	A	B	C	D	E	F	G	H	I	J	K	L
1	General UCL Statistics for Data Sets with Non-Detects											
2	User Selected Options											
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach1.wst									
4	Full Precision		OFF									
5	Confidence Coefficient		95%									
6	Number of Bootstrap Operations		2000									
7												
8												
9	2006 TEQ_D/F											
10												
11	General Statistics											
12	Number of Valid Data				10		Number of Detected Data				10	
13	Number of Distinct Detected Data				10		Number of Non-Detect Data				0	
14	Number of Missing Values				10		Percent Non-Detects				0.00%	
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.0001603			Minimum Detected			-8.738		
18	Maximum Detected			0.0005552			Maximum Detected			-7.496		
19	Mean of Detected			0.0003359			Mean of Detected			-8.109		
20	SD of Detected			0.0001596			SD of Detected			0.503		
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A		
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A		
23												
24												
25	UCL Statistics											
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
27	Shapiro Wilk Test Statistic			0.849			Shapiro Wilk Test Statistic			0.852		
28	5% Shapiro Wilk Critical Value			0.842			5% Shapiro Wilk Critical Value			0.842		
29	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
30												
31	Assuming Normal Distribution						Assuming Lognormal Distribution					
32	DL/2 Substitution Method						DL/2 Substitution Method					
33	Mean			0.0003359			Mean			-8.109		
34	SD			0.0001596			SD			0.503		
35	95% DL/2 (t) UCL			0.0004284			95% H-Stat (DL/2) UCL			0.0004955		
36												
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
38	MLE method failed to converge properly						Mean in Log Scale			N/A		
39							SD in Log Scale			N/A		
40							Mean in Original Scale			N/A		
41							SD in Original Scale			N/A		
42							95% Percentile Bootstrap UCL			N/A		
43							95% BCA Bootstrap UCL			N/A		
44												
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
46	k star (bias corrected)			3.355			Data appear Normal at 5% Significance Level					
47	Theta Star			0.0001001								
48	nu star			67.11								
49												
50	A-D Test Statistic			0.735			Nonparametric Statistics					
51	5% A-D Critical Value			0.729			Kaplan-Meier (KM) Method					
52	K-S Test Statistic			0.729			Mean			0.0003359		

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.268	SD					0.0001514	
54	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					5.048E-05	
55							95% KM (t) UCL					0.0004284	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0004189	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0004284	
58	Minimum						0.0001603	95% KM (bootstrap t) UCL					0.0004392
59	Maximum						0.0005552	95% KM (BCA) UCL					0.0004091
60	Mean						0.0003359	95% KM (Percentile Bootstrap) UCL					0.0004157
61	Median						0.0003128	95% KM (Chebyshev) UCL					0.0005559
62	SD						0.0001596	97.5% KM (Chebyshev) UCL					0.0006511
63	k star						3.355	99% KM (Chebyshev) UCL					0.0008381
64	Theta star						0.0001001						
65	Nu star						67.11	Potential UCLs to Use					
66	AppChi2						49.25	95% KM (t) UCL					0.0004284
67	95% Gamma Approximate UCL						0.0004576	95% KM (Percentile Bootstrap) UCL					0.0004157
68	95% Adjusted Gamma UCL						0.0004836						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					10	Number of Detected Data					10	
76	Number of Distinct Detected Data					10	Number of Non-Detect Data					0	
77	Number of Missing Values					10	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.0003889	Minimum Detected					-7.852	
81	Maximum Detected					0.00388	Maximum Detected					-5.552	
82	Mean of Detected					0.0016	Mean of Detected					-6.774	
83	SD of Detected					0.00124	SD of Detected					0.907	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.834	Shapiro Wilk Test Statistic					0.834	
91	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842	
92	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.0016	Mean					-6.774	
97	SD					0.00124	SD					0.907	
98	95% DL/2 (t) UCL					0.00232	95% H-Stat (DL/2) UCL					0.00416	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale					N/A	
102							SD in Log Scale					N/A	
103							Mean in Original Scale					N/A	
104							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
105						95% Percentile Bootstrap UCL					N/A	
106						95% BCA Bootstrap UCL					N/A	
107												
108	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
109	k star (bias corrected)				1.21	Data Follow Appr. Gamma Distribution at 5% Significance Level						
110	Theta Star				0.00132							
111	nu star				24.2							
112												
113	A-D Test Statistic				0.868	Nonparametric Statistics						
114	5% A-D Critical Value				0.738	Kaplan-Meier (KM) Method						
115	K-S Test Statistic				0.738	Mean					0.0016	
116	5% K-S Critical Value				0.271	SD					0.00117	
117	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean					0.0003917	
118						95% KM (t) UCL					0.00232	
119	Assuming Gamma Distribution					95% KM (z) UCL					0.00224	
120	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.00232	
121	Minimum				0.0003889	95% KM (bootstrap t) UCL					0.00238	
122	Maximum				0.00388	95% KM (BCA) UCL					0.00218	
123	Mean				0.0016	95% KM (Percentile Bootstrap) UCL					0.00221	
124	Median				0.00146	95% KM (Chebyshev) UCL					0.00331	
125	SD				0.00124	97.5% KM (Chebyshev) UCL					0.00405	
126	k star				1.21	99% KM (Chebyshev) UCL					0.0055	
127	Theta star				0.00132							
128	Nu star				24.2	Potential UCLs to Use						
129	AppChi2				14	95% KM (Chebyshev) UCL					0.00331	
130	95% Gamma Approximate UCL				0.00276							
131	95% Adjusted Gamma UCL				0.00305							
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138	Number of Valid Data				10	Number of Detected Data				10		
139	Number of Distinct Detected Data				10	Number of Non-Detect Data				0		
140	Number of Missing Values				10	Percent Non-Detects				0.00%		
141												
142	Raw Statistics					Log-transformed Statistics						
143	Minimum Detected				0.0001773	Minimum Detected				-8.637		
144	Maximum Detected				0.00342	Maximum Detected				-5.679		
145	Mean of Detected				0.00126	Mean of Detected				-7.135		
146	SD of Detected				0.0011	SD of Detected				1.09		
147	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
148	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
153	Shapiro Wilk Test Statistic				0.848	Shapiro Wilk Test Statistic				0.875		
154	5% Shapiro Wilk Critical Value				0.842	5% Shapiro Wilk Critical Value				0.842		
155	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.00126	Mean						-7.135
160	SD						0.0011	SD						1.09
161	95% DL/2 (t) UCL						0.0019	95% H-Stat (DL/2) UCL						0.00477
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						0.924	Data appear Normal at 5% Significance Level						
173	Theta Star						0.00137							
174	nu star						18.48							
175														
176	A-D Test Statistic						0.691	Nonparametric Statistics						
177	5% A-D Critical Value						0.744	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.744	Mean						0.00126
179	5% K-S Critical Value						0.273	SD						0.00105
180	Data appear Gamma Distributed at 5% Significance Level							SE of Mean						0.0003485
181								95% KM (t) UCL						0.0019
182	Assuming Gamma Distribution							95% KM (z) UCL						0.00184
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0019
184	Minimum						0.0001773	95% KM (bootstrap t) UCL						0.00195
185	Maximum						0.00342	95% KM (BCA) UCL						0.00188
186	Mean						0.00126	95% KM (Percentile Bootstrap) UCL						0.00184
187	Median						0.0011	95% KM (Chebyshev) UCL						0.00278
188	SD						0.0011	97.5% KM (Chebyshev) UCL						0.00344
189	k star						0.924	99% KM (Chebyshev) UCL						0.00473
190	Theta star						0.00137							
191	Nu star						18.48	Potential UCLs to Use						
192	AppChi2						9.737	95% KM (t) UCL						0.0019
193	95% Gamma Approximate UCL						0.0024	95% KM (Percentile Bootstrap) UCL						0.00184
194	95% Adjusted Gamma UCL						0.0027							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Aluminum													
199														
200	General Statistics													
201	Number of Valid Data						10	Number of Detected Data						1
202	Number of Distinct Detected Data						1	Number of Non-Detect Data						9
203	Number of Missing Values						9	Percent Non-Detects						90.00%
204														
205	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
206	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
207														
208	The data set for variable Aluminum was not processed!													

	A	B	C	D	E	F	G	H	I	J	K	L		
209														
210														
211														
212	Arsenic													
213														
214	General Statistics													
215	Number of Valid Data					10		Number of Detected Data					10	
216	Number of Distinct Detected Data					10		Number of Non-Detect Data					0	
217	Number of Missing Values					9		Percent Non-Detects					0.00%	
218														
219	Raw Statistics						Log-transformed Statistics							
220	Minimum Detected					62.31		Minimum Detected					4.132	
221	Maximum Detected					111.3		Maximum Detected					4.712	
222	Mean of Detected					86.89		Mean of Detected					4.445	
223	SD of Detected					17.66		SD of Detected					0.213	
224	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
225	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
226														
227														
228	UCL Statistics													
229	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
230	Shapiro Wilk Test Statistic					0.852		Shapiro Wilk Test Statistic					0.84	
231	5% Shapiro Wilk Critical Value					0.842		5% Shapiro Wilk Critical Value					0.842	
232	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
233														
234	Assuming Normal Distribution						Assuming Lognormal Distribution							
235	DL/2 Substitution Method							DL/2 Substitution Method						
236	Mean					86.89		Mean					4.445	
237	SD					17.66		SD					0.213	
238	95% DL/2 (t) UCL					97.13		95% H-Stat (DL/2) UCL					99.65	
239														
240	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
241	MLE method failed to converge properly						Mean in Log Scale					N/A		
242							SD in Log Scale					N/A		
243							Mean in Original Scale					N/A		
244							SD in Original Scale					N/A		
245							95% Percentile Bootstrap UCL					N/A		
246							95% BCA Bootstrap UCL					N/A		
247														
248	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
249	k star (bias corrected)					17.89		Data appear Normal at 5% Significance Level						
250	Theta Star					4.856								
251	nu star					357.9								
252														
253	A-D Test Statistic					0.893		Nonparametric Statistics						
254	5% A-D Critical Value					0.725		Kaplan-Meier (KM) Method						
255	K-S Test Statistic					0.725		Mean					86.89	
256	5% K-S Critical Value					0.266		SD					16.76	
257	Data not Gamma Distributed at 5% Significance Level						SE of Mean					5.586		
258							95% KM (t) UCL					97.13		
259	Assuming Gamma Distribution						95% KM (z) UCL					96.08		
260	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					97.13	

	A	B	C	D	E	F	G	H	I	J	K	L
261					Minimum	62.31				95% KM (bootstrap t) UCL		96.43
262					Maximum	111.3				95% KM (BCA) UCL		95.04
263					Mean	86.89				95% KM (Percentile Bootstrap) UCL		95.08
264					Median	96.4				95% KM (Chebyshev) UCL		111.2
265					SD	17.66				97.5% KM (Chebyshev) UCL		121.8
266					k star	17.89				99% KM (Chebyshev) UCL		142.5
267					Theta star	4.856						
268					Nu star	357.9				Potential UCLs to Use		
269					AppChi2	315				95% KM (t) UCL		97.13
270					95% Gamma Approximate UCL	98.71				95% KM (Percentile Bootstrap) UCL		95.08
271					95% Adjusted Gamma UCL	100.9						
272	Note: DL/2 is not a recommended method.											
273												
274												
275	Calcium											
276												
277	General Statistics											
278					Number of Valid Data	10				Number of Detected Data		10
279					Number of Distinct Detected Data	10				Number of Non-Detect Data		0
280					Number of Missing Values	9				Percent Non-Detects		0.00%
281												
282	Raw Statistics						Log-transformed Statistics					
283					Minimum Detected	272480				Minimum Detected		12.52
284					Maximum Detected	847440				Maximum Detected		13.65
285					Mean of Detected	443222				Mean of Detected		12.95
286					SD of Detected	166117				SD of Detected		0.329
287					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
288					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
289												
290												
291	UCL Statistics											
292	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
293					Shapiro Wilk Test Statistic	0.846				Shapiro Wilk Test Statistic		0.951
294					5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value		0.842
295	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
296												
297	Assuming Normal Distribution						Assuming Lognormal Distribution					
298					DL/2 Substitution Method					DL/2 Substitution Method		
299					Mean	443222				Mean		12.95
300					SD	166117				SD		0.329
301					95% DL/2 (t) UCL	539517				95% H-Stat (DL/2) UCL		553396
302												
303					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
304	MLE method failed to converge properly						Mean in Log Scale					
305							SD in Log Scale					
306							Mean in Original Scale					
307							SD in Original Scale					
308							95% Percentile Bootstrap UCL					
309							95% BCA Bootstrap UCL					
310												
311	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
312					k star (bias corrected)	6.829				Data appear Normal at 5% Significance Level		

	A	B	C	D	E	F	G	H	I	J	K	L
313	Theta Star					64907						
314	nu star					136.6						
315												
316	A-D Test Statistic					0.326	Nonparametric Statistics					
317	5% A-D Critical Value					0.725	Kaplan-Meier (KM) Method					
318	K-S Test Statistic					0.725	Mean					443222
319	5% K-S Critical Value					0.267	SD					157593
320	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					52531
321							95% KM (t) UCL					539517
322	Assuming Gamma Distribution						95% KM (z) UCL					529628
323	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					539517
324	Minimum					272480	95% KM (bootstrap t) UCL					611927
325	Maximum					847440	95% KM (BCA) UCL					536881
326	Mean					443222	95% KM (Percentile Bootstrap) UCL					533168
327	Median					400065	95% KM (Chebyshev) UCL					672199
328	SD					166117	97.5% KM (Chebyshev) UCL					771277
329	k star					6.829	99% KM (Chebyshev) UCL					965898
330	Theta star					64907						
331	Nu star					136.6	Potential UCLs to Use					
332	AppChi2					110.6	95% KM (t) UCL					539517
333	95% Gamma Approximate UCL					547447	95% KM (Percentile Bootstrap) UCL					533168
334	95% Adjusted Gamma UCL					568328						
335	Note: DL/2 is not a recommended method.											
336												
337												
338	Chromium											
339												
340	General Statistics											
341	Number of Valid Data					10	Number of Detected Data					10
342	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
343	Number of Missing Values					9	Percent Non-Detects					0.00%
344												
345	Raw Statistics						Log-transformed Statistics					
346	Minimum Detected					255.6	Minimum Detected					5.544
347	Maximum Detected					723.6	Maximum Detected					6.584
348	Mean of Detected					513.2	Mean of Detected					6.213
349	SD of Detected					115.4	SD of Detected					0.265
350	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
351	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
352												
353												
354	UCL Statistics											
355	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
356	Shapiro Wilk Test Statistic					0.85	Shapiro Wilk Test Statistic					0.767
357	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
358	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
359												
360	Assuming Normal Distribution						Assuming Lognormal Distribution					
361	DL/2 Substitution Method						DL/2 Substitution Method					
362	Mean					513.2	Mean					6.213
363	SD					115.4	SD					0.265
364	95% DL/2 (t) UCL					580	95% H-Stat (DL/2) UCL					613.5

	A	B	C	D	E	F	G	H	I	J	K	L
365												
366	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
367	MLE method failed to converge properly						Mean in Log Scale					N/A
368							SD in Log Scale					N/A
369							Mean in Original Scale					N/A
370							SD in Original Scale					N/A
371							95% Percentile Bootstrap UCL					N/A
372							95% BCA Bootstrap UCL					N/A
373												
374	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
375	k star (bias corrected)					12.73	Data appear Normal at 5% Significance Level					
376	Theta Star					40.32						
377	nu star					254.6						
378												
379	A-D Test Statistic					1.03	Nonparametric Statistics					
380	5% A-D Critical Value					0.725	Kaplan-Meier (KM) Method					
381	K-S Test Statistic					0.725	Mean					513.2
382	5% K-S Critical Value					0.266	SD					109.4
383	Data not Gamma Distributed at 5% Significance Level						SE of Mean					36.48
384							95% KM (t) UCL					580
385	Assuming Gamma Distribution						95% KM (z) UCL					573.2
386	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					580
387	Minimum					255.6	95% KM (bootstrap t) UCL					569.8
388	Maximum					723.6	95% KM (BCA) UCL					561.1
389	Mean					513.2	95% KM (Percentile Bootstrap) UCL					567.7
390	Median					519.7	95% KM (Chebyshev) UCL					672.2
391	SD					115.4	97.5% KM (Chebyshev) UCL					741
392	k star					12.73	99% KM (Chebyshev) UCL					876.1
393	Theta star					40.32						
394	Nu star					254.6	Potential UCLs to Use					
395	AppChi2					218.6	95% KM (t) UCL					580
396	95% Gamma Approximate UCL					597.5	95% KM (Percentile Bootstrap) UCL					567.7
397	95% Adjusted Gamma UCL					613.8						
398	Note: DL/2 is not a recommended method.											
399												
400												
401	Cobalt											
402												
403	General Statistics											
404	Number of Valid Data					10	Number of Detected Data					5
405	Number of Distinct Detected Data					5	Number of Non-Detect Data					5
406	Number of Missing Values					9	Percent Non-Detects					50.00%
407												
408	Raw Statistics						Log-transformed Statistics					
409	Minimum Detected					4.77	Minimum Detected					1.562
410	Maximum Detected					6.03	Maximum Detected					1.797
411	Mean of Detected					5.4	Mean of Detected					1.682
412	SD of Detected					0.574	SD of Detected					0.106
413	Minimum Non-Detect					6.75	Minimum Non-Detect					1.91
414	Maximum Non-Detect					9.91	Maximum Non-Detect					2.294
415												
416	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					10

	A	B	C	D	E	F	G	H	I	J	K	L
417	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
418	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
419												
420	Warning: There are only 5 Detected Values in this data											
421	Note: It should be noted that even though bootstrap may be performed on this data set											
422	the resulting calculations may not be reliable enough to draw conclusions											
423												
424	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
425												
426												
427	UCL Statistics											
428	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
429	Shapiro Wilk Test Statistic			0.841			Shapiro Wilk Test Statistic			0.85		
430	5% Shapiro Wilk Critical Value			0.762			5% Shapiro Wilk Critical Value			0.762		
431	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
432												
433	Assuming Normal Distribution						Assuming Lognormal Distribution					
434	DL/2 Substitution Method						DL/2 Substitution Method					
435	Mean			4.69			Mean			1.527		
436	SD			0.93			SD			0.202		
437	95% DL/2 (t) UCL			5.229			95% H-Stat (DL/2) UCL			8.562		
438												
439	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
440	MLE method failed to converge properly						Mean in Log Scale			1.682		
441							SD in Log Scale			0.0703		
442							Mean in Original Scale			5.388		
443							SD in Original Scale			0.383		
444							95% Percentile Bootstrap UCL			5.598		
445							95% BCA Bootstrap UCL			5.598		
446												
447	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
448	k star (bias corrected)			44.9			Data appear Normal at 5% Significance Level					
449	Theta Star			0.12								
450	nu star			449								
451												
452	A-D Test Statistic			0.533			Nonparametric Statistics					
453	5% A-D Critical Value			0.678			Kaplan-Meier (KM) Method					
454	K-S Test Statistic			0.678			Mean			5.4		
455	5% K-S Critical Value			0.357			SD			0.513		
456	Data appear Gamma Distributed at 5% Significance Level						SE of Mean			0.257		
457							95% KM (t) UCL			5.87		
458	Assuming Gamma Distribution						95% KM (z) UCL			5.822		
459	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			5.899		
460	Minimum			4.77			95% KM (bootstrap t) UCL			6.652		
461	Maximum			6.03			95% KM (BCA) UCL			5.828		
462	Mean			5.445			95% KM (Percentile Bootstrap) UCL			5.812		
463	Median			5.489			95% KM (Chebyshev) UCL			6.518		
464	SD			0.385			97.5% KM (Chebyshev) UCL			7.002		
465	k star			154.3			99% KM (Chebyshev) UCL			7.952		
466	Theta star			0.0353								
467	Nu star			3087			Potential UCLs to Use					
468	AppChi2			2959			95% KM (t) UCL			5.87		

	A	B	C	D	E	F	G	H	I	J	K	L
469	95% Gamma Approximate UCL					5.68	95% KM (Percentile Bootstrap) UCL					5.812
470	95% Adjusted Gamma UCL					5.722						
471	Note: DL/2 is not a recommended method.											
472												
473												
474	Copper											
475												
476	General Statistics											
477	Number of Valid Data					10	Number of Detected Data					10
478	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
479	Number of Missing Values					9	Percent Non-Detects					0.00%
480												
481	Raw Statistics						Log-transformed Statistics					
482	Minimum Detected					204	Minimum Detected					5.318
483	Maximum Detected					360.1	Maximum Detected					5.886
484	Mean of Detected					282.9	Mean of Detected					5.622
485	SD of Detected					62.94	SD of Detected					0.228
486	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
487	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
488												
489												
490	UCL Statistics											
491	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
492	Shapiro Wilk Test Statistic					0.849	Shapiro Wilk Test Statistic					0.85
493	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
494	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
495												
496	Assuming Normal Distribution						Assuming Lognormal Distribution					
497	DL/2 Substitution Method						DL/2 Substitution Method					
498	Mean					282.9	Mean					5.622
499	SD					62.94	SD					0.228
500	95% DL/2 (t) UCL					319.4	95% H-Stat (DL/2) UCL					328
501												
502	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
503	MLE method failed to converge properly						Mean in Log Scale					N/A
504							SD in Log Scale					N/A
505							Mean in Original Scale					N/A
506							SD in Original Scale					N/A
507							95% Percentile Bootstrap UCL					N/A
508							95% BCA Bootstrap UCL					N/A
509												
510	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
511	k star (bias corrected)					15.37	Data appear Normal at 5% Significance Level					
512	Theta Star					18.41						
513	nu star					307.4						
514												
515	A-D Test Statistic					0.753	Nonparametric Statistics					
516	5% A-D Critical Value					0.725	Kaplan-Meier (KM) Method					
517	K-S Test Statistic					0.725	Mean					282.9
518	5% K-S Critical Value					0.266	SD					59.71
519	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					19.9
520							95% KM (t) UCL					319.4

	A	B	C	D	E	F	G	H	I	J	K	L
521	Assuming Gamma Distribution						95% KM (z) UCL					315.7
522	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					319.4
523	Minimum				204		95% KM (bootstrap t) UCL					319.3
524	Maximum				360.1		95% KM (BCA) UCL					313.1
525	Mean				282.9		95% KM (Percentile Bootstrap) UCL					312.8
526	Median				281.4		95% KM (Chebyshev) UCL					369.7
527	SD				62.94		97.5% KM (Chebyshev) UCL					407.2
528	k star				15.37		99% KM (Chebyshev) UCL					481
529	Theta star				18.41							
530	Nu star				307.4		Potential UCLs to Use					
531	AppChi2				267.8		95% KM (t) UCL					319.4
532	95% Gamma Approximate UCL				324.8		95% KM (Percentile Bootstrap) UCL					312.8
533	95% Adjusted Gamma UCL				332.8							
534	Note: DL/2 is not a recommended method.											
535												
536												
537	Iron											
538												
539	General Statistics											
540	Number of Valid Data				10		Number of Detected Data				10	
541	Number of Distinct Detected Data				10		Number of Non-Detect Data				0	
542	Number of Missing Values				9		Percent Non-Detects				0.00%	
543												
544	Raw Statistics						Log-transformed Statistics					
545	Minimum Detected				2343		Minimum Detected				7.759	
546	Maximum Detected				6325		Maximum Detected				8.752	
547	Mean of Detected				4363		Mean of Detected				8.343	
548	SD of Detected				1208		SD of Detected				0.298	
549	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
550	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
551												
552												
553	UCL Statistics											
554	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
555	Shapiro Wilk Test Statistic				0.982		Shapiro Wilk Test Statistic				0.96	
556	5% Shapiro Wilk Critical Value				0.842		5% Shapiro Wilk Critical Value				0.842	
557	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
558												
559	Assuming Normal Distribution						Assuming Lognormal Distribution					
560	DL/2 Substitution Method						DL/2 Substitution Method					
561	Mean				4363		Mean				8.343	
562	SD				1208		SD				0.298	
563	95% DL/2 (t) UCL				5063		95% H-Stat (DL/2) UCL				5342	
564												
565	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
566	MLE method failed to converge properly						Mean in Log Scale				N/A	
567							SD in Log Scale				N/A	
568							Mean in Original Scale				N/A	
569							SD in Original Scale				N/A	
570							95% Percentile Bootstrap UCL				N/A	
571							95% BCA Bootstrap UCL				N/A	
572												

	A	B	C	D	E	F	G	H	I	J	K	L
573	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
574	k star (bias corrected)				9.455		Data appear Normal at 5% Significance Level					
575	Theta Star				461.5							
576	nu star				189.1							
577												
578	A-D Test Statistic				0.206		Nonparametric Statistics					
579	5% A-D Critical Value				0.725		Kaplan-Meier (KM) Method					
580	K-S Test Statistic				0.725						Mean	4363
581	5% K-S Critical Value				0.266						SD	1146
582	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	381.9
583											95% KM (t) UCL	5063
584	Assuming Gamma Distribution										95% KM (z) UCL	4991
585	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	5063
586	Minimum				2343						95% KM (bootstrap t) UCL	5076
587	Maximum				6325						95% KM (BCA) UCL	4962
588	Mean				4363						95% KM (Percentile Bootstrap) UCL	4978
589	Median				4418						95% KM (Chebyshev) UCL	6028
590	SD				1208						97.5% KM (Chebyshev) UCL	6748
591	k star				9.455						99% KM (Chebyshev) UCL	8163
592	Theta star				461.5							
593	Nu star				189.1		Potential UCLs to Use					
594	AppChi2				158.3						95% KM (t) UCL	5063
595	95% Gamma Approximate UCL				5213						95% KM (Percentile Bootstrap) UCL	4978
596	95% Adjusted Gamma UCL				5379							
597	Note: DL/2 is not a recommended method.											
598												
599												
600	Lead											
601												
602	General Statistics											
603	Number of Valid Data				10		Number of Detected Data				4	
604	Number of Distinct Detected Data				4		Number of Non-Detect Data				6	
605	Number of Missing Values				9		Percent Non-Detects				60.00%	
606												
607	Raw Statistics						Log-transformed Statistics					
608	Minimum Detected				14.47		Minimum Detected				2.672	
609	Maximum Detected				18.01		Maximum Detected				2.891	
610	Mean of Detected				16.45		Mean of Detected				2.796	
611	SD of Detected				1.638		SD of Detected				0.101	
612	Minimum Non-Detect				10.05		Minimum Non-Detect				2.308	
613	Maximum Non-Detect				12.84		Maximum Non-Detect				2.553	
614												
615	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				6	
616	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				4	
617	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				60.00%	
618												
619	Warning: There are only 4 Distinct Detected Values in this data											
620	Note: It should be noted that even though bootstrap may be performed on this data set											
621	the resulting calculations may not be reliable enough to draw conclusions											
622												
623	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
624												

	A	B	C	D	E	F	G	H	I	J	K	L
625												
626	UCL Statistics											
627	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
628	Shapiro Wilk Test Statistic					0.928	Shapiro Wilk Test Statistic					0.926
629	5% Shapiro Wilk Critical Value					0.748	5% Shapiro Wilk Critical Value					0.748
630	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
631												
632	Assuming Normal Distribution						Assuming Lognormal Distribution					
633	DL/2 Substitution Method						DL/2 Substitution Method					
634	Mean					9.843	Mean					2.133
635	SD					5.773	SD					0.578
636	95% DL/2 (t) UCL					13.19	95% H-Stat (DL/2) UCL					10.1
637												
638	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
639	Mean					16.47	Mean in Log Scale					2.595
640	SD					1.419	SD in Log Scale					0.183
641	95% MLE (t) UCL					17.29	Mean in Original Scale					13.6
642	95% MLE (Tiku) UCL					17.77	SD in Original Scale					2.622
643							95% Percentile Bootstrap UCL					15.01
644							95% BCA Bootstrap UCL					15.1
645												
646	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
647	k star (bias corrected)					33.13	Data appear Normal at 5% Significance Level					
648	Theta Star					0.496						
649	nu star					265.1						
650												
651	A-D Test Statistic					0.321	Nonparametric Statistics					
652	5% A-D Critical Value					0.657	Kaplan-Meier (KM) Method					
653	K-S Test Statistic					0.657	Mean					15.26
654	5% K-S Critical Value					0.394	SD					1.32
655	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.482
656							95% KM (t) UCL					16.14
657	Assuming Gamma Distribution						95% KM (z) UCL					16.05
658	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					16.25
659	Minimum					1E-09	95% KM (bootstrap t) UCL					15.8
660	Maximum					18.01	95% KM (BCA) UCL					18.01
661	Mean					6.578	95% KM (Percentile Bootstrap) UCL					17.6
662	Median					1E-09	95% KM (Chebyshev) UCL					17.36
663	SD					8.545	97.5% KM (Chebyshev) UCL					18.27
664	k star					0.112	99% KM (Chebyshev) UCL					20.05
665	Theta star					58.76						
666	Nu star					2.239	Potential UCLs to Use					
667	AppChi2					0.188	95% KM (t) UCL					16.14
668	95% Gamma Approximate UCL					78.34	95% KM (Percentile Bootstrap) UCL					17.6
669	95% Adjusted Gamma UCL					N/A						
670	Note: DL/2 is not a recommended method.											
671												
672												
673	Magnesium											
674												
675	General Statistics											
676	Number of Valid Data					10	Number of Detected Data					10

	A	B	C	D	E	F	G	H	I	J	K	L
677	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
678	Number of Missing Values					9	Percent Non-Detects					0.00%
679												
680	Raw Statistics						Log-transformed Statistics					
681	Minimum Detected					261620	Minimum Detected					12.47
682	Maximum Detected					282100	Maximum Detected					12.55
683	Mean of Detected					272964	Mean of Detected					12.52
684	SD of Detected					7469	SD of Detected					0.0274
685	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
686	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
687												
688												
689	UCL Statistics											
690	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
691	Shapiro Wilk Test Statistic					0.925	Shapiro Wilk Test Statistic					0.924
692	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
693	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
694												
695	Assuming Normal Distribution						Assuming Lognormal Distribution					
696	DL/2 Substitution Method						DL/2 Substitution Method					
697	Mean					272964	Mean					12.52
698	SD					7469	SD					0.0274
699	95% DL/2 (t) UCL					277294	95% H-Stat (DL/2) UCL					N/A
700												
701	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
702	MLE method failed to converge properly						Mean in Log Scale					N/A
703							SD in Log Scale					N/A
704							Mean in Original Scale					N/A
705							SD in Original Scale					N/A
706							95% Percentile Bootstrap UCL					N/A
707							95% BCA Bootstrap UCL					N/A
708												
709	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
710	k star (bias corrected)					1035	Data appear Normal at 5% Significance Level					
711	Theta Star					263.8						
712	nu star					20695						
713												
714	A-D Test Statistic					0.355	Nonparametric Statistics					
715	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
716	K-S Test Statistic					0.724	Mean					272964
717	5% K-S Critical Value					0.266	SD					7086
718	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2362
719							95% KM (t) UCL					277294
720	Assuming Gamma Distribution						95% KM (z) UCL					276849
721	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					277294
722	Minimum					261620	95% KM (bootstrap t) UCL					277078
723	Maximum					282100	95% KM (BCA) UCL					276946
724	Mean					272964	95% KM (Percentile Bootstrap) UCL					276472
725	Median					273940	95% KM (Chebyshev) UCL					283259
726	SD					7469	97.5% KM (Chebyshev) UCL					287714
727	k star					1035	99% KM (Chebyshev) UCL					296465
728	Theta star					263.8						

	A	B	C	D	E	F	G	H	I	J	K	L
729					Nu star	20695	Potential UCLs to Use					
730					AppChi2	20361	95% KM (t) UCL					277294
731			95% Gamma Approximate UCL			277435	95% KM (Percentile Bootstrap) UCL					276472
732			95% Adjusted Gamma UCL			278223						
733	Note: DL/2 is not a recommended method.											
734												
735												
736	Manganese											
737												
738	General Statistics											
739	Number of Valid Data					10	Number of Detected Data					10
740	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
741	Number of Missing Values					9	Percent Non-Detects					0.00%
742												
743	Raw Statistics						Log-transformed Statistics					
744	Minimum Detected					123.1	Minimum Detected					4.813
745	Maximum Detected					201	Maximum Detected					5.303
746	Mean of Detected					158.8	Mean of Detected					5.053
747	SD of Detected					28.67	SD of Detected					0.179
748	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
749	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
750												
751												
752	UCL Statistics											
753	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
754	Shapiro Wilk Test Statistic					0.907	Shapiro Wilk Test Statistic					0.92
755	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
756	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
757												
758	Assuming Normal Distribution						Assuming Lognormal Distribution					
759	DL/2 Substitution Method						DL/2 Substitution Method					
760	Mean					158.8	Mean					5.053
761	SD					28.67	SD					0.179
762	95% DL/2 (t) UCL					175.4	95% H-Stat (DL/2) UCL					177.7
763												
764	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
765	MLE method failed to converge properly						Mean in Log Scale					N/A
766							SD in Log Scale					N/A
767							Mean in Original Scale					N/A
768							SD in Original Scale					N/A
769							95% Percentile Bootstrap UCL					N/A
770							95% BCA Bootstrap UCL					N/A
771												
772	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
773	k star (bias corrected)					24.32	Data appear Normal at 5% Significance Level					
774	Theta Star					6.529						
775	nu star					486.4						
776												
777	A-D Test Statistic					0.404	Nonparametric Statistics					
778	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
779	K-S Test Statistic					0.724	Mean					158.8
780	5% K-S Critical Value					0.266	SD					27.19

	A	B	C	D	E	F	G	H	I	J	K	L
781	Data appear Gamma Distributed at 5% Significance Level							SE of Mean				9.065
782								95% KM (t) UCL				175.4
783	Assuming Gamma Distribution							95% KM (z) UCL				173.7
784	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL				175.4
785	Minimum						123.1	95% KM (bootstrap t) UCL				177.1
786	Maximum						201	95% KM (BCA) UCL				173.7
787	Mean						158.8	95% KM (Percentile Bootstrap) UCL				173.7
788	Median						154.5	95% KM (Chebyshev) UCL				198.3
789	SD						28.67	97.5% KM (Chebyshev) UCL				215.4
790	k star						24.32	99% KM (Chebyshev) UCL				249
791	Theta star						6.529					
792	Nu star						486.4	Potential UCLs to Use				
793	AppChi2						436.2	95% KM (t) UCL				175.4
794	95% Gamma Approximate UCL						177	95% KM (Percentile Bootstrap) UCL				173.7
795	95% Adjusted Gamma UCL						180.4					
796	Note: DL/2 is not a recommended method.											
797												
798												
799	Mercury											
800												
801	General Statistics											
802	Number of Valid Data						10	Number of Detected Data				10
803	Number of Distinct Detected Data						10	Number of Non-Detect Data				0
804	Number of Missing Values						9	Percent Non-Detects				0.00%
805												
806	Raw Statistics						Log-transformed Statistics					
807	Minimum Detected						65.4	Minimum Detected				4.181
808	Maximum Detected						273	Maximum Detected				5.609
809	Mean of Detected						156.9	Mean of Detected				4.93
810	SD of Detected						80.19	SD of Detected				0.538
811	Minimum Non-Detect						N/A	Minimum Non-Detect				N/A
812	Maximum Non-Detect						N/A	Maximum Non-Detect				N/A
813												
814												
815	UCL Statistics											
816	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
817	Shapiro Wilk Test Statistic						0.877	Shapiro Wilk Test Statistic				0.897
818	5% Shapiro Wilk Critical Value						0.842	5% Shapiro Wilk Critical Value				0.842
819	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
820												
821	Assuming Normal Distribution						Assuming Lognormal Distribution					
822	DL/2 Substitution Method						DL/2 Substitution Method					
823	Mean						156.9	Mean				4.93
824	SD						80.19	SD				0.538
825	95% DL/2 (t) UCL						203.4	95% H-Stat (DL/2) UCL				240.3
826												
827	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method				
828	MLE method failed to converge properly						Mean in Log Scale				N/A	
829							SD in Log Scale				N/A	
830							Mean in Original Scale				N/A	
831							SD in Original Scale				N/A	
832							95% Percentile Bootstrap UCL				N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
833							95% BCA Bootstrap UCL					N/A
834												
835	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
836	k star (bias corrected)					2.955	Data appear Normal at 5% Significance Level					
837	Theta Star					53.11						
838	nu star					59.1						
839												
840	A-D Test Statistic					0.526	Nonparametric Statistics					
841	5% A-D Critical Value					0.729	Kaplan-Meier (KM) Method					
842	K-S Test Statistic					0.729	Mean					156.9
843	5% K-S Critical Value					0.268	SD					76.08
844	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					25.36
845							95% KM (t) UCL					203.4
846	Assuming Gamma Distribution						95% KM (z) UCL					198.6
847	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					203.4
848	Minimum					65.4	95% KM (bootstrap t) UCL					209.6
849	Maximum					273	95% KM (BCA) UCL					201.2
850	Mean					156.9	95% KM (Percentile Bootstrap) UCL					196.4
851	Median					144.5	95% KM (Chebyshev) UCL					267.5
852	SD					80.19	97.5% KM (Chebyshev) UCL					315.3
853	k star					2.955	99% KM (Chebyshev) UCL					409.2
854	Theta star					53.11						
855	Nu star					59.1	Potential UCLs to Use					
856	AppChi2					42.42	95% KM (t) UCL					203.4
857	95% Gamma Approximate UCL					218.6	95% KM (Percentile Bootstrap) UCL					196.4
858	95% Adjusted Gamma UCL					232						
859	Note: DL/2 is not a recommended method.											
860												
861												
862	Nickel											
863												
864	General Statistics											
865	Number of Valid Data					10	Number of Detected Data					6
866	Number of Distinct Detected Data					6	Number of Non-Detect Data					4
867	Number of Missing Values					9	Percent Non-Detects					40.00%
868												
869	Raw Statistics						Log-transformed Statistics					
870	Minimum Detected					53.34	Minimum Detected					3.977
871	Maximum Detected					169.1	Maximum Detected					5.13
872	Mean of Detected					121.7	Mean of Detected					4.734
873	SD of Detected					43.71	SD of Detected					0.43
874	Minimum Non-Detect					39.3	Minimum Non-Detect					3.671
875	Maximum Non-Detect					41.55	Maximum Non-Detect					3.727
876												
877	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					4
878	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					6
879	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					40.00%
880												
881	Warning: There are only 6 Detected Values in this data											
882	Note: It should be noted that even though bootstrap may be performed on this data set											
883	the resulting calculations may not be reliable enough to draw conclusions											
884												

	A	B	C	D	E	F	G	H	I	J	K	L
885	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
886												
887												
888	UCL Statistics											
889	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
890	Shapiro Wilk Test Statistic				0.926		Shapiro Wilk Test Statistic				0.873	
891	5% Shapiro Wilk Critical Value				0.788		5% Shapiro Wilk Critical Value				0.788	
892	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
893												
894	Assuming Normal Distribution						Assuming Lognormal Distribution					
895	DL/2 Substitution Method						DL/2 Substitution Method					
896	Mean				81.11		Mean				4.042	
897	SD				61.73		SD				0.949	
898	95% DL/2 (t) UCL				116.9		95% H-Stat (DL/2) UCL				217.2	
899												
900	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
901	Mean				68.85		Mean in Log Scale				4.313	
902	SD				76.36		SD in Log Scale				0.631	
903	95% MLE (t) UCL				113.1		Mean in Original Scale				88.91	
904	95% MLE (Tiku) UCL				119.1		SD in Original Scale				53.45	
905							95% Percentile Bootstrap UCL				116.6	
906							95% BCA Bootstrap UCL				118.6	
907												
908	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
909	k star (bias corrected)				3.88		Data appear Normal at 5% Significance Level					
910	Theta Star				31.37							
911	nu star				46.56							
912												
913	A-D Test Statistic				0.391		Nonparametric Statistics					
914	5% A-D Critical Value				0.698		Kaplan-Meier (KM) Method					
915	K-S Test Statistic				0.698		Mean				94.37	
916	5% K-S Critical Value				0.333		SD				45.58	
917	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				15.79	
918							95% KM (t) UCL				123.3	
919	Assuming Gamma Distribution						95% KM (z) UCL				120.3	
920	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				125.9	
921	Minimum				53.34		95% KM (bootstrap t) UCL				119.4	
922	Maximum				169.1		95% KM (BCA) UCL				140.5	
923	Mean				113.5		95% KM (Percentile Bootstrap) UCL				131.5	
924	Median				101.1		95% KM (Chebyshev) UCL				163.2	
925	SD				34.27		97.5% KM (Chebyshev) UCL				193	
926	k star				8.003		99% KM (Chebyshev) UCL				251.5	
927	Theta star				14.18							
928	Nu star				160.1		Potential UCLs to Use					
929	AppChi2				131.8		95% KM (t) UCL				123.3	
930	95% Gamma Approximate UCL				137.8		95% KM (Percentile Bootstrap) UCL				131.5	
931	95% Adjusted Gamma UCL				142.6							
932	Note: DL/2 is not a recommended method.											
933												
934												
935	Potassium											
936												

	A	B	C	D	E	F	G	H	I	J	K	L
937	General Statistics											
938	Number of Valid Data					10	Number of Detected Data					10
939	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
940	Number of Missing Values					9	Percent Non-Detects					0.00%
941												
942	Raw Statistics						Log-transformed Statistics					
943	Minimum Detected					4099600	Minimum Detected					15.23
944	Maximum Detected					4470200	Maximum Detected					15.31
945	Mean of Detected					4290440	Mean of Detected					15.27
946	SD of Detected					131961	SD of Detected					0.0307
947	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
948	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
949												
950												
951	UCL Statistics											
952	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
953	Shapiro Wilk Test Statistic					0.933	Shapiro Wilk Test Statistic					0.934
954	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
955	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
956												
957	Assuming Normal Distribution						Assuming Lognormal Distribution					
958	DL/2 Substitution Method						DL/2 Substitution Method					
959	Mean					4290440	Mean					15.27
960	SD					131961	SD					0.0307
961	95% DL/2 (t) UCL					4366935	95% H-Stat (DL/2) UCL					N/A
962												
963	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
964	MLE method failed to converge properly						Mean in Log Scale					N/A
965							SD in Log Scale					N/A
966							Mean in Original Scale					N/A
967							SD in Original Scale					N/A
968							95% Percentile Bootstrap UCL					N/A
969							95% BCA Bootstrap UCL					N/A
970												
971	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
972	k star (bias corrected)					822.7	Data appear Normal at 5% Significance Level					
973	Theta Star					5215						
974	nu star					16454						
975												
976	A-D Test Statistic					0.333	Nonparametric Statistics					
977	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
978	K-S Test Statistic					0.724	Mean					4290440
979	5% K-S Critical Value					0.266	SD					125189
980	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					41730
981							95% KM (t) UCL					4366935
982	Assuming Gamma Distribution						95% KM (z) UCL					4359079
983	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					4366935
984	Minimum					4099600	95% KM (bootstrap t) UCL					4365985
985	Maximum					4470200	95% KM (BCA) UCL					4355420
986	Mean					4290440	95% KM (Percentile Bootstrap) UCL					4357060
987	Median					4281400	95% KM (Chebyshev) UCL					4472335
988	SD					131961	97.5% KM (Chebyshev) UCL					4551042

	A	B	C	D	E	F	G	H	I	J	K	L	
989					k star	822.7				99% KM (Chebyshev) UCL		4705645	
990					Theta star	5215							
991					Nu star	16454				Potential UCLs to Use			
992					AppChi2	16156				95% KM (t) UCL		4366935	
993					95% Gamma Approximate UCL	4369374				95% KM (Percentile Bootstrap) UCL		4357060	
994					95% Adjusted Gamma UCL	4383305							
995	Note: DL/2 is not a recommended method.												
996													
997													
998	Selenium												
999													
1000	General Statistics												
1001					Number of Valid Data	10				Number of Detected Data		10	
1002					Number of Distinct Detected Data	10				Number of Non-Detect Data		0	
1003					Number of Missing Values	9				Percent Non-Detects		0.00%	
1004													
1005	Raw Statistics						Log-transformed Statistics						
1006					Minimum Detected	319.5				Minimum Detected		5.767	
1007					Maximum Detected	609.4				Maximum Detected		6.412	
1008					Mean of Detected	427.8				Mean of Detected		6.043	
1009					SD of Detected	83.31				SD of Detected		0.185	
1010					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1011					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1012													
1013													
1014	UCL Statistics												
1015	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1016					Shapiro Wilk Test Statistic	0.918				Shapiro Wilk Test Statistic		0.955	
1017					5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value		0.842	
1018	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1019													
1020	Assuming Normal Distribution						Assuming Lognormal Distribution						
1021					DL/2 Substitution Method					DL/2 Substitution Method			
1022					Mean	427.8				Mean		6.043	
1023					SD	83.31				SD		0.185	
1024					95% DL/2 (t) UCL	476.1				95% H-Stat (DL/2) UCL		480.7	
1025													
1026					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1027	MLE method failed to converge properly										Mean in Log Scale		N/A
1028										SD in Log Scale		N/A	
1029										Mean in Original Scale		N/A	
1030										SD in Original Scale		N/A	
1031										95% Percentile Bootstrap UCL		N/A	
1032										95% BCA Bootstrap UCL		N/A	
1033													
1034	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1035					k star (bias corrected)	22.15				Data appear Normal at 5% Significance Level			
1036					Theta Star	19.32							
1037					nu star	442.9							
1038													
1039					A-D Test Statistic	0.318				Nonparametric Statistics			
1040					5% A-D Critical Value	0.724				Kaplan-Meier (KM) Method			

	A	B	C	D	E	F	G	H	I	J	K	L	
1041	K-S Test Statistic					0.724	Mean					427.8	
1042	5% K-S Critical Value					0.266	SD					79.03	
1043	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					26.34	
1044							95% KM (t) UCL					476.1	
1045	Assuming Gamma Distribution						95% KM (z) UCL					471.1	
1046	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					476.1	
1047	Minimum						319.5	95% KM (bootstrap t) UCL					490.8
1048	Maximum						609.4	95% KM (BCA) UCL					471.2
1049	Mean						427.8	95% KM (Percentile Bootstrap) UCL					468.9
1050	Median						408.5	95% KM (Chebyshev) UCL					542.6
1051	SD						83.31	97.5% KM (Chebyshev) UCL					592.3
1052	k star						22.15	99% KM (Chebyshev) UCL					689.9
1053	Theta star						19.32						
1054	Nu star						442.9	Potential UCLs to Use					
1055	AppChi2						395.1	95% KM (t) UCL					476.1
1056	95% Gamma Approximate UCL						479.5	95% KM (Percentile Bootstrap) UCL					468.9
1057	95% Adjusted Gamma UCL						489.2						
1058	Note: DL/2 is not a recommended method.												
1059													
1060													
1061	Sodium												
1062													
1063	General Statistics												
1064	Number of Valid Data					10	Number of Detected Data					10	
1065	Number of Distinct Detected Data					10	Number of Non-Detect Data					0	
1066	Number of Missing Values					9	Percent Non-Detects					0.00%	
1067													
1068	Raw Statistics						Log-transformed Statistics						
1069	Minimum Detected					377400	Minimum Detected					12.84	
1070	Maximum Detected					434340	Maximum Detected					12.98	
1071	Mean of Detected					399413	Mean of Detected					12.9	
1072	SD of Detected					18576	SD of Detected					0.0458	
1073	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1074	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1075													
1076													
1077	UCL Statistics												
1078	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1079	Shapiro Wilk Test Statistic					0.906	Shapiro Wilk Test Statistic					0.913	
1080	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842	
1081	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1082													
1083	Assuming Normal Distribution						Assuming Lognormal Distribution						
1084	DL/2 Substitution Method						DL/2 Substitution Method						
1085	Mean					399413	Mean					12.9	
1086	SD					18576	SD					0.0458	
1087	95% DL/2 (t) UCL					410181	95% H-Stat (DL/2) UCL					N/A	
1088													
1089	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1090	MLE method failed to converge properly						Mean in Log Scale						N/A
1091							SD in Log Scale						N/A
1092							Mean in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
1093										SD in Original Scale		N/A
1094										95% Percentile Bootstrap UCL		N/A
1095										95% BCA Bootstrap UCL		N/A
1096												
1097	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1098				k star (bias corrected)		366.8	Data appear Normal at 5% Significance Level					
1099				Theta Star		1089						
1100				nu star		7337						
1101												
1102				A-D Test Statistic		0.48	Nonparametric Statistics					
1103				5% A-D Critical Value		0.724	Kaplan-Meier (KM) Method					
1104				K-S Test Statistic		0.724					Mean	399413
1105				5% K-S Critical Value		0.266					SD	17623
1106	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	5874
1107											95% KM (t) UCL	410181
1108	Assuming Gamma Distribution										95% KM (z) UCL	409075
1109	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	410181
1110				Minimum		377400					95% KM (bootstrap t) UCL	413810
1111				Maximum		434340					95% KM (BCA) UCL	409252
1112				Mean		399413					95% KM (Percentile Bootstrap) UCL	408500
1113				Median		391150					95% KM (Chebyshev) UCL	425018
1114				SD		18576					97.5% KM (Chebyshev) UCL	436098
1115				k star		366.8					99% KM (Chebyshev) UCL	457861
1116				Theta star		1089						
1117				Nu star		7337	Potential UCLs to Use					
1118				AppChi2		7139					95% KM (t) UCL	410181
1119				95% Gamma Approximate UCL		410497					95% KM (Percentile Bootstrap) UCL	408500
1120				95% Adjusted Gamma UCL		412465						
1121	Note: DL/2 is not a recommended method.											
1122												
1123												
1124	Zinc											
1125												
1126	General Statistics											
1127				Number of Valid Data		10				Number of Detected Data		10
1128				Number of Distinct Detected Data		10				Number of Non-Detect Data		0
1129				Number of Missing Values		9				Percent Non-Detects		0.00%
1130												
1131	Raw Statistics					Log-transformed Statistics						
1132				Minimum Detected		6712				Minimum Detected		8.812
1133				Maximum Detected		8978				Maximum Detected		9.103
1134				Mean of Detected		7809				Mean of Detected		8.959
1135				SD of Detected		695.6				SD of Detected		0.0896
1136				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A
1137				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A
1138												
1139												
1140	UCL Statistics											
1141	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1142				Shapiro Wilk Test Statistic		0.984				Shapiro Wilk Test Statistic		0.982
1143				5% Shapiro Wilk Critical Value		0.842				5% Shapiro Wilk Critical Value		0.842
1144	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L		
1145														
1146	Assuming Normal Distribution						Assuming Lognormal Distribution							
1147	DL/2 Substitution Method						DL/2 Substitution Method							
1148	Mean						Mean						7809	8.959
1149	SD						SD						695.6	0.0896
1150	95% DL/2 (t) UCL						95% H-Stat (DL/2) UCL						8212	N/A
1151														
1152	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						N/A	
1153	MLE method failed to converge properly						Mean in Log Scale						N/A	
1154							SD in Log Scale						N/A	
1155							Mean in Original Scale						N/A	
1156							SD in Original Scale						N/A	
1157							95% Percentile Bootstrap UCL						N/A	
1158							95% BCA Bootstrap UCL						N/A	
1159														
1160	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1161	k star (bias corrected)						Data appear Normal at 5% Significance Level						97.52	
1162	Theta Star												80.07	
1163	nu star												1950	
1164														
1165	A-D Test Statistic						Nonparametric Statistics						0.156	
1166	5% A-D Critical Value						Kaplan-Meier (KM) Method						0.724	
1167	K-S Test Statistic						Mean						0.724	7809
1168	5% K-S Critical Value						SD						0.266	659.9
1169	Data appear Gamma Distributed at 5% Significance Level						SE of Mean							220
1170							95% KM (t) UCL							8212
1171	Assuming Gamma Distribution						95% KM (z) UCL							8171
1172	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL							8212
1173	Minimum						95% KM (bootstrap t) UCL						6712	8206
1174	Maximum						95% KM (BCA) UCL						8978	8175
1175	Mean						95% KM (Percentile Bootstrap) UCL						7809	8156
1176	Median						95% KM (Chebyshev) UCL						7804	8768
1177	SD						97.5% KM (Chebyshev) UCL						695.6	9183
1178	k star						99% KM (Chebyshev) UCL						97.52	9998
1179	Theta star												80.07	
1180	Nu star						Potential UCLs to Use						1950	
1181	AppChi2						95% KM (t) UCL						1849	8212
1182	95% Gamma Approximate UCL						95% KM (Percentile Bootstrap) UCL						8238	8156
1183	95% Adjusted Gamma UCL												8316	
1184	Note: DL/2 is not a recommended method.													
1185														

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach1_PCB&TEQ.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				10				Number of Distinct Observations				10			
13	Number of Missing Values				10											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0001603			Minimum of Log Data			-8.738						
17	Maximum			0.0005552			Maximum of Log Data			-7.496						
18	Mean			0.0003359			Mean of log Data			-8.109						
19	Median			0.0003128			SD of log Data			0.503						
20	SD			0.0001596												
21	Coefficient of Variation			0.475												
22	Skewness			0.211												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.849			Shapiro Wilk Test Statistic			0.852						
27	Shapiro Wilk Critical Value			0.842			Shapiro Wilk Critical Value			0.842						
28	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.0004284			95% H-UCL			0.0004955						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL									
33	95% Adjusted-CLT UCL			0.0004225			97.5% Chebyshev (MVUE) UCL			0.000677						
34	95% Modified-t UCL			0.000429			99% Chebyshev (MVUE) UCL			0.0008788						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			3.355			Data appear Normal at 5% Significance Level									
38	Theta Star			0.0001001												
39	nu star			67.11												
40	Approximate Chi Square Value (.05)			49.25			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0267			95% CLT UCL			0.0004189						
42	Adjusted Chi Square Value			46.61			95% Jackknife UCL			0.0004284						
43							95% Standard Bootstrap UCL			0.0004162						
44	Anderson-Darling Test Statistic			0.735			95% Bootstrap-t UCL			0.0004292						
45	Anderson-Darling 5% Critical Value			0.729			95% Hall's Bootstrap UCL			0.0004077						
46	Kolmogorov-Smirnov Test Statistic			0.236			95% Percentile Bootstrap UCL			0.0004119						
47	Kolmogorov-Smirnov 5% Critical Value			0.268			95% BCA Bootstrap UCL			0.0004182						
48	Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.0005559						
49							97.5% Chebyshev(Mean, Sd) UCL			0.0006511						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.0008381						
51	95% Approximate Gamma UCL			0.0004576												
52	95% Adjusted Gamma UCL			0.0004836												

	A	B	C	D	E	F	G	H	I	J	K	L
53												
54	Potential UCL to Use						Use 95% Student's-t UCL					0.0004284
55												
56												
57	2006 TEQ_D/F+PCB											
58												
59	General Statistics											
60	Number of Valid Observations					10	Number of Distinct Observations					10
61	Number of Missing Values					10						
62												
63	Raw Statistics						Log-transformed Statistics					
64	Minimum					0.0002283	Minimum of Log Data					-8.385
65	Maximum					0.00218	Maximum of Log Data					-6.127
66	Mean					0.001	Mean of log Data					-7.208
67	Median					0.0009376	SD of log Data					0.859
68	SD					0.000724						
69	Coefficient of Variation					0.724						
70	Skewness					0.309						
71												
72	Relevant UCL Statistics											
73	Normal Distribution Test						Lognormal Distribution Test					
74	Shapiro Wilk Test Statistic					0.848	Shapiro Wilk Test Statistic					0.852
75	Shapiro Wilk Critical Value					0.842	Shapiro Wilk Critical Value					0.842
76	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
77												
78	Assuming Normal Distribution						Assuming Lognormal Distribution					
79	95% Student's-t UCL					0.00142	95% H-UCL					0.0024
80	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					0.00228
81	95% Adjusted-CLT UCL					0.0014	97.5% Chebyshev (MVUE) UCL					0.00283
82	95% Modified-t UCL					0.00142	99% Chebyshev (MVUE) UCL					0.0039
83												
84	Gamma Distribution Test						Data Distribution					
85	k star (bias corrected)					1.338	Data appear Normal at 5% Significance Level					
86	Theta Star					0.0007472						
87	nu star					26.76						
88	Approximate Chi Square Value (.05)					15.97	Nonparametric Statistics					
89	Adjusted Level of Significance					0.0267	95% CLT UCL					0.00138
90	Adjusted Chi Square Value					14.54	95% Jackknife UCL					0.00142
91							95% Standard Bootstrap UCL					0.00136
92	Anderson-Darling Test Statistic					0.812	95% Bootstrap-t UCL					0.00141
93	Anderson-Darling 5% Critical Value					0.737	95% Hall's Bootstrap UCL					0.00133
94	Kolmogorov-Smirnov Test Statistic					0.27	95% Percentile Bootstrap UCL					0.00136
95	Kolmogorov-Smirnov 5% Critical Value					0.27	95% BCA Bootstrap UCL					0.00137
96	Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.002
97							97.5% Chebyshev(Mean, Sd) UCL					0.00243
98	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					0.00328
99	95% Approximate Gamma UCL					0.00168						
100	95% Adjusted Gamma UCL					0.00184						
101												
102	Potential UCL to Use						Use 95% Student's-t UCL					0.00142
103												
104												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					10	Number of Distinct Observations					10	
109	Number of Missing Values					10							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					6.799E-05	Minimum of Log Data					-9.596	
113	Maximum					0.00172	Maximum of Log Data					-6.364	
114	Mean					0.0006641	Mean of log Data					-7.834	
115	Median					0.0006211	SD of log Data					1.19	
116	SD					0.0005797							
117	Coefficient of Variation					0.873							
118	Skewness					0.509							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.859	Shapiro Wilk Test Statistic					0.88	
123	Shapiro Wilk Critical Value					0.842	Shapiro Wilk Critical Value					0.842	
124	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.001	95% H-UCL					0.00323	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00198
129	95% Adjusted-CLT UCL					0.0009972	97.5% Chebyshev (MVUE) UCL					0.00252	
130	95% Modified-t UCL					0.00101	99% Chebyshev (MVUE) UCL					0.00359	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					0.84	Data appear Normal at 5% Significance Level						
134	Theta Star					0.0007911							
135	nu star					16.79							
136	Approximate Chi Square Value (.05)					8.523	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0267	95% CLT UCL					0.0009657	
138	Adjusted Chi Square Value					7.521	95% Jackknife UCL					0.001	
139							95% Standard Bootstrap UCL					0.0009455	
140	Anderson-Darling Test Statistic					0.646	95% Bootstrap-t UCL					0.00103	
141	Anderson-Darling 5% Critical Value					0.746	95% Hall's Bootstrap UCL					0.0009653	
142	Kolmogorov-Smirnov Test Statistic					0.271	95% Percentile Bootstrap UCL					0.0009509	
143	Kolmogorov-Smirnov 5% Critical Value					0.273	95% BCA Bootstrap UCL					0.0009533	
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						0.00146
145							97.5% Chebyshev(Mean, Sd) UCL						0.00181
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.00249
147	95% Approximate Gamma UCL					0.00131							
148	95% Adjusted Gamma UCL					0.00148							
149													
150	Potential UCL to Use						Use 95% Student's-t UCL						0.001
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					3	Number of Distinct Observations					3	

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					17						
158												
159												
160	Warning: This data set only has 3 observations!											
161	Data set is too small to compute reliable and meaningful statistics and estimates!											
162	The data set for variable Non-Dioxin PCB, as Congener Sum was not processed!											
163												
164	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
165	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
166												
167												
168												
169	Total PCB, as Aroclor											
170												
171	General Statistics											
172	Number of Valid Observations					10	Number of Distinct Observations					10
173	Number of Missing Values					9						
174												
175	Raw Statistics						Log-transformed Statistics					
176	Minimum					1.9	Minimum of Log Data					0.642
177	Maximum					36.6	Maximum of Log Data					3.6
178	Mean					14.06	Mean of log Data					2.195
179	Median					12.5	SD of log Data					1.072
180	SD					12.04						
181	Coefficient of Variation					0.856						
182	Skewness					0.576						
183												
184	Relevant UCL Statistics											
185	Normal Distribution Test						Lognormal Distribution Test					
186	Shapiro Wilk Test Statistic					0.831	Shapiro Wilk Test Statistic					0.846
187	Shapiro Wilk Critical Value					0.842	Shapiro Wilk Critical Value					0.842
188	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
189												
190	Assuming Normal Distribution						Assuming Lognormal Distribution					
191	95% Student's-t UCL					21.04	95% H-UCL					51.04
192	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					37.64
193	95% Adjusted-CLT UCL					21.06	97.5% Chebyshev (MVUE) UCL					47.55
194	95% Modified-t UCL					21.15	99% Chebyshev (MVUE) UCL					67.01
195												
196	Gamma Distribution Test						Data Distribution					
197	k star (bias corrected)					0.945	Data appear Lognormal at 5% Significance Level					
198	Theta Star					14.88						
199	nu star					18.9						
200	Approximate Chi Square Value (.05)					10.04	Nonparametric Statistics					
201	Adjusted Level of Significance					0.0267	95% CLT UCL					20.32
202	Adjusted Chi Square Value					8.943	95% Jackknife UCL					21.04
203							95% Standard Bootstrap UCL					19.89
204	Anderson-Darling Test Statistic					0.894	95% Bootstrap-t UCL					21.33
205	Anderson-Darling 5% Critical Value					0.744	95% Hall's Bootstrap UCL					20.39
206	Kolmogorov-Smirnov Test Statistic					0.285	95% Percentile Bootstrap UCL					20.57
207	Kolmogorov-Smirnov 5% Critical Value					0.272	95% BCA Bootstrap UCL					19.78
208	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					30.65

	A	B	C	D	E	F	G	H	I	J	K	L	
209												97.5% Chebyshev(Mean, Sd) UCL 37.84	
210	Assuming Gamma Distribution												99% Chebyshev(Mean, Sd) UCL 51.94
211			95% Approximate Gamma UCL			26.46							
212			95% Adjusted Gamma UCL			29.71							
213													
214	Potential UCL to Use												Use 95% Chebyshev (MVUE) UCL 37.64
215	Recommended UCL exceeds the maximum observation												
216													
217													
218	Total PCB, as Congener Sum												
219													
220	General Statistics												
221			Number of Valid Observations			3						Number of Distinct Observations 3	
222			Number of Missing Values			17							
223													
224													
225	Warning: This data set only has 3 observations!												
226	Data set is too small to compute reliable and meaningful statistics and estimates!												
227	The data set for variable Total PCB, as Congener Sum was not processed!												
228													
229	It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
230	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
231													
232													

	A	B	C	D	E	F	G	H	I	J	K	L
1	General UCL Statistics for Data Sets with Non-Detects											
2	User Selected Options											
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach3.wst									
4	Full Precision		OFF									
5	Confidence Coefficient		95%									
6	Number of Bootstrap Operations		2000									
7												
8												
9	2006 TEQ_D/F											
10												
11	General Statistics											
12	Number of Valid Data				23		Number of Detected Data				23	
13	Number of Distinct Detected Data				23		Number of Non-Detect Data				0	
14	Number of Missing Values				18		Percent Non-Detects				0.00%	
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.0001129			Minimum Detected			-9.089		
18	Maximum Detected			0.0009669			Maximum Detected			-6.941		
19	Mean of Detected			0.0004289			Mean of Detected			-7.926		
20	SD of Detected			0.0002497			SD of Detected			0.612		
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A		
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A		
23												
24												
25	UCL Statistics											
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
27	Shapiro Wilk Test Statistic			0.906			Shapiro Wilk Test Statistic			0.951		
28	5% Shapiro Wilk Critical Value			0.914			5% Shapiro Wilk Critical Value			0.914		
29	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
30												
31	Assuming Normal Distribution						Assuming Lognormal Distribution					
32	DL/2 Substitution Method						DL/2 Substitution Method					
33	Mean			0.0004289			Mean			-7.926		
34	SD			0.0002497			SD			0.612		
35	95% DL/2 (t) UCL			0.0005183			95% H-Stat (DL/2) UCL			0.0005713		
36												
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
38	MLE method failed to converge properly						Mean in Log Scale			N/A		
39							SD in Log Scale			N/A		
40							Mean in Original Scale			N/A		
41							SD in Original Scale			N/A		
42							95% Percentile Bootstrap UCL			N/A		
43							95% BCA Bootstrap UCL			N/A		
44												
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
46	k star (bias corrected)			2.699			Data appear Gamma Distributed at 5% Significance Level					
47	Theta Star			0.0001589								
48	nu star			124.1								
49												
50	A-D Test Statistic			0.585			Nonparametric Statistics					
51	5% A-D Critical Value			0.75			Kaplan-Meier (KM) Method					
52	K-S Test Statistic			0.75			Mean			0.0004289		

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.183	SD					0.0002442	
54	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					5.206E-05	
55							95% KM (t) UCL					0.0005183	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0005145	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0005183	
58	Minimum						0.0001129	95% KM (bootstrap t) UCL					0.0005246
59	Maximum						0.0009669	95% KM (BCA) UCL					0.0005117
60	Mean						0.0004289	95% KM (Percentile Bootstrap) UCL					0.0005158
61	Median						0.0003456	95% KM (Chebyshev) UCL					0.0006558
62	SD						0.0002497	97.5% KM (Chebyshev) UCL					0.000754
63	k star						2.699	99% KM (Chebyshev) UCL					0.0009468
64	Theta star						0.0001589						
65	Nu star						124.1	Potential UCLs to Use					
66	AppChi2						99.41	95% KM (BCA) UCL					0.0005117
67	95% Gamma Approximate UCL						0.0005356						
68	95% Adjusted Gamma UCL						0.0005443						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					18	Number of Detected Data					18	
76	Number of Distinct Detected Data					18	Number of Non-Detect Data					0	
77	Number of Missing Values					23	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.0001146	Minimum Detected					-9.074	
81	Maximum Detected					0.00233	Maximum Detected					-6.064	
82	Mean of Detected					0.0008691	Mean of Detected					-7.374	
83	SD of Detected					0.0006724	SD of Detected					0.877	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.864	Shapiro Wilk Test Statistic					0.924	
91	5% Shapiro Wilk Critical Value					0.897	5% Shapiro Wilk Critical Value					0.897	
92	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.0008691	Mean					-7.374	
97	SD					0.0006724	SD					0.877	
98	95% DL/2 (t) UCL					0.00114	95% H-Stat (DL/2) UCL					0.00156	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale						N/A
102							SD in Log Scale						N/A
103							Mean in Original Scale						N/A
104							SD in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
105											95% Percentile Bootstrap UCL	N/A
106											95% BCA Bootstrap UCL	N/A
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109					k star (bias corrected)	1.44	Data appear Lognormal at 5% Significance Level					
110					Theta Star	0.0006035						
111					nu star	51.84						
112												
113					A-D Test Statistic	0.757	Nonparametric Statistics					
114					5% A-D Critical Value	0.755	Kaplan-Meier (KM) Method					
115					K-S Test Statistic	0.755	Mean					0.0008691
116					5% K-S Critical Value	0.207	SD					0.0006534
117	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0001585
118							95% KM (t) UCL					0.00114
119	Assuming Gamma Distribution						95% KM (z) UCL					0.00113
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00114
121					Minimum	0.0001146	95% KM (bootstrap t) UCL					0.00119
122					Maximum	0.00233	95% KM (BCA) UCL					0.00113
123					Mean	0.0008691	95% KM (Percentile Bootstrap) UCL					0.00113
124					Median	0.0004466	95% KM (Chebyshev) UCL					0.00156
125					SD	0.0006724	97.5% KM (Chebyshev) UCL					0.00186
126					k star	1.44	99% KM (Chebyshev) UCL					0.00245
127					Theta star	0.0006035						
128					Nu star	51.84	Potential UCLs to Use					
129					AppChi2	36.31	95% KM (Chebyshev) UCL					0.00156
130					95% Gamma Approximate UCL	0.00124						
131					95% Adjusted Gamma UCL	0.00129						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138					Number of Valid Data	18					Number of Detected Data	18
139					Number of Distinct Detected Data	17					Number of Non-Detect Data	0
140					Number of Missing Values	23					Percent Non-Detects	0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143					Minimum Detected	1.68E-06					Minimum Detected	-13.3
144					Maximum Detected	0.00207					Maximum Detected	-6.182
145					Mean of Detected	0.0005072					Mean of Detected	-9.342
146					SD of Detected	0.0006261					SD of Detected	2.748
147					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
148					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153					Shapiro Wilk Test Statistic	0.802					Shapiro Wilk Test Statistic	0.81
154					5% Shapiro Wilk Critical Value	0.897					5% Shapiro Wilk Critical Value	0.897
155	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.0005072	Mean						-9.342
160	SD						0.0006261	SD						2.748
161	95% DL/2 (t) UCL						0.0007639	95% H-Stat (DL/2) UCL						0.171
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						0.352	Data Follow Appr. Gamma Distribution at 5% Significance Level						
173	Theta Star						0.00144							
174	nu star						12.68							
175														
176	A-D Test Statistic						0.879	Nonparametric Statistics						
177	5% A-D Critical Value						0.826	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.826	Mean						0.0005072
179	5% K-S Critical Value						0.219	SD						0.0006084
180	Data follow Appr. Gamma Distribution at 5% Significance Level							SE of Mean						0.0001476
181								95% KM (t) UCL						0.0007639
182	Assuming Gamma Distribution							95% KM (z) UCL						0.0007499
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0007639
184	Minimum						1.68E-06	95% KM (bootstrap t) UCL						0.0008546
185	Maximum						0.00207	95% KM (BCA) UCL						0.0007465
186	Mean						0.0005072	95% KM (Percentile Bootstrap) UCL						0.0007495
187	Median						0.0002291	95% KM (Chebyshev) UCL						0.00115
188	SD						0.0006261	97.5% KM (Chebyshev) UCL						0.00143
189	k star						0.352	99% KM (Chebyshev) UCL						0.00198
190	Theta star						0.00144							
191	Nu star						12.68	Potential UCLs to Use						
192	AppChi2						5.679	95% KM (Chebyshev) UCL						0.00115
193	95% Gamma Approximate UCL						0.00113							
194	95% Adjusted Gamma UCL						0.00123							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Arsenic													
199														
200	General Statistics													
201	Number of Valid Data						10	Number of Detected Data						7
202	Number of Distinct Detected Data						7	Number of Non-Detect Data						3
203	Number of Missing Values						30	Percent Non-Detects						30.00%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						68.04	Minimum Detected						4.22
207	Maximum Detected						125.9	Maximum Detected						4.835
208	Mean of Detected						100.9	Mean of Detected						4.593

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					21.17	SD of Detected					0.224
210	Minimum Non-Detect					60.75	Minimum Non-Detect					4.107
211	Maximum Non-Detect					62.75	Maximum Non-Detect					4.139
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					3
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					7
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					30.00%
216												
217	Warning: There are only 7 Detected Values in this data											
218	Note: It should be noted that even though bootstrap may be performed on this data set											
219	the resulting calculations may not be reliable enough to draw conclusions											
220												
221	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
222												
223												
224	UCL Statistics											
225	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
226	Shapiro Wilk Test Statistic					0.946	Shapiro Wilk Test Statistic					0.925
227	5% Shapiro Wilk Critical Value					0.803	5% Shapiro Wilk Critical Value					0.803
228	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
229												
230	Assuming Normal Distribution						Assuming Lognormal Distribution					
231	DL/2 Substitution Method						DL/2 Substitution Method					
232	Mean					79.82	Mean					4.243
233	SD					38.02	SD					0.593
234	95% DL/2 (t) UCL					101.9	95% H-Stat (DL/2) UCL					132.2
235												
236	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
237	Mean					83.57	Mean in Log Scale					4.431
238	SD					32.29	SD in Log Scale					0.319
239	95% MLE (t) UCL					102.3	Mean in Original Scale					87.86
240	95% MLE (Tiku) UCL					103.8	SD in Original Scale					27.14
241							95% Percentile Bootstrap UCL					101.6
242							95% BCA Bootstrap UCL					102.7
243												
244	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
245	k star (bias corrected)					14.1	Data appear Normal at 5% Significance Level					
246	Theta Star					7.154						
247	nu star					197.4						
248												
249	A-D Test Statistic					0.296	Nonparametric Statistics					
250	5% A-D Critical Value					0.707	Kaplan-Meier (KM) Method					
251	K-S Test Statistic					0.707	Mean					91.01
252	5% K-S Critical Value					0.311	SD					22.25
253	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					7.599
254							95% KM (t) UCL					104.9
255	Assuming Gamma Distribution						95% KM (z) UCL					103.5
256	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					104.4
257	Minimum					68.04	95% KM (bootstrap t) UCL					104.8
258	Maximum					125.9	95% KM (BCA) UCL					109.6
259	Mean					94.92	95% KM (Percentile Bootstrap) UCL					108
260	Median					88.94	95% KM (Chebyshev) UCL					124.1

	A	B	C	D	E	F	G	H	I	J	K	L	
261					SD	19.75				97.5% KM (Chebyshev) UCL		138.5	
262					k star	18.38				99% KM (Chebyshev) UCL		166.6	
263					Theta star	5.165							
264					Nu star	367.5				Potential UCLs to Use			
265					AppChi2	324.1				95% KM (t) UCL		104.9	
266					95% Gamma Approximate UCL	107.6				95% KM (Percentile Bootstrap) UCL		108	
267					95% Adjusted Gamma UCL	110							
268	Note: DL/2 is not a recommended method.												
269													
270													
271	Calcium												
272													
273	General Statistics												
274					Number of Valid Data	10				Number of Detected Data		10	
275					Number of Distinct Detected Data	10				Number of Non-Detect Data		0	
276					Number of Missing Values	30				Percent Non-Detects		0.00%	
277													
278	Raw Statistics						Log-transformed Statistics						
279					Minimum Detected	196056				Minimum Detected		12.19	
280					Maximum Detected	559150				Maximum Detected		13.23	
281					Mean of Detected	388469				Mean of Detected		12.81	
282					SD of Detected	129923				SD of Detected		0.361	
283					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
284					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
285													
286													
287	UCL Statistics												
288	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
289					Shapiro Wilk Test Statistic	0.935				Shapiro Wilk Test Statistic		0.931	
290					5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value		0.842	
291	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
292													
293	Assuming Normal Distribution						Assuming Lognormal Distribution						
294					DL/2 Substitution Method					DL/2 Substitution Method			
295					Mean	388469				Mean		12.81	
296					SD	129923				SD		0.361	
297					95% DL/2 (t) UCL	463782				95% H-Stat (DL/2) UCL		501517	
298													
299					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
300	MLE method failed to converge properly										Mean in Log Scale		N/A
301										SD in Log Scale		N/A	
302										Mean in Original Scale		N/A	
303										SD in Original Scale		N/A	
304										95% Percentile Bootstrap UCL		N/A	
305										95% BCA Bootstrap UCL		N/A	
306													
307	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
308					k star (bias corrected)	6.484				Data appear Normal at 5% Significance Level			
309					Theta Star	59907							
310					nu star	129.7							
311													
312					A-D Test Statistic	0.311				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L	
313	5% A-D Critical Value					0.726	Kaplan-Meier (KM) Method						
314	K-S Test Statistic					0.726	Mean					388469	
315	5% K-S Critical Value					0.267	SD					123255	
316	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					41085	
317							95% KM (t) UCL					463782	
318	Assuming Gamma Distribution						95% KM (z) UCL					456048	
319	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					463782	
320	Minimum					196056	95% KM (bootstrap t) UCL					461415	
321	Maximum					559150	95% KM (BCA) UCL					454612	
322	Mean					388469	95% KM (Percentile Bootstrap) UCL					453606	
323	Median					382860	95% KM (Chebyshev) UCL					567555	
324	SD					129923	97.5% KM (Chebyshev) UCL					645045	
325	k star					6.484	99% KM (Chebyshev) UCL					797261	
326	Theta star					59907							
327	Nu star					129.7	Potential UCLs to Use						
328	AppChi2					104.4	95% KM (t) UCL					463782	
329	95% Gamma Approximate UCL					482646	95% KM (Percentile Bootstrap) UCL					453606	
330	95% Adjusted Gamma UCL					501587							
331	Note: DL/2 is not a recommended method.												
332													
333													
334	Chromium												
335													
336	General Statistics												
337	Number of Valid Data					10	Number of Detected Data					10	
338	Number of Distinct Detected Data					9	Number of Non-Detect Data					0	
339	Number of Missing Values					30	Percent Non-Detects					0.00%	
340													
341	Raw Statistics						Log-transformed Statistics						
342	Minimum Detected					267.3	Minimum Detected					5.588	
343	Maximum Detected					900.2	Maximum Detected					6.803	
344	Mean of Detected					453.5	Mean of Detected					6.056	
345	SD of Detected					183.1	SD of Detected					0.356	
346	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
347	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
348													
349													
350	UCL Statistics												
351	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
352	Shapiro Wilk Test Statistic					0.809	Shapiro Wilk Test Statistic					0.902	
353	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842	
354	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
355													
356	Assuming Normal Distribution						Assuming Lognormal Distribution						
357	DL/2 Substitution Method						DL/2 Substitution Method						
358	Mean					453.5	Mean					6.056	
359	SD					183.1	SD					0.356	
360	95% DL/2 (t) UCL					559.6	95% H-Stat (DL/2) UCL					578.9	
361													
362	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method
363	MLE method failed to converge properly												Mean in Log Scale
364													SD in Log Scale
													N/A
													N/A

	A	B	C	D	E	F	G	H	I	J	K	L
365						Mean in Original Scale					N/A	
366						SD in Original Scale					N/A	
367						95% Percentile Bootstrap UCL					N/A	
368						95% BCA Bootstrap UCL					N/A	
369												
370	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
371	k star (bias corrected)				5.899	Data appear Gamma Distributed at 5% Significance Level						
372	Theta Star				76.88							
373	nu star				118							
374												
375	A-D Test Statistic				0.594	Nonparametric Statistics						
376	5% A-D Critical Value				0.727	Kaplan-Meier (KM) Method						
377	K-S Test Statistic				0.727	Mean					453.5	
378	5% K-S Critical Value				0.267	SD					173.7	
379	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					57.91	
380						95% KM (t) UCL					559.6	
381	Assuming Gamma Distribution					95% KM (z) UCL					548.7	
382	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					559.6	
383	Minimum				267.3	95% KM (bootstrap t) UCL					631.7	
384	Maximum				900.2	95% KM (BCA) UCL					546.7	
385	Mean				453.5	95% KM (Percentile Bootstrap) UCL					553	
386	Median				402.1	95% KM (Chebyshev) UCL					705.9	
387	SD				183.1	97.5% KM (Chebyshev) UCL					815.2	
388	k star				5.899	99% KM (Chebyshev) UCL					1030	
389	Theta star				76.88							
390	Nu star				118	Potential UCLs to Use						
391	AppChi2				93.9	95% KM (BCA) UCL					546.7	
392	95% Gamma Approximate UCL				569.8							
393	95% Adjusted Gamma UCL				593.3							
394	Note: DL/2 is not a recommended method.											
395												
396												
397	Cobalt											
398												
399	General Statistics											
400	Number of Valid Data				10	Number of Detected Data				8		
401	Number of Distinct Detected Data				8	Number of Non-Detect Data				2		
402	Number of Missing Values				30	Percent Non-Detects				20.00%		
403												
404	Raw Statistics					Log-transformed Statistics						
405	Minimum Detected				3.65	Minimum Detected				1.295		
406	Maximum Detected				8.78	Maximum Detected				2.172		
407	Mean of Detected				5.791	Mean of Detected				1.713		
408	SD of Detected				1.797	SD of Detected				0.316		
409	Minimum Non-Detect				3.63	Minimum Non-Detect				1.289		
410	Maximum Non-Detect				3.78	Maximum Non-Detect				1.33		
411												
412	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					3	
413	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					7	
414	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					30.00%	
415												
416	Warning: There are only 8 Detected Values in this data											

	A	B	C	D	E	F	G	H	I	J	K	L
417	Note: It should be noted that even though bootstrap may be performed on this data set											
418	the resulting calculations may not be reliable enough to draw conclusions											
419												
420	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
421												
422												
423	UCL Statistics											
424	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
425	Shapiro Wilk Test Statistic					0.946	Shapiro Wilk Test Statistic					0.944
426	5% Shapiro Wilk Critical Value					0.818	5% Shapiro Wilk Critical Value					0.818
427	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
428												
429	Assuming Normal Distribution						Assuming Lognormal Distribution					
430	DL/2 Substitution Method						DL/2 Substitution Method					
431	Mean					5.004	Mean					1.494
432	SD					2.296	SD					0.54
433	95% DL/2 (t) UCL					6.334	95% H-Stat (DL/2) UCL					7.418
434												
435	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
436	Mean					4.974	Mean in Log Scale					1.574
437	SD					2.255	SD in Log Scale					0.406
438	95% MLE (t) UCL					6.281	Mean in Original Scale					5.19
439	95% MLE (Tiku) UCL					6.369	SD in Original Scale					2.034
440							95% Percentile Bootstrap UCL					6.204
441							95% BCA Bootstrap UCL					6.263
442												
443	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
444	k star (bias corrected)					7.444	Data appear Normal at 5% Significance Level					
445	Theta Star					0.778						
446	nu star					119.1						
447												
448	A-D Test Statistic					0.265	Nonparametric Statistics					
449	5% A-D Critical Value					0.715	Kaplan-Meier (KM) Method					
450	K-S Test Statistic					0.715	Mean					5.363
451	5% K-S Critical Value					0.294	SD					1.73
452	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.585
453							95% KM (t) UCL					6.435
454	Assuming Gamma Distribution						95% KM (z) UCL					6.325
455	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.41
456	Minimum					3.001	95% KM (bootstrap t) UCL					6.619
457	Maximum					8.78	95% KM (BCA) UCL					6.546
458	Mean					5.343	95% KM (Percentile Bootstrap) UCL					6.388
459	Median					5.01	95% KM (Chebyshev) UCL					7.913
460	SD					1.864	97.5% KM (Chebyshev) UCL					9.016
461	k star					6.639	99% KM (Chebyshev) UCL					11.18
462	Theta star					0.805						
463	Nu star					132.8	Potential UCLs to Use					
464	AppChi2					107.2	95% KM (t) UCL					6.435
465	95% Gamma Approximate UCL					6.62	95% KM (Percentile Bootstrap) UCL					6.388
466	95% Adjusted Gamma UCL					6.876						
467	Note: DL/2 is not a recommended method.											
468												

	A	B	C	D	E	F	G	H	I	J	K	L		
469														
470	Copper													
471														
472	General Statistics													
473	Number of Valid Data					10		Number of Detected Data					10	
474	Number of Distinct Detected Data					10		Number of Non-Detect Data					0	
475	Number of Missing Values					30		Percent Non-Detects					0.00%	
476														
477	Raw Statistics						Log-transformed Statistics							
478	Minimum Detected					176.3		Minimum Detected					5.172	
479	Maximum Detected					401.6		Maximum Detected					5.995	
480	Mean of Detected					269.8		Mean of Detected					5.557	
481	SD of Detected					80.19		SD of Detected					0.304	
482	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
483	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
484														
485														
486	UCL Statistics													
487	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
488	Shapiro Wilk Test Statistic					0.892		Shapiro Wilk Test Statistic					0.884	
489	5% Shapiro Wilk Critical Value					0.842		5% Shapiro Wilk Critical Value					0.842	
490	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
491														
492	Assuming Normal Distribution						Assuming Lognormal Distribution							
493	DL/2 Substitution Method							DL/2 Substitution Method						
494	Mean					269.8		Mean					5.557	
495	SD					80.19		SD					0.304	
496	95% DL/2 (t) UCL					316.3		95% H-Stat (DL/2) UCL					331.6	
497														
498	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
499	MLE method failed to converge properly						Mean in Log Scale						N/A	
500							SD in Log Scale						N/A	
501							Mean in Original Scale						N/A	
502							SD in Original Scale						N/A	
503							95% Percentile Bootstrap UCL						N/A	
504							95% BCA Bootstrap UCL						N/A	
505														
506	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
507	k star (bias corrected)					8.704		Data appear Normal at 5% Significance Level						
508	Theta Star					30.99								
509	nu star					174.1								
510														
511	A-D Test Statistic					0.598		Nonparametric Statistics						
512	5% A-D Critical Value					0.725		Kaplan-Meier (KM) Method						
513	K-S Test Statistic					0.725		Mean					269.8	
514	5% K-S Critical Value					0.267		SD					76.08	
515	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						25.36	
516							95% KM (t) UCL						316.3	
517	Assuming Gamma Distribution						95% KM (z) UCL						311.5	
518	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						316.3	
519	Minimum					176.3		95% KM (bootstrap t) UCL					317.6	
520	Maximum					401.6		95% KM (BCA) UCL					312.3	

	A	B	C	D	E	F	G	H	I	J	K	L	
521					Mean	269.8					95% KM (Percentile Bootstrap) UCL	308.6	
522					Median	281.6					95% KM (Chebyshev) UCL	380.3	
523					SD	80.19					97.5% KM (Chebyshev) UCL	428.1	
524					k star	8.704					99% KM (Chebyshev) UCL	522.1	
525					Theta star	30.99							
526					Nu star	174.1				Potential UCLs to Use			
527					AppChi2	144.6					95% KM (t) UCL	316.3	
528					95% Gamma Approximate UCL	324.8					95% KM (Percentile Bootstrap) UCL	308.6	
529					95% Adjusted Gamma UCL	335.7							
530	Note: DL/2 is not a recommended method.												
531													
532													
533	Iron												
534													
535	General Statistics												
536					Number of Valid Data	10					Number of Detected Data	10	
537					Number of Distinct Detected Data	9					Number of Non-Detect Data	0	
538					Number of Missing Values	30					Percent Non-Detects	0.00%	
539													
540	Raw Statistics						Log-transformed Statistics						
541					Minimum Detected	2532					Minimum Detected	7.837	
542					Maximum Detected	5583					Maximum Detected	8.627	
543					Mean of Detected	3691					Mean of Detected	8.18	
544					SD of Detected	1021					SD of Detected	0.273	
545					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
546					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
547													
548													
549	UCL Statistics												
550	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
551					Shapiro Wilk Test Statistic	0.922					Shapiro Wilk Test Statistic	0.931	
552					5% Shapiro Wilk Critical Value	0.842					5% Shapiro Wilk Critical Value	0.842	
553	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
554													
555	Assuming Normal Distribution						Assuming Lognormal Distribution						
556					DL/2 Substitution Method						DL/2 Substitution Method		
557					Mean	3691					Mean	8.18	
558					SD	1021					SD	0.273	
559					95% DL/2 (t) UCL	4283					95% H-Stat (DL/2) UCL	4424	
560													
561					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
562	MLE method failed to converge properly											Mean in Log Scale	N/A
563											SD in Log Scale	N/A	
564											Mean in Original Scale	N/A	
565											SD in Original Scale	N/A	
566											95% Percentile Bootstrap UCL	N/A	
567											95% BCA Bootstrap UCL	N/A	
568													
569	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
570					k star (bias corrected)	10.54					Data appear Normal at 5% Significance Level		
571					Theta Star	350.1							
572					nu star	210.8							

	A	B	C	D	E	F	G	H	I	J	K	L
573												
574				A-D Test Statistic		0.323	Nonparametric Statistics					
575				5% A-D Critical Value		0.725	Kaplan-Meier (KM) Method					
576				K-S Test Statistic		0.725					Mean	3691
577				5% K-S Critical Value		0.266					SD	968.9
578	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	323
579											95% KM (t) UCL	4283
580	Assuming Gamma Distribution										95% KM (z) UCL	4222
581	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	4283
582				Minimum		2532					95% KM (bootstrap t) UCL	4393
583				Maximum		5583					95% KM (BCA) UCL	4184
584				Mean		3691					95% KM (Percentile Bootstrap) UCL	4202
585				Median		3632					95% KM (Chebyshev) UCL	5098
586				SD		1021					97.5% KM (Chebyshev) UCL	5708
587				k star		10.54					99% KM (Chebyshev) UCL	6904
588				Theta star		350.1						
589				Nu star		210.8	Potential UCLs to Use					
590				AppChi2		178.2					95% KM (t) UCL	4283
591				95% Gamma Approximate UCL		4366					95% KM (Percentile Bootstrap) UCL	4202
592				95% Adjusted Gamma UCL		4497						
593	Note: DL/2 is not a recommended method.											
594												
595												
596	Lead											
597												
598	General Statistics											
599				Number of Valid Data		10					Number of Detected Data	3
600				Number of Distinct Detected Data		3					Number of Non-Detect Data	7
601				Number of Missing Values		30					Percent Non-Detects	70.00%
602												
603	Raw Statistics						Log-transformed Statistics					
604				Minimum Detected		11.82					Minimum Detected	2.47
605				Maximum Detected		52.78					Maximum Detected	3.966
606				Mean of Detected		28.7					Mean of Detected	3.168
607				SD of Detected		21.41					SD of Detected	0.753
608				Minimum Non-Detect		10.3					Minimum Non-Detect	2.332
609				Maximum Non-Detect		12.6					Maximum Non-Detect	2.534
610												
611	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	8
612	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	2
613	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	80.00%
614												
615	Warning: There are only 3 Distinct Detected Values in this data set											
616	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
617	Those methods will return a 'N/A' value on your output display!											
618												
619	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
620	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
621												
622												
623	UCL Statistics											
624	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
625	Shapiro Wilk Test Statistic					0.915	Shapiro Wilk Test Statistic					0.987
626	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
627	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
628												
629	Assuming Normal Distribution					Assuming Lognormal Distribution						
630	DL/2 Substitution Method						DL/2 Substitution Method					
631	Mean					12.73	Mean					2.19
632	SD					14.95	SD					0.766
633	95% DL/2 (t) UCL					21.4	95% H-Stat (DL/2) UCL					15.48
634												
635	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
636	MLE method failed to converge properly						Mean in Log Scale					1.88
637							SD in Log Scale					0.977
638							Mean in Original Scale					11.31
639							SD in Original Scale					15.69
640							95% Percentile Bootstrap UCL					20.08
641							95% BCA Bootstrap UCL					24.3
642												
643	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
644	k star (bias corrected)					N/A	Data appear Normal at 5% Significance Level					
645	Theta Star					N/A						
646	nu star					N/A						
647												
648	A-D Test Statistic					0.29	Nonparametric Statistics					
649	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
650	K-S Test Statistic					N/A	Mean					16.88
651	5% K-S Critical Value					N/A	SD					12.31
652	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4.767
653							95% KM (t) UCL					25.62
654	Assuming Gamma Distribution						95% KM (z) UCL					24.73
655	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					25.49
656	Minimum					N/A	95% KM (bootstrap t) UCL					27.78
657	Maximum					N/A	95% KM (BCA) UCL					52.78
658	Mean					N/A	95% KM (Percentile Bootstrap) UCL					52.78
659	Median					N/A	95% KM (Chebyshev) UCL					37.66
660	SD					N/A	97.5% KM (Chebyshev) UCL					46.65
661	k star					N/A	99% KM (Chebyshev) UCL					64.32
662	Theta star					N/A						
663	Nu star					N/A	Potential UCLs to Use					
664	AppChi2					N/A	95% KM (t) UCL					25.62
665	95% Gamma Approximate UCL					N/A	95% KM (Percentile Bootstrap) UCL					52.78
666	95% Adjusted Gamma UCL					N/A						
667	Note: DL/2 is not a recommended method.											
668												
669												
670	Magnesium											
671												
672	General Statistics											
673	Number of Valid Data					10	Number of Detected Data					10
674	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
675	Number of Missing Values					30	Percent Non-Detects					0.00%
676												

	A	B	C	D	E	F	G	H	I	J	K	L
677	Raw Statistics						Log-transformed Statistics					
678	Minimum Detected				263900		Minimum Detected				12.48	
679	Maximum Detected				306220		Maximum Detected				12.63	
680	Mean of Detected				277781		Mean of Detected				12.53	
681	SD of Detected				12138		SD of Detected				0.0427	
682	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
683	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
684												
685												
686	UCL Statistics											
687	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
688	Shapiro Wilk Test Statistic				0.875		Shapiro Wilk Test Statistic				0.889	
689	5% Shapiro Wilk Critical Value				0.842		5% Shapiro Wilk Critical Value				0.842	
690	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
691												
692	Assuming Normal Distribution						Assuming Lognormal Distribution					
693	DL/2 Substitution Method						DL/2 Substitution Method					
694	Mean				277781		Mean				12.53	
695	SD				12138		SD				0.0427	
696	95% DL/2 (t) UCL				284817		95% H-Stat (DL/2) UCL				N/A	
697												
698	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
699	MLE method failed to converge properly						Mean in Log Scale				N/A	
700							SD in Log Scale				N/A	
701							Mean in Original Scale				N/A	
702							SD in Original Scale				N/A	
703							95% Percentile Bootstrap UCL				N/A	
704							95% BCA Bootstrap UCL				N/A	
705												
706	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
707	k star (bias corrected)				420		Data appear Normal at 5% Significance Level					
708	Theta Star				661.3							
709	nu star				8401							
710												
711	A-D Test Statistic				0.454		Nonparametric Statistics					
712	5% A-D Critical Value				0.724		Kaplan-Meier (KM) Method					
713	K-S Test Statistic				0.724		Mean				277781	
714	5% K-S Critical Value				0.266		SD				11515	
715	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				3838	
716							95% KM (t) UCL				284817	
717	Assuming Gamma Distribution						95% KM (z) UCL				284094	
718	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				284817	
719	Minimum				263900		95% KM (bootstrap t) UCL				287452	
720	Maximum				306220		95% KM (BCA) UCL				283886	
721	Mean				277781		95% KM (Percentile Bootstrap) UCL				284057	
722	Median				276900		95% KM (Chebyshev) UCL				294512	
723	SD				12138		97.5% KM (Chebyshev) UCL				301751	
724	k star				420		99% KM (Chebyshev) UCL				315971	
725	Theta star				661.3							
726	Nu star				8401		Potential UCLs to Use					
727	AppChi2				8189		95% KM (t) UCL				284817	
728	95% Gamma Approximate UCL				284975		95% KM (Percentile Bootstrap) UCL				284057	

	A	B	C	D	E	F	G	H	I	J	K	L
729	95% Adjusted Gamma UCL					286250						
730	Note: DL/2 is not a recommended method.											
731												
732												
733	Manganese											
734												
735	General Statistics											
736	Number of Valid Data					10	Number of Detected Data					10
737	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
738	Number of Missing Values					30	Percent Non-Detects					0.00%
739												
740	Raw Statistics						Log-transformed Statistics					
741	Minimum Detected					111.8	Minimum Detected					4.717
742	Maximum Detected					473.8	Maximum Detected					6.161
743	Mean of Detected					175.1	Mean of Detected					5.066
744	SD of Detected					107	SD of Detected					0.412
745	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
746	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
747												
748												
749	UCL Statistics											
750	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
751	Shapiro Wilk Test Statistic					0.551	Shapiro Wilk Test Statistic					0.708
752	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
753	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
754												
755	Assuming Normal Distribution						Assuming Lognormal Distribution					
756	DL/2 Substitution Method						DL/2 Substitution Method					
757	Mean					175.1	Mean					5.066
758	SD					107	SD					0.412
759	95% DL/2 (t) UCL					237.1	95% H-Stat (DL/2) UCL					230.3
760												
761	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
762	MLE method failed to converge properly						Mean in Log Scale					N/A
763							SD in Log Scale					N/A
764							Mean in Original Scale					N/A
765							SD in Original Scale					N/A
766							95% Percentile Bootstrap UCL					N/A
767							95% BCA Bootstrap UCL					N/A
768												
769	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
770	k star (bias corrected)					3.706	Data do not follow a Discernable Distribution (0.05)					
771	Theta Star					47.24						
772	nu star					74.11						
773												
774	A-D Test Statistic					1.467	Nonparametric Statistics					
775	5% A-D Critical Value					0.729	Kaplan-Meier (KM) Method					
776	K-S Test Statistic					0.729	Mean					175.1
777	5% K-S Critical Value					0.267	SD					101.5
778	Data not Gamma Distributed at 5% Significance Level						SE of Mean					33.83
779							95% KM (t) UCL					237.1
780	Assuming Gamma Distribution						95% KM (z) UCL					230.7

	A	B	C	D	E	F	G	H	I	J	K	L
781	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					237.1
782					Minimum	111.8	95% KM (bootstrap t) UCL					418.2
783					Maximum	473.8	95% KM (BCA) UCL					245.3
784					Mean	175.1	95% KM (Percentile Bootstrap) UCL					239.5
785					Median	148.8	95% KM (Chebyshev) UCL					322.5
786					SD	107	97.5% KM (Chebyshev) UCL					386.3
787					k star	3.706	99% KM (Chebyshev) UCL					511.7
788					Theta star	47.24						
789					Nu star	74.11	Potential UCLs to Use					
790					AppChi2	55.29	95% KM (Chebyshev) UCL					322.5
791					95% Gamma Approximate UCL	234.7						
792					95% Adjusted Gamma UCL	247.3						
793	Note: DL/2 is not a recommended method.											
794												
795												
796	Mercury											
797												
798	General Statistics											
799					Number of Valid Data	18					Number of Detected Data	18
800					Number of Distinct Detected Data	12					Number of Non-Detect Data	0
801					Number of Missing Values	22					Percent Non-Detects	0.00%
802												
803	Raw Statistics					Log-transformed Statistics						
804					Minimum Detected	63.1					Minimum Detected	4.145
805					Maximum Detected	281					Maximum Detected	5.638
806					Mean of Detected	136.4					Mean of Detected	4.8
807					SD of Detected	70.63					SD of Detected	0.486
808					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
809					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
810												
811												
812	UCL Statistics											
813	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
814					Shapiro Wilk Test Statistic	0.836					Shapiro Wilk Test Statistic	0.908
815					5% Shapiro Wilk Critical Value	0.897					5% Shapiro Wilk Critical Value	0.897
816	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
817												
818	Assuming Normal Distribution					Assuming Lognormal Distribution						
819					DL/2 Substitution Method						DL/2 Substitution Method	
820					Mean	136.4					Mean	4.8
821					SD	70.63					SD	0.486
822					95% DL/2 (t) UCL	165.4					95% H-Stat (DL/2) UCL	173.3
823												
824					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
825	MLE method failed to converge properly										Mean in Log Scale	N/A
826											SD in Log Scale	N/A
827											Mean in Original Scale	N/A
828											SD in Original Scale	N/A
829											95% Percentile Bootstrap UCL	N/A
830											95% BCA Bootstrap UCL	N/A
831												
832	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						

	A	B	C	D	E	F	G	H	I	J	K	L	
833	k star (bias corrected)					3.764	Data appear Lognormal at 5% Significance Level						
834	Theta Star					36.24							
835	nu star					135.5							
836													
837	A-D Test Statistic					0.879	Nonparametric Statistics						
838	5% A-D Critical Value					0.743	Kaplan-Meier (KM) Method						
839	K-S Test Statistic					0.743						Mean	136.4
840	5% K-S Critical Value					0.204						SD	68.64
841	Data not Gamma Distributed at 5% Significance Level											SE of Mean	16.65
842												95% KM (t) UCL	165.4
843	Assuming Gamma Distribution											95% KM (z) UCL	163.8
844	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	165.4
845	Minimum					63.1						95% KM (bootstrap t) UCL	172.5
846	Maximum					281						95% KM (BCA) UCL	164.5
847	Mean					136.4						95% KM (Percentile Bootstrap) UCL	163.9
848	Median					115						95% KM (Chebyshev) UCL	209
849	SD					70.63						97.5% KM (Chebyshev) UCL	240.4
850	k star					3.764						99% KM (Chebyshev) UCL	302.1
851	Theta star					36.24							
852	Nu star					135.5	Potential UCLs to Use						
853	AppChi2					109.6						95% KM (Chebyshev) UCL	209
854	95% Gamma Approximate UCL					168.6							
855	95% Adjusted Gamma UCL					172.2							
856	Note: DL/2 is not a recommended method.												
857													
858													
859	Nickel												
860													
861	General Statistics												
862	Number of Valid Data					10	Number of Detected Data					8	
863	Number of Distinct Detected Data					8	Number of Non-Detect Data					2	
864	Number of Missing Values					30	Percent Non-Detects					20.00%	
865													
866	Raw Statistics						Log-transformed Statistics						
867	Minimum Detected					38.72	Minimum Detected					3.656	
868	Maximum Detected					161.3	Maximum Detected					5.083	
869	Mean of Detected					96.89	Mean of Detected					4.473	
870	SD of Detected					44.06	SD of Detected					0.495	
871	Minimum Non-Detect					36.6	Minimum Non-Detect					3.6	
872	Maximum Non-Detect					37.8	Maximum Non-Detect					3.632	
873													
874	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					2	
875	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					8	
876	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					20.00%	
877													
878	Warning: There are only 8 Detected Values in this data												
879	Note: It should be noted that even though bootstrap may be performed on this data set												
880	the resulting calculations may not be reliable enough to draw conclusions												
881													
882	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
883													
884													

	A	B	C	D	E	F	G	H	I	J	K	L	
885	UCL Statistics												
886	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
887	Shapiro Wilk Test Statistic					0.943	Shapiro Wilk Test Statistic					0.955	
888	5% Shapiro Wilk Critical Value					0.818	5% Shapiro Wilk Critical Value					0.818	
889	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
890													
891	Assuming Normal Distribution						Assuming Lognormal Distribution						
892	DL/2 Substitution Method						DL/2 Substitution Method						
893	Mean					81.23	Mean					4.163	
894	SD					50.98	SD					0.786	
895	95% DL/2 (t) UCL					110.8	95% H-Stat (DL/2) UCL					152.8	
896													
897	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
898	Mean					79.09	Mean in Log Scale					4.235	
899	SD					52.44	SD in Log Scale					0.665	
900	95% MLE (t) UCL					109.5	Mean in Original Scale					82.84	
901	95% MLE (Tiku) UCL					110.2	SD in Original Scale					48.85	
902							95% Percentile Bootstrap UCL					108.8	
903							95% BCA Bootstrap UCL					109.4	
904													
905	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
906	k star (bias corrected)					3.293	Data appear Normal at 5% Significance Level						
907	Theta Star					29.42							
908	nu star					52.69							
909													
910	A-D Test Statistic					0.235	Nonparametric Statistics						
911	5% A-D Critical Value					0.719	Kaplan-Meier (KM) Method						
912	K-S Test Statistic					0.719	Mean					85.25	
913	5% K-S Critical Value					0.295	SD					43.59	
914	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					14.74	
915							95% KM (t) UCL					112.3	
916	Assuming Gamma Distribution						95% KM (z) UCL						109.5
917	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						111.3
918	Minimum					37.78	95% KM (bootstrap t) UCL						114
919	Maximum					161.3	95% KM (BCA) UCL						114.7
920	Mean					85.07	95% KM (Percentile Bootstrap) UCL						111.4
921	Median					74.56	95% KM (Chebyshev) UCL						149.5
922	SD					46.16	97.5% KM (Chebyshev) UCL						177.3
923	k star					2.702	99% KM (Chebyshev) UCL						231.9
924	Theta star					31.48							
925	Nu star					54.05	Potential UCLs to Use						
926	AppChi2					38.16	95% KM (t) UCL					112.3	
927	95% Gamma Approximate UCL					120.5	95% KM (Percentile Bootstrap) UCL					111.4	
928	95% Adjusted Gamma UCL					128.3							
929	Note: DL/2 is not a recommended method.												
930													
931													
932	Potassium												
933													
934	General Statistics												
935	Number of Valid Data					10	Number of Detected Data					10	
936	Number of Distinct Detected Data					10	Number of Non-Detect Data					0	

	A	B	C	D	E	F	G	H	I	J	K	L
937	Number of Missing Values					30	Percent Non-Detects					0.00%
938												
939	Raw Statistics						Log-transformed Statistics					
940	Minimum Detected				4223000		Minimum Detected				15.26	
941	Maximum Detected				4869400		Maximum Detected				15.4	
942	Mean of Detected				4445810		Mean of Detected				15.31	
943	SD of Detected				187738		SD of Detected				0.0414	
944	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
945	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
946												
947												
948	UCL Statistics											
949	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
950	Shapiro Wilk Test Statistic				0.889		Shapiro Wilk Test Statistic				0.901	
951	5% Shapiro Wilk Critical Value				0.842		5% Shapiro Wilk Critical Value				0.842	
952	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
953												
954	Assuming Normal Distribution						Assuming Lognormal Distribution					
955	DL/2 Substitution Method						DL/2 Substitution Method					
956	Mean				4445810		Mean				15.31	
957	SD				187738		SD				0.0414	
958	95% DL/2 (t) UCL				4554638		95% H-Stat (DL/2) UCL				N/A	
959												
960	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
961	MLE method failed to converge properly						Mean in Log Scale				N/A	
962							SD in Log Scale				N/A	
963							Mean in Original Scale				N/A	
964							SD in Original Scale				N/A	
965							95% Percentile Bootstrap UCL				N/A	
966							95% BCA Bootstrap UCL				N/A	
967												
968	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
969	k star (bias corrected)				448.6		Data appear Normal at 5% Significance Level					
970	Theta Star				9909							
971	nu star				8973							
972												
973	A-D Test Statistic				0.476		Nonparametric Statistics					
974	5% A-D Critical Value				0.724		Kaplan-Meier (KM) Method					
975	K-S Test Statistic				0.724		Mean				4445810	
976	5% K-S Critical Value				0.266		SD				178103	
977	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				59368	
978							95% KM (t) UCL				4554638	
979	Assuming Gamma Distribution						95% KM (z) UCL				4543461	
980	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				4554638	
981	Minimum				4223000		95% KM (bootstrap t) UCL				4616574	
982	Maximum				4869400		95% KM (BCA) UCL				4544540	
983	Mean				4445810		95% KM (Percentile Bootstrap) UCL				4545860	
984	Median				4397750		95% KM (Chebyshev) UCL				4704588	
985	SD				187738		97.5% KM (Chebyshev) UCL				4816562	
986	k star				448.6		99% KM (Chebyshev) UCL				5036512	
987	Theta star				9909							
988	Nu star				8973		Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
989	AppChi2					8754	95% KM (t) UCL					4554638
990	95% Gamma Approximate UCL					4557139	95% KM (Percentile Bootstrap) UCL					4545860
991	95% Adjusted Gamma UCL					4576872						
992	Note: DL/2 is not a recommended method.											
993												
994												
995	Selenium											
996												
997	General Statistics											
998	Number of Valid Data					10	Number of Detected Data					10
999	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
1000	Number of Missing Values					30	Percent Non-Detects					0.00%
1001												
1002	Raw Statistics						Log-transformed Statistics					
1003	Minimum Detected					317.2	Minimum Detected					5.76
1004	Maximum Detected					459.8	Maximum Detected					6.131
1005	Mean of Detected					399.6	Mean of Detected					5.984
1006	SD of Detected					46.58	SD of Detected					0.121
1007	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1008	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1009												
1010												
1011	UCL Statistics											
1012	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1013	Shapiro Wilk Test Statistic					0.945	Shapiro Wilk Test Statistic					0.929
1014	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
1015	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1016												
1017	Assuming Normal Distribution						Assuming Lognormal Distribution					
1018	DL/2 Substitution Method						DL/2 Substitution Method					
1019	Mean					399.6	Mean					5.984
1020	SD					46.58	SD					0.121
1021	95% DL/2 (t) UCL					426.6	95% H-Stat (DL/2) UCL					430.4
1022												
1023	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1024	MLE method failed to converge properly						Mean in Log Scale					N/A
1025							SD in Log Scale					N/A
1026							Mean in Original Scale					N/A
1027							SD in Original Scale					N/A
1028							95% Percentile Bootstrap UCL					N/A
1029							95% BCA Bootstrap UCL					N/A
1030												
1031	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1032	k star (bias corrected)					54.59	Data appear Normal at 5% Significance Level					
1033	Theta Star					7.32						
1034	nu star					1092						
1035												
1036	A-D Test Statistic					0.345	Nonparametric Statistics					
1037	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
1038	K-S Test Statistic					0.724	Mean					399.6
1039	5% K-S Critical Value					0.266	SD					44.19
1040	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					14.73

	A	B	C	D	E	F	G	H	I	J	K	L	
1041											95% KM (t) UCL	426.6	
1042	Assuming Gamma Distribution										95% KM (z) UCL	423.8	
1043	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	426.6	
1044	Minimum					317.2						95% KM (bootstrap t) UCL	424.1
1045	Maximum					459.8						95% KM (BCA) UCL	422.3
1046	Mean					399.6						95% KM (Percentile Bootstrap) UCL	420.7
1047	Median					412.6						95% KM (Chebyshev) UCL	463.8
1048	SD					46.58						97.5% KM (Chebyshev) UCL	491.6
1049	k star					54.59						99% KM (Chebyshev) UCL	546.2
1050	Theta star					7.32							
1051	Nu star					1092						Potential UCLs to Use	
1052	AppChi2					1016						95% KM (t) UCL	426.6
1053	95% Gamma Approximate UCL					429.4						95% KM (Percentile Bootstrap) UCL	420.7
1054	95% Adjusted Gamma UCL					434.8							
1055	Note: DL/2 is not a recommended method.												
1056													
1057													
1058	Sodium												
1059													
1060	General Statistics												
1061	Number of Valid Data					10	Number of Detected Data					10	
1062	Number of Distinct Detected Data					10	Number of Non-Detect Data					0	
1063	Number of Missing Values					30	Percent Non-Detects					0.00%	
1064													
1065	Raw Statistics					Log-transformed Statistics							
1066	Minimum Detected					349920	Minimum Detected					12.77	
1067	Maximum Detected					485300	Maximum Detected					13.09	
1068	Mean of Detected					417848	Mean of Detected					12.94	
1069	SD of Detected					44045	SD of Detected					0.106	
1070	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1071	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1072													
1073													
1074	UCL Statistics												
1075	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1076	Shapiro Wilk Test Statistic					0.95	Shapiro Wilk Test Statistic					0.952	
1077	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842	
1078	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1079													
1080	Assuming Normal Distribution					Assuming Lognormal Distribution							
1081	DL/2 Substitution Method					DL/2 Substitution Method							
1082	Mean					417848	Mean					12.94	
1083	SD					44045	SD					0.106	
1084	95% DL/2 (t) UCL					443380	95% H-Stat (DL/2) UCL					445597	
1085													
1086	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1087	MLE method failed to converge properly					Mean in Log Scale							N/A
1088						SD in Log Scale							N/A
1089						Mean in Original Scale							N/A
1090						SD in Original Scale							N/A
1091						95% Percentile Bootstrap UCL							N/A
1092						95% BCA Bootstrap UCL							N/A

	A	B	C	D	E	F	G	H	I	J	K	L
1093												
1094	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1095	k star (bias corrected)				69.85		Data appear Normal at 5% Significance Level					
1096	Theta Star				5982							
1097	nu star				1397							
1098												
1099	A-D Test Statistic				0.281		Nonparametric Statistics					
1100	5% A-D Critical Value				0.724		Kaplan-Meier (KM) Method					
1101	K-S Test Statistic				0.724		Mean				417848	
1102	5% K-S Critical Value				0.266		SD				41785	
1103	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				13928	
1104							95% KM (t) UCL				443380	
1105	Assuming Gamma Distribution						95% KM (z) UCL				440758	
1106	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				443380	
1107	Minimum				349920		95% KM (bootstrap t) UCL				445203	
1108	Maximum				485300		95% KM (BCA) UCL				439953	
1109	Mean				417848		95% KM (Percentile Bootstrap) UCL				440114	
1110	Median				422075		95% KM (Chebyshev) UCL				478560	
1111	SD				44045		97.5% KM (Chebyshev) UCL				504830	
1112	k star				69.85		99% KM (Chebyshev) UCL				556433	
1113	Theta star				5982							
1114	Nu star				1397		Potential UCLs to Use					
1115	AppChi2				1311		95% KM (t) UCL				443380	
1116	95% Gamma Approximate UCL				445188		95% KM (Percentile Bootstrap) UCL				440114	
1117	95% Adjusted Gamma UCL				450159							
1118	Note: DL/2 is not a recommended method.											
1119												
1120												
1121	Zinc											
1122												
1123	General Statistics											
1124	Number of Valid Data				10		Number of Detected Data				10	
1125	Number of Distinct Detected Data				10		Number of Non-Detect Data				0	
1126	Number of Missing Values				30		Percent Non-Detects				0.00%	
1127												
1128	Raw Statistics						Log-transformed Statistics					
1129	Minimum Detected				5191		Minimum Detected				8.555	
1130	Maximum Detected				8003		Maximum Detected				8.988	
1131	Mean of Detected				6534		Mean of Detected				8.777	
1132	SD of Detected				836		SD of Detected				0.127	
1133	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1134	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1135												
1136												
1137	UCL Statistics											
1138	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1139	Shapiro Wilk Test Statistic				0.924		Shapiro Wilk Test Statistic				0.935	
1140	5% Shapiro Wilk Critical Value				0.842		5% Shapiro Wilk Critical Value				0.842	
1141	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1142												
1143	Assuming Normal Distribution						Assuming Lognormal Distribution					
1144	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach3_PBDE.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	PBDE-153															
10																
11	General Statistics															
12	Number of Valid Data				4				Number of Detected Data				2			
13	Number of Distinct Detected Data				2				Number of Non-Detect Data				2			
14									Percent Non-Detects				50.00%			
15																
16	Warning: This data set only has 4 observations!															
17	Data set is too small to compute reliable and meaningful statistics and estimates!															
18	The data set for variable PBDE-153 was not processed!															
19																
20	It is suggested to collect at least 8 to 10 observations before using these statistical methods!															
21	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.															
22																
23																
24																
25	PBDE-47															
26																
27	General Statistics															
28	Number of Valid Observations				4				Number of Distinct Observations				4			
29																
30																
31	Warning: This data set only has 4 observations!															
32	Data set is too small to compute reliable and meaningful statistics and estimates!															
33	The data set for variable PBDE-47 was not processed!															
34																
35	It is suggested to collect at least 8 to 10 observations before using these statistical methods!															
36	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.															
37																
38																
39																
40	PBDE-99															
41																
42	General Statistics															
43	Number of Valid Data				4				Number of Detected Data				2			
44	Number of Distinct Detected Data				2				Number of Non-Detect Data				2			
45									Percent Non-Detects				50.00%			
46																
47	Warning: This data set only has 4 observations!															
48	Data set is too small to compute reliable and meaningful statistics and estimates!															
49	The data set for variable PBDE-99 was not processed!															
50																
51	It is suggested to collect at least 8 to 10 observations before using these statistical methods!															
52	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.															

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach3_PCB&TEQ.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				23				Number of Distinct Observations				23			
13	Number of Missing Values				10											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0001129			Minimum of Log Data			-9.089						
17	Maximum			0.0009669			Maximum of Log Data			-6.941						
18	Mean			0.0004289			Mean of log Data			-7.926						
19	Median			0.0003456			SD of log Data			0.612						
20	SD			0.0002497												
21	Coefficient of Variation			0.582												
22	Skewness			0.632												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.906			Shapiro Wilk Test Statistic			0.951						
27	Shapiro Wilk Critical Value			0.914			Shapiro Wilk Critical Value			0.914						
28	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.0005183			95% H-UCL			0.0005713						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL									
33	95% Adjusted-CLT UCL			0.0005218			97.5% Chebyshev (MVUE) UCL			0.0007953						
34	95% Modified-t UCL			0.0005194			99% Chebyshev (MVUE) UCL			0.00101						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			2.699			Data appear Gamma Distributed at 5% Significance Level									
38	Theta Star			0.0001589												
39	nu star			124.1												
40	Approximate Chi Square Value (.05)			99.41			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0389			95% CLT UCL			0.0005145						
42	Adjusted Chi Square Value			97.81			95% Jackknife UCL			0.0005183						
43							95% Standard Bootstrap UCL			0.0005112						
44	Anderson-Darling Test Statistic			0.585			95% Bootstrap-t UCL			0.000536						
45	Anderson-Darling 5% Critical Value			0.75			95% Hall's Bootstrap UCL			0.0005216						
46	Kolmogorov-Smirnov Test Statistic			0.164			95% Percentile Bootstrap UCL			0.0005151						
47	Kolmogorov-Smirnov 5% Critical Value			0.183			95% BCA Bootstrap UCL			0.0005197						
48	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.0006558						
49							97.5% Chebyshev(Mean, Sd) UCL			0.000754						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.0009468						
51	95% Approximate Gamma UCL			0.0005356												
52	95% Adjusted Gamma UCL			0.0005443												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					18	Number of Distinct Observations					18	
109	Number of Missing Values					15							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					9.41E-05	Minimum of Log Data					-9.271	
113	Maximum					0.00386	Maximum of Log Data					-5.558	
114	Mean					0.000999	Mean of log Data					-7.518	
115	Median					0.0006156	SD of log Data					1.231	
116	SD					0.00104							
117	Coefficient of Variation					1.042							
118	Skewness					1.418							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.828	Shapiro Wilk Test Statistic					0.921	
123	Shapiro Wilk Critical Value					0.897	Shapiro Wilk Critical Value					0.897	
124	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.00143	95% H-UCL					0.00283	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00265
129	95% Adjusted-CLT UCL					0.00149	97.5% Chebyshev (MVUE) UCL					0.00333	
130	95% Modified-t UCL					0.00144	99% Chebyshev (MVUE) UCL					0.00466	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					0.831	Data appear Gamma Distributed at 5% Significance Level						
134	Theta Star					0.0012							
135	nu star					29.93							
136	Approximate Chi Square Value (.05)					18.44	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0357	95% CLT UCL					0.0014	
138	Adjusted Chi Square Value					17.58	95% Jackknife UCL					0.00143	
139							95% Standard Bootstrap UCL					0.00138	
140	Anderson-Darling Test Statistic					0.45	95% Bootstrap-t UCL					0.00157	
141	Anderson-Darling 5% Critical Value					0.769	95% Hall's Bootstrap UCL					0.00156	
142	Kolmogorov-Smirnov Test Statistic					0.153	95% Percentile Bootstrap UCL					0.00141	
143	Kolmogorov-Smirnov 5% Critical Value					0.21	95% BCA Bootstrap UCL					0.00152	
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.00207	
145							97.5% Chebyshev(Mean, Sd) UCL					0.00253	
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.00344
147	95% Approximate Gamma UCL					0.00162							
148	95% Adjusted Gamma UCL					0.0017							
149													
150	Potential UCL to Use						Use 95% Approximate Gamma UCL						0.00162
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					3	Number of Distinct Observations					3	

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					24						
158												
159												
160	Warning: This data set only has 3 observations!											
161	Data set is too small to compute reliable and meaningful statistics and estimates!											
162	The data set for variable Non-Dioxin PCB, as Congener Sum was not processed!											
163												
164	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
165	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
166												
167												
168												
169	Total PCB, as Aroclor											
170												
171	General Statistics											
172	Number of Valid Observations					18	Number of Distinct Observations					17
173	Number of Missing Values					14						
174												
175	Raw Statistics						Log-transformed Statistics					
176	Minimum					2	Minimum of Log Data					0.693
177	Maximum					82	Maximum of Log Data					4.407
178	Mean					24.92	Mean of log Data					2.606
179	Median					12	SD of log Data					1.254
180	SD					23.92						
181	Coefficient of Variation					0.96						
182	Skewness					0.864						
183												
184	Relevant UCL Statistics											
185	Normal Distribution Test						Lognormal Distribution Test					
186	Shapiro Wilk Test Statistic					0.851	Shapiro Wilk Test Statistic					0.904
187	Shapiro Wilk Critical Value					0.897	Shapiro Wilk Critical Value					0.897
188	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
189												
190	Assuming Normal Distribution						Assuming Lognormal Distribution					
191	95% Student's-t UCL					34.72	95% H-UCL					74.71
192	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					68.71
193	95% Adjusted-CLT UCL					35.42	97.5% Chebyshev (MVUE) UCL					86.44
194	95% Modified-t UCL					34.92	99% Chebyshev (MVUE) UCL					121.3
195												
196	Gamma Distribution Test						Data Distribution					
197	k star (bias corrected)					0.83	Data appear Gamma Distributed at 5% Significance Level					
198	Theta Star					30.01						
199	nu star					29.89						
200	Approximate Chi Square Value (.05)					18.41	Nonparametric Statistics					
201	Adjusted Level of Significance					0.0357	95% CLT UCL					34.19
202	Adjusted Chi Square Value					17.55	95% Jackknife UCL					34.72
203							95% Standard Bootstrap UCL					33.7
204	Anderson-Darling Test Statistic					0.721	95% Bootstrap-t UCL					35.92
205	Anderson-Darling 5% Critical Value					0.769	95% Hall's Bootstrap UCL					34.93
206	Kolmogorov-Smirnov Test Statistic					0.165	95% Percentile Bootstrap UCL					34.26
207	Kolmogorov-Smirnov 5% Critical Value					0.21	95% BCA Bootstrap UCL					34.71
208	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					49.49

	A	B	C	D	E	F	G	H	I	J	K	L	
209						97.5% Chebyshev(Mean, Sd) UCL					60.12		
210	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					81.01		
211	95% Approximate Gamma UCL				40.46								
212	95% Adjusted Gamma UCL				42.45								
213													
214	Potential UCL to Use					Use 95% Approximate Gamma UCL					40.46		
215													
216													
217	Total PCB, as Congener Sum												
218													
219	General Statistics												
220	Number of Valid Observations				3	Number of Distinct Observations				3			
221	Number of Missing Values				24								
222													
223													
224	Warning: This data set only has 3 observations!												
225	Data set is too small to compute reliable and meaningful statistics and estimates!												
226	The data set for variable Total PCB, as Congener Sum was not processed!												
227													
228	It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
229	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
230													
231													

	A	B	C	D	E	F	G	H	I	J	K	L
1	General UCL Statistics for Data Sets with Non-Detects											
2	User Selected Options											
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach6.wst									
4	Full Precision		OFF									
5	Confidence Coefficient		95%									
6	Number of Bootstrap Operations		2000									
7												
8												
9	2006 TEQ_D/F											
10												
11	General Statistics											
12	Number of Valid Data				26		Number of Detected Data				26	
13	Number of Distinct Detected Data				26		Number of Non-Detect Data				0	
14	Number of Missing Values				18		Percent Non-Detects				0.00%	
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			8.499E-05			Minimum Detected			-9.373		
18	Maximum Detected			0.0009389			Maximum Detected			-6.971		
19	Mean of Detected			0.0002868			Mean of Detected			-8.406		
20	SD of Detected			0.00024			SD of Detected			0.678		
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A		
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A		
23												
24												
25	UCL Statistics											
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
27	Shapiro Wilk Test Statistic			0.727			Shapiro Wilk Test Statistic			0.92		
28	5% Shapiro Wilk Critical Value			0.92			5% Shapiro Wilk Critical Value			0.92		
29	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
30												
31	Assuming Normal Distribution						Assuming Lognormal Distribution					
32	DL/2 Substitution Method						DL/2 Substitution Method					
33	Mean			0.0002868			Mean			-8.406		
34	SD			0.00024			SD			0.678		
35	95% DL/2 (t) UCL			0.0003672			95% H-Stat (DL/2) UCL			0.0003746		
36												
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
38	MLE method failed to converge properly						Mean in Log Scale			N/A		
39							SD in Log Scale			N/A		
40							Mean in Original Scale			N/A		
41							SD in Original Scale			N/A		
42							95% Percentile Bootstrap UCL			N/A		
43							95% BCA Bootstrap UCL			N/A		
44												
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
46	k star (bias corrected)			1.935			Data appear Lognormal at 5% Significance Level					
47	Theta Star			0.0001482								
48	nu star			100.6								
49												
50	A-D Test Statistic			1.34			Nonparametric Statistics					
51	5% A-D Critical Value			0.756			Kaplan-Meier (KM) Method					
52	K-S Test Statistic			0.756			Mean			0.0002868		

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.173	SD					0.0002353	
54	Data not Gamma Distributed at 5% Significance Level					SE of Mean					4.707E-05		
55						95% KM (t) UCL					0.0003672		
56	Assuming Gamma Distribution					95% KM (z) UCL					0.0003642		
57	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.0003672		
58	Minimum					8.499E-05	95% KM (bootstrap t) UCL					0.0004015	
59	Maximum					0.0009389	95% KM (BCA) UCL					0.0003701	
60	Mean					0.0002868	95% KM (Percentile Bootstrap) UCL					0.0003687	
61	Median					0.0002087	95% KM (Chebyshev) UCL					0.0004919	
62	SD					0.00024	97.5% KM (Chebyshev) UCL					0.0005807	
63	k star					1.935	99% KM (Chebyshev) UCL					0.0007551	
64	Theta star					0.0001482							
65	Nu star					100.6	Potential UCLs to Use						
66	AppChi2					78.48	95% KM (Chebyshev) UCL					0.0004919	
67	95% Gamma Approximate UCL					0.0003677							
68	95% Adjusted Gamma UCL					0.0003738							
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					26	Number of Detected Data					26	
76	Number of Distinct Detected Data					26	Number of Non-Detect Data					0	
77	Number of Missing Values					18	Percent Non-Detects					0.00%	
78													
79	Raw Statistics					Log-transformed Statistics							
80	Minimum Detected					8.581E-05	Minimum Detected					-9.363	
81	Maximum Detected					0.00192	Maximum Detected					-6.257	
82	Mean of Detected					0.0006253	Mean of Detected					-7.747	
83	SD of Detected					0.0004836	SD of Detected					0.956	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
90	Shapiro Wilk Test Statistic					0.907	Shapiro Wilk Test Statistic					0.919	
91	5% Shapiro Wilk Critical Value					0.92	5% Shapiro Wilk Critical Value					0.92	
92	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
93													
94	Assuming Normal Distribution					Assuming Lognormal Distribution							
95	DL/2 Substitution Method					DL/2 Substitution Method							
96	Mean					0.0006253	Mean					-7.747	
97	SD					0.0004836	SD					0.956	
98	95% DL/2 (t) UCL					0.0007874	95% H-Stat (DL/2) UCL					0.00109	
99													
100	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
101	MLE method failed to converge properly					Mean in Log Scale							N/A
102						SD in Log Scale							N/A
103						Mean in Original Scale							N/A
104						SD in Original Scale							N/A

	A	B	C	D	E	F	G	H	I	J	K	L
105											95% Percentile Bootstrap UCL	N/A
106											95% BCA Bootstrap UCL	N/A
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109					k star (bias corrected)	1.352	Data appear Gamma Distributed at 5% Significance Level					
110					Theta Star	0.0004627						
111					nu star	70.28						
112												
113					A-D Test Statistic	0.588	Nonparametric Statistics					
114					5% A-D Critical Value	0.762	Kaplan-Meier (KM) Method					
115					K-S Test Statistic	0.762	Mean					0.0006253
116					5% K-S Critical Value	0.174	SD					0.0004742
117	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					9.484E-05
118							95% KM (t) UCL					0.0007874
119	Assuming Gamma Distribution						95% KM (z) UCL					0.0007813
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0007874
121					Minimum	8.581E-05	95% KM (bootstrap t) UCL					0.0008136
122					Maximum	0.00192	95% KM (BCA) UCL					0.0007866
123					Mean	0.0006253	95% KM (Percentile Bootstrap) UCL					0.0007869
124					Median	0.0006174	95% KM (Chebyshev) UCL					0.00104
125					SD	0.0004836	97.5% KM (Chebyshev) UCL					0.00122
126					k star	1.352	99% KM (Chebyshev) UCL					0.00157
127					Theta star	0.0004627						
128					Nu star	70.28	Potential UCLs to Use					
129					AppChi2	51.98	95% KM (Chebyshev) UCL					0.00104
130					95% Gamma Approximate UCL	0.0008455						
131					95% Adjusted Gamma UCL	0.0008628						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138					Number of Valid Data	26					Number of Detected Data	26
139					Number of Distinct Detected Data	24					Number of Non-Detect Data	0
140					Number of Missing Values	18					Percent Non-Detects	0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143					Minimum Detected	3.08E-07					Minimum Detected	-14.99
144					Maximum Detected	0.00148					Maximum Detected	-6.517
145					Mean of Detected	0.0003386					Mean of Detected	-10
146					SD of Detected	0.0003699					SD of Detected	3.105
147					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
148					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153					Shapiro Wilk Test Statistic	0.835					Shapiro Wilk Test Statistic	0.775
154					5% Shapiro Wilk Critical Value	0.92					5% Shapiro Wilk Critical Value	0.92
155	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.0003386	Mean						-10
160	SD						0.0003699	SD						3.105
161	95% DL/2 (t) UCL						0.0004625	95% H-Stat (DL/2) UCL						0.203
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						0.323	Data do not follow a Discernable Distribution (0.05)						
173	Theta Star						0.00105							
174	nu star						16.81							
175														
176	A-D Test Statistic						2.256	Nonparametric Statistics						
177	5% A-D Critical Value						0.844	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.844	Mean						0.0003386
179	5% K-S Critical Value						0.185	SD						0.0003628
180	Data not Gamma Distributed at 5% Significance Level							SE of Mean						7.255E-05
181								95% KM (t) UCL						0.0004625
182	Assuming Gamma Distribution							95% KM (z) UCL						0.0004579
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0004625
184	Minimum						3.08E-07	95% KM (bootstrap t) UCL						0.0004886
185	Maximum						0.00148	95% KM (BCA) UCL						0.0004614
186	Mean						0.0003386	95% KM (Percentile Bootstrap) UCL						0.0004587
187	Median						0.0003173	95% KM (Chebyshev) UCL						0.0006548
188	SD						0.0003699	97.5% KM (Chebyshev) UCL						0.0007917
189	k star						0.323	99% KM (Chebyshev) UCL						0.00106
190	Theta star						0.00105							
191	Nu star						16.81	Potential UCLs to Use						
192	AppChi2						8.536	99% KM (Chebyshev) UCL						0.00106
193	95% Gamma Approximate UCL						0.0006667							
194	95% Adjusted Gamma UCL						0.0006985							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Arsenic													
199														
200	General Statistics													
201	Number of Valid Data						10	Number of Detected Data						7
202	Number of Distinct Detected Data						7	Number of Non-Detect Data						3
203	Number of Missing Values						33	Percent Non-Detects						30.00%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						79.92	Minimum Detected						4.381
207	Maximum Detected						178.9	Maximum Detected						5.187
208	Mean of Detected						117.4	Mean of Detected						4.729

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					34.74	SD of Detected					0.291
210	Minimum Non-Detect					60.75	Minimum Non-Detect					4.107
211	Maximum Non-Detect					61.75	Maximum Non-Detect					4.123
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					3
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					7
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					30.00%
216												
217	Warning: There are only 7 Detected Values in this data											
218	Note: It should be noted that even though bootstrap may be performed on this data set											
219	the resulting calculations may not be reliable enough to draw conclusions											
220												
221	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
222												
223												
224	UCL Statistics											
225	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
226	Shapiro Wilk Test Statistic					0.92	Shapiro Wilk Test Statistic					0.935
227	5% Shapiro Wilk Critical Value					0.803	5% Shapiro Wilk Critical Value					0.803
228	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
229												
230	Assuming Normal Distribution						Assuming Lognormal Distribution					
231	DL/2 Substitution Method						DL/2 Substitution Method					
232	Mean					91.35	Mean					4.336
233	SD					50.65	SD					0.676
234	95% DL/2 (t) UCL					120.7	95% H-Stat (DL/2) UCL					158.7
235												
236	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
237	Mean					91.52	Mean in Log Scale					4.507
238	SD					49.75	SD in Log Scale					0.432
239	95% MLE (t) UCL					120.4	Mean in Original Scale					98.46
240	95% MLE (Tiku) UCL					122.5	SD in Original Scale					41.75
241							95% Percentile Bootstrap UCL					119.5
242							95% BCA Bootstrap UCL					122.7
243												
244	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
245	k star (bias corrected)					8.003	Data appear Normal at 5% Significance Level					
246	Theta Star					14.67						
247	nu star					112						
248												
249	A-D Test Statistic					0.301	Nonparametric Statistics					
250	5% A-D Critical Value					0.708	Kaplan-Meier (KM) Method					
251	K-S Test Statistic					0.708	Mean					106.2
252	5% K-S Critical Value					0.312	SD					31.93
253	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					10.91
254							95% KM (t) UCL					126.2
255	Assuming Gamma Distribution						95% KM (z) UCL					124.1
256	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					125.5
257	Minimum					73.26	95% KM (bootstrap t) UCL					133.3
258	Maximum					178.9	95% KM (BCA) UCL					129.5
259	Mean					108	95% KM (Percentile Bootstrap) UCL					129.3
260	Median					98.68	95% KM (Chebyshev) UCL					153.7

	A	B	C	D	E	F	G	H	I	J	K	L	
261					SD	32.66				97.5% KM (Chebyshev) UCL		174.3	
262					k star	9.553				99% KM (Chebyshev) UCL		214.7	
263					Theta star	11.31							
264					Nu star	191.1				Potential UCLs to Use			
265					AppChi2	160.1				95% KM (t) UCL		126.2	
266					95% Gamma Approximate UCL	128.9				95% KM (Percentile Bootstrap) UCL		129.3	
267					95% Adjusted Gamma UCL	133							
268	Note: DL/2 is not a recommended method.												
269													
270													
271	Calcium												
272													
273	General Statistics												
274					Number of Valid Data	10				Number of Detected Data		10	
275					Number of Distinct Detected Data	10				Number of Non-Detect Data		0	
276					Number of Missing Values	33				Percent Non-Detects		0.00%	
277													
278	Raw Statistics						Log-transformed Statistics						
279					Minimum Detected	217485				Minimum Detected		12.29	
280					Maximum Detected	873540				Maximum Detected		13.68	
281					Mean of Detected	400232				Mean of Detected		12.81	
282					SD of Detected	195861				SD of Detected		0.424	
283					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
284					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
285													
286													
287	UCL Statistics												
288	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
289					Shapiro Wilk Test Statistic	0.829				Shapiro Wilk Test Statistic		0.941	
290					5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value		0.842	
291	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
292													
293	Assuming Normal Distribution						Assuming Lognormal Distribution						
294					DL/2 Substitution Method					DL/2 Substitution Method			
295					Mean	400232				Mean		12.81	
296					SD	195861				SD		0.424	
297					95% DL/2 (t) UCL	513769				95% H-Stat (DL/2) UCL		541291	
298													
299					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
300	MLE method failed to converge properly										Mean in Log Scale		N/A
301										SD in Log Scale		N/A	
302										Mean in Original Scale		N/A	
303										SD in Original Scale		N/A	
304										95% Percentile Bootstrap UCL		N/A	
305										95% BCA Bootstrap UCL		N/A	
306													
307	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
308					k star (bias corrected)	4.156				Data appear Gamma Distributed at 5% Significance Level			
309					Theta Star	96314							
310					nu star	83.11							
311													
312					A-D Test Statistic	0.37				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L
313	5% A-D Critical Value					0.729	Kaplan-Meier (KM) Method					
314	K-S Test Statistic					0.729	Mean					400232
315	5% K-S Critical Value					0.267	SD					185811
316	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					61937
317							95% KM (t) UCL					513769
318	Assuming Gamma Distribution						95% KM (z) UCL					502109
319	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					513769
320	Minimum					217485	95% KM (bootstrap t) UCL					592272
321	Maximum					873540	95% KM (BCA) UCL					503144
322	Mean					400232	95% KM (Percentile Bootstrap) UCL					504412
323	Median					352070	95% KM (Chebyshev) UCL					670208
324	SD					195861	97.5% KM (Chebyshev) UCL					787027
325	k star					4.156	99% KM (Chebyshev) UCL					1016496
326	Theta star					96314						
327	Nu star					83.11	Potential UCLs to Use					
328	AppChi2					63.1	95% KM (BCA) UCL					503144
329	95% Gamma Approximate UCL					527153						
330	95% Adjusted Gamma UCL					553671						
331	Note: DL/2 is not a recommended method.											
332												
333												
334	Chromium											
335												
336	General Statistics											
337	Number of Valid Data					10	Number of Detected Data					10
338	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
339	Number of Missing Values					33	Percent Non-Detects					0.00%
340												
341	Raw Statistics						Log-transformed Statistics					
342	Minimum Detected					296.4	Minimum Detected					5.692
343	Maximum Detected					537.1	Maximum Detected					6.286
344	Mean of Detected					408.2	Mean of Detected					5.998
345	SD of Detected					70.5	SD of Detected					0.174
346	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
347	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
348												
349												
350	UCL Statistics											
351	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
352	Shapiro Wilk Test Statistic					0.982	Shapiro Wilk Test Statistic					0.985
353	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
354	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
355												
356	Assuming Normal Distribution						Assuming Lognormal Distribution					
357	DL/2 Substitution Method						DL/2 Substitution Method					
358	Mean					408.2	Mean					5.998
359	SD					70.5	SD					0.174
360	95% DL/2 (t) UCL					449.1	95% H-Stat (DL/2) UCL					455.5
361												
362	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
363	MLE method failed to converge properly						Mean in Log Scale					N/A
364							SD in Log Scale					N/A

	A	B	C	D	E	F	G	H	I	J	K	L
365						Mean in Original Scale					N/A	
366						SD in Original Scale					N/A	
367						95% Percentile Bootstrap UCL					N/A	
368						95% BCA Bootstrap UCL					N/A	
369												
370	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
371	k star (bias corrected)				26.02	Data appear Normal at 5% Significance Level						
372	Theta Star				15.69							
373	nu star				520.5							
374												
375	A-D Test Statistic				0.169	Nonparametric Statistics						
376	5% A-D Critical Value				0.724	Kaplan-Meier (KM) Method						
377	K-S Test Statistic				0.724						Mean	408.2
378	5% K-S Critical Value				0.266						SD	66.89
379	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	22.3
380											95% KM (t) UCL	449.1
381	Assuming Gamma Distribution										95% KM (z) UCL	444.9
382	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	449.1
383	Minimum				296.4						95% KM (bootstrap t) UCL	452
384	Maximum				537.1						95% KM (BCA) UCL	444.7
385	Mean				408.2						95% KM (Percentile Bootstrap) UCL	443.4
386	Median				405.4						95% KM (Chebyshev) UCL	505.4
387	SD				70.5						97.5% KM (Chebyshev) UCL	547.5
388	k star				26.02						99% KM (Chebyshev) UCL	630.1
389	Theta star				15.69							
390	Nu star				520.5	Potential UCLs to Use						
391	AppChi2				468.6						95% KM (t) UCL	449.1
392	95% Gamma Approximate UCL				453.5						95% KM (Percentile Bootstrap) UCL	443.4
393	95% Adjusted Gamma UCL				461.9							
394	Note: DL/2 is not a recommended method.											
395												
396												
397	Cobalt											
398												
399	General Statistics											
400	Number of Valid Data				10	Number of Detected Data				10		
401	Number of Distinct Detected Data				10	Number of Non-Detect Data				0		
402	Number of Missing Values				33	Percent Non-Detects				0.00%		
403												
404	Raw Statistics					Log-transformed Statistics						
405	Minimum Detected				4.01	Minimum Detected				1.389		
406	Maximum Detected				8.4	Maximum Detected				2.128		
407	Mean of Detected				5.534	Mean of Detected				1.692		
408	SD of Detected				1.206	SD of Detected				0.203		
409	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
410	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
411												
412												
413	UCL Statistics											
414	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
415	Shapiro Wilk Test Statistic				0.879	Shapiro Wilk Test Statistic				0.941		
416	5% Shapiro Wilk Critical Value				0.842	5% Shapiro Wilk Critical Value				0.842		

	A	B	C	D	E	F	G	H	I	J	K	L
417	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
418												
419	Assuming Normal Distribution						Assuming Lognormal Distribution					
420	DL/2 Substitution Method						DL/2 Substitution Method					
421	Mean				5.534		Mean				1.692	
422	SD				1.206		SD				0.203	
423	95% DL/2 (t) UCL				6.233		95% H-Stat (DL/2) UCL				6.295	
424												
425	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
426	MLE method failed to converge properly						Mean in Log Scale				N/A	
427							SD in Log Scale				N/A	
428							Mean in Original Scale				N/A	
429							SD in Original Scale				N/A	
430							95% Percentile Bootstrap UCL				N/A	
431							95% BCA Bootstrap UCL				N/A	
432												
433	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
434	k star (bias corrected)				18.28		Data appear Normal at 5% Significance Level					
435	Theta Star				0.303							
436	nu star				365.6							
437												
438	A-D Test Statistic				0.363		Nonparametric Statistics					
439	5% A-D Critical Value				0.725		Kaplan-Meier (KM) Method					
440	K-S Test Statistic				0.725		Mean				5.534	
441	5% K-S Critical Value				0.266		SD				1.144	
442	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.381	
443							95% KM (t) UCL				6.233	
444	Assuming Gamma Distribution						95% KM (z) UCL				6.161	
445	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				6.233	
446	Minimum				4.01		95% KM (bootstrap t) UCL				6.451	
447	Maximum				8.4		95% KM (BCA) UCL				6.203	
448	Mean				5.534		95% KM (Percentile Bootstrap) UCL				6.153	
449	Median				5.46		95% KM (Chebyshev) UCL				7.196	
450	SD				1.206		97.5% KM (Chebyshev) UCL				7.916	
451	k star				18.28		99% KM (Chebyshev) UCL				9.328	
452	Theta star				0.303							
453	Nu star				365.6		Potential UCLs to Use					
454	AppChi2				322.3		95% KM (t) UCL				6.233	
455	95% Gamma Approximate UCL				6.278		95% KM (Percentile Bootstrap) UCL				6.153	
456	95% Adjusted Gamma UCL				6.419							
457	Note: DL/2 is not a recommended method.											
458												
459												
460	Copper											
461												
462	General Statistics											
463	Number of Valid Data				10		Number of Detected Data				10	
464	Number of Distinct Detected Data				10		Number of Non-Detect Data				0	
465	Number of Missing Values				33		Percent Non-Detects				0.00%	
466												
467	Raw Statistics						Log-transformed Statistics					
468	Minimum Detected				203.8		Minimum Detected				5.317	

	A	B	C	D	E	F	G	H	I	J	K	L
469	Maximum Detected					271.7	Maximum Detected					5.605
470	Mean of Detected					238.5	Mean of Detected					5.468
471	SD of Detected					28.3	SD of Detected					0.119
472	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
473	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
474												
475												
476	UCL Statistics											
477	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
478	Shapiro Wilk Test Statistic					0.842	Shapiro Wilk Test Statistic					0.846
479	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
480	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
481												
482	Assuming Normal Distribution						Assuming Lognormal Distribution					
483	DL/2 Substitution Method						DL/2 Substitution Method					
484	Mean					238.5	Mean					5.468
485	SD					28.3	SD					0.119
486	95% DL/2 (t) UCL					254.9	95% H-Stat (DL/2) UCL					256.5
487												
488	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
489	MLE method failed to converge properly						Mean in Log Scale					N/A
490												
491												
492												
493												
494												
495												
496	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
497	k star (bias corrected)					55.15	Data Follow Appr. Gamma Distribution at 5% Significance Level					
498	Theta Star					4.325						
499	nu star					1103						
500												
501	A-D Test Statistic					0.728	Nonparametric Statistics					
502	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
503	K-S Test Statistic					0.724	Mean					238.5
504	5% K-S Critical Value					0.266	SD					26.85
505	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					8.949
506												
507	Assuming Gamma Distribution						95% KM (z) UCL					253.3
508	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					254.9
509	Minimum					203.8	95% KM (bootstrap t) UCL					255.6
510	Maximum					271.7	95% KM (BCA) UCL					253
511	Mean					238.5	95% KM (Percentile Bootstrap) UCL					252.6
512	Median					236.5	95% KM (Chebyshev) UCL					277.5
513	SD					28.3	97.5% KM (Chebyshev) UCL					294.4
514	k star					55.15	99% KM (Chebyshev) UCL					327.6
515	Theta star					4.325						
516	Nu star					1103	Potential UCLs to Use					
517	AppChi2					1027	95% KM (BCA) UCL					253
518	95% Gamma Approximate UCL					256.2						
519	95% Adjusted Gamma UCL					259.4						
520	Note: DL/2 is not a recommended method.											

	A	B	C	D	E	F	G	H	I	J	K	L
521												
522												
523	Iron											
524												
525	General Statistics											
526	Number of Valid Data					10	Number of Detected Data					10
527	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
528	Number of Missing Values					33	Percent Non-Detects					0.00%
529												
530	Raw Statistics						Log-transformed Statistics					
531	Minimum Detected					2110	Minimum Detected					7.654
532	Maximum Detected					5217	Maximum Detected					8.56
533	Mean of Detected					3367	Mean of Detected					8.087
534	SD of Detected					943.6	SD of Detected					0.277
535	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
536	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
537												
538												
539	UCL Statistics											
540	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
541	Shapiro Wilk Test Statistic					0.956	Shapiro Wilk Test Statistic					0.977
542	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
543	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
544												
545	Assuming Normal Distribution						Assuming Lognormal Distribution					
546	DL/2 Substitution Method						DL/2 Substitution Method					
547	Mean					3367	Mean					8.087
548	SD					943.6	SD					0.277
549	95% DL/2 (t) UCL					3914	95% H-Stat (DL/2) UCL					4048
550												
551	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
552	MLE method failed to converge properly						Mean in Log Scale					N/A
553							SD in Log Scale					N/A
554							Mean in Original Scale					N/A
555							SD in Original Scale					N/A
556							95% Percentile Bootstrap UCL					N/A
557							95% BCA Bootstrap UCL					N/A
558												
559	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
560	k star (bias corrected)					10.29	Data appear Normal at 5% Significance Level					
561	Theta Star					327.1						
562	nu star					205.9						
563												
564	A-D Test Statistic					0.19	Nonparametric Statistics					
565	5% A-D Critical Value					0.725	Kaplan-Meier (KM) Method					
566	K-S Test Statistic					0.725	Mean					3367
567	5% K-S Critical Value					0.266	SD					895.2
568	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					298.4
569							95% KM (t) UCL					3914
570	Assuming Gamma Distribution						95% KM (z) UCL					3858
571	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3914
572	Minimum					2110	95% KM (bootstrap t) UCL					4018

	A	B	C	D	E	F	G	H	I	J	K	L	
573					Maximum	5217				95% KM (BCA) UCL		3840	
574					Mean	3367				95% KM (Percentile Bootstrap) UCL		3866	
575					Median	3154				95% KM (Chebyshev) UCL		4668	
576					SD	943.6				97.5% KM (Chebyshev) UCL		5231	
577					k star	10.29				99% KM (Chebyshev) UCL		6336	
578					Theta star	327.1							
579					Nu star	205.9				Potential UCLs to Use			
580					AppChi2	173.7				95% KM (t) UCL		3914	
581					95% Gamma Approximate UCL	3991				95% KM (Percentile Bootstrap) UCL		3866	
582					95% Adjusted Gamma UCL	4113							
583	Note: DL/2 is not a recommended method.												
584													
585													
586	Lead												
587													
588	General Statistics												
589					Number of Valid Data	10				Number of Detected Data		2	
590					Number of Distinct Detected Data	2				Number of Non-Detect Data		8	
591					Number of Missing Values	33				Percent Non-Detects		80.00%	
592													
593	Raw Statistics						Log-transformed Statistics						
594					Minimum Detected	39.71				Minimum Detected		3.682	
595					Maximum Detected	62.4				Maximum Detected		4.134	
596					Mean of Detected	51.06				Mean of Detected		3.908	
597					SD of Detected	16.04				SD of Detected		0.32	
598					Minimum Non-Detect	10.55				Minimum Non-Detect		2.356	
599					Maximum Non-Detect	12.35				Maximum Non-Detect		2.514	
600													
601	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						8
602	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						2
603	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						80.00%
604													
605	Warning: Data set has only 2 Distinct Detected Values.												
606	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
607	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
608													
609	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
610													
611	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
612	Those methods will return a 'N/A' value on your output display!												
613													
614	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
615	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
616													
617													
618	UCL Statistics												
619	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
620					Shapiro Wilk Test Statistic	1				Shapiro Wilk Test Statistic		1	
621					5% Shapiro Wilk Critical Value	N/A				5% Shapiro Wilk Critical Value		N/A	
622	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
623													
624	Assuming Normal Distribution						Assuming Lognormal Distribution						

	A	B	C	D	E	F	G	H	I	J	K	L
625	DL/2 Substitution Method					DL/2 Substitution Method						
626	Mean					14.78	Mean					2.174
627	SD					19.85	SD					0.922
628	95% DL/2 (t) UCL					26.29	95% H-Stat (DL/2) UCL					18.36
629												
630	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
631	MLE method failed to converge properly					Mean in Log Scale					N/A	
632						SD in Log Scale					N/A	
633						Mean in Original Scale					N/A	
634						SD in Original Scale					N/A	
635						95% Percentile Bootstrap UCL					N/A	
636						95% BCA Bootstrap UCL					N/A	
637												
638	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
639	k star (bias corrected)					N/A	Data do not follow a Discernable Distribution (0.05)					
640	Theta Star					N/A						
641	nu star					N/A						
642												
643	A-D Test Statistic					0.359	Nonparametric Statistics					
644	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
645	K-S Test Statistic					N/A	Mean					41.98
646	5% K-S Critical Value					N/A	SD					6.807
647	Data not Gamma Distributed at 5% Significance Level					SE of Mean					3.044	
648						95% KM (t) UCL					47.56	
649	Assuming Gamma Distribution					95% KM (z) UCL					46.99	
650	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					57.82	
651	Minimum					N/A	95% KM (bootstrap t) UCL					#NUM!
652	Maximum					N/A	95% KM (BCA) UCL					N/A
653	Mean					N/A	95% KM (Percentile Bootstrap) UCL					62.4
654	Median					N/A	95% KM (Chebyshev) UCL					55.25
655	SD					N/A	97.5% KM (Chebyshev) UCL					60.99
656	k star					N/A	99% KM (Chebyshev) UCL					72.27
657	Theta star					N/A						
658	Nu star					N/A	Potential UCLs to Use					
659	AppChi2					N/A	95% KM (t) UCL					47.56
660	95% Gamma Approximate UCL					N/A	95% KM (% Bootstrap) UCL					62.4
661	95% Adjusted Gamma UCL					N/A						
662	Note: DL/2 is not a recommended method.											
663												
664												
665	Magnesium											
666												
667	General Statistics											
668	Number of Valid Data					10	Number of Detected Data					10
669	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
670	Number of Missing Values					33	Percent Non-Detects					0.00%
671												
672	Raw Statistics					Log-transformed Statistics						
673	Minimum Detected					250290	Minimum Detected					12.43
674	Maximum Detected					273060	Maximum Detected					12.52
675	Mean of Detected					264073	Mean of Detected					12.48
676	SD of Detected					7084	SD of Detected					0.027

	A	B	C	D	E	F	G	H	I	J	K	L
677	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
678	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
679												
680												
681	UCL Statistics											
682	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
683	Shapiro Wilk Test Statistic					0.958	Shapiro Wilk Test Statistic					0.954
684	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
685	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
686												
687	Assuming Normal Distribution						Assuming Lognormal Distribution					
688	DL/2 Substitution Method						DL/2 Substitution Method					
689	Mean					264073	Mean					12.48
690	SD					7084	SD					0.027
691	95% DL/2 (t) UCL					268180	95% H-Stat (DL/2) UCL					N/A
692												
693	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
694	MLE method failed to converge properly						Mean in Log Scale					N/A
695							SD in Log Scale					N/A
696							Mean in Original Scale					N/A
697							SD in Original Scale					N/A
698							95% Percentile Bootstrap UCL					N/A
699							95% BCA Bootstrap UCL					N/A
700												
701	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
702	k star (bias corrected)					1071	Data appear Normal at 5% Significance Level					
703	Theta Star					246.6						
704	nu star					21415						
705												
706	A-D Test Statistic					0.221	Nonparametric Statistics					
707	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
708	K-S Test Statistic					0.724	Mean					264073
709	5% K-S Critical Value					0.266	SD					6721
710	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2240
711							95% KM (t) UCL					268180
712	Assuming Gamma Distribution						95% KM (z) UCL					267758
713	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					268180
714	Minimum					250290	95% KM (bootstrap t) UCL					267804
715	Maximum					273060	95% KM (BCA) UCL					267404
716	Mean					264073	95% KM (Percentile Bootstrap) UCL					267550
717	Median					265150	95% KM (Chebyshev) UCL					273838
718	SD					7084	97.5% KM (Chebyshev) UCL					278063
719	k star					1071	99% KM (Chebyshev) UCL					286363
720	Theta star					246.6						
721	Nu star					21415	Potential UCLs to Use					
722	AppChi2					21076	95% KM (t) UCL					268180
723	95% Gamma Approximate UCL					268324	95% KM (Percentile Bootstrap) UCL					267550
724	95% Adjusted Gamma UCL					269073						
725	Note: DL/2 is not a recommended method.											
726												
727												
728	Manganese											

	A	B	C	D	E	F	G	H	I	J	K	L		
729														
730	General Statistics													
731	Number of Valid Data					10		Number of Detected Data					10	
732	Number of Distinct Detected Data					10		Number of Non-Detect Data					0	
733	Number of Missing Values					33		Percent Non-Detects					0.00%	
734														
735	Raw Statistics						Log-transformed Statistics							
736	Minimum Detected					119.1		Minimum Detected					4.78	
737	Maximum Detected					185.3		Maximum Detected					5.222	
738	Mean of Detected					147.6		Mean of Detected					4.986	
739	SD of Detected					20.61		SD of Detected					0.137	
740	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
741	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
742														
743														
744	UCL Statistics													
745	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
746	Shapiro Wilk Test Statistic					0.959		Shapiro Wilk Test Statistic					0.973	
747	5% Shapiro Wilk Critical Value					0.842		5% Shapiro Wilk Critical Value					0.842	
748	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
749														
750	Assuming Normal Distribution						Assuming Lognormal Distribution							
751	DL/2 Substitution Method							DL/2 Substitution Method						
752	Mean					147.6		Mean					4.986	
753	SD					20.61		SD					0.137	
754	95% DL/2 (t) UCL					159.5		95% H-Stat (DL/2) UCL					160.6	
755														
756	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
757	MLE method failed to converge properly						Mean in Log Scale					N/A		
758							SD in Log Scale					N/A		
759							Mean in Original Scale					N/A		
760							SD in Original Scale					N/A		
761							95% Percentile Bootstrap UCL					N/A		
762							95% BCA Bootstrap UCL					N/A		
763														
764	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
765	k star (bias corrected)					41.02		Data appear Normal at 5% Significance Level						
766	Theta Star					3.598								
767	nu star					820.5								
768														
769	A-D Test Statistic					0.224		Nonparametric Statistics						
770	5% A-D Critical Value					0.724		Kaplan-Meier (KM) Method						
771	K-S Test Statistic					0.724		Mean					147.6	
772	5% K-S Critical Value					0.266		SD					19.55	
773	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					6.517		
774							95% KM (t) UCL					159.5		
775	Assuming Gamma Distribution						95% KM (z) UCL					158.3		
776	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					159.5	
777	Minimum					119.1		95% KM (bootstrap t) UCL					161.8	
778	Maximum					185.3		95% KM (BCA) UCL					158.3	
779	Mean					147.6		95% KM (Percentile Bootstrap) UCL					157.8	
780	Median					143.4		95% KM (Chebyshev) UCL					176	

	A	B	C	D	E	F	G	H	I	J	K	L	
781					SD	20.61				97.5% KM (Chebyshev) UCL		188.3	
782					k star	41.02				99% KM (Chebyshev) UCL		212.4	
783					Theta star	3.598							
784					Nu star	820.5				Potential UCLs to Use			
785					AppChi2	755				95% KM (t) UCL		159.5	
786					95% Gamma Approximate UCL	160.4				95% KM (Percentile Bootstrap) UCL		157.8	
787					95% Adjusted Gamma UCL	162.8							
788	Note: DL/2 is not a recommended method.												
789													
790													
791	Mercury												
792													
793	General Statistics												
794					Number of Valid Data	18				Number of Detected Data		18	
795					Number of Distinct Detected Data	17				Number of Non-Detect Data		0	
796					Number of Missing Values	25				Percent Non-Detects		0.00%	
797													
798	Raw Statistics						Log-transformed Statistics						
799					Minimum Detected	79.7				Minimum Detected		4.378	
800					Maximum Detected	417				Maximum Detected		6.033	
801					Mean of Detected	190.4				Mean of Detected		5.121	
802					SD of Detected	104.1				SD of Detected		0.513	
803					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
804					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
805													
806													
807	UCL Statistics												
808	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
809					Shapiro Wilk Test Statistic	0.871				Shapiro Wilk Test Statistic		0.951	
810					5% Shapiro Wilk Critical Value	0.897				5% Shapiro Wilk Critical Value		0.897	
811	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
812													
813	Assuming Normal Distribution						Assuming Lognormal Distribution						
814					DL/2 Substitution Method					DL/2 Substitution Method			
815					Mean	190.4				Mean		5.121	
816					SD	104.1				SD		0.513	
817					95% DL/2 (t) UCL	233.1				95% H-Stat (DL/2) UCL		246	
818													
819					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
820	MLE method failed to converge properly										Mean in Log Scale		N/A
821											SD in Log Scale		N/A
822											Mean in Original Scale		N/A
823											SD in Original Scale		N/A
824											95% Percentile Bootstrap UCL		N/A
825											95% BCA Bootstrap UCL		N/A
826													
827	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
828					k star (bias corrected)	3.412				Data appear Gamma Distributed at 5% Significance Level			
829					Theta Star	55.81							
830					nu star	122.8							
831													
832					A-D Test Statistic	0.459				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L
833	5% A-D Critical Value					0.743	Kaplan-Meier (KM) Method					
834	K-S Test Statistic					0.743	Mean					190.4
835	5% K-S Critical Value					0.205	SD					101.1
836	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					24.53
837							95% KM (t) UCL					233.1
838	Assuming Gamma Distribution						95% KM (z) UCL					230.8
839	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					233.1
840	Minimum					79.7	95% KM (bootstrap t) UCL					242.5
841	Maximum					417	95% KM (BCA) UCL					232.2
842	Mean					190.4	95% KM (Percentile Bootstrap) UCL					231.9
843	Median					155	95% KM (Chebyshev) UCL					297.4
844	SD					104.1	97.5% KM (Chebyshev) UCL					343.6
845	k star					3.412	99% KM (Chebyshev) UCL					434.5
846	Theta star					55.81						
847	Nu star					122.8	Potential UCLs to Use					
848	AppChi2					98.25	95% KM (BCA) UCL					232.2
849	95% Gamma Approximate UCL					238.1						
850	95% Adjusted Gamma UCL					243.3						
851	Note: DL/2 is not a recommended method.											
852												
853												
854	Nickel											
855												
856	General Statistics											
857	Number of Valid Data					10	Number of Detected Data					6
858	Number of Distinct Detected Data					6	Number of Non-Detect Data					4
859	Number of Missing Values					33	Percent Non-Detects					40.00%
860												
861	Raw Statistics						Log-transformed Statistics					
862	Minimum Detected					33.3	Minimum Detected					3.506
863	Maximum Detected					131.7	Maximum Detected					4.88
864	Mean of Detected					85.06	Mean of Detected					4.334
865	SD of Detected					40.17	SD of Detected					0.535
866	Minimum Non-Detect					36.45	Minimum Non-Detect					3.596
867	Maximum Non-Detect					37.05	Maximum Non-Detect					3.612
868												
869	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					5
870	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					5
871	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					50.00%
872												
873	Warning: There are only 6 Detected Values in this data											
874	Note: It should be noted that even though bootstrap may be performed on this data set											
875	the resulting calculations may not be reliable enough to draw conclusions											
876												
877	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
878												
879												
880	UCL Statistics											
881	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
882	Shapiro Wilk Test Statistic					0.909	Shapiro Wilk Test Statistic					0.91
883	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788
884	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L		
885														
886	Assuming Normal Distribution						Assuming Lognormal Distribution							
887	DL/2 Substitution Method						DL/2 Substitution Method							
888	Mean						58.37	Mean						3.764
889	SD						45.65	SD						0.837
890	95% DL/2 (t) UCL						84.83	95% H-Stat (DL/2) UCL						136
891														
892	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
893	Mean						41.38	Mean in Log Scale						3.987
894	SD						64.21	SD in Log Scale						0.607
895	95% MLE (t) UCL						78.61	Mean in Original Scale						63.96
896	95% MLE (Tiku) UCL						87.17	SD in Original Scale						40.58
897							95% Percentile Bootstrap UCL						85.23	
898							95% BCA Bootstrap UCL						86.1	
899														
900	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
901	k star (bias corrected)						2.479	Data appear Normal at 5% Significance Level						
902	Theta Star						34.31							
903	nu star						29.75							
904														
905	A-D Test Statistic						0.351	Nonparametric Statistics						
906	5% A-D Critical Value						0.699	Kaplan-Meier (KM) Method						
907	K-S Test Statistic						0.699	Mean						64.35
908	5% K-S Critical Value						0.333	SD						38.08
909	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						13.19	
910							95% KM (t) UCL						88.53	
911	Assuming Gamma Distribution						95% KM (z) UCL						86.05	
912	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						87.77	
913	Minimum						33.3	95% KM (bootstrap t) UCL						90.2
914	Maximum						131.7	95% KM (BCA) UCL						108
915	Mean						81.91	95% KM (Percentile Bootstrap) UCL						92.34
916	Median						77.8	95% KM (Chebyshev) UCL						121.8
917	SD						30.99	97.5% KM (Chebyshev) UCL						146.7
918	k star						5.155	99% KM (Chebyshev) UCL						195.6
919	Theta star						15.89							
920	Nu star						103.1	Potential UCLs to Use						
921	AppChi2						80.67	95% KM (t) UCL						88.53
922	95% Gamma Approximate UCL						104.7	95% KM (Percentile Bootstrap) UCL						92.34
923	95% Adjusted Gamma UCL						109.3							
924	Note: DL/2 is not a recommended method.													
925														
926														
927	Potassium													
928														
929	General Statistics													
930	Number of Valid Data						10	Number of Detected Data						10
931	Number of Distinct Detected Data						9	Number of Non-Detect Data						0
932	Number of Missing Values						33	Percent Non-Detects						0.00%
933														
934	Raw Statistics						Log-transformed Statistics							
935	Minimum Detected						4241100	Minimum Detected						15.26
936	Maximum Detected						4528800	Maximum Detected						15.33

	A	B	C	D	E	F	G	H	I	J	K	L
937	Mean of Detected					4315620	Mean of Detected					15.28
938	SD of Detected					87789	SD of Detected					0.02
939	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
940	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
941												
942												
943	UCL Statistics											
944	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
945	Shapiro Wilk Test Statistic					0.787	Shapiro Wilk Test Statistic					0.793
946	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
947	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
948												
949	Assuming Normal Distribution						Assuming Lognormal Distribution					
950	DL/2 Substitution Method						DL/2 Substitution Method					
951	Mean					4315620	Mean					15.28
952	SD					87789	SD					0.02
953	95% DL/2 (t) UCL					4366510	95% H-Stat (DL/2) UCL					N/A
954												
955	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
956	MLE method failed to converge properly						Mean in Log Scale					N/A
957												
958												
959												
960												
961												
962												
963	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
964	k star (bias corrected)					1917	Data do not follow a Discernable Distribution (0.05)					
965	Theta Star					2251						
966	nu star					38348						
967												
968	A-D Test Statistic					0.931	Nonparametric Statistics					
969	5% A-D Critical Value					0.724	Kaplan-Meier (KM) Method					
970	K-S Test Statistic					0.724	Mean					4315620
971	5% K-S Critical Value					0.266	SD					83284
972	Data not Gamma Distributed at 5% Significance Level						SE of Mean					27761
973												
974	Assuming Gamma Distribution						95% KM (t) UCL					4366510
975	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL					4361283
976	Minimum					4241100	95% KM (jackknife) UCL					4366510
977	Maximum					4528800	95% KM (bootstrap t) UCL					4440503
978	Mean					4315620	95% KM (BCA) UCL					4363960
979	Median					4291150	95% KM (Percentile Bootstrap) UCL					4361720
980	SD					87789	95% KM (Chebyshev) UCL					4436629
981	k star					1917	97.5% KM (Chebyshev) UCL					4488990
982	Theta star					2251	99% KM (Chebyshev) UCL					4591843
983	Nu star					38348	Potential UCLs to Use					
984	AppChi2					37893	95% KM (Chebyshev) UCL					4436629
985	95% Gamma Approximate UCL					4367369						
986	95% Adjusted Gamma UCL					4376464						
987	Note: DL/2 is not a recommended method.											
988												

	A	B	C	D	E	F	G	H	I	J	K	L		
989														
990	Selenium													
991														
992	General Statistics													
993	Number of Valid Data					10		Number of Detected Data					10	
994	Number of Distinct Detected Data					10		Number of Non-Detect Data					0	
995	Number of Missing Values					33		Percent Non-Detects					0.00%	
996														
997	Raw Statistics						Log-transformed Statistics							
998	Minimum Detected					211.4		Minimum Detected					5.354	
999	Maximum Detected					569.9		Maximum Detected					6.345	
1000	Mean of Detected					330.7		Mean of Detected					5.755	
1001	SD of Detected					109.8		SD of Detected					0.313	
1002	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
1003	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
1004														
1005														
1006	UCL Statistics													
1007	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1008	Shapiro Wilk Test Statistic					0.903		Shapiro Wilk Test Statistic					0.95	
1009	5% Shapiro Wilk Critical Value					0.842		5% Shapiro Wilk Critical Value					0.842	
1010	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1011														
1012	Assuming Normal Distribution						Assuming Lognormal Distribution							
1013	DL/2 Substitution Method							DL/2 Substitution Method						
1014	Mean					330.7		Mean					5.755	
1015	SD					109.8		SD					0.313	
1016	95% DL/2 (t) UCL					394.3		95% H-Stat (DL/2) UCL					408.6	
1017														
1018	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1019	MLE method failed to converge properly						Mean in Log Scale						N/A	
1020														
1021														
1022														
1023														
1024														
1025														
1026	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1027	k star (bias corrected)					7.85		Data appear Normal at 5% Significance Level						
1028	Theta Star					42.12								
1029	nu star					157								
1030														
1031	A-D Test Statistic					0.295		Nonparametric Statistics						
1032	5% A-D Critical Value					0.725		Kaplan-Meier (KM) Method						
1033	K-S Test Statistic					0.725		Mean					330.7	
1034	5% K-S Critical Value					0.267		SD					104.2	
1035	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						34.73	
1036														
1037	Assuming Gamma Distribution						95% KM (z) UCL						387.8	
1038	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						394.3	
1039	Minimum					211.4		95% KM (bootstrap t) UCL					418	
1040	Maximum					569.9		95% KM (BCA) UCL					386.3	

	A	B	C	D	E	F	G	H	I	J	K	L	
1041					Mean	330.7					95% KM (Percentile Bootstrap) UCL	387.4	
1042					Median	298.9					95% KM (Chebyshev) UCL	482	
1043					SD	109.8					97.5% KM (Chebyshev) UCL	547.5	
1044					k star	7.85					99% KM (Chebyshev) UCL	676.2	
1045					Theta star	42.12							
1046					Nu star	157					Potential UCLs to Use		
1047					AppChi2	129					95% KM (t) UCL	394.3	
1048					95% Gamma Approximate UCL	402.3					95% KM (Percentile Bootstrap) UCL	387.4	
1049					95% Adjusted Gamma UCL	416.5							
1050	Note: DL/2 is not a recommended method.												
1051													
1052													
1053	Sodium												
1054													
1055	General Statistics												
1056					Number of Valid Data	10					Number of Detected Data	10	
1057					Number of Distinct Detected Data	10					Number of Non-Detect Data	0	
1058					Number of Missing Values	33					Percent Non-Detects	0.00%	
1059													
1060	Raw Statistics						Log-transformed Statistics						
1061					Minimum Detected	409150					Minimum Detected	12.92	
1062					Maximum Detected	529200					Maximum Detected	13.18	
1063					Mean of Detected	464562					Mean of Detected	13.05	
1064					SD of Detected	39501					SD of Detected	0.0855	
1065					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
1066					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
1067													
1068													
1069	UCL Statistics												
1070	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1071					Shapiro Wilk Test Statistic	0.957					Shapiro Wilk Test Statistic	0.953	
1072					5% Shapiro Wilk Critical Value	0.842					5% Shapiro Wilk Critical Value	0.842	
1073	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1074													
1075	Assuming Normal Distribution						Assuming Lognormal Distribution						
1076					DL/2 Substitution Method						DL/2 Substitution Method		
1077					Mean	464562					Mean	13.05	
1078					SD	39501					SD	0.0855	
1079					95% DL/2 (t) UCL	487460					95% H-Stat (DL/2) UCL	N/A	
1080													
1081					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1082	MLE method failed to converge properly											Mean in Log Scale	N/A
1083											SD in Log Scale	N/A	
1084											Mean in Original Scale	N/A	
1085											SD in Original Scale	N/A	
1086											95% Percentile Bootstrap UCL	N/A	
1087											95% BCA Bootstrap UCL	N/A	
1088													
1089	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1090					k star (bias corrected)	107					Data appear Normal at 5% Significance Level		
1091					Theta Star	4342							
1092					nu star	2140							

	A	B	C	D	E	F	G	H	I	J	K	L
1093												
1094				A-D Test Statistic		0.252	Nonparametric Statistics					
1095				5% A-D Critical Value		0.724	Kaplan-Meier (KM) Method					
1096				K-S Test Statistic		0.724					Mean	464562
1097				5% K-S Critical Value		0.266					SD	37474
1098	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	12491
1099											95% KM (t) UCL	487460
1100	Assuming Gamma Distribution										95% KM (z) UCL	485108
1101	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	487460
1102				Minimum		409150					95% KM (bootstrap t) UCL	487381
1103				Maximum		529200					95% KM (BCA) UCL	482531
1104				Mean		464562					95% KM (Percentile Bootstrap) UCL	484063
1105				Median		468270					95% KM (Chebyshev) UCL	519010
1106				SD		39501					97.5% KM (Chebyshev) UCL	542570
1107				k star		107					99% KM (Chebyshev) UCL	588849
1108				Theta star		4342						
1109				Nu star		2140	Potential UCLs to Use					
1110				AppChi2		2034					95% KM (t) UCL	487460
1111				95% Gamma Approximate UCL		488883					95% KM (Percentile Bootstrap) UCL	484063
1112				95% Adjusted Gamma UCL		493269						
1113	Note: DL/2 is not a recommended method.											
1114												
1115												
1116	Thallium											
1117												
1118	General Statistics											
1119				Number of Valid Data		10					Number of Detected Data	5
1120				Number of Distinct Detected Data		5					Number of Non-Detect Data	5
1121				Number of Missing Values		33					Percent Non-Detects	50.00%
1122												
1123	Raw Statistics						Log-transformed Statistics					
1124				Minimum Detected		59.08					Minimum Detected	4.079
1125				Maximum Detected		73.85					Maximum Detected	4.302
1126				Mean of Detected		64.97					Mean of Detected	4.17
1127				SD of Detected		6.257					SD of Detected	0.0946
1128				Minimum Non-Detect		53.28					Minimum Non-Detect	3.976
1129				Maximum Non-Detect		61.75					Maximum Non-Detect	4.123
1130												
1131	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	7
1132	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	3
1133	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	70.00%
1134												
1135	Warning: There are only 5 Detected Values in this data											
1136	Note: It should be noted that even though bootstrap may be performed on this data set											
1137	the resulting calculations may not be reliable enough to draw conclusions											
1138												
1139	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1140												
1141												
1142	UCL Statistics											
1143	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1144				Shapiro Wilk Test Statistic		0.905					Shapiro Wilk Test Statistic	0.912

	A	B	C	D	E	F	G	H	I	J	K	L
1145	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
1146	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1147												
1148	Assuming Normal Distribution					Assuming Lognormal Distribution						
1149	DL/2 Substitution Method					DL/2 Substitution Method						
1150	Mean					47.38	Mean					3.781
1151	SD					19.05	SD					0.417
1152	95% DL/2 (t) UCL					58.42	95% H-Stat (DL/2) UCL					65.08
1153												
1154	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
1155	Mean					56.65	Mean in Log Scale					4.095
1156	SD					10.04	SD in Log Scale					0.107
1157	95% MLE (t) UCL					62.47	Mean in Original Scale					60.39
1158	95% MLE (Tiku) UCL					66.71	SD in Original Scale					6.687
1159						95% Percentile Bootstrap UCL					63.86	
1160						95% BCA Bootstrap UCL					64.47	
1161												
1162	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1163	k star (bias corrected)					55.41	Data appear Normal at 5% Significance Level					
1164	Theta Star					1.173						
1165	nu star					554.1						
1166												
1167	A-D Test Statistic					0.352	Nonparametric Statistics					
1168	5% A-D Critical Value					0.678	Kaplan-Meier (KM) Method					
1169	K-S Test Statistic					0.678	Mean					62.19
1170	5% K-S Critical Value					0.357	SD					4.852
1171	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					1.727	
1172						95% KM (t) UCL					65.36	
1173	Assuming Gamma Distribution					95% KM (z) UCL					65.03	
1174	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					65.08	
1175	Minimum					59.08	95% KM (bootstrap t) UCL					69.36
1176	Maximum					73.85	95% KM (BCA) UCL					67.93
1177	Mean					64.75	95% KM (Percentile Bootstrap) UCL					66.15
1178	Median					64.61	95% KM (Chebyshev) UCL					69.72
1179	SD					4.364	97.5% KM (Chebyshev) UCL					72.98
1180	k star					175.9	99% KM (Chebyshev) UCL					79.38
1181	Theta star					0.368						
1182	Nu star					3519	Potential UCLs to Use					
1183	AppChi2					3382	95% KM (t) UCL					65.36
1184	95% Gamma Approximate UCL					67.37	95% KM (Percentile Bootstrap) UCL					66.15
1185	95% Adjusted Gamma UCL					67.84						
1186	Note: DL/2 is not a recommended method.											
1187												
1188												
1189	Zinc											
1190												
1191	General Statistics											
1192	Number of Valid Data					10	Number of Detected Data					10
1193	Number of Distinct Detected Data					10	Number of Non-Detect Data					0
1194	Number of Missing Values					33	Percent Non-Detects					0.00%
1195												
1196	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
1197				Minimum Detected		6221				Minimum Detected		8.736	
1198				Maximum Detected		7655				Maximum Detected		8.943	
1199				Mean of Detected		6605				Mean of Detected		8.794	
1200				SD of Detected		431.7				SD of Detected		0.0624	
1201				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
1202				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
1203													
1204													
1205	UCL Statistics												
1206	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1207				Shapiro Wilk Test Statistic		0.76				Shapiro Wilk Test Statistic		0.779	
1208				5% Shapiro Wilk Critical Value		0.842				5% Shapiro Wilk Critical Value		0.842	
1209	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1210													
1211	Assuming Normal Distribution						Assuming Lognormal Distribution						
1212				DL/2 Substitution Method						DL/2 Substitution Method			
1213				Mean		6605				Mean		8.794	
1214				SD		431.7				SD		0.0624	
1215				95% DL/2 (t) UCL		6855				95% H-Stat (DL/2) UCL		N/A	
1216													
1217				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1218	MLE method failed to converge properly										Mean in Log Scale		N/A
1219										SD in Log Scale		N/A	
1220										Mean in Original Scale		N/A	
1221										SD in Original Scale		N/A	
1222										95% Percentile Bootstrap UCL		N/A	
1223										95% BCA Bootstrap UCL		N/A	
1224													
1225	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1226				k star (bias corrected)		194				Data do not follow a Discernable Distribution (0.05)			
1227				Theta Star		34.05							
1228				nu star		3879							
1229													
1230				A-D Test Statistic		1.027				Nonparametric Statistics			
1231				5% A-D Critical Value		0.724				Kaplan-Meier (KM) Method			
1232				K-S Test Statistic		0.724				Mean		6605	
1233				5% K-S Critical Value		0.266				SD		409.5	
1234	Data not Gamma Distributed at 5% Significance Level										SE of Mean		136.5
1235										95% KM (t) UCL		6855	
1236	Assuming Gamma Distribution										95% KM (z) UCL		6829
1237				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		6855	
1238				Minimum		6221				95% KM (bootstrap t) UCL		7320	
1239				Maximum		7655				95% KM (BCA) UCL		6865	
1240				Mean		6605				95% KM (Percentile Bootstrap) UCL		6834	
1241				Median		6458				95% KM (Chebyshev) UCL		7200	
1242				SD		431.7				97.5% KM (Chebyshev) UCL		7457	
1243				k star		194				99% KM (Chebyshev) UCL		7963	
1244				Theta star		34.05							
1245				Nu star		3879				Potential UCLs to Use			
1246				AppChi2		3735				95% KM (Chebyshev) UCL		7200	
1247				95% Gamma Approximate UCL		6859							
1248				95% Adjusted Gamma UCL		6904							

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Note: DL/2 is not a recommended method.											
1250												

	A	B	C	D	E	F	G	H	I	J	K	L						
1				General UCL Statistics for Full Data Sets														
2	User Selected Options																	
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-fillet_ProUCL\Fish_Reach6_PCB&TEQ.wst														
4	Full Precision			OFF														
5	Confidence Coefficient			95%														
6	Number of Bootstrap Operations			2000														
7																		
8																		
9	2006 TEQ_D/F																	
10																		
11	General Statistics																	
12	Number of Valid Observations				26				Number of Distinct Observations				26					
13	Number of Missing Values				10													
14																		
15	Raw Statistics						Log-transformed Statistics											
16	Minimum			8.499E-05			Minimum of Log Data			-9.373								
17	Maximum			0.0009389			Maximum of Log Data			-6.971								
18	Mean			0.0002868			Mean of log Data			-8.406								
19	Median			0.0002087			SD of log Data			0.678								
20	SD			0.00024														
21	Coefficient of Variation			0.837														
22	Skewness			1.794														
23																		
24	Relevant UCL Statistics																	
25	Normal Distribution Test						Lognormal Distribution Test											
26	Shapiro Wilk Test Statistic			0.727			Shapiro Wilk Test Statistic			0.92								
27	Shapiro Wilk Critical Value			0.92			Shapiro Wilk Critical Value			0.92								
28	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level											
29																		
30	Assuming Normal Distribution						Assuming Lognormal Distribution											
31	95% Student's-t UCL			0.0003672			95% H-UCL			0.0003746								
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.0004512					
33	95% Adjusted-CLT UCL			0.0003819			97.5% Chebyshev (MVUE) UCL			0.000526								
34	95% Modified-t UCL			0.0003699			99% Chebyshev (MVUE) UCL			0.000673								
35																		
36	Gamma Distribution Test						Data Distribution											
37	k star (bias corrected)			1.935			Data appear Lognormal at 5% Significance Level											
38	Theta Star			0.0001482														
39	nu star			100.6														
40	Approximate Chi Square Value (.05)			78.48			Nonparametric Statistics											
41	Adjusted Level of Significance			0.0398			95% CLT UCL			0.0003642								
42	Adjusted Chi Square Value			77.19			95% Jackknife UCL			0.0003672								
43							95% Standard Bootstrap UCL			0.0003613								
44	Anderson-Darling Test Statistic			1.34			95% Bootstrap-t UCL			0.0003994								
45	Anderson-Darling 5% Critical Value			0.756			95% Hall's Bootstrap UCL			0.0003728								
46	Kolmogorov-Smirnov Test Statistic			0.253			95% Percentile Bootstrap UCL			0.0003652								
47	Kolmogorov-Smirnov 5% Critical Value			0.173			95% BCA Bootstrap UCL			0.0003691								
48	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.0004919								
49							97.5% Chebyshev(Mean, Sd) UCL			0.0005807								
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.0007551								
51	95% Approximate Gamma UCL			0.0003677														
52	95% Adjusted Gamma UCL			0.0003738														

	A	B	C	D	E	F	G	H	I	J	K	L	
53													
54	Potential UCL to Use					Use 95% H-UCL					0.0003746		
55													
56													
57	2006 TEQ_D/F+PCB												
58													
59	General Statistics												
60	Number of Valid Observations					26	Number of Distinct Observations					26	
61	Number of Missing Values					10							
62													
63	Raw Statistics					Log-transformed Statistics							
64	Minimum					0.0003217	Minimum of Log Data					-8.042	
65	Maximum					0.00388	Maximum of Log Data					-5.551	
66	Mean					0.0009027	Mean of log Data					-7.184	
67	Median					0.000713	SD of log Data					0.558	
68	SD					0.0006951							
69	Coefficient of Variation					0.77							
70	Skewness					3.332							
71													
72	Relevant UCL Statistics												
73	Normal Distribution Test					Lognormal Distribution Test							
74	Shapiro Wilk Test Statistic					0.65	Shapiro Wilk Test Statistic					0.942	
75	Shapiro Wilk Critical Value					0.92	Shapiro Wilk Critical Value					0.92	
76	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
77													
78	Assuming Normal Distribution					Assuming Lognormal Distribution							
79	95% Student's-t UCL					0.00114	95% H-UCL					0.00111	
80	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL							0.00132
81	95% Adjusted-CLT UCL					0.00122	97.5% Chebyshev (MVUE) UCL					0.00151	
82	95% Modified-t UCL					0.00115	99% Chebyshev (MVUE) UCL					0.00189	
83													
84	Gamma Distribution Test					Data Distribution							
85	k star (bias corrected)					2.713	Data appear Gamma Distributed at 5% Significance Level						
86	Theta Star					0.0003327							
87	nu star					141.1							
88	Approximate Chi Square Value (.05)					114.6	Nonparametric Statistics						
89	Adjusted Level of Significance					0.0398	95% CLT UCL					0.00113	
90	Adjusted Chi Square Value					113.1	95% Jackknife UCL					0.00114	
91							95% Standard Bootstrap UCL					0.00112	
92	Anderson-Darling Test Statistic					0.719	95% Bootstrap-t UCL					0.00132	
93	Anderson-Darling 5% Critical Value					0.75	95% Hall's Bootstrap UCL					0.0021	
94	Kolmogorov-Smirnov Test Statistic					0.143	95% Percentile Bootstrap UCL					0.00115	
95	Kolmogorov-Smirnov 5% Critical Value					0.172	95% BCA Bootstrap UCL					0.00123	
96	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL							0.0015
97						97.5% Chebyshev(Mean, Sd) UCL							0.00175
98	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL							0.00226
99	95% Approximate Gamma UCL					0.00111							
100	95% Adjusted Gamma UCL					0.00113							
101													
102	Potential UCL to Use					Use 95% Approximate Gamma UCL							0.00111
103													
104													

	A	B	C	D	E	F	G	H	I	J	K	L
105	2006 TEQ_PCB											
106												
107	General Statistics											
108	Number of Valid Observations					26	Number of Distinct Observations					25
109	Number of Missing Values					10						
110												
111	Raw Statistics						Log-transformed Statistics					
112	Minimum					7.999E-05	Minimum of Log Data					-9.434
113	Maximum					0.00356	Maximum of Log Data					-5.639
114	Mean					0.0006159	Mean of log Data					-7.718
115	Median					0.0004345	SD of log Data					0.777
116	SD					0.0006746						
117	Coefficient of Variation					1.095						
118	Skewness					3.565						
119												
120	Relevant UCL Statistics											
121	Normal Distribution Test						Lognormal Distribution Test					
122	Shapiro Wilk Test Statistic					0.607	Shapiro Wilk Test Statistic					0.979
123	Shapiro Wilk Critical Value					0.92	Shapiro Wilk Critical Value					0.92
124	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
125												
126	Assuming Normal Distribution						Assuming Lognormal Distribution					
127	95% Student's-t UCL					0.0008419	95% H-UCL					0.0008493
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					0.00102
129	95% Adjusted-CLT UCL					0.0009323	97.5% Chebyshev (MVUE) UCL					0.00121
130	95% Modified-t UCL					0.0008573	99% Chebyshev (MVUE) UCL					0.00157
131												
132	Gamma Distribution Test						Data Distribution					
133	k star (bias corrected)					1.515	Data appear Gamma Distributed at 5% Significance Level					
134	Theta Star					0.0004066						
135	nu star					78.76						
136	Approximate Chi Square Value (.05)					59.32	Nonparametric Statistics					
137	Adjusted Level of Significance					0.0398	95% CLT UCL					0.0008335
138	Adjusted Chi Square Value					58.2	95% Jackknife UCL					0.0008419
139							95% Standard Bootstrap UCL					0.0008353
140	Anderson-Darling Test Statistic					0.714	95% Bootstrap-t UCL					0.00109
141	Anderson-Darling 5% Critical Value					0.76	95% Hall's Bootstrap UCL					0.00173
142	Kolmogorov-Smirnov Test Statistic					0.161	95% Percentile Bootstrap UCL					0.0008542
143	Kolmogorov-Smirnov 5% Critical Value					0.174	95% BCA Bootstrap UCL					0.0009703
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.00119
145							97.5% Chebyshev(Mean, Sd) UCL					0.00144
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					0.00193
147	95% Approximate Gamma UCL					0.0008178						
148	95% Adjusted Gamma UCL					0.0008335						
149												
150	Potential UCL to Use						Use 95% Approximate Gamma UCL					0.0008178
151												
152												
153	Non-Dioxin PCB, as Congener Sum											
154												
155	General Statistics											
156	Number of Valid Observations					2	Number of Distinct Observations					2

	A	B	C	D	E	F	G	H	I	J	K	L	
157	Number of Missing Values					30							
158													
159													
160	Warning: This data set only has 2 observations!												
161	Data set is too small to compute reliable and meaningful statistics and estimates!												
162	The data set for variable Non-Dioxin PCB, as Congener Sum was not processed!												
163													
164	It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
165	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
166													
167													
168													
169	Total PCB, as Aroclor												
170													
171	General Statistics												
172	Number of Valid Observations					26	Number of Distinct Observations					25	
173	Number of Missing Values					9							
174													
175	Raw Statistics						Log-transformed Statistics						
176	Minimum					1.7	Minimum of Log Data					0.531	
177	Maximum					75.6	Maximum of Log Data					4.325	
178	Mean					16.05	Mean of log Data					2.37	
179	Median					9.53	SD of log Data					0.9	
180	SD					17.12							
181	Coefficient of Variation					1.067							
182	Skewness					2.364							
183													
184	Relevant UCL Statistics												
185	Normal Distribution Test						Lognormal Distribution Test						
186	Shapiro Wilk Test Statistic					0.715	Shapiro Wilk Test Statistic					0.984	
187	Shapiro Wilk Critical Value					0.92	Shapiro Wilk Critical Value					0.92	
188	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
189													
190	Assuming Normal Distribution						Assuming Lognormal Distribution						
191	95% Student's-t UCL					21.78	95% H-UCL					24.54	
192	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						29.22
193	95% Adjusted-CLT UCL					23.24	97.5% Chebyshev (MVUE) UCL						35.07
194	95% Modified-t UCL					22.04	99% Chebyshev (MVUE) UCL						46.56
195													
196	Gamma Distribution Test						Data Distribution						
197	k star (bias corrected)					1.243	Data appear Gamma Distributed at 5% Significance Level						
198	Theta Star					12.92							
199	nu star					64.61							
200	Approximate Chi Square Value (.05)					47.12	Nonparametric Statistics						
201	Adjusted Level of Significance					0.0398	95% CLT UCL					21.57	
202	Adjusted Chi Square Value					46.13	95% Jackknife UCL					21.78	
203							95% Standard Bootstrap UCL					21.52	
204	Anderson-Darling Test Statistic					0.616	95% Bootstrap-t UCL					26.14	
205	Anderson-Darling 5% Critical Value					0.765	95% Hall's Bootstrap UCL					49.57	
206	Kolmogorov-Smirnov Test Statistic					0.138	95% Percentile Bootstrap UCL					21.8	
207	Kolmogorov-Smirnov 5% Critical Value					0.175	95% BCA Bootstrap UCL					23.23	
208	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						30.69

	A	B	C	D	E	F	G	H	I	J	K	L	
209						97.5% Chebyshev(Mean, Sd) UCL					37.02		
210	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					49.46		
211	95% Approximate Gamma UCL				22.01								
212	95% Adjusted Gamma UCL				22.48								
213													
214	Potential UCL to Use					Use 95% Approximate Gamma UCL					22.01		
215													
216													
217	Total PCB, as Congener Sum												
218													
219	General Statistics												
220	Number of Valid Observations				2	Number of Distinct Observations				2			
221	Number of Missing Values				30								
222													
223													
224	Warning: This data set only has 2 observations!												
225	Data set is too small to compute reliable and meaningful statistics and estimates!												
226	The data set for variable Total PCB, as Congener Sum was not processed!												
227													
228	It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
229	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
230													
231													

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach1.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Data				18				Number of Detected Data				18			
13	Number of Distinct Detected Data				18				Number of Non-Detect Data				0			
14	Number of Missing Values				28				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0003643			Minimum Detected			-7.917						
18	Maximum Detected			0.00113			Maximum Detected			-6.785						
19	Mean of Detected			0.0006742			Mean of Detected			-7.362						
20	SD of Detected			0.000242			SD of Detected			0.356						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Shapiro Wilk Test Statistic			0.92			Shapiro Wilk Test Statistic			0.953						
28	5% Shapiro Wilk Critical Value			0.897			5% Shapiro Wilk Critical Value			0.897						
29	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0006742			Mean			-7.362						
34	SD			0.000242			SD			0.356						
35	95% DL/2 (t) UCL			0.0007735			95% H-Stat (DL/2) UCL			0.000797						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			7.144			Data appear Normal at 5% Significance Level									
47	Theta Star			9.438E-05												
48	nu star			257.2												
49																
50	A-D Test Statistic			0.304			Nonparametric Statistics									
51	5% A-D Critical Value			0.74			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.74			Mean			0.0006742						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.204	SD					0.0002352	
54	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					5.704E-05	
55							95% KM (t) UCL					0.0007735	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.000768	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0007735	
58	Minimum						0.0003643	95% KM (bootstrap t) UCL					0.0007901
59	Maximum						0.00113	95% KM (BCA) UCL					0.0007672
60	Mean						0.0006742	95% KM (Percentile Bootstrap) UCL					0.000764
61	Median						0.0006543	95% KM (Chebyshev) UCL					0.0009229
62	SD						0.000242	97.5% KM (Chebyshev) UCL					0.00103
63	k star						7.144	99% KM (Chebyshev) UCL					0.00124
64	Theta star						9.438E-05						
65	Nu star						257.2	Potential UCLs to Use					
66	AppChi2						221	95% KM (t) UCL					0.0007735
67	95% Gamma Approximate UCL						0.0007844	95% KM (Percentile Bootstrap) UCL					0.000764
68	95% Adjusted Gamma UCL						0.000796						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					18	Number of Detected Data					18	
76	Number of Distinct Detected Data					18	Number of Non-Detect Data					0	
77	Number of Missing Values					28	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00278	Minimum Detected					-5.884	
81	Maximum Detected					0.0134	Maximum Detected					-4.313	
82	Mean of Detected					0.00654	Mean of Detected					-5.151	
83	SD of Detected					0.00326	SD of Detected					0.512	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.882	Shapiro Wilk Test Statistic					0.903	
91	5% Shapiro Wilk Critical Value					0.897	5% Shapiro Wilk Critical Value					0.897	
92	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.00654	Mean					-5.151	
97	SD					0.00326	SD					0.512	
98	95% DL/2 (t) UCL					0.00788	95% H-Stat (DL/2) UCL					0.0085	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale						N/A
102							SD in Log Scale						N/A
103							Mean in Original Scale						N/A
104							SD in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
105											95% Percentile Bootstrap UCL	N/A
106											95% BCA Bootstrap UCL	N/A
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109					k star (bias corrected)	3.602	Data Follow Appr. Gamma Distribution at 5% Significance Level					
110					Theta Star	0.00182						
111					nu star	129.7						
112												
113					A-D Test Statistic	0.863	Nonparametric Statistics					
114					5% A-D Critical Value	0.743	Kaplan-Meier (KM) Method					
115					K-S Test Statistic	0.743	Mean					
116					5% K-S Critical Value	0.204	SD					
117	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					
118							95% KM (t) UCL					
119	Assuming Gamma Distribution						95% KM (z) UCL					
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
121					Minimum	0.00278	95% KM (bootstrap t) UCL					
122					Maximum	0.0134	95% KM (BCA) UCL					
123					Mean	0.00654	95% KM (Percentile Bootstrap) UCL					
124					Median	0.00502	95% KM (Chebyshev) UCL					
125					SD	0.00326	97.5% KM (Chebyshev) UCL					
126					k star	3.602	99% KM (Chebyshev) UCL					
127					Theta star	0.00182						
128					Nu star	129.7	Potential UCLs to Use					
129					AppChi2	104.4	95% KM (BCA) UCL					
130					95% Gamma Approximate UCL	0.00813						
131					95% Adjusted Gamma UCL	0.0083						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138					Number of Valid Data	18					Number of Detected Data	18
139					Number of Distinct Detected Data	18					Number of Non-Detect Data	0
140					Number of Missing Values	28					Percent Non-Detects	0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143					Minimum Detected	0.00207					Minimum Detected	-6.179
144					Maximum Detected	0.013					Maximum Detected	-4.345
145					Mean of Detected	0.00587					Mean of Detected	-5.279
146					SD of Detected	0.00315					SD of Detected	0.553
147					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
148					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153					Shapiro Wilk Test Statistic	0.884					Shapiro Wilk Test Statistic	0.918
154					5% Shapiro Wilk Critical Value	0.897					5% Shapiro Wilk Critical Value	0.897
155	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.00587	Mean						-5.279
160	SD						0.00315	SD						0.553
161	95% DL/2 (t) UCL						0.00716	95% H-Stat (DL/2) UCL						0.00785
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						3.124	Data Follow Appr. Gamma Distribution at 5% Significance Level						
173	Theta Star						0.00188							
174	nu star						112.4							
175														
176	A-D Test Statistic						0.82	Nonparametric Statistics						
177	5% A-D Critical Value						0.744	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.744	Mean						0.00587
179	5% K-S Critical Value						0.205	SD						0.00306
180	Data follow Appr. Gamma Distribution at 5% Significance Level							SE of Mean						0.0007428
181								95% KM (t) UCL						0.00716
182	Assuming Gamma Distribution							95% KM (z) UCL						0.00709
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.00716
184	Minimum						0.00207	95% KM (bootstrap t) UCL						0.00732
185	Maximum						0.013	95% KM (BCA) UCL						0.00715
186	Mean						0.00587	95% KM (Percentile Bootstrap) UCL						0.00707
187	Median						0.00449	95% KM (Chebyshev) UCL						0.00911
188	SD						0.00315	97.5% KM (Chebyshev) UCL						0.0105
189	k star						3.124	99% KM (Chebyshev) UCL						0.0133
190	Theta star						0.00188							
191	Nu star						112.4	Potential UCLs to Use						
192	AppChi2						88.97	95% KM (BCA) UCL						0.00715
193	95% Gamma Approximate UCL						0.00742							
194	95% Adjusted Gamma UCL						0.00759							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Aluminum													
199														
200	General Statistics													
201	Number of Valid Data						38	Number of Detected Data						30
202	Number of Distinct Detected Data						30	Number of Non-Detect Data						8
203	Number of Missing Values						8	Percent Non-Detects						21.05%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						3960	Minimum Detected						8.284
207	Maximum Detected						400597	Maximum Detected						12.9
208	Mean of Detected						60967	Mean of Detected						10.15

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					86709	SD of Detected					1.369
210	Minimum Non-Detect					2889	Minimum Non-Detect					7.969
211	Maximum Non-Detect					4656	Maximum Non-Detect					8.446
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					10
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					28
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					26.32%
216												
217	UCL Statistics											
218	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
219	Shapiro Wilk Test Statistic					0.685	Shapiro Wilk Test Statistic					0.927
220	5% Shapiro Wilk Critical Value					0.927	5% Shapiro Wilk Critical Value					0.927
221	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
222												
223	Assuming Normal Distribution						Assuming Lognormal Distribution					
224	DL/2 Substitution Method						DL/2 Substitution Method					
225	Mean					48515	Mean					9.591
226	SD					80560	SD					1.638
227	95% DL/2 (t) UCL					70563	95% H-Stat (DL/2) UCL					59869
228												
229	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
230	Mean					30875	Mean in Log Scale					9.513
231	SD					97988	SD in Log Scale					1.742
232	95% MLE (t) UCL					57693	Mean in Original Scale					48395
233	95% MLE (Tiku) UCL					58196	SD in Original Scale					80632
234							95% Percentile Bootstrap UCL					70624
235							95% BCA Bootstrap UCL					76610
236												
237	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
238	k star (bias corrected)					0.649	Data appear Lognormal at 5% Significance Level					
239	Theta Star					93873						
240	nu star					38.97						
241												
242	A-D Test Statistic					1.121	Nonparametric Statistics					
243	5% A-D Critical Value					0.792	Kaplan-Meier (KM) Method					
244	K-S Test Statistic					0.792	Mean					48967
245	5% K-S Critical Value					0.167	SD					79232
246	Data not Gamma Distributed at 5% Significance Level						SE of Mean					13073
247							95% KM (t) UCL					71022
248	Assuming Gamma Distribution						95% KM (z) UCL					70470
249	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					70847
250	Minimum					1E-09	95% KM (bootstrap t) UCL					85071
251	Maximum					400597	95% KM (BCA) UCL					73711
252	Mean					48132	95% KM (Percentile Bootstrap) UCL					71665
253	Median					14743	95% KM (Chebyshev) UCL					105950
254	SD					80792	97.5% KM (Chebyshev) UCL					130607
255	k star					0.121	99% KM (Chebyshev) UCL					179041
256	Theta star					398133						
257	Nu star					9.188	Potential UCLs to Use					
258	AppChi2					3.441	97.5% KM (Chebyshev) UCL					130607
259	95% Gamma Approximate UCL					128523						
260	95% Adjusted Gamma UCL					134171						

	A	B	C	D	E	F	G	H	I	J	K	L		
261	Note: DL/2 is not a recommended method.													
262														
263														
264	Antimony													
265														
266	General Statistics													
267	Number of Valid Data					38		Number of Detected Data					10	
268	Number of Distinct Detected Data					10		Number of Non-Detect Data					28	
269	Number of Missing Values					8		Percent Non-Detects					73.68%	
270														
271	Raw Statistics						Log-transformed Statistics							
272	Minimum Detected					104.3		Minimum Detected					4.647	
273	Maximum Detected					583.8		Maximum Detected					6.37	
274	Mean of Detected					212.2		Mean of Detected					5.227	
275	SD of Detected					139.1		SD of Detected					0.497	
276	Minimum Non-Detect					71.04		Minimum Non-Detect					4.263	
277	Maximum Non-Detect					146.4		Maximum Non-Detect					4.986	
278														
279	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						31	
280	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						7	
281	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						81.58%	
282														
283	UCL Statistics													
284	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
285	Shapiro Wilk Test Statistic					0.688		Shapiro Wilk Test Statistic					0.885	
286	5% Shapiro Wilk Critical Value					0.842		5% Shapiro Wilk Critical Value					0.842	
287	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
288														
289	Assuming Normal Distribution						Assuming Lognormal Distribution							
290	DL/2 Substitution Method							DL/2 Substitution Method						
291	Mean					97.22		Mean					4.335	
292	SD					98.02		SD					0.607	
293	95% DL/2 (t) UCL					124		95% H-Stat (DL/2) UCL					90.4	
294														
295	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
296	MLE yields a negative mean						Mean in Log Scale						4.096	
297							SD in Log Scale						0.737	
298							Mean in Original Scale						85.7	
299							SD in Original Scale						103	
300							95% Percentile Bootstrap UCL						115.7	
301							95% BCA Bootstrap UCL						126.9	
302														
303	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
304	k star (bias corrected)					2.851		Data appear Gamma Distributed at 5% Significance Level						
305	Theta Star					74.43								
306	nu star					57.02								
307														
308	A-D Test Statistic					0.694		Nonparametric Statistics						
309	5% A-D Critical Value					0.729		Kaplan-Meier (KM) Method						
310	K-S Test Statistic					0.729		Mean					132.9	
311	5% K-S Critical Value					0.268		SD					82.67	
312	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						14.14	

	A	B	C	D	E	F	G	H	I	J	K	L	
313											95% KM (t) UCL	156.7	
314	Assuming Gamma Distribution										95% KM (z) UCL	156.2	
315	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	155.2	
316	Minimum					92.5						95% KM (bootstrap t) UCL	188.3
317	Maximum					583.8						95% KM (BCA) UCL	192.7
318	Mean					229.3						95% KM (Percentile Bootstrap) UCL	174.1
319	Median					243						95% KM (Chebyshev) UCL	194.5
320	SD					89.71						97.5% KM (Chebyshev) UCL	221.2
321	k star					7.185						99% KM (Chebyshev) UCL	273.6
322	Theta star					31.91							
323	Nu star					546						Potential UCLs to Use	
324	AppChi2					492.8						95% KM (t) UCL	156.7
325	95% Gamma Approximate UCL					254							
326	95% Adjusted Gamma UCL					255.1							
327	Note: DL/2 is not a recommended method.												
328													
329													
330	Arsenic												
331													
332	General Statistics												
333	Number of Valid Data					38	Number of Detected Data					38	
334	Number of Distinct Detected Data					38	Number of Non-Detect Data					0	
335	Number of Missing Values					8	Percent Non-Detects					0.00%	
336													
337	Raw Statistics					Log-transformed Statistics							
338	Minimum Detected					65.59	Minimum Detected					4.183	
339	Maximum Detected					437.7	Maximum Detected					6.082	
340	Mean of Detected					177	Mean of Detected					5.091	
341	SD of Detected					78.75	SD of Detected					0.412	
342	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
343	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
344													
345													
346	UCL Statistics												
347	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
348	Shapiro Wilk Test Statistic					0.887	Shapiro Wilk Test Statistic					0.98	
349	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938	
350	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
351													
352	Assuming Normal Distribution					Assuming Lognormal Distribution							
353	DL/2 Substitution Method						DL/2 Substitution Method						
354	Mean					177	Mean					5.091	
355	SD					78.75	SD					0.412	
356	95% DL/2 (t) UCL					198.5	95% H-Stat (DL/2) UCL					200.5	
357													
358	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
359	MLE method failed to converge properly					Mean in Log Scale					N/A		
360						SD in Log Scale					N/A		
361						Mean in Original Scale					N/A		
362						SD in Original Scale					N/A		
363						95% Percentile Bootstrap UCL					N/A		
364						95% BCA Bootstrap UCL					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
365												
366	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
367	k star (bias corrected)				5.585		Data appear Gamma Distributed at 5% Significance Level					
368	Theta Star				31.68							
369	nu star				424.5							
370												
371	A-D Test Statistic				0.605		Nonparametric Statistics					
372	5% A-D Critical Value				0.75		Kaplan-Meier (KM) Method					
373	K-S Test Statistic				0.75		Mean				177	
374	5% K-S Critical Value				0.143		SD				77.71	
375	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				12.77	
376							95% KM (t) UCL				198.5	
377	Assuming Gamma Distribution						95% KM (z) UCL				198	
378	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				198.5	
379	Minimum				65.59		95% KM (bootstrap t) UCL				201.4	
380	Maximum				437.7		95% KM (BCA) UCL				197.5	
381	Mean				177		95% KM (Percentile Bootstrap) UCL				197.8	
382	Median				155.6		95% KM (Chebyshev) UCL				232.6	
383	SD				78.75		97.5% KM (Chebyshev) UCL				256.7	
384	k star				5.585		99% KM (Chebyshev) UCL				304.1	
385	Theta star				31.68							
386	Nu star				424.5		Potential UCLs to Use					
387	AppChi2				377.7		95% KM (BCA) UCL				197.5	
388	95% Gamma Approximate UCL				198.9							
389	95% Adjusted Gamma UCL				199.8							
390	Note: DL/2 is not a recommended method.											
391												
392												
393	Barium											
394												
395	General Statistics											
396	Number of Valid Data				38		Number of Detected Data				38	
397	Number of Distinct Detected Data				38		Number of Non-Detect Data				0	
398	Number of Missing Values				8		Percent Non-Detects				0.00%	
399												
400	Raw Statistics						Log-transformed Statistics					
401	Minimum Detected				457.6		Minimum Detected				6.126	
402	Maximum Detected				38810		Maximum Detected				10.57	
403	Mean of Detected				4139		Mean of Detected				7.686	
404	SD of Detected				6966		SD of Detected				1.023	
405	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
406	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
407												
408												
409	UCL Statistics											
410	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
411	Shapiro Wilk Test Statistic				0.518		Shapiro Wilk Test Statistic				0.939	
412	5% Shapiro Wilk Critical Value				0.938		5% Shapiro Wilk Critical Value				0.938	
413	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
414												
415	Assuming Normal Distribution						Assuming Lognormal Distribution					
416	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
417					Mean	4139					Mean	7.686	
418					SD	6966					SD	1.023	
419					95% DL/2 (t) UCL	6045					95% H-Stat (DL/2) UCL	5502	
420													
421					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
422					MLE method failed to converge properly						Mean in Log Scale	N/A	
423											SD in Log Scale	N/A	
424											Mean in Original Scale	N/A	
425											SD in Original Scale	N/A	
426											95% Percentile Bootstrap UCL	N/A	
427											95% BCA Bootstrap UCL	N/A	
428													
429					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
430					k star (bias corrected)	0.855					Data appear Lognormal at 5% Significance Level		
431					Theta Star	4839							
432					nu star	65							
433													
434					A-D Test Statistic	2.083					Nonparametric Statistics		
435					5% A-D Critical Value	0.782					Kaplan-Meier (KM) Method		
436					K-S Test Statistic	0.782					Mean	4139	
437					5% K-S Critical Value	0.148					SD	6874	
438					Data not Gamma Distributed at 5% Significance Level						SE of Mean	1130	
439											95% KM (t) UCL	6045	
440					Assuming Gamma Distribution						95% KM (z) UCL	5998	
441					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	6045	
442					Minimum	457.6					95% KM (bootstrap t) UCL	8515	
443					Maximum	38810					95% KM (BCA) UCL	6349	
444					Mean	4139					95% KM (Percentile Bootstrap) UCL	6160	
445					Median	2047					95% KM (Chebyshev) UCL	9065	
446					SD	6966					97.5% KM (Chebyshev) UCL	11196	
447					k star	0.855					99% KM (Chebyshev) UCL	15383	
448					Theta star	4839							
449					Nu star	65					Potential UCLs to Use		
450					AppChi2	47.45					97.5% KM (Chebyshev) UCL	11196	
451					95% Gamma Approximate UCL	5670							
452					95% Adjusted Gamma UCL	5745							
453					Note: DL/2 is not a recommended method.								
454													
455													
456					Beryllium								
457													
458					General Statistics								
459					Number of Valid Data	38					Number of Detected Data	10	
460					Number of Distinct Detected Data	10					Number of Non-Detect Data	28	
461					Number of Missing Values	8					Percent Non-Detects	73.68%	
462													
463					Raw Statistics						Log-transformed Statistics		
464					Minimum Detected	4.446					Minimum Detected	1.492	
465					Maximum Detected	22.18					Maximum Detected	3.099	
466					Mean of Detected	9.287					Mean of Detected	2.099	
467					SD of Detected	5.584					SD of Detected	0.51	
468					Minimum Non-Detect	3.46					Minimum Non-Detect	1.241	

	A	B	C	D	E	F	G	H	I	J	K	L
469	Maximum Non-Detect					7.32	Maximum Non-Detect					1.991
470												
471	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					34
472	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					4
473	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					89.47%
474												
475	UCL Statistics											
476	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
477	Shapiro Wilk Test Statistic					0.801	Shapiro Wilk Test Statistic					0.914
478	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
479	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
480												
481	Assuming Normal Distribution						Assuming Lognormal Distribution					
482	DL/2 Substitution Method						DL/2 Substitution Method					
483	Mean					4.521	Mean					1.307
484	SD					4.006	SD					0.558
485	95% DL/2 (t) UCL					5.618	95% H-Stat (DL/2) UCL					4.293
486												
487	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
488	Mean					15.78	Mean in Log Scale					1.223
489	SD					5	SD in Log Scale					0.602
490	95% MLE (t) UCL					17.14	Mean in Original Scale					4.296
491	95% MLE (Tiku) UCL					19.91	SD in Original Scale					4.103
492							95% Percentile Bootstrap UCL					5.385
493							95% BCA Bootstrap UCL					5.83
494												
495	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
496	k star (bias corrected)					2.873	Data Follow Appr. Gamma Distribution at 5% Significance Level					
497	Theta Star					3.232						
498	nu star					57.46						
499												
500	A-D Test Statistic					0.583	Nonparametric Statistics					
501	5% A-D Critical Value					0.729	Kaplan-Meier (KM) Method					
502	K-S Test Statistic					0.729	Mean					5.797
503	5% K-S Critical Value					0.268	SD					3.439
504	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.592
505							95% KM (t) UCL					6.795
506	Assuming Gamma Distribution						95% KM (z) UCL					6.77
507	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.613
508	Minimum					4.446	95% KM (bootstrap t) UCL					7.709
509	Maximum					22.18	95% KM (BCA) UCL					7.837
510	Mean					9.341	95% KM (Percentile Bootstrap) UCL					7.356
511	Median					9.505	95% KM (Chebyshev) UCL					8.376
512	SD					2.933	97.5% KM (Chebyshev) UCL					9.492
513	k star					11.45	99% KM (Chebyshev) UCL					11.68
514	Theta star					0.816						
515	Nu star					869.9	Potential UCLs to Use					
516	AppChi2					802.5	95% KM (t) UCL					6.795
517	95% Gamma Approximate UCL					10.13						
518	95% Adjusted Gamma UCL					10.16						
519	Note: DL/2 is not a recommended method.											
520												

	A	B	C	D	E	F	G	H	I	J	K	L		
521														
522	Cadmium													
523														
524	General Statistics													
525	Number of Valid Data					38		Number of Detected Data					38	
526	Number of Distinct Detected Data					37		Number of Non-Detect Data					0	
527	Number of Missing Values					8		Percent Non-Detects					0.00%	
528														
529	Raw Statistics						Log-transformed Statistics							
530	Minimum Detected					18.61		Minimum Detected					2.923	
531	Maximum Detected					543.6		Maximum Detected					6.298	
532	Mean of Detected					236.1		Mean of Detected					4.997	
533	SD of Detected					166.5		SD of Detected					1.177	
534	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
535	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
536														
537														
538	UCL Statistics													
539	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
540	Shapiro Wilk Test Statistic					0.903		Shapiro Wilk Test Statistic					0.807	
541	5% Shapiro Wilk Critical Value					0.938		5% Shapiro Wilk Critical Value					0.938	
542	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
543														
544	Assuming Normal Distribution						Assuming Lognormal Distribution							
545	DL/2 Substitution Method							DL/2 Substitution Method						
546	Mean					236.1		Mean					4.997	
547	SD					166.5		SD					1.177	
548	95% DL/2 (t) UCL					281.7		95% H-Stat (DL/2) UCL					486.3	
549														
550	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
551	MLE method failed to converge properly						Mean in Log Scale						N/A	
552							SD in Log Scale						N/A	
553							Mean in Original Scale						N/A	
554							SD in Original Scale						N/A	
555							95% Percentile Bootstrap UCL						N/A	
556							95% BCA Bootstrap UCL						N/A	
557														
558	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
559	k star (bias corrected)					1.13		Data do not follow a Discernable Distribution (0.05)						
560	Theta Star					208.9								
561	nu star					85.92								
562														
563	A-D Test Statistic					2.127		Nonparametric Statistics						
564	5% A-D Critical Value					0.773		Kaplan-Meier (KM) Method						
565	K-S Test Statistic					0.773		Mean					236.1	
566	5% K-S Critical Value					0.147		SD					164.3	
567	Data not Gamma Distributed at 5% Significance Level						SE of Mean						27.01	
568							95% KM (t) UCL						281.7	
569	Assuming Gamma Distribution						95% KM (z) UCL						280.6	
570	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						281.7	
571	Minimum					18.61		95% KM (bootstrap t) UCL					280.6	
572	Maximum					543.6		95% KM (BCA) UCL					279.7	

	A	B	C	D	E	F	G	H	I	J	K	L
573					Mean	236.1					95% KM (Percentile Bootstrap) UCL	278.5
574					Median	263.8					95% KM (Chebyshev) UCL	353.9
575					SD	166.5					97.5% KM (Chebyshev) UCL	404.8
576					k star	1.13					99% KM (Chebyshev) UCL	504.9
577					Theta star	208.9						
578					Nu star	85.92				Potential UCLs to Use		
579					AppChi2	65.55					97.5% KM (Chebyshev) UCL	404.8
580					95% Gamma Approximate UCL	309.5						
581					95% Adjusted Gamma UCL	313						
582	Note: DL/2 is not a recommended method.											
583												
584												
585	Calcium											
586												
587	General Statistics											
588					Number of Valid Data	38					Number of Detected Data	38
589					Number of Distinct Detected Data	38					Number of Non-Detect Data	0
590					Number of Missing Values	8					Percent Non-Detects	0.00%
591												
592	Raw Statistics						Log-transformed Statistics					
593					Minimum Detected	4118400					Minimum Detected	15.23
594					Maximum Detected	13992000					Maximum Detected	16.45
595					Mean of Detected	8923026					Mean of Detected	15.96
596					SD of Detected	2651742					SD of Detected	0.328
597					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
598					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
599												
600												
601	UCL Statistics											
602	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
603					Shapiro Wilk Test Statistic	0.959					Shapiro Wilk Test Statistic	0.928
604					5% Shapiro Wilk Critical Value	0.938					5% Shapiro Wilk Critical Value	0.938
605	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
606												
607	Assuming Normal Distribution						Assuming Lognormal Distribution					
608					DL/2 Substitution Method						DL/2 Substitution Method	
609					Mean	8923026					Mean	15.96
610					SD	2651742					SD	0.328
611					95% DL/2 (t) UCL	9648761					95% H-Stat (DL/2) UCL	9878266
612												
613					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
614	MLE method failed to converge properly						Mean in Log Scale					
615							SD in Log Scale					
616							Mean in Original Scale					
617							SD in Original Scale					
618							95% Percentile Bootstrap UCL					
619							95% BCA Bootstrap UCL					
620												
621	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
622					k star (bias corrected)	9.636					Data appear Normal at 5% Significance Level	
623					Theta Star	925972						
624					nu star	732.4						

	A	B	C	D	E	F	G	H	I	J	K	L
625												
626				A-D Test Statistic		0.72	Nonparametric Statistics					
627				5% A-D Critical Value		0.748	Kaplan-Meier (KM) Method					
628				K-S Test Statistic		0.748					Mean	8923026
629				5% K-S Critical Value		0.143					SD	2616618
630	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	430169
631											95% KM (t) UCL	9648761
632	Assuming Gamma Distribution										95% KM (z) UCL	9630591
633	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	9648761
634					Minimum	4118400					95% KM (bootstrap t) UCL	9662241
635					Maximum	13992000					95% KM (BCA) UCL	9626390
636					Mean	8923026					95% KM (Percentile Bootstrap) UCL	9629479
637					Median	8964262					95% KM (Chebyshev) UCL	10798090
638					SD	2651742					97.5% KM (Chebyshev) UCL	11609432
639					k star	9.636					99% KM (Chebyshev) UCL	13203156
640					Theta star	925972						
641					Nu star	732.4	Potential UCLs to Use					
642					AppChi2	670.6					95% KM (t) UCL	9648761
643					95% Gamma Approximate UCL	9745296					95% KM (Percentile Bootstrap) UCL	9629479
644					95% Adjusted Gamma UCL	9780867						
645	Note: DL/2 is not a recommended method.											
646												
647												
648	Chromium											
649												
650	General Statistics											
651					Number of Valid Data	38					Number of Detected Data	38
652					Number of Distinct Detected Data	38					Number of Non-Detect Data	0
653					Number of Missing Values	8					Percent Non-Detects	0.00%
654												
655	Raw Statistics						Log-transformed Statistics					
656					Minimum Detected	326.4					Minimum Detected	5.788
657					Maximum Detected	8218					Maximum Detected	9.014
658					Mean of Detected	1408					Mean of Detected	6.884
659					SD of Detected	1697					SD of Detected	0.747
660					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
661					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
662												
663												
664	UCL Statistics											
665	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
666					Shapiro Wilk Test Statistic	0.574					Shapiro Wilk Test Statistic	0.848
667					5% Shapiro Wilk Critical Value	0.938					5% Shapiro Wilk Critical Value	0.938
668	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
669												
670	Assuming Normal Distribution						Assuming Lognormal Distribution					
671					DL/2 Substitution Method						DL/2 Substitution Method	
672					Mean	1408					Mean	6.884
673					SD	1697					SD	0.747
674					95% DL/2 (t) UCL	1872					95% H-Stat (DL/2) UCL	1673
675												
676					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	

	A	B	C	D	E	F	G	H	I	J	K	L
677	MLE method failed to converge properly						Mean in Log Scale					N/A
678							SD in Log Scale					N/A
679							Mean in Original Scale					N/A
680							SD in Original Scale					N/A
681							95% Percentile Bootstrap UCL					N/A
682							95% BCA Bootstrap UCL					N/A
683												
684	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
685	k star (bias corrected)				1.41		Data do not follow a Discernable Distribution (0.05)					
686	Theta Star				998.5							
687	nu star				107.1							
688												
689	A-D Test Statistic				3.622		Nonparametric Statistics					
690	5% A-D Critical Value				0.766		Kaplan-Meier (KM) Method					
691	K-S Test Statistic				0.766		Mean					1408
692	5% K-S Critical Value				0.146		SD					1674
693	Data not Gamma Distributed at 5% Significance Level						SE of Mean					275.2
694							95% KM (t) UCL					1872
695	Assuming Gamma Distribution						95% KM (z) UCL					1860
696	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1872
697	Minimum				326.4		95% KM (bootstrap t) UCL					2189
698	Maximum				8218		95% KM (BCA) UCL					1858
699	Mean				1408		95% KM (Percentile Bootstrap) UCL					1857
700	Median				790		95% KM (Chebyshev) UCL					2607
701	SD				1697		97.5% KM (Chebyshev) UCL					3126
702	k star				1.41		99% KM (Chebyshev) UCL					4146
703	Theta star				998.5							
704	Nu star				107.1		Potential UCLs to Use					
705	AppChi2				84.24		95% KM (Chebyshev) UCL					2607
706	95% Gamma Approximate UCL				1790							
707	95% Adjusted Gamma UCL				1808							
708	Note: DL/2 is not a recommended method.											
709												
710												
711	Cobalt											
712												
713	General Statistics											
714	Number of Valid Data				38		Number of Detected Data				38	
715	Number of Distinct Detected Data				38		Number of Non-Detect Data				0	
716	Number of Missing Values				8		Percent Non-Detects				0.00%	
717												
718	Raw Statistics						Log-transformed Statistics					
719	Minimum Detected				18.05		Minimum Detected				2.893	
720	Maximum Detected				1178		Maximum Detected				7.071	
721	Mean of Detected				119.8		Mean of Detected				4.071	
722	SD of Detected				220.8		SD of Detected				1.022	
723	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
724	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
725												
726												
727	UCL Statistics											
728	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
729	Shapiro Wilk Test Statistic					0.486	Shapiro Wilk Test Statistic					0.871
730	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938
731	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
732												
733	Assuming Normal Distribution						Assuming Lognormal Distribution					
734	DL/2 Substitution Method						DL/2 Substitution Method					
735	Mean					119.8	Mean					4.071
736	SD					220.8	SD					1.022
737	95% DL/2 (t) UCL					180.2	95% H-Stat (DL/2) UCL					147.7
738												
739	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
740	MLE method failed to converge properly						Mean in Log Scale					N/A
741							SD in Log Scale					N/A
742							Mean in Original Scale					N/A
743							SD in Original Scale					N/A
744							95% Percentile Bootstrap UCL					N/A
745							95% BCA Bootstrap UCL					N/A
746												
747	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
748	k star (bias corrected)					0.779	Data do not follow a Discernable Distribution (0.05)					
749	Theta Star					153.7						
750	nu star					59.21						
751												
752	A-D Test Statistic					3.501	Nonparametric Statistics					
753	5% A-D Critical Value					0.785	Kaplan-Meier (KM) Method					
754	K-S Test Statistic					0.785	Mean					119.8
755	5% K-S Critical Value					0.148	SD					217.9
756	Data not Gamma Distributed at 5% Significance Level						SE of Mean					35.82
757							95% KM (t) UCL					180.2
758	Assuming Gamma Distribution						95% KM (z) UCL					178.7
759	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					180.2
760	Minimum					18.05	95% KM (bootstrap t) UCL					268.4
761	Maximum					1178	95% KM (BCA) UCL					183.3
762	Mean					119.8	95% KM (Percentile Bootstrap) UCL					185.8
763	Median					52.89	95% KM (Chebyshev) UCL					275.9
764	SD					220.8	97.5% KM (Chebyshev) UCL					343.5
765	k star					0.779	99% KM (Chebyshev) UCL					476.2
766	Theta star					153.7						
767	Nu star					59.21	Potential UCLs to Use					
768	AppChi2					42.52	97.5% KM (Chebyshev) UCL					343.5
769	95% Gamma Approximate UCL					166.8						
770	95% Adjusted Gamma UCL					169.1						
771	Note: DL/2 is not a recommended method.											
772												
773												
774	Copper											
775												
776	General Statistics											
777	Number of Valid Data					38	Number of Detected Data					38
778	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
779	Number of Missing Values					8	Percent Non-Detects					0.00%
780												

	A	B	C	D	E	F	G	H	I	J	K	L
781	Raw Statistics						Log-transformed Statistics					
782	Minimum Detected				301		Minimum Detected				5.707	
783	Maximum Detected				48491		Maximum Detected				10.79	
784	Mean of Detected				4034		Mean of Detected				7.346	
785	SD of Detected				8773		SD of Detected				1.197	
786	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
787	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
788												
789												
790	UCL Statistics											
791	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
792	Shapiro Wilk Test Statistic				0.448		Shapiro Wilk Test Statistic				0.909	
793	5% Shapiro Wilk Critical Value				0.938		5% Shapiro Wilk Critical Value				0.938	
794	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
795												
796	Assuming Normal Distribution						Assuming Lognormal Distribution					
797	DL/2 Substitution Method						DL/2 Substitution Method					
798	Mean				4034		Mean				7.346	
799	SD				8773		SD				1.197	
800	95% DL/2 (t) UCL				6435		95% H-Stat (DL/2) UCL				5299	
801												
802	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
803	MLE method failed to converge properly						Mean in Log Scale				N/A	
804							SD in Log Scale				N/A	
805							Mean in Original Scale				N/A	
806							SD in Original Scale				N/A	
807							95% Percentile Bootstrap UCL				N/A	
808							95% BCA Bootstrap UCL				N/A	
809												
810	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
811	k star (bias corrected)				0.607		Data do not follow a Discernable Distribution (0.05)					
812	Theta Star				6644							
813	nu star				46.14							
814												
815	A-D Test Statistic				3.431		Nonparametric Statistics					
816	5% A-D Critical Value				0.799		Kaplan-Meier (KM) Method					
817	K-S Test Statistic				0.799		Mean				4034	
818	5% K-S Critical Value				0.15		SD				8657	
819	Data not Gamma Distributed at 5% Significance Level						SE of Mean				1423	
820							95% KM (t) UCL				6435	
821	Assuming Gamma Distribution						95% KM (z) UCL				6375	
822	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				6435	
823	Minimum				301		95% KM (bootstrap t) UCL				10139	
824	Maximum				48491		95% KM (BCA) UCL				6936	
825	Mean				4034		95% KM (Percentile Bootstrap) UCL				6679	
826	Median				1229		95% KM (Chebyshev) UCL				10237	
827	SD				8773		97.5% KM (Chebyshev) UCL				12922	
828	k star				0.607		99% KM (Chebyshev) UCL				18195	
829	Theta star				6644							
830	Nu star				46.14		Potential UCLs to Use					
831	AppChi2				31.56		97.5% KM (Chebyshev) UCL				12922	
832	95% Gamma Approximate UCL				5898							

	A	B	C	D	E	F	G	H	I	J	K	L
833	95% Adjusted Gamma UCL					5993						
834	Note: DL/2 is not a recommended method.											
835												
836												
837	Iron											
838												
839	General Statistics											
840	Number of Valid Data					38	Number of Detected Data					38
841	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
842	Number of Missing Values					8	Percent Non-Detects					0.00%
843												
844	Raw Statistics						Log-transformed Statistics					
845	Minimum Detected					9390	Minimum Detected					9.147
846	Maximum Detected					4100877	Maximum Detected					15.23
847	Mean of Detected					303049	Mean of Detected					11.17
848	SD of Detected					745386	SD of Detected					1.568
849	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
850	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
851												
852												
853	UCL Statistics											
854	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
855	Shapiro Wilk Test Statistic					0.44	Shapiro Wilk Test Statistic					0.923
856	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938
857	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
858												
859	Assuming Normal Distribution						Assuming Lognormal Distribution					
860	DL/2 Substitution Method						DL/2 Substitution Method					
861	Mean					303049	Mean					11.17
862	SD					745386	SD					1.568
863	95% DL/2 (t) UCL					507048	95% H-Stat (DL/2) UCL					537177
864												
865	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
866	MLE method failed to converge properly						Mean in Log Scale					N/A
867							SD in Log Scale					N/A
868							Mean in Original Scale					N/A
869							SD in Original Scale					N/A
870							95% Percentile Bootstrap UCL					N/A
871							95% BCA Bootstrap UCL					N/A
872												
873	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
874	k star (bias corrected)					0.428	Data do not follow a Discernable Distribution (0.05)					
875	Theta Star					707596						
876	nu star					32.55						
877												
878	A-D Test Statistic					3.034	Nonparametric Statistics					
879	5% A-D Critical Value					0.825	Kaplan-Meier (KM) Method					
880	K-S Test Statistic					0.825	Mean					303049
881	5% K-S Critical Value					0.152	SD					735513
882	Data not Gamma Distributed at 5% Significance Level						SE of Mean					120918
883							95% KM (t) UCL					507048
884	Assuming Gamma Distribution						95% KM (z) UCL					501941

	A	B	C	D	E	F	G	H	I	J	K	L
885	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					507048
886					Minimum	9390	95% KM (bootstrap t) UCL					817258
887					Maximum	4100877	95% KM (BCA) UCL					508783
888					Mean	303049	95% KM (Percentile Bootstrap) UCL					524319
889					Median	65829	95% KM (Chebyshev) UCL					830116
890					SD	745386	97.5% KM (Chebyshev) UCL					1058179
891					k star	0.428	99% KM (Chebyshev) UCL					1506164
892					Theta star	707596						
893					Nu star	32.55	Potential UCLs to Use					
894					AppChi2	20.51	99% KM (Chebyshev) UCL					1506164
895					95% Gamma Approximate UCL	480982						
896					95% Adjusted Gamma UCL	490472						
897	Note: DL/2 is not a recommended method.											
898												
899												
900	Lead											
901												
902	General Statistics											
903					Number of Valid Data	38					Number of Detected Data	38
904					Number of Distinct Detected Data	38					Number of Non-Detect Data	0
905					Number of Missing Values	8					Percent Non-Detects	0.00%
906												
907	Raw Statistics						Log-transformed Statistics					
908					Minimum Detected	29.3					Minimum Detected	3.378
909					Maximum Detected	14370					Maximum Detected	9.573
910					Mean of Detected	4198					Mean of Detected	7.146
911					SD of Detected	4128					SD of Detected	2.105
912					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
913					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
914												
915												
916	UCL Statistics											
917	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
918					Shapiro Wilk Test Statistic	0.854					Shapiro Wilk Test Statistic	0.827
919					5% Shapiro Wilk Critical Value	0.938					5% Shapiro Wilk Critical Value	0.938
920	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
921												
922	Assuming Normal Distribution						Assuming Lognormal Distribution					
923					DL/2 Substitution Method						DL/2 Substitution Method	
924					Mean	4198					Mean	7.146
925					SD	4128					SD	2.105
926					95% DL/2 (t) UCL	5328					95% H-Stat (DL/2) UCL	43910
927												
928					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
929	MLE method failed to converge properly										Mean in Log Scale	N/A
930											SD in Log Scale	N/A
931											Mean in Original Scale	N/A
932											SD in Original Scale	N/A
933											95% Percentile Bootstrap UCL	N/A
934											95% BCA Bootstrap UCL	N/A
935												
936	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L	
937	k star (bias corrected)					0.503	Data do not follow a Discernable Distribution (0.05)						
938	Theta Star					8353							
939	nu star					38.19							
940													
941	A-D Test Statistic					2.078	Nonparametric Statistics						
942	5% A-D Critical Value					0.81	Kaplan-Meier (KM) Method						
943	K-S Test Statistic					0.81						Mean	4198
944	5% K-S Critical Value					0.151						SD	4074
945	Data not Gamma Distributed at 5% Significance Level											SE of Mean	669.7
946												95% KM (t) UCL	5328
947	Assuming Gamma Distribution											95% KM (z) UCL	5299
948	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	5328
949	Minimum					29.3						95% KM (bootstrap t) UCL	5436
950	Maximum					14370						95% KM (BCA) UCL	5357
951	Mean					4198						95% KM (Percentile Bootstrap) UCL	5315
952	Median					3846						95% KM (Chebyshev) UCL	7117
953	SD					4128						97.5% KM (Chebyshev) UCL	8380
954	k star					0.503						99% KM (Chebyshev) UCL	10861
955	Theta star					8353							
956	Nu star					38.19	Potential UCLs to Use						
957	AppChi2					25.04						99% KM (Chebyshev) UCL	10861
958	95% Gamma Approximate UCL					6403							
959	95% Adjusted Gamma UCL					6518							
960	Note: DL/2 is not a recommended method.												
961													
962													
963	Magnesium												
964													
965	General Statistics												
966	Number of Valid Data					38	Number of Detected Data					38	
967	Number of Distinct Detected Data					38	Number of Non-Detect Data					0	
968	Number of Missing Values					8	Percent Non-Detects					0.00%	
969													
970	Raw Statistics						Log-transformed Statistics						
971	Minimum Detected					273578	Minimum Detected					12.52	
972	Maximum Detected					429897	Maximum Detected					12.97	
973	Mean of Detected					346179	Mean of Detected					12.75	
974	SD of Detected					37722	SD of Detected					0.108	
975	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
976	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
977													
978													
979	UCL Statistics												
980	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
981	Shapiro Wilk Test Statistic					0.973	Shapiro Wilk Test Statistic					0.982	
982	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938	
983	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
984													
985	Assuming Normal Distribution						Assuming Lognormal Distribution						
986	DL/2 Substitution Method						DL/2 Substitution Method						
987	Mean					346179	Mean					12.75	
988	SD					37722	SD					0.108	

	A	B	C	D	E	F	G	H	I	J	K	L
989	95% DL/2 (t) UCL					356503	95% H-Stat (DL/2) UCL					356820
990												
991	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
992	MLE method failed to converge properly						Mean in Log Scale					N/A
993												
994												
995												
996												
997												
998												
999	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1000	k star (bias corrected)					80.77	Data appear Normal at 5% Significance Level					
1001												
1002												
1003												
1004	A-D Test Statistic					0.189	Nonparametric Statistics					
1005	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
1006	K-S Test Statistic					0.746	Mean					346179
1007	5% K-S Critical Value					0.143	SD					37222
1008	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					6119
1009												
1010	Assuming Gamma Distribution						95% KM (z) UCL					356244
1011	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					356503
1012	Minimum					273578	95% KM (bootstrap t) UCL					356497
1013	Maximum					429897	95% KM (BCA) UCL					355908
1014	Mean					346179	95% KM (Percentile Bootstrap) UCL					355986
1015	Median					344127	95% KM (Chebyshev) UCL					372852
1016	SD					37722	97.5% KM (Chebyshev) UCL					384394
1017	k star					80.77	99% KM (Chebyshev) UCL					407065
1018												
1019	Nu star					6139	Potential UCLs to Use					
1020	AppChi2					5957	95% KM (t) UCL					356503
1021	95% Gamma Approximate UCL					356703	95% KM (Percentile Bootstrap) UCL					355986
1022	95% Adjusted Gamma UCL					357143						
1023	Note: DL/2 is not a recommended method.											
1024												
1025												
1026	Manganese											
1027												
1028	General Statistics											
1029	Number of Valid Data					38	Number of Detected Data					38
1030	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
1031	Number of Missing Values					8	Percent Non-Detects					0.00%
1032												
1033	Raw Statistics						Log-transformed Statistics					
1034	Minimum Detected					946.8	Minimum Detected					6.853
1035	Maximum Detected					85220	Maximum Detected					11.35
1036	Mean of Detected					11554	Mean of Detected					8.677
1037	SD of Detected					15790	SD of Detected					1.216
1038	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1039	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1040												

	A	B	C	D	E	F	G	H	I	J	K	L	
1041													
1042	UCL Statistics												
1043	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1044	Shapiro Wilk Test Statistic					0.653	Shapiro Wilk Test Statistic					0.94	
1045	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938	
1046	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1047													
1048	Assuming Normal Distribution						Assuming Lognormal Distribution						
1049	DL/2 Substitution Method						DL/2 Substitution Method						
1050	Mean					11554	Mean					8.677	
1051	SD					15790	SD					1.216	
1052	95% DL/2 (t) UCL					15876	95% H-Stat (DL/2) UCL					20775	
1053													
1054	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1055	MLE method failed to converge properly						Mean in Log Scale					N/A	
1056							SD in Log Scale					N/A	
1057							Mean in Original Scale					N/A	
1058							SD in Original Scale					N/A	
1059							95% Percentile Bootstrap UCL					N/A	
1060							95% BCA Bootstrap UCL					N/A	
1061													
1062	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1063	k star (bias corrected)					0.816	Data appear Gamma Distributed at 5% Significance Level						
1064	Theta Star					14157							
1065	nu star					62.03							
1066													
1067	A-D Test Statistic					0.738	Nonparametric Statistics						
1068	5% A-D Critical Value					0.783	Kaplan-Meier (KM) Method						
1069	K-S Test Statistic					0.783	Mean					11554	
1070	5% K-S Critical Value					0.148	SD					15581	
1071	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2561	
1072							95% KM (t) UCL					15876	
1073	Assuming Gamma Distribution						95% KM (z) UCL					15767	
1074	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					15876	
1075	Minimum					946.8	95% KM (bootstrap t) UCL					18496	
1076	Maximum					85220	95% KM (BCA) UCL					15637	
1077	Mean					11554	95% KM (Percentile Bootstrap) UCL					16160	
1078	Median					6460	95% KM (Chebyshev) UCL					22719	
1079	SD					15790	97.5% KM (Chebyshev) UCL					27551	
1080	k star					0.816	99% KM (Chebyshev) UCL					37041	
1081	Theta star					14157							
1082	Nu star					62.03	Potential UCLs to Use						
1083	AppChi2					44.91	95% KM (Chebyshev) UCL					22719	
1084	95% Gamma Approximate UCL					15957							
1085	95% Adjusted Gamma UCL					16175							
1086	Note: DL/2 is not a recommended method.												
1087													
1088													
1089	Mercury												
1090													
1091	General Statistics												
1092	Number of Valid Data					18	Number of Detected Data					18	

	A	B	C	D	E	F	G	H	I	J	K	L
1093	Number of Distinct Detected Data					18	Number of Non-Detect Data					0
1094	Number of Missing Values					28	Percent Non-Detects					0.00%
1095												
1096	Raw Statistics						Log-transformed Statistics					
1097	Minimum Detected					56.88	Minimum Detected					4.041
1098	Maximum Detected					194	Maximum Detected					5.268
1099	Mean of Detected					105.5	Mean of Detected					4.578
1100	SD of Detected					46.56	SD of Detected					0.4
1101	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1102	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1103												
1104												
1105	UCL Statistics											
1106	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1107	Shapiro Wilk Test Statistic					0.81	Shapiro Wilk Test Statistic					0.877
1108	5% Shapiro Wilk Critical Value					0.897	5% Shapiro Wilk Critical Value					0.897
1109	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1110												
1111	Assuming Normal Distribution						Assuming Lognormal Distribution					
1112	DL/2 Substitution Method						DL/2 Substitution Method					
1113	Mean					105.5	Mean					4.578
1114	SD					46.56	SD					0.4
1115	95% DL/2 (t) UCL					124.6	95% H-Stat (DL/2) UCL					127.1
1116												
1117	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1118	MLE method failed to converge properly						Mean in Log Scale					N/A
1119							SD in Log Scale					N/A
1120							Mean in Original Scale					N/A
1121							SD in Original Scale					N/A
1122							95% Percentile Bootstrap UCL					N/A
1123							95% BCA Bootstrap UCL					N/A
1124												
1125	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1126	k star (bias corrected)					5.33	Data do not follow a Discernable Distribution (0.05)					
1127	Theta Star					19.79						
1128	nu star					191.9						
1129												
1130	A-D Test Statistic					1.166	Nonparametric Statistics					
1131	5% A-D Critical Value					0.742	Kaplan-Meier (KM) Method					
1132	K-S Test Statistic					0.742	Mean					105.5
1133	5% K-S Critical Value					0.204	SD					45.24
1134	Data not Gamma Distributed at 5% Significance Level						SE of Mean					10.97
1135							95% KM (t) UCL					124.6
1136	Assuming Gamma Distribution						95% KM (z) UCL					123.5
1137	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					124.6
1138	Minimum					56.88	95% KM (bootstrap t) UCL					130.3
1139	Maximum					194	95% KM (BCA) UCL					122.7
1140	Mean					105.5	95% KM (Percentile Bootstrap) UCL					123.2
1141	Median					83.35	95% KM (Chebyshev) UCL					153.3
1142	SD					46.56	97.5% KM (Chebyshev) UCL					174
1143	k star					5.33	99% KM (Chebyshev) UCL					214.7
1144	Theta star					19.79						

	A	B	C	D	E	F	G	H	I	J	K	L
1145					Nu star	191.9	Potential UCLs to Use					
1146					AppChi2	160.8	95% KM (Chebyshev) UCL					153.3
1147			95% Gamma Approximate UCL			125.8						
1148			95% Adjusted Gamma UCL			128						
1149	Note: DL/2 is not a recommended method.											
1150												
1151												
1152	Nickel											
1153												
1154	General Statistics											
1155	Number of Valid Data					38	Number of Detected Data					38
1156	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
1157	Number of Missing Values					8	Percent Non-Detects					0.00%
1158												
1159	Raw Statistics						Log-transformed Statistics					
1160	Minimum Detected					169	Minimum Detected					5.13
1161	Maximum Detected					5203	Maximum Detected					8.557
1162	Mean of Detected					651.4	Mean of Detected					6.07
1163	SD of Detected					918.1	SD of Detected					0.764
1164	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1165	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1166												
1167												
1168	UCL Statistics											
1169	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1170	Shapiro Wilk Test Statistic					0.504	Shapiro Wilk Test Statistic					0.839
1171	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938
1172	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1173												
1174	Assuming Normal Distribution						Assuming Lognormal Distribution					
1175	DL/2 Substitution Method						DL/2 Substitution Method					
1176	Mean					651.4	Mean					6.07
1177	SD					918.1	SD					0.764
1178	95% DL/2 (t) UCL					902.7	95% H-Stat (DL/2) UCL					757
1179												
1180	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1181	MLE method failed to converge properly						Mean in Log Scale					N/A
1182							SD in Log Scale					N/A
1183							Mean in Original Scale					N/A
1184							SD in Original Scale					N/A
1185							95% Percentile Bootstrap UCL					N/A
1186							95% BCA Bootstrap UCL					N/A
1187												
1188	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1189	k star (bias corrected)					1.274	Data do not follow a Discernable Distribution (0.05)					
1190	Theta Star					511.3						
1191	nu star					96.82						
1192												
1193	A-D Test Statistic					3.901	Nonparametric Statistics					
1194	5% A-D Critical Value					0.769	Kaplan-Meier (KM) Method					
1195	K-S Test Statistic					0.769	Mean					651.4
1196	5% K-S Critical Value					0.146	SD					905.9

	A	B	C	D	E	F	G	H	I	J	K	L
1197	Data not Gamma Distributed at 5% Significance Level							SE of Mean				148.9
1198								95% KM (t) UCL				902.7
1199	Assuming Gamma Distribution							95% KM (z) UCL				896.4
1200	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				902.7	
1201	Minimum					169	95% KM (bootstrap t) UCL				1169	
1202	Maximum					5203	95% KM (BCA) UCL				932.4	
1203	Mean					651.4	95% KM (Percentile Bootstrap) UCL				911.2	
1204	Median					356.8	95% KM (Chebyshev) UCL				1301	
1205	SD					918.1	97.5% KM (Chebyshev) UCL				1581	
1206	k star					1.274	99% KM (Chebyshev) UCL				2133	
1207	Theta star					511.3						
1208	Nu star					96.82	Potential UCLs to Use					
1209	AppChi2					75.12	95% KM (Chebyshev) UCL				1301	
1210	95% Gamma Approximate UCL					839.6						
1211	95% Adjusted Gamma UCL					848.5						
1212	Note: DL/2 is not a recommended method.											
1213												
1214												
1215	Potassium											
1216												
1217	General Statistics											
1218	Number of Valid Data					38	Number of Detected Data					38
1219	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
1220	Number of Missing Values					8	Percent Non-Detects					0.00%
1221												
1222	Raw Statistics						Log-transformed Statistics					
1223	Minimum Detected					2698500	Minimum Detected					14.81
1224	Maximum Detected					3767400	Maximum Detected					15.14
1225	Mean of Detected					3282552	Mean of Detected					15
1226	SD of Detected					236235	SD of Detected					0.074
1227	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1228	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1229												
1230												
1231	UCL Statistics											
1232	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1233	Shapiro Wilk Test Statistic					0.94	Shapiro Wilk Test Statistic					0.925
1234	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938
1235	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1236												
1237	Assuming Normal Distribution						Assuming Lognormal Distribution					
1238	DL/2 Substitution Method						DL/2 Substitution Method					
1239	Mean					3282552	Mean					15
1240	SD					236235	SD					0.074
1241	95% DL/2 (t) UCL					3347206	95% H-Stat (DL/2) UCL					N/A
1242												
1243	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1244	MLE method failed to converge properly						Mean in Log Scale					N/A
1245							SD in Log Scale					N/A
1246							Mean in Original Scale					N/A
1247							SD in Original Scale					N/A
1248							95% Percentile Bootstrap UCL					N/A

	A	B	C	D	E	F	G	H	I	J	K	L	
1249										95% BCA Bootstrap UCL		N/A	
1250													
1251	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1252				k star (bias corrected)		176.3	Data appear Normal at 5% Significance Level						
1253				Theta Star		18624							
1254				nu star		13395							
1255													
1256				A-D Test Statistic		1.178	Nonparametric Statistics						
1257				5% A-D Critical Value		0.746	Kaplan-Meier (KM) Method						
1258				K-S Test Statistic		0.746				Mean		3282552	
1259				5% K-S Critical Value		0.143				SD		233105	
1260	Data not Gamma Distributed at 5% Significance Level										SE of Mean		38322
1261										95% KM (t) UCL		3347206	
1262	Assuming Gamma Distribution										95% KM (z) UCL		3345587
1263	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		3347206
1264				Minimum		2698500				95% KM (bootstrap t) UCL		3342948	
1265				Maximum		3767400				95% KM (BCA) UCL		3340873	
1266				Mean		3282552				95% KM (Percentile Bootstrap) UCL		3343416	
1267				Median		3327993				95% KM (Chebyshev) UCL		3449595	
1268				SD		236235				97.5% KM (Chebyshev) UCL		3521875	
1269				k star		176.3				99% KM (Chebyshev) UCL		3663854	
1270				Theta star		18624							
1271				Nu star		13395	Potential UCLs to Use						
1272				AppChi2		13127				95% KM (t) UCL		3347206	
1273				95% Gamma Approximate UCL		3349589				95% KM (Percentile Bootstrap) UCL		3343416	
1274				95% Adjusted Gamma UCL		3352379							
1275	Note: DL/2 is not a recommended method.												
1276													
1277													
1278	Selenium												
1279													
1280	General Statistics												
1281				Number of Valid Data		38				Number of Detected Data		38	
1282				Number of Distinct Detected Data		37				Number of Non-Detect Data		0	
1283				Number of Missing Values		8				Percent Non-Detects		0.00%	
1284													
1285	Raw Statistics						Log-transformed Statistics						
1286				Minimum Detected		361.4				Minimum Detected		5.89	
1287				Maximum Detected		1218				Maximum Detected		7.105	
1288				Mean of Detected		647.7				Mean of Detected		6.433	
1289				SD of Detected		194.8				SD of Detected		0.287	
1290				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
1291				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
1292													
1293													
1294	UCL Statistics												
1295	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1296				Shapiro Wilk Test Statistic		0.926				Shapiro Wilk Test Statistic		0.977	
1297				5% Shapiro Wilk Critical Value		0.938				5% Shapiro Wilk Critical Value		0.938	
1298	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1299													
1300	Assuming Normal Distribution						Assuming Lognormal Distribution						

	A	B	C	D	E	F	G	H	I	J	K	L
1301	DL/2 Substitution Method					DL/2 Substitution Method						
1302	Mean					647.7	Mean					6.433
1303	SD					194.8	SD					0.287
1304	95% DL/2 (t) UCL					701	95% H-Stat (DL/2) UCL					704.3
1305												
1306	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1307	MLE method failed to converge properly					Mean in Log Scale					N/A	
1308						SD in Log Scale					N/A	
1309						Mean in Original Scale					N/A	
1310						SD in Original Scale					N/A	
1311						95% Percentile Bootstrap UCL					N/A	
1312						95% BCA Bootstrap UCL					N/A	
1313												
1314	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1315	k star (bias corrected)					11.44	Data appear Gamma Distributed at 5% Significance Level					
1316	Theta Star					56.62						
1317	nu star					869.5						
1318												
1319	A-D Test Statistic					0.333	Nonparametric Statistics					
1320	5% A-D Critical Value					0.748	Kaplan-Meier (KM) Method					
1321	K-S Test Statistic					0.748	Mean					647.7
1322	5% K-S Critical Value					0.143	SD					192.2
1323	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					31.6	
1324						95% KM (t) UCL					701	
1325	Assuming Gamma Distribution					95% KM (z) UCL					699.7	
1326	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					701	
1327	Minimum					361.4	95% KM (bootstrap t) UCL					710.2
1328	Maximum					1218	95% KM (BCA) UCL					701.1
1329	Mean					647.7	95% KM (Percentile Bootstrap) UCL					701
1330	Median					627.3	95% KM (Chebyshev) UCL					785.4
1331	SD					194.8	97.5% KM (Chebyshev) UCL					845
1332	k star					11.44	99% KM (Chebyshev) UCL					962.1
1333	Theta star					56.62						
1334	Nu star					869.5	Potential UCLs to Use					
1335	AppChi2					802	95% KM (BCA) UCL					701.1
1336	95% Gamma Approximate UCL					702.2						
1337	95% Adjusted Gamma UCL					704.5						
1338	Note: DL/2 is not a recommended method.											
1339												
1340												
1341	Silver											
1342												
1343	General Statistics											
1344	Number of Valid Data					38	Number of Detected Data					6
1345	Number of Distinct Detected Data					6	Number of Non-Detect Data					32
1346	Number of Missing Values					8	Percent Non-Detects					84.21%
1347												
1348	Raw Statistics					Log-transformed Statistics						
1349	Minimum Detected					49.62	Minimum Detected					3.904
1350	Maximum Detected					166.3	Maximum Detected					5.114
1351	Mean of Detected					98.33	Mean of Detected					4.513
1352	SD of Detected					41.7	SD of Detected					0.429

	A	B	C	D	E	F	G	H	I	J	K	L
1353	Minimum Non-Detect					36.12	Minimum Non-Detect					3.587
1354	Maximum Non-Detect					77.61	Maximum Non-Detect					4.352
1355												
1356	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					35
1357	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
1358	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					92.11%
1359												
1360	Warning: There are only 6 Detected Values in this data											
1361	Note: It should be noted that even though bootstrap may be performed on this data set											
1362	the resulting calculations may not be reliable enough to draw conclusions											
1363												
1364	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1365												
1366												
1367	UCL Statistics											
1368	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1369	Shapiro Wilk Test Statistic					0.94	Shapiro Wilk Test Statistic					0.969
1370	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788
1371	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1372												
1373	Assuming Normal Distribution						Assuming Lognormal Distribution					
1374	DL/2 Substitution Method						DL/2 Substitution Method					
1375	Mean					40.93	Mean					3.561
1376	SD					30.03	SD					0.494
1377	95% DL/2 (t) UCL					49.15	95% H-Stat (DL/2) UCL					38.88
1378												
1379	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1380	MLE yields a negative mean						Mean in Log Scale					3.162
1381							SD in Log Scale					0.622
1382							Mean in Original Scale					31.07
1383							SD in Original Scale					33.32
1384							95% Percentile Bootstrap UCL					40.53
1385							95% BCA Bootstrap UCL					42.63
1386												
1387	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1388	k star (bias corrected)					3.501	Data appear Normal at 5% Significance Level					
1389	Theta Star					28.09						
1390	nu star					42.01						
1391												
1392	A-D Test Statistic					0.249	Nonparametric Statistics					
1393	5% A-D Critical Value					0.698	Kaplan-Meier (KM) Method					
1394	K-S Test Statistic					0.698	Mean					57.49
1395	5% K-S Critical Value					0.333	SD					23.35
1396	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					4.168
1397							95% KM (t) UCL					64.52
1398	Assuming Gamma Distribution						95% KM (z) UCL					64.34
1399	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					71.41
1400	Minimum					49.62	95% KM (bootstrap t) UCL					64.94
1401	Maximum					166.3	95% KM (BCA) UCL					114.4
1402	Mean					103.5	95% KM (Percentile Bootstrap) UCL					89.85
1403	Median					105.5	95% KM (Chebyshev) UCL					75.65
1404	SD					16.23	97.5% KM (Chebyshev) UCL					83.51

	A	B	C	D	E	F	G	H	I	J	K	L
1405					k star	34.98				99% KM (Chebyshev) UCL		98.96
1406					Theta star	2.96						
1407					Nu star	2658				Potential UCLs to Use		
1408					AppChi2	2540				95% KM (t) UCL		64.52
1409					95% Gamma Approximate UCL	108.4				95% KM (Percentile Bootstrap) UCL		89.85
1410					95% Adjusted Gamma UCL	108.6						
1411	Note: DL/2 is not a recommended method.											
1412												
1413												
1414	Sodium											
1415												
1416	General Statistics											
1417					Number of Valid Data	38				Number of Detected Data		38
1418					Number of Distinct Detected Data	38				Number of Non-Detect Data		0
1419					Number of Missing Values	8				Percent Non-Detects		0.00%
1420												
1421	Raw Statistics						Log-transformed Statistics					
1422					Minimum Detected	647680				Minimum Detected		13.38
1423					Maximum Detected	1396131				Maximum Detected		14.15
1424					Mean of Detected	1046454				Mean of Detected		13.84
1425					SD of Detected	214336				SD of Detected		0.213
1426					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
1427					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
1428												
1429												
1430	UCL Statistics											
1431	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1432					Shapiro Wilk Test Statistic	0.948				Shapiro Wilk Test Statistic		0.944
1433					5% Shapiro Wilk Critical Value	0.938				5% Shapiro Wilk Critical Value		0.938
1434	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1435												
1436	Assuming Normal Distribution						Assuming Lognormal Distribution					
1437					DL/2 Substitution Method					DL/2 Substitution Method		
1438					Mean	1046454				Mean		13.84
1439					SD	214336				SD		0.213
1440					95% DL/2 (t) UCL	1105114				95% H-Stat (DL/2) UCL		1113324
1441												
1442					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
1443	MLE method failed to converge properly											
1444										Mean in Log Scale		N/A
1445										SD in Log Scale		N/A
1446										Mean in Original Scale		N/A
1447										SD in Original Scale		N/A
1448										95% Percentile Bootstrap UCL		N/A
1449										95% BCA Bootstrap UCL		N/A
1450	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1451					k star (bias corrected)	21.65				Data appear Normal at 5% Significance Level		
1452					Theta Star	48340						
1453					nu star	1645						
1454												
1455					A-D Test Statistic	0.527				Nonparametric Statistics		
1456					5% A-D Critical Value	0.747				Kaplan-Meier (KM) Method		

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	K-S Test Statistic					0.747	Mean					1046454	
1458	5% K-S Critical Value					0.143	SD					211497	
1459	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					34770	
1460							95% KM (t) UCL					1105114	
1461	Assuming Gamma Distribution						95% KM (z) UCL					1103645	
1462	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1105114	
1463	Minimum					647680	95% KM (bootstrap t) UCL					1105466	
1464	Maximum					1396131	95% KM (BCA) UCL					1105400	
1465	Mean					1046454	95% KM (Percentile Bootstrap) UCL					1102596	
1466	Median					1038080	95% KM (Chebyshev) UCL					1198012	
1467	SD					214336	97.5% KM (Chebyshev) UCL					1263592	
1468	k star					21.65	99% KM (Chebyshev) UCL					1392410	
1469	Theta star					48340							
1470	Nu star					1645	Potential UCLs to Use						
1471	AppChi2					1552	95% KM (t) UCL					1105114	
1472	95% Gamma Approximate UCL					1109296	95% KM (Percentile Bootstrap) UCL					1102596	
1473	95% Adjusted Gamma UCL					1111968							
1474	Note: DL/2 is not a recommended method.												
1475													
1476													
1477	Uranium												
1478													
1479	General Statistics												
1480	Number of Valid Data					38	Number of Detected Data					38	
1481	Number of Distinct Detected Data					38	Number of Non-Detect Data					0	
1482	Number of Missing Values					8	Percent Non-Detects					0.00%	
1483													
1484	Raw Statistics						Log-transformed Statistics						
1485	Minimum Detected					0.791	Minimum Detected					-0.235	
1486	Maximum Detected					97.56	Maximum Detected					4.58	
1487	Mean of Detected					18.7	Mean of Detected					2.302	
1488	SD of Detected					19.89	SD of Detected					1.303	
1489	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1490	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1491													
1492													
1493	UCL Statistics												
1494	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1495	Shapiro Wilk Test Statistic					0.795	Shapiro Wilk Test Statistic					0.931	
1496	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938	
1497	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1498													
1499	Assuming Normal Distribution						Assuming Lognormal Distribution						
1500	DL/2 Substitution Method						DL/2 Substitution Method						
1501	Mean					18.7	Mean					2.302	
1502	SD					19.89	SD					1.303	
1503	95% DL/2 (t) UCL					24.14	95% H-Stat (DL/2) UCL					41.95	
1504													
1505	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1506	MLE method failed to converge properly						Mean in Log Scale						N/A
1507							SD in Log Scale						N/A
1508							Mean in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
1509							SD in Original Scale					N/A
1510							95% Percentile Bootstrap UCL					N/A
1511							95% BCA Bootstrap UCL					N/A
1512												
1513	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1514	k star (bias corrected)				0.874		Data appear Gamma Distributed at 5% Significance Level					
1515	Theta Star				21.41							
1516	nu star				66.39							
1517												
1518	A-D Test Statistic				0.301		Nonparametric Statistics					
1519	5% A-D Critical Value				0.781		Kaplan-Meier (KM) Method					
1520	K-S Test Statistic				0.781		Mean				18.7	
1521	5% K-S Critical Value				0.148		SD				19.63	
1522	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				3.227	
1523							95% KM (t) UCL				24.14	
1524	Assuming Gamma Distribution						95% KM (z) UCL				24.01	
1525	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				24.14	
1526	Minimum				0.791		95% KM (bootstrap t) UCL				26.13	
1527	Maximum				97.56		95% KM (BCA) UCL				24.27	
1528	Mean				18.7		95% KM (Percentile Bootstrap) UCL				24.5	
1529	Median				11.96		95% KM (Chebyshev) UCL				32.77	
1530	SD				19.89		97.5% KM (Chebyshev) UCL				38.85	
1531	k star				0.874		99% KM (Chebyshev) UCL				50.81	
1532	Theta star				21.41							
1533	Nu star				66.39		Potential UCLs to Use					
1534	AppChi2				48.64		95% KM (Chebyshev) UCL				32.77	
1535	95% Gamma Approximate UCL				25.53							
1536	95% Adjusted Gamma UCL				25.86							
1537	Note: DL/2 is not a recommended method.											
1538												
1539												
1540	Vanadium											
1541												
1542	General Statistics											
1543	Number of Valid Data				38		Number of Detected Data				15	
1544	Number of Distinct Detected Data				15		Number of Non-Detect Data				23	
1545	Number of Missing Values				8		Percent Non-Detects				60.53%	
1546												
1547	Raw Statistics						Log-transformed Statistics					
1548	Minimum Detected				103.7		Minimum Detected				4.641	
1549	Maximum Detected				802.4		Maximum Detected				6.688	
1550	Mean of Detected				297.7		Mean of Detected				5.521	
1551	SD of Detected				200.6		SD of Detected				0.591	
1552	Minimum Non-Detect				96.31		Minimum Non-Detect				4.568	
1553	Maximum Non-Detect				146.4		Maximum Non-Detect				4.986	
1554												
1555	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				25	
1556	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				13	
1557	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				65.79%	
1558												
1559	UCL Statistics											
1560	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
1561	Shapiro Wilk Test Statistic					0.817	Shapiro Wilk Test Statistic					0.945
1562	5% Shapiro Wilk Critical Value					0.881	5% Shapiro Wilk Critical Value					0.881
1563	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1564												
1565	Assuming Normal Distribution						Assuming Lognormal Distribution					
1566	DL/2 Substitution Method						DL/2 Substitution Method					
1567	Mean					152.3	Mean					4.626
1568	SD					171.5	SD					0.824
1569	95% DL/2 (t) UCL					199.2	95% H-Stat (DL/2) UCL					132.5
1570												
1571	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1572	Mean					9.375	Mean in Log Scale					4.498
1573	SD					306.9	SD in Log Scale					0.919
1574	95% MLE (t) UCL					93.36	Mean in Original Scale					145.7
1575	95% MLE (Tiku) UCL					143	SD in Original Scale					175.3
1576							95% Percentile Bootstrap UCL					194
1577							95% BCA Bootstrap UCL					206.4
1578												
1579	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1580	k star (bias corrected)					2.451	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1581	Theta Star					121.4						
1582	nu star					73.53						
1583												
1584	A-D Test Statistic					0.624	Nonparametric Statistics					
1585	5% A-D Critical Value					0.744	Kaplan-Meier (KM) Method					
1586	K-S Test Statistic					0.744	Mean					180.4
1587	5% K-S Critical Value					0.223	SD					154.2
1588	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					25.9
1589							95% KM (t) UCL					224.1
1590	Assuming Gamma Distribution						95% KM (z) UCL					223
1591	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					217.8
1592	Minimum					103.7	95% KM (bootstrap t) UCL					238.1
1593	Maximum					802.4	95% KM (BCA) UCL					257.5
1594	Mean					297	95% KM (Percentile Bootstrap) UCL					238.7
1595	Median					298.7	95% KM (Chebyshev) UCL					293.3
1596	SD					123.8	97.5% KM (Chebyshev) UCL					342.1
1597	k star					6.769	99% KM (Chebyshev) UCL					438.1
1598	Theta star					43.87						
1599	Nu star					514.4	Potential UCLs to Use					
1600	AppChi2					462.8	95% KM (t) UCL					224.1
1601	95% Gamma Approximate UCL					330.1						
1602	95% Adjusted Gamma UCL					331.5						
1603	Note: DL/2 is not a recommended method.											
1604												
1605												
1606	Zinc											
1607												
1608	General Statistics											
1609	Number of Valid Data					38	Number of Detected Data					38
1610	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
1611	Number of Missing Values					8	Percent Non-Detects					0.00%
1612												

	A	B	C	D	E	F	G	H	I	J	K	L
1613	Raw Statistics						Log-transformed Statistics					
1614	Minimum Detected				12601		Minimum Detected				9.442	
1615	Maximum Detected				359347		Maximum Detected				12.79	
1616	Mean of Detected				49710		Mean of Detected				10.46	
1617	SD of Detected				62270		SD of Detected				0.742	
1618	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1619	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1620												
1621												
1622	UCL Statistics											
1623	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1624	Shapiro Wilk Test Statistic				0.544		Shapiro Wilk Test Statistic				0.912	
1625	5% Shapiro Wilk Critical Value				0.938		5% Shapiro Wilk Critical Value				0.938	
1626	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1627												
1628	Assuming Normal Distribution						Assuming Lognormal Distribution					
1629	DL/2 Substitution Method						DL/2 Substitution Method					
1630	Mean				49710		Mean				10.46	
1631	SD				62270		SD				0.742	
1632	95% DL/2 (t) UCL				66752		95% H-Stat (DL/2) UCL				59542	
1633												
1634	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1635	MLE method failed to converge properly						Mean in Log Scale				N/A	
1636							SD in Log Scale				N/A	
1637							Mean in Original Scale				N/A	
1638							SD in Original Scale				N/A	
1639							95% Percentile Bootstrap UCL				N/A	
1640							95% BCA Bootstrap UCL				N/A	
1641												
1642	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1643	k star (bias corrected)				1.461		Data do not follow a Discernable Distribution (0.05)					
1644	Theta Star				34026							
1645	nu star				111							
1646												
1647	A-D Test Statistic				2.281		Nonparametric Statistics					
1648	5% A-D Critical Value				0.765		Kaplan-Meier (KM) Method					
1649	K-S Test Statistic				0.765		Mean				49710	
1650	5% K-S Critical Value				0.146		SD				61445	
1651	Data not Gamma Distributed at 5% Significance Level						SE of Mean				10102	
1652							95% KM (t) UCL				66752	
1653	Assuming Gamma Distribution						95% KM (z) UCL				66325	
1654	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				66752	
1655	Minimum				12601		95% KM (bootstrap t) UCL				83419	
1656	Maximum				359347		95% KM (BCA) UCL				69960	
1657	Mean				49710		95% KM (Percentile Bootstrap) UCL				66940	
1658	Median				29617		95% KM (Chebyshev) UCL				93742	
1659	SD				62270		97.5% KM (Chebyshev) UCL				112794	
1660	k star				1.461		99% KM (Chebyshev) UCL				150219	
1661	Theta star				34026							
1662	Nu star				111		Potential UCLs to Use					
1663	AppChi2				87.71		95% KM (Chebyshev) UCL				93742	
1664	95% Gamma Approximate UCL				62928							

	A	B	C	D	E	F	G	H	I	J	K	L
1665	95% Adjusted Gamma UCL					63550						
1666	Note: DL/2 is not a recommended method.											
1667												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach1_PCB&TEQ.												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				18				Number of Distinct Observations				18			
13	Number of Missing Values				8											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0003643			Minimum of Log Data			-7.917						
17	Maximum			0.00113			Maximum of Log Data			-6.785						
18	Mean			0.0006742			Mean of log Data			-7.362						
19	Median			0.0006543			SD of log Data			0.356						
20	SD			0.000242												
21	Coefficient of Variation			0.359												
22	Skewness			0.658												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.92			Shapiro Wilk Test Statistic			0.953						
27	Shapiro Wilk Critical Value			0.897			Shapiro Wilk Critical Value			0.897						
28	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.0007735			95% H-UCL			0.000797						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL									
33	95% Adjusted-CLT UCL			0.0007775			97.5% Chebyshev (MVUE) UCL			0.00103						
34	95% Modified-t UCL			0.0007749			99% Chebyshev (MVUE) UCL			0.00125						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			7.144			Data appear Normal at 5% Significance Level									
38	Theta Star			9.438E-05												
39	nu star			257.2												
40	Approximate Chi Square Value (.05)			221			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0357			95% CLT UCL			0.000768						
42	Adjusted Chi Square Value			217.8			95% Jackknife UCL			0.0007735						
43							95% Standard Bootstrap UCL			0.0007657						
44	Anderson-Darling Test Statistic			0.304			95% Bootstrap-t UCL			0.0007874						
45	Anderson-Darling 5% Critical Value			0.74			95% Hall's Bootstrap UCL			0.0007747						
46	Kolmogorov-Smirnov Test Statistic			0.106			95% Percentile Bootstrap UCL			0.000768						
47	Kolmogorov-Smirnov 5% Critical Value			0.204			95% BCA Bootstrap UCL			0.0007661						
48	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.0009229						
49							97.5% Chebyshev(Mean, Sd) UCL			0.00103						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.00124						
51	95% Approximate Gamma UCL			0.0007844												
52	95% Adjusted Gamma UCL			0.000796												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					18	Number of Distinct Observations					18	
109	Number of Missing Values					8							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					0.0009466	Minimum of Log Data					-6.963	
113	Maximum					0.0075	Maximum of Log Data					-4.893	
114	Mean					0.00334	Mean of log Data					-5.879	
115	Median					0.00262	SD of log Data					0.627	
116	SD					0.00198							
117	Coefficient of Variation					0.595							
118	Skewness					0.723							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.898	Shapiro Wilk Test Statistic					0.946	
123	Shapiro Wilk Critical Value					0.897	Shapiro Wilk Critical Value					0.897	
124	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.00415	95% H-UCL					0.00472	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00564
129	95% Adjusted-CLT UCL					0.00419	97.5% Chebyshev (MVUE) UCL					0.00663	
130	95% Modified-t UCL					0.00416	99% Chebyshev (MVUE) UCL					0.00856	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					2.521	Data appear Normal at 5% Significance Level						
134	Theta Star					0.00132							
135	nu star					90.76							
136	Approximate Chi Square Value (.05)					69.79	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0357	95% CLT UCL					0.00411	
138	Adjusted Chi Square Value					68.03	95% Jackknife UCL					0.00415	
139							95% Standard Bootstrap UCL					0.00408	
140	Anderson-Darling Test Statistic					0.489	95% Bootstrap-t UCL					0.00427	
141	Anderson-Darling 5% Critical Value					0.746	95% Hall's Bootstrap UCL					0.00424	
142	Kolmogorov-Smirnov Test Statistic					0.158	95% Percentile Bootstrap UCL					0.00411	
143	Kolmogorov-Smirnov 5% Critical Value					0.205	95% BCA Bootstrap UCL					0.00415	
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						0.00538
145							97.5% Chebyshev(Mean, Sd) UCL					0.00626	
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.00799
147	95% Approximate Gamma UCL					0.00434							
148	95% Adjusted Gamma UCL					0.00445							
149													
150	Potential UCL to Use						Use 95% Student's-t UCL						0.00415
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					4	Number of Distinct Observations					4	

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					21						
158												
159												
160	Warning: This data set only has 4 observations!											
161	Data set is too small to compute reliable and meaningful statistics and estimates!											
162	The data set for variable Non-Dioxin PCB, as Congener Sum was not processed!											
163												
164	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
165	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
166												
167												
168												
169	Total PCB, as Aroclor											
170												
171	General Statistics											
172	Number of Valid Observations					18	Number of Distinct Observations					18
173	Number of Missing Values					8						
174												
175	Raw Statistics						Log-transformed Statistics					
176	Minimum					14	Minimum of Log Data					2.639
177	Maximum					89	Maximum of Log Data					4.489
178	Mean					40.8	Mean of log Data					3.569
179	Median					33.87	SD of log Data					0.553
180	SD					21.63						
181	Coefficient of Variation					0.53						
182	Skewness					0.624						
183												
184	Relevant UCL Statistics											
185	Normal Distribution Test						Lognormal Distribution Test					
186	Shapiro Wilk Test Statistic					0.911	Shapiro Wilk Test Statistic					0.942
187	Shapiro Wilk Critical Value					0.897	Shapiro Wilk Critical Value					0.897
188	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
189												
190	Assuming Normal Distribution						Assuming Lognormal Distribution					
191	95% Student's-t UCL					49.66	95% H-UCL					54.63
192	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					65.2
193	95% Adjusted-CLT UCL					49.98	97.5% Chebyshev (MVUE) UCL					75.69
194	95% Modified-t UCL					49.79	99% Chebyshev (MVUE) UCL					96.3
195												
196	Gamma Distribution Test						Data Distribution					
197	k star (bias corrected)					3.16	Data appear Normal at 5% Significance Level					
198	Theta Star					12.91						
199	nu star					113.8						
200	Approximate Chi Square Value (.05)					90.15	Nonparametric Statistics					
201	Adjusted Level of Significance					0.0357	95% CLT UCL					49.18
202	Adjusted Chi Square Value					88.13	95% Jackknife UCL					49.66
203							95% Standard Bootstrap UCL					48.8
204	Anderson-Darling Test Statistic					0.544	95% Bootstrap-t UCL					50.73
205	Anderson-Darling 5% Critical Value					0.743	95% Hall's Bootstrap UCL					49.77
206	Kolmogorov-Smirnov Test Statistic					0.17	95% Percentile Bootstrap UCL					49.58
207	Kolmogorov-Smirnov 5% Critical Value					0.205	95% BCA Bootstrap UCL					50.04
208	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					63.02

	A	B	C	D	E	F	G	H	I	J	K	L
209						97.5% Chebyshev(Mean, Sd) UCL					72.63	
210	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					91.52	
211	95% Approximate Gamma UCL				51.49							
212	95% Adjusted Gamma UCL				52.67							
213												
214	Potential UCL to Use					Use 95% Student's-t UCL					49.66	
215												
216												
217	Total PCB, as Congener Sum											
218												
219	General Statistics											
220	Number of Valid Observations				4	Number of Distinct Observations				4		
221	Number of Missing Values				21							
222												
223												
224	Warning: This data set only has 4 observations!											
225	Data set is too small to compute reliable and meaningful statistics and estimates!											
226	The data set for variable Total PCB, as Congener Sum was not processed!											
227												
228	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
229	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
230												
231												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach2.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Data				22				Number of Detected Data				22			
13	Number of Distinct Detected Data				22				Number of Non-Detect Data				0			
14	Number of Missing Values				22				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0003331			Minimum Detected			-8.007						
18	Maximum Detected			0.0019			Maximum Detected			-6.267						
19	Mean of Detected			0.0009065			Mean of Detected			-7.1						
20	SD of Detected			0.0003768			SD of Detected			0.467						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Shapiro Wilk Test Statistic			0.942			Shapiro Wilk Test Statistic			0.916						
28	5% Shapiro Wilk Critical Value			0.911			5% Shapiro Wilk Critical Value			0.911						
29	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0009065			Mean			-7.1						
34	SD			0.0003768			SD			0.467						
35	95% DL/2 (t) UCL			0.00104			95% H-Stat (DL/2) UCL			0.00112						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			4.752			Data appear Normal at 5% Significance Level									
47	Theta Star			0.0001908												
48	nu star			209.1												
49																
50	A-D Test Statistic			0.647			Nonparametric Statistics									
51	5% A-D Critical Value			0.746			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.746			Mean			0.0009065						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.186	SD					0.0003682	
54	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					8.034E-05	
55							95% KM (t) UCL					0.00104	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.00104	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00104	
58	Minimum						0.0003331	95% KM (bootstrap t) UCL					0.00105
59	Maximum						0.0019	95% KM (BCA) UCL					0.00103
60	Mean						0.0009065	95% KM (Percentile Bootstrap) UCL					0.00104
61	Median						0.0009275	95% KM (Chebyshev) UCL					0.00126
62	SD						0.0003768	97.5% KM (Chebyshev) UCL					0.00141
63	k star						4.752	99% KM (Chebyshev) UCL					0.00171
64	Theta star						0.0001908						
65	Nu star						209.1	Potential UCLs to Use					
66	AppChi2						176.6	95% KM (t) UCL					0.00104
67	95% Gamma Approximate UCL						0.00107	95% KM (Percentile Bootstrap) UCL					0.00104
68	95% Adjusted Gamma UCL						0.00109						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					22	Number of Detected Data					22	
76	Number of Distinct Detected Data					22	Number of Non-Detect Data					0	
77	Number of Missing Values					22	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00139	Minimum Detected					-6.576	
81	Maximum Detected					0.0639	Maximum Detected					-2.75	
82	Mean of Detected					0.00715	Mean of Detected					-5.401	
83	SD of Detected					0.0129	SD of Detected					0.749	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.359	Shapiro Wilk Test Statistic					0.794	
91	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911	
92	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.00715	Mean					-5.401	
97	SD					0.0129	SD					0.749	
98	95% DL/2 (t) UCL					0.0119	95% H-Stat (DL/2) UCL					0.00861	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale					N/A	
102							SD in Log Scale					N/A	
103							Mean in Original Scale					N/A	
104							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
105						95% Percentile Bootstrap UCL					N/A	
106						95% BCA Bootstrap UCL					N/A	
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109	k star (bias corrected)					1.09	Data do not follow a Discernable Distribution (0.05)					
110	Theta Star					0.00656						
111	nu star					47.96						
112												
113	A-D Test Statistic					2.962	Nonparametric Statistics					
114	5% A-D Critical Value					0.765	Kaplan-Meier (KM) Method					
115	K-S Test Statistic					0.765	Mean					0.00715
116	5% K-S Critical Value					0.19	SD					0.0126
117	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.00275
118							95% KM (t) UCL					0.0119
119	Assuming Gamma Distribution						95% KM (z) UCL					0.0117
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0119
121	Minimum					0.00139	95% KM (bootstrap t) UCL					0.0302
122	Maximum					0.0639	95% KM (BCA) UCL					0.0126
123	Mean					0.00715	95% KM (Percentile Bootstrap) UCL					0.0125
124	Median					0.00368	95% KM (Chebyshev) UCL					0.0191
125	SD					0.0129	97.5% KM (Chebyshev) UCL					0.0243
126	k star					1.09	99% KM (Chebyshev) UCL					0.0345
127	Theta star					0.00656						
128	Nu star					47.96	Potential UCLs to Use					
129	AppChi2					33.07	95% KM (Chebyshev) UCL					0.0191
130	95% Gamma Approximate UCL					0.0104						
131	95% Adjusted Gamma UCL					0.0107						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138	Number of Valid Data					22	Number of Detected Data					22
139	Number of Distinct Detected Data					17	Number of Non-Detect Data					0
140	Number of Missing Values					22	Percent Non-Detects					0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143	Minimum Detected					0.000463	Minimum Detected					-7.678
144	Maximum Detected					0.062	Maximum Detected					-2.78
145	Mean of Detected					0.00624	Mean of Detected					-5.689
146	SD of Detected					0.0127	SD of Detected					0.925
147	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
148	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153	Shapiro Wilk Test Statistic					0.365	Shapiro Wilk Test Statistic					0.888
154	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
155	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.00624	Mean						-5.689
160	SD						0.0127	SD						0.925
161	95% DL/2 (t) UCL						0.0109	95% H-Stat (DL/2) UCL						0.0085
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						0.85	Data do not follow a Discernable Distribution (0.05)						
173	Theta Star						0.00735							
174	nu star						37.39							
175														
176	A-D Test Statistic						2.263	Nonparametric Statistics						
177	5% A-D Critical Value						0.773	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.773	Mean						0.00624
179	5% K-S Critical Value						0.191	SD						0.0124
180	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.0027
181								95% KM (t) UCL						0.0109
182	Assuming Gamma Distribution							95% KM (z) UCL						0.0107
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0109
184	Minimum						0.000463	95% KM (bootstrap t) UCL						0.03
185	Maximum						0.062	95% KM (BCA) UCL						0.0116
186	Mean						0.00624	95% KM (Percentile Bootstrap) UCL						0.0115
187	Median						0.00296	95% KM (Chebyshev) UCL						0.018
188	SD						0.0127	97.5% KM (Chebyshev) UCL						0.0231
189	k star						0.85	99% KM (Chebyshev) UCL						0.0331
190	Theta star						0.00735							
191	Nu star						37.39	Potential UCLs to Use						
192	AppChi2						24.39	95% KM (Chebyshev) UCL						0.018
193	95% Gamma Approximate UCL						0.00957							
194	95% Adjusted Gamma UCL						0.00989							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Aluminum													
199														
200	General Statistics													
201	Number of Valid Data						22	Number of Detected Data						12
202	Number of Distinct Detected Data						12	Number of Non-Detect Data						10
203	Number of Missing Values						21	Percent Non-Detects						45.45%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						3689	Minimum Detected						8.213
207	Maximum Detected						41850	Maximum Detected						10.64
208	Mean of Detected						11489	Mean of Detected						9.038

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					11194	SD of Detected					0.763
210	Minimum Non-Detect					3108	Minimum Non-Detect					8.042
211	Maximum Non-Detect					4800	Maximum Non-Detect					8.476
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					12
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					10
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					54.55%
216												
217	UCL Statistics											
218	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
219	Shapiro Wilk Test Statistic					0.705	Shapiro Wilk Test Statistic					0.858
220	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
221	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
222												
223	Assuming Normal Distribution						Assuming Lognormal Distribution					
224	DL/2 Substitution Method						DL/2 Substitution Method					
225	Mean					7153	Mean					8.367
226	SD					9451	SD					0.94
227	95% DL/2 (t) UCL					10620	95% H-Stat (DL/2) UCL					7065
228												
229	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
230	Mean					1302	Mean in Log Scale					8.188
231	SD					14828	SD in Log Scale					1.122
232	95% MLE (t) UCL					6742	Mean in Original Scale					6881
233	95% MLE (Tiku) UCL					8483	SD in Original Scale					9612
234							95% Percentile Bootstrap UCL					10505
235							95% BCA Bootstrap UCL					11721
236												
237	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
238	k star (bias corrected)					1.373	Data do not follow a Discernable Distribution (0.05)					
239	Theta Star					8369						
240	nu star					32.95						
241												
242	A-D Test Statistic					0.997	Nonparametric Statistics					
243	5% A-D Critical Value					0.743	Kaplan-Meier (KM) Method					
244	K-S Test Statistic					0.743	Mean					7948
245	5% K-S Critical Value					0.249	SD					8815
246	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1963
247							95% KM (t) UCL					11326
248	Assuming Gamma Distribution						95% KM (z) UCL					11177
249	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10957
250	Minimum					3689	95% KM (bootstrap t) UCL					14995
251	Maximum					41850	95% KM (BCA) UCL					11863
252	Mean					11031	95% KM (Percentile Bootstrap) UCL					11668
253	Median					10130	95% KM (Chebyshev) UCL					16505
254	SD					8211	97.5% KM (Chebyshev) UCL					20207
255	k star					2.586	99% KM (Chebyshev) UCL					27479
256	Theta star					4265						
257	Nu star					113.8	Potential UCLs to Use					
258	AppChi2					90.18	95% KM (t) UCL					11326
259	95% Gamma Approximate UCL					13921	95% KM (% Bootstrap) UCL					11668
260	95% Adjusted Gamma UCL					14167						

	A	B	C	D	E	F	G	H	I	J	K	L		
261	Note: DL/2 is not a recommended method.													
262														
263														
264	Arsenic													
265														
266	General Statistics													
267	Number of Valid Data					22		Number of Detected Data					22	
268	Number of Distinct Detected Data					22		Number of Non-Detect Data					0	
269	Number of Missing Values					21		Percent Non-Detects					0.00%	
270														
271	Raw Statistics						Log-transformed Statistics							
272	Minimum Detected					90.65		Minimum Detected					4.507	
273	Maximum Detected					780.5		Maximum Detected					6.66	
274	Mean of Detected					236.7		Mean of Detected					5.23	
275	SD of Detected					206.2		SD of Detected					0.637	
276	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
277	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
278														
279														
280	UCL Statistics													
281	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
282	Shapiro Wilk Test Statistic					0.65		Shapiro Wilk Test Statistic					0.852	
283	5% Shapiro Wilk Critical Value					0.911		5% Shapiro Wilk Critical Value					0.911	
284	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
285														
286	Assuming Normal Distribution						Assuming Lognormal Distribution							
287	DL/2 Substitution Method							DL/2 Substitution Method						
288	Mean					236.7		Mean					5.23	
289	SD					206.2		SD					0.637	
290	95% DL/2 (t) UCL					312.4		95% H-Stat (DL/2) UCL					307	
291														
292	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
293	MLE method failed to converge properly						Mean in Log Scale					N/A		
294							SD in Log Scale					N/A		
295							Mean in Original Scale					N/A		
296							SD in Original Scale					N/A		
297							95% Percentile Bootstrap UCL					N/A		
298							95% BCA Bootstrap UCL					N/A		
299														
300	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
301	k star (bias corrected)					1.981		Data do not follow a Discernable Distribution (0.05)						
302	Theta Star					119.5								
303	nu star					87.17								
304														
305	A-D Test Statistic					1.826		Nonparametric Statistics						
306	5% A-D Critical Value					0.754		Kaplan-Meier (KM) Method						
307	K-S Test Statistic					0.754		Mean					236.7	
308	5% K-S Critical Value					0.188		SD					201.4	
309	Data not Gamma Distributed at 5% Significance Level						SE of Mean					43.95		
310							95% KM (t) UCL					312.4		
311	Assuming Gamma Distribution						95% KM (z) UCL					309		
312	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					312.4	

	A	B	C	D	E	F	G	H	I	J	K	L
313					Minimum	90.65				95% KM (bootstrap t) UCL		339.5
314					Maximum	780.5				95% KM (BCA) UCL		308.1
315					Mean	236.7				95% KM (Percentile Bootstrap) UCL		310.9
316					Median	159				95% KM (Chebyshev) UCL		428.3
317					SD	206.2				97.5% KM (Chebyshev) UCL		511.2
318					k star	1.981				99% KM (Chebyshev) UCL		674.1
319					Theta star	119.5						
320					Nu star	87.17				Potential UCLs to Use		
321					AppChi2	66.65				95% KM (Chebyshev) UCL		428.3
322					95% Gamma Approximate UCL	309.6						
323					95% Adjusted Gamma UCL	316						
324	Note: DL/2 is not a recommended method.											
325												
326												
327	Barium											
328												
329	General Statistics											
330					Number of Valid Data	22				Number of Detected Data		22
331					Number of Distinct Detected Data	21				Number of Non-Detect Data		0
332					Number of Missing Values	21				Percent Non-Detects		0.00%
333												
334	Raw Statistics						Log-transformed Statistics					
335					Minimum Detected	410.8				Minimum Detected		6.018
336					Maximum Detected	5555				Maximum Detected		8.622
337					Mean of Detected	1671				Mean of Detected		7.067
338					SD of Detected	1576				SD of Detected		0.827
339					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
340					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
341												
342												
343	UCL Statistics											
344	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
345					Shapiro Wilk Test Statistic	0.759				Shapiro Wilk Test Statistic		0.905
346					5% Shapiro Wilk Critical Value	0.911				5% Shapiro Wilk Critical Value		0.911
347	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
348												
349	Assuming Normal Distribution						Assuming Lognormal Distribution					
350					DL/2 Substitution Method					DL/2 Substitution Method		
351					Mean	1671				Mean		7.067
352					SD	1576				SD		0.827
353					95% DL/2 (t) UCL	2249				95% H-Stat (DL/2) UCL		2511
354												
355					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
356	MLE method failed to converge properly						Mean in Log Scale					
357							SD in Log Scale					
358							Mean in Original Scale					
359							SD in Original Scale					
360							95% Percentile Bootstrap UCL					
361							95% BCA Bootstrap UCL					
362												
363	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
364					k star (bias corrected)	1.375				Data do not follow a Discernable Distribution (0.05)		

	A	B	C	D	E	F	G	H	I	J	K	L
365	Theta Star					1215						
366	nu star					60.52						
367												
368	A-D Test Statistic					1.174	Nonparametric Statistics					
369	5% A-D Critical Value					0.758	Kaplan-Meier (KM) Method					
370	K-S Test Statistic					0.758	Mean					1671
371	5% K-S Critical Value					0.188	SD					1540
372	Data not Gamma Distributed at 5% Significance Level						SE of Mean					336
373							95% KM (t) UCL					2249
374	Assuming Gamma Distribution						95% KM (z) UCL					2224
375	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2249
376	Minimum					410.8	95% KM (bootstrap t) UCL					2538
377	Maximum					5555	95% KM (BCA) UCL					2242
378	Mean					1671	95% KM (Percentile Bootstrap) UCL					2260
379	Median					878	95% KM (Chebyshev) UCL					3136
380	SD					1576	97.5% KM (Chebyshev) UCL					3769
381	k star					1.375	99% KM (Chebyshev) UCL					5014
382	Theta star					1215						
383	Nu star					60.52	Potential UCLs to Use					
384	AppChi2					43.63	95% KM (Chebyshev) UCL					3136
385	95% Gamma Approximate UCL					2318						
386	95% Adjusted Gamma UCL					2376						
387	Note: DL/2 is not a recommended method.											
388												
389												
390	Cadmium											
391												
392	General Statistics											
393	Number of Valid Data					22	Number of Detected Data					19
394	Number of Distinct Detected Data					19	Number of Non-Detect Data					3
395	Number of Missing Values					21	Percent Non-Detects					13.64%
396												
397	Raw Statistics						Log-transformed Statistics					
398	Minimum Detected					16.58	Minimum Detected					2.808
399	Maximum Detected					475.2	Maximum Detected					6.164
400	Mean of Detected					100.1	Mean of Detected					3.85
401	SD of Detected					145.8	SD of Detected					1.124
402	Minimum Non-Detect					15.8	Minimum Non-Detect					2.76
403	Maximum Non-Detect					16.95	Maximum Non-Detect					2.83
404												
405	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					4
406	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					18
407	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					18.18%
408												
409	UCL Statistics											
410	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
411	Shapiro Wilk Test Statistic					0.601	Shapiro Wilk Test Statistic					0.754
412	5% Shapiro Wilk Critical Value					0.901	5% Shapiro Wilk Critical Value					0.901
413	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
414												
415	Assuming Normal Distribution						Assuming Lognormal Distribution					
416	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
417					Mean	87.55					Mean	3.611	
418					SD	138.8					SD	1.209	
419					95% DL/2 (t) UCL	138.5					95% H-Stat (DL/2) UCL	150.4	
420													
421					Maximum Likelihood Estimate(MLE) Method						Log ROS Method		
422					Mean	69.45					Mean in Log Scale	3.536	
423					SD	154.8					SD in Log Scale	1.32	
424					95% MLE (t) UCL	126.2					Mean in Original Scale	87.08	
425					95% MLE (Tiku) UCL	124.6					SD in Original Scale	139.1	
426											95% Percentile Bootstrap UCL	137.7	
427											95% BCA Bootstrap UCL	151.5	
428													
429					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
430					k star (bias corrected)	0.698					Data do not follow a Discernable Distribution (0.05)		
431					Theta Star	143.4							
432					nu star	26.52							
433													
434					A-D Test Statistic	2.834					Nonparametric Statistics		
435					5% A-D Critical Value	0.777					Kaplan-Meier (KM) Method		
436					K-S Test Statistic	0.777					Mean	88.69	
437					5% K-S Critical Value	0.206					SD	135	
438					Data not Gamma Distributed at 5% Significance Level						SE of Mean	29.57	
439											95% KM (t) UCL	139.6	
440					Assuming Gamma Distribution						95% KM (z) UCL	137.3	
441					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	139.2	
442					Minimum	1E-09					95% KM (bootstrap t) UCL	176.7	
443					Maximum	475.2					95% KM (BCA) UCL	143.2	
444					Mean	86.43					95% KM (Percentile Bootstrap) UCL	138	
445					Median	28					95% KM (Chebyshev) UCL	217.6	
446					SD	139.5					97.5% KM (Chebyshev) UCL	273.3	
447					k star	0.192					99% KM (Chebyshev) UCL	382.9	
448					Theta star	449.3							
449					Nu star	8.465					Potential UCLs to Use		
450					AppChi2	3.007					97.5% KM (Chebyshev) UCL	273.3	
451					95% Gamma Approximate UCL	243.3							
452					95% Adjusted Gamma UCL	264.2							
453					Note: DL/2 is not a recommended method.								
454													
455													
456					Calcium								
457													
458					General Statistics								
459					Number of Valid Data	22					Number of Detected Data	22	
460					Number of Distinct Detected Data	22					Number of Non-Detect Data	0	
461					Number of Missing Values	21					Percent Non-Detects	0.00%	
462													
463					Raw Statistics						Log-transformed Statistics		
464					Minimum Detected	3805500					Minimum Detected	15.15	
465					Maximum Detected	13209000					Maximum Detected	16.4	
466					Mean of Detected	8099764					Mean of Detected	15.83	
467					SD of Detected	3057823					SD of Detected	0.402	
468					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
469	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
470												
471												
472	UCL Statistics											
473	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
474	Shapiro Wilk Test Statistic					0.913	Shapiro Wilk Test Statistic					0.905
475	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
476	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
477												
478	Assuming Normal Distribution						Assuming Lognormal Distribution					
479	DL/2 Substitution Method						DL/2 Substitution Method					
480	Mean					8099764	Mean					15.83
481	SD					3057823	SD					0.402
482	95% DL/2 (t) UCL					9221568	95% H-Stat (DL/2) UCL					9634708
483												
484	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
485	MLE method failed to converge properly						Mean in Log Scale					N/A
486							SD in Log Scale					N/A
487							Mean in Original Scale					N/A
488							SD in Original Scale					N/A
489							95% Percentile Bootstrap UCL					N/A
490							95% BCA Bootstrap UCL					N/A
491												
492	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
493	k star (bias corrected)					6.012	Data appear Normal at 5% Significance Level					
494	Theta Star					1347291						
495	nu star					264.5						
496												
497	A-D Test Statistic					0.859	Nonparametric Statistics					
498	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
499	K-S Test Statistic					0.745	Mean					8099764
500	5% K-S Critical Value					0.186	SD					2987519
501	Data not Gamma Distributed at 5% Significance Level						SE of Mean					651930
502							95% KM (t) UCL					9221568
503	Assuming Gamma Distribution						95% KM (z) UCL					9172093
504	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9221568
505	Minimum					3805500	95% KM (bootstrap t) UCL					9247630
506	Maximum					13209000	95% KM (BCA) UCL					9266064
507	Mean					8099764	95% KM (Percentile Bootstrap) UCL					9122086
508	Median					8495100	95% KM (Chebyshev) UCL					10941461
509	SD					3057823	97.5% KM (Chebyshev) UCL					12171066
510	k star					6.012	99% KM (Chebyshev) UCL					14586386
511	Theta star					1347291						
512	Nu star					264.5	Potential UCLs to Use					
513	AppChi2					227.9	95% KM (t) UCL					9221568
514	95% Gamma Approximate UCL					9403011	95% KM (Percentile Bootstrap) UCL					9122086
515	95% Adjusted Gamma UCL					9508856						
516	Note: DL/2 is not a recommended method.											
517												
518												
519	Chromium											
520												

	A	B	C	D	E	F	G	H	I	J	K	L
521	General Statistics											
522	Number of Valid Data					22	Number of Detected Data					22
523	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
524	Number of Missing Values					21	Percent Non-Detects					0.00%
525												
526	Raw Statistics						Log-transformed Statistics					
527	Minimum Detected					362.6	Minimum Detected					5.893
528	Maximum Detected					1410	Maximum Detected					7.251
529	Mean of Detected					675	Mean of Detected					6.445
530	SD of Detected					270.8	SD of Detected					0.375
531	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
532	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
533												
534												
535	UCL Statistics											
536	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
537	Shapiro Wilk Test Statistic					0.904	Shapiro Wilk Test Statistic					0.964
538	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
539	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
540												
541	Assuming Normal Distribution						Assuming Lognormal Distribution					
542	DL/2 Substitution Method						DL/2 Substitution Method					
543	Mean					675	Mean					6.445
544	SD					270.8	SD					0.375
545	95% DL/2 (t) UCL					774.3	95% H-Stat (DL/2) UCL					788
546												
547	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
548	MLE method failed to converge properly						Mean in Log Scale					N/A
549							SD in Log Scale					N/A
550							Mean in Original Scale					N/A
551							SD in Original Scale					N/A
552							95% Percentile Bootstrap UCL					N/A
553							95% BCA Bootstrap UCL					N/A
554												
555	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
556	k star (bias corrected)					6.375	Data appear Gamma Distributed at 5% Significance Level					
557	Theta Star					105.9						
558	nu star					280.5						
559												
560	A-D Test Statistic					0.344	Nonparametric Statistics					
561	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
562	K-S Test Statistic					0.745	Mean					675
563	5% K-S Critical Value					0.186	SD					264.6
564	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					57.74
565							95% KM (t) UCL					774.3
566	Assuming Gamma Distribution						95% KM (z) UCL					769.9
567	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					774.3
568	Minimum					362.6	95% KM (bootstrap t) UCL					794
569	Maximum					1410	95% KM (BCA) UCL					774.1
570	Mean					675	95% KM (Percentile Bootstrap) UCL					771.2
571	Median					631.8	95% KM (Chebyshev) UCL					926.6
572	SD					270.8	97.5% KM (Chebyshev) UCL					1036

	A	B	C	D	E	F	G	H	I	J	K	L	
573					k star	6.375				99% KM (Chebyshev) UCL		1249	
574					Theta star	105.9							
575					Nu star	280.5				Potential UCLs to Use			
576					AppChi2	242.7				95% KM (BCA) UCL		774.1	
577					95% Gamma Approximate UCL	780							
578					95% Adjusted Gamma UCL	788.6							
579	Note: DL/2 is not a recommended method.												
580													
581													
582	Cobalt												
583													
584	General Statistics												
585					Number of Valid Data	22				Number of Detected Data		18	
586					Number of Distinct Detected Data	18				Number of Non-Detect Data		4	
587					Number of Missing Values	21				Percent Non-Detects		18.18%	
588													
589	Raw Statistics						Log-transformed Statistics						
590					Minimum Detected	20.2				Minimum Detected		3.006	
591					Maximum Detected	64.17				Maximum Detected		4.162	
592					Mean of Detected	30.91				Mean of Detected		3.369	
593					SD of Detected	12.48				SD of Detected		0.345	
594					Minimum Non-Detect	12.44				Minimum Non-Detect		2.521	
595					Maximum Non-Detect	16.53				Maximum Non-Detect		2.805	
596													
597	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		4
598	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		18
599	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		18.18%
600													
601	UCL Statistics												
602	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
603					Shapiro Wilk Test Statistic	0.784				Shapiro Wilk Test Statistic		0.854	
604					5% Shapiro Wilk Critical Value	0.897				5% Shapiro Wilk Critical Value		0.897	
605	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
606													
607	Assuming Normal Distribution						Assuming Lognormal Distribution						
608					DL/2 Substitution Method					DL/2 Substitution Method			
609					Mean	26.65				Mean		3.121	
610					SD	14.55				SD		0.622	
611					95% DL/2 (t) UCL	31.99				95% H-Stat (DL/2) UCL		31.38	
612													
613					Maximum Likelihood Estimate(MLE) Method					Log ROS Method			
614					Mean	26.75				Mean in Log Scale		3.229	
615					SD	14.38				SD in Log Scale		0.434	
616					95% MLE (t) UCL	32.03				Mean in Original Scale		27.74	
617					95% MLE (Tiku) UCL	32.06				SD in Original Scale		13.17	
618										95% Percentile Bootstrap UCL		32.62	
619										95% BCA Bootstrap UCL		33.45	
620													
621	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
622					k star (bias corrected)	6.867				Data do not follow a Discernable Distribution (0.05)			
623					Theta Star	4.501							
624					nu star	247.2							

	A	B	C	D	E	F	G	H	I	J	K	L
625												
626				A-D Test Statistic		1.287	Nonparametric Statistics					
627				5% A-D Critical Value		0.741	Kaplan-Meier (KM) Method					
628				K-S Test Statistic		0.741	Mean					28.96
629				5% K-S Critical Value		0.204	SD					11.72
630	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.571
631							95% KM (t) UCL					33.38
632	Assuming Gamma Distribution						95% KM (z) UCL					33.19
633	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					33.29
634				Minimum		16.16	95% KM (bootstrap t) UCL					35.07
635				Maximum		64.17	95% KM (BCA) UCL					33.89
636				Mean		28.22	95% KM (Percentile Bootstrap) UCL					33.36
637				Median		23.69	95% KM (Chebyshev) UCL					40.17
638				SD		12.65	97.5% KM (Chebyshev) UCL					45.02
639				k star		5.7	99% KM (Chebyshev) UCL					54.54
640				Theta star		4.952						
641				Nu star		250.8	Potential UCLs to Use					
642				AppChi2		215.1	95% KM (Chebyshev) UCL					40.17
643				95% Gamma Approximate UCL		32.9						
644				95% Adjusted Gamma UCL		33.28						
645	Note: DL/2 is not a recommended method.											
646												
647												
648	Copper											
649												
650	General Statistics											
651				Number of Valid Data		22	Number of Detected Data					22
652				Number of Distinct Detected Data		21	Number of Non-Detect Data					0
653				Number of Missing Values		21	Percent Non-Detects					0.00%
654												
655	Raw Statistics						Log-transformed Statistics					
656				Minimum Detected		284.9	Minimum Detected					5.652
657				Maximum Detected		1926	Maximum Detected					7.563
658				Mean of Detected		969.6	Mean of Detected					6.718
659				SD of Detected		505.3	SD of Detected					0.613
660				Minimum Non-Detect		N/A	Minimum Non-Detect					N/A
661				Maximum Non-Detect		N/A	Maximum Non-Detect					N/A
662												
663												
664	UCL Statistics											
665	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
666				Shapiro Wilk Test Statistic		0.95	Shapiro Wilk Test Statistic					0.922
667				5% Shapiro Wilk Critical Value		0.911	5% Shapiro Wilk Critical Value					0.911
668	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
669												
670	Assuming Normal Distribution						Assuming Lognormal Distribution					
671				DL/2 Substitution Method			DL/2 Substitution Method					
672				Mean		969.6	Mean					6.718
673				SD		505.3	SD					0.613
674				95% DL/2 (t) UCL		1155	95% H-Stat (DL/2) UCL					1320
675												
676				Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method					

	A	B	C	D	E	F	G	H	I	J	K	L
677	MLE method failed to converge properly						Mean in Log Scale					N/A
678							SD in Log Scale					N/A
679							Mean in Original Scale					N/A
680							SD in Original Scale					N/A
681							95% Percentile Bootstrap UCL					N/A
682							95% BCA Bootstrap UCL					N/A
683												
684	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
685	k star (bias corrected)				2.885		Data appear Normal at 5% Significance Level					
686	Theta Star				336							
687	nu star				126.9							
688												
689	A-D Test Statistic				0.442		Nonparametric Statistics					
690	5% A-D Critical Value				0.749		Kaplan-Meier (KM) Method					
691	K-S Test Statistic				0.749		Mean					969.6
692	5% K-S Critical Value				0.187		SD					493.7
693	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					107.7
694							95% KM (t) UCL					1155
695	Assuming Gamma Distribution						95% KM (z) UCL					1147
696	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1155
697	Minimum				284.9		95% KM (bootstrap t) UCL					1169
698	Maximum				1926		95% KM (BCA) UCL					1155
699	Mean				969.6		95% KM (Percentile Bootstrap) UCL					1145
700	Median				975.8		95% KM (Chebyshev) UCL					1439
701	SD				505.3		97.5% KM (Chebyshev) UCL					1642
702	k star				2.885		99% KM (Chebyshev) UCL					2042
703	Theta star				336							
704	Nu star				126.9		Potential UCLs to Use					
705	AppChi2				101.9		95% KM (t) UCL					1155
706	95% Gamma Approximate UCL				1208		95% KM (Percentile Bootstrap) UCL					1145
707	95% Adjusted Gamma UCL				1228							
708	Note: DL/2 is not a recommended method.											
709												
710												
711	Iron											
712												
713	General Statistics											
714	Number of Valid Data				22		Number of Detected Data				22	
715	Number of Distinct Detected Data				21		Number of Non-Detect Data				0	
716	Number of Missing Values				21		Percent Non-Detects				0.00%	
717												
718	Raw Statistics						Log-transformed Statistics					
719	Minimum Detected				8806		Minimum Detected				9.083	
720	Maximum Detected				91791		Maximum Detected				11.43	
721	Mean of Detected				24877		Mean of Detected				9.87	
722	SD of Detected				21701		SD of Detected				0.67	
723	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
724	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
725												
726												
727	UCL Statistics											
728	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
729	Shapiro Wilk Test Statistic					0.71	Shapiro Wilk Test Statistic					0.9
730	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
731	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
732												
733	Assuming Normal Distribution					Assuming Lognormal Distribution						
734	DL/2 Substitution Method						DL/2 Substitution Method					
735	Mean					24877	Mean					9.87
736	SD					21701	SD					0.67
737	95% DL/2 (t) UCL					32838	95% H-Stat (DL/2) UCL					33164
738												
739	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
740	MLE method failed to converge properly						Mean in Log Scale					N/A
741							SD in Log Scale					N/A
742							Mean in Original Scale					N/A
743							SD in Original Scale					N/A
744							95% Percentile Bootstrap UCL					N/A
745							95% BCA Bootstrap UCL					N/A
746												
747	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
748	k star (bias corrected)					1.88	Data do not follow a Discernable Distribution (0.05)					
749	Theta Star					13236						
750	nu star					82.7						
751												
752	A-D Test Statistic					1.293	Nonparametric Statistics					
753	5% A-D Critical Value					0.755	Kaplan-Meier (KM) Method					
754	K-S Test Statistic					0.755	Mean					24877
755	5% K-S Critical Value					0.188	SD					21202
756	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4627
757							95% KM (t) UCL					32838
758	Assuming Gamma Distribution						95% KM (z) UCL					32487
759	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					32838
760	Minimum					8806	95% KM (bootstrap t) UCL					37458
761	Maximum					91791	95% KM (BCA) UCL					32622
762	Mean					24877	95% KM (Percentile Bootstrap) UCL					32811
763	Median					17306	95% KM (Chebyshev) UCL					45044
764	SD					21701	97.5% KM (Chebyshev) UCL					53770
765	k star					1.88	99% KM (Chebyshev) UCL					70911
766	Theta star					13236						
767	Nu star					82.7	Potential UCLs to Use					
768	AppChi2					62.74	95% KM (Chebyshev) UCL					45044
769	95% Gamma Approximate UCL					32790						
770	95% Adjusted Gamma UCL					33482						
771	Note: DL/2 is not a recommended method.											
772												
773												
774	Lead											
775												
776	General Statistics											
777	Number of Valid Data					22	Number of Detected Data					22
778	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
779	Number of Missing Values					21	Percent Non-Detects					0.00%
780												

	A	B	C	D	E	F	G	H	I	J	K	L
781	Raw Statistics						Log-transformed Statistics					
782	Minimum Detected					23.05	Minimum Detected					3.138
783	Maximum Detected					4277	Maximum Detected					8.361
784	Mean of Detected					722.1	Mean of Detected					4.857
785	SD of Detected					1435	SD of Detected					1.665
786	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
787	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
788												
789												
790	UCL Statistics											
791	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
792	Shapiro Wilk Test Statistic					0.514	Shapiro Wilk Test Statistic					0.707
793	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
794	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
795												
796	Assuming Normal Distribution						Assuming Lognormal Distribution					
797	DL/2 Substitution Method						DL/2 Substitution Method					
798	Mean					722.1	Mean					4.857
799	SD					1435	SD					1.665
800	95% DL/2 (t) UCL					1248	95% H-Stat (DL/2) UCL					1862
801												
802	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
803	MLE method failed to converge properly						Mean in Log Scale					N/A
804							SD in Log Scale					N/A
805							Mean in Original Scale					N/A
806							SD in Original Scale					N/A
807							95% Percentile Bootstrap UCL					N/A
808							95% BCA Bootstrap UCL					N/A
809												
810	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
811	k star (bias corrected)					0.362	Data do not follow a Discernable Distribution (0.05)					
812	Theta Star					1995						
813	nu star					15.93						
814												
815	A-D Test Statistic					4.209	Nonparametric Statistics					
816	5% A-D Critical Value					0.829	Kaplan-Meier (KM) Method					
817	K-S Test Statistic					0.829	Mean					722.1
818	5% K-S Critical Value					0.199	SD					1402
819	Data not Gamma Distributed at 5% Significance Level						SE of Mean					305.9
820							95% KM (t) UCL					1248
821	Assuming Gamma Distribution						95% KM (z) UCL					1225
822	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1248
823	Minimum					23.05	95% KM (bootstrap t) UCL					1617
824	Maximum					4277	95% KM (BCA) UCL					1238
825	Mean					722.1	95% KM (Percentile Bootstrap) UCL					1261
826	Median					69.1	95% KM (Chebyshev) UCL					2055
827	SD					1435	97.5% KM (Chebyshev) UCL					2632
828	k star					0.362	99% KM (Chebyshev) UCL					3766
829	Theta star					1995						
830	Nu star					15.93	Potential UCLs to Use					
831	AppChi2					7.91	99% KM (Chebyshev) UCL					3766
832	95% Gamma Approximate UCL					1454						

	A	B	C	D	E	F	G	H	I	J	K	L
833	95% Adjusted Gamma UCL					1535						
834	Note: DL/2 is not a recommended method.											
835												
836												
837	Magnesium											
838												
839	General Statistics											
840	Number of Valid Data					22	Number of Detected Data					22
841	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
842	Number of Missing Values					21	Percent Non-Detects					0.00%
843												
844	Raw Statistics						Log-transformed Statistics					
845	Minimum Detected					269232	Minimum Detected					12.5
846	Maximum Detected					394240	Maximum Detected					12.88
847	Mean of Detected					326036	Mean of Detected					12.69
848	SD of Detected					38963	SD of Detected					0.121
849	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
850	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
851												
852												
853	UCL Statistics											
854	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
855	Shapiro Wilk Test Statistic					0.947	Shapiro Wilk Test Statistic					0.942
856	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
857	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
858												
859	Assuming Normal Distribution						Assuming Lognormal Distribution					
860	DL/2 Substitution Method						DL/2 Substitution Method					
861	Mean					326036	Mean					12.69
862	SD					38963	SD					0.121
863	95% DL/2 (t) UCL					340330	95% H-Stat (DL/2) UCL					341321
864												
865	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
866	MLE method failed to converge properly						Mean in Log Scale					N/A
867							SD in Log Scale					N/A
868							Mean in Original Scale					N/A
869							SD in Original Scale					N/A
870							95% Percentile Bootstrap UCL					N/A
871							95% BCA Bootstrap UCL					N/A
872												
873	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
874	k star (bias corrected)					62.84	Data appear Normal at 5% Significance Level					
875	Theta Star					5189						
876	nu star					2765						
877												
878	A-D Test Statistic					0.452	Nonparametric Statistics					
879	5% A-D Critical Value					0.742	Kaplan-Meier (KM) Method					
880	K-S Test Statistic					0.742	Mean					326036
881	5% K-S Critical Value					0.185	SD					38067
882	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					8307
883							95% KM (t) UCL					340330
884	Assuming Gamma Distribution						95% KM (z) UCL					339699

	A	B	C	D	E	F	G	H	I	J	K	L
885	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					340330
886					Minimum	269232				95% KM (bootstrap t) UCL		340827
887					Maximum	394240				95% KM (BCA) UCL		339281
888					Mean	326036			95% KM (Percentile Bootstrap) UCL			339403
889					Median	329315			95% KM (Chebyshev) UCL			362244
890					SD	38963			97.5% KM (Chebyshev) UCL			377912
891					k star	62.84			99% KM (Chebyshev) UCL			408688
892					Theta star	5189						
893					Nu star	2765	Potential UCLs to Use					
894					AppChi2	2644			95% KM (t) UCL			340330
895			95% Gamma Approximate UCL			340979			95% KM (Percentile Bootstrap) UCL			339403
896			95% Adjusted Gamma UCL			342120						
897	Note: DL/2 is not a recommended method.											
898												
899												
900	Manganese											
901												
902	General Statistics											
903		Number of Valid Data				22		Number of Detected Data				22
904		Number of Distinct Detected Data				22		Number of Non-Detect Data				0
905		Number of Missing Values				21		Percent Non-Detects				0.00%
906												
907	Raw Statistics						Log-transformed Statistics					
908		Minimum Detected				632		Minimum Detected				6.449
909		Maximum Detected				7477		Maximum Detected				8.92
910		Mean of Detected				2355		Mean of Detected				7.458
911		SD of Detected				2178		SD of Detected				0.748
912		Minimum Non-Detect				N/A		Minimum Non-Detect				N/A
913		Maximum Non-Detect				N/A		Maximum Non-Detect				N/A
914												
915												
916	UCL Statistics											
917	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
918		Shapiro Wilk Test Statistic				0.694		Shapiro Wilk Test Statistic				0.888
919		5% Shapiro Wilk Critical Value				0.911		5% Shapiro Wilk Critical Value				0.911
920	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
921												
922	Assuming Normal Distribution						Assuming Lognormal Distribution					
923		DL/2 Substitution Method						DL/2 Substitution Method				
924		Mean				2355		Mean				7.458
925		SD				2178		SD				0.748
926		95% DL/2 (t) UCL				3155		95% H-Stat (DL/2) UCL				3303
927												
928		Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method				
929	MLE method failed to converge properly							Mean in Log Scale				N/A
930								SD in Log Scale				N/A
931								Mean in Original Scale				N/A
932								SD in Original Scale				N/A
933								95% Percentile Bootstrap UCL				N/A
934								95% BCA Bootstrap UCL				N/A
935												
936	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L	
937	k star (bias corrected)					1.569	Data do not follow a Discernable Distribution (0.05)						
938	Theta Star					1502							
939	nu star					69.02							
940													
941	A-D Test Statistic					1.589	Nonparametric Statistics						
942	5% A-D Critical Value					0.757	Kaplan-Meier (KM) Method						
943	K-S Test Statistic					0.757						Mean	2355
944	5% K-S Critical Value					0.188						SD	2128
945	Data not Gamma Distributed at 5% Significance Level											SE of Mean	464.4
946												95% KM (t) UCL	3155
947	Assuming Gamma Distribution											95% KM (z) UCL	3119
948	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	3155
949	Minimum					632						95% KM (bootstrap t) UCL	3598
950	Maximum					7477						95% KM (BCA) UCL	3154
951	Mean					2355						95% KM (Percentile Bootstrap) UCL	3130
952	Median					1458						95% KM (Chebyshev) UCL	4380
953	SD					2178						97.5% KM (Chebyshev) UCL	5256
954	k star					1.569						99% KM (Chebyshev) UCL	6976
955	Theta star					1502							
956	Nu star					69.02	Potential UCLs to Use						
957	AppChi2					50.9						95% KM (Chebyshev) UCL	4380
958	95% Gamma Approximate UCL					3194							
959	95% Adjusted Gamma UCL					3269							
960	Note: DL/2 is not a recommended method.												
961													
962													
963	Mercury												
964													
965	General Statistics												
966	Number of Valid Data					22	Number of Detected Data					22	
967	Number of Distinct Detected Data					22	Number of Non-Detect Data					0	
968	Number of Missing Values					21	Percent Non-Detects					0.00%	
969													
970	Raw Statistics						Log-transformed Statistics						
971	Minimum Detected					36	Minimum Detected					3.584	
972	Maximum Detected					222	Maximum Detected					5.403	
973	Mean of Detected					107	Mean of Detected					4.515	
974	SD of Detected					58.09	SD of Detected					0.595	
975	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
976	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
977													
978													
979	UCL Statistics												
980	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
981	Shapiro Wilk Test Statistic					0.912	Shapiro Wilk Test Statistic					0.911	
982	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911	
983	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
984													
985	Assuming Normal Distribution						Assuming Lognormal Distribution						
986	DL/2 Substitution Method						DL/2 Substitution Method						
987	Mean					107	Mean					4.515	
988	SD					58.09	SD					0.595	

	A	B	C	D	E	F	G	H	I	J	K	L
989	95% DL/2 (t) UCL					128.4	95% H-Stat (DL/2) UCL					142.7
990												
991	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
992	MLE method failed to converge properly						Mean in Log Scale					N/A
993												
994												
995												
996												
997												
998												
999	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1000	k star (bias corrected)					2.889	Data appear Normal at 5% Significance Level					
1001												
1002												
1003												
1004	A-D Test Statistic					0.793	Nonparametric Statistics					
1005	5% A-D Critical Value					0.749	Kaplan-Meier (KM) Method					
1006	K-S Test Statistic					0.749	Mean					107
1007	5% K-S Critical Value					0.187	SD					56.76
1008	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					12.39
1009												
1010	Assuming Gamma Distribution						95% KM (z) UCL					127.4
1011	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					128.4
1012	Minimum					36	95% KM (bootstrap t) UCL					131.2
1013	Maximum					222	95% KM (BCA) UCL					127.2
1014	Mean					107	95% KM (Percentile Bootstrap) UCL					126.6
1015	Median					113	95% KM (Chebyshev) UCL					161
1016	SD					58.09	97.5% KM (Chebyshev) UCL					184.4
1017	k star					2.889	99% KM (Chebyshev) UCL					230.3
1018												
1019	Nu star					127.1	Potential UCLs to Use					
1020	AppChi2					102.1	95% KM (t) UCL					128.4
1021	95% Gamma Approximate UCL					133.3	95% KM (Percentile Bootstrap) UCL					126.6
1022	95% Adjusted Gamma UCL					135.5						
1023	Note: DL/2 is not a recommended method.											
1024												
1025												
1026	Nickel											
1027												
1028	General Statistics											
1029	Number of Valid Data					22	Number of Detected Data					22
1030	Number of Distinct Detected Data					21	Number of Non-Detect Data					0
1031	Number of Missing Values					21	Percent Non-Detects					0.00%
1032												
1033	Raw Statistics						Log-transformed Statistics					
1034	Minimum Detected					156.4	Minimum Detected					5.052
1035	Maximum Detected					683.8	Maximum Detected					6.528
1036	Mean of Detected					319.9	Mean of Detected					5.668
1037	SD of Detected					151.1	SD of Detected					0.454
1038	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1039	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1040												

	A	B	C	D	E	F	G	H	I	J	K	L	
1041													
1042	UCL Statistics												
1043	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1044	Shapiro Wilk Test Statistic					0.885	Shapiro Wilk Test Statistic					0.931	
1045	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911	
1046	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1047													
1048	Assuming Normal Distribution						Assuming Lognormal Distribution						
1049	DL/2 Substitution Method						DL/2 Substitution Method						
1050	Mean					319.9	Mean					5.668	
1051	SD					151.1	SD					0.454	
1052	95% DL/2 (t) UCL					375.3	95% H-Stat (DL/2) UCL					389	
1053													
1054	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1055	MLE method failed to converge properly						Mean in Log Scale					N/A	
1056							SD in Log Scale					N/A	
1057							Mean in Original Scale					N/A	
1058							SD in Original Scale					N/A	
1059							95% Percentile Bootstrap UCL					N/A	
1060							95% BCA Bootstrap UCL					N/A	
1061													
1062	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1063	k star (bias corrected)					4.489	Data appear Gamma Distributed at 5% Significance Level						
1064	Theta Star					71.25							
1065	nu star					197.5							
1066													
1067	A-D Test Statistic					0.591	Nonparametric Statistics						
1068	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method						
1069	K-S Test Statistic					0.746	Mean					319.9	
1070	5% K-S Critical Value					0.186	SD					147.6	
1071	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					32.21	
1072							95% KM (t) UCL					375.3	
1073	Assuming Gamma Distribution						95% KM (z) UCL					372.9	
1074	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					375.3	
1075	Minimum					156.4	95% KM (bootstrap t) UCL					387	
1076	Maximum					683.8	95% KM (BCA) UCL					372.2	
1077	Mean					319.9	95% KM (Percentile Bootstrap) UCL					370.9	
1078	Median					311.5	95% KM (Chebyshev) UCL					460.3	
1079	SD					151.1	97.5% KM (Chebyshev) UCL					521.1	
1080	k star					4.489	99% KM (Chebyshev) UCL					640.4	
1081	Theta star					71.25							
1082	Nu star					197.5	Potential UCLs to Use						
1083	AppChi2					166	95% KM (BCA) UCL					372.2	
1084	95% Gamma Approximate UCL					380.6							
1085	95% Adjusted Gamma UCL					385.6							
1086	Note: DL/2 is not a recommended method.												
1087													
1088													
1089	Potassium												
1090													
1091	General Statistics												
1092	Number of Valid Data					22	Number of Detected Data					22	

	A	B	C	D	E	F	G	H	I	J	K	L
1093	Number of Distinct Detected Data					21	Number of Non-Detect Data					0
1094	Number of Missing Values					21	Percent Non-Detects					0.00%
1095												
1096	Raw Statistics						Log-transformed Statistics					
1097	Minimum Detected					2978820	Minimum Detected					14.91
1098	Maximum Detected					3686400	Maximum Detected					15.12
1099	Mean of Detected					3249565	Mean of Detected					14.99
1100	SD of Detected					179249	SD of Detected					0.0546
1101	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1102	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1103												
1104												
1105	UCL Statistics											
1106	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1107	Shapiro Wilk Test Statistic					0.962	Shapiro Wilk Test Statistic					0.969
1108	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
1109	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1110												
1111	Assuming Normal Distribution						Assuming Lognormal Distribution					
1112	DL/2 Substitution Method						DL/2 Substitution Method					
1113	Mean					3249565	Mean					14.99
1114	SD					179249	SD					0.0546
1115	95% DL/2 (t) UCL					3315325	95% H-Stat (DL/2) UCL					N/A
1116												
1117	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1118	MLE method failed to converge properly						Mean in Log Scale					N/A
1119							SD in Log Scale					N/A
1120							Mean in Original Scale					N/A
1121							SD in Original Scale					N/A
1122							95% Percentile Bootstrap UCL					N/A
1123							95% BCA Bootstrap UCL					N/A
1124												
1125	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1126	k star (bias corrected)					302	Data appear Normal at 5% Significance Level					
1127	Theta Star					10761						
1128	nu star					13287						
1129												
1130	A-D Test Statistic					0.248	Nonparametric Statistics					
1131	5% A-D Critical Value					0.741	Kaplan-Meier (KM) Method					
1132	K-S Test Statistic					0.741	Mean					3249565
1133	5% K-S Critical Value					0.185	SD					175128
1134	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					38216
1135							95% KM (t) UCL					3315325
1136	Assuming Gamma Distribution						95% KM (z) UCL					3312425
1137	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3315325
1138	Minimum					2978820	95% KM (bootstrap t) UCL					3320717
1139	Maximum					3686400	95% KM (BCA) UCL					3313336
1140	Mean					3249565	95% KM (Percentile Bootstrap) UCL					3310570
1141	Median					3236950	95% KM (Chebyshev) UCL					3416145
1142	SD					179249	97.5% KM (Chebyshev) UCL					3488224
1143	k star					302	99% KM (Chebyshev) UCL					3629810
1144	Theta star					10761						

	A	B	C	D	E	F	G	H	I	J	K	L
1145					Nu star	13287	Potential UCLs to Use					
1146					AppChi2	13020	95% KM (t) UCL					3315325
1147			95% Gamma Approximate UCL			3316201	95% KM (Percentile Bootstrap) UCL					3310570
1148			95% Adjusted Gamma UCL			3321216						
1149	Note: DL/2 is not a recommended method.											
1150												
1151												
1152	Selenium											
1153												
1154	General Statistics											
1155	Number of Valid Data					22	Number of Detected Data					22
1156	Number of Distinct Detected Data					21	Number of Non-Detect Data					0
1157	Number of Missing Values					21	Percent Non-Detects					0.00%
1158												
1159	Raw Statistics						Log-transformed Statistics					
1160	Minimum Detected					440.3	Minimum Detected					6.087
1161	Maximum Detected					855	Maximum Detected					6.751
1162	Mean of Detected					622	Mean of Detected					6.419
1163	SD of Detected					105.2	SD of Detected					0.172
1164	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1165	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1166												
1167												
1168	UCL Statistics											
1169	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1170	Shapiro Wilk Test Statistic					0.979	Shapiro Wilk Test Statistic					0.975
1171	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
1172	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1173												
1174	Assuming Normal Distribution						Assuming Lognormal Distribution					
1175	DL/2 Substitution Method						DL/2 Substitution Method					
1176	Mean					622	Mean					6.419
1177	SD					105.2	SD					0.172
1178	95% DL/2 (t) UCL					660.6	95% H-Stat (DL/2) UCL					664.8
1179												
1180	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1181	MLE method failed to converge properly						Mean in Log Scale					N/A
1182							SD in Log Scale					N/A
1183							Mean in Original Scale					N/A
1184							SD in Original Scale					N/A
1185							95% Percentile Bootstrap UCL					N/A
1186							95% BCA Bootstrap UCL					N/A
1187												
1188	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1189	k star (bias corrected)					31.21	Data appear Normal at 5% Significance Level					
1190	Theta Star					19.93						
1191	nu star					1373						
1192												
1193	A-D Test Statistic					0.227	Nonparametric Statistics					
1194	5% A-D Critical Value					0.742	Kaplan-Meier (KM) Method					
1195	K-S Test Statistic					0.742	Mean					622
1196	5% K-S Critical Value					0.185	SD					102.8

	A	B	C	D	E	F	G	H	I	J	K	L	
1197	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		22.44
1198										95% KM (t) UCL		660.6	
1199	Assuming Gamma Distribution										95% KM (z) UCL		658.9
1200	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		660.6
1201				Minimum		440.3					95% KM (bootstrap t) UCL		664.2
1202				Maximum		855					95% KM (BCA) UCL		654.8
1203				Mean		622					95% KM (Percentile Bootstrap) UCL		657.8
1204				Median		617.6					95% KM (Chebyshev) UCL		719.8
1205				SD		105.2					97.5% KM (Chebyshev) UCL		762.1
1206				k star		31.21					99% KM (Chebyshev) UCL		845.2
1207				Theta star		19.93							
1208				Nu star		1373				Potential UCLs to Use			
1209				AppChi2		1288					95% KM (t) UCL		660.6
1210				95% Gamma Approximate UCL		663					95% KM (Percentile Bootstrap) UCL		657.8
1211				95% Adjusted Gamma UCL		666.2							
1212	Note: DL/2 is not a recommended method.												
1213													
1214													
1215	Sodium												
1216													
1217	General Statistics												
1218				Number of Valid Data		22				Number of Detected Data		22	
1219				Number of Distinct Detected Data		22				Number of Non-Detect Data		0	
1220				Number of Missing Values		21				Percent Non-Detects		0.00%	
1221													
1222	Raw Statistics						Log-transformed Statistics						
1223				Minimum Detected		657280				Minimum Detected		13.4	
1224				Maximum Detected		1536360				Maximum Detected		14.24	
1225				Mean of Detected		989991				Mean of Detected		13.77	
1226				SD of Detected		274720				SD of Detected		0.274	
1227				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
1228				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
1229													
1230													
1231	UCL Statistics												
1232	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1233				Shapiro Wilk Test Statistic		0.914				Shapiro Wilk Test Statistic		0.929	
1234				5% Shapiro Wilk Critical Value		0.911				5% Shapiro Wilk Critical Value		0.911	
1235	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1236													
1237	Assuming Normal Distribution						Assuming Lognormal Distribution						
1238				DL/2 Substitution Method						DL/2 Substitution Method			
1239				Mean		989991				Mean		13.77	
1240				SD		274720				SD		0.274	
1241				95% DL/2 (t) UCL		1090776				95% H-Stat (DL/2) UCL		1104877	
1242													
1243				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1244	MLE method failed to converge properly										Mean in Log Scale		N/A
1245										SD in Log Scale		N/A	
1246										Mean in Original Scale		N/A	
1247										SD in Original Scale		N/A	
1248										95% Percentile Bootstrap UCL		N/A	

	A	B	C	D	E	F	G	H	I	J	K	L	
1249										95% BCA Bootstrap UCL		N/A	
1250													
1251	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1252					k star (bias corrected)	12.13	Data appear Normal at 5% Significance Level						
1253					Theta Star	81593							
1254					nu star	533.9							
1255													
1256					A-D Test Statistic	0.585	Nonparametric Statistics						
1257					5% A-D Critical Value	0.742	Kaplan-Meier (KM) Method						
1258					K-S Test Statistic	0.742				Mean		989991	
1259					5% K-S Critical Value	0.185				SD		268404	
1260	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		58570
1261										95% KM (t) UCL		1090776	
1262	Assuming Gamma Distribution										95% KM (z) UCL		1086331
1263	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		1090776
1264					Minimum	657280				95% KM (bootstrap t) UCL		1100179	
1265					Maximum	1536360				95% KM (BCA) UCL		1083146	
1266					Mean	989991				95% KM (Percentile Bootstrap) UCL		1084542	
1267					Median	957005				95% KM (Chebyshev) UCL		1245294	
1268					SD	274720				97.5% KM (Chebyshev) UCL		1355764	
1269					k star	12.13				99% KM (Chebyshev) UCL		1572760	
1270					Theta star	81593							
1271					Nu star	533.9	Potential UCLs to Use						
1272					AppChi2	481.3				95% KM (t) UCL		1090776	
1273					95% Gamma Approximate UCL	1098163				95% KM (Percentile Bootstrap) UCL		1084542	
1274					95% Adjusted Gamma UCL	1106716							
1275	Note: DL/2 is not a recommended method.												
1276													
1277													
1278	Uranium												
1279													
1280	General Statistics												
1281					Number of Valid Data	22				Number of Detected Data		19	
1282					Number of Distinct Detected Data	19				Number of Non-Detect Data		3	
1283					Number of Missing Values	21				Percent Non-Detects		13.64%	
1284													
1285	Raw Statistics						Log-transformed Statistics						
1286					Minimum Detected	0.7				Minimum Detected		-0.357	
1287					Maximum Detected	17.94				Maximum Detected		2.887	
1288					Mean of Detected	5.399				Mean of Detected		1.236	
1289					SD of Detected	5.701				SD of Detected		0.951	
1290					Minimum Non-Detect	0.65				Minimum Non-Detect		-0.431	
1291					Maximum Non-Detect	0.65				Maximum Non-Detect		-0.431	
1292													
1293													
1294	UCL Statistics												
1295	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1296					Shapiro Wilk Test Statistic	0.706				Shapiro Wilk Test Statistic		0.92	
1297					5% Shapiro Wilk Critical Value	0.901				5% Shapiro Wilk Critical Value		0.901	
1298	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1299													
1300	Assuming Normal Distribution						Assuming Lognormal Distribution						

	A	B	C	D	E	F	G	H	I	J	K	L
1301	DL/2 Substitution Method					DL/2 Substitution Method						
1302	Mean					4.707	Mean					0.914
1303	SD					5.571	SD					1.209
1304	95% DL/2 (t) UCL					6.751	95% H-Stat (DL/2) UCL					6.084
1305												
1306	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
1307	Mean					4.246	Mean in Log Scale					0.938
1308	SD					6.022	SD in Log Scale					1.173
1309	95% MLE (t) UCL					6.455	Mean in Original Scale					4.718
1310	95% MLE (Tiku) UCL					6.383	SD in Original Scale					5.563
1311											95% Percentile Bootstrap UCL	6.777
1312											95% BCA Bootstrap UCL	7.034
1313												
1314	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1315	k star (bias corrected)					1.089	Data appear Lognormal at 5% Significance Level					
1316	Theta Star					4.959						
1317	nu star					41.37						
1318												
1319	A-D Test Statistic					1.219	Nonparametric Statistics					
1320	5% A-D Critical Value					0.763	Kaplan-Meier (KM) Method					
1321	K-S Test Statistic					0.763	Mean					4.758
1322	5% K-S Critical Value					0.203	SD					5.403
1323	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.184	
1324						95% KM (t) UCL					6.795	
1325	Assuming Gamma Distribution					95% KM (z) UCL					6.705	
1326	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					6.777	
1327	Minimum					1E-09	95% KM (bootstrap t) UCL					7.684
1328	Maximum					17.94	95% KM (BCA) UCL					7.035
1329	Mean					4.663	95% KM (Percentile Bootstrap) UCL					6.748
1330	Median					2.435	95% KM (Chebyshev) UCL					9.917
1331	SD					5.609	97.5% KM (Chebyshev) UCL					12.15
1332	k star					0.22	99% KM (Chebyshev) UCL					16.53
1333	Theta star					21.18						
1334	Nu star					9.688	Potential UCLs to Use					
1335	AppChi2					3.747	95% KM (Chebyshev) UCL					9.917
1336	95% Gamma Approximate UCL					12.05						
1337	95% Adjusted Gamma UCL					13						
1338	Note: DL/2 is not a recommended method.											
1339												
1340												
1341	Vanadium											
1342												
1343	General Statistics											
1344	Number of Valid Data					22	Number of Detected Data					5
1345	Number of Distinct Detected Data					5	Number of Non-Detect Data					17
1346	Number of Missing Values					21	Percent Non-Detects					77.27%
1347												
1348	Raw Statistics					Log-transformed Statistics						
1349	Minimum Detected					107.2	Minimum Detected					4.674
1350	Maximum Detected					184.1	Maximum Detected					5.216
1351	Mean of Detected					133.5	Mean of Detected					4.877
1352	SD of Detected					29.49	SD of Detected					0.202

	A	B	C	D	E	F	G	H	I	J	K	L
1353	Minimum Non-Detect					83.85	Minimum Non-Detect					4.429
1354	Maximum Non-Detect					147.1	Maximum Non-Detect					4.991
1355												
1356	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					21
1357	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1358	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					95.45%
1359												
1360	Warning: There are only 5 Detected Values in this data											
1361	Note: It should be noted that even though bootstrap may be performed on this data set											
1362	the resulting calculations may not be reliable enough to draw conclusions											
1363												
1364	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1365												
1366												
1367	UCL Statistics											
1368	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1369	Shapiro Wilk Test Statistic					0.8	Shapiro Wilk Test Statistic					0.848
1370	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
1371	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1372												
1373	Assuming Normal Distribution						Assuming Lognormal Distribution					
1374	DL/2 Substitution Method						DL/2 Substitution Method					
1375	Mean					75.24	Mean					4.24
1376	SD					35.5	SD					0.384
1377	95% DL/2 (t) UCL					88.26	95% H-Stat (DL/2) UCL					79.67
1378												
1379	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1380	MLE method failed to converge properly						Mean in Log Scale					4.486
1381							SD in Log Scale					0.253
1382							Mean in Original Scale					91.8
1383							SD in Original Scale					27.48
1384							95% Percentile Bootstrap UCL					102.1
1385							95% BCA Bootstrap UCL					104.1
1386												
1387	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1388	k star (bias corrected)					11.73	Data appear Normal at 5% Significance Level					
1389	Theta Star					11.38						
1390	nu star					117.3						
1391												
1392	A-D Test Statistic					0.572	Nonparametric Statistics					
1393	5% A-D Critical Value					0.679	Kaplan-Meier (KM) Method					
1394	K-S Test Statistic					0.679	Mean					114.1
1395	5% K-S Critical Value					0.357	SD					16.87
1396	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					4.156
1397							95% KM (t) UCL					121.2
1398	Assuming Gamma Distribution						95% KM (z) UCL					120.9
1399	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					123.3
1400	Minimum					107.2	95% KM (bootstrap t) UCL					122.5
1401	Maximum					184.1	95% KM (BCA) UCL					133.1
1402	Mean					130.1	95% KM (Percentile Bootstrap) UCL					131.2
1403	Median					128.3	95% KM (Chebyshev) UCL					132.2
1404	SD					13.52	97.5% KM (Chebyshev) UCL					140

	A	B	C	D	E	F	G	H	I	J	K	L
1405					k star	97.87					99% KM (Chebyshev) UCL	155.4
1406					Theta star	1.33						
1407					Nu star	4306				Potential UCLs to Use		
1408					AppChi2	4155					95% KM (t) UCL	121.2
1409					95% Gamma Approximate UCL	134.9					95% KM (Percentile Bootstrap) UCL	131.2
1410					95% Adjusted Gamma UCL	135.2						
1411	Note: DL/2 is not a recommended method.											
1412												
1413												
1414	Zinc											
1415												
1416	General Statistics											
1417					Number of Valid Data	22					Number of Detected Data	22
1418					Number of Distinct Detected Data	22					Number of Non-Detect Data	0
1419					Number of Missing Values	21					Percent Non-Detects	0.00%
1420												
1421	Raw Statistics						Log-transformed Statistics					
1422					Minimum Detected	11500					Minimum Detected	9.35
1423					Maximum Detected	27192					Maximum Detected	10.21
1424					Mean of Detected	16936					Mean of Detected	9.689
1425					SD of Detected	5529					SD of Detected	0.313
1426					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
1427					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
1428												
1429												
1430	UCL Statistics											
1431	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1432					Shapiro Wilk Test Statistic	0.813					Shapiro Wilk Test Statistic	0.821
1433					5% Shapiro Wilk Critical Value	0.911					5% Shapiro Wilk Critical Value	0.911
1434	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1435												
1436	Assuming Normal Distribution						Assuming Lognormal Distribution					
1437					DL/2 Substitution Method						DL/2 Substitution Method	
1438					Mean	16936					Mean	9.689
1439					SD	5529					SD	0.313
1440					95% DL/2 (t) UCL	18965					95% H-Stat (DL/2) UCL	19215
1441												
1442					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
1443	MLE method failed to converge properly										Mean in Log Scale	N/A
1444											SD in Log Scale	N/A
1445											Mean in Original Scale	N/A
1446											SD in Original Scale	N/A
1447											95% Percentile Bootstrap UCL	N/A
1448											95% BCA Bootstrap UCL	N/A
1449												
1450	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1451					k star (bias corrected)	9.122					Data do not follow a Discernable Distribution (0.05)	
1452					Theta Star	1857						
1453					nu star	401.4						
1454												
1455					A-D Test Statistic	1.856					Nonparametric Statistics	
1456					5% A-D Critical Value	0.743					Kaplan-Meier (KM) Method	

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	K-S Test Statistic					0.743	Mean					16936	
1458	5% K-S Critical Value					0.185	SD					5402	
1459	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1179	
1460							95% KM (t) UCL					18965	
1461	Assuming Gamma Distribution						95% KM (z) UCL					18875	
1462	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					18965	
1463	Minimum						11500	95% KM (bootstrap t) UCL					19324
1464	Maximum						27192	95% KM (BCA) UCL					18796
1465	Mean						16936	95% KM (Percentile Bootstrap) UCL					18810
1466	Median						13544	95% KM (Chebyshev) UCL					22075
1467	SD						5529	97.5% KM (Chebyshev) UCL					24298
1468	k star						9.122	99% KM (Chebyshev) UCL					28665
1469	Theta star						1857						
1470	Nu star						401.4	Potential UCLs to Use					
1471	AppChi2						355.9	95% KM (Chebyshev) UCL					22075
1472	95% Gamma Approximate UCL						19098						
1473	95% Adjusted Gamma UCL						19271						
1474	Note: DL/2 is not a recommended method.												
1475													

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach2_PCB&TEQ.												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				22				Number of Distinct Observations				22			
13	Number of Missing Values				22											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0003331			Minimum of Log Data			-8.007						
17	Maximum			0.0019			Maximum of Log Data			-6.267						
18	Mean			0.0009065			Mean of log Data			-7.1						
19	Median			0.0009275			SD of log Data			0.467						
20	SD			0.0003768												
21	Coefficient of Variation			0.416												
22	Skewness			0.447												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.942			Shapiro Wilk Test Statistic			0.916						
27	Shapiro Wilk Critical Value			0.911			Shapiro Wilk Critical Value			0.911						
28	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.00104			95% H-UCL			0.00112						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL			0.00133						
33	95% Adjusted-CLT UCL			0.00105			97.5% Chebyshev (MVUE) UCL			0.0015						
34	95% Modified-t UCL			0.00105			99% Chebyshev (MVUE) UCL			0.00185						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			4.752			Data appear Normal at 5% Significance Level									
38	Theta Star			0.0001908												
39	nu star			209.1												
40	Approximate Chi Square Value (.05)			176.6			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0386			95% CLT UCL			0.00104						
42	Adjusted Chi Square Value			174.4			95% Jackknife UCL			0.00104						
43							95% Standard Bootstrap UCL			0.00103						
44	Anderson-Darling Test Statistic			0.647			95% Bootstrap-t UCL			0.00105						
45	Anderson-Darling 5% Critical Value			0.746			95% Hall's Bootstrap UCL			0.00107						
46	Kolmogorov-Smirnov Test Statistic			0.138			95% Percentile Bootstrap UCL			0.00103						
47	Kolmogorov-Smirnov 5% Critical Value			0.186			95% BCA Bootstrap UCL			0.00105						
48	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.00126						
49							97.5% Chebyshev(Mean, Sd) UCL			0.00141						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.00171						
51	95% Approximate Gamma UCL			0.00107												
52	95% Adjusted Gamma UCL			0.00109												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					22	Number of Distinct Observations					21	
109	Number of Missing Values					22							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					0.0003378	Minimum of Log Data					-7.993	
113	Maximum					0.0344	Maximum of Log Data					-3.371	
114	Mean					0.00386	Mean of log Data					-6.118	
115	Median					0.00211	SD of log Data					0.915	
116	SD					0.00703							
117	Coefficient of Variation					1.823							
118	Skewness					4.262							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.405	Shapiro Wilk Test Statistic					0.899	
123	Shapiro Wilk Critical Value					0.911	Shapiro Wilk Critical Value					0.911	
124	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.00643	95% H-UCL					0.00544	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00634
129	95% Adjusted-CLT UCL					0.00777	97.5% Chebyshev (MVUE) UCL					0.00767	
130	95% Modified-t UCL					0.00666	99% Chebyshev (MVUE) UCL					0.0103	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					0.918	Data do not follow a Discernable Distribution (0.05)						
134	Theta Star					0.0042							
135	nu star					40.37							
136	Approximate Chi Square Value (.05)					26.81	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0386	95% CLT UCL					0.00632	
138	Adjusted Chi Square Value					25.99	95% Jackknife UCL					0.00643	
139							95% Standard Bootstrap UCL					0.00631	
140	Anderson-Darling Test Statistic					2.056	95% Bootstrap-t UCL					0.0149	
141	Anderson-Darling 5% Critical Value					0.77	95% Hall's Bootstrap UCL					0.0147	
142	Kolmogorov-Smirnov Test Statistic					0.272	95% Percentile Bootstrap UCL					0.0066	
143	Kolmogorov-Smirnov 5% Critical Value					0.191	95% BCA Bootstrap UCL					0.00829	
144	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						0.0104
145							97.5% Chebyshev(Mean, Sd) UCL					0.0132	
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.0188
147	95% Approximate Gamma UCL					0.0058							
148	95% Adjusted Gamma UCL					0.00599							
149													
150	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL						0.0104
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					5	Number of Distinct Observations					5	

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					39						
158												
159	Raw Statistics						Log-transformed Statistics					
160	Minimum					24.21	Minimum of Log Data					3.187
161	Maximum					117.3	Maximum of Log Data					4.765
162	Mean					52.91	Mean of log Data					3.786
163	Median					35.65	SD of log Data					0.648
164	SD					38.61						
165	Coefficient of Variation					0.73						
166	Skewness					1.607						
167												
168												
169	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
170												
171	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
172	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
173												
174												
175	Warning: There are only 5 Values in this data											
176	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
177	the resulting calculations may not be reliable enough to draw conclusions											
178												
179	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
180												
181	Relevant UCL Statistics											
182	Normal Distribution Test						Lognormal Distribution Test					
183	Shapiro Wilk Test Statistic					0.815	Shapiro Wilk Test Statistic					0.911
184	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762
185	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
186												
187	Assuming Normal Distribution						Assuming Lognormal Distribution					
188	95% Student's-t UCL					89.72	95% H-UCL					167
189	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					116.5
190	95% Adjusted-CLT UCL					94.57	97.5% Chebyshev (MVUE) UCL					144.4
191	95% Modified-t UCL					91.79	99% Chebyshev (MVUE) UCL					199.3
192												
193	Gamma Distribution Test						Data Distribution					
194	k star (bias corrected)					1.293	Data appear Normal at 5% Significance Level					
195	Theta Star					40.92						
196	nu star					12.93						
197	Approximate Chi Square Value (.05)					5.845	Nonparametric Statistics					
198	Adjusted Level of Significance					0.0086	95% CLT UCL					81.31
199	Adjusted Chi Square Value					3.945	95% Jackknife UCL					89.72
200							95% Standard Bootstrap UCL					78.4
201	Anderson-Darling Test Statistic					0.397	95% Bootstrap-t UCL					220.9
202	Anderson-Darling 5% Critical Value					0.683	95% Hall's Bootstrap UCL					234.2
203	Kolmogorov-Smirnov Test Statistic					0.266	95% Percentile Bootstrap UCL					80.71
204	Kolmogorov-Smirnov 5% Critical Value					0.36	95% BCA Bootstrap UCL					87.86
205	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					128.2
206							97.5% Chebyshev(Mean, Sd) UCL					160.7
207	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					224.7
208	95% Approximate Gamma UCL					117						

	A	B	C	D	E	F	G	H	I	J	K	L	
209	95% Adjusted Gamma UCL					173.4							
210													
211	Potential UCL to Use									Use 95% Student's-t UCL	89.72		
212													
213													
214	Total PCB, as Aroclor												
215													
216	General Statistics												
217	Number of Valid Observations					22	Number of Distinct Observations					20	
218	Number of Missing Values					21							
219													
220	Raw Statistics						Log-transformed Statistics						
221	Minimum					5.5	Minimum of Log Data					1.705	
222	Maximum					419	Maximum of Log Data					6.038	
223	Mean					49.68	Mean of log Data					3.431	
224	Median					27.45	SD of log Data					0.822	
225	SD					84.83							
226	Coefficient of Variation					1.707							
227	Skewness					4.301							
228													
229	Relevant UCL Statistics												
230	Normal Distribution Test						Lognormal Distribution Test						
231	Shapiro Wilk Test Statistic					0.399	Shapiro Wilk Test Statistic					0.87	
232	Shapiro Wilk Critical Value					0.911	Shapiro Wilk Critical Value					0.911	
233	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
234													
235	Assuming Normal Distribution						Assuming Lognormal Distribution						
236	95% Student's-t UCL					80.8	95% H-UCL					65.7	
237	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						77.97
238	95% Adjusted-CLT UCL					97.15	97.5% Chebyshev (MVUE) UCL					93.33	
239	95% Modified-t UCL					83.57	99% Chebyshev (MVUE) UCL					123.5	
240													
241	Gamma Distribution Test						Data Distribution						
242	k star (bias corrected)					1.059	Data do not follow a Discernable Distribution (0.05)						
243	Theta Star					46.89							
244	nu star					46.62							
245	Approximate Chi Square Value (.05)					31.95	Nonparametric Statistics						
246	Adjusted Level of Significance					0.0386	95% CLT UCL					79.43	
247	Adjusted Chi Square Value					31.04	95% Jackknife UCL					80.8	
248							95% Standard Bootstrap UCL					78.76	
249	Anderson-Darling Test Statistic					2.277	95% Bootstrap-t UCL					186.2	
250	Anderson-Darling 5% Critical Value					0.766	95% Hall's Bootstrap UCL					185.2	
251	Kolmogorov-Smirnov Test Statistic					0.292	95% Percentile Bootstrap UCL					83.51	
252	Kolmogorov-Smirnov 5% Critical Value					0.19	95% BCA Bootstrap UCL					103.9	
253	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					128.5	
254							97.5% Chebyshev(Mean, Sd) UCL					162.6	
255	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					229.6	
256	95% Approximate Gamma UCL					72.49							
257	95% Adjusted Gamma UCL					74.61							
258													
259	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL					128.5	
260													

	A	B	C	D	E	F	G	H	I	J	K	L	
261													
262	Total PCB, as Congener Sum												
263													
264	General Statistics												
265	Number of Valid Observations					5	Number of Distinct Observations					5	
266	Number of Missing Values					39							
267													
268	Raw Statistics						Log-transformed Statistics						
269	Minimum					26.12	Minimum of Log Data					3.263	
270	Maximum					127	Maximum of Log Data					4.844	
271	Mean					56.68	Mean of log Data					3.849	
272	Median					38.43	SD of log Data					0.659	
273	SD					42.08							
274	Coefficient of Variation					0.742							
275	Skewness					1.617							
276													
277													
278	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!												
279													
280	It is suggested to collect at least 8 to 10 observations using these statistical methods!												
281	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
282													
283													
284	Warning: There are only 5 Values in this data												
285	Note: It should be noted that even though bootstrap methods may be performed on this data set,												
286	the resulting calculations may not be reliable enough to draw conclusions												
287													
288	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.												
289													
290	Relevant UCL Statistics												
291	Normal Distribution Test						Lognormal Distribution Test						
292	Shapiro Wilk Test Statistic					0.809	Shapiro Wilk Test Statistic					0.9	
293	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762	
294	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
295													
296	Assuming Normal Distribution						Assuming Lognormal Distribution						
297	95% Student's-t UCL					96.81	95% H-UCL					185.1	
298	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						125.8
299	95% Adjusted-CLT UCL					102.2	97.5% Chebyshev (MVUE) UCL					156.2	
300	95% Modified-t UCL					99.07	99% Chebyshev (MVUE) UCL					215.9	
301													
302	Gamma Distribution Test						Data Distribution						
303	k star (bias corrected)					1.256	Data appear Normal at 5% Significance Level						
304	Theta Star					45.14							
305	nu star					12.56							
306	Approximate Chi Square Value (.05)					5.597	Nonparametric Statistics						
307	Adjusted Level of Significance					0.0086	95% CLT UCL					87.64	
308	Adjusted Chi Square Value					3.748	95% Jackknife UCL					96.81	
309							95% Standard Bootstrap UCL					84.82	
310	Anderson-Darling Test Statistic					0.411	95% Bootstrap-t UCL					228	
311	Anderson-Darling 5% Critical Value					0.683	95% Hall's Bootstrap UCL					233.3	
312	Kolmogorov-Smirnov Test Statistic					0.257	95% Percentile Bootstrap UCL					86.62	

	A	B	C	D	E	F	G	H	I	J	K	L	
313	Kolmogorov-Smirnov 5% Critical Value					0.36	95% BCA Bootstrap UCL					91.55	
314	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					138.7	
315							97.5% Chebyshev(Mean, Sd) UCL					174.2	
316	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					243.9	
317	95% Approximate Gamma UCL				127.2								
318	95% Adjusted Gamma UCL				189.9								
319													
320	Potential UCL to Use						Use 95% Student's-t UCL					96.81	
321													

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach3.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Data				24				Number of Detected Data				24			
13	Number of Distinct Detected Data				24				Number of Non-Detect Data				0			
14	Number of Missing Values				24				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0003404			Minimum Detected			-7.985						
18	Maximum Detected			0.0024			Maximum Detected			-6.034						
19	Mean of Detected			0.0008451			Mean of Detected			-7.198						
20	SD of Detected			0.0004734			SD of Detected			0.489						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Shapiro Wilk Test Statistic			0.813			Shapiro Wilk Test Statistic			0.946						
28	5% Shapiro Wilk Critical Value			0.916			5% Shapiro Wilk Critical Value			0.916						
29	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0008451			Mean			-7.198						
34	SD			0.0004734			SD			0.489						
35	95% DL/2 (t) UCL			0.00101			95% H-Stat (DL/2) UCL			0.00103						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			3.768			Data Follow Appr. Gamma Distribution at 5% Significance Level									
47	Theta Star			0.0002243												
48	nu star			180.9												
49																
50	A-D Test Statistic			0.73			Nonparametric Statistics									
51	5% A-D Critical Value			0.748			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.748			Mean			0.0008451						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.179	SD					0.0004634	
54	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					9.662E-05	
55							95% KM (t) UCL					0.00101	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.001	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00101	
58	Minimum						0.0003404	95% KM (bootstrap t) UCL					0.00107
59	Maximum						0.0024	95% KM (BCA) UCL					0.00101
60	Mean						0.0008451	95% KM (Percentile Bootstrap) UCL					0.00101
61	Median						0.0007265	95% KM (Chebyshev) UCL					0.00127
62	SD						0.0004734	97.5% KM (Chebyshev) UCL					0.00145
63	k star						3.768	99% KM (Chebyshev) UCL					0.00181
64	Theta star						0.0002243						
65	Nu star						180.9	Potential UCLs to Use					
66	AppChi2						150.8	95% KM (BCA) UCL					0.00101
67	95% Gamma Approximate UCL						0.00101						
68	95% Adjusted Gamma UCL						0.00103						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					24	Number of Detected Data					24	
76	Number of Distinct Detected Data					24	Number of Non-Detect Data					0	
77	Number of Missing Values					24	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00108	Minimum Detected					-6.828	
81	Maximum Detected					0.0109	Maximum Detected					-4.52	
82	Mean of Detected					0.00377	Mean of Detected					-5.729	
83	SD of Detected					0.00236	SD of Detected					0.54	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.797	Shapiro Wilk Test Statistic					0.973	
91	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916	
92	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.00377	Mean					-5.729	
97	SD					0.00236	SD					0.54	
98	95% DL/2 (t) UCL					0.00459	95% H-Stat (DL/2) UCL					0.00471	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale						N/A
102							SD in Log Scale						N/A
103							Mean in Original Scale						N/A
104							SD in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
105						95% Percentile Bootstrap UCL					N/A	
106						95% BCA Bootstrap UCL					N/A	
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109	k star (bias corrected)					3.113	Data appear Gamma Distributed at 5% Significance Level					
110	Theta Star					0.00121						
111	nu star					149.4						
112												
113	A-D Test Statistic					0.504	Nonparametric Statistics					
114	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
115	K-S Test Statistic					0.75	Mean					0.00377
116	5% K-S Critical Value					0.179	SD					0.00231
117	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0004813
118							95% KM (t) UCL					0.00459
119	Assuming Gamma Distribution						95% KM (z) UCL					0.00456
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00459
121	Minimum					0.00108	95% KM (bootstrap t) UCL					0.00496
122	Maximum					0.0109	95% KM (BCA) UCL					0.00456
123	Mean					0.00377	95% KM (Percentile Bootstrap) UCL					0.00457
124	Median					0.00337	95% KM (Chebyshev) UCL					0.00587
125	SD					0.00236	97.5% KM (Chebyshev) UCL					0.00677
126	k star					3.113	99% KM (Chebyshev) UCL					0.00856
127	Theta star					0.00121						
128	Nu star					149.4	Potential UCLs to Use					
129	AppChi2					122.2	95% KM (BCA) UCL					0.00456
130	95% Gamma Approximate UCL					0.00461						
131	95% Adjusted Gamma UCL					0.00468						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138	Number of Valid Data					24	Number of Detected Data					24
139	Number of Distinct Detected Data					23	Number of Non-Detect Data					0
140	Number of Missing Values					24	Percent Non-Detects					0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143	Minimum Detected					0.0004925	Minimum Detected					-7.616
144	Maximum Detected					0.0101	Maximum Detected					-4.599
145	Mean of Detected					0.00292	Mean of Detected					-6.064
146	SD of Detected					0.00231	SD of Detected					0.678
147	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
148	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153	Shapiro Wilk Test Statistic					0.753	Shapiro Wilk Test Statistic					0.973
154	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916
155	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L
157	Assuming Normal Distribution						Assuming Lognormal Distribution					
158	DL/2 Substitution Method						DL/2 Substitution Method					
159	Mean						Mean					
160	SD						SD					
161	95% DL/2 (t) UCL						95% H-Stat (DL/2) UCL					
162												
163	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
164	MLE method failed to converge properly						Mean in Log Scale					
165							SD in Log Scale					
166							Mean in Original Scale					
167							SD in Original Scale					
168							95% Percentile Bootstrap UCL					
169							95% BCA Bootstrap UCL					
170												
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
172	k star (bias corrected)						2.073					
173	Theta Star						0.00141					
174	nu star						99.49					
175												
176	A-D Test Statistic						0.59					
177	5% A-D Critical Value						0.754					
178	K-S Test Statistic						0.754					
179	5% K-S Critical Value						0.18					
180	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
181							0.0004712					
182	Assuming Gamma Distribution						95% KM (t) UCL					
183	Gamma ROS Statistics using Extrapolated Data						0.00373					
184	Minimum						0.0004925					
185	Maximum						0.0101					
186	Mean						0.00292					
187	Median						0.00211					
188	SD						0.00231					
189	k star						2.073					
190	Theta star						0.00141					
191	Nu star						99.49					
192	AppChi2						77.48					
193	95% Gamma Approximate UCL						0.00375					
194	95% Adjusted Gamma UCL						0.00382					
195	Note: DL/2 is not a recommended method.											
196												
197												
198	Aluminum											
199												
200	General Statistics											
201	Number of Valid Data						34					
202	Number of Distinct Detected Data						29					
203	Number of Missing Values						14					
204												
205	Raw Statistics						Log-transformed Statistics					
206	Minimum Detected						3615					
207	Maximum Detected						51023					
208	Mean of Detected						15134					
							8.193					
							10.84					
							9.238					

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					14010	SD of Detected					0.883
210	Minimum Non-Detect					2937	Minimum Non-Detect					7.985
211	Maximum Non-Detect					3792	Maximum Non-Detect					8.241
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					7
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					27
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					20.59%
216												
217	UCL Statistics											
218	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
219	Shapiro Wilk Test Statistic					0.795	Shapiro Wilk Test Statistic					0.89
220	5% Shapiro Wilk Critical Value					0.926	5% Shapiro Wilk Critical Value					0.926
221	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
222												
223	Assuming Normal Distribution						Assuming Lognormal Distribution					
224	DL/2 Substitution Method						DL/2 Substitution Method					
225	Mean					13161	Mean					8.974
226	SD					13777	SD					1.039
227	95% DL/2 (t) UCL					17160	95% H-Stat (DL/2) UCL					16255
228												
229	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
230	Mean					11370	Mean in Log Scale					8.956
231	SD					15791	SD in Log Scale					1.067
232	95% MLE (t) UCL					15953	Mean in Original Scale					13132
233	95% MLE (Tiku) UCL					15942	SD in Original Scale					13802
234							95% Percentile Bootstrap UCL					17002
235							95% BCA Bootstrap UCL					17714
236												
237	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
238	k star (bias corrected)					1.312	Data do not follow a Discernable Distribution (0.05)					
239	Theta Star					11537						
240	nu star					76.09						
241												
242	A-D Test Statistic					1.348	Nonparametric Statistics					
243	5% A-D Critical Value					0.764	Kaplan-Meier (KM) Method					
244	K-S Test Statistic					0.764	Mean					13441
245	5% K-S Critical Value					0.166	SD					13352
246	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2330
247							95% KM (t) UCL					17385
248	Assuming Gamma Distribution						95% KM (z) UCL					17274
249	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					17357
250	Minimum					1E-09	95% KM (bootstrap t) UCL					18456
251	Maximum					51023	95% KM (BCA) UCL					17841
252	Mean					12909	95% KM (Percentile Bootstrap) UCL					17192
253	Median					6188	95% KM (Chebyshev) UCL					23599
254	SD					14005	97.5% KM (Chebyshev) UCL					27994
255	k star					0.169	99% KM (Chebyshev) UCL					36628
256	Theta star					76425						
257	Nu star					11.49	Potential UCLs to Use					
258	AppChi2					4.89	95% KM (Chebyshev) UCL					23599
259	95% Gamma Approximate UCL					30319						
260	95% Adjusted Gamma UCL					31694						

	A	B	C	D	E	F	G	H	I	J	K	L		
261	Note: DL/2 is not a recommended method.													
262														
263														
264	Antimony													
265														
266	General Statistics													
267	Number of Valid Data					34		Number of Detected Data					1	
268	Number of Distinct Detected Data					1		Number of Non-Detect Data					33	
269	Number of Missing Values					14		Percent Non-Detects					97.06%	
270														
271	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
272	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
273														
274	The data set for variable Antimony was not processed!													
275														
276														
277														
278	Arsenic													
279														
280	General Statistics													
281	Number of Valid Data					34		Number of Detected Data					34	
282	Number of Distinct Detected Data					34		Number of Non-Detect Data					0	
283	Number of Missing Values					14		Percent Non-Detects					0.00%	
284														
285	Raw Statistics						Log-transformed Statistics							
286	Minimum Detected					93.87		Minimum Detected					4.542	
287	Maximum Detected					717.1		Maximum Detected					6.575	
288	Mean of Detected					246.2		Mean of Detected					5.331	
289	SD of Detected					175.9		SD of Detected					0.556	
290	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
291	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
292														
293														
294	UCL Statistics													
295	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
296	Shapiro Wilk Test Statistic					0.701		Shapiro Wilk Test Statistic					0.881	
297	5% Shapiro Wilk Critical Value					0.933		5% Shapiro Wilk Critical Value					0.933	
298	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
299														
300	Assuming Normal Distribution						Assuming Lognormal Distribution							
301	DL/2 Substitution Method							DL/2 Substitution Method						
302	Mean					246.2		Mean					5.331	
303	SD					175.9		SD					0.556	
304	95% DL/2 (t) UCL					297.2		95% H-Stat (DL/2) UCL					291.5	
305														
306	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
307	MLE method failed to converge properly						Mean in Log Scale					N/A		
308							SD in Log Scale					N/A		
309							Mean in Original Scale					N/A		
310							SD in Original Scale					N/A		
311							95% Percentile Bootstrap UCL					N/A		
312							95% BCA Bootstrap UCL					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
313												
314	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
315	k star (bias corrected)				2.76		Data do not follow a Discernable Distribution (0.05)					
316	Theta Star				89.2							
317	nu star				187.7							
318												
319	A-D Test Statistic				2.195		Nonparametric Statistics					
320	5% A-D Critical Value				0.753		Kaplan-Meier (KM) Method					
321	K-S Test Statistic				0.753		Mean				246.2	
322	5% K-S Critical Value				0.152		SD				173.3	
323	Data not Gamma Distributed at 5% Significance Level						SE of Mean				30.16	
324							95% KM (t) UCL				297.2	
325	Assuming Gamma Distribution						95% KM (z) UCL				295.8	
326	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				297.2	
327	Minimum				93.87		95% KM (bootstrap t) UCL				313.7	
328	Maximum				717.1		95% KM (BCA) UCL				300.7	
329	Mean				246.2		95% KM (Percentile Bootstrap) UCL				295.2	
330	Median				189.8		95% KM (Chebyshev) UCL				377.7	
331	SD				175.9		97.5% KM (Chebyshev) UCL				434.6	
332	k star				2.76		99% KM (Chebyshev) UCL				546.3	
333	Theta star				89.2							
334	Nu star				187.7		Potential UCLs to Use					
335	AppChi2				157		95% KM (Chebyshev) UCL				377.7	
336	95% Gamma Approximate UCL				294.3							
337	95% Adjusted Gamma UCL				296.9							
338	Note: DL/2 is not a recommended method.											
339												
340												
341	Barium											
342												
343	General Statistics											
344	Number of Valid Data				34		Number of Detected Data				34	
345	Number of Distinct Detected Data				34		Number of Non-Detect Data				0	
346	Number of Missing Values				14		Percent Non-Detects				0.00%	
347												
348	Raw Statistics						Log-transformed Statistics					
349	Minimum Detected				471.6		Minimum Detected				6.156	
350	Maximum Detected				6115		Maximum Detected				8.719	
351	Mean of Detected				2028		Mean of Detected				7.311	
352	SD of Detected				1611		SD of Detected				0.801	
353	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
354	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
355												
356												
357	UCL Statistics											
358	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
359	Shapiro Wilk Test Statistic				0.846		Shapiro Wilk Test Statistic				0.929	
360	5% Shapiro Wilk Critical Value				0.933		5% Shapiro Wilk Critical Value				0.933	
361	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
362												
363	Assuming Normal Distribution						Assuming Lognormal Distribution					
364	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
365					Mean	2028					Mean	7.311	
366					SD	1611					SD	0.801	
367					95% DL/2 (t) UCL	2496					95% H-Stat (DL/2) UCL	2795	
368													
369					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
370					MLE method failed to converge properly						Mean in Log Scale	N/A	
371											SD in Log Scale	N/A	
372											Mean in Original Scale	N/A	
373											SD in Original Scale	N/A	
374											95% Percentile Bootstrap UCL	N/A	
375											95% BCA Bootstrap UCL	N/A	
376													
377					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
378					k star (bias corrected)	1.654				Data Follow Appr. Gamma Distribution at 5% Significance Level			
379					Theta Star	1226							
380					nu star	112.5							
381													
382					A-D Test Statistic	0.794				Nonparametric Statistics			
383					5% A-D Critical Value	0.762				Kaplan-Meier (KM) Method			
384					K-S Test Statistic	0.762					Mean	2028	
385					5% K-S Critical Value	0.153					SD	1587	
386					Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean	276.3	
387											95% KM (t) UCL	2496	
388					Assuming Gamma Distribution						95% KM (z) UCL	2483	
389					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	2496	
390					Minimum	471.6					95% KM (bootstrap t) UCL	2583	
391					Maximum	6115					95% KM (BCA) UCL	2481	
392					Mean	2028					95% KM (Percentile Bootstrap) UCL	2494	
393					Median	1576					95% KM (Chebyshev) UCL	3232	
394					SD	1611					97.5% KM (Chebyshev) UCL	3753	
395					k star	1.654					99% KM (Chebyshev) UCL	4777	
396					Theta star	1226							
397					Nu star	112.5				Potential UCLs to Use			
398					AppChi2	89					95% KM (Chebyshev) UCL	3232	
399					95% Gamma Approximate UCL	2563							
400					95% Adjusted Gamma UCL	2593							
401					Note: DL/2 is not a recommended method.								
402													
403													
404					Beryllium								
405													
406					General Statistics								
407					Number of Valid Data	34					Number of Detected Data	4	
408					Number of Distinct Detected Data	4					Number of Non-Detect Data	30	
409					Number of Missing Values	14					Percent Non-Detects	88.24%	
410													
411					Raw Statistics						Log-transformed Statistics		
412					Minimum Detected	5.079					Minimum Detected	1.625	
413					Maximum Detected	5.801					Maximum Detected	1.758	
414					Mean of Detected	5.508					Mean of Detected	1.705	
415					SD of Detected	0.35					SD of Detected	0.0642	
416					Minimum Non-Detect	3.95					Minimum Non-Detect	1.374	

	A	B	C	D	E	F	G	H	I	J	K	L
417	Maximum Non-Detect					6.52	Maximum Non-Detect					1.875
418												
419	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					34
420	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
421	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
422												
423	Warning: There are only 4 Distinct Detected Values in this data											
424	Note: It should be noted that even though bootstrap may be performed on this data set											
425	the resulting calculations may not be reliable enough to draw conclusions											
426												
427	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
428												
429												
430	UCL Statistics											
431	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
432	Shapiro Wilk Test Statistic					0.873	Shapiro Wilk Test Statistic					0.874
433	5% Shapiro Wilk Critical Value					0.748	5% Shapiro Wilk Critical Value					0.748
434	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
435												
436	Assuming Normal Distribution						Assuming Lognormal Distribution					
437	DL/2 Substitution Method						DL/2 Substitution Method					
438	Mean					2.889	Mean					1.016
439	SD					1.02	SD					0.281
440	95% DL/2 (t) UCL					3.185	95% H-Stat (DL/2) UCL					3.032
441												
442	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
443	MLE method failed to converge properly						Mean in Log Scale					1.469
444							SD in Log Scale					0.0914
445							Mean in Original Scale					4.362
446							SD in Original Scale					0.444
447							95% Percentile Bootstrap UCL					4.488
448							95% BCA Bootstrap UCL					4.528
449												
450	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
451	k star (bias corrected)					81.61	Data appear Normal at 5% Significance Level					
452	Theta Star					0.0675						
453	nu star					652.9						
454												
455	A-D Test Statistic					0.418	Nonparametric Statistics					
456	5% A-D Critical Value					0.657	Kaplan-Meier (KM) Method					
457	K-S Test Statistic					0.657	Mean					5.137
458	5% K-S Critical Value					0.394	SD					0.183
459	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0387
460							95% KM (t) UCL					5.202
461	Assuming Gamma Distribution						95% KM (z) UCL					5.201
462	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5.316
463	Minimum					1E-09	95% KM (bootstrap t) UCL					5.178
464	Maximum					5.801	95% KM (BCA) UCL					5.801
465	Mean					0.648	95% KM (Percentile Bootstrap) UCL					5.788
466	Median					1E-09	95% KM (Chebyshev) UCL					5.305
467	SD					1.804	97.5% KM (Chebyshev) UCL					5.378
468	k star					0.0648	99% KM (Chebyshev) UCL					5.522

	A	B	C	D	E	F	G	H	I	J	K	L
469	Theta star					9.993						
470	Nu star					4.409	Potential UCLs to Use					
471	AppChi2					0.89	95% KM (t) UCL					5.202
472	95% Gamma Approximate UCL					3.211	95% KM (Percentile Bootstrap) UCL					5.788
473	95% Adjusted Gamma UCL					N/A						
474	Note: DL/2 is not a recommended method.											
475												
476												
477	Cadmium											
478												
479	General Statistics											
480	Number of Valid Data					34	Number of Detected Data					34
481	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
482	Number of Missing Values					14	Percent Non-Detects					0.00%
483												
484	Raw Statistics						Log-transformed Statistics					
485	Minimum Detected					15.85	Minimum Detected					2.763
486	Maximum Detected					391	Maximum Detected					5.969
487	Mean of Detected					105.1	Mean of Detected					4.102
488	SD of Detected					112.6	SD of Detected					1.063
489	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
490	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
491												
492												
493	UCL Statistics											
494	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
495	Shapiro Wilk Test Statistic					0.761	Shapiro Wilk Test Statistic					0.889
496	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
497	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
498												
499	Assuming Normal Distribution						Assuming Lognormal Distribution					
500	DL/2 Substitution Method						DL/2 Substitution Method					
501	Mean					105.1	Mean					4.102
502	SD					112.6	SD					1.063
503	95% DL/2 (t) UCL					137.7	95% H-Stat (DL/2) UCL					167.9
504												
505	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
506	MLE method failed to converge properly						Mean in Log Scale					N/A
507							SD in Log Scale					N/A
508							Mean in Original Scale					N/A
509							SD in Original Scale					N/A
510							95% Percentile Bootstrap UCL					N/A
511							95% BCA Bootstrap UCL					N/A
512												
513	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
514	k star (bias corrected)					0.968	Data do not follow a Discernable Distribution (0.05)					
515	Theta Star					108.5						
516	nu star					65.81						
517												
518	A-D Test Statistic					1.767	Nonparametric Statistics					
519	5% A-D Critical Value					0.775	Kaplan-Meier (KM) Method					
520	K-S Test Statistic					0.775	Mean					105.1

	A	B	C	D	E	F	G	H	I	J	K	L	
521	5% K-S Critical Value					0.155	SD					110.9	
522	Data not Gamma Distributed at 5% Significance Level						SE of Mean					19.31	
523							95% KM (t) UCL					137.7	
524	Assuming Gamma Distribution						95% KM (z) UCL					136.8	
525	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					137.7	
526	Minimum						15.85	95% KM (bootstrap t) UCL					145.2
527	Maximum						391	95% KM (BCA) UCL					137.2
528	Mean						105.1	95% KM (Percentile Bootstrap) UCL					137.7
529	Median						46.48	95% KM (Chebyshev) UCL					189.2
530	SD						112.6	97.5% KM (Chebyshev) UCL					225.6
531	k star						0.968	99% KM (Chebyshev) UCL					297.2
532	Theta star						108.5						
533	Nu star						65.81	Potential UCLs to Use					
534	AppChi2						48.15	97.5% KM (Chebyshev) UCL					225.6
535	95% Gamma Approximate UCL						143.6						
536	95% Adjusted Gamma UCL						145.9						
537	Note: DL/2 is not a recommended method.												
538													
539													
540	Calcium												
541													
542	General Statistics												
543	Number of Valid Data					34	Number of Detected Data					34	
544	Number of Distinct Detected Data					34	Number of Non-Detect Data					0	
545	Number of Missing Values					14	Percent Non-Detects					0.00%	
546													
547	Raw Statistics						Log-transformed Statistics						
548	Minimum Detected					4596200	Minimum Detected					15.34	
549	Maximum Detected					12750600	Maximum Detected					16.36	
550	Mean of Detected					8590769	Mean of Detected					15.92	
551	SD of Detected					2594153	SD of Detected					0.333	
552	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
553	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
554													
555													
556	UCL Statistics												
557	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
558	Shapiro Wilk Test Statistic					0.916	Shapiro Wilk Test Statistic					0.883	
559	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933	
560	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
561													
562	Assuming Normal Distribution						Assuming Lognormal Distribution						
563	DL/2 Substitution Method						DL/2 Substitution Method						
564	Mean					8590769	Mean					15.92	
565	SD					2594153	SD					0.333	
566	95% DL/2 (t) UCL					9343689	95% H-Stat (DL/2) UCL					9588542	
567													
568	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
569	MLE method failed to converge properly						Mean in Log Scale						N/A
570							SD in Log Scale						N/A
571							Mean in Original Scale						N/A
572							SD in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
573						95% Percentile Bootstrap UCL					N/A	
574						95% BCA Bootstrap UCL					N/A	
575												
576	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
577	k star (bias corrected)					9.222	Data do not follow a Discernable Distribution (0.05)					
578	Theta Star					931533						
579	nu star					627.1						
580												
581	A-D Test Statistic					1.219	Nonparametric Statistics					
582	5% A-D Critical Value					0.748	Kaplan-Meier (KM) Method					
583	K-S Test Statistic					0.748	Mean					8590769
584	5% K-S Critical Value					0.151	SD					2555718
585	Data not Gamma Distributed at 5% Significance Level						SE of Mean					444893
586							95% KM (t) UCL					9343689
587	Assuming Gamma Distribution						95% KM (z) UCL					9322554
588	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9343689
589	Minimum					4596200	95% KM (bootstrap t) UCL					9308722
590	Maximum					12750600	95% KM (BCA) UCL					9349645
591	Mean					8590769	95% KM (Percentile Bootstrap) UCL					9306320
592	Median					9020897	95% KM (Chebyshev) UCL					10530015
593	SD					2594153	97.5% KM (Chebyshev) UCL					11369128
594	k star					9.222	99% KM (Chebyshev) UCL					13017403
595	Theta star					931533						
596	Nu star					627.1	Potential UCLs to Use					
597	AppChi2					570	95% KM (Chebyshev) UCL					10530015
598	95% Gamma Approximate UCL					9451230						
599	95% Adjusted Gamma UCL					9495913						
600	Note: DL/2 is not a recommended method.											
601												
602												
603	Chromium											
604												
605	General Statistics											
606	Number of Valid Data					34	Number of Detected Data					34
607	Number of Distinct Detected Data					33	Number of Non-Detect Data					0
608	Number of Missing Values					14	Percent Non-Detects					0.00%
609												
610	Raw Statistics						Log-transformed Statistics					
611	Minimum Detected					296.8	Minimum Detected					5.693
612	Maximum Detected					3021	Maximum Detected					8.013
613	Mean of Detected					695.4	Mean of Detected					6.392
614	SD of Detected					537.9	SD of Detected					0.494
615	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
616	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
617												
618												
619	UCL Statistics											
620	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
621	Shapiro Wilk Test Statistic					0.579	Shapiro Wilk Test Statistic					0.873
622	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
623	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
624												

	A	B	C	D	E	F	G	H	I	J	K	L		
625	Assuming Normal Distribution						Assuming Lognormal Distribution							
626	DL/2 Substitution Method						DL/2 Substitution Method							
627	Mean						695.4	Mean						6.392
628	SD						537.9	SD						0.494
629	95% DL/2 (t) UCL						851.5	95% H-Stat (DL/2) UCL						794.6
630														
631	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
632	MLE method failed to converge properly							Mean in Log Scale						N/A
633								SD in Log Scale						N/A
634								Mean in Original Scale						N/A
635								SD in Original Scale						N/A
636								95% Percentile Bootstrap UCL						N/A
637								95% BCA Bootstrap UCL						N/A
638														
639	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
640	k star (bias corrected)						3.145	Data do not follow a Discernable Distribution (0.05)						
641	Theta Star						221.1							
642	nu star						213.9							
643														
644	A-D Test Statistic						2.035	Nonparametric Statistics						
645	5% A-D Critical Value						0.753	Kaplan-Meier (KM) Method						
646	K-S Test Statistic						0.753	Mean						695.4
647	5% K-S Critical Value						0.152	SD						529.9
648	Data not Gamma Distributed at 5% Significance Level							SE of Mean						92.25
649								95% KM (t) UCL						851.5
650	Assuming Gamma Distribution							95% KM (z) UCL						847.1
651	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						851.5
652	Minimum						296.8	95% KM (bootstrap t) UCL						1094
653	Maximum						3021	95% KM (BCA) UCL						861.9
654	Mean						695.4	95% KM (Percentile Bootstrap) UCL						871.8
655	Median						592.3	95% KM (Chebyshev) UCL						1097
656	SD						537.9	97.5% KM (Chebyshev) UCL						1271
657	k star						3.145	99% KM (Chebyshev) UCL						1613
658	Theta star						221.1							
659	Nu star						213.9	Potential UCLs to Use						
660	AppChi2						181	95% KM (Chebyshev) UCL						1097
661	95% Gamma Approximate UCL						821.5							
662	95% Adjusted Gamma UCL						828.3							
663	Note: DL/2 is not a recommended method.													
664														
665														
666	Cobalt													
667														
668	General Statistics													
669	Number of Valid Data						34	Number of Detected Data						34
670	Number of Distinct Detected Data						33	Number of Non-Detect Data						0
671	Number of Missing Values						14	Percent Non-Detects						0.00%
672														
673	Raw Statistics						Log-transformed Statistics							
674	Minimum Detected						16.31	Minimum Detected						2.792
675	Maximum Detected						89.9	Maximum Detected						4.499
676	Mean of Detected						33.79	Mean of Detected						3.437

	A	B	C	D	E	F	G	H	I	J	K	L
677	SD of Detected					15.63	SD of Detected					0.398
678	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
679	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
680												
681												
682	UCL Statistics											
683	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
684	Shapiro Wilk Test Statistic					0.832	Shapiro Wilk Test Statistic					0.96
685	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
686	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
687												
688	Assuming Normal Distribution						Assuming Lognormal Distribution					
689	DL/2 Substitution Method						DL/2 Substitution Method					
690	Mean					33.79	Mean					3.437
691	SD					15.63	SD					0.398
692	95% DL/2 (t) UCL					38.32	95% H-Stat (DL/2) UCL					38.24
693												
694	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
695	MLE method failed to converge properly						Mean in Log Scale					N/A
696							SD in Log Scale					N/A
697							Mean in Original Scale					N/A
698							SD in Original Scale					N/A
699							95% Percentile Bootstrap UCL					N/A
700							95% BCA Bootstrap UCL					N/A
701												
702	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
703	k star (bias corrected)					5.656	Data appear Gamma Distributed at 5% Significance Level					
704	Theta Star					5.973						
705	nu star					384.6						
706												
707	A-D Test Statistic					0.619	Nonparametric Statistics					
708	5% A-D Critical Value					0.749	Kaplan-Meier (KM) Method					
709	K-S Test Statistic					0.749	Mean					33.79
710	5% K-S Critical Value					0.151	SD					15.4
711	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2.681
712							95% KM (t) UCL					38.32
713	Assuming Gamma Distribution						95% KM (z) UCL					38.2
714	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					38.32
715	Minimum					16.31	95% KM (bootstrap t) UCL					39.83
716	Maximum					89.9	95% KM (BCA) UCL					38.82
717	Mean					33.79	95% KM (Percentile Bootstrap) UCL					38.25
718	Median					31.16	95% KM (Chebyshev) UCL					45.47
719	SD					15.63	97.5% KM (Chebyshev) UCL					50.53
720	k star					5.656	99% KM (Chebyshev) UCL					60.46
721	Theta star					5.973						
722	Nu star					384.6	Potential UCLs to Use					
723	AppChi2					340.2	95% KM (BCA) UCL					38.82
724	95% Gamma Approximate UCL					38.2						
725	95% Adjusted Gamma UCL					38.43						
726	Note: DL/2 is not a recommended method.											
727												
728												

	A	B	C	D	E	F	G	H	I	J	K	L
729	Copper											
730												
731	General Statistics											
732	Number of Valid Data				34		Number of Detected Data				34	
733	Number of Distinct Detected Data				34		Number of Non-Detect Data				0	
734	Number of Missing Values				14		Percent Non-Detects				0.00%	
735												
736	Raw Statistics						Log-transformed Statistics					
737	Minimum Detected				262.5		Minimum Detected				5.57	
738	Maximum Detected				2570		Maximum Detected				7.852	
739	Mean of Detected				893.4		Mean of Detected				6.636	
740	SD of Detected				549.1		SD of Detected				0.567	
741	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
742	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
743												
744												
745	UCL Statistics											
746	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
747	Shapiro Wilk Test Statistic				0.844		Shapiro Wilk Test Statistic				0.972	
748	5% Shapiro Wilk Critical Value				0.933		5% Shapiro Wilk Critical Value				0.933	
749	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
750												
751	Assuming Normal Distribution						Assuming Lognormal Distribution					
752	DL/2 Substitution Method						DL/2 Substitution Method					
753	Mean				893.4		Mean				6.636	
754	SD				549.1		SD				0.567	
755	95% DL/2 (t) UCL				1053		95% H-Stat (DL/2) UCL				1087	
756												
757	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
758	MLE method failed to converge properly						Mean in Log Scale				N/A	
759							SD in Log Scale				N/A	
760							Mean in Original Scale				N/A	
761							SD in Original Scale				N/A	
762							95% Percentile Bootstrap UCL				N/A	
763							95% BCA Bootstrap UCL				N/A	
764												
765	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
766	k star (bias corrected)				3.028		Data appear Gamma Distributed at 5% Significance Level					
767	Theta Star				295.1							
768	nu star				205.9							
769												
770	A-D Test Statistic				0.424		Nonparametric Statistics					
771	5% A-D Critical Value				0.753		Kaplan-Meier (KM) Method					
772	K-S Test Statistic				0.753		Mean				893.4	
773	5% K-S Critical Value				0.152		SD				541	
774	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				94.17	
775							95% KM (t) UCL				1053	
776	Assuming Gamma Distribution						95% KM (z) UCL				1048	
777	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1053	
778	Minimum				262.5		95% KM (bootstrap t) UCL				1084	
779	Maximum				2570		95% KM (BCA) UCL				1068	
780	Mean				893.4		95% KM (Percentile Bootstrap) UCL				1053	

	A	B	C	D	E	F	G	H	I	J	K	L	
781					Median	809.7				95% KM (Chebyshev) UCL		1304	
782					SD	549.1				97.5% KM (Chebyshev) UCL		1482	
783					k star	3.028				99% KM (Chebyshev) UCL		1830	
784					Theta star	295.1							
785					Nu star	205.9				Potential UCLs to Use			
786					AppChi2	173.7				95% KM (BCA) UCL		1068	
787					95% Gamma Approximate UCL	1059							
788					95% Adjusted Gamma UCL	1068							
789	Note: DL/2 is not a recommended method.												
790													
791													
792	Iron												
793													
794	General Statistics												
795					Number of Valid Data	34				Number of Detected Data		34	
796					Number of Distinct Detected Data	34				Number of Non-Detect Data		0	
797					Number of Missing Values	14				Percent Non-Detects		0.00%	
798													
799	Raw Statistics						Log-transformed Statistics						
800					Minimum Detected	7098				Minimum Detected		8.868	
801					Maximum Detected	93074				Maximum Detected		11.44	
802					Mean of Detected	28968				Mean of Detected		10.02	
803					SD of Detected	22584				SD of Detected		0.701	
804					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
805					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
806													
807													
808	UCL Statistics												
809	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
810					Shapiro Wilk Test Statistic	0.81				Shapiro Wilk Test Statistic		0.951	
811					5% Shapiro Wilk Critical Value	0.933				5% Shapiro Wilk Critical Value		0.933	
812	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
813													
814	Assuming Normal Distribution						Assuming Lognormal Distribution						
815					DL/2 Substitution Method					DL/2 Substitution Method			
816					Mean	28968				Mean		10.02	
817					SD	22584				SD		0.701	
818					95% DL/2 (t) UCL	35523				95% H-Stat (DL/2) UCL		37222	
819													
820					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
821	MLE method failed to converge properly										Mean in Log Scale		N/A
822											SD in Log Scale		N/A
823											Mean in Original Scale		N/A
824											SD in Original Scale		N/A
825											95% Percentile Bootstrap UCL		N/A
826											95% BCA Bootstrap UCL		N/A
827													
828	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
829					k star (bias corrected)	1.982				Data Follow Appr. Gamma Distribution at 5% Significance Level			
830					Theta Star	14614							
831					nu star	134.8							
832													

	A	B	C	D	E	F	G	H	I	J	K	L
833	A-D Test Statistic					0.827	Nonparametric Statistics					
834	5% A-D Critical Value					0.759	Kaplan-Meier (KM) Method					
835	K-S Test Statistic					0.759	Mean					28968
836	5% K-S Critical Value					0.153	SD					22249
837	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					3873
838							95% KM (t) UCL					35523
839	Assuming Gamma Distribution						95% KM (z) UCL					35339
840	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					35523
841	Minimum					7098	95% KM (bootstrap t) UCL					37175
842	Maximum					93074	95% KM (BCA) UCL					36105
843	Mean					28968	95% KM (Percentile Bootstrap) UCL					35376
844	Median					21653	95% KM (Chebyshev) UCL					45851
845	SD					22584	97.5% KM (Chebyshev) UCL					53156
846	k star					1.982	99% KM (Chebyshev) UCL					67505
847	Theta star					14614						
848	Nu star					134.8	Potential UCLs to Use					
849	AppChi2					109	95% KM (Chebyshev) UCL					45851
850	95% Gamma Approximate UCL					35833						
851	95% Adjusted Gamma UCL					36214						
852	Note: DL/2 is not a recommended method.											
853												
854												
855	Lead											
856												
857	General Statistics											
858	Number of Valid Data					34	Number of Detected Data					34
859	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
860	Number of Missing Values					14	Percent Non-Detects					0.00%
861												
862	Raw Statistics						Log-transformed Statistics					
863	Minimum Detected					31.65	Minimum Detected					3.455
864	Maximum Detected					4338	Maximum Detected					8.375
865	Mean of Detected					915.6	Mean of Detected					5.485
866	SD of Detected					1341	SD of Detected					1.727
867	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
868	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
869												
870												
871	UCL Statistics											
872	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
873	Shapiro Wilk Test Statistic					0.691	Shapiro Wilk Test Statistic					0.847
874	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
875	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
876												
877	Assuming Normal Distribution						Assuming Lognormal Distribution					
878	DL/2 Substitution Method						DL/2 Substitution Method					
879	Mean					915.6	Mean					5.485
880	SD					1341	SD					1.727
881	95% DL/2 (t) UCL					1305	95% H-Stat (DL/2) UCL					2936
882												
883	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
884	MLE method failed to converge properly						Mean in Log Scale					N/A

	A	B	C	D	E	F	G	H	I	J	K	L
885						SD in Log Scale					N/A	
886						Mean in Original Scale					N/A	
887						SD in Original Scale					N/A	
888						95% Percentile Bootstrap UCL					N/A	
889						95% BCA Bootstrap UCL					N/A	
890												
891	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
892	k star (bias corrected)					0.456	Data do not follow a Discernable Distribution (0.05)					
893	Theta Star					2006						
894	nu star					31.03						
895												
896	A-D Test Statistic					2.688	Nonparametric Statistics					
897	5% A-D Critical Value					0.816	Kaplan-Meier (KM) Method					
898	K-S Test Statistic					0.816	Mean				915.6	
899	5% K-S Critical Value					0.16	SD				1322	
900	Data not Gamma Distributed at 5% Significance Level					SE of Mean				230.1		
901						95% KM (t) UCL				1305		
902	Assuming Gamma Distribution					95% KM (z) UCL				1294		
903	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1305		
904	Minimum					31.65	95% KM (bootstrap t) UCL				1381	
905	Maximum					4338	95% KM (BCA) UCL				1313	
906	Mean					915.6	95% KM (Percentile Bootstrap) UCL				1310	
907	Median					125.2	95% KM (Chebyshev) UCL				1918	
908	SD					1341	97.5% KM (Chebyshev) UCL				2352	
909	k star					0.456	99% KM (Chebyshev) UCL				3205	
910	Theta star					2006						
911	Nu star					31.03	Potential UCLs to Use					
912	AppChi2					19.31	99% KM (Chebyshev) UCL				3205	
913	95% Gamma Approximate UCL					1472						
914	95% Adjusted Gamma UCL					1507						
915	Note: DL/2 is not a recommended method.											
916												
917												
918	Magnesium											
919												
920	General Statistics											
921	Number of Valid Data					34	Number of Detected Data				34	
922	Number of Distinct Detected Data					34	Number of Non-Detect Data				0	
923	Number of Missing Values					14	Percent Non-Detects				0.00%	
924												
925	Raw Statistics					Log-transformed Statistics						
926	Minimum Detected					270970	Minimum Detected				12.51	
927	Maximum Detected					398120	Maximum Detected				12.89	
928	Mean of Detected					338777	Mean of Detected				12.73	
929	SD of Detected					35624	SD of Detected				0.109	
930	Minimum Non-Detect					N/A	Minimum Non-Detect				N/A	
931	Maximum Non-Detect					N/A	Maximum Non-Detect				N/A	
932												
933												
934	UCL Statistics											
935	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
936	Shapiro Wilk Test Statistic					0.947	Shapiro Wilk Test Statistic				0.931	

	A	B	C	D	E	F	G	H	I	J	K	L
937	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
938	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
939												
940	Assuming Normal Distribution					Assuming Lognormal Distribution						
941	DL/2 Substitution Method					DL/2 Substitution Method						
942	Mean					338777	Mean					12.73
943	SD					35624	SD					0.109
944	95% DL/2 (t) UCL					349116	95% H-Stat (DL/2) UCL					349940
945												
946	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
947	MLE method failed to converge properly					Mean in Log Scale					N/A	
948						SD in Log Scale					N/A	
949						Mean in Original Scale					N/A	
950						SD in Original Scale					N/A	
951						95% Percentile Bootstrap UCL					N/A	
952						95% BCA Bootstrap UCL					N/A	
953												
954	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
955	k star (bias corrected)					81.68	Data appear Normal at 5% Significance Level					
956	Theta Star					4148						
957	nu star					5554						
958												
959	A-D Test Statistic					0.656	Nonparametric Statistics					
960	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
961	K-S Test Statistic					0.745	Mean					338777
962	5% K-S Critical Value					0.15	SD					35097
963	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					6110	
964						95% KM (t) UCL					349116	
965	Assuming Gamma Distribution					95% KM (z) UCL					348826	
966	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					349116	
967	Minimum					270970	95% KM (bootstrap t) UCL					348712
968	Maximum					398120	95% KM (BCA) UCL					348933
969	Mean					338777	95% KM (Percentile Bootstrap) UCL					348712
970	Median					343807	95% KM (Chebyshev) UCL					365408
971	SD					35624	97.5% KM (Chebyshev) UCL					376931
972	k star					81.68	99% KM (Chebyshev) UCL					399566
973	Theta star					4148						
974	Nu star					5554	Potential UCLs to Use					
975	AppChi2					5382	95% KM (t) UCL					349116
976	95% Gamma Approximate UCL					349617	95% KM (Percentile Bootstrap) UCL					348712
977	95% Adjusted Gamma UCL					350160						
978	Note: DL/2 is not a recommended method.											
979												
980												
981	Manganese											
982												
983	General Statistics											
984	Number of Valid Data					34	Number of Detected Data					34
985	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
986	Number of Missing Values					14	Percent Non-Detects					0.00%
987												
988	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
989				Minimum Detected		665.7				Minimum Detected		6.501	
990				Maximum Detected		8285				Maximum Detected		9.022	
991				Mean of Detected		3222				Mean of Detected		7.776	
992				SD of Detected		2469				SD of Detected		0.8	
993				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
994				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
995													
996													
997				UCL Statistics									
998				Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only					
999				Shapiro Wilk Test Statistic		0.833				Shapiro Wilk Test Statistic		0.91	
1000				5% Shapiro Wilk Critical Value		0.933				5% Shapiro Wilk Critical Value		0.933	
1001				Data not Normal at 5% Significance Level				Data not Lognormal at 5% Significance Level					
1002													
1003				Assuming Normal Distribution				Assuming Lognormal Distribution					
1004				DL/2 Substitution Method						DL/2 Substitution Method			
1005				Mean		3222				Mean		7.776	
1006				SD		2469				SD		0.8	
1007				95% DL/2 (t) UCL		3938				95% H-Stat (DL/2) UCL		4448	
1008													
1009				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1010				MLE method failed to converge properly							Mean in Log Scale		N/A
1011										SD in Log Scale		N/A	
1012										Mean in Original Scale		N/A	
1013										SD in Original Scale		N/A	
1014										95% Percentile Bootstrap UCL		N/A	
1015										95% BCA Bootstrap UCL		N/A	
1016													
1017				Gamma Distribution Test with Detected Values Only				Data Distribution Test with Detected Values Only					
1018				k star (bias corrected)		1.666				Data do not follow a Discernable Distribution (0.05)			
1019				Theta Star		1934							
1020				nu star		113.3							
1021													
1022				A-D Test Statistic		1.318				Nonparametric Statistics			
1023				5% A-D Critical Value		0.762				Kaplan-Meier (KM) Method			
1024				K-S Test Statistic		0.762				Mean		3222	
1025				5% K-S Critical Value		0.153				SD		2432	
1026				Data not Gamma Distributed at 5% Significance Level							SE of Mean		423.4
1027										95% KM (t) UCL		3938	
1028				Assuming Gamma Distribution							95% KM (z) UCL		3918
1029				Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL		3938
1030				Minimum		665.7				95% KM (bootstrap t) UCL		3996	
1031				Maximum		8285				95% KM (BCA) UCL		3930	
1032				Mean		3222				95% KM (Percentile Bootstrap) UCL		3907	
1033				Median		2041				95% KM (Chebyshev) UCL		5067	
1034				SD		2469				97.5% KM (Chebyshev) UCL		5866	
1035				k star		1.666				99% KM (Chebyshev) UCL		7434	
1036				Theta star		1934							
1037				Nu star		113.3				Potential UCLs to Use			
1038				AppChi2		89.73				95% KM (Chebyshev) UCL		5067	
1039				95% Gamma Approximate UCL		4068							
1040				95% Adjusted Gamma UCL		4116							

	A	B	C	D	E	F	G	H	I	J	K	L		
1041	Note: DL/2 is not a recommended method.													
1042														
1043														
1044	Mercury													
1045														
1046	General Statistics													
1047	Number of Valid Data					24		Number of Detected Data					24	
1048	Number of Distinct Detected Data					23		Number of Non-Detect Data					0	
1049	Number of Missing Values					24		Percent Non-Detects					0.00%	
1050														
1051	Raw Statistics						Log-transformed Statistics							
1052	Minimum Detected					49.5		Minimum Detected					3.902	
1053	Maximum Detected					293		Maximum Detected					5.68	
1054	Mean of Detected					138		Mean of Detected					4.733	
1055	SD of Detected					82.13		SD of Detected					0.659	
1056	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
1057	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
1058														
1059														
1060	UCL Statistics													
1061	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1062	Shapiro Wilk Test Statistic					0.874		Shapiro Wilk Test Statistic					0.851	
1063	5% Shapiro Wilk Critical Value					0.916		5% Shapiro Wilk Critical Value					0.916	
1064	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1065														
1066	Assuming Normal Distribution						Assuming Lognormal Distribution							
1067	DL/2 Substitution Method							DL/2 Substitution Method						
1068	Mean					138		Mean					4.733	
1069	SD					82.13		SD					0.659	
1070	95% DL/2 (t) UCL					166.7		95% H-Stat (DL/2) UCL					188.7	
1071														
1072	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1073	MLE method failed to converge properly						Mean in Log Scale					N/A		
1074							SD in Log Scale					N/A		
1075							Mean in Original Scale					N/A		
1076							SD in Original Scale					N/A		
1077							95% Percentile Bootstrap UCL					N/A		
1078							95% BCA Bootstrap UCL					N/A		
1079														
1080	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1081	k star (bias corrected)					2.416		Data do not follow a Discernable Distribution (0.05)						
1082	Theta Star					57.1								
1083	nu star					116								
1084														
1085	A-D Test Statistic					1.312		Nonparametric Statistics						
1086	5% A-D Critical Value					0.752		Kaplan-Meier (KM) Method						
1087	K-S Test Statistic					0.752		Mean					138	
1088	5% K-S Critical Value					0.179		SD					80.4	
1089	Data not Gamma Distributed at 5% Significance Level						SE of Mean					16.76		
1090							95% KM (t) UCL					166.7		
1091	Assuming Gamma Distribution						95% KM (z) UCL					165.6		
1092	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					166.7	

	A	B	C	D	E	F	G	H	I	J	K	L
1093					Minimum	49.5				95% KM (bootstrap t) UCL		168.5
1094					Maximum	293				95% KM (BCA) UCL		165.2
1095					Mean	138				95% KM (Percentile Bootstrap) UCL		165.3
1096					Median	142.6				95% KM (Chebyshev) UCL		211.1
1097					SD	82.13				97.5% KM (Chebyshev) UCL		242.7
1098					k star	2.416				99% KM (Chebyshev) UCL		304.8
1099					Theta star	57.1						
1100					Nu star	116				Potential UCLs to Use		
1101					AppChi2	92.12				95% KM (Chebyshev) UCL		211.1
1102					95% Gamma Approximate UCL	173.7						
1103					95% Adjusted Gamma UCL	176.6						
1104	Note: DL/2 is not a recommended method.											
1105												
1106												
1107	Nickel											
1108												
1109	General Statistics											
1110					Number of Valid Data	34				Number of Detected Data		34
1111					Number of Distinct Detected Data	34				Number of Non-Detect Data		0
1112					Number of Missing Values	14				Percent Non-Detects		0.00%
1113												
1114	Raw Statistics						Log-transformed Statistics					
1115					Minimum Detected	160.2				Minimum Detected		5.077
1116					Maximum Detected	2043				Maximum Detected		7.622
1117					Mean of Detected	419.9				Mean of Detected		5.85
1118					SD of Detected	382.4				SD of Detected		0.538
1119					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
1120					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
1121												
1122												
1123	UCL Statistics											
1124	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1125					Shapiro Wilk Test Statistic	0.518				Shapiro Wilk Test Statistic		0.846
1126					5% Shapiro Wilk Critical Value	0.933				5% Shapiro Wilk Critical Value		0.933
1127	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1128												
1129	Assuming Normal Distribution						Assuming Lognormal Distribution					
1130					DL/2 Substitution Method					DL/2 Substitution Method		
1131					Mean	419.9				Mean		5.85
1132					SD	382.4				SD		0.538
1133					95% DL/2 (t) UCL	530.8				95% H-Stat (DL/2) UCL		481.6
1134												
1135					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
1136	MLE method failed to converge properly						Mean in Log Scale					
1137							SD in Log Scale					
1138							Mean in Original Scale					
1139							SD in Original Scale					
1140							95% Percentile Bootstrap UCL					
1141							95% BCA Bootstrap UCL					
1142												
1143	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1144					k star (bias corrected)	2.557				Data do not follow a Discernable Distribution (0.05)		

	A	B	C	D	E	F	G	H	I	J	K	L	
1145					Theta Star	164.2							
1146					nu star	173.9							
1147													
1148					A-D Test Statistic	2.692	Nonparametric Statistics						
1149					5% A-D Critical Value	0.755	Kaplan-Meier (KM) Method						
1150					K-S Test Statistic	0.755				Mean		419.9	
1151					5% K-S Critical Value	0.152					SD	376.7	
1152	Data not Gamma Distributed at 5% Significance Level										SE of Mean	65.58	
1153											95% KM (t) UCL	530.8	
1154	Assuming Gamma Distribution											95% KM (z) UCL	527.7
1155	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	530.8
1156					Minimum	160.2					95% KM (bootstrap t) UCL	764.1	
1157					Maximum	2043					95% KM (BCA) UCL	548.9	
1158					Mean	419.9					95% KM (Percentile Bootstrap) UCL	533.9	
1159					Median	342.9					95% KM (Chebyshev) UCL	705.7	
1160					SD	382.4					97.5% KM (Chebyshev) UCL	829.4	
1161					k star	2.557					99% KM (Chebyshev) UCL	1072	
1162					Theta star	164.2							
1163					Nu star	173.9	Potential UCLs to Use						
1164					AppChi2	144.4					95% KM (Chebyshev) UCL	705.7	
1165					95% Gamma Approximate UCL	505.6							
1166					95% Adjusted Gamma UCL	510.3							
1167	Note: DL/2 is not a recommended method.												
1168													
1169													
1170	Potassium												
1171													
1172	General Statistics												
1173					Number of Valid Data	34					Number of Detected Data	34	
1174					Number of Distinct Detected Data	34					Number of Non-Detect Data	0	
1175					Number of Missing Values	14					Percent Non-Detects	0.00%	
1176													
1177	Raw Statistics						Log-transformed Statistics						
1178					Minimum Detected	2904400					Minimum Detected	14.88	
1179					Maximum Detected	3826835					Maximum Detected	15.16	
1180					Mean of Detected	3334730					Mean of Detected	15.02	
1181					SD of Detected	253928					SD of Detected	0.0762	
1182					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
1183					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
1184													
1185													
1186	UCL Statistics												
1187	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1188					Shapiro Wilk Test Statistic	0.965					Shapiro Wilk Test Statistic	0.966	
1189					5% Shapiro Wilk Critical Value	0.933					5% Shapiro Wilk Critical Value	0.933	
1190	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1191													
1192	Assuming Normal Distribution						Assuming Lognormal Distribution						
1193					DL/2 Substitution Method						DL/2 Substitution Method		
1194					Mean	3334730					Mean	15.02	
1195					SD	253928					SD	0.0762	
1196					95% DL/2 (t) UCL	3408430					95% H-Stat (DL/2) UCL	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
1197												
1198	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1199	MLE method failed to converge properly						Mean in Log Scale					N/A
1200							SD in Log Scale					N/A
1201							Mean in Original Scale					N/A
1202							SD in Original Scale					N/A
1203							95% Percentile Bootstrap UCL					N/A
1204							95% BCA Bootstrap UCL					N/A
1205												
1206	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1207	k star (bias corrected)					162.1	Data appear Normal at 5% Significance Level					
1208	Theta Star					20578						
1209	nu star					11020						
1210												
1211	A-D Test Statistic					0.282	Nonparametric Statistics					
1212	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
1213	K-S Test Statistic					0.746	Mean					3334730
1214	5% K-S Critical Value					0.15	SD					250166
1215	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					43548
1216							95% KM (t) UCL					3408430
1217	Assuming Gamma Distribution						95% KM (z) UCL					3406361
1218	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3408430
1219	Minimum					2904400	95% KM (bootstrap t) UCL					3412593
1220	Maximum					3826835	95% KM (BCA) UCL					3409890
1221	Mean					3334730	95% KM (Percentile Bootstrap) UCL					3405706
1222	Median					3351620	95% KM (Chebyshev) UCL					3524553
1223	SD					253928	97.5% KM (Chebyshev) UCL					3606689
1224	k star					162.1	99% KM (Chebyshev) UCL					3768030
1225	Theta star					20578						
1226	Nu star					11020	Potential UCLs to Use					
1227	AppChi2					10777	95% KM (t) UCL					3408430
1228	95% Gamma Approximate UCL					3409939	95% KM (Percentile Bootstrap) UCL					3405706
1229	95% Adjusted Gamma UCL					3413684						
1230	Note: DL/2 is not a recommended method.											
1231												
1232												
1233	Selenium											
1234												
1235	General Statistics											
1236	Number of Valid Data					34	Number of Detected Data					34
1237	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
1238	Number of Missing Values					14	Percent Non-Detects					0.00%
1239												
1240	Raw Statistics						Log-transformed Statistics					
1241	Minimum Detected					407.5	Minimum Detected					6.01
1242	Maximum Detected					874.7	Maximum Detected					6.774
1243	Mean of Detected					616.8	Mean of Detected					6.405
1244	SD of Detected					124	SD of Detected					0.204
1245	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1246	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1247												
1248												

	A	B	C	D	E	F	G	H	I	J	K	L
1249	UCL Statistics											
1250	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1251	Shapiro Wilk Test Statistic					0.963	Shapiro Wilk Test Statistic					0.964
1252	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
1253	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1254												
1255	Assuming Normal Distribution						Assuming Lognormal Distribution					
1256	DL/2 Substitution Method						DL/2 Substitution Method					
1257	Mean					616.8	Mean					6.405
1258	SD					124	SD					0.204
1259	95% DL/2 (t) UCL					652.8	95% H-Stat (DL/2) UCL					656.7
1260												
1261	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1262	MLE method failed to converge properly						Mean in Log Scale					N/A
1263							SD in Log Scale					N/A
1264							Mean in Original Scale					N/A
1265							SD in Original Scale					N/A
1266							95% Percentile Bootstrap UCL					N/A
1267							95% BCA Bootstrap UCL					N/A
1268												
1269	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1270	k star (bias corrected)					22.99	Data appear Normal at 5% Significance Level					
1271	Theta Star					26.83						
1272	nu star					1563						
1273												
1274	A-D Test Statistic					0.363	Nonparametric Statistics					
1275	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
1276	K-S Test Statistic					0.746	Mean					616.8
1277	5% K-S Critical Value					0.151	SD					122.1
1278	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					21.26
1279							95% KM (t) UCL					652.8
1280	Assuming Gamma Distribution						95% KM (z) UCL					651.8
1281	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					652.8
1282	Minimum					407.5	95% KM (bootstrap t) UCL					651.7
1283	Maximum					874.7	95% KM (BCA) UCL					649.5
1284	Mean					616.8	95% KM (Percentile Bootstrap) UCL					652.2
1285	Median					587.6	95% KM (Chebyshev) UCL					709.5
1286	SD					124	97.5% KM (Chebyshev) UCL					749.6
1287	k star					22.99	99% KM (Chebyshev) UCL					828.4
1288	Theta star					26.83						
1289	Nu star					1563	Potential UCLs to Use					
1290	AppChi2					1472	95% KM (t) UCL					652.8
1291	95% Gamma Approximate UCL					654.8	95% KM (Percentile Bootstrap) UCL					652.2
1292	95% Adjusted Gamma UCL					656.8						
1293	Note: DL/2 is not a recommended method.											
1294												
1295												
1296	Sodium											
1297												
1298	General Statistics											
1299	Number of Valid Data					34	Number of Detected Data					34
1300	Number of Distinct Detected Data					34	Number of Non-Detect Data					0

	A	B	C	D	E	F	G	H	I	J	K	L
1301	Number of Missing Values					14	Percent Non-Detects					0.00%
1302												
1303	Raw Statistics						Log-transformed Statistics					
1304	Minimum Detected					673620	Minimum Detected					13.42
1305	Maximum Detected					1551680	Maximum Detected					14.25
1306	Mean of Detected					1064141	Mean of Detected					13.85
1307	SD of Detected					260059	SD of Detected					0.248
1308	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1309	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1310												
1311												
1312	UCL Statistics											
1313	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1314	Shapiro Wilk Test Statistic					0.919	Shapiro Wilk Test Statistic					0.927
1315	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
1316	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1317												
1318	Assuming Normal Distribution						Assuming Lognormal Distribution					
1319	DL/2 Substitution Method						DL/2 Substitution Method					
1320	Mean					1064141	Mean					13.85
1321	SD					260059	SD					0.248
1322	95% DL/2 (t) UCL					1139619	95% H-Stat (DL/2) UCL					1149660
1323												
1324	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1325	MLE method failed to converge properly						Mean in Log Scale					N/A
1326							SD in Log Scale					N/A
1327							Mean in Original Scale					N/A
1328							SD in Original Scale					N/A
1329							95% Percentile Bootstrap UCL					N/A
1330							95% BCA Bootstrap UCL					N/A
1331												
1332	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1333	k star (bias corrected)					15.6	Data do not follow a Discernable Distribution (0.05)					
1334	Theta Star					68219						
1335	nu star					1061						
1336												
1337	A-D Test Statistic					0.858	Nonparametric Statistics					
1338	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method					
1339	K-S Test Statistic					0.747	Mean					1064141
1340	5% K-S Critical Value					0.151	SD					256206
1341	Data not Gamma Distributed at 5% Significance Level						SE of Mean					44600
1342							95% KM (t) UCL					1139619
1343	Assuming Gamma Distribution						95% KM (z) UCL					1137501
1344	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1139619
1345	Minimum					673620	95% KM (bootstrap t) UCL					1140838
1346	Maximum					1551680	95% KM (BCA) UCL					1134392
1347	Mean					1064141	95% KM (Percentile Bootstrap) UCL					1133597
1348	Median					1010518	95% KM (Chebyshev) UCL					1258546
1349	SD					260059	97.5% KM (Chebyshev) UCL					1342666
1350	k star					15.6	99% KM (Chebyshev) UCL					1507903
1351	Theta star					68219						
1352	Nu star					1061	Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
1353	AppChi2				986.1	95% KM (Chebyshev) UCL						1258546
1354	95% Gamma Approximate UCL				1144650							
1355	95% Adjusted Gamma UCL				1148777							
1356	Note: DL/2 is not a recommended method.											
1357												
1358												
1359	Uranium											
1360												
1361	General Statistics											
1362	Number of Valid Data				34	Number of Detected Data				33		
1363	Number of Distinct Detected Data				33	Number of Non-Detect Data				1		
1364	Number of Missing Values				14	Percent Non-Detects				2.94%		
1365												
1366	Raw Statistics						Log-transformed Statistics					
1367	Minimum Detected				0.811	Minimum Detected				-0.21		
1368	Maximum Detected				25.77	Maximum Detected				3.249		
1369	Mean of Detected				9.977	Mean of Detected				1.767		
1370	SD of Detected				9.023	SD of Detected				1.139		
1371	Minimum Non-Detect				1.43	Minimum Non-Detect				0.358		
1372	Maximum Non-Detect				1.43	Maximum Non-Detect				0.358		
1373												
1374												
1375	UCL Statistics											
1376	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1377	Shapiro Wilk Test Statistic				0.821	Shapiro Wilk Test Statistic				0.907		
1378	5% Shapiro Wilk Critical Value				0.931	5% Shapiro Wilk Critical Value				0.931		
1379	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1380												
1381	Assuming Normal Distribution						Assuming Lognormal Distribution					
1382	DL/2 Substitution Method						DL/2 Substitution Method					
1383	Mean				9.704	Mean				1.705		
1384	SD				9.026	SD				1.178		
1385	95% DL/2 (t) UCL				12.32	95% H-Stat (DL/2) UCL				17.38		
1386												
1387	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1388	Mean				8.93	Mean in Log Scale				1.714		
1389	SD				9.976	SD in Log Scale				1.164		
1390	95% MLE (t) UCL				11.83	Mean in Original Scale				9.712		
1391	95% MLE (Tiku) UCL				11.79	SD in Original Scale				9.018		
1392							95% Percentile Bootstrap UCL				12.27	
1393							95% BCA Bootstrap UCL				12.45	
1394												
1395	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1396	k star (bias corrected)				0.996	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1397	Theta Star				10.02							
1398	nu star				65.71							
1399												
1400	A-D Test Statistic				1.162	Nonparametric Statistics						
1401	5% A-D Critical Value				0.774	Kaplan-Meier (KM) Method						
1402	K-S Test Statistic				0.774	Mean				9.712		
1403	5% K-S Critical Value				0.157	SD				8.885		
1404	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean				1.547	

	A	B	C	D	E	F	G	H	I	J	K	L	
1405											95% KM (t) UCL	12.33	
1406	Assuming Gamma Distribution										95% KM (z) UCL	12.26	
1407	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	12.33	
1408	Minimum					1E-09						95% KM (bootstrap t) UCL	12.46
1409	Maximum					25.77						95% KM (BCA) UCL	12.45
1410	Mean					9.683						95% KM (Percentile Bootstrap) UCL	12.27
1411	Median					4.59						95% KM (Chebyshev) UCL	16.46
1412	SD					9.048						97.5% KM (Chebyshev) UCL	19.37
1413	k star					0.511						99% KM (Chebyshev) UCL	25.11
1414	Theta star					18.95							
1415	Nu star					34.74						Potential UCLs to Use	
1416	AppChi2					22.26						95% KM (Chebyshev) UCL	16.46
1417	95% Gamma Approximate UCL					15.11							
1418	95% Adjusted Gamma UCL					15.46							
1419	Note: DL/2 is not a recommended method.												
1420													
1421													
1422	Vanadium												
1423													
1424	General Statistics												
1425	Number of Valid Data					34	Number of Detected Data					19	
1426	Number of Distinct Detected Data					19	Number of Non-Detect Data					15	
1427	Number of Missing Values					14	Percent Non-Detects					44.12%	
1428													
1429	Raw Statistics					Log-transformed Statistics							
1430	Minimum Detected					84.8	Minimum Detected					4.44	
1431	Maximum Detected					228.9	Maximum Detected					5.433	
1432	Mean of Detected					142.9	Mean of Detected					4.924	
1433	SD of Detected					42.1	SD of Detected					0.282	
1434	Minimum Non-Detect					90.4	Minimum Non-Detect					4.504	
1435	Maximum Non-Detect					126.9	Maximum Non-Detect					4.843	
1436													
1437	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					23		
1438	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					11		
1439	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					67.65%		
1440													
1441	UCL Statistics												
1442	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1443	Shapiro Wilk Test Statistic					0.902	Shapiro Wilk Test Statistic					0.948	
1444	5% Shapiro Wilk Critical Value					0.901	5% Shapiro Wilk Critical Value					0.901	
1445	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1446													
1447	Assuming Normal Distribution					Assuming Lognormal Distribution							
1448	DL/2 Substitution Method					DL/2 Substitution Method							
1449	Mean					103.8	Mean					4.511	
1450	SD					54.58	SD					0.519	
1451	95% DL/2 (t) UCL					119.6	95% H-Stat (DL/2) UCL					104.6	
1452													
1453	Maximum Likelihood Estimate(MLE) Method					Log ROS Method							
1454	Mean					96.51	Mean in Log Scale					4.708	
1455	SD					65.14	SD in Log Scale					0.326	
1456	95% MLE (t) UCL					115.4	Mean in Original Scale					117.1	

	A	B	C	D	E	F	G	H	I	J	K	L
1457	95% MLE (Tiku) UCL					127.6	SD in Original Scale					43.01
1458							95% Percentile Bootstrap UCL					129.8
1459							95% BCA Bootstrap UCL					132.3
1460												
1461	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1462	k star (bias corrected)					11.09	Data appear Normal at 5% Significance Level					
1463	Theta Star					12.88						
1464	nu star					421.6						
1465												
1466	A-D Test Statistic					0.575	Nonparametric Statistics					
1467	5% A-D Critical Value					0.741	Kaplan-Meier (KM) Method					
1468	K-S Test Statistic					0.741	Mean					119.6
1469	5% K-S Critical Value					0.198	SD					40.77
1470	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					7.307
1471							95% KM (t) UCL					132
1472	Assuming Gamma Distribution						95% KM (z) UCL					131.6
1473	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					131.2
1474	Minimum					84.8	95% KM (bootstrap t) UCL					133.2
1475	Maximum					228.9	95% KM (BCA) UCL					138.5
1476	Mean					136.4	95% KM (Percentile Bootstrap) UCL					135.2
1477	Median					121.4	95% KM (Chebyshev) UCL					151.5
1478	SD					33.54	97.5% KM (Chebyshev) UCL					165.2
1479	k star					17.64	99% KM (Chebyshev) UCL					192.3
1480	Theta star					7.732						
1481	Nu star					1200	Potential UCLs to Use					
1482	AppChi2					1120	95% KM (t) UCL					132
1483	95% Gamma Approximate UCL					146.1	95% KM (Percentile Bootstrap) UCL					135.2
1484	95% Adjusted Gamma UCL					146.6						
1485	Note: DL/2 is not a recommended method.											
1486												
1487												
1488	Zinc											
1489												
1490	General Statistics											
1491	Number of Valid Data					34	Number of Detected Data					34
1492	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
1493	Number of Missing Values					14	Percent Non-Detects					0.00%
1494												
1495	Raw Statistics						Log-transformed Statistics					
1496	Minimum Detected					11029	Minimum Detected					9.308
1497	Maximum Detected					24480	Maximum Detected					10.11
1498	Mean of Detected					17531	Mean of Detected					9.728
1499	SD of Detected					5159	SD of Detected					0.302
1500	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1501	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1502												
1503												
1504	UCL Statistics											
1505	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1506	Shapiro Wilk Test Statistic					0.813	Shapiro Wilk Test Statistic					0.819
1507	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
1508	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
1509												
1510	Assuming Normal Distribution						Assuming Lognormal Distribution					
1511	DL/2 Substitution Method						DL/2 Substitution Method					
1512	Mean					17531	Mean				9.728	
1513	SD					5159	SD				0.302	
1514	95% DL/2 (t) UCL					19028	95% H-Stat (DL/2) UCL				19298	
1515												
1516	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method				
1517	MLE method failed to converge properly						Mean in Log Scale				N/A	
1518							SD in Log Scale				N/A	
1519							Mean in Original Scale				N/A	
1520							SD in Original Scale				N/A	
1521							95% Percentile Bootstrap UCL				N/A	
1522							95% BCA Bootstrap UCL				N/A	
1523												
1524	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1525	k star (bias corrected)					10.62	Data do not follow a Discernable Distribution (0.05)					
1526	Theta Star					1651						
1527	nu star					722.2						
1528												
1529	A-D Test Statistic					2.583	Nonparametric Statistics					
1530	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method					
1531	K-S Test Statistic					0.747	Mean				17531	
1532	5% K-S Critical Value					0.151	SD				5082	
1533	Data not Gamma Distributed at 5% Significance Level						SE of Mean				884.7	
1534							95% KM (t) UCL				19028	
1535	Assuming Gamma Distribution						95% KM (z) UCL				18986	
1536	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				19028	
1537	Minimum					11029	95% KM (bootstrap t) UCL				19039	
1538	Maximum					24480	95% KM (BCA) UCL				19008	
1539	Mean					17531	95% KM (Percentile Bootstrap) UCL				18955	
1540	Median					15916	95% KM (Chebyshev) UCL				21388	
1541	SD					5159	97.5% KM (Chebyshev) UCL				23056	
1542	k star					10.62	99% KM (Chebyshev) UCL				26334	
1543	Theta star					1651						
1544	Nu star					722.2	Potential UCLs to Use					
1545	AppChi2					660.9	95% KM (Chebyshev) UCL				21388	
1546	95% Gamma Approximate UCL					19159						
1547	95% Adjusted Gamma UCL					19243						
1548	Note: DL/2 is not a recommended method.											
1549												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach3_PCB&TEQ.												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				24				Number of Distinct Observations				24			
13	Number of Missing Values				14											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0003404			Minimum of Log Data			-7.985						
17	Maximum			0.0024			Maximum of Log Data			-6.034						
18	Mean			0.0008451			Mean of log Data			-7.198						
19	Median			0.0007265			SD of log Data			0.489						
20	SD			0.0004734												
21	Coefficient of Variation			0.56												
22	Skewness			1.844												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.813			Shapiro Wilk Test Statistic			0.946						
27	Shapiro Wilk Critical Value			0.916			Shapiro Wilk Critical Value			0.916						
28	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.00101			95% H-UCL			0.00103						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL									
33	95% Adjusted-CLT UCL			0.00104			97.5% Chebyshev (MVUE) UCL			0.00138						
34	95% Modified-t UCL			0.00102			99% Chebyshev (MVUE) UCL			0.0017						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			3.768			Data Follow Appr. Gamma Distribution at 5% Significance Level									
38	Theta Star			0.0002243												
39	nu star			180.9												
40	Approximate Chi Square Value (.05)			150.8			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0392			95% CLT UCL			0.001						
42	Adjusted Chi Square Value			148.8			95% Jackknife UCL			0.00101						
43							95% Standard Bootstrap UCL			0.0009999						
44	Anderson-Darling Test Statistic			0.73			95% Bootstrap-t UCL			0.00108						
45	Anderson-Darling 5% Critical Value			0.748			95% Hall's Bootstrap UCL			0.00113						
46	Kolmogorov-Smirnov Test Statistic			0.196			95% Percentile Bootstrap UCL			0.00102						
47	Kolmogorov-Smirnov 5% Critical Value			0.179			95% BCA Bootstrap UCL			0.00105						
48	Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.00127						
49							97.5% Chebyshev(Mean, Sd) UCL			0.00145						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.00181						
51	95% Approximate Gamma UCL			0.00101												
52	95% Adjusted Gamma UCL			0.00103												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					24	Number of Distinct Observations					24	
109	Number of Missing Values					14							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					0.0003041	Minimum of Log Data					-8.098	
113	Maximum					0.00557	Maximum of Log Data					-5.189	
114	Mean					0.00173	Mean of log Data					-6.587	
115	Median					0.00126	SD of log Data					0.682	
116	SD					0.00129							
117	Coefficient of Variation					0.75							
118	Skewness					1.845							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.799	Shapiro Wilk Test Statistic					0.98	
123	Shapiro Wilk Critical Value					0.916	Shapiro Wilk Critical Value					0.916	
124	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.00218	95% H-UCL					0.00236	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00284
129	95% Adjusted-CLT UCL					0.00227	97.5% Chebyshev (MVUE) UCL					0.00332	
130	95% Modified-t UCL					0.0022	99% Chebyshev (MVUE) UCL					0.00427	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					2.109	Data appear Gamma Distributed at 5% Significance Level						
134	Theta Star					0.0008182							
135	nu star					101.3							
136	Approximate Chi Square Value (.05)					79.04	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0392	95% CLT UCL					0.00216	
138	Adjusted Chi Square Value					77.66	95% Jackknife UCL					0.00218	
139							95% Standard Bootstrap UCL					0.00216	
140	Anderson-Darling Test Statistic					0.45	95% Bootstrap-t UCL					0.00236	
141	Anderson-Darling 5% Critical Value					0.754	95% Hall's Bootstrap UCL					0.0031	
142	Kolmogorov-Smirnov Test Statistic					0.127	95% Percentile Bootstrap UCL					0.0022	
143	Kolmogorov-Smirnov 5% Critical Value					0.18	95% BCA Bootstrap UCL					0.00227	
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.00288	
145							97.5% Chebyshev(Mean, Sd) UCL					0.00338	
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.00436
147	95% Approximate Gamma UCL					0.00221							
148	95% Adjusted Gamma UCL					0.00225							
149													
150	Potential UCL to Use						Use 95% Approximate Gamma UCL					0.00221	
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					6	Number of Distinct Observations					6	

	A	B	C	D	E	F	G	H	I	J	K	L	
157	Number of Missing Values					29							
158													
159	Raw Statistics						Log-transformed Statistics						
160	Minimum					8.335	Minimum of Log Data					2.12	
161	Maximum					102.4	Maximum of Log Data					4.628	
162	Mean					34.4	Mean of log Data					3.21	
163	Median					23.12	SD of log Data					0.85	
164	SD					34.49							
165	Coefficient of Variation					1.003							
166	Skewness					2.087							
167													
168													
169	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!												
170													
171	It is suggested to collect at least 8 to 10 observations using these statistical methods!												
172	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
173													
174													
175	Warning: There are only 6 Values in this data												
176	Note: It should be noted that even though bootstrap methods may be performed on this data set,												
177	the resulting calculations may not be reliable enough to draw conclusions												
178													
179	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.												
180													
181	Relevant UCL Statistics												
182	Normal Distribution Test						Lognormal Distribution Test						
183	Shapiro Wilk Test Statistic					0.738	Shapiro Wilk Test Statistic					0.958	
184	Shapiro Wilk Critical Value					0.788	Shapiro Wilk Critical Value					0.788	
185	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
186													
187	Assuming Normal Distribution						Assuming Lognormal Distribution						
188	95% Student's-t UCL					62.77	95% H-UCL					141.1	
189	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						82.65
190	95% Adjusted-CLT UCL					70.38	97.5% Chebyshev (MVUE) UCL					104.1	
191	95% Modified-t UCL					64.77	99% Chebyshev (MVUE) UCL					146.2	
192													
193	Gamma Distribution Test						Data Distribution						
194	k star (bias corrected)					0.946	Data appear Gamma Distributed at 5% Significance Level						
195	Theta Star					36.34							
196	nu star					11.36							
197	Approximate Chi Square Value (.05)						4.807	Nonparametric Statistics					
198	Adjusted Level of Significance						0.0122	95% CLT UCL					57.56
199	Adjusted Chi Square Value						3.392	95% Jackknife UCL					62.77
200							95% Standard Bootstrap UCL					55.18	
201	Anderson-Darling Test Statistic						0.406	95% Bootstrap-t UCL					119.1
202	Anderson-Darling 5% Critical Value						0.707	95% Hall's Bootstrap UCL					171.1
203	Kolmogorov-Smirnov Test Statistic						0.248	95% Percentile Bootstrap UCL					57.84
204	Kolmogorov-Smirnov 5% Critical Value						0.337	95% BCA Bootstrap UCL					64.71
205	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					95.78	
206							97.5% Chebyshev(Mean, Sd) UCL					122.3	
207	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					174.5	
208	95% Approximate Gamma UCL					81.27							

	A	B	C	D	E	F	G	H	I	J	K	L	
209	95% Adjusted Gamma UCL					115.2							
210													
211	Potential UCL to Use							Use 95% Approximate Gamma UCL				81.27	
212													
213													
214	Total PCB, as Aroclor												
215													
216	General Statistics												
217	Number of Valid Observations					24	Number of Distinct Observations					23	
218	Number of Missing Values					14							
219													
220	Raw Statistics						Log-transformed Statistics						
221	Minimum					6.457	Minimum of Log Data					1.865	
222	Maximum					68	Maximum of Log Data					4.22	
223	Mean					22.04	Mean of log Data					2.856	
224	Median					14.27	SD of log Data					0.677	
225	SD					17.27							
226	Coefficient of Variation					0.783							
227	Skewness					1.621							
228													
229	Relevant UCL Statistics												
230	Normal Distribution Test						Lognormal Distribution Test						
231	Shapiro Wilk Test Statistic					0.782	Shapiro Wilk Test Statistic					0.942	
232	Shapiro Wilk Critical Value					0.916	Shapiro Wilk Critical Value					0.916	
233	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
234													
235	Assuming Normal Distribution						Assuming Lognormal Distribution						
236	95% Student's-t UCL					28.08	95% H-UCL					29.53	
237	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						35.53
238	95% Adjusted-CLT UCL					29.09	97.5% Chebyshev (MVUE) UCL					41.55	
239	95% Modified-t UCL					28.28	99% Chebyshev (MVUE) UCL					53.38	
240													
241	Gamma Distribution Test						Data Distribution						
242	k star (bias corrected)					2.006	Data Follow Appr. Gamma Distribution at 5% Significance Level						
243	Theta Star					10.99							
244	nu star					96.3							
245	Approximate Chi Square Value (.05)					74.67	Nonparametric Statistics						
246	Adjusted Level of Significance					0.0392	95% CLT UCL					27.84	
247	Adjusted Chi Square Value					73.33	95% Jackknife UCL					28.08	
248							95% Standard Bootstrap UCL					27.7	
249	Anderson-Darling Test Statistic					0.829	95% Bootstrap-t UCL					30.86	
250	Anderson-Darling 5% Critical Value					0.754	95% Hall's Bootstrap UCL					28.84	
251	Kolmogorov-Smirnov Test Statistic					0.172	95% Percentile Bootstrap UCL					27.94	
252	Kolmogorov-Smirnov 5% Critical Value					0.18	95% BCA Bootstrap UCL					29.36	
253	Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					37.41	
254							97.5% Chebyshev(Mean, Sd) UCL					44.06	
255	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					57.12	
256	95% Approximate Gamma UCL					28.43							
257	95% Adjusted Gamma UCL					28.95							
258													
259	Potential UCL to Use						Use 95% Approximate Gamma UCL					28.43	
260													

	A	B	C	D	E	F	G	H	I	J	K	L	
261													
262	Total PCB, as Congener Sum												
263													
264	General Statistics												
265	Number of Valid Observations					6	Number of Distinct Observations					6	
266	Number of Missing Values					29							
267													
268	Raw Statistics						Log-transformed Statistics						
269	Minimum					9.045	Minimum of Log Data					2.202	
270	Maximum					108.9	Maximum of Log Data					4.691	
271	Mean					37.18	Mean of log Data					3.297	
272	Median					25.88	SD of log Data					0.843	
273	SD					36.49							
274	Coefficient of Variation					0.981							
275	Skewness					2.064							
276													
277													
278	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!												
279													
280	It is suggested to collect at least 8 to 10 observations using these statistical methods!												
281	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
282													
283													
284	Warning: There are only 6 Values in this data												
285	Note: It should be noted that even though bootstrap methods may be performed on this data set,												
286	the resulting calculations may not be reliable enough to draw conclusions												
287													
288	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.												
289													
290	Relevant UCL Statistics												
291	Normal Distribution Test						Lognormal Distribution Test						
292	Shapiro Wilk Test Statistic					0.748	Shapiro Wilk Test Statistic					0.966	
293	Shapiro Wilk Critical Value					0.788	Shapiro Wilk Critical Value					0.788	
294	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
295													
296	Assuming Normal Distribution						Assuming Lognormal Distribution						
297	95% Student's-t UCL					67.2	95% H-UCL					149.9	
298	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						89.29
299	95% Adjusted-CLT UCL					75.1	97.5% Chebyshev (MVUE) UCL					112.4	
300	95% Modified-t UCL					69.3	99% Chebyshev (MVUE) UCL					157.7	
301													
302	Gamma Distribution Test						Data Distribution						
303	k star (bias corrected)					0.969	Data appear Gamma Distributed at 5% Significance Level						
304	Theta Star					38.37							
305	nu star					11.63							
306	Approximate Chi Square Value (.05)					4.983	Nonparametric Statistics						
307	Adjusted Level of Significance					0.0122	95% CLT UCL					61.69	
308	Adjusted Chi Square Value					3.536	95% Jackknife UCL					67.2	
309							95% Standard Bootstrap UCL					59.79	
310	Anderson-Darling Test Statistic					0.374	95% Bootstrap-t UCL					120.5	
311	Anderson-Darling 5% Critical Value					0.706	95% Hall's Bootstrap UCL					180.6	
312	Kolmogorov-Smirnov Test Statistic					0.226	95% Percentile Bootstrap UCL					64.6	

	A	B	C	D	E	F	G	H	I	J	K	L
313	Kolmogorov-Smirnov 5% Critical Value					0.337	95% BCA Bootstrap UCL					69.64
314	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					102.1
315							97.5% Chebyshev(Mean, Sd) UCL					130.2
316	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					185.4
317	95% Approximate Gamma UCL				86.77							
318	95% Adjusted Gamma UCL				122.3							
319												
320	Potential UCL to Use						Use 95% Approximate Gamma UCL					86.77
321												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach4a.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Data				22				Number of Detected Data				22			
13	Number of Distinct Detected Data				22				Number of Non-Detect Data				0			
14	Number of Missing Values				22				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0003317			Minimum Detected			-8.011						
18	Maximum Detected			0.00212			Maximum Detected			-6.158						
19	Mean of Detected			0.0008925			Mean of Detected			-7.135						
20	SD of Detected			0.0004626			SD of Detected			0.481						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Shapiro Wilk Test Statistic			0.872			Shapiro Wilk Test Statistic			0.974						
28	5% Shapiro Wilk Critical Value			0.911			5% Shapiro Wilk Critical Value			0.911						
29	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0008925			Mean			-7.135						
34	SD			0.0004626			SD			0.481						
35	95% DL/2 (t) UCL			0.00106			95% H-Stat (DL/2) UCL			0.0011						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			3.967			Data appear Gamma Distributed at 5% Significance Level									
47	Theta Star			0.000225												
48	nu star			174.5												
49																
50	A-D Test Statistic			0.444			Nonparametric Statistics									
51	5% A-D Critical Value			0.747			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.747			Mean			0.0008925						

	A	B	C	D	E	F	G	H	I	J	K	L		
53	5% K-S Critical Value					0.186						SD	0.000452	
54	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	9.864E-05	
55												95% KM (t) UCL	0.00106	
56	Assuming Gamma Distribution											95% KM (z) UCL	0.00105	
57	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.00106	
58	Minimum						0.0003317						95% KM (bootstrap t) UCL	0.00109
59	Maximum						0.00212						95% KM (BCA) UCL	0.00104
60	Mean						0.0008925						95% KM (Percentile Bootstrap) UCL	0.00106
61	Median						0.0007865						95% KM (Chebyshev) UCL	0.00132
62	SD						0.0004626						97.5% KM (Chebyshev) UCL	0.00151
63	k star						3.967						99% KM (Chebyshev) UCL	0.00187
64	Theta star						0.000225							
65	Nu star						174.5						Potential UCLs to Use	
66	AppChi2						145						95% KM (BCA) UCL	0.00104
67	95% Gamma Approximate UCL						0.00107							
68	95% Adjusted Gamma UCL						0.00109							
69	Note: DL/2 is not a recommended method.													
70														
71														
72	2006 TEQ_D/F+PCB													
73														
74	General Statistics													
75	Number of Valid Data					22	Number of Detected Data					22		
76	Number of Distinct Detected Data					22	Number of Non-Detect Data					0		
77	Number of Missing Values					22	Percent Non-Detects					0.00%		
78														
79	Raw Statistics						Log-transformed Statistics							
80	Minimum Detected					0.00145	Minimum Detected					-6.539		
81	Maximum Detected					0.0218	Maximum Detected					-3.825		
82	Mean of Detected					0.00469	Mean of Detected					-5.717		
83	SD of Detected					0.00548	SD of Detected					0.746		
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A		
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A		
86														
87														
88	UCL Statistics													
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
90	Shapiro Wilk Test Statistic					0.569	Shapiro Wilk Test Statistic					0.823		
91	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911		
92	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
93														
94	Assuming Normal Distribution						Assuming Lognormal Distribution							
95	DL/2 Substitution Method						DL/2 Substitution Method							
96	Mean					0.00469	Mean					-5.717		
97	SD					0.00548	SD					0.746		
98	95% DL/2 (t) UCL					0.0067	95% H-Stat (DL/2) UCL					0.00624		
99														
100	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method							
101	MLE method failed to converge properly						Mean in Log Scale					N/A		
102							SD in Log Scale					N/A		
103							Mean in Original Scale					N/A		
104							SD in Original Scale					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
105											95% Percentile Bootstrap UCL	N/A
106											95% BCA Bootstrap UCL	N/A
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109					k star (bias corrected)	1.373	Data do not follow a Discernable Distribution (0.05)					
110					Theta Star	0.00342						
111					nu star	60.4						
112												
113					A-D Test Statistic	2.224	Nonparametric Statistics					
114					5% A-D Critical Value	0.758	Kaplan-Meier (KM) Method					
115					K-S Test Statistic	0.758	Mean					
116					5% K-S Critical Value	0.188	SD					
117	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
118							95% KM (t) UCL					
119	Assuming Gamma Distribution						95% KM (z) UCL					
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
121					Minimum	0.00145	95% KM (bootstrap t) UCL					
122					Maximum	0.0218	95% KM (BCA) UCL					
123					Mean	0.00469	95% KM (Percentile Bootstrap) UCL					
124					Median	0.00247	95% KM (Chebyshev) UCL					
125					SD	0.00548	97.5% KM (Chebyshev) UCL					
126					k star	1.373	99% KM (Chebyshev) UCL					
127					Theta star	0.00342						
128					Nu star	60.4	Potential UCLs to Use					
129					AppChi2	43.53	95% KM (Chebyshev) UCL					
130					95% Gamma Approximate UCL	0.00651						
131					95% Adjusted Gamma UCL	0.00667						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138					Number of Valid Data	22					Number of Detected Data	22
139					Number of Distinct Detected Data	19					Number of Non-Detect Data	0
140					Number of Missing Values	22					Percent Non-Detects	0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143					Minimum Detected	0.0009916					Minimum Detected	-6.916
144					Maximum Detected	0.021					Maximum Detected	-3.862
145					Mean of Detected	0.0038					Mean of Detected	-6.076
146					SD of Detected	0.00546					SD of Detected	0.862
147					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
148					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153					Shapiro Wilk Test Statistic	0.526					Shapiro Wilk Test Statistic	0.797
154					5% Shapiro Wilk Critical Value	0.911					5% Shapiro Wilk Critical Value	0.911
155	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.0038	Mean						-6.076
160	SD						0.00546	SD						0.862
161	95% DL/2 (t) UCL						0.0058	95% H-Stat (DL/2) UCL						0.0052
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						1.009	Data do not follow a Discernable Distribution (0.05)						
173	Theta Star						0.00376							
174	nu star						44.38							
175														
176	A-D Test Statistic						2.722	Nonparametric Statistics						
177	5% A-D Critical Value						0.768	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.768	Mean						0.0038
179	5% K-S Critical Value						0.19	SD						0.00533
180	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.00116
181								95% KM (t) UCL						0.0058
182	Assuming Gamma Distribution							95% KM (z) UCL						0.00571
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0058
184	Minimum						0.0009916	95% KM (bootstrap t) UCL						0.0095
185	Maximum						0.021	95% KM (BCA) UCL						0.00598
186	Mean						0.0038	95% KM (Percentile Bootstrap) UCL						0.00584
187	Median						0.00163	95% KM (Chebyshev) UCL						0.00887
188	SD						0.00546	97.5% KM (Chebyshev) UCL						0.0111
189	k star						1.009	99% KM (Chebyshev) UCL						0.0154
190	Theta star						0.00376							
191	Nu star						44.38	Potential UCLs to Use						
192	AppChi2						30.1	95% KM (Chebyshev) UCL						0.00887
193	95% Gamma Approximate UCL						0.0056							
194	95% Adjusted Gamma UCL						0.00577							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Aluminum													
199														
200	General Statistics													
201	Number of Valid Data						22	Number of Detected Data						21
202	Number of Distinct Detected Data						21	Number of Non-Detect Data						1
203	Number of Missing Values						21	Percent Non-Detects						4.55%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						4510	Minimum Detected						8.414
207	Maximum Detected						88888	Maximum Detected						11.4
208	Mean of Detected						16283	Mean of Detected						9.094

	A	B	C	D	E	F	G	H	I	J	K	L	
209	SD of Detected					25374	SD of Detected					0.925	
210	Minimum Non-Detect					3324	Minimum Non-Detect					8.109	
211	Maximum Non-Detect					3324	Maximum Non-Detect					8.109	
212													
213													
214	UCL Statistics												
215	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
216	Shapiro Wilk Test Statistic					0.498	Shapiro Wilk Test Statistic					0.674	
217	5% Shapiro Wilk Critical Value					0.908	5% Shapiro Wilk Critical Value					0.908	
218	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
219													
220	Assuming Normal Distribution						Assuming Lognormal Distribution						
221	DL/2 Substitution Method						DL/2 Substitution Method						
222	Mean					15618	Mean					9.018	
223	SD					24958	SD					0.971	
224	95% DL/2 (t) UCL					24774	95% H-Stat (DL/2) UCL					21175	
225													
226	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
227	Mean					14950	Mean in Log Scale					9.006	
228	SD					25108	SD in Log Scale					0.994	
229	95% MLE (t) UCL					24162	Mean in Original Scale					15600	
230	95% MLE (Tiku) UCL					23318	SD in Original Scale					24968	
231							95% Percentile Bootstrap UCL					24678	
232							95% BCA Bootstrap UCL					27142	
233													
234	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
235	k star (bias corrected)					0.855	Data do not follow a Discernable Distribution (0.05)						
236	Theta Star					19041							
237	nu star					35.92							
238													
239	A-D Test Statistic					3.795	Nonparametric Statistics						
240	5% A-D Critical Value					0.772	Kaplan-Meier (KM) Method						
241	K-S Test Statistic					0.772	Mean					15748	
242	5% K-S Critical Value					0.195	SD					24317	
243	Data not Gamma Distributed at 5% Significance Level						SE of Mean					5312	
244							95% KM (t) UCL					24889	
245	Assuming Gamma Distribution						95% KM (z) UCL						24486
246	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					24868	
247	Minimum					1E-09	95% KM (bootstrap t) UCL					39114	
248	Maximum					88888	95% KM (BCA) UCL					25766	
249	Mean					15543	95% KM (Percentile Bootstrap) UCL					25109	
250	Median					6024	95% KM (Chebyshev) UCL					38904	
251	SD					25004	97.5% KM (Chebyshev) UCL					48923	
252	k star					0.334	99% KM (Chebyshev) UCL					68605	
253	Theta star					46568							
254	Nu star					14.69	Potential UCLs to Use						
255	AppChi2					7.043	95% KM (Chebyshev) UCL					38904	
256	95% Gamma Approximate UCL					32407							
257	95% Adjusted Gamma UCL					34323							
258	Note: DL/2 is not a recommended method.												
259													
260													

	A	B	C	D	E	F	G	H	I	J	K	L
261	Arsenic											
262												
263	General Statistics											
264	Number of Valid Data					22	Number of Detected Data					22
265	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
266	Number of Missing Values					21	Percent Non-Detects					0.00%
267												
268	Raw Statistics						Log-transformed Statistics					
269	Minimum Detected					85.25	Minimum Detected					4.446
270	Maximum Detected					941.4	Maximum Detected					6.847
271	Mean of Detected					306.4	Mean of Detected					5.474
272	SD of Detected					253.1	SD of Detected					0.69
273	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
274	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
275												
276												
277	UCL Statistics											
278	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
279	Shapiro Wilk Test Statistic					0.727	Shapiro Wilk Test Statistic					0.912
280	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
281	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
282												
283	Assuming Normal Distribution						Assuming Lognormal Distribution					
284	DL/2 Substitution Method						DL/2 Substitution Method					
285	Mean					306.4	Mean					5.474
286	SD					253.1	SD					0.69
287	95% DL/2 (t) UCL					399.3	95% H-Stat (DL/2) UCL					419.6
288												
289	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
290	MLE method failed to converge properly						Mean in Log Scale					N/A
291							SD in Log Scale					N/A
292							Mean in Original Scale					N/A
293							SD in Original Scale					N/A
294							95% Percentile Bootstrap UCL					N/A
295							95% BCA Bootstrap UCL					N/A
296												
297	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
298	k star (bias corrected)					1.885	Data appear Lognormal at 5% Significance Level					
299	Theta Star					162.5						
300	nu star					82.95						
301												
302	A-D Test Statistic					1.289	Nonparametric Statistics					
303	5% A-D Critical Value					0.755	Kaplan-Meier (KM) Method					
304	K-S Test Statistic					0.755	Mean					306.4
305	5% K-S Critical Value					0.188	SD					247.2
306	Data not Gamma Distributed at 5% Significance Level						SE of Mean					53.95
307							95% KM (t) UCL					399.3
308	Assuming Gamma Distribution						95% KM (z) UCL					395.2
309	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					399.3
310	Minimum					85.25	95% KM (bootstrap t) UCL					441.1
311	Maximum					941.4	95% KM (BCA) UCL					389.3
312	Mean					306.4	95% KM (Percentile Bootstrap) UCL					399

	A	B	C	D	E	F	G	H	I	J	K	L	
313					Median	224.3				95% KM (Chebyshev) UCL		541.6	
314					SD	253.1				97.5% KM (Chebyshev) UCL		643.4	
315					k star	1.885				99% KM (Chebyshev) UCL		843.2	
316					Theta star	162.5							
317					Nu star	82.95			Potential UCLs to Use				
318					AppChi2	62.96				95% KM (Chebyshev) UCL		541.6	
319					95% Gamma Approximate UCL	403.7							
320					95% Adjusted Gamma UCL	412.2							
321	Note: DL/2 is not a recommended method.												
322													
323													
324	Barium												
325													
326	General Statistics												
327					Number of Valid Data	22				Number of Detected Data		22	
328					Number of Distinct Detected Data	22				Number of Non-Detect Data		0	
329					Number of Missing Values	21				Percent Non-Detects		0.00%	
330													
331	Raw Statistics						Log-transformed Statistics						
332					Minimum Detected	282.9				Minimum Detected		5.645	
333					Maximum Detected	6594				Maximum Detected		8.794	
334					Mean of Detected	2038				Mean of Detected		7.095	
335					SD of Detected	2168				SD of Detected		1.032	
336					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
337					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
338													
339													
340	UCL Statistics												
341	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
342					Shapiro Wilk Test Statistic	0.742				Shapiro Wilk Test Statistic		0.889	
343					5% Shapiro Wilk Critical Value	0.911				5% Shapiro Wilk Critical Value		0.911	
344	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
345													
346	Assuming Normal Distribution						Assuming Lognormal Distribution						
347					DL/2 Substitution Method					DL/2 Substitution Method			
348					Mean	2038				Mean		7.095	
349					SD	2168				SD		1.032	
350					95% DL/2 (t) UCL	2834				95% H-Stat (DL/2) UCL		3681	
351													
352					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
353	MLE method failed to converge properly										Mean in Log Scale		N/A
354											SD in Log Scale		N/A
355											Mean in Original Scale		N/A
356											SD in Original Scale		N/A
357											95% Percentile Bootstrap UCL		N/A
358											95% BCA Bootstrap UCL		N/A
359													
360	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
361					k star (bias corrected)	0.972			Data do not follow a Discernable Distribution (0.05)				
362					Theta Star	2098							
363					nu star	42.75							
364													

	A	B	C	D	E	F	G	H	I	J	K	L
365	A-D Test Statistic					1.555	Nonparametric Statistics					
366	5% A-D Critical Value					0.769	Kaplan-Meier (KM) Method					
367	K-S Test Statistic					0.769	Mean					2038
368	5% K-S Critical Value					0.19	SD					2118
369	Data not Gamma Distributed at 5% Significance Level						SE of Mean					462.3
370							95% KM (t) UCL					2834
371	Assuming Gamma Distribution						95% KM (z) UCL					2798
372	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2834
373	Minimum					282.9	95% KM (bootstrap t) UCL					3018
374	Maximum					6594	95% KM (BCA) UCL					2868
375	Mean					2038	95% KM (Percentile Bootstrap) UCL					2815
376	Median					911.5	95% KM (Chebyshev) UCL					4053
377	SD					2168	97.5% KM (Chebyshev) UCL					4925
378	k star					0.972	99% KM (Chebyshev) UCL					6637
379	Theta star					2098						
380	Nu star					42.75	Potential UCLs to Use					
381	AppChi2					28.76	97.5% KM (Chebyshev) UCL					4925
382	95% Gamma Approximate UCL					3030						
383	95% Adjusted Gamma UCL					3123						
384	Note: DL/2 is not a recommended method.											
385												
386												
387	Cadmium											
388												
389	General Statistics											
390	Number of Valid Data					22	Number of Detected Data					22
391	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
392	Number of Missing Values					21	Percent Non-Detects					0.00%
393												
394	Raw Statistics						Log-transformed Statistics					
395	Minimum Detected					20.03	Minimum Detected					2.997
396	Maximum Detected					374.4	Maximum Detected					5.925
397	Mean of Detected					75.8	Mean of Detected					3.846
398	SD of Detected					103.2	SD of Detected					0.846
399	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
400	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
401												
402												
403	UCL Statistics											
404	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
405	Shapiro Wilk Test Statistic					0.532	Shapiro Wilk Test Statistic					0.762
406	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
407	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
408												
409	Assuming Normal Distribution						Assuming Lognormal Distribution					
410	DL/2 Substitution Method						DL/2 Substitution Method					
411	Mean					75.8	Mean					3.846
412	SD					103.2	SD					0.846
413	95% DL/2 (t) UCL					113.7	95% H-Stat (DL/2) UCL					103.3
414												
415	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
416	MLE method failed to converge properly						Mean in Log Scale					N/A

	A	B	C	D	E	F	G	H	I	J	K	L
417							SD in Log Scale					N/A
418							Mean in Original Scale					N/A
419							SD in Original Scale					N/A
420							95% Percentile Bootstrap UCL					N/A
421							95% BCA Bootstrap UCL					N/A
422												
423	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
424	k star (bias corrected)					1.046	Data do not follow a Discernable Distribution (0.05)					
425	Theta Star					72.46						
426	nu star					46.03						
427												
428	A-D Test Statistic					3.173	Nonparametric Statistics					
429	5% A-D Critical Value					0.767	Kaplan-Meier (KM) Method					
430	K-S Test Statistic					0.767	Mean					75.8
431	5% K-S Critical Value					0.19	SD					100.8
432	Data not Gamma Distributed at 5% Significance Level						SE of Mean					22
433							95% KM (t) UCL					113.7
434	Assuming Gamma Distribution						95% KM (z) UCL					112
435	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					113.7
436	Minimum					20.03	95% KM (bootstrap t) UCL					133.5
437	Maximum					374.4	95% KM (BCA) UCL					116.2
438	Mean					75.8	95% KM (Percentile Bootstrap) UCL					113.6
439	Median					38.78	95% KM (Chebyshev) UCL					171.7
440	SD					103.2	97.5% KM (Chebyshev) UCL					213.2
441	k star					1.046	99% KM (Chebyshev) UCL					294.7
442	Theta star					72.46						
443	Nu star					46.03	Potential UCLs to Use					
444	AppChi2					31.46	95% KM (Chebyshev) UCL					171.7
445	95% Gamma Approximate UCL					110.9						
446	95% Adjusted Gamma UCL					114.2						
447	Note: DL/2 is not a recommended method.											
448												
449												
450	Calcium											
451												
452	General Statistics											
453	Number of Valid Data					22	Number of Detected Data					22
454	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
455	Number of Missing Values					21	Percent Non-Detects					0.00%
456												
457	Raw Statistics						Log-transformed Statistics					
458	Minimum Detected					3427200	Minimum Detected					15.05
459	Maximum Detected					15662400	Maximum Detected					16.57
460	Mean of Detected					7955295	Mean of Detected					15.78
461	SD of Detected					3734825	SD of Detected					0.48
462	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
463	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
464												
465												
466	UCL Statistics											
467	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
468	Shapiro Wilk Test Statistic					0.908	Shapiro Wilk Test Statistic					0.934

	A	B	C	D	E	F	G	H	I	J	K	L
469	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
470	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
471												
472	Assuming Normal Distribution					Assuming Lognormal Distribution						
473	DL/2 Substitution Method					DL/2 Substitution Method						
474	Mean					7955295	Mean					15.78
475	SD					3734825	SD					0.48
476	95% DL/2 (t) UCL					9325467	95% H-Stat (DL/2) UCL					9839057
477												
478	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
479	MLE method failed to converge properly					Mean in Log Scale					N/A	
480						SD in Log Scale					N/A	
481						Mean in Original Scale					N/A	
482						SD in Original Scale					N/A	
483						95% Percentile Bootstrap UCL					N/A	
484						95% BCA Bootstrap UCL					N/A	
485												
486	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
487	k star (bias corrected)					4.172	Data appear Gamma Distributed at 5% Significance Level					
488	Theta Star					1906748						
489	nu star					183.6						
490												
491	A-D Test Statistic					0.633	Nonparametric Statistics					
492	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
493	K-S Test Statistic					0.746	Mean					7955295
494	5% K-S Critical Value					0.186	SD					3648955
495	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					796267	
496						95% KM (t) UCL					9325467	
497	Assuming Gamma Distribution					95% KM (z) UCL					9265039	
498	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					9325467	
499	Minimum					3427200	95% KM (bootstrap t) UCL					9424052
500	Maximum					15662400	95% KM (BCA) UCL					9314459
501	Mean					7955295	95% KM (Percentile Bootstrap) UCL					9256836
502	Median					6974550	95% KM (Chebyshev) UCL					11426144
503	SD					3734825	97.5% KM (Chebyshev) UCL					12927983
504	k star					4.172	99% KM (Chebyshev) UCL					15878055
505	Theta star					1906748						
506	Nu star					183.6	Potential UCLs to Use					
507	AppChi2					153.2	95% KM (BCA) UCL					9314459
508	95% Gamma Approximate UCL					9530413						
509	95% Adjusted Gamma UCL					9660726						
510	Note: DL/2 is not a recommended method.											
511												
512												
513	Chromium											
514												
515	General Statistics											
516	Number of Valid Data					22	Number of Detected Data					22
517	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
518	Number of Missing Values					21	Percent Non-Detects					0.00%
519												
520	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
521				Minimum Detected		261.3				Minimum Detected		5.566	
522				Maximum Detected		2108				Maximum Detected		7.654	
523				Mean of Detected		671.3				Mean of Detected		6.389	
524				SD of Detected		397.6				SD of Detected		0.479	
525				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
526				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
527													
528													
529	UCL Statistics												
530	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
531				Shapiro Wilk Test Statistic		0.751				Shapiro Wilk Test Statistic		0.955	
532				5% Shapiro Wilk Critical Value		0.911				5% Shapiro Wilk Critical Value		0.911	
533	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
534													
535	Assuming Normal Distribution						Assuming Lognormal Distribution						
536				DL/2 Substitution Method						DL/2 Substitution Method			
537				Mean		671.3				Mean		6.389	
538				SD		397.6				SD		0.479	
539				95% DL/2 (t) UCL		817.2				95% H-Stat (DL/2) UCL		818.9	
540													
541				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
542	MLE method failed to converge properly										Mean in Log Scale		N/A
543										SD in Log Scale		N/A	
544										Mean in Original Scale		N/A	
545										SD in Original Scale		N/A	
546										95% Percentile Bootstrap UCL		N/A	
547										95% BCA Bootstrap UCL		N/A	
548													
549	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
550				k star (bias corrected)		3.746				Data appear Gamma Distributed at 5% Significance Level			
551				Theta Star		179.2							
552				nu star		164.8							
553													
554				A-D Test Statistic		0.612				Nonparametric Statistics			
555				5% A-D Critical Value		0.747				Kaplan-Meier (KM) Method			
556				K-S Test Statistic		0.747				Mean		671.3	
557				5% K-S Critical Value		0.186				SD		388.4	
558	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		84.76
559										95% KM (t) UCL		817.2	
560	Assuming Gamma Distribution										95% KM (z) UCL		810.8
561				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		817.2	
562				Minimum		261.3				95% KM (bootstrap t) UCL		913.8	
563				Maximum		2108				95% KM (BCA) UCL		815.5	
564				Mean		671.3				95% KM (Percentile Bootstrap) UCL		816.7	
565				Median		530				95% KM (Chebyshev) UCL		1041	
566				SD		397.6				97.5% KM (Chebyshev) UCL		1201	
567				k star		3.746				99% KM (Chebyshev) UCL		1515	
568				Theta star		179.2							
569				Nu star		164.8				Potential UCLs to Use			
570				AppChi2		136.1				95% KM (BCA) UCL		815.5	
571				95% Gamma Approximate UCL		812.8							
572				95% Adjusted Gamma UCL		824.6							

	A	B	C	D	E	F	G	H	I	J	K	L		
573	Note: DL/2 is not a recommended method.													
574														
575														
576	Cobalt													
577														
578	General Statistics													
579	Number of Valid Data					22		Number of Detected Data					22	
580	Number of Distinct Detected Data					22		Number of Non-Detect Data					0	
581	Number of Missing Values					21		Percent Non-Detects					0.00%	
582														
583	Raw Statistics						Log-transformed Statistics							
584	Minimum Detected					14.14		Minimum Detected					2.649	
585	Maximum Detected					108.4		Maximum Detected					4.686	
586	Mean of Detected					35.44		Mean of Detected					3.43	
587	SD of Detected					22.81		SD of Detected					0.5	
588	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
589	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
590														
591														
592	UCL Statistics													
593	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
594	Shapiro Wilk Test Statistic					0.72		Shapiro Wilk Test Statistic					0.916	
595	5% Shapiro Wilk Critical Value					0.911		5% Shapiro Wilk Critical Value					0.911	
596	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
597														
598	Assuming Normal Distribution						Assuming Lognormal Distribution							
599	DL/2 Substitution Method							DL/2 Substitution Method						
600	Mean					35.44		Mean					3.43	
601	SD					22.81		SD					0.5	
602	95% DL/2 (t) UCL					43.81		95% H-Stat (DL/2) UCL					43.44	
603														
604	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
605	MLE method failed to converge properly						Mean in Log Scale					N/A		
606							SD in Log Scale					N/A		
607							Mean in Original Scale					N/A		
608							SD in Original Scale					N/A		
609							95% Percentile Bootstrap UCL					N/A		
610							95% BCA Bootstrap UCL					N/A		
611														
612	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
613	k star (bias corrected)					3.305		Data appear Lognormal at 5% Significance Level						
614	Theta Star					10.72								
615	nu star					145.4								
616														
617	A-D Test Statistic					1.142		Nonparametric Statistics						
618	5% A-D Critical Value					0.747		Kaplan-Meier (KM) Method						
619	K-S Test Statistic					0.747		Mean					35.44	
620	5% K-S Critical Value					0.186		SD					22.29	
621	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4.864		
622							95% KM (t) UCL					43.81		
623	Assuming Gamma Distribution						95% KM (z) UCL					43.44		
624	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					43.81	

	A	B	C	D	E	F	G	H	I	J	K	L	
625					Minimum	14.14				95% KM (bootstrap t) UCL		51.42	
626					Maximum	108.4				95% KM (BCA) UCL		43.05	
627					Mean	35.44				95% KM (Percentile Bootstrap) UCL		43.55	
628					Median	28.76				95% KM (Chebyshev) UCL		56.64	
629					SD	22.81				97.5% KM (Chebyshev) UCL		65.81	
630					k star	3.305				99% KM (Chebyshev) UCL		83.83	
631					Theta star	10.72							
632					Nu star	145.4				Potential UCLs to Use			
633					AppChi2	118.6				95% KM (Chebyshev) UCL		56.64	
634					95% Gamma Approximate UCL	43.47							
635					95% Adjusted Gamma UCL	44.14							
636	Note: DL/2 is not a recommended method.												
637													
638													
639	Copper												
640													
641	General Statistics												
642					Number of Valid Data	22				Number of Detected Data		22	
643					Number of Distinct Detected Data	22				Number of Non-Detect Data		0	
644					Number of Missing Values	21				Percent Non-Detects		0.00%	
645													
646	Raw Statistics						Log-transformed Statistics						
647					Minimum Detected	360.1				Minimum Detected		5.886	
648					Maximum Detected	1397				Maximum Detected		7.242	
649					Mean of Detected	726				Mean of Detected		6.535	
650					SD of Detected	250.2				SD of Detected		0.33	
651					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
652					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
653													
654													
655	UCL Statistics												
656	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
657					Shapiro Wilk Test Statistic	0.931				Shapiro Wilk Test Statistic		0.989	
658					5% Shapiro Wilk Critical Value	0.911				5% Shapiro Wilk Critical Value		0.911	
659	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
660													
661	Assuming Normal Distribution						Assuming Lognormal Distribution						
662					DL/2 Substitution Method					DL/2 Substitution Method			
663					Mean	726				Mean		6.535	
664					SD	250.2				SD		0.33	
665					95% DL/2 (t) UCL	817.8				95% H-Stat (DL/2) UCL		830.8	
666													
667					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
668	MLE method failed to converge properly										Mean in Log Scale		N/A
669										SD in Log Scale		N/A	
670										Mean in Original Scale		N/A	
671										SD in Original Scale		N/A	
672										95% Percentile Bootstrap UCL		N/A	
673										95% BCA Bootstrap UCL		N/A	
674													
675	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
676					k star (bias corrected)	8.345				Data appear Normal at 5% Significance Level			

	A	B	C	D	E	F	G	H	I	J	K	L
677	Theta Star					86.99						
678	nu star					367.2						
679												
680	A-D Test Statistic					0.219	Nonparametric Statistics					
681	5% A-D Critical Value					0.744	Kaplan-Meier (KM) Method					
682	K-S Test Statistic					0.744	Mean					726
683	5% K-S Critical Value					0.185	SD					244.4
684	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					53.34
685							95% KM (t) UCL					817.8
686	Assuming Gamma Distribution						95% KM (z) UCL					813.7
687	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					817.8
688	Minimum					360.1	95% KM (bootstrap t) UCL					840.2
689	Maximum					1397	95% KM (BCA) UCL					818.8
690	Mean					726	95% KM (Percentile Bootstrap) UCL					810.8
691	Median					692	95% KM (Chebyshev) UCL					958.5
692	SD					250.2	97.5% KM (Chebyshev) UCL					1059
693	k star					8.345	99% KM (Chebyshev) UCL					1257
694	Theta star					86.99						
695	Nu star					367.2	Potential UCLs to Use					
696	AppChi2					323.8	95% KM (t) UCL					817.8
697	95% Gamma Approximate UCL					823.3	95% KM (Percentile Bootstrap) UCL					810.8
698	95% Adjusted Gamma UCL					831.1						
699	Note: DL/2 is not a recommended method.											
700												
701												
702	Iron											
703												
704	General Statistics											
705	Number of Valid Data					22	Number of Detected Data					22
706	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
707	Number of Missing Values					21	Percent Non-Detects					0.00%
708												
709	Raw Statistics						Log-transformed Statistics					
710	Minimum Detected					9350	Minimum Detected					9.143
711	Maximum Detected					130622	Maximum Detected					11.78
712	Mean of Detected					29075	Mean of Detected					9.937
713	SD of Detected					33594	SD of Detected					0.724
714	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
715	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
716												
717												
718	UCL Statistics											
719	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
720	Shapiro Wilk Test Statistic					0.55	Shapiro Wilk Test Statistic					0.802
721	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
722	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
723												
724	Assuming Normal Distribution						Assuming Lognormal Distribution					
725	DL/2 Substitution Method						DL/2 Substitution Method					
726	Mean					29075	Mean					9.937
727	SD					33594	SD					0.724
728	95% DL/2 (t) UCL					41399	95% H-Stat (DL/2) UCL					38058

	A	B	C	D	E	F	G	H	I	J	K	L
729												
730	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
731	MLE method failed to converge properly						Mean in Log Scale					N/A
732							SD in Log Scale					N/A
733							Mean in Original Scale					N/A
734							SD in Original Scale					N/A
735							95% Percentile Bootstrap UCL					N/A
736							95% BCA Bootstrap UCL					N/A
737												
738	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
739	k star (bias corrected)					1.424	Data do not follow a Discernable Distribution (0.05)					
740	Theta Star					20419						
741	nu star					62.65						
742												
743	A-D Test Statistic					2.609	Nonparametric Statistics					
744	5% A-D Critical Value					0.758	Kaplan-Meier (KM) Method					
745	K-S Test Statistic					0.758	Mean					29075
746	5% K-S Critical Value					0.188	SD					32822
747	Data not Gamma Distributed at 5% Significance Level						SE of Mean					7162
748							95% KM (t) UCL					41399
749	Assuming Gamma Distribution						95% KM (z) UCL					40856
750	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					41399
751	Minimum					9350	95% KM (bootstrap t) UCL					59352
752	Maximum					130622	95% KM (BCA) UCL					42857
753	Mean					29075	95% KM (Percentile Bootstrap) UCL					41948
754	Median					17570	95% KM (Chebyshev) UCL					60295
755	SD					33594	97.5% KM (Chebyshev) UCL					73803
756	k star					1.424	99% KM (Chebyshev) UCL					100339
757	Theta star					20419						
758	Nu star					62.65	Potential UCLs to Use					
759	AppChi2					45.45	95% KM (Chebyshev) UCL					60295
760	95% Gamma Approximate UCL					40084						
761	95% Adjusted Gamma UCL					41073						
762	Note: DL/2 is not a recommended method.											
763												
764												
765	Lead											
766												
767	General Statistics											
768	Number of Valid Data					22	Number of Detected Data					20
769	Number of Distinct Detected Data					20	Number of Non-Detect Data					2
770	Number of Missing Values					21	Percent Non-Detects					9.09%
771												
772	Raw Statistics						Log-transformed Statistics					
773	Minimum Detected					13.6	Minimum Detected					2.61
774	Maximum Detected					2103	Maximum Detected					7.651
775	Mean of Detected					307.1	Mean of Detected					4.628
776	SD of Detected					577.7	SD of Detected					1.379
777	Minimum Non-Detect					13.75	Minimum Non-Detect					2.621
778	Maximum Non-Detect					14.1	Maximum Non-Detect					2.646
779												
780	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					3

	A	B	C	D	E	F	G	H	I	J	K	L
781	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					19
782	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					13.64%
783												
784	UCL Statistics											
785	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
786	Shapiro Wilk Test Statistic			0.528			Shapiro Wilk Test Statistic			0.88		
787	5% Shapiro Wilk Critical Value			0.905			5% Shapiro Wilk Critical Value			0.905		
788	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
789												
790	Assuming Normal Distribution						Assuming Lognormal Distribution					
791	DL/2 Substitution Method						DL/2 Substitution Method					
792	Mean			279.8			Mean			4.384		
793	SD			556.5			SD			1.532		
794	95% DL/2 (t) UCL			484			95% H-Stat (DL/2) UCL			624.2		
795												
796	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
797	Mean			224.7			Mean in Log Scale			4.393		
798	SD			599.3			SD in Log Scale			1.517		
799	95% MLE (t) UCL			444.5			Mean in Original Scale			279.9		
800	95% MLE (Tiku) UCL			432.7			SD in Original Scale			556.5		
801							95% Percentile Bootstrap UCL			486.9		
802							95% BCA Bootstrap UCL			557.4		
803												
804	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
805	k star (bias corrected)			0.515			Data do not follow a Discernable Distribution (0.05)					
806	Theta Star			596								
807	nu star			20.61								
808												
809	A-D Test Statistic			2.286			Nonparametric Statistics					
810	5% A-D Critical Value			0.796			Kaplan-Meier (KM) Method					
811	K-S Test Statistic			0.796			Mean			280.4		
812	5% K-S Critical Value			0.204			SD			543.4		
813	Data not Gamma Distributed at 5% Significance Level						SE of Mean			118.9		
814							95% KM (t) UCL			485		
815	Assuming Gamma Distribution						95% KM (z) UCL			475.9		
816	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			484.4		
817	Minimum			1E-09			95% KM (bootstrap t) UCL			672.1		
818	Maximum			2103			95% KM (BCA) UCL			496.6		
819	Mean			279.2			95% KM (Percentile Bootstrap) UCL			479.7		
820	Median			83.16			95% KM (Chebyshev) UCL			798.6		
821	SD			556.8			97.5% KM (Chebyshev) UCL			1023		
822	k star			0.22			99% KM (Chebyshev) UCL			1463		
823	Theta star			1271								
824	Nu star			9.665			Potential UCLs to Use					
825	AppChi2			3.734			97.5% KM (Chebyshev) UCL			1023		
826	95% Gamma Approximate UCL			722.7								
827	95% Adjusted Gamma UCL			779.4								
828	Note: DL/2 is not a recommended method.											
829												
830												
831	Magnesium											
832												

	A	B	C	D	E	F	G	H	I	J	K	L		
833	General Statistics													
834	Number of Valid Data					22		Number of Detected Data					22	
835	Number of Distinct Detected Data					22		Number of Non-Detect Data					0	
836	Number of Missing Values					21		Percent Non-Detects					0.00%	
837														
838	Raw Statistics						Log-transformed Statistics							
839	Minimum Detected					266760		Minimum Detected					12.49	
840	Maximum Detected					398370		Maximum Detected					12.9	
841	Mean of Detected					329288		Mean of Detected					12.7	
842	SD of Detected					41056		SD of Detected					0.125	
843	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
844	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
845														
846														
847	UCL Statistics													
848	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
849	Shapiro Wilk Test Statistic					0.945		Shapiro Wilk Test Statistic					0.949	
850	5% Shapiro Wilk Critical Value					0.911		5% Shapiro Wilk Critical Value					0.911	
851	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
852														
853	Assuming Normal Distribution						Assuming Lognormal Distribution							
854	DL/2 Substitution Method							DL/2 Substitution Method						
855	Mean					329288		Mean					12.7	
856	SD					41056		SD					0.125	
857	95% DL/2 (t) UCL					344350		95% H-Stat (DL/2) UCL					345259	
858														
859	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
860	MLE method failed to converge properly						Mean in Log Scale					N/A		
861							SD in Log Scale					N/A		
862							Mean in Original Scale					N/A		
863							SD in Original Scale					N/A		
864							95% Percentile Bootstrap UCL					N/A		
865							95% BCA Bootstrap UCL					N/A		
866														
867	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
868	k star (bias corrected)					58.47		Data appear Normal at 5% Significance Level						
869	Theta Star					5631								
870	nu star					2573								
871														
872	A-D Test Statistic					0.434		Nonparametric Statistics						
873	5% A-D Critical Value					0.742		Kaplan-Meier (KM) Method						
874	K-S Test Statistic					0.742		Mean					329288	
875	5% K-S Critical Value					0.185		SD					40112	
876	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					8753		
877							95% KM (t) UCL					344350		
878	Assuming Gamma Distribution						95% KM (z) UCL					343685		
879	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					344350	
880	Minimum					266760		95% KM (bootstrap t) UCL					344849	
881	Maximum					398370		95% KM (BCA) UCL					342449	
882	Mean					329288		95% KM (Percentile Bootstrap) UCL					343713	
883	Median					322955		95% KM (Chebyshev) UCL					367442	
884	SD					41056		97.5% KM (Chebyshev) UCL					383951	

	A	B	C	D	E	F	G	H	I	J	K	L	
885					k star	58.47				99% KM (Chebyshev) UCL		416381	
886					Theta star	5631							
887					Nu star	2573				Potential UCLs to Use			
888					AppChi2	2456				95% KM (t) UCL		344350	
889					95% Gamma Approximate UCL	344953				95% KM (Percentile Bootstrap) UCL		343713	
890					95% Adjusted Gamma UCL	346151							
891	Note: DL/2 is not a recommended method.												
892													
893													
894	Manganese												
895													
896	General Statistics												
897					Number of Valid Data	22				Number of Detected Data		22	
898					Number of Distinct Detected Data	22				Number of Non-Detect Data		0	
899					Number of Missing Values	21				Percent Non-Detects		0.00%	
900													
901	Raw Statistics						Log-transformed Statistics						
902					Minimum Detected	867.7				Minimum Detected		6.766	
903					Maximum Detected	9051				Maximum Detected		9.111	
904					Mean of Detected	2738				Mean of Detected		7.674	
905					SD of Detected	2358				SD of Detected		0.655	
906					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
907					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
908													
909													
910	UCL Statistics												
911	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
912					Shapiro Wilk Test Statistic	0.683				Shapiro Wilk Test Statistic		0.903	
913					5% Shapiro Wilk Critical Value	0.911				5% Shapiro Wilk Critical Value		0.911	
914	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
915													
916	Assuming Normal Distribution						Assuming Lognormal Distribution						
917					DL/2 Substitution Method					DL/2 Substitution Method			
918					Mean	2738				Mean		7.674	
919					SD	2358				SD		0.655	
920					95% DL/2 (t) UCL	3603				95% H-Stat (DL/2) UCL		3615	
921													
922					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
923	MLE method failed to converge properly										Mean in Log Scale		N/A
924										SD in Log Scale		N/A	
925										Mean in Original Scale		N/A	
926										SD in Original Scale		N/A	
927										95% Percentile Bootstrap UCL		N/A	
928										95% BCA Bootstrap UCL		N/A	
929													
930	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
931					k star (bias corrected)	1.953				Data do not follow a Discernable Distribution (0.05)			
932					Theta Star	1402							
933					nu star	85.92							
934													
935					A-D Test Statistic	1.381				Nonparametric Statistics			
936					5% A-D Critical Value	0.755				Kaplan-Meier (KM) Method			

	A	B	C	D	E	F	G	H	I	J	K	L	
937	K-S Test Statistic					0.755	Mean					2738	
938	5% K-S Critical Value					0.188	SD					2304	
939	Data not Gamma Distributed at 5% Significance Level						SE of Mean					502.8	
940							95% KM (t) UCL					3603	
941	Assuming Gamma Distribution						95% KM (z) UCL					3565	
942	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3603	
943	Minimum						867.7	95% KM (bootstrap t) UCL					4065
944	Maximum						9051	95% KM (BCA) UCL					3697
945	Mean						2738	95% KM (Percentile Bootstrap) UCL					3574
946	Median						1958	95% KM (Chebyshev) UCL					4930
947	SD						2358	97.5% KM (Chebyshev) UCL					5878
948	k star						1.953	99% KM (Chebyshev) UCL					7741
949	Theta star						1402						
950	Nu star						85.92	Potential UCLs to Use					
951	AppChi2						65.55	95% KM (Chebyshev) UCL					4930
952	95% Gamma Approximate UCL						3589						
953	95% Adjusted Gamma UCL						3663						
954	Note: DL/2 is not a recommended method.												
955													
956													
957	Mercury												
958													
959	General Statistics												
960	Number of Valid Data					22	Number of Detected Data					22	
961	Number of Distinct Detected Data					22	Number of Non-Detect Data					0	
962	Number of Missing Values					21	Percent Non-Detects					0.00%	
963													
964	Raw Statistics						Log-transformed Statistics						
965	Minimum Detected					44.7	Minimum Detected					3.8	
966	Maximum Detected					300	Maximum Detected					5.704	
967	Mean of Detected					136.8	Mean of Detected					4.74	
968	SD of Detected					80.34	SD of Detected					0.623	
969	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
970	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
971													
972													
973	UCL Statistics												
974	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
975	Shapiro Wilk Test Statistic					0.889	Shapiro Wilk Test Statistic					0.897	
976	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911	
977	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
978													
979	Assuming Normal Distribution						Assuming Lognormal Distribution						
980	DL/2 Substitution Method						DL/2 Substitution Method						
981	Mean					136.8	Mean					4.74	
982	SD					80.34	SD					0.623	
983	95% DL/2 (t) UCL					166.3	95% H-Stat (DL/2) UCL					185	
984													
985	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
986	MLE method failed to converge properly						Mean in Log Scale					N/A	
987							SD in Log Scale					N/A	
988							Mean in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
989						SD in Original Scale					N/A	
990						95% Percentile Bootstrap UCL					N/A	
991						95% BCA Bootstrap UCL					N/A	
992												
993	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
994	k star (bias corrected)					2.588	Data do not follow a Discernable Distribution (0.05)					
995	Theta Star					52.88						
996	nu star					113.9						
997												
998	A-D Test Statistic					0.977	Nonparametric Statistics					
999	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
1000	K-S Test Statistic					0.75	Mean					136.8
1001	5% K-S Critical Value					0.187	SD					78.49
1002	Data not Gamma Distributed at 5% Significance Level					SE of Mean					17.13	
1003						95% KM (t) UCL					166.3	
1004	Assuming Gamma Distribution					95% KM (z) UCL					165	
1005	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					166.3	
1006	Minimum					44.7	95% KM (bootstrap t) UCL					167.7
1007	Maximum					300	95% KM (BCA) UCL					167.4
1008	Mean					136.8	95% KM (Percentile Bootstrap) UCL					165.9
1009	Median					125	95% KM (Chebyshev) UCL					211.5
1010	SD					80.34	97.5% KM (Chebyshev) UCL					243.8
1011	k star					2.588	99% KM (Chebyshev) UCL					307.2
1012	Theta star					52.88						
1013	Nu star					113.9	Potential UCLs to Use					
1014	AppChi2					90.22	95% KM (Chebyshev) UCL					211.5
1015	95% Gamma Approximate UCL					172.7						
1016	95% Adjusted Gamma UCL					175.7						
1017	Note: DL/2 is not a recommended method.											
1018												
1019												
1020	Nickel											
1021												
1022	General Statistics											
1023	Number of Valid Data					22	Number of Detected Data					22
1024	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
1025	Number of Missing Values					21	Percent Non-Detects					0.00%
1026												
1027	Raw Statistics					Log-transformed Statistics						
1028	Minimum Detected					122.4	Minimum Detected					4.807
1029	Maximum Detected					891.6	Maximum Detected					6.793
1030	Mean of Detected					315.7	Mean of Detected					5.624
1031	SD of Detected					180.1	SD of Detected					0.512
1032	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1033	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1034												
1035												
1036	UCL Statistics											
1037	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1038	Shapiro Wilk Test Statistic					0.847	Shapiro Wilk Test Statistic					0.967
1039	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
1040	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L		
1041														
1042	Assuming Normal Distribution						Assuming Lognormal Distribution							
1043	DL/2 Substitution Method						DL/2 Substitution Method							
1044	Mean						315.7	Mean						5.624
1045	SD						180.1	SD						0.512
1046	95% DL/2 (t) UCL						381.7	95% H-Stat (DL/2) UCL						394.3
1047														
1048	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1049	MLE method failed to converge properly						Mean in Log Scale						N/A	
1050							SD in Log Scale						N/A	
1051							Mean in Original Scale						N/A	
1052							SD in Original Scale						N/A	
1053							95% Percentile Bootstrap UCL						N/A	
1054							95% BCA Bootstrap UCL						N/A	
1055														
1056	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1057	k star (bias corrected)						3.464	Data appear Gamma Distributed at 5% Significance Level						
1058	Theta Star						91.13							
1059	nu star						152.4							
1060														
1061	A-D Test Statistic						0.427	Nonparametric Statistics						
1062	5% A-D Critical Value						0.747	Kaplan-Meier (KM) Method						
1063	K-S Test Statistic						0.747	Mean						315.7
1064	5% K-S Critical Value						0.186	SD						175.9
1065	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						38.39	
1066							95% KM (t) UCL						381.7	
1067	Assuming Gamma Distribution						95% KM (z) UCL						378.8	
1068	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						381.7	
1069	Minimum						122.4	95% KM (bootstrap t) UCL						409.7
1070	Maximum						891.6	95% KM (BCA) UCL						384.3
1071	Mean						315.7	95% KM (Percentile Bootstrap) UCL						379.4
1072	Median						256.8	95% KM (Chebyshev) UCL						483
1073	SD						180.1	97.5% KM (Chebyshev) UCL						555.4
1074	k star						3.464	99% KM (Chebyshev) UCL						697.6
1075	Theta star						91.13							
1076	Nu star						152.4	Potential UCLs to Use						
1077	AppChi2						124.9	95% KM (BCA) UCL						384.3
1078	95% Gamma Approximate UCL						385.3							
1079	95% Adjusted Gamma UCL						391.1							
1080	Note: DL/2 is not a recommended method.													
1081														
1082														
1083	Potassium													
1084														
1085	General Statistics													
1086	Number of Valid Data						22	Number of Detected Data						22
1087	Number of Distinct Detected Data						22	Number of Non-Detect Data						0
1088	Number of Missing Values						21	Percent Non-Detects						0.00%
1089														
1090	Raw Statistics						Log-transformed Statistics							
1091	Minimum Detected						2896740	Minimum Detected						14.88
1092	Maximum Detected						3817100	Maximum Detected						15.16

	A	B	C	D	E	F	G	H	I	J	K	L
1093	Mean of Detected					3230162	Mean of Detected					14.98
1094	SD of Detected					266805	SD of Detected					0.0804
1095	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1096	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1097												
1098												
1099	UCL Statistics											
1100	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1101	Shapiro Wilk Test Statistic					0.911	Shapiro Wilk Test Statistic					0.927
1102	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
1103	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1104												
1105	Assuming Normal Distribution						Assuming Lognormal Distribution					
1106	DL/2 Substitution Method						DL/2 Substitution Method					
1107	Mean					3230162	Mean					14.98
1108	SD					266805	SD					0.0804
1109	95% DL/2 (t) UCL					3328043	95% H-Stat (DL/2) UCL					N/A
1110												
1111	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1112	MLE method failed to converge properly						Mean in Log Scale					N/A
1113												
1114												
1115												
1116												
1117												
1118												
1119	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1120	k star (bias corrected)					137.7	Data appear Normal at 5% Significance Level					
1121	Theta Star					23450						
1122	nu star					6061						
1123												
1124	A-D Test Statistic					0.552	Nonparametric Statistics					
1125	5% A-D Critical Value					0.741	Kaplan-Meier (KM) Method					
1126	K-S Test Statistic					0.741	Mean					3230162
1127	5% K-S Critical Value					0.185	SD					260671
1128	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					56883
1129												
1130	Assuming Gamma Distribution						95% KM (t) UCL					3323726
1131	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3328043
1132	Minimum					2896740	95% KM (bootstrap t) UCL					3343011
1133	Maximum					3817100	95% KM (BCA) UCL					3318259
1134	Mean					3230162	95% KM (Percentile Bootstrap) UCL					3314400
1135	Median					3197900	95% KM (Chebyshev) UCL					3478109
1136	SD					266805	97.5% KM (Chebyshev) UCL					3585396
1137	k star					137.7	99% KM (Chebyshev) UCL					3796141
1138	Theta star					23450						
1139	Nu star					6061	Potential UCLs to Use					
1140	AppChi2					5881	95% KM (t) UCL					3328043
1141	95% Gamma Approximate UCL					3329004	95% KM (Percentile Bootstrap) UCL					3314400
1142	95% Adjusted Gamma UCL					3336486						
1143	Note: DL/2 is not a recommended method.											
1144												

	A	B	C	D	E	F	G	H	I	J	K	L		
1145														
1146	Selenium													
1147														
1148	General Statistics													
1149	Number of Valid Data					22		Number of Detected Data					22	
1150	Number of Distinct Detected Data					22		Number of Non-Detect Data					0	
1151	Number of Missing Values					21		Percent Non-Detects					0.00%	
1152														
1153	Raw Statistics						Log-transformed Statistics							
1154	Minimum Detected					408		Minimum Detected					6.011	
1155	Maximum Detected					868.9		Maximum Detected					6.767	
1156	Mean of Detected					630.2		Mean of Detected					6.418	
1157	SD of Detected					151.4		SD of Detected					0.246	
1158	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
1159	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
1160														
1161														
1162	UCL Statistics													
1163	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1164	Shapiro Wilk Test Statistic					0.929		Shapiro Wilk Test Statistic					0.931	
1165	5% Shapiro Wilk Critical Value					0.911		5% Shapiro Wilk Critical Value					0.911	
1166	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1167														
1168	Assuming Normal Distribution						Assuming Lognormal Distribution							
1169	DL/2 Substitution Method							DL/2 Substitution Method						
1170	Mean					630.2		Mean					6.418	
1171	SD					151.4		SD					0.246	
1172	95% DL/2 (t) UCL					685.7		95% H-Stat (DL/2) UCL					695.3	
1173														
1174	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1175	MLE method failed to converge properly						Mean in Log Scale					N/A		
1176							SD in Log Scale					N/A		
1177							Mean in Original Scale					N/A		
1178							SD in Original Scale					N/A		
1179							95% Percentile Bootstrap UCL					N/A		
1180							95% BCA Bootstrap UCL					N/A		
1181														
1182	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1183	k star (bias corrected)					15.35		Data appear Normal at 5% Significance Level						
1184	Theta Star					41.05								
1185	nu star					675.4								
1186														
1187	A-D Test Statistic					0.557		Nonparametric Statistics						
1188	5% A-D Critical Value					0.741		Kaplan-Meier (KM) Method						
1189	K-S Test Statistic					0.741		Mean					630.2	
1190	5% K-S Critical Value					0.185		SD					147.9	
1191	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					32.27		
1192							95% KM (t) UCL					685.7		
1193	Assuming Gamma Distribution						95% KM (z) UCL					683.2		
1194	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					685.7		
1195	Minimum					408		95% KM (bootstrap t) UCL					683.2	
1196	Maximum					868.9		95% KM (BCA) UCL					682.9	

	A	B	C	D	E	F	G	H	I	J	K	L
1197					Mean	630.2			95% KM (Percentile Bootstrap) UCL			685.1
1198					Median	608.8			95% KM (Chebyshev) UCL			770.8
1199					SD	151.4			97.5% KM (Chebyshev) UCL			831.7
1200					k star	15.35			99% KM (Chebyshev) UCL			951.2
1201					Theta star	41.05						
1202					Nu star	675.4			Potential UCLs to Use			
1203					AppChi2	616.1			95% KM (t) UCL			685.7
1204			95% Gamma Approximate UCL			690.8			95% KM (Percentile Bootstrap) UCL			685.1
1205			95% Adjusted Gamma UCL			695.6						
1206	Note: DL/2 is not a recommended method.											
1207												
1208												
1209	Sodium											
1210												
1211	General Statistics											
1212			Number of Valid Data			22			Number of Detected Data			22
1213			Number of Distinct Detected Data			22			Number of Non-Detect Data			0
1214			Number of Missing Values			21			Percent Non-Detects			0.00%
1215												
1216	Raw Statistics						Log-transformed Statistics					
1217			Minimum Detected			641520			Minimum Detected			13.37
1218			Maximum Detected			1470840			Maximum Detected			14.2
1219			Mean of Detected			984698			Mean of Detected			13.77
1220			SD of Detected			255302			SD of Detected			0.258
1221			Minimum Non-Detect			N/A			Minimum Non-Detect			N/A
1222			Maximum Non-Detect			N/A			Maximum Non-Detect			N/A
1223												
1224												
1225	UCL Statistics											
1226	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1227			Shapiro Wilk Test Statistic			0.919			Shapiro Wilk Test Statistic			0.936
1228			5% Shapiro Wilk Critical Value			0.911			5% Shapiro Wilk Critical Value			0.911
1229	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1230												
1231	Assuming Normal Distribution						Assuming Lognormal Distribution					
1232			DL/2 Substitution Method						DL/2 Substitution Method			
1233			Mean			984698			Mean			13.77
1234			SD			255302			SD			0.258
1235			95% DL/2 (t) UCL			1078359			95% H-Stat (DL/2) UCL			1091496
1236												
1237			Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method			
1238	MLE method failed to converge properly								Mean in Log Scale			N/A
1239									SD in Log Scale			N/A
1240									Mean in Original Scale			N/A
1241									SD in Original Scale			N/A
1242									95% Percentile Bootstrap UCL			N/A
1243									95% BCA Bootstrap UCL			N/A
1244												
1245	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1246			k star (bias corrected)			13.74			Data appear Normal at 5% Significance Level			
1247			Theta Star			71688						
1248			nu star			604.4						

	A	B	C	D	E	F	G	H	I	J	K	L
1249												
1250				A-D Test Statistic		0.58	Nonparametric Statistics					
1251				5% A-D Critical Value		0.742	Kaplan-Meier (KM) Method					
1252				K-S Test Statistic		0.742					Mean	984698
1253				5% K-S Critical Value		0.185					SD	249432
1254	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	54431
1255											95% KM (t) UCL	1078359
1256	Assuming Gamma Distribution										95% KM (z) UCL	1074228
1257	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1078359
1258					Minimum	641520					95% KM (bootstrap t) UCL	1079085
1259					Maximum	1470840					95% KM (BCA) UCL	1073391
1260					Mean	984698					95% KM (Percentile Bootstrap) UCL	1074780
1261					Median	926250					95% KM (Chebyshev) UCL	1221955
1262					SD	255302					97.5% KM (Chebyshev) UCL	1324617
1263					k star	13.74					99% KM (Chebyshev) UCL	1526275
1264					Theta star	71688						
1265					Nu star	604.4	Potential UCLs to Use					
1266					AppChi2	548.4					95% KM (t) UCL	1078359
1267					95% Gamma Approximate UCL	1085309					95% KM (Percentile Bootstrap) UCL	1074780
1268					95% Adjusted Gamma UCL	1093234						
1269	Note: DL/2 is not a recommended method.											
1270												
1271												
1272	Uranium											
1273												
1274	General Statistics											
1275					Number of Valid Data	22					Number of Detected Data	15
1276					Number of Distinct Detected Data	15					Number of Non-Detect Data	7
1277					Number of Missing Values	21					Percent Non-Detects	31.82%
1278												
1279	Raw Statistics						Log-transformed Statistics					
1280					Minimum Detected	0.69					Minimum Detected	-0.371
1281					Maximum Detected	19.54					Maximum Detected	2.972
1282					Mean of Detected	5.381					Mean of Detected	1.076
1283					SD of Detected	6.478					SD of Detected	1.116
1284					Minimum Non-Detect	1.36					Minimum Non-Detect	0.307
1285					Maximum Non-Detect	1.71					Maximum Non-Detect	0.536
1286												
1287	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	12
1288	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	10
1289	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	54.55%
1290												
1291	UCL Statistics											
1292	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1293					Shapiro Wilk Test Statistic	0.707					Shapiro Wilk Test Statistic	0.91
1294					5% Shapiro Wilk Critical Value	0.881					5% Shapiro Wilk Critical Value	0.881
1295	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1296												
1297	Assuming Normal Distribution						Assuming Lognormal Distribution					
1298					DL/2 Substitution Method						DL/2 Substitution Method	
1299					Mean	3.902					Mean	0.634
1300					SD	5.735					SD	1.128

	A	B	C	D	E	F	G	H	I	J	K	L
1301	95% DL/2 (t) UCL					6.006	95% H-Stat (DL/2) UCL					5.91
1302												
1303	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1304	MLE yields a negative mean						Mean in Log Scale					0.713
1305							SD in Log Scale					1.061
1306							Mean in Original Scale					3.967
1307							SD in Original Scale					5.698
1308							95% Percentile Bootstrap UCL					6.085
1309							95% BCA Bootstrap UCL					6.544
1310												
1311	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1312	k star (bias corrected)					0.809	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1313	Theta Star					6.651						
1314	nu star					24.27						
1315												
1316	A-D Test Statistic					0.878	Nonparametric Statistics					
1317	5% A-D Critical Value					0.765	Kaplan-Meier (KM) Method					
1318	K-S Test Statistic					0.765	Mean					3.973
1319	5% K-S Critical Value					0.228	SD					5.564
1320	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					1.228
1321							95% KM (t) UCL					6.086
1322	Assuming Gamma Distribution						95% KM (z) UCL					5.993
1323	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.063
1324	Minimum					0.69	95% KM (bootstrap t) UCL					7.103
1325	Maximum					19.54	95% KM (BCA) UCL					6.01
1326	Mean					4.552	95% KM (Percentile Bootstrap) UCL					6.079
1327	Median					2.778	95% KM (Chebyshev) UCL					9.327
1328	SD					5.433	97.5% KM (Chebyshev) UCL					11.64
1329	k star					1.096	99% KM (Chebyshev) UCL					16.19
1330	Theta star					4.155						
1331	Nu star					48.21	Potential UCLs to Use					
1332	AppChi2					33.27	95% KM (BCA) UCL					6.01
1333	95% Gamma Approximate UCL					6.596						
1334	95% Adjusted Gamma UCL					6.785						
1335	Note: DL/2 is not a recommended method.											
1336												
1337												
1338	Vanadium											
1339												
1340	General Statistics											
1341	Number of Valid Data					22	Number of Detected Data					5
1342	Number of Distinct Detected Data					5	Number of Non-Detect Data					17
1343	Number of Missing Values					21	Percent Non-Detects					77.27%
1344												
1345	Raw Statistics						Log-transformed Statistics					
1346	Minimum Detected					79.54	Minimum Detected					4.376
1347	Maximum Detected					298.1	Maximum Detected					5.697
1348	Mean of Detected					185.9	Mean of Detected					5.089
1349	SD of Detected					102.1	SD of Detected					0.601
1350	Minimum Non-Detect					76.38	Minimum Non-Detect					4.336
1351	Maximum Non-Detect					136.8	Maximum Non-Detect					4.919
1352												

	A	B	C	D	E	F	G	H	I	J	K	L
1353	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					19
1354	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
1355	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					86.36%
1356												
1357	Warning: There are only 5 Detected Values in this data											
1358	Note: It should be noted that even though bootstrap may be performed on this data set											
1359	the resulting calculations may not be reliable enough to draw conclusions											
1360												
1361	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1362												
1363												
1364	UCL Statistics											
1365	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1366	Shapiro Wilk Test Statistic				0.869		Shapiro Wilk Test Statistic				0.89	
1367	5% Shapiro Wilk Critical Value				0.762		5% Shapiro Wilk Critical Value				0.762	
1368	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1369												
1370	Assuming Normal Distribution						Assuming Lognormal Distribution					
1371	DL/2 Substitution Method						DL/2 Substitution Method					
1372	Mean				85.65		Mean				4.261	
1373	SD				71.64		SD				0.546	
1374	95% DL/2 (t) UCL				111.9		95% H-Stat (DL/2) UCL				86.28	
1375												
1376	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1377	Mean				257.9		Mean in Log Scale				4.312	
1378	SD				58.43		SD in Log Scale				0.531	
1379	95% MLE (t) UCL				279.3		Mean in Original Scale				88.84	
1380	95% MLE (Tiku) UCL				315.5		SD in Original Scale				70.47	
1381							95% Percentile Bootstrap UCL				113.8	
1382							95% BCA Bootstrap UCL				121.1	
1383												
1384	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1385	k star (bias corrected)				1.661		Data appear Normal at 5% Significance Level					
1386	Theta Star				112							
1387	nu star				16.61							
1388												
1389	A-D Test Statistic				0.391		Nonparametric Statistics					
1390	5% A-D Critical Value				0.681		Kaplan-Meier (KM) Method					
1391	K-S Test Statistic				0.681		Mean				107	
1392	5% K-S Critical Value				0.359		SD				61.44	
1393	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				15.07	
1394							95% KM (t) UCL				132.9	
1395	Assuming Gamma Distribution						95% KM (z) UCL				131.8	
1396	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				129.1	
1397	Minimum				79.54		95% KM (bootstrap t) UCL				130.5	
1398	Maximum				298.1		95% KM (BCA) UCL				286.3	
1399	Mean				183.6		95% KM (Percentile Bootstrap) UCL				190.6	
1400	Median				190.8		95% KM (Chebyshev) UCL				172.7	
1401	SD				50.98		97.5% KM (Chebyshev) UCL				201.1	
1402	k star				10.38		99% KM (Chebyshev) UCL				257	
1403	Theta star				17.69							
1404	Nu star				456.7		Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
1405	AppChi2					408.1	95% KM (t) UCL					132.9
1406	95% Gamma Approximate UCL					205.4	95% KM (Percentile Bootstrap) UCL					190.6
1407	95% Adjusted Gamma UCL					207.2						
1408	Note: DL/2 is not a recommended method.											
1409												
1410												
1411	Zinc											
1412												
1413	General Statistics											
1414	Number of Valid Data					22	Number of Detected Data					22
1415	Number of Distinct Detected Data					22	Number of Non-Detect Data					0
1416	Number of Missing Values					21	Percent Non-Detects					0.00%
1417												
1418	Raw Statistics						Log-transformed Statistics					
1419	Minimum Detected					10724	Minimum Detected					9.28
1420	Maximum Detected					24500	Maximum Detected					10.11
1421	Mean of Detected					16298	Mean of Detected					9.654
1422	SD of Detected					5115	SD of Detected					0.303
1423	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1424	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1425												
1426												
1427	UCL Statistics											
1428	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1429	Shapiro Wilk Test Statistic					0.829	Shapiro Wilk Test Statistic					0.855
1430	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911
1431	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1432												
1433	Assuming Normal Distribution						Assuming Lognormal Distribution					
1434	DL/2 Substitution Method						DL/2 Substitution Method					
1435	Mean					16298	Mean					9.654
1436	SD					5115	SD					0.303
1437	95% DL/2 (t) UCL					18174	95% H-Stat (DL/2) UCL					18409
1438												
1439	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1440	MLE method failed to converge properly						Mean in Log Scale					N/A
1441							SD in Log Scale					N/A
1442							Mean in Original Scale					N/A
1443							SD in Original Scale					N/A
1444							95% Percentile Bootstrap UCL					N/A
1445							95% BCA Bootstrap UCL					N/A
1446												
1447	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1448	k star (bias corrected)					9.788	Data do not follow a Discernable Distribution (0.05)					
1449	Theta Star					1665						
1450	nu star					430.7						
1451												
1452	A-D Test Statistic					1.463	Nonparametric Statistics					
1453	5% A-D Critical Value					0.743	Kaplan-Meier (KM) Method					
1454	K-S Test Statistic					0.743	Mean					16298
1455	5% K-S Critical Value					0.185	SD					4998
1456	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1091

	A	B	C	D	E	F	G	H	I	J	K	L	
1457											95% KM (t) UCL	18174	
1458	Assuming Gamma Distribution											95% KM (z) UCL	18092
1459	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	18174	
1460					Minimum	10724					95% KM (bootstrap t) UCL	18285	
1461					Maximum	24500					95% KM (BCA) UCL	18176	
1462					Mean	16298					95% KM (Percentile Bootstrap) UCL	17959	
1463					Median	13893					95% KM (Chebyshev) UCL	21052	
1464					SD	5115					97.5% KM (Chebyshev) UCL	23109	
1465					k star	9.788					99% KM (Chebyshev) UCL	27149	
1466					Theta star	1665							
1467					Nu star	430.7				Potential UCLs to Use			
1468					AppChi2	383.5					95% KM (Chebyshev) UCL	21052	
1469					95% Gamma Approximate UCL	18300							
1470					95% Adjusted Gamma UCL	18459							
1471	Note: DL/2 is not a recommended method.												
1472													

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach4a_PCB&TEC												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				22				Number of Distinct Observations				22			
13	Number of Missing Values				22											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0003317			Minimum of Log Data			-8.011						
17	Maximum			0.00212			Maximum of Log Data			-6.158						
18	Mean			0.0008925			Mean of log Data			-7.135						
19	Median			0.0007865			SD of log Data			0.481						
20	SD			0.0004626												
21	Coefficient of Variation			0.518												
22	Skewness			1.323												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.872			Shapiro Wilk Test Statistic			0.974						
27	Shapiro Wilk Critical Value			0.911			Shapiro Wilk Critical Value			0.911						
28	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.00106			95% H-UCL			0.0011						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL			0.0013						
33	95% Adjusted-CLT UCL			0.00108			97.5% Chebyshev (MVUE) UCL			0.00148						
34	95% Modified-t UCL			0.00107			99% Chebyshev (MVUE) UCL			0.00183						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			3.967			Data appear Gamma Distributed at 5% Significance Level									
38	Theta Star			0.000225												
39	nu star			174.5												
40	Approximate Chi Square Value (.05)			145			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0386			95% CLT UCL			0.00105						
42	Adjusted Chi Square Value			143			95% Jackknife UCL			0.00106						
43							95% Standard Bootstrap UCL			0.00105						
44	Anderson-Darling Test Statistic			0.444			95% Bootstrap-t UCL			0.00111						
45	Anderson-Darling 5% Critical Value			0.747			95% Hall's Bootstrap UCL			0.00111						
46	Kolmogorov-Smirnov Test Statistic			0.159			95% Percentile Bootstrap UCL			0.00106						
47	Kolmogorov-Smirnov 5% Critical Value			0.186			95% BCA Bootstrap UCL			0.0011						
48	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.00132						
49							97.5% Chebyshev(Mean, Sd) UCL			0.00151						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.00187						
51	95% Approximate Gamma UCL			0.00107												
52	95% Adjusted Gamma UCL			0.00109												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					22	Number of Distinct Observations					21	
109	Number of Missing Values					22							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					0.0002359	Minimum of Log Data					-8.352	
113	Maximum					0.0116	Maximum of Log Data					-4.453	
114	Mean					0.00239	Mean of log Data					-6.518	
115	Median					0.00139	SD of log Data					0.921	
116	SD					0.00305							
117	Coefficient of Variation					1.28							
118	Skewness					2.415							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.598	Shapiro Wilk Test Statistic					0.921	
123	Shapiro Wilk Critical Value					0.911	Shapiro Wilk Critical Value					0.911	
124	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.00351	95% H-UCL					0.00369	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00429
129	95% Adjusted-CLT UCL					0.00382	97.5% Chebyshev (MVUE) UCL					0.0052	
130	95% Modified-t UCL					0.00356	99% Chebyshev (MVUE) UCL					0.00698	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					1.051	Data appear Lognormal at 5% Significance Level						
134	Theta Star					0.00227							
135	nu star					46.23							
136	Approximate Chi Square Value (.05)					31.63	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0386	95% CLT UCL					0.00346	
138	Adjusted Chi Square Value					30.73	95% Jackknife UCL					0.00351	
139							95% Standard Bootstrap UCL					0.00341	
140	Anderson-Darling Test Statistic					1.669	95% Bootstrap-t UCL					0.00469	
141	Anderson-Darling 5% Critical Value					0.766	95% Hall's Bootstrap UCL					0.00374	
142	Kolmogorov-Smirnov Test Statistic					0.282	95% Percentile Bootstrap UCL					0.00356	
143	Kolmogorov-Smirnov 5% Critical Value					0.19	95% BCA Bootstrap UCL					0.00384	
144	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						0.00522
145							97.5% Chebyshev(Mean, Sd) UCL					0.00645	
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.00887
147	95% Approximate Gamma UCL					0.00349							
148	95% Adjusted Gamma UCL					0.00359							
149													
150	Potential UCL to Use						Use 95% H-UCL						0.00369
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					5	Number of Distinct Observations					5	

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					37						
158												
159	Raw Statistics						Log-transformed Statistics					
160	Minimum					10.46	Minimum of Log Data					2.348
161	Maximum					144	Maximum of Log Data					4.97
162	Mean					44.49	Mean of log Data					3.29
163	Median					20.69	SD of log Data					1.044
164	SD					56.39						
165	Coefficient of Variation					1.268						
166	Skewness					2.091						
167												
168												
169	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
170												
171	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
172	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
173												
174												
175	Warning: There are only 5 Values in this data											
176	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
177	the resulting calculations may not be reliable enough to draw conclusions											
178												
179	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
180												
181	Relevant UCL Statistics											
182	Normal Distribution Test						Lognormal Distribution Test					
183	Shapiro Wilk Test Statistic					0.693	Shapiro Wilk Test Statistic					0.896
184	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762
185	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
186												
187	Assuming Normal Distribution						Assuming Lognormal Distribution					
188	95% Student's-t UCL					98.26	95% H-UCL					662.2
189	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					118.8
190	95% Adjusted-CLT UCL					111.2	97.5% Chebyshev (MVUE) UCL					152.7
191	95% Modified-t UCL					102.2	99% Chebyshev (MVUE) UCL					219.4
192												
193	Gamma Distribution Test						Data Distribution					
194	k star (bias corrected)					0.584	Data appear Gamma Distributed at 5% Significance Level					
195	Theta Star					76.21						
196	nu star					5.838						
197	Approximate Chi Square Value (.05)						Nonparametric Statistics					
198	Adjusted Level of Significance					0.0086	95% CLT UCL					85.98
199	Adjusted Chi Square Value					0.783	95% Jackknife UCL					98.26
200							95% Standard Bootstrap UCL					80.11
201	Anderson-Darling Test Statistic					0.528	95% Bootstrap-t UCL					385.2
202	Anderson-Darling 5% Critical Value					0.69	95% Hall's Bootstrap UCL					387
203	Kolmogorov-Smirnov Test Statistic					0.277	95% Percentile Bootstrap UCL					91.6
204	Kolmogorov-Smirnov 5% Critical Value					0.364	95% BCA Bootstrap UCL					97.4
205	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					154.4
206							97.5% Chebyshev(Mean, Sd) UCL					202
207	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					295.4
208	95% Approximate Gamma UCL					166.8						

	A	B	C	D	E	F	G	H	I	J	K	L	
209	95% Adjusted Gamma UCL					331.7							
210													
211	Potential UCL to Use					Use 95% Approximate Gamma UCL					166.8		
212	Recommended UCL exceeds the maximum observation												
213													
214													
215	Total PCB, as Aroclor												
216													
217	General Statistics												
218	Number of Valid Observations				22	Number of Distinct Observations				21			
219	Number of Missing Values				21								
220													
221	Raw Statistics						Log-transformed Statistics						
222	Minimum				6.7	Minimum of Log Data				1.902			
223	Maximum				154	Maximum of Log Data				5.037			
224	Mean				33.21	Mean of log Data				2.997			
225	Median				17.8	SD of log Data				0.902			
226	SD				44.41								
227	Coefficient of Variation				1.337								
228	Skewness				2.22								
229													
230	Relevant UCL Statistics												
231	Normal Distribution Test						Lognormal Distribution Test						
232	Shapiro Wilk Test Statistic				0.561	Shapiro Wilk Test Statistic				0.84			
233	Shapiro Wilk Critical Value				0.911	Shapiro Wilk Critical Value				0.911			
234	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
235													
236	Assuming Normal Distribution						Assuming Lognormal Distribution						
237	95% Student's-t UCL				49.5	95% H-UCL				48.42			
238	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				56.6		
239	95% Adjusted-CLT UCL				53.57	97.5% Chebyshev (MVUE) UCL				68.4			
240	95% Modified-t UCL				50.25	99% Chebyshev (MVUE) UCL				91.56			
241													
242	Gamma Distribution Test						Data Distribution						
243	k star (bias corrected)				1.003	Data do not follow a Discernable Distribution (0.05)							
244	Theta Star				33.09								
245	nu star				44.15								
246	Approximate Chi Square Value (.05)				29.91	Nonparametric Statistics							
247	Adjusted Level of Significance				0.0386	95% CLT UCL				48.78			
248	Adjusted Chi Square Value				29.04	95% Jackknife UCL				49.5			
249						95% Standard Bootstrap UCL				48.66			
250	Anderson-Darling Test Statistic				2.418	95% Bootstrap-t UCL				57.57			
251	Anderson-Darling 5% Critical Value				0.768	95% Hall's Bootstrap UCL				45.9			
252	Kolmogorov-Smirnov Test Statistic				0.322	95% Percentile Bootstrap UCL				50.12			
253	Kolmogorov-Smirnov 5% Critical Value				0.19	95% BCA Bootstrap UCL				53.41			
254	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL				74.48		
255							97.5% Chebyshev(Mean, Sd) UCL				92.34		
256	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL				127.4		
257	95% Approximate Gamma UCL				49.02								
258	95% Adjusted Gamma UCL				50.49								
259													
260	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL				74.48		

	A	B	C	D	E	F	G	H	I	J	K	L	
261													
262													
263	Total PCB, as Congener Sum												
264													
265	General Statistics												
266	Number of Valid Observations					5	Number of Distinct Observations					5	
267	Number of Missing Values					37							
268													
269	Raw Statistics						Log-transformed Statistics						
270					Minimum	11.32					Minimum of Log Data	2.427	
271					Maximum	152.4					Maximum of Log Data	5.027	
272					Mean	47.62					Mean of log Data	3.375	
273					Median	22.33					SD of log Data	1.026	
274					SD	59.41							
275					Coefficient of Variation	1.248							
276					Skewness	2.088							
277													
278													
279	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!												
280													
281	It is suggested to collect at least 8 to 10 observations using these statistical methods!												
282	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
283													
284													
285	Warning: There are only 5 Values in this data												
286	Note: It should be noted that even though bootstrap methods may be performed on this data set,												
287	the resulting calculations may not be reliable enough to draw conclusions												
288													
289	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.												
290													
291	Relevant UCL Statistics												
292	Normal Distribution Test						Lognormal Distribution Test						
293					Shapiro Wilk Test Statistic	0.696					Shapiro Wilk Test Statistic	0.902	
294					Shapiro Wilk Critical Value	0.762					Shapiro Wilk Critical Value	0.762	
295	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
296													
297	Assuming Normal Distribution						Assuming Lognormal Distribution						
298					95% Student's-t UCL	104.3					95% H-UCL	647.6	
299	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						126.3
300					95% Adjusted-CLT UCL	117.8					97.5% Chebyshev (MVUE) UCL	162.2	
301					95% Modified-t UCL	108.4					99% Chebyshev (MVUE) UCL	232.7	
302													
303	Gamma Distribution Test						Data Distribution						
304					k star (bias corrected)	0.599	Data appear Gamma Distributed at 5% Significance Level						
305					Theta Star	79.57							
306					nu star	5.985							
307					Approximate Chi Square Value (.05)	1.632	Nonparametric Statistics						
308					Adjusted Level of Significance	0.0086					95% CLT UCL	91.33	
309					Adjusted Chi Square Value	0.831					95% Jackknife UCL	104.3	
310											95% Standard Bootstrap UCL	85.82	
311					Anderson-Darling Test Statistic	0.521					95% Bootstrap-t UCL	414.3	
312					Anderson-Darling 5% Critical Value	0.69					95% Hall's Bootstrap UCL	302.5	

	A	B	C	D	E	F	G	H	I	J	K	L
313	Kolmogorov-Smirnov Test Statistic					0.276	95% Percentile Bootstrap UCL					95.98
314	Kolmogorov-Smirnov 5% Critical Value					0.364	95% BCA Bootstrap UCL					101.9
315	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					163.4
316							97.5% Chebyshev(Mean, Sd) UCL					213.6
317	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					312
318	95% Approximate Gamma UCL					174.6						
319	95% Adjusted Gamma UCL					343.1						
320												
321	Potential UCL to Use						Use 95% Approximate Gamma UCL					174.6
322	Recommended UCL exceeds the maximum observation											
323												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach5.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Data				25				Number of Detected Data				25			
13	Number of Distinct Detected Data				25				Number of Non-Detect Data				0			
14	Number of Missing Values				25				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0004081			Minimum Detected			-7.804						
18	Maximum Detected			0.00163			Maximum Detected			-6.42						
19	Mean of Detected			0.0008611			Mean of Detected			-7.135						
20	SD of Detected			0.0003563			SD of Detected			0.4						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Shapiro Wilk Test Statistic			0.899			Shapiro Wilk Test Statistic			0.956						
28	5% Shapiro Wilk Critical Value			0.918			5% Shapiro Wilk Critical Value			0.918						
29	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0008611			Mean			-7.135						
34	SD			0.0003563			SD			0.4						
35	95% DL/2 (t) UCL			0.000983			95% H-Stat (DL/2) UCL			0.00101						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			5.827			Data appear Gamma Distributed at 5% Significance Level									
47	Theta Star			0.0001478												
48	nu star			291.4												
49																
50	A-D Test Statistic			0.473			Nonparametric Statistics									
51	5% A-D Critical Value			0.746			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.746			Mean			0.0008611						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.175	SD					0.0003491	
54	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					7.126E-05	
55							95% KM (t) UCL					0.000983	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0009783	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.000983	
58	Minimum						0.0004081	95% KM (bootstrap t) UCL					0.001
59	Maximum						0.00163	95% KM (BCA) UCL					0.0009754
60	Mean						0.0008611	95% KM (Percentile Bootstrap) UCL					0.0009825
61	Median						0.0007465	95% KM (Chebyshev) UCL					0.00117
62	SD						0.0003563	97.5% KM (Chebyshev) UCL					0.00131
63	k star						5.827	99% KM (Chebyshev) UCL					0.00157
64	Theta star						0.0001478						
65	Nu star						291.4	Potential UCLs to Use					
66	AppChi2						252.8	95% KM (BCA) UCL					0.0009754
67	95% Gamma Approximate UCL						0.0009924						
68	95% Adjusted Gamma UCL						0.001						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					25	Number of Detected Data					25	
76	Number of Distinct Detected Data					25	Number of Non-Detect Data					0	
77	Number of Missing Values					25	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.0009537	Minimum Detected					-6.955	
81	Maximum Detected					0.0234	Maximum Detected					-3.754	
82	Mean of Detected					0.00618	Mean of Detected					-5.415	
83	SD of Detected					0.00549	SD of Detected					0.826	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.81	Shapiro Wilk Test Statistic					0.981	
91	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918	
92	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.00618	Mean					-5.415	
97	SD					0.00549	SD					0.826	
98	95% DL/2 (t) UCL					0.00806	95% H-Stat (DL/2) UCL					0.00919	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale					N/A	
102							SD in Log Scale					N/A	
103							Mean in Original Scale					N/A	
104							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
105											95% Percentile Bootstrap UCL	N/A
106											95% BCA Bootstrap UCL	N/A
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109					k star (bias corrected)	1.493	Data appear Gamma Distributed at 5% Significance Level					
110					Theta Star	0.00414						
111					nu star	74.65						
112												
113					A-D Test Statistic	0.495	Nonparametric Statistics					
114					5% A-D Critical Value	0.76	Kaplan-Meier (KM) Method					
115					K-S Test Statistic	0.76	Mean					
116					5% K-S Critical Value	0.177	SD					
117	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
118							95% KM (t) UCL					
119	Assuming Gamma Distribution						95% KM (z) UCL					
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
121					Minimum	0.0009537	95% KM (bootstrap t) UCL					
122					Maximum	0.0234	95% KM (BCA) UCL					
123					Mean	0.00618	95% KM (Percentile Bootstrap) UCL					
124					Median	0.00424	95% KM (Chebyshev) UCL					
125					SD	0.00549	97.5% KM (Chebyshev) UCL					
126					k star	1.493	99% KM (Chebyshev) UCL					
127					Theta star	0.00414						
128					Nu star	74.65	Potential UCLs to Use					
129					AppChi2	55.75	95% KM (Chebyshev) UCL					
130					95% Gamma Approximate UCL	0.00828						
131					95% Adjusted Gamma UCL	0.00845						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138					Number of Valid Data	25					Number of Detected Data	25
139					Number of Distinct Detected Data	23					Number of Non-Detect Data	0
140					Number of Missing Values	25					Percent Non-Detects	0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143					Minimum Detected	0.0003837					Minimum Detected	-7.866
144					Maximum Detected	0.0228					Maximum Detected	-3.781
145					Mean of Detected	0.00532					Mean of Detected	-5.731
146					SD of Detected	0.0055					SD of Detected	1.07
147					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
148					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153					Shapiro Wilk Test Statistic	0.794					Shapiro Wilk Test Statistic	0.976
154					5% Shapiro Wilk Critical Value	0.918					5% Shapiro Wilk Critical Value	0.918
155	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.00532	Mean						-5.731
160	SD						0.0055	SD						1.07
161	95% DL/2 (t) UCL						0.0072	95% H-Stat (DL/2) UCL						0.0101
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						1.036	Data appear Gamma Distributed at 5% Significance Level						
173	Theta Star						0.00514							
174	nu star						51.79							
175														
176	A-D Test Statistic						0.376	Nonparametric Statistics						
177	5% A-D Critical Value						0.77	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.77	Mean						0.00532
179	5% K-S Critical Value						0.179	SD						0.00539
180	Data appear Gamma Distributed at 5% Significance Level							SE of Mean						0.0011
181								95% KM (t) UCL						0.0072
182	Assuming Gamma Distribution							95% KM (z) UCL						0.00713
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0072
184	Minimum						0.0003837	95% KM (bootstrap t) UCL						0.00792
185	Maximum						0.0228	95% KM (BCA) UCL						0.00698
186	Mean						0.00532	95% KM (Percentile Bootstrap) UCL						0.00718
187	Median						0.00375	95% KM (Chebyshev) UCL						0.0101
188	SD						0.0055	97.5% KM (Chebyshev) UCL						0.0122
189	k star						1.036	99% KM (Chebyshev) UCL						0.0163
190	Theta star						0.00514							
191	Nu star						51.79	Potential UCLs to Use						
192	AppChi2						36.26	95% KM (Chebyshev) UCL						0.0101
193	95% Gamma Approximate UCL						0.0076							
194	95% Adjusted Gamma UCL						0.00779							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Aluminum													
199														
200	General Statistics													
201	Number of Valid Data						25	Number of Detected Data						21
202	Number of Distinct Detected Data						21	Number of Non-Detect Data						4
203	Number of Missing Values						24	Percent Non-Detects						16.00%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						4480	Minimum Detected						8.407
207	Maximum Detected						86147	Maximum Detected						11.36
208	Mean of Detected						21295	Mean of Detected						9.444

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					26073	SD of Detected					0.974
210	Minimum Non-Detect					3024	Minimum Non-Detect					8.014
211	Maximum Non-Detect					4224	Maximum Non-Detect					8.349
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					4
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					21
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					16.00%
216												
217	UCL Statistics											
218	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
219	Shapiro Wilk Test Statistic					0.645	Shapiro Wilk Test Statistic					0.866
220	5% Shapiro Wilk Critical Value					0.908	5% Shapiro Wilk Critical Value					0.908
221	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
222												
223	Assuming Normal Distribution						Assuming Lognormal Distribution					
224	DL/2 Substitution Method						DL/2 Substitution Method					
225	Mean					18170	Mean					9.127
226	SD					24898	SD					1.158
227	95% DL/2 (t) UCL					26689	95% H-Stat (DL/2) UCL					22425
228												
229	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
230	Mean					15671	Mean in Log Scale					9.097
231	SD					27266	SD in Log Scale					1.204
232	95% MLE (t) UCL					25001	Mean in Original Scale					18119
233	95% MLE (Tiku) UCL					24671	SD in Original Scale					24933
234							95% Percentile Bootstrap UCL					26443
235							95% BCA Bootstrap UCL					29447
236												
237	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
238	k star (bias corrected)					0.969	Data do not follow a Discernable Distribution (0.05)					
239	Theta Star					21981						
240	nu star					40.69						
241												
242	A-D Test Statistic					1.602	Nonparametric Statistics					
243	5% A-D Critical Value					0.767	Kaplan-Meier (KM) Method					
244	K-S Test Statistic					0.767	Mean					18605
245	5% K-S Critical Value					0.194	SD					24121
246	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4943
247							95% KM (t) UCL					27062
248	Assuming Gamma Distribution						95% KM (z) UCL					26736
249	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					27001
250	Minimum					1E-09	95% KM (bootstrap t) UCL					30595
251	Maximum					86147	95% KM (BCA) UCL					27149
252	Mean					17888	95% KM (Percentile Bootstrap) UCL					26696
253	Median					7448	95% KM (Chebyshev) UCL					40152
254	SD					25099	97.5% KM (Chebyshev) UCL					49476
255	k star					0.158	99% KM (Chebyshev) UCL					67791
256	Theta star					113554						
257	Nu star					7.876	Potential UCLs to Use					
258	AppChi2					2.664	95% KM (Chebyshev) UCL					40152
259	95% Gamma Approximate UCL					52895						
260	95% Adjusted Gamma UCL					57250						

	A	B	C	D	E	F	G	H	I	J	K	L		
261	Note: DL/2 is not a recommended method.													
262														
263														
264	Arsenic													
265														
266	General Statistics													
267	Number of Valid Data					25		Number of Detected Data					25	
268	Number of Distinct Detected Data					25		Number of Non-Detect Data					0	
269	Number of Missing Values					24		Percent Non-Detects					0.00%	
270														
271	Raw Statistics						Log-transformed Statistics							
272	Minimum Detected					106.4		Minimum Detected					4.667	
273	Maximum Detected					956.5		Maximum Detected					6.863	
274	Mean of Detected					321.4		Mean of Detected					5.52	
275	SD of Detected					268.6		SD of Detected					0.675	
276	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
277	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
278														
279														
280	UCL Statistics													
281	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
282	Shapiro Wilk Test Statistic					0.702		Shapiro Wilk Test Statistic					0.857	
283	5% Shapiro Wilk Critical Value					0.918		5% Shapiro Wilk Critical Value					0.918	
284	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
285														
286	Assuming Normal Distribution						Assuming Lognormal Distribution							
287	DL/2 Substitution Method							DL/2 Substitution Method						
288	Mean					321.4		Mean					5.52	
289	SD					268.6		SD					0.675	
290	95% DL/2 (t) UCL					413.3		95% H-Stat (DL/2) UCL					419.6	
291														
292	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
293	MLE method failed to converge properly						Mean in Log Scale					N/A		
294							SD in Log Scale					N/A		
295							Mean in Original Scale					N/A		
296							SD in Original Scale					N/A		
297							95% Percentile Bootstrap UCL					N/A		
298							95% BCA Bootstrap UCL					N/A		
299														
300	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
301	k star (bias corrected)					1.9		Data do not follow a Discernable Distribution (0.05)						
302	Theta Star					169.2								
303	nu star					94.98								
304														
305	A-D Test Statistic					2.052		Nonparametric Statistics						
306	5% A-D Critical Value					0.756		Kaplan-Meier (KM) Method						
307	K-S Test Statistic					0.756		Mean					321.4	
308	5% K-S Critical Value					0.177		SD					263.2	
309	Data not Gamma Distributed at 5% Significance Level						SE of Mean					53.73		
310							95% KM (t) UCL					413.3		
311	Assuming Gamma Distribution						95% KM (z) UCL					409.8		
312	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					413.3	

	A	B	C	D	E	F	G	H	I	J	K	L
313					Minimum	106.4				95% KM (bootstrap t) UCL		438.5
314					Maximum	956.5				95% KM (BCA) UCL		401.5
315					Mean	321.4				95% KM (Percentile Bootstrap) UCL		412
316					Median	195.6				95% KM (Chebyshev) UCL		555.6
317					SD	268.6				97.5% KM (Chebyshev) UCL		656.9
318					k star	1.9				99% KM (Chebyshev) UCL		856
319					Theta star	169.2						
320					Nu star	94.98				Potential UCLs to Use		
321					AppChi2	73.51				95% KM (Chebyshev) UCL		555.6
322					95% Gamma Approximate UCL	415.3						
323					95% Adjusted Gamma UCL	422.7						
324	Note: DL/2 is not a recommended method.											
325												
326												
327	Barium											
328												
329	General Statistics											
330					Number of Valid Data	25				Number of Detected Data		25
331					Number of Distinct Detected Data	25				Number of Non-Detect Data		0
332					Number of Missing Values	24				Percent Non-Detects		0.00%
333												
334	Raw Statistics						Log-transformed Statistics					
335					Minimum Detected	354.9				Minimum Detected		5.872
336					Maximum Detected	8463				Maximum Detected		9.043
337					Mean of Detected	2559				Mean of Detected		7.299
338					SD of Detected	2535				SD of Detected		1.106
339					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
340					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
341												
342												
343	UCL Statistics											
344	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
345					Shapiro Wilk Test Statistic	0.809				Shapiro Wilk Test Statistic		0.869
346					5% Shapiro Wilk Critical Value	0.918				5% Shapiro Wilk Critical Value		0.918
347	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
348												
349	Assuming Normal Distribution						Assuming Lognormal Distribution					
350					DL/2 Substitution Method					DL/2 Substitution Method		
351					Mean	2559				Mean		7.299
352					SD	2535				SD		1.106
353					95% DL/2 (t) UCL	3426				95% H-Stat (DL/2) UCL		4939
354												
355					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
356	MLE method failed to converge properly						Mean in Log Scale					
357							SD in Log Scale					
358							Mean in Original Scale					
359							SD in Original Scale					
360							95% Percentile Bootstrap UCL					
361							95% BCA Bootstrap UCL					
362												
363	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
364					k star (bias corrected)	0.949				Data do not follow a Discernable Distribution (0.05)		

	A	B	C	D	E	F	G	H	I	J	K	L
365	Theta Star					2697						
366	nu star					47.44						
367												
368	A-D Test Statistic					1.507	Nonparametric Statistics					
369	5% A-D Critical Value					0.772	Kaplan-Meier (KM) Method					
370	K-S Test Statistic					0.772	Mean					2559
371	5% K-S Critical Value					0.179	SD					2484
372	Data not Gamma Distributed at 5% Significance Level						SE of Mean					506.9
373							95% KM (t) UCL					3426
374	Assuming Gamma Distribution						95% KM (z) UCL					3393
375	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3426
376	Minimum					354.9	95% KM (bootstrap t) UCL					3640
377	Maximum					8463	95% KM (BCA) UCL					3428
378	Mean					2559	95% KM (Percentile Bootstrap) UCL					3420
379	Median					877.3	95% KM (Chebyshev) UCL					4769
380	SD					2535	97.5% KM (Chebyshev) UCL					5725
381	k star					0.949	99% KM (Chebyshev) UCL					7603
382	Theta star					2697						
383	Nu star					47.44	Potential UCLs to Use					
384	AppChi2					32.63	97.5% KM (Chebyshev) UCL					5725
385	95% Gamma Approximate UCL					3720						
386	95% Adjusted Gamma UCL					3818						
387	Note: DL/2 is not a recommended method.											
388												
389												
390	Cadmium											
391												
392	General Statistics											
393	Number of Valid Data					25	Number of Detected Data					21
394	Number of Distinct Detected Data					20	Number of Non-Detect Data					4
395	Number of Missing Values					24	Percent Non-Detects					16.00%
396												
397	Raw Statistics						Log-transformed Statistics					
398	Minimum Detected					14.11	Minimum Detected					2.647
399	Maximum Detected					298.1	Maximum Detected					5.697
400	Mean of Detected					108	Mean of Detected					4.127
401	SD of Detected					114.3	SD of Detected					1.076
402	Minimum Non-Detect					15.36	Minimum Non-Detect					2.732
403	Maximum Non-Detect					17.25	Maximum Non-Detect					2.848
404												
405	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					5
406	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					20
407	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					20.00%
408												
409	UCL Statistics											
410	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
411	Shapiro Wilk Test Statistic					0.704	Shapiro Wilk Test Statistic					0.865
412	5% Shapiro Wilk Critical Value					0.908	5% Shapiro Wilk Critical Value					0.908
413	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
414												
415	Assuming Normal Distribution						Assuming Lognormal Distribution					
416	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
417					Mean	92.02					Mean	3.801	
418					SD	110.8					SD	1.243	
419					95% DL/2 (t) UCL	129.9					95% H-Stat (DL/2) UCL	161.8	
420													
421					Maximum Likelihood Estimate(MLE) Method						Log ROS Method		
422					Mean	77.22					Mean in Log Scale	3.801	
423					SD	126.4					SD in Log Scale	1.244	
424					95% MLE (t) UCL	120.5					Mean in Original Scale	92.01	
425					95% MLE (Tiku) UCL	120.2					SD in Original Scale	110.8	
426											95% Percentile Bootstrap UCL	130.4	
427											95% BCA Bootstrap UCL	137.4	
428													
429					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
430					k star (bias corrected)	0.919					Data do not follow a Discernable Distribution (0.05)		
431					Theta Star	117.5							
432					nu star	38.6							
433													
434					A-D Test Statistic	1.721					Nonparametric Statistics		
435					5% A-D Critical Value	0.769					Kaplan-Meier (KM) Method		
436					K-S Test Statistic	0.769					Mean	92.98	
437					5% K-S Critical Value	0.195					SD	107.8	
438					Data not Gamma Distributed at 5% Significance Level						SE of Mean	22.1	
439											95% KM (t) UCL	130.8	
440					Assuming Gamma Distribution						95% KM (z) UCL	129.3	
441					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	130.2	
442					Minimum	1E-09					95% KM (bootstrap t) UCL	137	
443					Maximum	298.1					95% KM (BCA) UCL	128.3	
444					Mean	90.72					95% KM (Percentile Bootstrap) UCL	131.4	
445					Median	40.95					95% KM (Chebyshev) UCL	189.3	
446					SD	111.9					97.5% KM (Chebyshev) UCL	231	
447					k star	0.179					99% KM (Chebyshev) UCL	312.9	
448					Theta star	507.7							
449					Nu star	8.934					Potential UCLs to Use		
450					AppChi2	3.287					97.5% KM (Chebyshev) UCL	231	
451					95% Gamma Approximate UCL	246.6							
452					95% Adjusted Gamma UCL	265.1							
453					Note: DL/2 is not a recommended method.								
454													
455													
456					Calcium								
457													
458					General Statistics								
459					Number of Valid Data	25					Number of Detected Data	25	
460					Number of Distinct Detected Data	25					Number of Non-Detect Data	0	
461					Number of Missing Values	24					Percent Non-Detects	0.00%	
462													
463					Raw Statistics						Log-transformed Statistics		
464					Minimum Detected	3782000					Minimum Detected	15.15	
465					Maximum Detected	14052500					Maximum Detected	16.46	
466					Mean of Detected	8573368					Mean of Detected	15.88	
467					SD of Detected	3365375					SD of Detected	0.426	
468					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
469	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
470												
471												
472	UCL Statistics											
473	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
474	Shapiro Wilk Test Statistic					0.921	Shapiro Wilk Test Statistic					0.919
475	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918
476	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
477												
478	Assuming Normal Distribution						Assuming Lognormal Distribution					
479	DL/2 Substitution Method						DL/2 Substitution Method					
480	Mean					8573368	Mean					15.88
481	SD					3365375	SD					0.426
482	95% DL/2 (t) UCL					9724920	95% H-Stat (DL/2) UCL					10202338
483												
484	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
485	MLE method failed to converge properly						Mean in Log Scale					N/A
486							SD in Log Scale					N/A
487							Mean in Original Scale					N/A
488							SD in Original Scale					N/A
489							95% Percentile Bootstrap UCL					N/A
490							95% BCA Bootstrap UCL					N/A
491												
492	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
493	k star (bias corrected)					5.512	Data appear Normal at 5% Significance Level					
494	Theta Star					1555436						
495	nu star					275.6						
496												
497	A-D Test Statistic					0.673	Nonparametric Statistics					
498	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
499	K-S Test Statistic					0.746	Mean					8573368
500	5% K-S Critical Value					0.175	SD					3297381
501	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					673075
502							95% KM (t) UCL					9724920
503	Assuming Gamma Distribution						95% KM (z) UCL					9680478
504	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9724920
505	Minimum					3782000	95% KM (bootstrap t) UCL					9754000
506	Maximum					14052500	95% KM (BCA) UCL					9755068
507	Mean					8573368	95% KM (Percentile Bootstrap) UCL					9654896
508	Median					8199200	95% KM (Chebyshev) UCL					11507234
509	SD					3365375	97.5% KM (Chebyshev) UCL					12776720
510	k star					5.512	99% KM (Chebyshev) UCL					15270380
511	Theta star					1555436						
512	Nu star					275.6	Potential UCLs to Use					
513	AppChi2					238.1	95% KM (t) UCL					9724920
514	95% Gamma Approximate UCL					9921468	95% KM (Percentile Bootstrap) UCL					9654896
515	95% Adjusted Gamma UCL					10021173						
516	Note: DL/2 is not a recommended method.											
517												
518												
519	Chromium											
520												

	A	B	C	D	E	F	G	H	I	J	K	L
521	General Statistics											
522	Number of Valid Data					25	Number of Detected Data					25
523	Number of Distinct Detected Data					25	Number of Non-Detect Data					0
524	Number of Missing Values					24	Percent Non-Detects					0.00%
525												
526	Raw Statistics						Log-transformed Statistics					
527	Minimum Detected					274.4	Minimum Detected					5.615
528	Maximum Detected					1576	Maximum Detected					7.363
529	Mean of Detected					744.9	Mean of Detected					6.492
530	SD of Detected					377.9	SD of Detected					0.506
531	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
532	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
533												
534												
535	UCL Statistics											
536	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
537	Shapiro Wilk Test Statistic					0.908	Shapiro Wilk Test Statistic					0.966
538	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918
539	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
540												
541	Assuming Normal Distribution						Assuming Lognormal Distribution					
542	DL/2 Substitution Method						DL/2 Substitution Method					
543	Mean					744.9	Mean					6.492
544	SD					377.9	SD					0.506
545	95% DL/2 (t) UCL					874.2	95% H-Stat (DL/2) UCL					918.3
546												
547	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
548	MLE method failed to converge properly						Mean in Log Scale					N/A
549							SD in Log Scale					N/A
550							Mean in Original Scale					N/A
551							SD in Original Scale					N/A
552							95% Percentile Bootstrap UCL					N/A
553							95% BCA Bootstrap UCL					N/A
554												
555	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
556	k star (bias corrected)					3.794	Data appear Gamma Distributed at 5% Significance Level					
557	Theta Star					196.4						
558	nu star					189.7						
559												
560	A-D Test Statistic					0.333	Nonparametric Statistics					
561	5% A-D Critical Value					0.748	Kaplan-Meier (KM) Method					
562	K-S Test Statistic					0.748	Mean					744.9
563	5% K-S Critical Value					0.175	SD					370.3
564	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					75.58
565							95% KM (t) UCL					874.2
566	Assuming Gamma Distribution						95% KM (z) UCL					869.2
567	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					874.2
568	Minimum					274.4	95% KM (bootstrap t) UCL					887.3
569	Maximum					1576	95% KM (BCA) UCL					868.5
570	Mean					744.9	95% KM (Percentile Bootstrap) UCL					870.1
571	Median					632.5	95% KM (Chebyshev) UCL					1074
572	SD					377.9	97.5% KM (Chebyshev) UCL					1217

	A	B	C	D	E	F	G	H	I	J	K	L	
573					k star	3.794				99% KM (Chebyshev) UCL		1497	
574					Theta star	196.4							
575					Nu star	189.7				Potential UCLs to Use			
576					AppChi2	158.8				95% KM (BCA) UCL		868.5	
577					95% Gamma Approximate UCL	889.7							
578					95% Adjusted Gamma UCL	900.6							
579	Note: DL/2 is not a recommended method.												
580													
581													
582	Cobalt												
583													
584	General Statistics												
585					Number of Valid Data	25				Number of Detected Data		25	
586					Number of Distinct Detected Data	25				Number of Non-Detect Data		0	
587					Number of Missing Values	24				Percent Non-Detects		0.00%	
588													
589	Raw Statistics						Log-transformed Statistics						
590					Minimum Detected	17.64				Minimum Detected		2.87	
591					Maximum Detected	113.6				Maximum Detected		4.732	
592					Mean of Detected	39.51				Mean of Detected		3.529	
593					SD of Detected	25.17				SD of Detected		0.524	
594					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
595					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
596													
597													
598	UCL Statistics												
599	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
600					Shapiro Wilk Test Statistic	0.77				Shapiro Wilk Test Statistic		0.915	
601					5% Shapiro Wilk Critical Value	0.918				5% Shapiro Wilk Critical Value		0.918	
602	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
603													
604	Assuming Normal Distribution						Assuming Lognormal Distribution						
605					DL/2 Substitution Method					DL/2 Substitution Method			
606					Mean	39.51				Mean		3.529	
607					SD	25.17				SD		0.524	
608					95% DL/2 (t) UCL	48.12				95% H-Stat (DL/2) UCL		48.34	
609													
610					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
611	MLE method failed to converge properly										Mean in Log Scale		N/A
612										SD in Log Scale		N/A	
613										Mean in Original Scale		N/A	
614										SD in Original Scale		N/A	
615										95% Percentile Bootstrap UCL		N/A	
616										95% BCA Bootstrap UCL		N/A	
617													
618	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
619					k star (bias corrected)	3.147				Data do not follow a Discernable Distribution (0.05)			
620					Theta Star	12.56							
621					nu star	157.3							
622													
623					A-D Test Statistic	1.035				Nonparametric Statistics			
624					5% A-D Critical Value	0.75				Kaplan-Meier (KM) Method			

	A	B	C	D	E	F	G	H	I	J	K	L	
625	K-S Test Statistic					0.75	Mean					39.51	
626	5% K-S Critical Value					0.176	SD					24.67	
627	Data not Gamma Distributed at 5% Significance Level						SE of Mean					5.035	
628							95% KM (t) UCL					48.12	
629	Assuming Gamma Distribution						95% KM (z) UCL					47.79	
630	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					48.12	
631	Minimum						17.64	95% KM (bootstrap t) UCL					52.01
632	Maximum						113.6	95% KM (BCA) UCL					47.88
633	Mean						39.51	95% KM (Percentile Bootstrap) UCL					48.16
634	Median						31.8	95% KM (Chebyshev) UCL					61.46
635	SD						25.17	97.5% KM (Chebyshev) UCL					70.95
636	k star						3.147	99% KM (Chebyshev) UCL					89.61
637	Theta star						12.56						
638	Nu star						157.3	Potential UCLs to Use					
639	AppChi2						129.3	95% KM (Chebyshev) UCL					61.46
640	95% Gamma Approximate UCL						48.06						
641	95% Adjusted Gamma UCL						48.71						
642	Note: DL/2 is not a recommended method.												
643													
644													
645	Copper												
646													
647	General Statistics												
648	Number of Valid Data					25	Number of Detected Data					25	
649	Number of Distinct Detected Data					25	Number of Non-Detect Data					0	
650	Number of Missing Values					24	Percent Non-Detects					0.00%	
651													
652	Raw Statistics						Log-transformed Statistics						
653	Minimum Detected					302.4	Minimum Detected					5.712	
654	Maximum Detected					1275	Maximum Detected					7.151	
655	Mean of Detected					700	Mean of Detected					6.496	
656	SD of Detected					232.2	SD of Detected					0.347	
657	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
658	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
659													
660													
661	UCL Statistics												
662	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
663	Shapiro Wilk Test Statistic					0.96	Shapiro Wilk Test Statistic					0.965	
664	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918	
665	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
666													
667	Assuming Normal Distribution						Assuming Lognormal Distribution						
668	DL/2 Substitution Method						DL/2 Substitution Method						
669	Mean					700	Mean					6.496	
670	SD					232.2	SD					0.347	
671	95% DL/2 (t) UCL					779.5	95% H-Stat (DL/2) UCL					801.8	
672													
673	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
674	MLE method failed to converge properly						Mean in Log Scale						N/A
675							SD in Log Scale						N/A
676							Mean in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L
677							SD in Original Scale					N/A
678							95% Percentile Bootstrap UCL					N/A
679							95% BCA Bootstrap UCL					N/A
680												
681	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
682	k star (bias corrected)				8.152		Data appear Normal at 5% Significance Level					
683	Theta Star				85.87							
684	nu star				407.6							
685												
686	A-D Test Statistic				0.278		Nonparametric Statistics					
687	5% A-D Critical Value				0.745		Kaplan-Meier (KM) Method					
688	K-S Test Statistic				0.745						Mean	700
689	5% K-S Critical Value				0.175						SD	227.6
690	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	46.45
691											95% KM (t) UCL	779.5
692	Assuming Gamma Distribution										95% KM (z) UCL	776.4
693	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	779.5
694	Minimum				302.4						95% KM (bootstrap t) UCL	784.5
695	Maximum				1275						95% KM (BCA) UCL	772.8
696	Mean				700						95% KM (Percentile Bootstrap) UCL	773.9
697	Median				672						95% KM (Chebyshev) UCL	902.5
698	SD				232.2						97.5% KM (Chebyshev) UCL	990.1
699	k star				8.152						99% KM (Chebyshev) UCL	1162
700	Theta star				85.87							
701	Nu star				407.6		Potential UCLs to Use					
702	AppChi2				361.8						95% KM (t) UCL	779.5
703	95% Gamma Approximate UCL				788.7						95% KM (Percentile Bootstrap) UCL	773.9
704	95% Adjusted Gamma UCL				795.1							
705	Note: DL/2 is not a recommended method.											
706												
707												
708	Iron											
709												
710	General Statistics											
711	Number of Valid Data				25		Number of Detected Data				25	
712	Number of Distinct Detected Data				25		Number of Non-Detect Data				0	
713	Number of Missing Values				24		Percent Non-Detects				0.00%	
714												
715	Raw Statistics						Log-transformed Statistics					
716	Minimum Detected				7056		Minimum Detected				8.862	
717	Maximum Detected				129636		Maximum Detected				11.77	
718	Mean of Detected				32506		Mean of Detected				10.06	
719	SD of Detected				32802		SD of Detected				0.763	
720	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
721	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
722												
723												
724	UCL Statistics											
725	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
726	Shapiro Wilk Test Statistic				0.667		Shapiro Wilk Test Statistic				0.93	
727	5% Shapiro Wilk Critical Value				0.918		5% Shapiro Wilk Critical Value				0.918	
728	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L		
729														
730	Assuming Normal Distribution						Assuming Lognormal Distribution							
731	DL/2 Substitution Method						DL/2 Substitution Method							
732	Mean						32506	Mean						10.06
733	SD						32802	SD						0.763
734	95% DL/2 (t) UCL						43730	95% H-Stat (DL/2) UCL						44352
735														
736	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
737	MLE method failed to converge properly						Mean in Log Scale						N/A	
738							SD in Log Scale						N/A	
739							Mean in Original Scale						N/A	
740							SD in Original Scale						N/A	
741							95% Percentile Bootstrap UCL						N/A	
742							95% BCA Bootstrap UCL						N/A	
743														
744	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
745	k star (bias corrected)						1.511	Data appear Lognormal at 5% Significance Level						
746	Theta Star						21517							
747	nu star						75.54							
748														
749	A-D Test Statistic						1.331	Nonparametric Statistics						
750	5% A-D Critical Value						0.76	Kaplan-Meier (KM) Method						
751	K-S Test Statistic						0.76	Mean						32506
752	5% K-S Critical Value						0.177	SD						32139
753	Data not Gamma Distributed at 5% Significance Level						SE of Mean						6560	
754							95% KM (t) UCL						43730	
755	Assuming Gamma Distribution						95% KM (z) UCL						43297	
756	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						43730	
757	Minimum						7056	95% KM (bootstrap t) UCL						50487
758	Maximum						129636	95% KM (BCA) UCL						44350
759	Mean						32506	95% KM (Percentile Bootstrap) UCL						43861
760	Median						19278	95% KM (Chebyshev) UCL						61102
761	SD						32802	97.5% KM (Chebyshev) UCL						73476
762	k star						1.511	99% KM (Chebyshev) UCL						97781
763	Theta star						21517							
764	Nu star						75.54	Potential UCLs to Use						
765	AppChi2						56.52	95% KM (Chebyshev) UCL						61102
766	95% Gamma Approximate UCL						43444							
767	95% Adjusted Gamma UCL						44324							
768	Note: DL/2 is not a recommended method.													
769														
770														
771	Lead													
772														
773	General Statistics													
774	Number of Valid Data						25	Number of Detected Data						19
775	Number of Distinct Detected Data						19	Number of Non-Detect Data						6
776	Number of Missing Values						24	Percent Non-Detects						24.00%
777														
778	Raw Statistics						Log-transformed Statistics							
779	Minimum Detected						21.72	Minimum Detected						3.078
780	Maximum Detected						1436	Maximum Detected						7.27

	A	B	C	D	E	F	G	H	I	J	K	L
781	Mean of Detected					328.9	Mean of Detected					4.947
782	SD of Detected					425.5	SD of Detected					1.34
783	Minimum Non-Detect					13.15	Minimum Non-Detect					2.576
784	Maximum Non-Detect					15.5	Maximum Non-Detect					2.741
785												
786	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					6
787	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					19
788	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					24.00%
789												
790	UCL Statistics											
791	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
792	Shapiro Wilk Test Statistic					0.722	Shapiro Wilk Test Statistic					0.865
793	5% Shapiro Wilk Critical Value					0.901	5% Shapiro Wilk Critical Value					0.901
794	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
795												
796	Assuming Normal Distribution						Assuming Lognormal Distribution					
797	DL/2 Substitution Method						DL/2 Substitution Method					
798	Mean					251.7	Mean					4.231
799	SD					394.3	SD					1.743
800	95% DL/2 (t) UCL					386.6	95% H-Stat (DL/2) UCL					405.9
801												
802	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
803	Mean					176.7	Mean in Log Scale					4.229
804	SD					468.2	SD in Log Scale					1.746
805	95% MLE (t) UCL					336.9	Mean in Original Scale					251.6
806	95% MLE (Tiku) UCL					338.2	SD in Original Scale					394.3
807							95% Percentile Bootstrap UCL					382.4
808							95% BCA Bootstrap UCL					414.9
809												
810	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
811	k star (bias corrected)					0.634	Data do not follow a Discernable Distribution (0.05)					
812	Theta Star					519.1						
813	nu star					24.08						
814												
815	A-D Test Statistic					1.613	Nonparametric Statistics					
816	5% A-D Critical Value					0.783	Kaplan-Meier (KM) Method					
817	K-S Test Statistic					0.783	Mean					255.2
818	5% K-S Critical Value					0.207	SD					384.2
819	Data not Gamma Distributed at 5% Significance Level						SE of Mean					78.94
820							95% KM (t) UCL					390.2
821	Assuming Gamma Distribution						95% KM (z) UCL					385
822	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					386.3
823	Minimum					1E-09	95% KM (bootstrap t) UCL					451.2
824	Maximum					1436	95% KM (BCA) UCL					400.7
825	Mean					250	95% KM (Percentile Bootstrap) UCL					386.5
826	Median					53.44	95% KM (Chebyshev) UCL					599.3
827	SD					395.4	97.5% KM (Chebyshev) UCL					748.1
828	k star					0.131	99% KM (Chebyshev) UCL					1041
829	Theta star					1915						
830	Nu star					6.526	Potential UCLs to Use					
831	AppChi2					1.914	97.5% KM (Chebyshev) UCL					748.1
832	95% Gamma Approximate UCL					852.1						

	A	B	C	D	E	F	G	H	I	J	K	L
833	95% Adjusted Gamma UCL					932.5						
834	Note: DL/2 is not a recommended method.											
835												
836												
837	Magnesium											
838												
839	General Statistics											
840	Number of Valid Data					25	Number of Detected Data					25
841	Number of Distinct Detected Data					25	Number of Non-Detect Data					0
842	Number of Missing Values					24	Percent Non-Detects					0.00%
843												
844	Raw Statistics						Log-transformed Statistics					
845	Minimum Detected					264640	Minimum Detected					12.49
846	Maximum Detected					397120	Maximum Detected					12.89
847	Mean of Detected					328562	Mean of Detected					12.7
848	SD of Detected					38244	SD of Detected					0.117
849	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
850	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
851												
852												
853	UCL Statistics											
854	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
855	Shapiro Wilk Test Statistic					0.943	Shapiro Wilk Test Statistic					0.941
856	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918
857	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
858												
859	Assuming Normal Distribution						Assuming Lognormal Distribution					
860	DL/2 Substitution Method						DL/2 Substitution Method					
861	Mean					328562	Mean					12.7
862	SD					38244	SD					0.117
863	95% DL/2 (t) UCL					341648	95% H-Stat (DL/2) UCL					342483
864												
865	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
866	MLE method failed to converge properly						Mean in Log Scale					N/A
867							SD in Log Scale					N/A
868							Mean in Original Scale					N/A
869							SD in Original Scale					N/A
870							95% Percentile Bootstrap UCL					N/A
871							95% BCA Bootstrap UCL					N/A
872												
873	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
874	k star (bias corrected)					67.06	Data appear Normal at 5% Significance Level					
875	Theta Star					4899						
876	nu star					3353						
877												
878	A-D Test Statistic					0.597	Nonparametric Statistics					
879	5% A-D Critical Value					0.742	Kaplan-Meier (KM) Method					
880	K-S Test Statistic					0.742	Mean					328562
881	5% K-S Critical Value					0.174	SD					37471
882	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					7649
883							95% KM (t) UCL					341648
884	Assuming Gamma Distribution						95% KM (z) UCL					341143

	A	B	C	D	E	F	G	H	I	J	K	L
885	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					341648
886					Minimum	264640				95% KM (bootstrap t) UCL		341052
887					Maximum	397120				95% KM (BCA) UCL		340072
888					Mean	328562				95% KM (Percentile Bootstrap) UCL		340924
889					Median	327040				95% KM (Chebyshev) UCL		361903
890					SD	38244				97.5% KM (Chebyshev) UCL		376329
891					k star	67.06				99% KM (Chebyshev) UCL		404667
892					Theta star	4899						
893					Nu star	3353				Potential UCLs to Use		
894					AppChi2	3220				95% KM (t) UCL		341648
895					95% Gamma Approximate UCL	342191				95% KM (Percentile Bootstrap) UCL		340924
896					95% Adjusted Gamma UCL	343139						
897	Note: DL/2 is not a recommended method.											
898												
899												
900	Manganese											
901												
902	General Statistics											
903					Number of Valid Data	25					Number of Detected Data	25
904					Number of Distinct Detected Data	25					Number of Non-Detect Data	0
905					Number of Missing Values	24					Percent Non-Detects	0.00%
906												
907	Raw Statistics						Log-transformed Statistics					
908					Minimum Detected	1249					Minimum Detected	7.13
909					Maximum Detected	9268					Maximum Detected	9.134
910					Mean of Detected	3232					Mean of Detected	7.825
911					SD of Detected	2654					SD of Detected	0.683
912					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
913					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
914												
915												
916	UCL Statistics											
917	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
918					Shapiro Wilk Test Statistic	0.719					Shapiro Wilk Test Statistic	0.83
919					5% Shapiro Wilk Critical Value	0.918					5% Shapiro Wilk Critical Value	0.918
920	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
921												
922	Assuming Normal Distribution						Assuming Lognormal Distribution					
923					DL/2 Substitution Method						DL/2 Substitution Method	
924					Mean	3232					Mean	7.825
925					SD	2654					SD	0.683
926					95% DL/2 (t) UCL	4140					95% H-Stat (DL/2) UCL	4253
927												
928					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
929	MLE method failed to converge properly										Mean in Log Scale	N/A
930											SD in Log Scale	N/A
931											Mean in Original Scale	N/A
932											SD in Original Scale	N/A
933											95% Percentile Bootstrap UCL	N/A
934											95% BCA Bootstrap UCL	N/A
935												
936	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L	
937	k star (bias corrected)					1.882	Data do not follow a Discernable Distribution (0.05)						
938	Theta Star					1717							
939	nu star					94.11							
940													
941	A-D Test Statistic					2.155	Nonparametric Statistics						
942	5% A-D Critical Value					0.756	Kaplan-Meier (KM) Method						
943	K-S Test Statistic					0.756	Mean						3232
944	5% K-S Critical Value					0.177	SD						2600
945	Data not Gamma Distributed at 5% Significance Level						SE of Mean						530.8
946							95% KM (t) UCL						4140
947	Assuming Gamma Distribution						95% KM (z) UCL						4105
948	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						4140
949	Minimum					1249	95% KM (bootstrap t) UCL						4325
950	Maximum					9268	95% KM (BCA) UCL						4107
951	Mean					3232	95% KM (Percentile Bootstrap) UCL						4130
952	Median					1844	95% KM (Chebyshev) UCL						5545
953	SD					2654	97.5% KM (Chebyshev) UCL						6546
954	k star					1.882	99% KM (Chebyshev) UCL						8513
955	Theta star					1717							
956	Nu star					94.11	Potential UCLs to Use						
957	AppChi2					72.74	95% KM (Chebyshev) UCL						5545
958	95% Gamma Approximate UCL					4181							
959	95% Adjusted Gamma UCL					4256							
960	Note: DL/2 is not a recommended method.												
961													
962													
963	Mercury												
964													
965	General Statistics												
966	Number of Valid Data					25	Number of Detected Data					25	
967	Number of Distinct Detected Data					23	Number of Non-Detect Data					0	
968	Number of Missing Values					24	Percent Non-Detects					0.00%	
969													
970	Raw Statistics						Log-transformed Statistics						
971	Minimum Detected					58.5	Minimum Detected					4.069	
972	Maximum Detected					258	Maximum Detected					5.553	
973	Mean of Detected					148	Mean of Detected					4.836	
974	SD of Detected					78.65	SD of Detected					0.6	
975	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
976	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
977													
978													
979	UCL Statistics												
980	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
981	Shapiro Wilk Test Statistic					0.816	Shapiro Wilk Test Statistic					0.799	
982	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918	
983	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
984													
985	Assuming Normal Distribution						Assuming Lognormal Distribution						
986	DL/2 Substitution Method						DL/2 Substitution Method						
987	Mean					148	Mean					4.836	
988	SD					78.65	SD					0.6	

	A	B	C	D	E	F	G	H	I	J	K	L
989	95% DL/2 (t) UCL					174.9	95% H-Stat (DL/2) UCL					193.8
990												
991	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
992	MLE method failed to converge properly						Mean in Log Scale					N/A
993												
994												
995												
996												
997												
998												
999	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1000	k star (bias corrected)					2.903	Data do not follow a Discernable Distribution (0.05)					
1001												
1002	Theta Star					50.99						
1003												
1004	nu star					145.1						
1005												
1006	A-D Test Statistic					2.09	Nonparametric Statistics					
1007	5% A-D Critical Value					0.751	Kaplan-Meier (KM) Method					
1008	K-S Test Statistic					0.751	Mean					148
1009	5% K-S Critical Value					0.176	SD					77.06
1010	Data not Gamma Distributed at 5% Significance Level						SE of Mean					15.73
1011												
1012												
1013												
1014												
1015												
1016												
1017												
1018												
1019												
1020												
1021												
1022												
1023	Note: DL/2 is not a recommended method.											
1024												
1025												
1026	Nickel											
1027												
1028	General Statistics											
1029	Number of Valid Data					25	Number of Detected Data					25
1030	Number of Distinct Detected Data					25	Number of Non-Detect Data					0
1031	Number of Missing Values					24	Percent Non-Detects					0.00%
1032												
1033	Raw Statistics						Log-transformed Statistics					
1034	Minimum Detected					136.4	Minimum Detected					4.916
1035	Maximum Detected					730	Maximum Detected					6.593
1036	Mean of Detected					330.6	Mean of Detected					5.699
1037	SD of Detected					154.2	SD of Detected					0.465
1038	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1039	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1040												

	A	B	C	D	E	F	G	H	I	J	K	L	
1041													
1042	UCL Statistics												
1043	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1044	Shapiro Wilk Test Statistic					0.928	Shapiro Wilk Test Statistic					0.972	
1045	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918	
1046	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1047													
1048	Assuming Normal Distribution						Assuming Lognormal Distribution						
1049	DL/2 Substitution Method						DL/2 Substitution Method						
1050	Mean					330.6	Mean					5.699	
1051	SD					154.2	SD					0.465	
1052	95% DL/2 (t) UCL					383.4	95% H-Stat (DL/2) UCL					399.4	
1053													
1054	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1055	MLE method failed to converge properly						Mean in Log Scale					N/A	
1056							SD in Log Scale					N/A	
1057							Mean in Original Scale					N/A	
1058							SD in Original Scale					N/A	
1059							95% Percentile Bootstrap UCL					N/A	
1060							95% BCA Bootstrap UCL					N/A	
1061													
1062	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1063	k star (bias corrected)					4.465	Data appear Normal at 5% Significance Level						
1064	Theta Star					74.06							
1065	nu star					223.2							
1066													
1067	A-D Test Statistic					0.259	Nonparametric Statistics						
1068	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method						
1069	K-S Test Statistic					0.747	Mean					330.6	
1070	5% K-S Critical Value					0.175	SD					151.1	
1071	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					30.85	
1072							95% KM (t) UCL					383.4	
1073	Assuming Gamma Distribution						95% KM (z) UCL					381.4	
1074	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					383.4	
1075	Minimum					136.4	95% KM (bootstrap t) UCL					389.5	
1076	Maximum					730	95% KM (BCA) UCL					385.7	
1077	Mean					330.6	95% KM (Percentile Bootstrap) UCL					384	
1078	Median					275.6	95% KM (Chebyshev) UCL					465.1	
1079	SD					154.2	97.5% KM (Chebyshev) UCL					523.3	
1080	k star					4.465	99% KM (Chebyshev) UCL					637.6	
1081	Theta star					74.06							
1082	Nu star					223.2	Potential UCLs to Use						
1083	AppChi2					189.7	95% KM (t) UCL					383.4	
1084	95% Gamma Approximate UCL					389.2	95% KM (Percentile Bootstrap) UCL					384	
1085	95% Adjusted Gamma UCL					393.6							
1086	Note: DL/2 is not a recommended method.												
1087													
1088													
1089	Potassium												
1090													
1091	General Statistics												
1092	Number of Valid Data					25	Number of Detected Data					25	

	A	B	C	D	E	F	G	H	I	J	K	L
1093	Number of Distinct Detected Data					25	Number of Non-Detect Data					0
1094	Number of Missing Values					24	Percent Non-Detects					0.00%
1095												
1096	Raw Statistics						Log-transformed Statistics					
1097	Minimum Detected					2673000	Minimum Detected					14.8
1098	Maximum Detected					3778800	Maximum Detected					15.14
1099	Mean of Detected					3112216	Mean of Detected					14.95
1100	SD of Detected					342353	SD of Detected					0.107
1101	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1102	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1103												
1104												
1105	UCL Statistics											
1106	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1107	Shapiro Wilk Test Statistic					0.912	Shapiro Wilk Test Statistic					0.926
1108	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918
1109	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1110												
1111	Assuming Normal Distribution						Assuming Lognormal Distribution					
1112	DL/2 Substitution Method						DL/2 Substitution Method					
1113	Mean					3112216	Mean					14.95
1114	SD					342353	SD					0.107
1115	95% DL/2 (t) UCL					3229361	95% H-Stat (DL/2) UCL					3231836
1116												
1117	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1118	MLE method failed to converge properly						Mean in Log Scale					N/A
1119							SD in Log Scale					N/A
1120							Mean in Original Scale					N/A
1121							SD in Original Scale					N/A
1122							95% Percentile Bootstrap UCL					N/A
1123							95% BCA Bootstrap UCL					N/A
1124												
1125	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1126	k star (bias corrected)					78.42	Data appear Gamma Distributed at 5% Significance Level					
1127	Theta Star					39689						
1128	nu star					3921						
1129												
1130	A-D Test Statistic					0.669	Nonparametric Statistics					
1131	5% A-D Critical Value					0.742	Kaplan-Meier (KM) Method					
1132	K-S Test Statistic					0.742	Mean					3112216
1133	5% K-S Critical Value					0.174	SD					335436
1134	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					68471
1135							95% KM (t) UCL					3229361
1136	Assuming Gamma Distribution						95% KM (z) UCL					3224840
1137	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3229361
1138	Minimum					2673000	95% KM (bootstrap t) UCL					3236214
1139	Maximum					3778800	95% KM (BCA) UCL					3225960
1140	Mean					3112216	95% KM (Percentile Bootstrap) UCL					3229802
1141	Median					3035200	95% KM (Chebyshev) UCL					3410672
1142	SD					342353	97.5% KM (Chebyshev) UCL					3539815
1143	k star					78.42	99% KM (Chebyshev) UCL					3793490
1144	Theta star					39689						

	A	B	C	D	E	F	G	H	I	J	K	L	
1145					Nu star	3921	Potential UCLs to Use						
1146					AppChi2	3776				95% KM (BCA) UCL		3225960	
1147					95% Gamma Approximate UCL	3231314							
1148					95% Adjusted Gamma UCL	3239580							
1149	Note: DL/2 is not a recommended method.												
1150													
1151													
1152	Selenium												
1153													
1154	General Statistics												
1155					Number of Valid Data	25				Number of Detected Data		25	
1156					Number of Distinct Detected Data	25				Number of Non-Detect Data		0	
1157					Number of Missing Values	24				Percent Non-Detects		0.00%	
1158													
1159	Raw Statistics						Log-transformed Statistics						
1160					Minimum Detected	308				Minimum Detected		5.73	
1161					Maximum Detected	838.4				Maximum Detected		6.731	
1162					Mean of Detected	506.8				Mean of Detected		6.201	
1163					SD of Detected	122.1				SD of Detected		0.235	
1164					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1165					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1166													
1167													
1168	UCL Statistics												
1169	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1170					Shapiro Wilk Test Statistic	0.959				Shapiro Wilk Test Statistic		0.99	
1171					5% Shapiro Wilk Critical Value	0.918				5% Shapiro Wilk Critical Value		0.918	
1172	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1173													
1174	Assuming Normal Distribution						Assuming Lognormal Distribution						
1175					DL/2 Substitution Method					DL/2 Substitution Method			
1176					Mean	506.8				Mean		6.201	
1177					SD	122.1				SD		0.235	
1178					95% DL/2 (t) UCL	548.6				95% H-Stat (DL/2) UCL		552.3	
1179													
1180					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1181	MLE method failed to converge properly										Mean in Log Scale		N/A
1182										SD in Log Scale		N/A	
1183										Mean in Original Scale		N/A	
1184										SD in Original Scale		N/A	
1185										95% Percentile Bootstrap UCL		N/A	
1186										95% BCA Bootstrap UCL		N/A	
1187													
1188	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1189					k star (bias corrected)	16.62				Data appear Normal at 5% Significance Level			
1190					Theta Star	30.5							
1191					nu star	830.8							
1192													
1193					A-D Test Statistic	0.175				Nonparametric Statistics			
1194					5% A-D Critical Value	0.743				Kaplan-Meier (KM) Method			
1195					K-S Test Statistic	0.743				Mean		506.8	
1196					5% K-S Critical Value	0.174				SD		119.7	

	A	B	C	D	E	F	G	H	I	J	K	L	
1197	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	24.43
1198											95% KM (t) UCL	548.6	
1199	Assuming Gamma Distribution											95% KM (z) UCL	547
1200	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	548.6	
1201				Minimum		308					95% KM (bootstrap t) UCL	554.7	
1202				Maximum		838.4					95% KM (BCA) UCL	550.4	
1203				Mean		506.8					95% KM (Percentile Bootstrap) UCL	547.4	
1204				Median		508.8					95% KM (Chebyshev) UCL	613.3	
1205				SD		122.1					97.5% KM (Chebyshev) UCL	659.4	
1206				k star		16.62					99% KM (Chebyshev) UCL	749.9	
1207				Theta star		30.5							
1208				Nu star		830.8				Potential UCLs to Use			
1209				AppChi2		765					95% KM (t) UCL	548.6	
1210				95% Gamma Approximate UCL		550.5					95% KM (Percentile Bootstrap) UCL	547.4	
1211				95% Adjusted Gamma UCL		553.6							
1212	Note: DL/2 is not a recommended method.												
1213													
1214													
1215	Sodium												
1216													
1217	General Statistics												
1218				Number of Valid Data		25					Number of Detected Data	25	
1219				Number of Distinct Detected Data		25					Number of Non-Detect Data	0	
1220				Number of Missing Values		24					Percent Non-Detects	0.00%	
1221													
1222	Raw Statistics						Log-transformed Statistics						
1223				Minimum Detected		698060					Minimum Detected	13.46	
1224				Maximum Detected		1636080					Maximum Detected	14.31	
1225				Mean of Detected		1092548					Mean of Detected	13.87	
1226				SD of Detected		298249					SD of Detected	0.275	
1227				Minimum Non-Detect		N/A					Minimum Non-Detect	N/A	
1228				Maximum Non-Detect		N/A					Maximum Non-Detect	N/A	
1229													
1230													
1231	UCL Statistics												
1232	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1233				Shapiro Wilk Test Statistic		0.925					Shapiro Wilk Test Statistic	0.933	
1234				5% Shapiro Wilk Critical Value		0.918					5% Shapiro Wilk Critical Value	0.918	
1235	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1236													
1237	Assuming Normal Distribution						Assuming Lognormal Distribution						
1238				DL/2 Substitution Method							DL/2 Substitution Method		
1239				Mean		1092548					Mean	13.87	
1240				SD		298249					SD	0.275	
1241				95% DL/2 (t) UCL		1194602					95% H-Stat (DL/2) UCL	1210392	
1242													
1243				Maximum Likelihood Estimate(MLE) Method		N/A					Log ROS Method		
1244	MLE method failed to converge properly											Mean in Log Scale	N/A
1245											SD in Log Scale	N/A	
1246											Mean in Original Scale	N/A	
1247											SD in Original Scale	N/A	
1248											95% Percentile Bootstrap UCL	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L	
1249										95% BCA Bootstrap UCL		N/A	
1250													
1251	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1252					k star (bias corrected)	12.39	Data appear Normal at 5% Significance Level						
1253					Theta Star	88187							
1254					nu star	619.4							
1255													
1256					A-D Test Statistic	0.584	Nonparametric Statistics						
1257					5% A-D Critical Value	0.744	Kaplan-Meier (KM) Method						
1258					K-S Test Statistic	0.744						Mean	1092548
1259					5% K-S Critical Value	0.174						SD	292224
1260	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	59650
1261												95% KM (t) UCL	1194602
1262	Assuming Gamma Distribution											95% KM (z) UCL	1190663
1263	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	1194602
1264					Minimum	698060						95% KM (bootstrap t) UCL	1196177
1265					Maximum	1636080						95% KM (BCA) UCL	1192418
1266					Mean	1092548						95% KM (Percentile Bootstrap) UCL	1189413
1267					Median	1020440						95% KM (Chebyshev) UCL	1352556
1268					SD	298249						97.5% KM (Chebyshev) UCL	1465061
1269					k star	12.39						99% KM (Chebyshev) UCL	1686057
1270					Theta star	88187							
1271					Nu star	619.4	Potential UCLs to Use						
1272					AppChi2	562.7						95% KM (t) UCL	1194602
1273					95% Gamma Approximate UCL	1202706						95% KM (Percentile Bootstrap) UCL	1189413
1274					95% Adjusted Gamma UCL	1210618							
1275	Note: DL/2 is not a recommended method.												
1276													
1277													
1278	Uranium												
1279													
1280	General Statistics												
1281					Number of Valid Data	25					Number of Detected Data	20	
1282					Number of Distinct Detected Data	20					Number of Non-Detect Data	5	
1283					Number of Missing Values	24					Percent Non-Detects	20.00%	
1284													
1285	Raw Statistics						Log-transformed Statistics						
1286					Minimum Detected	0.68					Minimum Detected	-0.386	
1287					Maximum Detected	20.57					Maximum Detected	3.024	
1288					Mean of Detected	6.711					Mean of Detected	1.427	
1289					SD of Detected	6.389					SD of Detected	1.052	
1290					Minimum Non-Detect	1.36					Minimum Non-Detect	0.307	
1291					Maximum Non-Detect	1.76					Maximum Non-Detect	0.565	
1292													
1293	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						9
1294	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						16
1295	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						36.00%
1296													
1297	UCL Statistics												
1298	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1299					Shapiro Wilk Test Statistic	0.823					Shapiro Wilk Test Statistic	0.955	
1300					5% Shapiro Wilk Critical Value	0.905					5% Shapiro Wilk Critical Value	0.905	

	A	B	C	D	E	F	G	H	I	J	K	L
1301	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1302												
1303	Assuming Normal Distribution						Assuming Lognormal Distribution					
1304	DL/2 Substitution Method						DL/2 Substitution Method					
1305	Mean				5.521		Mean				1.087	
1306	SD				6.182		SD				1.167	
1307	95% DL/2 (t) UCL				7.636		95% H-Stat (DL/2) UCL				7.217	
1308												
1309	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1310	Mean				3.743		Mean in Log Scale				1.119	
1311	SD				8.143		SD in Log Scale				1.129	
1312	95% MLE (t) UCL				6.529		Mean in Original Scale				5.547	
1313	95% MLE (Tiku) UCL				6.785		SD in Original Scale				6.161	
1314							95% Percentile Bootstrap UCL				7.618	
1315							95% BCA Bootstrap UCL				8.023	
1316												
1317	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1318	k star (bias corrected)				1.044		Data appear Gamma Distributed at 5% Significance Level					
1319	Theta Star				6.43							
1320	nu star				41.74							
1321												
1322	A-D Test Statistic				0.485		Nonparametric Statistics					
1323	5% A-D Critical Value				0.764		Kaplan-Meier (KM) Method					
1324	K-S Test Statistic				0.764		Mean				5.554	
1325	5% K-S Critical Value				0.199		SD				6.032	
1326	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				1.238	
1327							95% KM (t) UCL				7.673	
1328	Assuming Gamma Distribution						95% KM (z) UCL				7.591	
1329	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				7.663	
1330	Minimum				0.313		95% KM (bootstrap t) UCL				8.239	
1331	Maximum				20.57		95% KM (BCA) UCL				7.467	
1332	Mean				5.524		95% KM (Percentile Bootstrap) UCL				7.683	
1333	Median				2.49		95% KM (Chebyshev) UCL				10.95	
1334	SD				6.182		97.5% KM (Chebyshev) UCL				13.29	
1335	k star				0.818		99% KM (Chebyshev) UCL				17.87	
1336	Theta star				6.754							
1337	Nu star				40.89		Potential UCLs to Use					
1338	AppChi2				27.24		95% KM (BCA) UCL				7.467	
1339	95% Gamma Approximate UCL				8.293							
1340	95% Adjusted Gamma UCL				8.531							
1341	Note: DL/2 is not a recommended method.											
1342												
1343												
1344	Vanadium											
1345												
1346	General Statistics											
1347	Number of Valid Data				25		Number of Detected Data				11	
1348	Number of Distinct Detected Data				11		Number of Non-Detect Data				14	
1349	Number of Missing Values				24		Percent Non-Detects				56.00%	
1350												
1351	Raw Statistics						Log-transformed Statistics					
1352	Minimum Detected				85.68		Minimum Detected				4.451	

	A	B	C	D	E	F	G	H	I	J	K	L
1353	Maximum Detected					277	Maximum Detected					5.624
1354	Mean of Detected					152	Mean of Detected					4.951
1355	SD of Detected					64.4	SD of Detected					0.39
1356	Minimum Non-Detect					79.04	Minimum Non-Detect					4.37
1357	Maximum Non-Detect					137.3	Maximum Non-Detect					4.922
1358												
1359	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					20
1360	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					5
1361	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					80.00%
1362												
1363	UCL Statistics											
1364	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1365	Shapiro Wilk Test Statistic					0.855	Shapiro Wilk Test Statistic					0.918
1366	5% Shapiro Wilk Critical Value					0.85	5% Shapiro Wilk Critical Value					0.85
1367	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1368												
1369	Assuming Normal Distribution						Assuming Lognormal Distribution					
1370	DL/2 Substitution Method						DL/2 Substitution Method					
1371	Mean					98.05	Mean					4.425
1372	SD					64.27	SD					0.546
1373	95% DL/2 (t) UCL					120	95% H-Stat (DL/2) UCL					98.81
1374												
1375	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1376	Mean					37.46	Mean in Log Scale					4.628
1377	SD					119.3	SD in Log Scale					0.403
1378	95% MLE (t) UCL					78.27	Mean in Original Scale					111.8
1379	95% MLE (Tiku) UCL					135.4	SD in Original Scale					55.84
1380							95% Percentile Bootstrap UCL					130.3
1381							95% BCA Bootstrap UCL					135.4
1382												
1383	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1384	k star (bias corrected)					5.169	Data appear Normal at 5% Significance Level					
1385	Theta Star					29.4						
1386	nu star					113.7						
1387												
1388	A-D Test Statistic					0.525	Nonparametric Statistics					
1389	5% A-D Critical Value					0.731	Kaplan-Meier (KM) Method					
1390	K-S Test Statistic					0.731	Mean					119.3
1391	5% K-S Critical Value					0.256	SD					50.46
1392	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					10.81
1393							95% KM (t) UCL					137.8
1394	Assuming Gamma Distribution						95% KM (z) UCL					137.1
1395	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					136
1396	Minimum					85.68	95% KM (bootstrap t) UCL					144.2
1397	Maximum					277	95% KM (BCA) UCL					143
1398	Mean					151.4	95% KM (Percentile Bootstrap) UCL					139.2
1399	Median					154.4	95% KM (Chebyshev) UCL					166.4
1400	SD					42.49	97.5% KM (Chebyshev) UCL					186.8
1401	k star					13.16	99% KM (Chebyshev) UCL					226.9
1402	Theta star					11.5						
1403	Nu star					658.2	Potential UCLs to Use					
1404	AppChi2					599.7	95% KM (t) UCL					137.8

	A	B	C	D	E	F	G	H	I	J	K	L
1405	95% Gamma Approximate UCL					166.2	95% KM (Percentile Bootstrap) UCL					139.2
1406	95% Adjusted Gamma UCL					167.2						
1407	Note: DL/2 is not a recommended method.											
1408												
1409												
1410	Zinc											
1411												
1412	General Statistics											
1413	Number of Valid Data					25	Number of Detected Data					25
1414	Number of Distinct Detected Data					25	Number of Non-Detect Data					0
1415	Number of Missing Values					24	Percent Non-Detects					0.00%
1416												
1417	Raw Statistics						Log-transformed Statistics					
1418	Minimum Detected					11211	Minimum Detected					9.325
1419	Maximum Detected					26235	Maximum Detected					10.17
1420	Mean of Detected					17197	Mean of Detected					9.712
1421	SD of Detected					4988	SD of Detected					0.288
1422	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1423	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1424												
1425												
1426	UCL Statistics											
1427	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1428	Shapiro Wilk Test Statistic					0.862	Shapiro Wilk Test Statistic					0.869
1429	5% Shapiro Wilk Critical Value					0.918	5% Shapiro Wilk Critical Value					0.918
1430	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1431												
1432	Assuming Normal Distribution						Assuming Lognormal Distribution					
1433	DL/2 Substitution Method						DL/2 Substitution Method					
1434	Mean					17197	Mean					9.712
1435	SD					4988	SD					0.288
1436	95% DL/2 (t) UCL					18903	95% H-Stat (DL/2) UCL					19149
1437												
1438	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1439	MLE method failed to converge properly						Mean in Log Scale					N/A
1440							SD in Log Scale					N/A
1441							Mean in Original Scale					N/A
1442							SD in Original Scale					N/A
1443							95% Percentile Bootstrap UCL					N/A
1444							95% BCA Bootstrap UCL					N/A
1445												
1446	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1447	k star (bias corrected)					11.16	Data do not follow a Discernable Distribution (0.05)					
1448	Theta Star					1541						
1449	nu star					557.9						
1450												
1451	A-D Test Statistic					1.487	Nonparametric Statistics					
1452	5% A-D Critical Value					0.744	Kaplan-Meier (KM) Method					
1453	K-S Test Statistic					0.744	Mean					17197
1454	5% K-S Critical Value					0.174	SD					4887
1455	Data not Gamma Distributed at 5% Significance Level						SE of Mean					997.5
1456							95% KM (t) UCL					18903

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	Assuming Gamma Distribution						95% KM (z) UCL					18837	
1458	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					18903	
1459	Minimum						11211	95% KM (bootstrap t) UCL					18981
1460	Maximum						26235	95% KM (BCA) UCL					18756
1461	Mean						17197	95% KM (Percentile Bootstrap) UCL					18819
1462	Median						13840	95% KM (Chebyshev) UCL					21545
1463	SD						4988	97.5% KM (Chebyshev) UCL					23426
1464	k star						11.16	99% KM (Chebyshev) UCL					27122
1465	Theta star						1541						
1466	Nu star						557.9	Potential UCLs to Use					
1467	AppChi2						504.1	95% KM (Chebyshev) UCL					21545
1468	95% Gamma Approximate UCL						19031						
1469	95% Adjusted Gamma UCL						19163						
1470	Note: DL/2 is not a recommended method.												
1471													

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach5_PCB&TEQ.												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				25				Number of Distinct Observations				25			
13	Number of Missing Values				25											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0004081			Minimum of Log Data			-7.804						
17	Maximum			0.00163			Maximum of Log Data			-6.42						
18	Mean			0.0008611			Mean of log Data			-7.135						
19	Median			0.0007465			SD of log Data			0.4						
20	SD			0.0003563												
21	Coefficient of Variation			0.414												
22	Skewness			0.852												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.899			Shapiro Wilk Test Statistic			0.956						
27	Shapiro Wilk Critical Value			0.918			Shapiro Wilk Critical Value			0.918						
28	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.000983			95% H-UCL			0.00101						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL			0.00117						
33	95% Adjusted-CLT UCL			0.0009913			97.5% Chebyshev (MVUE) UCL			0.0013						
34	95% Modified-t UCL			0.000985			99% Chebyshev (MVUE) UCL			0.00156						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			5.827			Data appear Gamma Distributed at 5% Significance Level									
38	Theta Star			0.0001478												
39	nu star			291.4												
40	Approximate Chi Square Value (.05)			252.8			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0395			95% CLT UCL			0.0009783						
42	Adjusted Chi Square Value			250.4			95% Jackknife UCL			0.000983						
43							95% Standard Bootstrap UCL			0.0009775						
44	Anderson-Darling Test Statistic			0.473			95% Bootstrap-t UCL			0.000992						
45	Anderson-Darling 5% Critical Value			0.746			95% Hall's Bootstrap UCL			0.000987						
46	Kolmogorov-Smirnov Test Statistic			0.12			95% Percentile Bootstrap UCL			0.0009759						
47	Kolmogorov-Smirnov 5% Critical Value			0.175			95% BCA Bootstrap UCL			0.0009754						
48	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.00117						
49							97.5% Chebyshev(Mean, Sd) UCL			0.00131						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.00157						
51	95% Approximate Gamma UCL			0.0009924												
52	95% Adjusted Gamma UCL			0.001												

	A	B	C	D	E	F	G	H	I	J	K	L
53												
54	Potential UCL to Use						Use 95% Approximate Gamma UCL					0.0009924
55												
56												
57	2006 TEQ_D/F+PCB											
58												
59	General Statistics											
60	Number of Valid Observations					25	Number of Distinct Observations					25
61	Number of Missing Values					25						
62												
63	Raw Statistics						Log-transformed Statistics					
64	Minimum					0.0007225	Minimum of Log Data					-7.233
65	Maximum					0.0133	Maximum of Log Data					-4.323
66	Mean					0.00414	Mean of log Data					-5.745
67	Median					0.00283	SD of log Data					0.741
68	SD					0.00312						
69	Coefficient of Variation					0.753						
70	Skewness					1.337						
71												
72	Relevant UCL Statistics											
73	Normal Distribution Test						Lognormal Distribution Test					
74	Shapiro Wilk Test Statistic					0.859	Shapiro Wilk Test Statistic					0.98
75	Shapiro Wilk Critical Value					0.918	Shapiro Wilk Critical Value					0.918
76	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
77												
78	Assuming Normal Distribution						Assuming Lognormal Distribution					
79	95% Student's-t UCL					0.0052	95% H-UCL					0.00586
80	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					0.00706
81	95% Adjusted-CLT UCL					0.00534	97.5% Chebyshev (MVUE) UCL					0.00832
82	95% Modified-t UCL					0.00523	99% Chebyshev (MVUE) UCL					0.0108
83												
84	Gamma Distribution Test						Data Distribution					
85	k star (bias corrected)					1.867	Data appear Gamma Distributed at 5% Significance Level					
86	Theta Star					0.00222						
87	nu star					93.37						
88	Approximate Chi Square Value (.05)					72.09	Nonparametric Statistics					
89	Adjusted Level of Significance					0.0395	95% CLT UCL					0.00516
90	Adjusted Chi Square Value					70.81	95% Jackknife UCL					0.0052
91							95% Standard Bootstrap UCL					0.00512
92	Anderson-Darling Test Statistic					0.425	95% Bootstrap-t UCL					0.00549
93	Anderson-Darling 5% Critical Value					0.756	95% Hall's Bootstrap UCL					0.00547
94	Kolmogorov-Smirnov Test Statistic					0.13	95% Percentile Bootstrap UCL					0.00517
95	Kolmogorov-Smirnov 5% Critical Value					0.177	95% BCA Bootstrap UCL					0.00538
96	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.00686
97							97.5% Chebyshev(Mean, Sd) UCL					0.00803
98	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					0.0103
99	95% Approximate Gamma UCL					0.00536						
100	95% Adjusted Gamma UCL					0.00546						
101												
102	Potential UCL to Use						Use 95% Approximate Gamma UCL					0.00536
103												
104												

	A	B	C	D	E	F	G	H	I	J	K	L	
105	2006 TEQ_PCB												
106													
107	General Statistics												
108	Number of Valid Observations					25	Number of Distinct Observations					24	
109	Number of Missing Values					25							
110													
111	Raw Statistics						Log-transformed Statistics						
112	Minimum					0.0001526	Minimum of Log Data					-8.788	
113	Maximum					0.0126	Maximum of Log Data					-4.372	
114	Mean					0.00328	Mean of log Data					-6.231	
115	Median					0.00221	SD of log Data					1.156	
116	SD					0.00312							
117	Coefficient of Variation					0.953							
118	Skewness					1.448							
119													
120	Relevant UCL Statistics												
121	Normal Distribution Test						Lognormal Distribution Test						
122	Shapiro Wilk Test Statistic					0.84	Shapiro Wilk Test Statistic					0.95	
123	Shapiro Wilk Critical Value					0.918	Shapiro Wilk Critical Value					0.918	
124	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
125													
126	Assuming Normal Distribution						Assuming Lognormal Distribution						
127	95% Student's-t UCL					0.00435	95% H-UCL					0.00726	
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.00802
129	95% Adjusted-CLT UCL					0.0045	97.5% Chebyshev (MVUE) UCL					0.0099	
130	95% Modified-t UCL					0.00438	99% Chebyshev (MVUE) UCL					0.0136	
131													
132	Gamma Distribution Test						Data Distribution						
133	k star (bias corrected)					1.01	Data appear Gamma Distributed at 5% Significance Level						
134	Theta Star					0.00325							
135	nu star					50.48							
136	Approximate Chi Square Value (.05)					35.17	Nonparametric Statistics						
137	Adjusted Level of Significance					0.0395	95% CLT UCL					0.0043	
138	Adjusted Chi Square Value					34.3	95% Jackknife UCL					0.00435	
139							95% Standard Bootstrap UCL					0.00427	
140	Anderson-Darling Test Statistic					0.312	95% Bootstrap-t UCL					0.0047	
141	Anderson-Darling 5% Critical Value					0.77	95% Hall's Bootstrap UCL					0.0046	
142	Kolmogorov-Smirnov Test Statistic					0.146	95% Percentile Bootstrap UCL					0.00427	
143	Kolmogorov-Smirnov 5% Critical Value					0.179	95% BCA Bootstrap UCL					0.00441	
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.006	
145							97.5% Chebyshev(Mean, Sd) UCL					0.00718	
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						0.00949
147	95% Approximate Gamma UCL					0.0047							
148	95% Adjusted Gamma UCL					0.00482							
149													
150	Potential UCL to Use						Use 95% Approximate Gamma UCL						0.0047
151													
152													
153	Non-Dioxin PCB, as Congener Sum												
154													
155	General Statistics												
156	Number of Valid Observations					6	Number of Distinct Observations					6	

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					42						
158												
159	Raw Statistics						Log-transformed Statistics					
160	Minimum					8.686	Minimum of Log Data					2.162
161	Maximum					124.4	Maximum of Log Data					4.824
162	Mean					38.93	Mean of log Data					3.261
163	Median					26.78	SD of log Data					0.937
164	SD					43.18						
165	Coefficient of Variation					1.109						
166	Skewness					2.133						
167												
168												
169	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
170												
171	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
172	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
173												
174												
175	Warning: There are only 6 Values in this data											
176	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
177	the resulting calculations may not be reliable enough to draw conclusions											
178												
179	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
180												
181	Relevant UCL Statistics											
182	Normal Distribution Test						Lognormal Distribution Test					
183	Shapiro Wilk Test Statistic					0.716	Shapiro Wilk Test Statistic					0.948
184	Shapiro Wilk Critical Value					0.788	Shapiro Wilk Critical Value					0.788
185	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
186												
187	Assuming Normal Distribution						Assuming Lognormal Distribution					
188	95% Student's-t UCL					74.46	95% H-UCL					206.9
189	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					97.75
190	95% Adjusted-CLT UCL					84.33	97.5% Chebyshev (MVUE) UCL					124.1
191	95% Modified-t UCL					77.02	99% Chebyshev (MVUE) UCL					175.7
192												
193	Gamma Distribution Test						Data Distribution					
194	k star (bias corrected)					0.806	Data appear Gamma Distributed at 5% Significance Level					
195	Theta Star					48.3						
196	nu star					9.673						
197	Approximate Chi Square Value (.05)						Nonparametric Statistics					
198	Adjusted Level of Significance					0.0122	95% CLT UCL					67.93
199	Adjusted Chi Square Value					2.534	95% Jackknife UCL					74.46
200							95% Standard Bootstrap UCL					65.99
201	Anderson-Darling Test Statistic					0.419	95% Bootstrap-t UCL					137.6
202	Anderson-Darling 5% Critical Value					0.709	95% Hall's Bootstrap UCL					187.1
203	Kolmogorov-Smirnov Test Statistic					0.274	95% Percentile Bootstrap UCL					70.87
204	Kolmogorov-Smirnov 5% Critical Value					0.338	95% BCA Bootstrap UCL					77.14
205	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					115.8
206							97.5% Chebyshev(Mean, Sd) UCL					149
207	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					214.3
208	95% Approximate Gamma UCL					100.7						

	A	B	C	D	E	F	G	H	I	J	K	L	
209	95% Adjusted Gamma UCL					148.6							
210													
211	Potential UCL to Use									Use 95% Approximate Gamma UCL		100.7	
212													
213													
214	Total PCB, as Aroclor												
215													
216	General Statistics												
217	Number of Valid Observations					25	Number of Distinct Observations					23	
218	Number of Missing Values					24							
219													
220	Raw Statistics						Log-transformed Statistics						
221	Minimum					6.3	Minimum of Log Data					1.841	
222	Maximum					154	Maximum of Log Data					5.037	
223	Mean					42.9	Mean of log Data					3.395	
224	Median					28	SD of log Data					0.878	
225	SD					39.17							
226	Coefficient of Variation					0.913							
227	Skewness					1.513							
228													
229	Relevant UCL Statistics												
230	Normal Distribution Test						Lognormal Distribution Test						
231	Shapiro Wilk Test Statistic					0.802	Shapiro Wilk Test Statistic					0.958	
232	Shapiro Wilk Critical Value					0.918	Shapiro Wilk Critical Value					0.918	
233	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
234													
235	Assuming Normal Distribution						Assuming Lognormal Distribution						
236	95% Student's-t UCL					56.31	95% H-UCL					66.72	
237	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						79.45
238	95% Adjusted-CLT UCL					58.32	97.5% Chebyshev (MVUE) UCL					95.25	
239	95% Modified-t UCL					56.7	99% Chebyshev (MVUE) UCL					126.3	
240													
241	Gamma Distribution Test						Data Distribution						
242	k star (bias corrected)					1.363	Data Follow Appr. Gamma Distribution at 5% Significance Level						
243	Theta Star					31.49							
244	nu star					68.13							
245	Approximate Chi Square Value (.05)					50.13	Nonparametric Statistics						
246	Adjusted Level of Significance					0.0395	95% CLT UCL					55.79	
247	Adjusted Chi Square Value					49.08	95% Jackknife UCL					56.31	
248							95% Standard Bootstrap UCL					55.7	
249	Anderson-Darling Test Statistic					0.73	95% Bootstrap-t UCL					60.73	
250	Anderson-Darling 5% Critical Value					0.761	95% Hall's Bootstrap UCL					58.13	
251	Kolmogorov-Smirnov Test Statistic					0.217	95% Percentile Bootstrap UCL					56.49	
252	Kolmogorov-Smirnov 5% Critical Value					0.178	95% BCA Bootstrap UCL					59.05	
253	Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					77.05	
254							97.5% Chebyshev(Mean, Sd) UCL					91.83	
255	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					120.8	
256	95% Approximate Gamma UCL					58.31							
257	95% Adjusted Gamma UCL					59.56							
258													
259	Potential UCL to Use						Use 95% Approximate Gamma UCL					58.31	
260													

	A	B	C	D	E	F	G	H	I	J	K	L	
261													
262	Total PCB, as Congener Sum												
263													
264	General Statistics												
265	Number of Valid Observations					6	Number of Distinct Observations					6	
266	Number of Missing Values					42							
267													
268	Raw Statistics						Log-transformed Statistics						
269	Minimum					9.327	Minimum of Log Data					2.233	
270	Maximum					133.9	Maximum of Log Data					4.897	
271	Mean					42.07	Mean of log Data					3.341	
272	Median					29.37	SD of log Data					0.937	
273	SD					46.39							
274	Coefficient of Variation					1.103							
275	Skewness					2.128							
276													
277													
278	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!												
279													
280	It is suggested to collect at least 8 to 10 observations using these statistical methods!												
281	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
282													
283													
284	Warning: There are only 6 Values in this data												
285	Note: It should be noted that even though bootstrap methods may be performed on this data set,												
286	the resulting calculations may not be reliable enough to draw conclusions												
287													
288	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.												
289													
290	Relevant UCL Statistics												
291	Normal Distribution Test						Lognormal Distribution Test						
292	Shapiro Wilk Test Statistic					0.718	Shapiro Wilk Test Statistic					0.948	
293	Shapiro Wilk Critical Value					0.788	Shapiro Wilk Critical Value					0.788	
294	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
295													
296	Assuming Normal Distribution						Assuming Lognormal Distribution						
297	95% Student's-t UCL					80.23	95% H-UCL					223.8	
298	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						105.8
299	95% Adjusted-CLT UCL					90.81	97.5% Chebyshev (MVUE) UCL					134.3	
300	95% Modified-t UCL					82.98	99% Chebyshev (MVUE) UCL					190.3	
301													
302	Gamma Distribution Test						Data Distribution						
303	k star (bias corrected)					0.81	Data appear Gamma Distributed at 5% Significance Level						
304	Theta Star					51.93							
305	nu star					9.721							
306	Approximate Chi Square Value (.05)					3.768	Nonparametric Statistics						
307	Adjusted Level of Significance					0.0122	95% CLT UCL					73.22	
308	Adjusted Chi Square Value					2.557	95% Jackknife UCL					80.23	
309							95% Standard Bootstrap UCL					70.09	
310	Anderson-Darling Test Statistic					0.415	95% Bootstrap-t UCL					147	
311	Anderson-Darling 5% Critical Value					0.709	95% Hall's Bootstrap UCL					203.8	
312	Kolmogorov-Smirnov Test Statistic					0.276	95% Percentile Bootstrap UCL					76.19	

	A	B	C	D	E	F	G	H	I	J	K	L
313	Kolmogorov-Smirnov 5% Critical Value					0.338	95% BCA Bootstrap UCL					82.69
314	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					124.6
315							97.5% Chebyshev(Mean, Sd) UCL					160.3
316	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					230.5
317	95% Approximate Gamma UCL					108.5						
318	95% Adjusted Gamma UCL					159.9						
319												
320	Potential UCL to Use						Use 95% Approximate Gamma UCL					108.5
321												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach6.wst												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Data				24				Number of Detected Data				24			
13	Number of Distinct Detected Data				24				Number of Non-Detect Data				0			
14	Number of Missing Values				24				Percent Non-Detects				0.00%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.0003611			Minimum Detected			-7.926						
18	Maximum Detected			0.00158			Maximum Detected			-6.45						
19	Mean of Detected			0.0008566			Mean of Detected			-7.123						
20	SD of Detected			0.0003012			SD of Detected			0.361						
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
23																
24																
25	UCL Statistics															
26	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
27	Shapiro Wilk Test Statistic			0.945			Shapiro Wilk Test Statistic			0.969						
28	5% Shapiro Wilk Critical Value			0.916			5% Shapiro Wilk Critical Value			0.916						
29	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
30																
31	Assuming Normal Distribution						Assuming Lognormal Distribution									
32	DL/2 Substitution Method						DL/2 Substitution Method									
33	Mean			0.0008566			Mean			-7.123						
34	SD			0.0003012			SD			0.361						
35	95% DL/2 (t) UCL			0.000962			95% H-Stat (DL/2) UCL			0.0009897						
36																
37	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method									
38	MLE method failed to converge properly						Mean in Log Scale			N/A						
39							SD in Log Scale			N/A						
40							Mean in Original Scale			N/A						
41							SD in Original Scale			N/A						
42							95% Percentile Bootstrap UCL			N/A						
43							95% BCA Bootstrap UCL			N/A						
44																
45	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
46	k star (bias corrected)			7.431			Data appear Normal at 5% Significance Level									
47	Theta Star			0.0001153												
48	nu star			356.7												
49																
50	A-D Test Statistic			0.368			Nonparametric Statistics									
51	5% A-D Critical Value			0.745			Kaplan-Meier (KM) Method									
52	K-S Test Statistic			0.745			Mean			0.0008566						

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% K-S Critical Value					0.178	SD					0.0002949	
54	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					6.148E-05	
55							95% KM (t) UCL					0.000962	
56	Assuming Gamma Distribution						95% KM (z) UCL					0.0009577	
57	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.000962	
58	Minimum						0.0003611	95% KM (bootstrap t) UCL					0.0009754
59	Maximum						0.00158	95% KM (BCA) UCL					0.0009494
60	Mean						0.0008566	95% KM (Percentile Bootstrap) UCL					0.0009638
61	Median						0.0008509	95% KM (Chebyshev) UCL					0.00112
62	SD						0.0003012	97.5% KM (Chebyshev) UCL					0.00124
63	k star						7.431	99% KM (Chebyshev) UCL					0.00147
64	Theta star						0.0001153						
65	Nu star						356.7	Potential UCLs to Use					
66	AppChi2						313.9	95% KM (t) UCL					0.000962
67	95% Gamma Approximate UCL						0.0009733	95% KM (Percentile Bootstrap) UCL					0.0009638
68	95% Adjusted Gamma UCL						0.0009821						
69	Note: DL/2 is not a recommended method.												
70													
71													
72	2006 TEQ_D/F+PCB												
73													
74	General Statistics												
75	Number of Valid Data					24	Number of Detected Data					24	
76	Number of Distinct Detected Data					24	Number of Non-Detect Data					0	
77	Number of Missing Values					24	Percent Non-Detects					0.00%	
78													
79	Raw Statistics						Log-transformed Statistics						
80	Minimum Detected					0.00148	Minimum Detected					-6.516	
81	Maximum Detected					0.0252	Maximum Detected					-3.683	
82	Mean of Detected					0.00627	Mean of Detected					-5.371	
83	SD of Detected					0.00564	SD of Detected					0.761	
84	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
85	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
86													
87													
88	UCL Statistics												
89	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
90	Shapiro Wilk Test Statistic					0.762	Shapiro Wilk Test Statistic					0.953	
91	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916	
92	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
93													
94	Assuming Normal Distribution						Assuming Lognormal Distribution						
95	DL/2 Substitution Method						DL/2 Substitution Method						
96	Mean					0.00627	Mean					-5.371	
97	SD					0.00564	SD					0.761	
98	95% DL/2 (t) UCL					0.00825	95% H-Stat (DL/2) UCL					0.00884	
99													
100	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
101	MLE method failed to converge properly						Mean in Log Scale					N/A	
102							SD in Log Scale					N/A	
103							Mean in Original Scale					N/A	
104							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
105						95% Percentile Bootstrap UCL					N/A	
106						95% BCA Bootstrap UCL					N/A	
107												
108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
109	k star (bias corrected)					1.62	Data Follow Appr. Gamma Distribution at 5% Significance Level					
110	Theta Star					0.00387						
111	nu star					77.76						
112												
113	A-D Test Statistic					0.768	Nonparametric Statistics					
114	5% A-D Critical Value					0.757	Kaplan-Meier (KM) Method					
115	K-S Test Statistic					0.757	Mean					0.00627
116	5% K-S Critical Value					0.181	SD					0.00552
117	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.00115
118							95% KM (t) UCL					0.00825
119	Assuming Gamma Distribution						95% KM (z) UCL					0.00817
120	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00825
121	Minimum					0.00148	95% KM (bootstrap t) UCL					0.00924
122	Maximum					0.0252	95% KM (BCA) UCL					0.00832
123	Mean					0.00627	95% KM (Percentile Bootstrap) UCL					0.00813
124	Median					0.00405	95% KM (Chebyshev) UCL					0.0113
125	SD					0.00564	97.5% KM (Chebyshev) UCL					0.0135
126	k star					1.62	99% KM (Chebyshev) UCL					0.0177
127	Theta star					0.00387						
128	Nu star					77.76	Potential UCLs to Use					
129	AppChi2					58.45	95% KM (Chebyshev) UCL					0.0113
130	95% Gamma Approximate UCL					0.00835						
131	95% Adjusted Gamma UCL					0.00852						
132	Note: DL/2 is not a recommended method.											
133												
134												
135	2006 TEQ_PCB											
136												
137	General Statistics											
138	Number of Valid Data					24	Number of Detected Data					24
139	Number of Distinct Detected Data					23	Number of Non-Detect Data					0
140	Number of Missing Values					24	Percent Non-Detects					0.00%
141												
142	Raw Statistics						Log-transformed Statistics					
143	Minimum Detected					0.0006533	Minimum Detected					-7.333
144	Maximum Detected					0.0243	Maximum Detected					-3.718
145	Mean of Detected					0.00542	Mean of Detected					-5.645
146	SD of Detected					0.00557	SD of Detected					0.951
147	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
148	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
149												
150												
151	UCL Statistics											
152	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
153	Shapiro Wilk Test Statistic					0.758	Shapiro Wilk Test Statistic					0.974
154	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916
155	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
156												

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Normal Distribution						Assuming Lognormal Distribution							
158	DL/2 Substitution Method						DL/2 Substitution Method							
159	Mean						0.00542	Mean						-5.645
160	SD						0.00557	SD						0.951
161	95% DL/2 (t) UCL						0.00737	95% H-Stat (DL/2) UCL						0.00903
162														
163	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
164	MLE method failed to converge properly							Mean in Log Scale						N/A
165								SD in Log Scale						N/A
166								Mean in Original Scale						N/A
167								SD in Original Scale						N/A
168								95% Percentile Bootstrap UCL						N/A
169								95% BCA Bootstrap UCL						N/A
170														
171	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
172	k star (bias corrected)						1.178	Data appear Gamma Distributed at 5% Significance Level						
173	Theta Star						0.0046							
174	nu star						56.52							
175														
176	A-D Test Statistic						0.53	Nonparametric Statistics						
177	5% A-D Critical Value						0.765	Kaplan-Meier (KM) Method						
178	K-S Test Statistic						0.765	Mean						0.00542
179	5% K-S Critical Value						0.182	SD						0.00546
180	Data appear Gamma Distributed at 5% Significance Level							SE of Mean						0.00114
181								95% KM (t) UCL						0.00737
182	Assuming Gamma Distribution							95% KM (z) UCL						0.00729
183	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.00737
184	Minimum						0.0006533	95% KM (bootstrap t) UCL						0.00815
185	Maximum						0.0243	95% KM (BCA) UCL						0.00732
186	Mean						0.00542	95% KM (Percentile Bootstrap) UCL						0.00737
187	Median						0.00335	95% KM (Chebyshev) UCL						0.0104
188	SD						0.00557	97.5% KM (Chebyshev) UCL						0.0125
189	k star						1.178	99% KM (Chebyshev) UCL						0.0167
190	Theta star						0.0046							
191	Nu star						56.52	Potential UCLs to Use						
192	AppChi2						40.24	95% KM (Chebyshev) UCL						0.0104
193	95% Gamma Approximate UCL						0.00761							
194	95% Adjusted Gamma UCL						0.0078							
195	Note: DL/2 is not a recommended method.													
196														
197														
198	Aluminum													
199														
200	General Statistics													
201	Number of Valid Data						34	Number of Detected Data						27
202	Number of Distinct Detected Data						27	Number of Non-Detect Data						7
203	Number of Missing Values						13	Percent Non-Detects						20.59%
204														
205	Raw Statistics						Log-transformed Statistics							
206	Minimum Detected						3039	Minimum Detected						8.019
207	Maximum Detected						112553	Maximum Detected						11.63
208	Mean of Detected						18389	Mean of Detected						9.228

	A	B	C	D	E	F	G	H	I	J	K	L
209	SD of Detected					26791	SD of Detected					0.968
210	Minimum Non-Detect					3204	Minimum Non-Detect					8.072
211	Maximum Non-Detect					4800	Maximum Non-Detect					8.476
212												
213	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					11
214	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					23
215	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					32.35%
216												
217	UCL Statistics											
218	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
219	Shapiro Wilk Test Statistic					0.579	Shapiro Wilk Test Statistic					0.846
220	5% Shapiro Wilk Critical Value					0.923	5% Shapiro Wilk Critical Value					0.923
221	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
222												
223	Assuming Normal Distribution						Assuming Lognormal Distribution					
224	DL/2 Substitution Method						DL/2 Substitution Method					
225	Mean					15007	Mean					8.888
226	SD					24718	SD					1.096
227	95% DL/2 (t) UCL					22181	95% H-Stat (DL/2) UCL					17131
228												
229	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
230	Mean					8002	Mean in Log Scale					8.874
231	SD					31246	SD in Log Scale					1.115
232	95% MLE (t) UCL					17070	Mean in Original Scale					14979
233	95% MLE (Tiku) UCL					17592	SD in Original Scale					24732
234							95% Percentile Bootstrap UCL					22490
235							95% BCA Bootstrap UCL					24423
236												
237	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
238	k star (bias corrected)					0.895	Data do not follow a Discernable Distribution (0.05)					
239	Theta Star					20546						
240	nu star					48.33						
241												
242	A-D Test Statistic					2.811	Nonparametric Statistics					
243	5% A-D Critical Value					0.774	Kaplan-Meier (KM) Method					
244	K-S Test Statistic					0.774	Mean					15268
245	5% K-S Critical Value					0.173	SD					24217
246	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4232
247							95% KM (t) UCL					22431
248	Assuming Gamma Distribution						95% KM (z) UCL					22230
249	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					22350
250	Minimum					1E-09	95% KM (bootstrap t) UCL					27550
251	Maximum					112553	95% KM (BCA) UCL					22969
252	Mean					14603	95% KM (Percentile Bootstrap) UCL					23005
253	Median					5862	95% KM (Chebyshev) UCL					33717
254	SD					24949	97.5% KM (Chebyshev) UCL					41699
255	k star					0.13	99% KM (Chebyshev) UCL					57380
256	Theta star					112138						
257	Nu star					8.855	Potential UCLs to Use					
258	AppChi2					3.24	95% KM (BCA) UCL					22969
259	95% Gamma Approximate UCL					39915						
260	95% Adjusted Gamma UCL					42076						

	A	B	C	D	E	F	G	H	I	J	K	L		
261	Note: DL/2 is not a recommended method.													
262														
263														
264	Antimony													
265														
266	General Statistics													
267	Number of Valid Data					34		Number of Detected Data					1	
268	Number of Distinct Detected Data					1		Number of Non-Detect Data					33	
269	Number of Missing Values					13		Percent Non-Detects					97.06%	
270														
271	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
272	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
273														
274	The data set for variable Antimony was not processed!													
275														
276														
277														
278	Arsenic													
279														
280	General Statistics													
281	Number of Valid Data					34		Number of Detected Data					34	
282	Number of Distinct Detected Data					34		Number of Non-Detect Data					0	
283	Number of Missing Values					13		Percent Non-Detects					0.00%	
284														
285	Raw Statistics						Log-transformed Statistics							
286	Minimum Detected					81		Minimum Detected					4.394	
287	Maximum Detected					958.4		Maximum Detected					6.865	
288	Mean of Detected					266.6		Mean of Detected					5.318	
289	SD of Detected					249.7		SD of Detected					0.664	
290	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
291	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
292														
293														
294	UCL Statistics													
295	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
296	Shapiro Wilk Test Statistic					0.616		Shapiro Wilk Test Statistic					0.831	
297	5% Shapiro Wilk Critical Value					0.933		5% Shapiro Wilk Critical Value					0.933	
298	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
299														
300	Assuming Normal Distribution						Assuming Lognormal Distribution							
301	DL/2 Substitution Method							DL/2 Substitution Method						
302	Mean					266.6		Mean					5.318	
303	SD					249.7		SD					0.664	
304	95% DL/2 (t) UCL					339.1		95% H-Stat (DL/2) UCL					322.3	
305														
306	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
307	MLE method failed to converge properly						Mean in Log Scale					N/A		
308							SD in Log Scale					N/A		
309							Mean in Original Scale					N/A		
310							SD in Original Scale					N/A		
311							95% Percentile Bootstrap UCL					N/A		
312							95% BCA Bootstrap UCL					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
313												
314	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
315	k star (bias corrected)				1.861		Data do not follow a Discernable Distribution (0.05)					
316	Theta Star				143.3							
317	nu star				126.5							
318												
319	A-D Test Statistic				3.521		Nonparametric Statistics					
320	5% A-D Critical Value				0.759		Kaplan-Meier (KM) Method					
321	K-S Test Statistic				0.759		Mean				266.6	
322	5% K-S Critical Value				0.153		SD				246	
323	Data not Gamma Distributed at 5% Significance Level						SE of Mean				42.82	
324							95% KM (t) UCL				339.1	
325	Assuming Gamma Distribution						95% KM (z) UCL				337	
326	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				339.1	
327	Minimum				81		95% KM (bootstrap t) UCL				365.7	
328	Maximum				958.4		95% KM (BCA) UCL				335.5	
329	Mean				266.6		95% KM (Percentile Bootstrap) UCL				337.3	
330	Median				181.6		95% KM (Chebyshev) UCL				453.3	
331	SD				249.7		97.5% KM (Chebyshev) UCL				534	
332	k star				1.861		99% KM (Chebyshev) UCL				692.7	
333	Theta star				143.3							
334	Nu star				126.5		Potential UCLs to Use					
335	AppChi2				101.6		95% KM (Chebyshev) UCL				453.3	
336	95% Gamma Approximate UCL				332.2							
337	95% Adjusted Gamma UCL				335.8							
338	Note: DL/2 is not a recommended method.											
339												
340												
341	Barium											
342												
343	General Statistics											
344	Number of Valid Data				34		Number of Detected Data				34	
345	Number of Distinct Detected Data				34		Number of Non-Detect Data				0	
346	Number of Missing Values				13		Percent Non-Detects				0.00%	
347												
348	Raw Statistics						Log-transformed Statistics					
349	Minimum Detected				318.3		Minimum Detected				5.763	
350	Maximum Detected				7301		Maximum Detected				8.896	
351	Mean of Detected				2469		Mean of Detected				7.424	
352	SD of Detected				2064		SD of Detected				0.948	
353	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
354	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
355												
356												
357	UCL Statistics											
358	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
359	Shapiro Wilk Test Statistic				0.861		Shapiro Wilk Test Statistic				0.937	
360	5% Shapiro Wilk Critical Value				0.933		5% Shapiro Wilk Critical Value				0.933	
361	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
362												
363	Assuming Normal Distribution						Assuming Lognormal Distribution					
364	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
365					Mean	2469					Mean	7.424	
366					SD	2064					SD	0.948	
367					95% DL/2 (t) UCL	3068					95% H-Stat (DL/2) UCL	3862	
368													
369					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
370					MLE method failed to converge properly						Mean in Log Scale	N/A	
371											SD in Log Scale	N/A	
372											Mean in Original Scale	N/A	
373											SD in Original Scale	N/A	
374											95% Percentile Bootstrap UCL	N/A	
375											95% BCA Bootstrap UCL	N/A	
376													
377					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
378					k star (bias corrected)	1.327					Data appear Gamma Distributed at 5% Significance Level		
379					Theta Star	1861							
380					nu star	90.22							
381													
382					A-D Test Statistic	0.601					Nonparametric Statistics		
383					5% A-D Critical Value	0.767					Kaplan-Meier (KM) Method		
384					K-S Test Statistic	0.767					Mean	2469	
385					5% K-S Critical Value	0.154					SD	2034	
386					Data appear Gamma Distributed at 5% Significance Level						SE of Mean	354	
387											95% KM (t) UCL	3068	
388					Assuming Gamma Distribution						95% KM (z) UCL	3051	
389					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	3068	
390					Minimum	318.3					95% KM (bootstrap t) UCL	3160	
391					Maximum	7301					95% KM (BCA) UCL	3058	
392					Mean	2469					95% KM (Percentile Bootstrap) UCL	3082	
393					Median	2004					95% KM (Chebyshev) UCL	4012	
394					SD	2064					97.5% KM (Chebyshev) UCL	4680	
395					k star	1.327					99% KM (Chebyshev) UCL	5991	
396					Theta star	1861							
397					Nu star	90.22					Potential UCLs to Use		
398					AppChi2	69.32					95% KM (Chebyshev) UCL	4012	
399					95% Gamma Approximate UCL								
400					95% Adjusted Gamma UCL								
401					Note: DL/2 is not a recommended method.								
402													
403													
404					Beryllium								
405													
406					General Statistics								
407					Number of Valid Data		34				Number of Detected Data		2
408					Number of Distinct Detected Data		2				Number of Non-Detect Data		32
409					Number of Missing Values		13				Percent Non-Detects		94.12%
410													
411					Raw Statistics						Log-transformed Statistics		
412					Minimum Detected		5.281				Minimum Detected		1.664
413					Maximum Detected		9.313				Maximum Detected		2.231
414					Mean of Detected		7.297				Mean of Detected		1.948
415					SD of Detected		2.851				SD of Detected		0.401
416					Minimum Non-Detect		3.89				Minimum Non-Detect		1.358

	A	B	C	D	E	F	G	H	I	J	K	L
417	Maximum Non-Detect					6.7	Maximum Non-Detect					1.902
418												
419	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					33
420	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
421	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.06%
422												
423	Warning: Data set has only 2 Distinct Detected Values.											
424	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
425	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
426												
427	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
428												
429	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
430	Those methods will return a 'N/A' value on your output display!											
431												
432	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
433	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
434												
435												
436	UCL Statistics											
437	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
438	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1		
439	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A		
440	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
441												
442	Assuming Normal Distribution						Assuming Lognormal Distribution					
443	DL/2 Substitution Method						DL/2 Substitution Method					
444	Mean			2.897			Mean			1.014		
445	SD			1.264			SD			0.278		
446	95% DL/2 (t) UCL			3.264			95% H-Stat (DL/2) UCL			3.029		
447												
448	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
449	MLE method failed to converge properly						Mean in Log Scale			N/A		
450							SD in Log Scale			N/A		
451							Mean in Original Scale			N/A		
452							SD in Original Scale			N/A		
453							95% Percentile Bootstrap UCL			N/A		
454							95% BCA Bootstrap UCL			N/A		
455												
456	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
457	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
458	Theta Star			N/A								
459	nu star			N/A								
460												
461	A-D Test Statistic			0.359			Nonparametric Statistics					
462	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
463	K-S Test Statistic			N/A			Mean			5.399		
464	5% K-S Critical Value			N/A			SD			0.681		
465	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.165		
466							95% KM (t) UCL			5.679		
467	Assuming Gamma Distribution						95% KM (z) UCL			5.671		
468	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			8.036		

	A	B	C	D	E	F	G	H	I	J	K	L
469					Minimum	N/A				95% KM (bootstrap t) UCL		#NUM!
470					Maximum	N/A				95% KM (BCA) UCL		N/A
471					Mean	N/A				95% KM (Percentile Bootstrap) UCL		N/A
472					Median	N/A				95% KM (Chebyshev) UCL		6.12
473					SD	N/A				97.5% KM (Chebyshev) UCL		6.431
474					k star	N/A				99% KM (Chebyshev) UCL		7.043
475					Theta star	N/A						
476					Nu star	N/A				Potential UCLs to Use		
477					AppChi2	N/A				95% KM (t) UCL		5.679
478					95% Gamma Approximate UCL	N/A				95% KM (% Bootstrap) UCL		N/A
479					95% Adjusted Gamma UCL	N/A						
480	Note: DL/2 is not a recommended method.											
481												
482												
483	Cadmium											
484												
485	General Statistics											
486					Number of Valid Data	34				Number of Detected Data		34
487					Number of Distinct Detected Data	34				Number of Non-Detect Data		0
488					Number of Missing Values	13				Percent Non-Detects		0.00%
489												
490	Raw Statistics						Log-transformed Statistics					
491					Minimum Detected	16.55				Minimum Detected		2.806
492					Maximum Detected	405.3				Maximum Detected		6.005
493					Mean of Detected	128.3				Mean of Detected		4.345
494					SD of Detected	117				SD of Detected		1.083
495					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
496					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
497												
498												
499	UCL Statistics											
500	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
501					Shapiro Wilk Test Statistic	0.826				Shapiro Wilk Test Statistic		0.878
502					5% Shapiro Wilk Critical Value	0.933				5% Shapiro Wilk Critical Value		0.933
503	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
504												
505	Assuming Normal Distribution						Assuming Lognormal Distribution					
506					DL/2 Substitution Method					DL/2 Substitution Method		
507					Mean	128.3				Mean		4.345
508					SD	117				SD		1.083
509					95% DL/2 (t) UCL	162.3				95% H-Stat (DL/2) UCL		221.9
510												
511					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
512	MLE method failed to converge properly						Mean in Log Scale					
513							SD in Log Scale					
514							Mean in Original Scale					
515							SD in Original Scale					
516							95% Percentile Bootstrap UCL					
517							95% BCA Bootstrap UCL					
518												
519	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
520					k star (bias corrected)	1.039	Data do not follow a Discernable Distribution (0.05)					

	A	B	C	D	E	F	G	H	I	J	K	L
521	Theta Star					123.5						
522	nu star					70.66						
523												
524	A-D Test Statistic					1.7	Nonparametric Statistics					
525	5% A-D Critical Value					0.773	Kaplan-Meier (KM) Method					
526	K-S Test Statistic					0.773	Mean					128.3
527	5% K-S Critical Value					0.155	SD					115.3
528	Data not Gamma Distributed at 5% Significance Level						SE of Mean					20.06
529							95% KM (t) UCL					162.3
530	Assuming Gamma Distribution						95% KM (z) UCL					161.3
531	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					162.3
532	Minimum					16.55	95% KM (bootstrap t) UCL					166.9
533	Maximum					405.3	95% KM (BCA) UCL					161.3
534	Mean					128.3	95% KM (Percentile Bootstrap) UCL					161.3
535	Median					53.34	95% KM (Chebyshev) UCL					215.8
536	SD					117	97.5% KM (Chebyshev) UCL					253.6
537	k star					1.039	99% KM (Chebyshev) UCL					328
538	Theta star					123.5						
539	Nu star					70.66	Potential UCLs to Use					
540	AppChi2					52.3	97.5% KM (Chebyshev) UCL					253.6
541	95% Gamma Approximate UCL					173.3						
542	95% Adjusted Gamma UCL					176						
543	Note: DL/2 is not a recommended method.											
544												
545												
546	Calcium											
547												
548	General Statistics											
549	Number of Valid Data					34	Number of Detected Data					34
550	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
551	Number of Missing Values					13	Percent Non-Detects					0.00%
552												
553	Raw Statistics						Log-transformed Statistics					
554	Minimum Detected					4413529	Minimum Detected					15.3
555	Maximum Detected					14146200	Maximum Detected					16.46
556	Mean of Detected					9222710	Mean of Detected					15.99
557	SD of Detected					2617893	SD of Detected					0.314
558	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
559	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
560												
561												
562	UCL Statistics											
563	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
564	Shapiro Wilk Test Statistic					0.96	Shapiro Wilk Test Statistic					0.927
565	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
566	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
567												
568	Assuming Normal Distribution						Assuming Lognormal Distribution					
569	DL/2 Substitution Method						DL/2 Substitution Method					
570	Mean					9222710	Mean					15.99
571	SD					2617893	SD					0.314
572	95% DL/2 (t) UCL					9982520	95% H-Stat (DL/2) UCL					10224506

	A	B	C	D	E	F	G	H	I	J	K	L
573												
574	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
575	MLE method failed to converge properly						Mean in Log Scale					N/A
576							SD in Log Scale					N/A
577							Mean in Original Scale					N/A
578							SD in Original Scale					N/A
579							95% Percentile Bootstrap UCL					N/A
580							95% BCA Bootstrap UCL					N/A
581												
582	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
583	k star (bias corrected)					10.41	Data appear Normal at 5% Significance Level					
584	Theta Star					885836						
585	nu star					708						
586												
587	A-D Test Statistic					0.635	Nonparametric Statistics					
588	5% A-D Critical Value					0.748	Kaplan-Meier (KM) Method					
589	K-S Test Statistic					0.748	Mean					9222710
590	5% K-S Critical Value					0.151	SD					2579108
591	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					448965
592							95% KM (t) UCL					9982520
593	Assuming Gamma Distribution						95% KM (z) UCL					9961192
594	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9982520
595	Minimum					4413529	95% KM (bootstrap t) UCL					9991860
596	Maximum					14146200	95% KM (BCA) UCL					9940561
597	Mean					9222710	95% KM (Percentile Bootstrap) UCL					9973206
598	Median					9867937	95% KM (Chebyshev) UCL					11179703
599	SD					2617893	97.5% KM (Chebyshev) UCL					12026495
600	k star					10.41	99% KM (Chebyshev) UCL					13689855
601	Theta star					885836						
602	Nu star					708	Potential UCLs to Use					
603	AppChi2					647.2	95% KM (t) UCL					9982520
604	95% Gamma Approximate UCL					10088170	95% KM (Percentile Bootstrap) UCL					9973206
605	95% Adjusted Gamma UCL					10132965						
606	Note: DL/2 is not a recommended method.											
607												
608												
609	Chromium											
610												
611	General Statistics											
612	Number of Valid Data					34	Number of Detected Data					34
613	Number of Distinct Detected Data					34	Number of Non-Detect Data					0
614	Number of Missing Values					13	Percent Non-Detects					0.00%
615												
616	Raw Statistics						Log-transformed Statistics					
617	Minimum Detected					262.6	Minimum Detected					5.571
618	Maximum Detected					2287	Maximum Detected					7.735
619	Mean of Detected					772	Mean of Detected					6.468
620	SD of Detected					520.1	SD of Detected					0.589
621	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
622	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
623												
624												

	A	B	C	D	E	F	G	H	I	J	K	L	
625	UCL Statistics												
626	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
627	Shapiro Wilk Test Statistic					0.807	Shapiro Wilk Test Statistic					0.94	
628	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933	
629	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
630													
631	Assuming Normal Distribution						Assuming Lognormal Distribution						
632	DL/2 Substitution Method						DL/2 Substitution Method						
633	Mean					772	Mean					6.468	
634	SD					520.1	SD					0.589	
635	95% DL/2 (t) UCL					922.9	95% H-Stat (DL/2) UCL					939.2	
636													
637	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
638	MLE method failed to converge properly						Mean in Log Scale						N/A
639	SD in Log Scale												N/A
640	Mean in Original Scale												N/A
641	SD in Original Scale												N/A
642	95% Percentile Bootstrap UCL												N/A
643	95% BCA Bootstrap UCL												N/A
644													
645	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
646	k star (bias corrected)					2.681	Data appear Lognormal at 5% Significance Level						
647	Theta Star					288							
648	nu star					182.3							
649													
650	A-D Test Statistic					1.082	Nonparametric Statistics						
651	5% A-D Critical Value					0.754	Kaplan-Meier (KM) Method						
652	K-S Test Statistic					0.754	Mean					772	
653	5% K-S Critical Value					0.152	SD					512.4	
654	Data not Gamma Distributed at 5% Significance Level						SE of Mean					89.2	
655	95% KM (t) UCL												922.9
656	Assuming Gamma Distribution						95% KM (z) UCL						918.7
657	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						922.9
658	Minimum					262.6	95% KM (bootstrap t) UCL						964.8
659	Maximum					2287	95% KM (BCA) UCL						928.8
660	Mean					772	95% KM (Percentile Bootstrap) UCL						928.7
661	Median					548.9	95% KM (Chebyshev) UCL						1161
662	SD					520.1	97.5% KM (Chebyshev) UCL						1329
663	k star					2.681	99% KM (Chebyshev) UCL						1659
664	Theta star					288							
665	Nu star					182.3	Potential UCLs to Use						
666	AppChi2					152.1	95% KM (Chebyshev) UCL						1161
667	95% Gamma Approximate UCL					925.4							
668	95% Adjusted Gamma UCL					933.8							
669	Note: DL/2 is not a recommended method.												
670													
671													
672	Cobalt												
673													
674	General Statistics												
675	Number of Valid Data					34	Number of Detected Data					34	
676	Number of Distinct Detected Data					34	Number of Non-Detect Data					0	

	A	B	C	D	E	F	G	H	I	J	K	L
677	Number of Missing Values					13	Percent Non-Detects					0.00%
678												
679	Raw Statistics						Log-transformed Statistics					
680	Minimum Detected					18.33	Minimum Detected					2.908
681	Maximum Detected					105.3	Maximum Detected					4.657
682	Mean of Detected					36.04	Mean of Detected					3.472
683	SD of Detected					20.13	SD of Detected					0.453
684	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
685	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
686												
687												
688	UCL Statistics											
689	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
690	Shapiro Wilk Test Statistic					0.774	Shapiro Wilk Test Statistic					0.892
691	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
692	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
693												
694	Assuming Normal Distribution						Assuming Lognormal Distribution					
695	DL/2 Substitution Method						DL/2 Substitution Method					
696	Mean					36.04	Mean					3.472
697	SD					20.13	SD					0.453
698	95% DL/2 (t) UCL					41.88	95% H-Stat (DL/2) UCL					41.38
699												
700	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
701	MLE method failed to converge properly						Mean in Log Scale					N/A
702							SD in Log Scale					N/A
703							Mean in Original Scale					N/A
704							SD in Original Scale					N/A
705							95% Percentile Bootstrap UCL					N/A
706							95% BCA Bootstrap UCL					N/A
707												
708	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
709	k star (bias corrected)					4.193	Data do not follow a Discernable Distribution (0.05)					
710	Theta Star					8.596						
711	nu star					285.1						
712												
713	A-D Test Statistic					1.666	Nonparametric Statistics					
714	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
715	K-S Test Statistic					0.75	Mean					36.04
716	5% K-S Critical Value					0.151	SD					19.83
717	Data not Gamma Distributed at 5% Significance Level						SE of Mean					3.452
718							95% KM (t) UCL					41.88
719	Assuming Gamma Distribution						95% KM (z) UCL					41.72
720	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					41.88
721	Minimum					18.33	95% KM (bootstrap t) UCL					43.18
722	Maximum					105.3	95% KM (BCA) UCL					41.76
723	Mean					36.04	95% KM (Percentile Bootstrap) UCL					41.82
724	Median					27.68	95% KM (Chebyshev) UCL					51.09
725	SD					20.13	97.5% KM (Chebyshev) UCL					57.6
726	k star					4.193	99% KM (Chebyshev) UCL					70.39
727	Theta star					8.596						
728	Nu star					285.1	Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
729	AppChi2				247	95% KM (Chebyshev) UCL						51.09
730	95% Gamma Approximate UCL				41.6							
731	95% Adjusted Gamma UCL				41.9							
732	Note: DL/2 is not a recommended method.											
733												
734												
735	Copper											
736												
737	General Statistics											
738	Number of Valid Data				34	Number of Detected Data				34		
739	Number of Distinct Detected Data				34	Number of Non-Detect Data				0		
740	Number of Missing Values				13	Percent Non-Detects				0.00%		
741												
742	Raw Statistics						Log-transformed Statistics					
743	Minimum Detected				310.8	Minimum Detected				5.739		
744	Maximum Detected				1513	Maximum Detected				7.322		
745	Mean of Detected				646.1	Mean of Detected				6.371		
746	SD of Detected				304.6	SD of Detected				0.447		
747	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
748	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
749												
750												
751	UCL Statistics											
752	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
753	Shapiro Wilk Test Statistic				0.876	Shapiro Wilk Test Statistic				0.915		
754	5% Shapiro Wilk Critical Value				0.933	5% Shapiro Wilk Critical Value				0.933		
755	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
756												
757	Assuming Normal Distribution						Assuming Lognormal Distribution					
758	DL/2 Substitution Method					DL/2 Substitution Method						
759	Mean				646.1	Mean				6.371		
760	SD				304.6	SD				0.447		
761	95% DL/2 (t) UCL				734.5	95% H-Stat (DL/2) UCL				747.9		
762												
763	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
764	MLE method failed to converge properly						Mean in Log Scale				N/A	
765							SD in Log Scale				N/A	
766							Mean in Original Scale				N/A	
767							SD in Original Scale				N/A	
768							95% Percentile Bootstrap UCL				N/A	
769							95% BCA Bootstrap UCL				N/A	
770												
771	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
772	k star (bias corrected)				4.722	Data do not follow a Discernable Distribution (0.05)						
773	Theta Star				136.8							
774	nu star				321.1							
775												
776	A-D Test Statistic				1.16	Nonparametric Statistics						
777	5% A-D Critical Value				0.749	Kaplan-Meier (KM) Method						
778	K-S Test Statistic				0.749	Mean				646.1		
779	5% K-S Critical Value				0.151	SD				300.1		
780	Data not Gamma Distributed at 5% Significance Level						SE of Mean				52.25	

	A	B	C	D	E	F	G	H	I	J	K	L	
781											95% KM (t) UCL	734.5	
782	Assuming Gamma Distribution										95% KM (z) UCL	732	
783	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	734.5	
784	Minimum					310.8						95% KM (bootstrap t) UCL	741
785	Maximum					1513						95% KM (BCA) UCL	727.5
786	Mean					646.1						95% KM (Percentile Bootstrap) UCL	732.9
787	Median					560.2						95% KM (Chebyshev) UCL	873.8
788	SD					304.6						97.5% KM (Chebyshev) UCL	972.3
789	k star					4.722						99% KM (Chebyshev) UCL	1166
790	Theta star					136.8							
791	Nu star					321.1						Potential UCLs to Use	
792	AppChi2					280.6						95% KM (Chebyshev) UCL	873.8
793	95% Gamma Approximate UCL					739.4							
794	95% Adjusted Gamma UCL					744.3							
795	Note: DL/2 is not a recommended method.												
796													
797													
798	Iron												
799													
800	General Statistics												
801	Number of Valid Data					34	Number of Detected Data					34	
802	Number of Distinct Detected Data					34	Number of Non-Detect Data					0	
803	Number of Missing Values					13	Percent Non-Detects					0.00%	
804													
805	Raw Statistics					Log-transformed Statistics							
806	Minimum Detected					8399	Minimum Detected					9.036	
807	Maximum Detected					192496	Maximum Detected					12.17	
808	Mean of Detected					32755	Mean of Detected					9.97	
809	SD of Detected					41485	SD of Detected					0.82	
810	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
811	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
812													
813													
814	UCL Statistics												
815	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
816	Shapiro Wilk Test Statistic					0.586	Shapiro Wilk Test Statistic					0.852	
817	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933	
818	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
819													
820	Assuming Normal Distribution					Assuming Lognormal Distribution							
821	DL/2 Substitution Method						DL/2 Substitution Method						
822	Mean					32755	Mean					9.97	
823	SD					41485	SD					0.82	
824	95% DL/2 (t) UCL					44796	95% H-Stat (DL/2) UCL					40985	
825													
826	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
827	MLE method failed to converge properly					Mean in Log Scale					N/A		
828						SD in Log Scale					N/A		
829						Mean in Original Scale					N/A		
830						SD in Original Scale					N/A		
831						95% Percentile Bootstrap UCL					N/A		
832						95% BCA Bootstrap UCL					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
833												
834	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
835	k star (bias corrected)				1.217		Data do not follow a Discernable Distribution (0.05)					
836	Theta Star				26908							
837	nu star				82.77							
838												
839	A-D Test Statistic				2.952		Nonparametric Statistics					
840	5% A-D Critical Value				0.77		Kaplan-Meier (KM) Method					
841	K-S Test Statistic				0.77		Mean				32755	
842	5% K-S Critical Value				0.154		SD				40870	
843	Data not Gamma Distributed at 5% Significance Level						SE of Mean				7115	
844							95% KM (t) UCL				44796	
845	Assuming Gamma Distribution						95% KM (z) UCL				44458	
846	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				44796	
847	Minimum				8399		95% KM (bootstrap t) UCL				55987	
848	Maximum				192496		95% KM (BCA) UCL				45930	
849	Mean				32755		95% KM (Percentile Bootstrap) UCL				44936	
850	Median				17337		95% KM (Chebyshev) UCL				63767	
851	SD				41485		97.5% KM (Chebyshev) UCL				77186	
852	k star				1.217		99% KM (Chebyshev) UCL				103545	
853	Theta star				26908							
854	Nu star				82.77		Potential UCLs to Use					
855	AppChi2				62.81		95% KM (Chebyshev) UCL				63767	
856	95% Gamma Approximate UCL				43168							
857	95% Adjusted Gamma UCL				43768							
858	Note: DL/2 is not a recommended method.											
859												
860												
861	Lead											
862												
863	General Statistics											
864	Number of Valid Data				34		Number of Detected Data				34	
865	Number of Distinct Detected Data				34		Number of Non-Detect Data				0	
866	Number of Missing Values				13		Percent Non-Detects				0.00%	
867												
868	Raw Statistics						Log-transformed Statistics					
869	Minimum Detected				13.47		Minimum Detected				2.6	
870	Maximum Detected				951.4		Maximum Detected				6.858	
871	Mean of Detected				223.5		Mean of Detected				4.619	
872	SD of Detected				238.9		SD of Detected				1.422	
873	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
874	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
875												
876												
877	UCL Statistics											
878	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
879	Shapiro Wilk Test Statistic				0.825		Shapiro Wilk Test Statistic				0.886	
880	5% Shapiro Wilk Critical Value				0.933		5% Shapiro Wilk Critical Value				0.933	
881	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
882												
883	Assuming Normal Distribution						Assuming Lognormal Distribution					
884	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
885					Mean	223.5					Mean	4.619	
886					SD	238.9					SD	1.422	
887					95% DL/2 (t) UCL	292.8					95% H-Stat (DL/2) UCL	576.1	
888													
889					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
890					MLE method failed to converge properly						Mean in Log Scale	N/A	
891											SD in Log Scale	N/A	
892											Mean in Original Scale	N/A	
893											SD in Original Scale	N/A	
894											95% Percentile Bootstrap UCL	N/A	
895											95% BCA Bootstrap UCL	N/A	
896													
897					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
898					k star (bias corrected)	0.71					Data do not follow a Discernable Distribution (0.05)		
899					Theta Star	314.9							
900					nu star	48.26							
901													
902					A-D Test Statistic	1.328					Nonparametric Statistics		
903					5% A-D Critical Value	0.787					Kaplan-Meier (KM) Method		
904					K-S Test Statistic	0.787					Mean	223.5	
905					5% K-S Critical Value	0.157					SD	235.3	
906					Data not Gamma Distributed at 5% Significance Level						SE of Mean	40.97	
907											95% KM (t) UCL	292.8	
908					Assuming Gamma Distribution						95% KM (z) UCL	290.9	
909					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	292.8	
910					Minimum	13.47					95% KM (bootstrap t) UCL	303.5	
911					Maximum	951.4					95% KM (BCA) UCL	295.5	
912					Mean	223.5					95% KM (Percentile Bootstrap) UCL	294.1	
913					Median	86.13					95% KM (Chebyshev) UCL	402.1	
914					SD	238.9					97.5% KM (Chebyshev) UCL	479.3	
915					k star	0.71					99% KM (Chebyshev) UCL	631.1	
916					Theta star	314.9							
917					Nu star	48.26					Potential UCLs to Use		
918					AppChi2	33.32					97.5% KM (Chebyshev) UCL	479.3	
919					95% Gamma Approximate UCL	323.7							
920					95% Adjusted Gamma UCL	329.8							
921					Note: DL/2 is not a recommended method.								
922													
923													
924					Magnesium								
925													
926					General Statistics								
927					Number of Valid Data	34					Number of Detected Data	34	
928					Number of Distinct Detected Data	34					Number of Non-Detect Data	0	
929					Number of Missing Values	13					Percent Non-Detects	0.00%	
930													
931					Raw Statistics						Log-transformed Statistics		
932					Minimum Detected	257904					Minimum Detected	12.46	
933					Maximum Detected	390240					Maximum Detected	12.87	
934					Mean of Detected	323735					Mean of Detected	12.68	
935					SD of Detected	33275					SD of Detected	0.103	
936					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
937	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
938												
939												
940	UCL Statistics											
941	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
942	Shapiro Wilk Test Statistic					0.971	Shapiro Wilk Test Statistic					0.971
943	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
944	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
945												
946	Assuming Normal Distribution						Assuming Lognormal Distribution					
947	DL/2 Substitution Method						DL/2 Substitution Method					
948	Mean					323735	Mean					12.68
949	SD					33275	SD					0.103
950	95% DL/2 (t) UCL					333393	95% H-Stat (DL/2) UCL					333845
951												
952	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
953	MLE method failed to converge properly						Mean in Log Scale					N/A
954							SD in Log Scale					N/A
955							Mean in Original Scale					N/A
956							SD in Original Scale					N/A
957							95% Percentile Bootstrap UCL					N/A
958							95% BCA Bootstrap UCL					N/A
959												
960	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
961	k star (bias corrected)					88.47	Data appear Normal at 5% Significance Level					
962	Theta Star					3659						
963	nu star					6016						
964												
965	A-D Test Statistic					0.369	Nonparametric Statistics					
966	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
967	K-S Test Statistic					0.746	Mean					323735
968	5% K-S Critical Value					0.15	SD					32782
969	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					5707
970							95% KM (t) UCL					333393
971	Assuming Gamma Distribution						95% KM (z) UCL					333122
972	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					333393
973	Minimum					257904	95% KM (bootstrap t) UCL					333427
974	Maximum					390240	95% KM (BCA) UCL					332838
975	Mean					323735	95% KM (Percentile Bootstrap) UCL					333318
976	Median					321300	95% KM (Chebyshev) UCL					348609
977	SD					33275	97.5% KM (Chebyshev) UCL					359373
978	k star					88.47	99% KM (Chebyshev) UCL					380515
979	Theta star					3659						
980	Nu star					6016	Potential UCLs to Use					
981	AppChi2					5837	95% KM (t) UCL					333393
982	95% Gamma Approximate UCL					333679	95% KM (Percentile Bootstrap) UCL					333318
983	95% Adjusted Gamma UCL					334176						
984	Note: DL/2 is not a recommended method.											
985												
986												
987	Manganese											
988												

	A	B	C	D	E	F	G	H	I	J	K	L		
989	General Statistics													
990	Number of Valid Data					34		Number of Detected Data					34	
991	Number of Distinct Detected Data					34		Number of Non-Detect Data					0	
992	Number of Missing Values					13		Percent Non-Detects					0.00%	
993														
994	Raw Statistics						Log-transformed Statistics							
995	Minimum Detected					984.9		Minimum Detected					6.893	
996	Maximum Detected					9461		Maximum Detected					9.155	
997	Mean of Detected					3040		Mean of Detected					7.791	
998	SD of Detected					2285		SD of Detected					0.665	
999	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
1000	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
1001														
1002														
1003	UCL Statistics													
1004	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1005	Shapiro Wilk Test Statistic					0.798		Shapiro Wilk Test Statistic					0.923	
1006	5% Shapiro Wilk Critical Value					0.933		5% Shapiro Wilk Critical Value					0.933	
1007	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1008														
1009	Assuming Normal Distribution						Assuming Lognormal Distribution							
1010	DL/2 Substitution Method							DL/2 Substitution Method						
1011	Mean					3040		Mean					7.791	
1012	SD					2285		SD					0.665	
1013	95% DL/2 (t) UCL					3703		95% H-Stat (DL/2) UCL					3827	
1014														
1015	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1016	MLE method failed to converge properly						Mean in Log Scale					N/A		
1017							SD in Log Scale					N/A		
1018							Mean in Original Scale					N/A		
1019							SD in Original Scale					N/A		
1020							95% Percentile Bootstrap UCL					N/A		
1021							95% BCA Bootstrap UCL					N/A		
1022														
1023	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1024	k star (bias corrected)					2.151		Data do not follow a Discernable Distribution (0.05)						
1025	Theta Star					1414								
1026	nu star					146.2								
1027														
1028	A-D Test Statistic					1.182		Nonparametric Statistics						
1029	5% A-D Critical Value					0.757		Kaplan-Meier (KM) Method						
1030	K-S Test Statistic					0.757		Mean					3040	
1031	5% K-S Critical Value					0.153		SD					2251	
1032	Data not Gamma Distributed at 5% Significance Level						SE of Mean					391.9		
1033							95% KM (t) UCL					3703		
1034	Assuming Gamma Distribution						95% KM (z) UCL					3685		
1035	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					3703	
1036	Minimum					984.9		95% KM (bootstrap t) UCL					3871	
1037	Maximum					9461		95% KM (BCA) UCL					3651	
1038	Mean					3040		95% KM (Percentile Bootstrap) UCL					3702	
1039	Median					2413		95% KM (Chebyshev) UCL					4748	
1040	SD					2285		97.5% KM (Chebyshev) UCL					5488	

	A	B	C	D	E	F	G	H	I	J	K	L	
1041					k star	2.151				99% KM (Chebyshev) UCL		6939	
1042					Theta star	1414							
1043					Nu star	146.2				Potential UCLs to Use			
1044					AppChi2	119.3				95% KM (Chebyshev) UCL		4748	
1045					95% Gamma Approximate UCL	3727							
1046					95% Adjusted Gamma UCL	3765							
1047	Note: DL/2 is not a recommended method.												
1048													
1049													
1050	Mercury												
1051													
1052	General Statistics												
1053					Number of Valid Data	24				Number of Detected Data		24	
1054					Number of Distinct Detected Data	24				Number of Non-Detect Data		0	
1055					Number of Missing Values	23				Percent Non-Detects		0.00%	
1056													
1057	Raw Statistics						Log-transformed Statistics						
1058					Minimum Detected	68.34				Minimum Detected		4.224	
1059					Maximum Detected	292				Maximum Detected		5.677	
1060					Mean of Detected	181.9				Mean of Detected		5.115	
1061					SD of Detected	68.54				SD of Detected		0.458	
1062					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1063					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1064													
1065													
1066	UCL Statistics												
1067	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1068					Shapiro Wilk Test Statistic	0.902				Shapiro Wilk Test Statistic		0.844	
1069					5% Shapiro Wilk Critical Value	0.916				5% Shapiro Wilk Critical Value		0.916	
1070	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1071													
1072	Assuming Normal Distribution						Assuming Lognormal Distribution						
1073					DL/2 Substitution Method					DL/2 Substitution Method			
1074					Mean	181.9				Mean		5.115	
1075					SD	68.54				SD		0.458	
1076					95% DL/2 (t) UCL	205.9				95% H-Stat (DL/2) UCL		222.5	
1077													
1078					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1079	MLE method failed to converge properly										Mean in Log Scale		N/A
1080										SD in Log Scale		N/A	
1081										Mean in Original Scale		N/A	
1082										SD in Original Scale		N/A	
1083										95% Percentile Bootstrap UCL		N/A	
1084										95% BCA Bootstrap UCL		N/A	
1085													
1086	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1087					k star (bias corrected)	5.143				Data do not follow a Discernable Distribution (0.05)			
1088					Theta Star	35.37							
1089					nu star	246.8							
1090													
1091					A-D Test Statistic	1.492				Nonparametric Statistics			
1092					5% A-D Critical Value	0.746				Kaplan-Meier (KM) Method			

	A	B	C	D	E	F	G	H	I	J	K	L	
1093	K-S Test Statistic					0.746	Mean					181.9	
1094	5% K-S Critical Value					0.178	SD					67.09	
1095	Data not Gamma Distributed at 5% Significance Level						SE of Mean					13.99	
1096							95% KM (t) UCL					205.9	
1097	Assuming Gamma Distribution						95% KM (z) UCL					204.9	
1098	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					205.9	
1099	Minimum						68.34	95% KM (bootstrap t) UCL					205.1
1100	Maximum						292	95% KM (BCA) UCL					205.2
1101	Mean						181.9	95% KM (Percentile Bootstrap) UCL					204.6
1102	Median						206.5	95% KM (Chebyshev) UCL					242.9
1103	SD						68.54	97.5% KM (Chebyshev) UCL					269.2
1104	k star						5.143	99% KM (Chebyshev) UCL					321.1
1105	Theta star						35.37						
1106	Nu star						246.8	Potential UCLs to Use					
1107	AppChi2						211.5	95% KM (Chebyshev) UCL					242.9
1108	95% Gamma Approximate UCL						212.3						
1109	95% Adjusted Gamma UCL						214.6						
1110	Note: DL/2 is not a recommended method.												
1111													
1112													
1113	Nickel												
1114													
1115	General Statistics												
1116	Number of Valid Data					34	Number of Detected Data					34	
1117	Number of Distinct Detected Data					34	Number of Non-Detect Data					0	
1118	Number of Missing Values					13	Percent Non-Detects					0.00%	
1119													
1120	Raw Statistics						Log-transformed Statistics						
1121	Minimum Detected					159.4	Minimum Detected					5.071	
1122	Maximum Detected					1282	Maximum Detected					7.156	
1123	Mean of Detected					372.9	Mean of Detected					5.806	
1124	SD of Detected					216.4	SD of Detected					0.46	
1125	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1126	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1127													
1128													
1129	UCL Statistics												
1130	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1131	Shapiro Wilk Test Statistic					0.762	Shapiro Wilk Test Statistic					0.954	
1132	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933	
1133	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1134													
1135	Assuming Normal Distribution						Assuming Lognormal Distribution						
1136	DL/2 Substitution Method						DL/2 Substitution Method						
1137	Mean					372.9	Mean					5.806	
1138	SD					216.4	SD					0.46	
1139	95% DL/2 (t) UCL					435.7	95% H-Stat (DL/2) UCL					429.4	
1140													
1141	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1142	MLE method failed to converge properly						Mean in Log Scale						N/A
1143							SD in Log Scale						N/A
1144							Mean in Original Scale						N/A

	A	B	C	D	E	F	G	H	I	J	K	L	
1145											SD in Original Scale	N/A	
1146											95% Percentile Bootstrap UCL	N/A	
1147											95% BCA Bootstrap UCL	N/A	
1148													
1149	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1150					k star (bias corrected)	4.11	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1151					Theta Star	90.72							
1152					nu star	279.5							
1153													
1154					A-D Test Statistic	0.851	Nonparametric Statistics						
1155					5% A-D Critical Value	0.751	Kaplan-Meier (KM) Method						
1156					K-S Test Statistic	0.751					Mean	372.9	
1157					5% K-S Critical Value	0.151					SD	213.2	
1158	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean	37.11	
1159											95% KM (t) UCL	435.7	
1160	Assuming Gamma Distribution											95% KM (z) UCL	433.9
1161	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	435.7
1162					Minimum	159.4					95% KM (bootstrap t) UCL	470.4	
1163					Maximum	1282					95% KM (BCA) UCL	440.2	
1164					Mean	372.9					95% KM (Percentile Bootstrap) UCL	435.9	
1165					Median	311.3					95% KM (Chebyshev) UCL	534.6	
1166					SD	216.4					97.5% KM (Chebyshev) UCL	604.6	
1167					k star	4.11					99% KM (Chebyshev) UCL	742.2	
1168					Theta star	90.72							
1169					Nu star	279.5	Potential UCLs to Use						
1170					AppChi2	241.8					95% KM (BCA) UCL	440.2	
1171					95% Gamma Approximate UCL	431							
1172					95% Adjusted Gamma UCL	434.1							
1173	Note: DL/2 is not a recommended method.												
1174													
1175													
1176	Potassium												
1177													
1178	General Statistics												
1179					Number of Valid Data	34					Number of Detected Data	34	
1180					Number of Distinct Detected Data	34					Number of Non-Detect Data	0	
1181					Number of Missing Values	13					Percent Non-Detects	0.00%	
1182													
1183	Raw Statistics						Log-transformed Statistics						
1184					Minimum Detected	2595300					Minimum Detected	14.77	
1185					Maximum Detected	3572037					Maximum Detected	15.09	
1186					Mean of Detected	3081103					Mean of Detected	14.94	
1187					SD of Detected	294121					SD of Detected	0.0963	
1188					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
1189					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
1190													
1191													
1192	UCL Statistics												
1193	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1194					Shapiro Wilk Test Statistic	0.936					Shapiro Wilk Test Statistic	0.933	
1195					5% Shapiro Wilk Critical Value	0.933					5% Shapiro Wilk Critical Value	0.933	
1196	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L
1197												
1198	Assuming Normal Distribution						Assuming Lognormal Distribution					
1199	DL/2 Substitution Method						DL/2 Substitution Method					
1200	Mean				3081103		Mean				14.94	
1201	SD				294121		SD				0.0963	
1202	95% DL/2 (t) UCL				3166468		95% H-Stat (DL/2) UCL				N/A	
1203												
1204	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1205	MLE method failed to converge properly						Mean in Log Scale				N/A	
1206							SD in Log Scale				N/A	
1207							Mean in Original Scale				N/A	
1208							SD in Original Scale				N/A	
1209							95% Percentile Bootstrap UCL				N/A	
1210							95% BCA Bootstrap UCL				N/A	
1211												
1212	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1213	k star (bias corrected)				102.1		Data appear Normal at 5% Significance Level					
1214	Theta Star				30189							
1215	nu star				6940							
1216												
1217	A-D Test Statistic				0.72		Nonparametric Statistics					
1218	5% A-D Critical Value				0.746		Kaplan-Meier (KM) Method					
1219	K-S Test Statistic				0.746		Mean				3081103	
1220	5% K-S Critical Value				0.15		SD				289763	
1221	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				50441	
1222							95% KM (t) UCL				3166468	
1223	Assuming Gamma Distribution						95% KM (z) UCL				3164072	
1224	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				3166468	
1225	Minimum				2595300		95% KM (bootstrap t) UCL				3163532	
1226	Maximum				3572037		95% KM (BCA) UCL				3159624	
1227	Mean				3081103		95% KM (Percentile Bootstrap) UCL				3164893	
1228	Median				3136419		95% KM (Chebyshev) UCL				3300972	
1229	SD				294121		97.5% KM (Chebyshev) UCL				3396109	
1230	k star				102.1		99% KM (Chebyshev) UCL				3582988	
1231	Theta star				30189							
1232	Nu star				6940		Potential UCLs to Use					
1233	AppChi2				6747		95% KM (t) UCL				3166468	
1234	95% Gamma Approximate UCL				3169070		95% KM (Percentile Bootstrap) UCL				3164893	
1235	95% Adjusted Gamma UCL				3173465							
1236	Note: DL/2 is not a recommended method.											
1237												
1238												
1239	Selenium											
1240												
1241	General Statistics											
1242	Number of Valid Data				34		Number of Detected Data				34	
1243	Number of Distinct Detected Data				34		Number of Non-Detect Data				0	
1244	Number of Missing Values				13		Percent Non-Detects				0.00%	
1245												
1246	Raw Statistics						Log-transformed Statistics					
1247	Minimum Detected				266.2		Minimum Detected				5.584	
1248	Maximum Detected				628.1		Maximum Detected				6.443	

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Mean of Detected					459.4	Mean of Detected					6.104
1250	SD of Detected					101.6	SD of Detected					0.237
1251	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1252	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1253												
1254												
1255	UCL Statistics											
1256	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1257	Shapiro Wilk Test Statistic					0.955	Shapiro Wilk Test Statistic					0.931
1258	5% Shapiro Wilk Critical Value					0.933	5% Shapiro Wilk Critical Value					0.933
1259	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1260												
1261	Assuming Normal Distribution						Assuming Lognormal Distribution					
1262	DL/2 Substitution Method						DL/2 Substitution Method					
1263	Mean					459.4	Mean					6.104
1264	SD					101.6	SD					0.237
1265	95% DL/2 (t) UCL					488.9	95% H-Stat (DL/2) UCL					495
1266												
1267	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1268	MLE method failed to converge properly						Mean in Log Scale					N/A
1269												
1270												
1271												
1272												
1273												
1274												
1275	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1276	k star (bias corrected)					17.74	Data appear Normal at 5% Significance Level					
1277	Theta Star					25.89						
1278	nu star					1207						
1279												
1280	A-D Test Statistic					0.634	Nonparametric Statistics					
1281	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
1282	K-S Test Statistic					0.746	Mean					459.4
1283	5% K-S Critical Value					0.151	SD					100.1
1284	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					17.43
1285												
1286	Assuming Gamma Distribution						95% KM (t) UCL					488.9
1287	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL					488.1
1288	Minimum					266.2	95% KM (jackknife) UCL					488.9
1289	Maximum					628.1	95% KM (bootstrap t) UCL					488.6
1290	Mean					459.4	95% KM (BCA) UCL					487.7
1291	Median					484.3	95% KM (Percentile Bootstrap) UCL					487.6
1292	SD					101.6	95% KM (Chebyshev) UCL					535.4
1293	k star					17.74	97.5% KM (Chebyshev) UCL					568.2
1294	Theta star					25.89	99% KM (Chebyshev) UCL					632.8
1295	Nu star					1207	Potential UCLs to Use					
1296	AppChi2					1127	95% KM (t) UCL					488.9
1297	95% Gamma Approximate UCL					491.9	95% KM (Percentile Bootstrap) UCL					487.6
1298	95% Adjusted Gamma UCL					493.5						
1299	Note: DL/2 is not a recommended method.											
1300												

	A	B	C	D	E	F	G	H	I	J	K	L		
1301														
1302	Sodium													
1303														
1304	General Statistics													
1305	Number of Valid Data					34		Number of Detected Data					34	
1306	Number of Distinct Detected Data					34		Number of Non-Detect Data					0	
1307	Number of Missing Values					13		Percent Non-Detects					0.00%	
1308														
1309	Raw Statistics						Log-transformed Statistics							
1310	Minimum Detected					690100		Minimum Detected					13.44	
1311	Maximum Detected					1503405		Maximum Detected					14.22	
1312	Mean of Detected					1136842		Mean of Detected					13.92	
1313	SD of Detected					221893		SD of Detected					0.2	
1314	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
1315	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
1316														
1317														
1318	UCL Statistics													
1319	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1320	Shapiro Wilk Test Statistic					0.952		Shapiro Wilk Test Statistic					0.957	
1321	5% Shapiro Wilk Critical Value					0.933		5% Shapiro Wilk Critical Value					0.933	
1322	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1323														
1324	Assuming Normal Distribution						Assuming Lognormal Distribution							
1325	DL/2 Substitution Method							DL/2 Substitution Method						
1326	Mean					1136842		Mean					13.92	
1327	SD					221893		SD					0.2	
1328	95% DL/2 (t) UCL					1201243		95% H-Stat (DL/2) UCL					1208680	
1329														
1330	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1331	MLE method failed to converge properly						Mean in Log Scale						N/A	
1332							SD in Log Scale						N/A	
1333							Mean in Original Scale						N/A	
1334							SD in Original Scale						N/A	
1335							95% Percentile Bootstrap UCL						N/A	
1336							95% BCA Bootstrap UCL						N/A	
1337														
1338	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1339	k star (bias corrected)					24.18		Data appear Normal at 5% Significance Level						
1340	Theta Star					47010								
1341	nu star					1644								
1342														
1343	A-D Test Statistic					0.445		Nonparametric Statistics						
1344	5% A-D Critical Value					0.746		Kaplan-Meier (KM) Method						
1345	K-S Test Statistic					0.746		Mean					1136842	
1346	5% K-S Critical Value					0.151		SD					218606	
1347	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						38054	
1348							95% KM (t) UCL						1201243	
1349	Assuming Gamma Distribution						95% KM (z) UCL						1199436	
1350	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						1201243	
1351	Minimum					690100		95% KM (bootstrap t) UCL					1203404	
1352	Maximum					1503405		95% KM (BCA) UCL					1196748	

	A	B	C	D	E	F	G	H	I	J	K	L	
1353					Mean	1136842					95% KM (Percentile Bootstrap) UCL	1198808	
1354					Median	1090011					95% KM (Chebyshev) UCL	1302717	
1355					SD	221893					97.5% KM (Chebyshev) UCL	1374491	
1356					k star	24.18					99% KM (Chebyshev) UCL	1515478	
1357					Theta star	47010							
1358					Nu star	1644					Potential UCLs to Use		
1359					AppChi2	1551					95% KM (t) UCL	1201243	
1360					95% Gamma Approximate UCL	1205129					95% KM (Percentile Bootstrap) UCL	1198808	
1361					95% Adjusted Gamma UCL	1208600							
1362	Note: DL/2 is not a recommended method.												
1363													
1364													
1365	Thallium												
1366													
1367	General Statistics												
1368					Number of Valid Data	34					Number of Detected Data	5	
1369					Number of Distinct Detected Data	5					Number of Non-Detect Data	29	
1370					Number of Missing Values	13					Percent Non-Detects	85.29%	
1371													
1372	Raw Statistics						Log-transformed Statistics						
1373					Minimum Detected	67.15					Minimum Detected	4.207	
1374					Maximum Detected	78.39					Maximum Detected	4.362	
1375					Mean of Detected	70.95					Mean of Detected	4.26	
1376					SD of Detected	4.622					SD of Detected	0.0636	
1377					Minimum Non-Detect	49.2					Minimum Non-Detect	3.896	
1378					Maximum Non-Detect	83.75					Maximum Non-Detect	4.428	
1379													
1380	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						34
1381	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
1382	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
1383													
1384	Warning: There are only 5 Detected Values in this data												
1385	Note: It should be noted that even though bootstrap may be performed on this data set												
1386	the resulting calculations may not be reliable enough to draw conclusions												
1387													
1388	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
1389													
1390													
1391	UCL Statistics												
1392	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1393					Shapiro Wilk Test Statistic	0.866					Shapiro Wilk Test Statistic	0.876	
1394					5% Shapiro Wilk Critical Value	0.762					5% Shapiro Wilk Critical Value	0.762	
1395	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1396													
1397	Assuming Normal Distribution						Assuming Lognormal Distribution						
1398					DL/2 Substitution Method						DL/2 Substitution Method		
1399					Mean	38.71					Mean	3.605	
1400					SD	14.28					SD	0.305	
1401					95% DL/2 (t) UCL	42.86					95% H-Stat (DL/2) UCL	43.15	
1402													
1403					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1404	MLE method failed to converge properly						Mean in Log Scale						4.076

	A	B	C	D	E	F	G	H	I	J	K	L	
1405											SD in Log Scale	0.0824	
1406											Mean in Original Scale	59.13	
1407											SD in Original Scale	5.319	
1408											95% Percentile Bootstrap UCL	60.74	
1409											95% BCA Bootstrap UCL	61.05	
1410													
1411	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1412					k star (bias corrected)	121.8	Data appear Normal at 5% Significance Level						
1413					Theta Star	0.583							
1414					nu star	1218							
1415													
1416					A-D Test Statistic	0.408	Nonparametric Statistics						
1417					5% A-D Critical Value	0.678	Kaplan-Meier (KM) Method						
1418					K-S Test Statistic	0.678	Mean						67.81
1419					5% K-S Critical Value	0.357	SD						2.193
1420	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						0.448
1421							95% KM (t) UCL						68.57
1422	Assuming Gamma Distribution						95% KM (z) UCL						68.55
1423	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						68.39
1424					Minimum	67.15	95% KM (bootstrap t) UCL						69.09
1425					Maximum	78.39	95% KM (BCA) UCL						72.61
1426					Mean	71.06	95% KM (Percentile Bootstrap) UCL						70.24
1427					Median	70.95	95% KM (Chebyshev) UCL						69.76
1428					SD	1.63	97.5% KM (Chebyshev) UCL						70.61
1429					k star	1835	99% KM (Chebyshev) UCL						72.27
1430					Theta star	0.0387							
1431					Nu star	124793	Potential UCLs to Use						
1432					AppChi2	123972	95% KM (t) UCL						68.57
1433					95% Gamma Approximate UCL	71.53	95% KM (Percentile Bootstrap) UCL						70.24
1434					95% Adjusted Gamma UCL	71.55							
1435	Note: DL/2 is not a recommended method.												
1436													
1437													
1438	Uranium												
1439													
1440	General Statistics												
1441					Number of Valid Data	34					Number of Detected Data	30	
1442					Number of Distinct Detected Data	30					Number of Non-Detect Data	4	
1443					Number of Missing Values	13					Percent Non-Detects	11.76%	
1444													
1445	Raw Statistics						Log-transformed Statistics						
1446					Minimum Detected	0.749					Minimum Detected	-0.289	
1447					Maximum Detected	21.09					Maximum Detected	3.049	
1448					Mean of Detected	7.548					Mean of Detected	1.57	
1449					SD of Detected	6.168					SD of Detected	1.078	
1450					Minimum Non-Detect	1.324					Minimum Non-Detect	0.281	
1451					Maximum Non-Detect	1.67					Maximum Non-Detect	0.513	
1452													
1453	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						11
1454	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						23
1455	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						32.35%
1456													

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	UCL Statistics												
1458	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1459	Shapiro Wilk Test Statistic					0.897	Shapiro Wilk Test Statistic					0.908	
1460	5% Shapiro Wilk Critical Value					0.927	5% Shapiro Wilk Critical Value					0.927	
1461	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1462													
1463	Assuming Normal Distribution						Assuming Lognormal Distribution						
1464	DL/2 Substitution Method						DL/2 Substitution Method						
1465	Mean					6.748	Mean					1.351	
1466	SD					6.195	SD					1.181	
1467	95% DL/2 (t) UCL					8.546	95% H-Stat (DL/2) UCL					10.45	
1468													
1469	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1470	Mean					5.278	Mean in Log Scale					1.408	
1471	SD					8.036	SD in Log Scale					1.107	
1472	95% MLE (t) UCL					7.61	Mean in Original Scale					6.803	
1473	95% MLE (Tiku) UCL					7.791	SD in Original Scale					6.142	
1474							95% Percentile Bootstrap UCL					8.578	
1475							95% BCA Bootstrap UCL					8.761	
1476													
1477	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1478	k star (bias corrected)					1.146	Data appear Gamma Distributed at 5% Significance Level						
1479	Theta Star					6.584							
1480	nu star					68.79							
1481													
1482	A-D Test Statistic					0.623	Nonparametric Statistics						
1483	5% A-D Critical Value					0.769	Kaplan-Meier (KM) Method						
1484	K-S Test Statistic					0.769	Mean					6.78	
1485	5% K-S Critical Value					0.164	SD					6.073	
1486	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1.059	
1487							95% KM (t) UCL					8.573	
1488	Assuming Gamma Distribution						95% KM (z) UCL						8.523
1489	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						8.569
1490	Minimum					0.574	95% KM (bootstrap t) UCL					8.78	
1491	Maximum					21.09	95% KM (BCA) UCL					8.459	
1492	Mean					6.755	95% KM (Percentile Bootstrap) UCL					8.488	
1493	Median					5.07	95% KM (Chebyshev) UCL					11.4	
1494	SD					6.189	97.5% KM (Chebyshev) UCL					13.4	
1495	k star					0.964	99% KM (Chebyshev) UCL					17.32	
1496	Theta star					7.01							
1497	Nu star					65.53	Potential UCLs to Use						
1498	AppChi2					47.9	95% KM (BCA) UCL					8.459	
1499	95% Gamma Approximate UCL					9.241							
1500	95% Adjusted Gamma UCL					9.387							
1501	Note: DL/2 is not a recommended method.												
1502													
1503													
1504	Vanadium												
1505													
1506	General Statistics												
1507	Number of Valid Data					34	Number of Detected Data					12	
1508	Number of Distinct Detected Data					12	Number of Non-Detect Data					22	

	A	B	C	D	E	F	G	H	I	J	K	L
1509	Number of Missing Values					13	Percent Non-Detects					64.71%
1510												
1511	Raw Statistics						Log-transformed Statistics					
1512	Minimum Detected					90.9	Minimum Detected					4.51
1513	Maximum Detected					354.8	Maximum Detected					5.872
1514	Mean of Detected					167.6	Mean of Detected					5.018
1515	SD of Detected					88.39	SD of Detected					0.452
1516	Minimum Non-Detect					79.95	Minimum Non-Detect					4.381
1517	Maximum Non-Detect					130.7	Maximum Non-Detect					4.873
1518												
1519	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					29
1520	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					5
1521	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					85.29%
1522												
1523	UCL Statistics											
1524	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1525	Shapiro Wilk Test Statistic					0.783	Shapiro Wilk Test Statistic					0.883
1526	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
1527	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1528												
1529	Assuming Normal Distribution						Assuming Lognormal Distribution					
1530	DL/2 Substitution Method						DL/2 Substitution Method					
1531	Mean					93.64	Mean					4.339
1532	SD					75.52	SD					0.58
1533	95% DL/2 (t) UCL					115.6	95% H-Stat (DL/2) UCL					92.61
1534												
1535	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1536	Mean					264.6	Mean in Log Scale					4.409
1537	SD					79.68	SD in Log Scale					0.538
1538	95% MLE (t) UCL					287.7	Mean in Original Scale					97.65
1539	95% MLE (Tiku) UCL					323.7	SD in Original Scale					73.41
1540							95% Percentile Bootstrap UCL					118.4
1541							95% BCA Bootstrap UCL					125
1542												
1543	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1544	k star (bias corrected)					3.796	Data appear Lognormal at 5% Significance Level					
1545	Theta Star					44.15						
1546	nu star					91.09						
1547												
1548	A-D Test Statistic					0.763	Nonparametric Statistics					
1549	5% A-D Critical Value					0.732	Kaplan-Meier (KM) Method					
1550	K-S Test Statistic					0.732	Mean					119.7
1551	5% K-S Critical Value					0.246	SD					61.64
1552	Data not Gamma Distributed at 5% Significance Level						SE of Mean					11.1
1553							95% KM (t) UCL					138.5
1554	Assuming Gamma Distribution						95% KM (z) UCL					138
1555	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					136.3
1556	Minimum					90.9	95% KM (bootstrap t) UCL					155.8
1557	Maximum					354.8	95% KM (BCA) UCL					148.2
1558	Mean					167	95% KM (Percentile Bootstrap) UCL					142.5
1559	Median					170.1	95% KM (Chebyshev) UCL					168.1
1560	SD					51.91	97.5% KM (Chebyshev) UCL					189

	A	B	C	D	E	F	G	H	I	J	K	L	
1561					k star	12.08				99% KM (Chebyshev) UCL		230.2	
1562					Theta star	13.83							
1563					Nu star	821.4				Potential UCLs to Use			
1564					AppChi2	755.9				95% KM (t) UCL		138.5	
1565					95% Gamma Approximate UCL	181.5				95% KM (% Bootstrap) UCL		142.5	
1566					95% Adjusted Gamma UCL	182.2							
1567	Note: DL/2 is not a recommended method.												
1568													
1569													
1570	Zinc												
1571													
1572	General Statistics												
1573					Number of Valid Data	34				Number of Detected Data		34	
1574					Number of Distinct Detected Data	34				Number of Non-Detect Data		0	
1575					Number of Missing Values	13				Percent Non-Detects		0.00%	
1576													
1577	Raw Statistics						Log-transformed Statistics						
1578					Minimum Detected	11425				Minimum Detected		9.344	
1579					Maximum Detected	28312				Maximum Detected		10.25	
1580					Mean of Detected	16753				Mean of Detected		9.69	
1581					SD of Detected	4683				SD of Detected		0.271	
1582					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1583					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1584													
1585													
1586	UCL Statistics												
1587	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1588					Shapiro Wilk Test Statistic	0.877				Shapiro Wilk Test Statistic		0.891	
1589					5% Shapiro Wilk Critical Value	0.933				5% Shapiro Wilk Critical Value		0.933	
1590	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1591													
1592	Assuming Normal Distribution						Assuming Lognormal Distribution						
1593					DL/2 Substitution Method					DL/2 Substitution Method			
1594					Mean	16753				Mean		9.69	
1595					SD	4683				SD		0.271	
1596					95% DL/2 (t) UCL	18112				95% H-Stat (DL/2) UCL		18219	
1597													
1598					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1599	MLE method failed to converge properly										Mean in Log Scale		N/A
1600										SD in Log Scale		N/A	
1601										Mean in Original Scale		N/A	
1602										SD in Original Scale		N/A	
1603										95% Percentile Bootstrap UCL		N/A	
1604										95% BCA Bootstrap UCL		N/A	
1605													
1606	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1607					k star (bias corrected)	12.77				Data do not follow a Discernable Distribution (0.05)			
1608					Theta Star	1311							
1609					nu star	868.6							
1610													
1611					A-D Test Statistic	1.42				Nonparametric Statistics			
1612					5% A-D Critical Value	0.747				Kaplan-Meier (KM) Method			

	A	B	C	D	E	F	G	H	I	J	K	L
1613	K-S Test Statistic					0.747	Mean					16753
1614	5% K-S Critical Value					0.151	SD					4613
1615	Data not Gamma Distributed at 5% Significance Level						SE of Mean					803.1
1616							95% KM (t) UCL					18112
1617	Assuming Gamma Distribution						95% KM (z) UCL					18074
1618	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					18112
1619	Minimum					11425	95% KM (bootstrap t) UCL					18261
1620	Maximum					28312	95% KM (BCA) UCL					18128
1621	Mean					16753	95% KM (Percentile Bootstrap) UCL					18134
1622	Median					17521	95% KM (Chebyshev) UCL					20254
1623	SD					4683	97.5% KM (Chebyshev) UCL					21768
1624	k star					12.77	99% KM (Chebyshev) UCL					24744
1625	Theta star					1311						
1626	Nu star					868.6	Potential UCLs to Use					
1627	AppChi2					801.2	95% KM (Chebyshev) UCL					20254
1628	95% Gamma Approximate UCL					18162						
1629	95% Adjusted Gamma UCL					18235						
1630	Note: DL/2 is not a recommended method.											
1631												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Full Data Sets												
2	User Selected Options															
3	From File			I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Fish-wholebody_ProUCL\Fish_Reach6_PCB&TEQ.												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2006 TEQ_D/F															
10																
11	General Statistics															
12	Number of Valid Observations				24				Number of Distinct Observations				24			
13	Number of Missing Values				14											
14																
15	Raw Statistics						Log-transformed Statistics									
16	Minimum			0.0003611			Minimum of Log Data			-7.926						
17	Maximum			0.00158			Maximum of Log Data			-6.45						
18	Mean			0.0008566			Mean of log Data			-7.123						
19	Median			0.0008509			SD of log Data			0.361						
20	SD			0.0003012												
21	Coefficient of Variation			0.352												
22	Skewness			0.664												
23																
24	Relevant UCL Statistics															
25	Normal Distribution Test						Lognormal Distribution Test									
26	Shapiro Wilk Test Statistic			0.945			Shapiro Wilk Test Statistic			0.969						
27	Shapiro Wilk Critical Value			0.916			Shapiro Wilk Critical Value			0.916						
28	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
29																
30	Assuming Normal Distribution						Assuming Lognormal Distribution									
31	95% Student's-t UCL			0.000962			95% H-UCL			0.0009897						
32	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL			0.00114						
33	95% Adjusted-CLT UCL			0.0009666			97.5% Chebyshev (MVUE) UCL			0.00126						
34	95% Modified-t UCL			0.0009634			99% Chebyshev (MVUE) UCL			0.0015						
35																
36	Gamma Distribution Test						Data Distribution									
37	k star (bias corrected)			7.431			Data appear Normal at 5% Significance Level									
38	Theta Star			0.0001153												
39	nu star			356.7												
40	Approximate Chi Square Value (.05)			313.9			Nonparametric Statistics									
41	Adjusted Level of Significance			0.0392			95% CLT UCL			0.0009577						
42	Adjusted Chi Square Value			311.1			95% Jackknife UCL			0.000962						
43							95% Standard Bootstrap UCL			0.0009532						
44	Anderson-Darling Test Statistic			0.368			95% Bootstrap-t UCL			0.000982						
45	Anderson-Darling 5% Critical Value			0.745			95% Hall's Bootstrap UCL			0.000968						
46	Kolmogorov-Smirnov Test Statistic			0.128			95% Percentile Bootstrap UCL			0.0009636						
47	Kolmogorov-Smirnov 5% Critical Value			0.178			95% BCA Bootstrap UCL			0.0009681						
48	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			0.00112						
49							97.5% Chebyshev(Mean, Sd) UCL			0.00124						
50	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			0.00147						
51	95% Approximate Gamma UCL			0.0009733												
52	95% Adjusted Gamma UCL			0.0009821												

	A	B	C	D	E	F	G	H	I	J	K	L	
53													
54	Potential UCL to Use					Use 95% Student's-t UCL					0.000962		
55													
56													
57	2006 TEQ_D/F+PCB												
58													
59	General Statistics												
60	Number of Valid Observations					24	Number of Distinct Observations					24	
61	Number of Missing Values					14							
62													
63	Raw Statistics					Log-transformed Statistics							
64	Minimum					0.00136	Minimum of Log Data					-6.6	
65	Maximum					0.0143	Maximum of Log Data					-4.246	
66	Mean					0.00433	Mean of log Data					-5.689	
67	Median					0.00292	SD of log Data					0.683	
68	SD					0.00348							
69	Coefficient of Variation					0.804							
70	Skewness					1.626							
71													
72	Relevant UCL Statistics												
73	Normal Distribution Test					Lognormal Distribution Test							
74	Shapiro Wilk Test Statistic					0.78	Shapiro Wilk Test Statistic					0.931	
75	Shapiro Wilk Critical Value					0.916	Shapiro Wilk Critical Value					0.916	
76	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
77													
78	Assuming Normal Distribution					Assuming Lognormal Distribution							
79	95% Student's-t UCL					0.00554	95% H-UCL					0.0058	
80	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL							0.00697
81	95% Adjusted-CLT UCL					0.00575	97.5% Chebyshev (MVUE) UCL					0.00816	
82	95% Modified-t UCL					0.00558	99% Chebyshev (MVUE) UCL					0.0105	
83													
84	Gamma Distribution Test					Data Distribution							
85	k star (bias corrected)					1.941	Data appear Lognormal at 5% Significance Level						
86	Theta Star					0.00223							
87	nu star					93.17							
88	Approximate Chi Square Value (.05)					71.91	Nonparametric Statistics						
89	Adjusted Level of Significance					0.0392	95% CLT UCL					0.00549	
90	Adjusted Chi Square Value					70.6	95% Jackknife UCL					0.00554	
91							95% Standard Bootstrap UCL					0.00546	
92	Anderson-Darling Test Statistic					0.992	95% Bootstrap-t UCL					0.0059	
93	Anderson-Darling 5% Critical Value					0.754	95% Hall's Bootstrap UCL					0.00575	
94	Kolmogorov-Smirnov Test Statistic					0.186	95% Percentile Bootstrap UCL					0.00554	
95	Kolmogorov-Smirnov 5% Critical Value					0.18	95% BCA Bootstrap UCL					0.00565	
96	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL							0.00742
97						97.5% Chebyshev(Mean, Sd) UCL							0.00876
98	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL							0.0114
99	95% Approximate Gamma UCL					0.00561							
100	95% Adjusted Gamma UCL					0.00571							
101													
102	Potential UCL to Use					Use 95% H-UCL							0.0058
103													
104													

	A	B	C	D	E	F	G	H	I	J	K	L
105	2006 TEQ_PCB											
106												
107	General Statistics											
108	Number of Valid Observations					24	Number of Distinct Observations					23
109	Number of Missing Values					14						
110												
111	Raw Statistics						Log-transformed Statistics					
112	Minimum					0.0005598	Minimum of Log Data					-7.488
113	Maximum					0.0134	Maximum of Log Data					-4.309
114	Mean					0.00347	Mean of log Data					-6.049
115	Median					0.00224	SD of log Data					0.885
116	SD					0.00338						
117	Coefficient of Variation					0.974						
118	Skewness					1.705						
119												
120	Relevant UCL Statistics											
121	Normal Distribution Test						Lognormal Distribution Test					
122	Shapiro Wilk Test Statistic					0.774	Shapiro Wilk Test Statistic					0.961
123	Shapiro Wilk Critical Value					0.916	Shapiro Wilk Critical Value					0.916
124	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
125												
126	Assuming Normal Distribution						Assuming Lognormal Distribution					
127	95% Student's-t UCL					0.00465	95% H-UCL					0.00541
128	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					0.0064
129	95% Adjusted-CLT UCL					0.00486	97.5% Chebyshev (MVUE) UCL					0.0077
130	95% Modified-t UCL					0.00469	99% Chebyshev (MVUE) UCL					0.0102
131												
132	Gamma Distribution Test						Data Distribution					
133	k star (bias corrected)					1.289	Data appear Gamma Distributed at 5% Significance Level					
134	Theta Star					0.00269						
135	nu star					61.88						
136	Approximate Chi Square Value (.05)					44.78	Nonparametric Statistics					
137	Adjusted Level of Significance					0.0392	95% CLT UCL					0.0046
138	Adjusted Chi Square Value					43.76	95% Jackknife UCL					0.00465
139							95% Standard Bootstrap UCL					0.0046
140	Anderson-Darling Test Statistic					0.713	95% Bootstrap-t UCL					0.00519
141	Anderson-Darling 5% Critical Value					0.763	95% Hall's Bootstrap UCL					0.00489
142	Kolmogorov-Smirnov Test Statistic					0.172	95% Percentile Bootstrap UCL					0.00467
143	Kolmogorov-Smirnov 5% Critical Value					0.181	95% BCA Bootstrap UCL					0.00491
144	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.00648
145							97.5% Chebyshev(Mean, Sd) UCL					0.00778
146	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					0.0103
147	95% Approximate Gamma UCL					0.00479						
148	95% Adjusted Gamma UCL					0.00491						
149												
150	Potential UCL to Use						Use 95% Approximate Gamma UCL					0.00479
151												
152												
153	Non-Dioxin PCB, as Congener Sum											
154												
155	General Statistics											
156	Number of Valid Observations					5	Number of Distinct Observations					5

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Missing Values					27						
158												
159	Raw Statistics						Log-transformed Statistics					
160	Minimum					16.27	Minimum of Log Data					2.789
161	Maximum					159.9	Maximum of Log Data					5.075
162	Mean					55.45	Mean of log Data					3.659
163	Median					35	SD of log Data					0.882
164	SD					59.4						
165	Coefficient of Variation					1.071						
166	Skewness					2.052						
167												
168												
169	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
170												
171	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
172	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
173												
174												
175	Warning: There are only 5 Values in this data											
176	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
177	the resulting calculations may not be reliable enough to draw conclusions											
178												
179	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
180												
181	Relevant UCL Statistics											
182	Normal Distribution Test						Lognormal Distribution Test					
183	Shapiro Wilk Test Statistic					0.72	Shapiro Wilk Test Statistic					0.915
184	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762
185	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
186												
187	Assuming Normal Distribution						Assuming Lognormal Distribution					
188	95% Student's-t UCL					112.1	95% H-UCL					398.5
189	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					139.2
190	95% Adjusted-CLT UCL					125.2	97.5% Chebyshev (MVUE) UCL					176.8
191	95% Modified-t UCL					116.1	99% Chebyshev (MVUE) UCL					250.7
192												
193	Gamma Distribution Test						Data Distribution					
194	k star (bias corrected)					0.753	Data appear Gamma Distributed at 5% Significance Level					
195	Theta Star					73.63						
196	nu star					7.531						
197	Approximate Chi Square Value (.05)					2.467	Nonparametric Statistics					
198	Adjusted Level of Significance					0.0086	95% CLT UCL					99.15
199	Adjusted Chi Square Value					1.392	95% Jackknife UCL					112.1
200							95% Standard Bootstrap UCL					95.16
201	Anderson-Darling Test Statistic					0.482	95% Bootstrap-t UCL					256.2
202	Anderson-Darling 5% Critical Value					0.686	95% Hall's Bootstrap UCL					311.3
203	Kolmogorov-Smirnov Test Statistic					0.3	95% Percentile Bootstrap UCL					104.7
204	Kolmogorov-Smirnov 5% Critical Value					0.362	95% BCA Bootstrap UCL					111.8
205	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					171.2
206							97.5% Chebyshev(Mean, Sd) UCL					221.3
207	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					319.7
208	95% Approximate Gamma UCL					169.3						

	A	B	C	D	E	F	G	H	I	J	K	L		
209	95% Adjusted Gamma UCL					300.1								
210														
211	Potential UCL to Use					Use 95% Approximate Gamma UCL					169.3			
212	Recommended UCL exceeds the maximum observation													
213														
214														
215	Total PCB, as Aroclor													
216														
217	General Statistics													
218	Number of Valid Observations				24	Number of Distinct Observations				22				
219	Number of Missing Values				13									
220														
221	Raw Statistics						Log-transformed Statistics							
222	Minimum				8.782	Minimum of Log Data				2.173				
223	Maximum				164	Maximum of Log Data				5.1				
224	Mean				43.72	Mean of log Data				3.43				
225	Median				27.26	SD of log Data				0.812				
226	SD				42.54									
227	Coefficient of Variation				0.973									
228	Skewness				1.807									
229														
230	Relevant UCL Statistics													
231	Normal Distribution Test						Lognormal Distribution Test							
232	Shapiro Wilk Test Statistic				0.732	Shapiro Wilk Test Statistic				0.938				
233	Shapiro Wilk Critical Value				0.916	Shapiro Wilk Critical Value				0.916				
234	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
235														
236	Assuming Normal Distribution						Assuming Lognormal Distribution							
237	95% Student's-t UCL				58.6	95% H-UCL				63.14				
238	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				75.54			
239	95% Adjusted-CLT UCL				61.42	97.5% Chebyshev (MVUE) UCL				89.98				
240	95% Modified-t UCL				59.13	99% Chebyshev (MVUE) UCL				118.3				
241														
242	Gamma Distribution Test						Data Distribution							
243	k star (bias corrected)				1.415	Data appear Lognormal at 5% Significance Level								
244	Theta Star				30.9									
245	nu star				67.9									
246	Approximate Chi Square Value (.05)				49.94	Nonparametric Statistics								
247	Adjusted Level of Significance				0.0392	95% CLT UCL				58				
248	Adjusted Chi Square Value				48.85	95% Jackknife UCL				58.6				
249						95% Standard Bootstrap UCL				57.63				
250	Anderson-Darling Test Statistic				1.168	95% Bootstrap-t UCL				64.7				
251	Anderson-Darling 5% Critical Value				0.76	95% Hall's Bootstrap UCL				61.69				
252	Kolmogorov-Smirnov Test Statistic				0.211	95% Percentile Bootstrap UCL				58.11				
253	Kolmogorov-Smirnov 5% Critical Value				0.181	95% BCA Bootstrap UCL				60.5				
254	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL				81.56			
255							97.5% Chebyshev(Mean, Sd) UCL				97.94			
256	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL							
257	95% Approximate Gamma UCL				59.44									
258	95% Adjusted Gamma UCL				60.76									
259														
260	Potential UCL to Use						Use 95% H-UCL							

	A	B	C	D	E	F	G	H	I	J	K	L	
261													
262													
263	Total PCB, as Congener Sum												
264													
265	General Statistics												
266	Number of Valid Observations					5	Number of Distinct Observations					5	
267	Number of Missing Values					27							
268													
269	Raw Statistics						Log-transformed Statistics						
270	Minimum					17.44	Minimum of Log Data					2.859	
271	Maximum					172.5	Maximum of Log Data					5.15	
272	Mean					60.02	Mean of log Data					3.743	
273	Median					37.92	SD of log Data					0.876	
274	SD					63.92							
275	Coefficient of Variation					1.065							
276	Skewness					2.056							
277													
278													
279	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!												
280													
281	It is suggested to collect at least 8 to 10 observations using these statistical methods!												
282	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
283													
284													
285	Warning: There are only 5 Values in this data												
286	Note: It should be noted that even though bootstrap methods may be performed on this data set,												
287	the resulting calculations may not be reliable enough to draw conclusions												
288													
289	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.												
290													
291	Relevant UCL Statistics												
292	Normal Distribution Test						Lognormal Distribution Test						
293	Shapiro Wilk Test Statistic					0.72	Shapiro Wilk Test Statistic					0.918	
294	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762	
295	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
296													
297	Assuming Normal Distribution						Assuming Lognormal Distribution						
298	95% Student's-t UCL					121	95% H-UCL					421.1	
299	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						150.2
300	95% Adjusted-CLT UCL					135.1	97.5% Chebyshev (MVUE) UCL					190.7	
301	95% Modified-t UCL					125.3	99% Chebyshev (MVUE) UCL					270.3	
302													
303	Gamma Distribution Test						Data Distribution						
304	k star (bias corrected)					0.761	Data appear Gamma Distributed at 5% Significance Level						
305	Theta Star					78.89							
306	nu star					7.608							
307	Approximate Chi Square Value (.05)					2.51	Nonparametric Statistics						
308	Adjusted Level of Significance					0.0086	95% CLT UCL					107	
309	Adjusted Chi Square Value					1.422	95% Jackknife UCL					121	
310							95% Standard Bootstrap UCL					101.5	
311	Anderson-Darling Test Statistic					0.481	95% Bootstrap-t UCL					282.4	
312	Anderson-Darling 5% Critical Value					0.686	95% Hall's Bootstrap UCL					345.9	

	A	B	C	D	E	F	G	H	I	J	K	L
313	Kolmogorov-Smirnov Test Statistic					0.304	95% Percentile Bootstrap UCL					111.9
314	Kolmogorov-Smirnov 5% Critical Value					0.362	95% BCA Bootstrap UCL					120.5
315	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					184.6
316							97.5% Chebyshev(Mean, Sd) UCL					238.5
317	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					344.5
318	95% Approximate Gamma UCL					181.9						
319	95% Adjusted Gamma UCL					321.1						
320												
321	Potential UCL to Use						Use 95% Approximate Gamma UCL					181.9
322	Recommended UCL exceeds the maximum observation											
323												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			C:\Documents and Settings\visitor\Desktop\UCR Desktop\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	2,4'-DDE											
10												
11	General Statistics											
12	Number of Valid Data				45		Number of Detected Data				1	
13	Number of Distinct Detected Data				1		Number of Non-Detect Data				44	
14	Number of Missing Values				74		Percent Non-Detects				97.78%	
15												
16	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
17	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
18												
19	The data set for variable 2,4'-DDE was not processed!											
20												
21												
22												
23	2,4'-DDT											
24												
25	General Statistics											
26	Number of Valid Data				45		Number of Detected Data				2	
27	Number of Distinct Detected Data				2		Number of Non-Detect Data				43	
28	Number of Missing Values				74		Percent Non-Detects				95.56%	
29												
30	Raw Statistics						Log-transformed Statistics					
31	Minimum Detected			0.26			Minimum Detected			-1.347		
32	Maximum Detected			0.27			Maximum Detected			-1.309		
33	Mean of Detected			0.265			Mean of Detected			-1.328		
34	SD of Detected			0.00707			SD of Detected			0.0267		
35	Minimum Non-Detect			0.68			Minimum Non-Detect			-0.386		
36	Maximum Non-Detect			1.1			Maximum Non-Detect			0.0953		
37												
38	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				45	
39	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
40	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
41												
42	Warning: Data set has only 2 Distinct Detected Values.											
43	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
44	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
45												
46	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
47												
48	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
49	Those methods will return a 'N/A' value on your output display!											
50												
51	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
52	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											

	A	B	C	D	E	F	G	H	I	J	K	L
105	General Statistics											
106	Number of Valid Data					7	Number of Detected Data					7
107	Number of Distinct Detected Data					7	Number of Non-Detect Data					0
108	Number of Missing Values					102	Percent Non-Detects					0.00%
109												
110	Raw Statistics						Log-transformed Statistics					
111	Minimum Detected					0.0835	Minimum Detected					-2.483
112	Maximum Detected					0.35	Maximum Detected					-1.049
113	Mean of Detected					0.177	Mean of Detected					-1.864
114	SD of Detected					0.1	SD of Detected					0.552
115	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
116	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
117												
118												
119	Warning: There are only 7 Detected Values in this data											
120	Note: It should be noted that even though bootstrap may be performed on this data set											
121	the resulting calculations may not be reliable enough to draw conclusions											
122												
123	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
124												
125												
126	UCL Statistics											
127	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
128	Shapiro Wilk Test Statistic					0.885	Shapiro Wilk Test Statistic					0.922
129	5% Shapiro Wilk Critical Value					0.803	5% Shapiro Wilk Critical Value					0.803
130	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
131												
132	Assuming Normal Distribution						Assuming Lognormal Distribution					
133	DL/2 Substitution Method						DL/2 Substitution Method					
134	Mean					0.177	Mean					-1.864
135	SD					0.1	SD					0.552
136	95% DL/2 (t) UCL					0.25	95% H-Stat (DL/2) UCL					0.322
137												
138	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
139	MLE method failed to converge properly						Mean in Log Scale					N/A
140							SD in Log Scale					N/A
141							Mean in Original Scale					N/A
142							SD in Original Scale					N/A
143							95% Percentile Bootstrap UCL					N/A
144							95% BCA Bootstrap UCL					N/A
145												
146	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
147	k star (bias corrected)					2.344	Data appear Normal at 5% Significance Level					
148	Theta Star					0.0755						
149	nu star					32.82						
150												
151	A-D Test Statistic					0.347	Nonparametric Statistics					
152	5% A-D Critical Value					0.71	Kaplan-Meier (KM) Method					
153	K-S Test Statistic					0.71	Mean					0.177
154	5% K-S Critical Value					0.313	SD					0.0927
155	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0379
156							95% KM (t) UCL					0.25

	A	B	C	D	E	F	G	H	I	J	K	L		
157	Assuming Gamma Distribution						95% KM (z) UCL					0.239		
158	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.25		
159	Minimum						0.0835	95% KM (bootstrap t) UCL					0.303	
160	Maximum						0.35	95% KM (BCA) UCL					0.231	
161	Mean						0.177	95% KM (Percentile Bootstrap) UCL					0.237	
162	Median						0.159	95% KM (Chebyshev) UCL					0.342	
163	SD						0.1	97.5% KM (Chebyshev) UCL					0.413	
164	k star						2.344	99% KM (Chebyshev) UCL					0.554	
165	Theta star						0.0755							
166	Nu star						32.82	Potential UCLs to Use						
167	AppChi2						20.72	95% KM (t) UCL					0.25	
168	95% Gamma Approximate UCL						0.28	95% KM (Percentile Bootstrap) UCL					0.237	
169	95% Adjusted Gamma UCL						0.325							
170	Note: DL/2 is not a recommended method.													
171														
172														
173	2-Methylnaphthalene													
174														
175	General Statistics													
176	Number of Valid Data						45	Number of Detected Data						36
177	Number of Distinct Detected Data						8	Number of Non-Detect Data						9
178	Number of Missing Values						74	Percent Non-Detects						20.00%
179														
180	Raw Statistics						Log-transformed Statistics							
181	Minimum Detected						0.2	Minimum Detected						-1.609
182	Maximum Detected						2	Maximum Detected						0.693
183	Mean of Detected						0.669	Mean of Detected						-0.648
184	SD of Detected						0.531	SD of Detected						0.697
185	Minimum Non-Detect						4	Minimum Non-Detect						1.386
186	Maximum Non-Detect						6	Maximum Non-Detect						1.792
187														
188	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						45	
189	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0	
190	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%	
191														
192	UCL Statistics													
193	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
194	Shapiro Wilk Test Statistic						0.739	Shapiro Wilk Test Statistic						0.904
195	5% Shapiro Wilk Critical Value						0.935	5% Shapiro Wilk Critical Value						0.935
196	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
197														
198	Assuming Normal Distribution						Assuming Lognormal Distribution							
199	DL/2 Substitution Method						DL/2 Substitution Method							
200	Mean						1.002	Mean						-0.352
201	SD						0.843	SD						0.867
202	95% DL/2 (t) UCL						1.213	95% H-Stat (DL/2) UCL						1.859
203														
204	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
205	MLE method failed to converge properly						Mean in Log Scale						-0.648	
206							SD in Log Scale						0.65	
207							Mean in Original Scale						0.65	
208							SD in Original Scale						0.487	

	A	B	C	D	E	F	G	H	I	J	K	L
209											95% Percentile Bootstrap UCL	0.766
210											95% BCA Bootstrap UCL	0.795
211												
212	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
213				k star (bias corrected)		2.014	Data do not follow a Discernable Distribution (0.05)					
214				Theta Star		0.332						
215				nu star		145						
216												
217				A-D Test Statistic		1.326	Nonparametric Statistics					
218				5% A-D Critical Value		0.759	Kaplan-Meier (KM) Method					
219				K-S Test Statistic		0.759	Mean					
220				5% K-S Critical Value		0.149	SD					
221	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
222							95% KM (t) UCL					
223	Assuming Gamma Distribution						95% KM (z) UCL					
224	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
225				Minimum		0.192	95% KM (bootstrap t) UCL					
226				Maximum		2	95% KM (BCA) UCL					
227				Mean		0.676	95% KM (Percentile Bootstrap) UCL					
228				Median		0.5	95% KM (Chebyshev) UCL					
229				SD		0.491	97.5% KM (Chebyshev) UCL					
230				k star		2.281	99% KM (Chebyshev) UCL					
231				Theta star		0.296						
232				Nu star		205.3	Potential UCLs to Use					
233				AppChi2		173.1	95% KM (BCA) UCL					
234				95% Gamma Approximate UCL		0.801						
235				95% Adjusted Gamma UCL		0.806						
236	Note: DL/2 is not a recommended method.											
237												
238												
239	4,4'-DDE											
240												
241	General Statistics											
242				Number of Valid Data		58					Number of Detected Data	4
243				Number of Distinct Detected Data		4					Number of Non-Detect Data	54
244				Number of Missing Values		61					Percent Non-Detects	93.10%
245												
246	Raw Statistics						Log-transformed Statistics					
247				Minimum Detected		0.12					Minimum Detected	-2.12
248				Maximum Detected		0.65					Maximum Detected	-0.431
249				Mean of Detected		0.398					Mean of Detected	-1.087
250				SD of Detected		0.221					SD of Detected	0.73
251				Minimum Non-Detect		0.68					Minimum Non-Detect	-0.386
252				Maximum Non-Detect		3.9					Maximum Non-Detect	1.361
253												
254	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
255	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
256	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
257												
258	Warning: There are only 4 Distinct Detected Values in this data											
259	Note: It should be noted that even though bootstrap may be performed on this data set											
260	the resulting calculations may not be reliable enough to draw conclusions											

	A	B	C	D	E	F	G	H	I	J	K	L
261												
262	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
263												
264												
265	UCL Statistics											
266	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
267	Lilliefors Test Statistic			0.994			Lilliefors Test Statistic			0.904		
268	5% Lilliefors Critical Value			0.748			5% Lilliefors Critical Value			0.748		
269	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
270												
271	Assuming Normal Distribution						Assuming Lognormal Distribution					
272	DL/2 Substitution Method						DL/2 Substitution Method					
273	Mean			0.703			Mean			-0.586		
274	SD			0.555			SD			0.641		
275	95% DL/2 (t) UCL			0.825			95% H-Stat (DL/2) UCL			0.929		
276												
277	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
278	MLE method failed to converge properly						Mean in Log Scale			-1.087		
279							SD in Log Scale			0.479		
280							Mean in Original Scale			0.376		
281							SD in Original Scale			0.181		
282							95% Percentile Bootstrap UCL			0.416		
283							95% BCA Bootstrap UCL			0.42		
284												
285	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
286	k star (bias corrected)			0.965			Data appear Normal at 5% Significance Level					
287	Theta Star			0.412								
288	nu star			7.717								
289												
290	A-D Test Statistic			0.3			Nonparametric Statistics					
291	5% A-D Critical Value			0.659			Kaplan-Meier (KM) Method					
292	K-S Test Statistic			0.659			Mean			0.398		
293	5% K-S Critical Value			0.396			SD			0.191		
294	Data appear Gamma Distributed at 5% Significance Level						SE of Mean			0.11		
295							95% KM (t) UCL			0.582		
296	Assuming Gamma Distribution						95% KM (z) UCL			0.579		
297	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			0.609		
298	Minimum			0.0852			95% KM (bootstrap t) UCL			0.602		
299	Maximum			0.717			95% KM (BCA) UCL			0.578		
300	Mean			0.397			95% KM (Percentile Bootstrap) UCL			N/A		
301	Median			0.396			95% KM (Chebyshev) UCL			0.878		
302	SD			0.152			97.5% KM (Chebyshev) UCL			1.087		
303	k star			5.461			99% KM (Chebyshev) UCL			1.495		
304	Theta star			0.0727								
305	Nu star			633.5			Potential UCLs to Use					
306	AppChi2			576.1			95% KM (t) UCL			0.582		
307	95% Gamma Approximate UCL			0.436			95% KM (Percentile Bootstrap) UCL			N/A		
308	95% Adjusted Gamma UCL			N/A								
309	Note: DL/2 is not a recommended method.											
310												
311												
312	4,4'-DDT											

	A	B	C	D	E	F	G	H	I	J	K	L
313												
314	General Statistics											
315	Number of Valid Data					58	Number of Detected Data					12
316	Number of Distinct Detected Data					10	Number of Non-Detect Data					46
317	Number of Missing Values					61	Percent Non-Detects					79.31%
318												
319	Raw Statistics						Log-transformed Statistics					
320	Minimum Detected					0.2	Minimum Detected					-1.609
321	Maximum Detected					1.5	Maximum Detected					0.405
322	Mean of Detected					0.448	Mean of Detected					-0.971
323	SD of Detected					0.35	SD of Detected					0.54
324	Minimum Non-Detect					0.68	Minimum Non-Detect					-0.386
325	Maximum Non-Detect					3.9	Maximum Non-Detect					1.361
326												
327	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					58
328	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
329	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
330												
331	UCL Statistics											
332	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
333	Lilliefors Test Statistic					0.624	Lilliefors Test Statistic					0.868
334	5% Lilliefors Critical Value					0.859	5% Lilliefors Critical Value					0.859
335	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
336												
337	Assuming Normal Distribution						Assuming Lognormal Distribution					
338	DL/2 Substitution Method						DL/2 Substitution Method					
339	Mean					0.718	Mean					-0.572
340	SD					0.565	SD					0.654
341	95% DL/2 (t) UCL					0.842	95% H-Stat (DL/2) UCL					0.996
342												
343	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
344	MLE method failed to converge properly						Mean in Log Scale					-1.042
345							SD in Log Scale					0.322
346							Mean in Original Scale					0.375
347							SD in Original Scale					0.176
348							95% Percentile Bootstrap UCL					0.416
349							95% BCA Bootstrap UCL					0.434
350												
351	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
352	k star (bias corrected)					2.42	Data appear Lognormal at 5% Significance Level					
353	Theta Star					0.185						
354	nu star					58.07						
355												
356	A-D Test Statistic					0.935	Nonparametric Statistics					
357	5% A-D Critical Value					0.739	Kaplan-Meier (KM) Method					
358	K-S Test Statistic					0.739	Mean					0.377
359	5% K-S Critical Value					0.247	SD					0.203
360	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0438
361							95% KM (t) UCL					0.451
362	Assuming Gamma Distribution						95% KM (z) UCL					0.449
363	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.452
364	Minimum					0.2	95% KM (bootstrap t) UCL					0.484

	A	B	C	D	E	F	G	H	I	J	K	L	
365					Maximum	1.5				95% KM (BCA) UCL		0.459	
366					Mean	0.454				95% KM (Percentile Bootstrap) UCL		0.452	
367					Median	0.459				95% KM (Chebyshev) UCL		0.568	
368					SD	0.157				97.5% KM (Chebyshev) UCL		0.651	
369					k star	12.92				99% KM (Chebyshev) UCL		0.813	
370					Theta star	0.0352							
371					Nu star	1499				Potential UCLs to Use			
372					AppChi2	1410				95% KM (t) UCL		0.451	
373					95% Gamma Approximate UCL	0.483				95% KM (% Bootstrap) UCL		0.452	
374					95% Adjusted Gamma UCL	0.484							
375	Note: DL/2 is not a recommended method.												
376													
377													
378	Acenaphthene												
379													
380	General Statistics												
381					Number of Valid Data	45				Number of Detected Data		5	
382					Number of Distinct Detected Data	3				Number of Non-Detect Data		40	
383					Number of Missing Values	74				Percent Non-Detects		88.89%	
384													
385	Raw Statistics						Log-transformed Statistics						
386					Minimum Detected	0.2				Minimum Detected		-1.609	
387					Maximum Detected	2				Maximum Detected		0.693	
388					Mean of Detected	0.66				Mean of Detected		-0.898	
389					SD of Detected	0.78				SD of Detected		1.042	
390					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
391					Maximum Non-Detect	7				Maximum Non-Detect		1.946	
392													
393	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						45
394	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
395	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
396													
397	Warning: There are only 3 Distinct Detected Values in this data set												
398	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
399	Those methods will return a 'N/A' value on your output display!												
400													
401	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
402	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
403													
404													
405	UCL Statistics												
406	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
407					Shapiro Wilk Test Statistic	0.713				Shapiro Wilk Test Statistic		0.773	
408					5% Shapiro Wilk Critical Value	0.762				5% Shapiro Wilk Critical Value		0.762	
409	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
410													
411	Assuming Normal Distribution						Assuming Lognormal Distribution						
412					DL/2 Substitution Method					DL/2 Substitution Method			
413					Mean	2.351				Mean		0.729	
414					SD	0.725				SD		0.673	
415					95% DL/2 (t) UCL	2.533				95% H-Stat (DL/2) UCL		4.329	
416													

	A	B	C	D	E	F	G	H	I	J	K	L
417	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
418	MLE method failed to converge properly						Mean in Log Scale					-0.898
419							SD in Log Scale					1.019
420							Mean in Original Scale					0.665
421							SD in Original Scale					0.719
422							95% Percentile Bootstrap UCL					0.85
423							95% BCA Bootstrap UCL					0.88
424												
425	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
426	k star (bias corrected)					0.603	Data appear Lognormal at 5% Significance Level					
427	Theta Star					1.095						
428	nu star					6.03						
429												
430	A-D Test Statistic					0.703	Nonparametric Statistics					
431	5% A-D Critical Value					0.69	Kaplan-Meier (KM) Method					
432	K-S Test Statistic					0.69	Mean					0.66
433	5% K-S Critical Value					0.363	SD					0.697
434	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.349
435							95% KM (t) UCL					1.246
436	Assuming Gamma Distribution						95% KM (z) UCL					1.234
437	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.308
438	Minimum					1E-09	95% KM (bootstrap t) UCL					#NUM!
439	Maximum					2.127	95% KM (BCA) UCL					1.35
440	Mean					0.71	95% KM (Percentile Bootstrap) UCL					1.35
441	Median					0.561	95% KM (Chebyshev) UCL					2.18
442	SD					0.676	97.5% KM (Chebyshev) UCL					2.838
443	k star					0.182	99% KM (Chebyshev) UCL					4.13
444	Theta star					3.91						
445	Nu star					16.34	Potential UCLs to Use					
446	AppChi2					8.202	95% KM (BCA) UCL					1.35
447	95% Gamma Approximate UCL					1.414						
448	95% Adjusted Gamma UCL					1.448						
449	Note: DL/2 is not a recommended method.											
450												
451												
452	Acenaphthylene											
453												
454	General Statistics											
455	Number of Valid Data					45	Number of Detected Data					3
456	Number of Distinct Detected Data					2	Number of Non-Detect Data					42
457	Number of Missing Values					74	Percent Non-Detects					93.33%
458												
459	Raw Statistics						Log-transformed Statistics					
460	Minimum Detected					2	Minimum Detected					0.693
461	Maximum Detected					3	Maximum Detected					1.099
462	Mean of Detected					2.667	Mean of Detected					0.963
463	SD of Detected					0.577	SD of Detected					0.234
464	Minimum Non-Detect					4	Minimum Non-Detect					1.386
465	Maximum Non-Detect					7	Maximum Non-Detect					1.946
466												
467	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					45
468	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0

	A	B	C	D	E	F	G	H	I	J	K	L
469	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
470												
471	Warning: Data set has only 2 Distinct Detected Values.											
472	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
473	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
474												
475	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
476												
477	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
478	Those methods will return a 'N/A' value on your output display!											
479												
480	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
481	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
482												
483												
484	UCL Statistics											
485	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
486	Shapiro Wilk Test Statistic			0.75			Shapiro Wilk Test Statistic			0.75		
487	5% Shapiro Wilk Critical Value			0.767			5% Shapiro Wilk Critical Value			0.767		
488	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
489												
490	Assuming Normal Distribution						Assuming Lognormal Distribution					
491	DL/2 Substitution Method						DL/2 Substitution Method					
492	Mean			2.589			Mean			0.941		
493	SD			0.374			SD			0.147		
494	95% DL/2 (t) UCL			2.682			95% H-Stat (DL/2) UCL			2.883		
495												
496	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
497	MLE method failed to converge properly						Mean in Log Scale			0.963		
498							SD in Log Scale			0.247		
499							Mean in Original Scale			2.7		
500							SD in Original Scale			0.669		
501							95% Percentile Bootstrap UCL			2.865		
502							95% BCA Bootstrap UCL			2.858		
503												
504	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
505	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
506	Theta Star			N/A								
507	nu star			N/A								
508												
509	A-D Test Statistic			0.619			Nonparametric Statistics					
510	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
511	K-S Test Statistic			N/A			Mean			2.667		
512	5% K-S Critical Value			N/A			SD			0.471		
513	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.333		
514							95% KM (t) UCL			3.227		
515	Assuming Gamma Distribution						95% KM (z) UCL			3.215		
516	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			3.345		
517	Minimum			N/A			95% KM (bootstrap t) UCL			3.222		
518	Maximum			N/A			95% KM (BCA) UCL			3		
519	Mean			N/A			95% KM (Percentile Bootstrap) UCL			3		
520	Median			N/A			95% KM (Chebyshev) UCL			4.12		

	A	B	C	D	E	F	G	H	I	J	K	L
521					SD	N/A				97.5% KM (Chebyshev) UCL		4.748
522					k star	N/A				99% KM (Chebyshev) UCL		5.983
523					Theta star	N/A						
524					Nu star	N/A				Potential UCLs to Use		
525					AppChi2	N/A				95% KM (t) UCL		3.227
526					95% Gamma Approximate UCL	N/A				95% KM (% Bootstrap) UCL		3
527					95% Adjusted Gamma UCL	N/A						
528	Warning: Recommended UCL exceeds the maximum observation											
529	Note: DL/2 is not a recommended method.											
530												
531												
532	Acetophenone											
533												
534	General Statistics											
535					Number of Valid Data	45				Number of Detected Data		1
536					Number of Distinct Detected Data	1				Number of Non-Detect Data		44
537					Number of Missing Values	74				Percent Non-Detects		97.78%
538												
539	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
540	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
541												
542	The data set for variable Acetophenone was not processed!											
543												
544												
545												
546	alpha-BHC											
547												
548	General Statistics											
549					Number of Valid Data	58				Number of Detected Data		1
550					Number of Distinct Detected Data	1				Number of Non-Detect Data		57
551					Number of Missing Values	61				Percent Non-Detects		98.28%
552												
553	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
554	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
555												
556	The data set for variable alpha-BHC was not processed!											
557												
558												
559												
560	Aluminum											
561												
562	General Statistics											
563					Number of Valid Data	68				Number of Detected Data		68
564					Number of Distinct Detected Data	61				Number of Non-Detect Data		0
565					Number of Missing Values	52				Percent Non-Detects		0.00%
566												
567	Raw Statistics						Log-transformed Statistics					
568					Minimum Detected	4710				Minimum Detected		8.457
569					Maximum Detected	32400				Maximum Detected		10.39
570					Mean of Detected	11366				Mean of Detected		9.205
571					SD of Detected	6142				SD of Detected		0.511
572					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A

	A	B	C	D	E	F	G	H	I	J	K	L
573	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
574												
575												
576	UCL Statistics											
577	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
578	Lilliefors Test Statistic					0.219	Lilliefors Test Statistic					0.193
579	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
580	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
581												
582	Assuming Normal Distribution						Assuming Lognormal Distribution					
583	DL/2 Substitution Method						DL/2 Substitution Method					
584	Mean					11366	Mean					9.205
585	SD					6142	SD					0.511
586	95% DL/2 (t) UCL					12608	95% H-Stat (DL/2) UCL					12737
587												
588	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
589	MLE method failed to converge properly						Mean in Log Scale					N/A
590							SD in Log Scale					N/A
591							Mean in Original Scale					N/A
592							SD in Original Scale					N/A
593							95% Percentile Bootstrap UCL					N/A
594							95% BCA Bootstrap UCL					N/A
595												
596	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
597	k star (bias corrected)					3.757	Data do not follow a Discernable Distribution (0.05)					
598	Theta Star					3025						
599	nu star					511						
600												
601	A-D Test Statistic					2.845	Nonparametric Statistics					
602	5% A-D Critical Value					0.755	Kaplan-Meier (KM) Method					
603	K-S Test Statistic					0.755	Mean					11366
604	5% K-S Critical Value					0.109	SD					6097
605	Data not Gamma Distributed at 5% Significance Level						SE of Mean					744.9
606							95% KM (t) UCL					12608
607	Assuming Gamma Distribution						95% KM (z) UCL					12591
608	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					12608
609	Minimum					4710	95% KM (bootstrap t) UCL					12684
610	Maximum					32400	95% KM (BCA) UCL					12663
611	Mean					11366	95% KM (Percentile Bootstrap) UCL					12638
612	Median					8725	95% KM (Chebyshev) UCL					14613
613	SD					6142	97.5% KM (Chebyshev) UCL					16018
614	k star					3.757	99% KM (Chebyshev) UCL					18777
615	Theta star					3025						
616	Nu star					511	Potential UCLs to Use					
617	AppChi2					459.6	95% KM (Chebyshev) UCL					14613
618	95% Gamma Approximate UCL					12637						
619	95% Adjusted Gamma UCL					12666						
620	Note: DL/2 is not a recommended method.											
621												
622												
623	Anthracene											
624												

	A	B	C	D	E	F	G	H	I	J	K	L
625	General Statistics											
626	Number of Valid Data					45	Number of Detected Data					11
627	Number of Distinct Detected Data					6	Number of Non-Detect Data					34
628	Number of Missing Values					74	Percent Non-Detects					75.56%
629												
630	Raw Statistics						Log-transformed Statistics					
631	Minimum Detected					0.2	Minimum Detected					-1.609
632	Maximum Detected					6	Maximum Detected					1.792
633	Mean of Detected					1.545	Mean of Detected					-0.133
634	SD of Detected					1.732	SD of Detected					1.174
635	Minimum Non-Detect					4	Minimum Non-Detect					1.386
636	Maximum Non-Detect					6	Maximum Non-Detect					1.792
637												
638	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					44
639	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
640	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.78%
641												
642	UCL Statistics											
643	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
644	Shapiro Wilk Test Statistic					0.772	Shapiro Wilk Test Statistic					0.915
645	5% Shapiro Wilk Critical Value					0.85	5% Shapiro Wilk Critical Value					0.85
646	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
647												
648	Assuming Normal Distribution						Assuming Lognormal Distribution					
649	DL/2 Substitution Method						DL/2 Substitution Method					
650	Mean					2.289	Mean					0.661
651	SD					0.977	SD					0.733
652	95% DL/2 (t) UCL					2.534	95% H-Stat (DL/2) UCL					4.605
653												
654	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
655	MLE method failed to converge properly						Mean in Log Scale					-0.308
656							SD in Log Scale					0.94
657							Mean in Original Scale					1.115
658							SD in Original Scale					1.117
659							95% Percentile Bootstrap UCL					1.407
660							95% BCA Bootstrap UCL					1.448
661												
662	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
663	k star (bias corrected)					0.798	Data appear Gamma Distributed at 5% Significance Level					
664	Theta Star					1.938						
665	nu star					17.55						
666												
667	A-D Test Statistic					0.396	Nonparametric Statistics					
668	5% A-D Critical Value					0.751	Kaplan-Meier (KM) Method					
669	K-S Test Statistic					0.751	Mean					1.209
670	5% K-S Critical Value					0.262	SD					1.15
671	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.314
672							95% KM (t) UCL					1.737
673	Assuming Gamma Distribution						95% KM (z) UCL					1.726
674	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.756
675	Minimum					0.2	95% KM (bootstrap t) UCL					1.958
676	Maximum					6	95% KM (BCA) UCL					1.753

	A	B	C	D	E	F	G	H	I	J	K	L
677					Mean	1.566					95% KM (Percentile Bootstrap) UCL	1.737
678					Median	1.534					95% KM (Chebyshev) UCL	2.579
679					SD	0.849					97.5% KM (Chebyshev) UCL	3.172
680					k star	3.341					99% KM (Chebyshev) UCL	4.336
681					Theta star	0.469						
682					Nu star	300.7				Potential UCLs to Use		
683					AppChi2	261.5					95% KM (t) UCL	1.737
684					95% Gamma Approximate UCL		1.801					
685					95% Adjusted Gamma UCL		1.809					
686	Note: DL/2 is not a recommended method.											
687												
688												
689	Antimony											
690												
691	General Statistics											
692					Number of Valid Data	67					Number of Detected Data	67
693					Number of Distinct Detected Data	64					Number of Non-Detect Data	0
694					Number of Missing Values	53					Percent Non-Detects	0.00%
695												
696	Raw Statistics						Log-transformed Statistics					
697					Minimum Detected	1.8					Minimum Detected	0.588
698					Maximum Detected	323					Maximum Detected	5.778
699					Mean of Detected	31.33					Mean of Detected	3.074
700					SD of Detected	40.06					SD of Detected	0.858
701					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
702					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
703												
704												
705	UCL Statistics											
706	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
707					Lilliefors Test Statistic	0.23					Lilliefors Test Statistic	0.0933
708					5% Lilliefors Critical Value	0.108					5% Lilliefors Critical Value	0.108
709	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
710												
711	Assuming Normal Distribution						Assuming Lognormal Distribution					
712					DL/2 Substitution Method						DL/2 Substitution Method	
713					Mean	31.33					Mean	3.074
714					SD	40.06					SD	0.858
715					95% DL/2 (t) UCL	39.5					95% H-Stat (DL/2) UCL	39.14
716												
717					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
718	MLE method failed to converge properly										Mean in Log Scale	N/A
719											SD in Log Scale	N/A
720											Mean in Original Scale	N/A
721											SD in Original Scale	N/A
722											95% Percentile Bootstrap UCL	N/A
723											95% BCA Bootstrap UCL	N/A
724												
725	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
726					k star (bias corrected)	1.437					Data Follow Appr. Gamma Distribution at 5% Significance Level	
727					Theta Star	21.8						
728					nu star	192.6						

	A	B	C	D	E	F	G	H	I	J	K	L
729												
730	A-D Test Statistic					0.898	Nonparametric Statistics					
731	5% A-D Critical Value					0.769	Kaplan-Meier (KM) Method					
732	K-S Test Statistic					0.769	Mean					31.33
733	5% K-S Critical Value					0.111	SD					39.76
734	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					4.894
735							95% KM (t) UCL					39.5
736	Assuming Gamma Distribution						95% KM (z) UCL					39.38
737	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					39.5
738	Minimum					1.8	95% KM (bootstrap t) UCL					47.97
739	Maximum					323	95% KM (BCA) UCL					40.87
740	Mean					31.33	95% KM (Percentile Bootstrap) UCL					40.4
741	Median					21.2	95% KM (Chebyshev) UCL					52.67
742	SD					40.06	97.5% KM (Chebyshev) UCL					61.9
743	k star					1.437	99% KM (Chebyshev) UCL					80.03
744	Theta star					21.8						
745	Nu star					192.6	Potential UCLs to Use					
746	AppChi2					161.5	95% KM (Chebyshev) UCL					52.67
747	95% Gamma Approximate UCL					37.37						
748	95% Adjusted Gamma UCL					37.51						
749	Note: DL/2 is not a recommended method.											
750												
751												
752	Arsenic											
753												
754	General Statistics											
755	Number of Valid Data					71	Number of Detected Data					69
756	Number of Distinct Detected Data					59	Number of Non-Detect Data					2
757	Number of Missing Values					52	Percent Non-Detects					2.82%
758												
759	Raw Statistics						Log-transformed Statistics					
760	Minimum Detected					2.4	Minimum Detected					0.875
761	Maximum Detected					74.4	Maximum Detected					4.309
762	Mean of Detected					16.89	Mean of Detected					2.583
763	SD of Detected					13.16	SD of Detected					0.694
764	Minimum Non-Detect					1.3	Minimum Non-Detect					0.262
765	Maximum Non-Detect					2.8	Maximum Non-Detect					1.03
766												
767	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					3
768	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					68
769	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					4.23%
770												
771	UCL Statistics											
772	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
773	Lilliefors Test Statistic					0.177	Lilliefors Test Statistic					0.107
774	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
775	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
776												
777	Assuming Normal Distribution						Assuming Lognormal Distribution					
778	DL/2 Substitution Method						DL/2 Substitution Method					
779	Mean					16.45	Mean					2.509
780	SD					13.24	SD					0.815

	A	B	C	D	E	F	G	H	I	J	K	L
781	95% DL/2 (t) UCL					19.06	95% H-Stat (DL/2) UCL					20.06
782												
783	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
784	Mean				16.2	Mean in Log Scale				2.535		
785	SD				13.53	SD in Log Scale				0.741		
786	95% MLE (t) UCL				18.88	Mean in Original Scale				16.49		
787	95% MLE (Tiku) UCL				18.76	SD in Original Scale				13.19		
788						95% Percentile Bootstrap UCL				19.17		
789						95% BCA Bootstrap UCL				19.39		
790												
791	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
792	k star (bias corrected)				2.118	Data do not follow a Discernable Distribution (0.05)						
793	Theta Star				7.977							
794	nu star				292.2							
795												
796	A-D Test Statistic				1.109	Nonparametric Statistics						
797	5% A-D Critical Value				0.762	Kaplan-Meier (KM) Method						
798	K-S Test Statistic				0.762	Mean				16.48		
799	5% K-S Critical Value				0.108	SD				13.1		
800	Data not Gamma Distributed at 5% Significance Level						SE of Mean				1.566	
801						95% KM (t) UCL				19.1		
802	Assuming Gamma Distribution						95% KM (z) UCL				19.06	
803	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				19.07	
804	Minimum				1E-09	95% KM (bootstrap t) UCL				19.41		
805	Maximum				74.4	95% KM (BCA) UCL				19.21		
806	Mean				16.42	95% KM (Percentile Bootstrap) UCL				19.28		
807	Median				11	95% KM (Chebyshev) UCL				23.31		
808	SD				13.27	97.5% KM (Chebyshev) UCL				26.27		
809	k star				0.674	99% KM (Chebyshev) UCL				32.07		
810	Theta star				24.35							
811	Nu star				95.74	Potential UCLs to Use						
812	AppChi2				74.17	95% KM (BCA) UCL				19.21		
813	95% Gamma Approximate UCL				21.19							
814	95% Adjusted Gamma UCL				21.3							
815	Note: DL/2 is not a recommended method.											
816												
817												
818	Barium											
819												
820	General Statistics											
821	Number of Valid Data				68	Number of Detected Data				68		
822	Number of Distinct Detected Data				65	Number of Non-Detect Data				0		
823	Number of Missing Values				52	Percent Non-Detects				0.00%		
824												
825	Raw Statistics						Log-transformed Statistics					
826	Minimum Detected				94.6	Minimum Detected				4.55		
827	Maximum Detected				3100	Maximum Detected				8.039		
828	Mean of Detected				943.8	Mean of Detected				6.6		
829	SD of Detected				673.5	SD of Detected				0.73		
830	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
831	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
832												

	A	B	C	D	E	F	G	H	I	J	K	L		
833														
834	UCL Statistics													
835	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
836	Lilliefors Test Statistic				0.167		Lilliefors Test Statistic				0.09			
837	5% Lilliefors Critical Value				0.107		5% Lilliefors Critical Value				0.107			
838	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
839														
840	Assuming Normal Distribution						Assuming Lognormal Distribution							
841	DL/2 Substitution Method						DL/2 Substitution Method							
842	Mean				943.8		Mean				6.6			
843	SD				673.5		SD				0.73			
844	95% DL/2 (t) UCL				1080		95% H-Stat (DL/2) UCL				1149			
845														
846	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
847	MLE method failed to converge properly						Mean in Log Scale				N/A			
848							SD in Log Scale				N/A			
849							Mean in Original Scale				N/A			
850							SD in Original Scale				N/A			
851							95% Percentile Bootstrap UCL				N/A			
852							95% BCA Bootstrap UCL				N/A			
853														
854	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
855	k star (bias corrected)				2.065		Data appear Lognormal at 5% Significance Level							
856	Theta Star				457.1									
857	nu star				280.8									
858														
859	A-D Test Statistic				1.09		Nonparametric Statistics							
860	5% A-D Critical Value				0.762		Kaplan-Meier (KM) Method							
861	K-S Test Statistic				0.762		Mean				943.8			
862	5% K-S Critical Value				0.109		SD				668.6			
863	Data not Gamma Distributed at 5% Significance Level						SE of Mean				81.68			
864							95% KM (t) UCL				1080			
865	Assuming Gamma Distribution						95% KM (z) UCL				1078			
866	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1080			
867	Minimum				94.6		95% KM (bootstrap t) UCL				1088			
868	Maximum				3100		95% KM (BCA) UCL				1090			
869	Mean				943.8		95% KM (Percentile Bootstrap) UCL				1077			
870	Median				676		95% KM (Chebyshev) UCL				1300			
871	SD				673.5		97.5% KM (Chebyshev) UCL				1454			
872	k star				2.065		99% KM (Chebyshev) UCL				1757			
873	Theta star				457.1									
874	Nu star				280.8		Potential UCLs to Use							
875	AppChi2				243		95% KM (Chebyshev) UCL				1300			
876	95% Gamma Approximate UCL				1091									
877	95% Adjusted Gamma UCL				1094									
878	Note: DL/2 is not a recommended method.													
879														
880														
881	Benzo(a)anthracene													
882														
883	General Statistics													
884	Number of Valid Data				45		Number of Detected Data				35			

	A	B	C	D	E	F	G	H	I	J	K	L
885	Number of Distinct Detected Data					16	Number of Non-Detect Data					10
886	Number of Missing Values					74	Percent Non-Detects					22.22%
887												
888	Raw Statistics						Log-transformed Statistics					
889	Minimum Detected					0.2	Minimum Detected					-1.609
890	Maximum Detected					12	Maximum Detected					2.485
891	Mean of Detected					2.086	Mean of Detected					-0.0235
892	SD of Detected					3.202	SD of Detected					1.142
893	Minimum Non-Detect					4	Minimum Non-Detect					1.386
894	Maximum Non-Detect					6	Maximum Non-Detect					1.792
895												
896	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					40
897	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					5
898	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					88.89%
899												
900	UCL Statistics											
901	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
902	Shapiro Wilk Test Statistic					0.59	Shapiro Wilk Test Statistic					0.898
903	5% Shapiro Wilk Critical Value					0.934	5% Shapiro Wilk Critical Value					0.934
904	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
905												
906	Assuming Normal Distribution						Assuming Lognormal Distribution					
907	DL/2 Substitution Method						DL/2 Substitution Method					
908	Mean					2.133	Mean					0.165
909	SD					2.821	SD					1.067
910	95% DL/2 (t) UCL					2.84	95% H-Stat (DL/2) UCL					4.054
911												
912	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
913	MLE yields a negative mean						Mean in Log Scale					-0.081
914							SD in Log Scale					1.051
915							Mean in Original Scale					1.822
916							SD in Original Scale					2.869
917							95% Percentile Bootstrap UCL					2.583
918							95% BCA Bootstrap UCL					2.662
919												
920	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
921	k star (bias corrected)					0.736	Data do not follow a Discernable Distribution (0.05)					
922	Theta Star					2.833						
923	nu star					51.53						
924												
925	A-D Test Statistic					2.777	Nonparametric Statistics					
926	5% A-D Critical Value					0.786	Kaplan-Meier (KM) Method					
927	K-S Test Statistic					0.786	Mean					1.815
928	5% K-S Critical Value					0.154	SD					2.846
929	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.434
930							95% KM (t) UCL					2.544
931	Assuming Gamma Distribution						95% KM (z) UCL					2.529
932	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.542
933	Minimum					0.2	95% KM (bootstrap t) UCL					2.852
934	Maximum					12	95% KM (BCA) UCL					2.533
935	Mean					2.079	95% KM (Percentile Bootstrap) UCL					2.534
936	Median					1	95% KM (Chebyshev) UCL					3.706

	A	B	C	D	E	F	G	H	I	J	K	L	
937					SD	2.829				97.5% KM (Chebyshev) UCL		4.525	
938					k star	0.916				99% KM (Chebyshev) UCL		6.133	
939					Theta star	2.268							
940					Nu star	82.48				Potential UCLs to Use			
941					AppChi2	62.55				95% KM (Chebyshev) UCL		3.706	
942					95% Gamma Approximate UCL	2.741							
943					95% Adjusted Gamma UCL	2.767							
944	Note: DL/2 is not a recommended method.												
945													
946													
947	Benzo(a)pyrene												
948													
949	General Statistics												
950					Number of Valid Data	45				Number of Detected Data		22	
951					Number of Distinct Detected Data	13				Number of Non-Detect Data		23	
952					Number of Missing Values	74				Percent Non-Detects		51.11%	
953													
954	Raw Statistics						Log-transformed Statistics						
955					Minimum Detected	0.4				Minimum Detected		-0.916	
956					Maximum Detected	13				Maximum Detected		2.565	
957					Mean of Detected	3.314				Mean of Detected		0.525	
958					SD of Detected	4.15				SD of Detected		1.149	
959					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
960					Maximum Non-Detect	6				Maximum Non-Detect		1.792	
961													
962	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						40
963	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						5
964	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						88.89%
965													
966	UCL Statistics												
967	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
968					Shapiro Wilk Test Statistic	0.696				Shapiro Wilk Test Statistic		0.888	
969					5% Shapiro Wilk Critical Value	0.911				5% Shapiro Wilk Critical Value		0.911	
970	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
971													
972	Assuming Normal Distribution						Assuming Lognormal Distribution						
973					DL/2 Substitution Method					DL/2 Substitution Method			
974					Mean	2.898				Mean		0.719	
975					SD	2.908				SD		0.823	
976					95% DL/2 (t) UCL	3.626				95% H-Stat (DL/2) UCL		4.808	
977													
978					Maximum Likelihood Estimate(MLE) Method					Log ROS Method			
979					Mean	10.66				Mean in Log Scale		0.286	
980					SD	2.154				SD in Log Scale		0.968	
981					95% MLE (t) UCL	11.2				Mean in Original Scale		2.297	
982					95% MLE (Tiku) UCL	12.27				SD in Original Scale		3.1	
983										95% Percentile Bootstrap UCL		3.09	
984										95% BCA Bootstrap UCL		3.277	
985													
986	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
987					k star (bias corrected)	0.783				Data do not follow a Discernable Distribution (0.05)			
988					Theta Star	4.231							

	A	B	C	D	E	F	G	H	I	J	K	L
989	nu star					34.46						
990												
991	A-D Test Statistic					1.596	Nonparametric Statistics					
992	5% A-D Critical Value					0.777	Kaplan-Meier (KM) Method					
993	K-S Test Statistic					0.777	Mean					2.208
994	5% K-S Critical Value					0.192	SD					3.083
995	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.486
996							95% KM (t) UCL					3.025
997	Assuming Gamma Distribution						95% KM (z) UCL					3.007
998	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.018
999	Minimum					0.4	95% KM (bootstrap t) UCL					3.358
1000	Maximum					13	95% KM (BCA) UCL					3.018
1001	Mean					3.349	95% KM (Percentile Bootstrap) UCL					2.988
1002	Median					2.404	95% KM (Chebyshev) UCL					4.326
1003	SD					2.982	97.5% KM (Chebyshev) UCL					5.242
1004	k star					1.448	99% KM (Chebyshev) UCL					7.042
1005	Theta star					2.313						
1006	Nu star					130.3	Potential UCLs to Use					
1007	AppChi2					104.9	95% KM (BCA) UCL					3.018
1008	95% Gamma Approximate UCL					4.159						
1009	95% Adjusted Gamma UCL					4.189						
1010	Note: DL/2 is not a recommended method.											
1011												
1012												
1013	Benzo(b)fluoranthene											
1014												
1015	General Statistics											
1016	Number of Valid Data					45	Number of Detected Data					20
1017	Number of Distinct Detected Data					12	Number of Non-Detect Data					25
1018	Number of Missing Values					74	Percent Non-Detects					55.56%
1019												
1020	Raw Statistics						Log-transformed Statistics					
1021	Minimum Detected					0.2	Minimum Detected					-1.609
1022	Maximum Detected					9	Maximum Detected					2.197
1023	Mean of Detected					1.675	Mean of Detected					-0.0195
1024	SD of Detected					2.219	SD of Detected					0.988
1025	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1026	Maximum Non-Detect					6	Maximum Non-Detect					1.792
1027												
1028	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					43
1029	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					2
1030	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					95.56%
1031												
1032	UCL Statistics											
1033	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1034	Shapiro Wilk Test Statistic					0.626	Shapiro Wilk Test Statistic					0.934
1035	5% Shapiro Wilk Critical Value					0.905	5% Shapiro Wilk Critical Value					0.905
1036	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1037												
1038	Assuming Normal Distribution						Assuming Lognormal Distribution					
1039	DL/2 Substitution Method						DL/2 Substitution Method					
1040	Mean					2.2	Mean					0.522

	A	B	C	D	E	F	G	H	I	J	K	L	
1041					SD	1.553					SD	0.819	
1042					95% DL/2 (t) UCL	2.589				95% H-Stat (DL/2) UCL		4.402	
1043													
1044					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1045					MLE method failed to converge properly						Mean in Log Scale	-0.139	
1046											SD in Log Scale	0.836	
1047											Mean in Original Scale	1.293	
1048											SD in Original Scale	1.577	
1049											95% Percentile Bootstrap UCL	1.688	
1050											95% BCA Bootstrap UCL	1.827	
1051													
1052					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
1053					k star (bias corrected)	0.943					Data appear Lognormal at 5% Significance Level		
1054					Theta Star	1.777							
1055					nu star	37.71							
1056													
1057					A-D Test Statistic	1.284					Nonparametric Statistics		
1058					5% A-D Critical Value	0.767					Kaplan-Meier (KM) Method		
1059					K-S Test Statistic	0.767					Mean	1.292	
1060					5% K-S Critical Value	0.199					SD	1.597	
1061					Data not Gamma Distributed at 5% Significance Level						SE of Mean	0.279	
1062											95% KM (t) UCL	1.76	
1063					Assuming Gamma Distribution						95% KM (z) UCL	1.75	
1064					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	1.759	
1065					Minimum	0.2					95% KM (bootstrap t) UCL	1.984	
1066					Maximum	9					95% KM (BCA) UCL	1.808	
1067					Mean	1.705					95% KM (Percentile Bootstrap) UCL	1.763	
1068					Median	1.222					95% KM (Chebyshev) UCL	2.507	
1069					SD	1.538					97.5% KM (Chebyshev) UCL	3.033	
1070					k star	1.806					99% KM (Chebyshev) UCL	4.066	
1071					Theta star	0.944							
1072					Nu star	162.6					Potential UCLs to Use		
1073					AppChi2	134.1					95% KM (t) UCL	1.76	
1074					95% Gamma Approximate UCL	2.067					95% KM (% Bootstrap) UCL	1.763	
1075					95% Adjusted Gamma UCL	2.08							
1076	Note: DL/2 is not a recommended method.												
1077													
1078													
1079	Benzo(ghi)perylene												
1080													
1081					General Statistics								
1082					Number of Valid Data	45					Number of Detected Data	29	
1083					Number of Distinct Detected Data	14					Number of Non-Detect Data	16	
1084					Number of Missing Values	74					Percent Non-Detects	35.56%	
1085													
1086					Raw Statistics						Log-transformed Statistics		
1087					Minimum Detected	0.2					Minimum Detected	-1.609	
1088					Maximum Detected	9					Maximum Detected	2.197	
1089					Mean of Detected	1.928					Mean of Detected	-0.0168	
1090					SD of Detected	2.61					SD of Detected	1.114	
1091					Minimum Non-Detect	4					Minimum Non-Detect	1.386	
1092					Maximum Non-Detect	6					Maximum Non-Detect	1.792	

	A	B	C	D	E	F	G	H	I	J	K	L
1093												
1094	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					41
1095	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					4
1096	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					91.11%
1097												
1098	UCL Statistics											
1099	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1100	Shapiro Wilk Test Statistic				0.647		Shapiro Wilk Test Statistic				0.905	
1101	5% Shapiro Wilk Critical Value				0.926		5% Shapiro Wilk Critical Value				0.926	
1102	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1103												
1104	Assuming Normal Distribution						Assuming Lognormal Distribution					
1105	DL/2 Substitution Method						DL/2 Substitution Method					
1106	Mean				2.142		Mean				0.316	
1107	SD				2.112		SD				1.001	
1108	95% DL/2 (t) UCL				2.671		95% H-Stat (DL/2) UCL				4.438	
1109												
1110	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1111	Mean				1.096		Mean in Log Scale				-0.127	
1112	SD				3.651		SD in Log Scale				0.985	
1113	95% MLE (t) UCL				2.01		Mean in Original Scale				1.557	
1114	95% MLE (Tiku) UCL				5.319		SD in Original Scale				2.167	
1115							95% Percentile Bootstrap UCL				2.114	
1116							95% BCA Bootstrap UCL				2.259	
1117												
1118	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1119	k star (bias corrected)				0.805		Data do not follow a Discernable Distribution (0.05)					
1120	Theta Star				2.395							
1121	nu star				46.68							
1122												
1123	A-D Test Statistic				2.072		Nonparametric Statistics					
1124	5% A-D Critical Value				0.779		Kaplan-Meier (KM) Method					
1125	K-S Test Statistic				0.779		Mean				1.547	
1126	5% K-S Critical Value				0.168		SD				2.165	
1127	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.338	
1128							95% KM (t) UCL				2.116	
1129	Assuming Gamma Distribution						95% KM (z) UCL				2.104	
1130	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				2.113	
1131	Minimum				0.2		95% KM (bootstrap t) UCL				2.357	
1132	Maximum				9		95% KM (BCA) UCL				2.175	
1133	Mean				1.925		95% KM (Percentile Bootstrap) UCL				2.091	
1134	Median				1.808		95% KM (Chebyshev) UCL				3.022	
1135	SD				2.082		97.5% KM (Chebyshev) UCL				3.661	
1136	k star				1.222		99% KM (Chebyshev) UCL				4.914	
1137	Theta star				1.576							
1138	Nu star				110		Potential UCLs to Use					
1139	AppChi2				86.75		95% KM (Chebyshev) UCL				3.022	
1140	95% Gamma Approximate UCL				2.44							
1141	95% Adjusted Gamma UCL				2.459							
1142	Note: DL/2 is not a recommended method.											
1143												
1144												

	A	B	C	D	E	F	G	H	I	J	K	L
1145	Benzo(k)fluoranthene											
1146												
1147	General Statistics											
1148	Number of Valid Data				45		Number of Detected Data				20	
1149	Number of Distinct Detected Data				10		Number of Non-Detect Data				25	
1150	Number of Missing Values				74		Percent Non-Detects				55.56%	
1151												
1152	Raw Statistics						Log-transformed Statistics					
1153	Minimum Detected				0.2		Minimum Detected				-1.609	
1154	Maximum Detected				7		Maximum Detected				1.946	
1155	Mean of Detected				1.285		Mean of Detected				-0.236	
1156	SD of Detected				1.714		SD of Detected				0.913	
1157	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
1158	Maximum Non-Detect				6		Maximum Non-Detect				1.792	
1159												
1160	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				44	
1161	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				1	
1162	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				97.78%	
1163												
1164	UCL Statistics											
1165	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1166	Shapiro Wilk Test Statistic				0.59		Shapiro Wilk Test Statistic				0.916	
1167	5% Shapiro Wilk Critical Value				0.905		5% Shapiro Wilk Critical Value				0.905	
1168	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1169												
1170	Assuming Normal Distribution						Assuming Lognormal Distribution					
1171	DL/2 Substitution Method						DL/2 Substitution Method					
1172	Mean				2.027		Mean				0.426	
1173	SD				1.334		SD				0.853	
1174	95% DL/2 (t) UCL				2.361		95% H-Stat (DL/2) UCL				4.38	
1175												
1176	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1177	MLE method failed to converge properly						Mean in Log Scale				-0.328	
1178							SD in Log Scale				0.775	
1179							Mean in Original Scale				1.023	
1180							SD in Original Scale				1.213	
1181							95% Percentile Bootstrap UCL				1.343	
1182							95% BCA Bootstrap UCL				1.469	
1183												
1184	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1185	k star (bias corrected)				1.024		Data appear Lognormal at 5% Significance Level					
1186	Theta Star				1.255							
1187	nu star				40.97							
1188												
1189	A-D Test Statistic				1.463		Nonparametric Statistics					
1190	5% A-D Critical Value				0.765		Kaplan-Meier (KM) Method					
1191	K-S Test Statistic				0.765		Mean				1.018	
1192	5% K-S Critical Value				0.199		SD				1.239	
1193	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.215	
1194							95% KM (t) UCL				1.38	
1195	Assuming Gamma Distribution						95% KM (z) UCL				1.372	
1196	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1.379	

	A	B	C	D	E	F	G	H	I	J	K	L	
1197					Minimum	0.2				95% KM (bootstrap t) UCL		1.59	
1198					Maximum	7				95% KM (BCA) UCL		1.392	
1199					Mean	1.294				95% KM (Percentile Bootstrap) UCL		1.396	
1200					Median	1.113				95% KM (Chebyshev) UCL		1.957	
1201					SD	1.139				97.5% KM (Chebyshev) UCL		2.363	
1202					k star	2.234				99% KM (Chebyshev) UCL		3.161	
1203					Theta star	0.579							
1204					Nu star	201.1				Potential UCLs to Use			
1205					AppChi2	169.3				95% KM (t) UCL		1.38	
1206					95% Gamma Approximate UCL	1.537				95% KM (% Bootstrap) UCL		1.396	
1207					95% Adjusted Gamma UCL	1.545							
1208	Note: DL/2 is not a recommended method.												
1209													
1210													
1211	Beryllium												
1212													
1213	General Statistics												
1214					Number of Valid Data	68				Number of Detected Data		68	
1215					Number of Distinct Detected Data	45				Number of Non-Detect Data		0	
1216					Number of Missing Values	52				Percent Non-Detects		0.00%	
1217													
1218	Raw Statistics						Log-transformed Statistics						
1219					Minimum Detected	0.23				Minimum Detected		-1.47	
1220					Maximum Detected	77				Maximum Detected		4.344	
1221					Mean of Detected	1.88				Mean of Detected		-0.314	
1222					SD of Detected	9.252				SD of Detected		0.744	
1223					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1224					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1225													
1226													
1227	UCL Statistics												
1228	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1229					Lilliefors Test Statistic	0.493				Lilliefors Test Statistic		0.145	
1230					5% Lilliefors Critical Value	0.107				5% Lilliefors Critical Value		0.107	
1231	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1232													
1233	Assuming Normal Distribution						Assuming Lognormal Distribution						
1234					DL/2 Substitution Method					DL/2 Substitution Method			
1235					Mean	1.88				Mean		-0.314	
1236					SD	9.252				SD		0.744	
1237					95% DL/2 (t) UCL	3.751				95% H-Stat (DL/2) UCL		1.158	
1238													
1239					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1240	MLE method failed to converge properly						Mean in Log Scale						N/A
1241							SD in Log Scale						N/A
1242							Mean in Original Scale						N/A
1243							SD in Original Scale						N/A
1244							95% Percentile Bootstrap UCL						N/A
1245							95% BCA Bootstrap UCL						N/A
1246													
1247	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1248					k star (bias corrected)	0.628				Data do not follow a Discernable Distribution (0.05)			

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Theta Star					2.995						
1250	nu star					85.37						
1251												
1252	A-D Test Statistic					14.07	Nonparametric Statistics					
1253	5% A-D Critical Value					0.802	Kaplan-Meier (KM) Method					
1254	K-S Test Statistic					0.802	Mean					1.88
1255	5% K-S Critical Value					0.113	SD					9.184
1256	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.122
1257							95% KM (t) UCL					3.751
1258	Assuming Gamma Distribution						95% KM (z) UCL					3.726
1259	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.751
1260	Minimum					0.23	95% KM (bootstrap t) UCL					35.61
1261	Maximum					77	95% KM (BCA) UCL					4.144
1262	Mean					1.88	95% KM (Percentile Bootstrap) UCL					4.117
1263	Median					0.695	95% KM (Chebyshev) UCL					6.771
1264	SD					9.252	97.5% KM (Chebyshev) UCL					8.887
1265	k star					0.628	99% KM (Chebyshev) UCL					13.04
1266	Theta star					2.995						
1267	Nu star					85.37	Potential UCLs to Use					
1268	AppChi2					65.07	95% KM (Chebyshev) UCL					6.771
1269	95% Gamma Approximate UCL					2.466						
1270	95% Adjusted Gamma UCL					2.481						
1271	Note: DL/2 is not a recommended method.											
1272												
1273												
1274	Bis(2-ethylhexyl)phthalate											
1275												
1276	General Statistics											
1277	Number of Valid Data					45	Number of Detected Data					1
1278	Number of Distinct Detected Data					1	Number of Non-Detect Data					44
1279	Number of Missing Values					74	Percent Non-Detects					97.78%
1280												
1281	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
1282	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
1283												
1284	The data set for variable Bis(2-ethylhexyl)phthalate was not processed!											
1285												
1286												
1287												
1288	Bismuth											
1289												
1290	General Statistics											
1291	Number of Valid Data					1	Number of Detected Data					1
1292	Number of Distinct Detected Data					1	Number of Non-Detect Data					0
1293	Number of Missing Values					111	Percent Non-Detects					0.00%
1294												
1295	Warning: This data set only has 1 observations!											
1296	Data set is too small to compute reliable and meaningful statistics and estimates!											
1297	The data set for variable Bismuth was not processed!											
1298												
1299	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1300	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

	A	B	C	D	E	F	G	H	I	J	K	L	
1301													
1302													
1303													
1304	Cadmium												
1305													
1306	General Statistics												
1307	Number of Valid Data					71	Number of Detected Data					63	
1308	Number of Distinct Detected Data					41	Number of Non-Detect Data					8	
1309	Number of Missing Values					52	Percent Non-Detects					11.27%	
1310													
1311	Raw Statistics						Log-transformed Statistics						
1312	Minimum Detected					0.19	Minimum Detected					-1.661	
1313	Maximum Detected					7.5	Maximum Detected					2.015	
1314	Mean of Detected					2.31	Mean of Detected					0.578	
1315	SD of Detected					1.554	SD of Detected					0.798	
1316	Minimum Non-Detect					0.003	Minimum Non-Detect					-5.809	
1317	Maximum Non-Detect					0.62	Maximum Non-Detect					-0.478	
1318													
1319	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					15	
1320	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					56	
1321	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					21.13%	
1322													
1323	UCL Statistics												
1324	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1325	Lilliefors Test Statistic					0.157	Lilliefors Test Statistic					0.113	
1326	5% Lilliefors Critical Value					0.112	5% Lilliefors Critical Value					0.112	
1327	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1328													
1329	Assuming Normal Distribution						Assuming Lognormal Distribution						
1330	DL/2 Substitution Method						DL/2 Substitution Method						
1331	Mean					2.057	Mean					0.112	
1332	SD					1.629	SD					1.581	
1333	95% DL/2 (t) UCL					2.379	95% H-Stat (DL/2) UCL					5.405	
1334													
1335	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1336	Mean					1.916	Mean in Log Scale					0.386	
1337	SD					1.837	SD in Log Scale					0.929	
1338	95% MLE (t) UCL					2.279	Mean in Original Scale					2.088	
1339	95% MLE (Tiku) UCL					2.288	SD in Original Scale					1.592	
1340							95% Percentile Bootstrap UCL					2.408	
1341							95% BCA Bootstrap UCL					2.422	
1342													
1343	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1344	k star (bias corrected)					1.988	Data appear Gamma Distributed at 5% Significance Level						
1345	Theta Star					1.162							
1346	nu star					250.4							
1347													
1348	A-D Test Statistic					0.314	Nonparametric Statistics						
1349	5% A-D Critical Value					0.763	Kaplan-Meier (KM) Method						
1350	K-S Test Statistic					0.763	Mean					2.073	
1351	5% K-S Critical Value					0.114	SD					1.598	
1352	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.191	

	A	B	C	D	E	F	G	H	I	J	K	L	
1353											95% KM (t) UCL	2.391	
1354	Assuming Gamma Distribution										95% KM (z) UCL	2.387	
1355	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	2.385	
1356	Minimum					1E-09						95% KM (bootstrap t) UCL	2.422
1357	Maximum					7.5						95% KM (BCA) UCL	2.406
1358	Mean					2.058						95% KM (Percentile Bootstrap) UCL	2.403
1359	Median					1.8						95% KM (Chebyshev) UCL	2.906
1360	SD					1.628						97.5% KM (Chebyshev) UCL	3.267
1361	k star					0.371						99% KM (Chebyshev) UCL	3.975
1362	Theta star					5.552							
1363	Nu star					52.64						Potential UCLs to Use	
1364	AppChi2					36.97						95% KM (BCA) UCL	2.406
1365	95% Gamma Approximate UCL					2.93							
1366	95% Adjusted Gamma UCL					2.952							
1367	Note: DL/2 is not a recommended method.												
1368													
1369													
1370	Calcium												
1371													
1372	General Statistics												
1373	Number of Valid Data					68	Number of Detected Data					68	
1374	Number of Distinct Detected Data					66	Number of Non-Detect Data					0	
1375	Number of Missing Values					52	Percent Non-Detects					0.00%	
1376													
1377	Raw Statistics					Log-transformed Statistics							
1378	Minimum Detected					5310	Minimum Detected					8.577	
1379	Maximum Detected					95400	Maximum Detected					11.47	
1380	Mean of Detected					40396	Mean of Detected					10.48	
1381	SD of Detected					19164	SD of Detected					0.531	
1382	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1383	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1384													
1385													
1386	UCL Statistics												
1387	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1388	Lilliefors Test Statistic					0.0888	Lilliefors Test Statistic					0.0608	
1389	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107	
1390	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1391													
1392	Assuming Normal Distribution					Assuming Lognormal Distribution							
1393	DL/2 Substitution Method					DL/2 Substitution Method							
1394	Mean					40396	Mean					10.48	
1395	SD					19164	SD					0.531	
1396	95% DL/2 (t) UCL					44272	95% H-Stat (DL/2) UCL					46391	
1397													
1398	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1399	MLE method failed to converge properly					Mean in Log Scale					N/A		
1400						SD in Log Scale					N/A		
1401						Mean in Original Scale					N/A		
1402						SD in Original Scale					N/A		
1403						95% Percentile Bootstrap UCL					N/A		
1404						95% BCA Bootstrap UCL					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
1405												
1406	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1407	k star (bias corrected)				4.012		Data appear Normal at 5% Significance Level					
1408	Theta Star				10069							
1409	nu star				545.6							
1410												
1411	A-D Test Statistic				0.298		Nonparametric Statistics					
1412	5% A-D Critical Value				0.755		Kaplan-Meier (KM) Method					
1413	K-S Test Statistic				0.755		Mean				40396	
1414	5% K-S Critical Value				0.108		SD				19023	
1415	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				2324	
1416							95% KM (t) UCL				44272	
1417	Assuming Gamma Distribution						95% KM (z) UCL				44218	
1418	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				44272	
1419	Minimum				5310		95% KM (bootstrap t) UCL				44411	
1420	Maximum				95400		95% KM (BCA) UCL				44209	
1421	Mean				40396		95% KM (Percentile Bootstrap) UCL				44135	
1422	Median				37900		95% KM (Chebyshev) UCL				50526	
1423	SD				19164		97.5% KM (Chebyshev) UCL				54909	
1424	k star				4.012		99% KM (Chebyshev) UCL				63519	
1425	Theta star				10069							
1426	Nu star				545.6		Potential UCLs to Use					
1427	AppChi2				492.4		95% KM (t) UCL				44272	
1428	95% Gamma Approximate UCL				44758		95% KM (Percentile Bootstrap) UCL				44135	
1429	95% Adjusted Gamma UCL				44857							
1430	Note: DL/2 is not a recommended method.											
1431												
1432												
1433	Cerium											
1434												
1435	General Statistics											
1436	Number of Valid Data				1		Number of Detected Data				1	
1437	Number of Distinct Detected Data				1		Number of Non-Detect Data				0	
1438	Number of Missing Values				111		Percent Non-Detects				0.00%	
1439												
1440	Warning: This data set only has 1 observations!											
1441	Data set is too small to compute reliable and meaningful statistics and estimates!											
1442	The data set for variable Cerium was not processed!											
1443												
1444	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1445	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1446												
1447												
1448												
1449	Cesium											
1450												
1451	General Statistics											
1452	Number of Valid Data				1		Number of Detected Data				1	
1453	Number of Distinct Detected Data				1		Number of Non-Detect Data				0	
1454	Number of Missing Values				111		Percent Non-Detects				0.00%	
1455												
1456	Warning: This data set only has 1 observations!											

	A	B	C	D	E	F	G	H	I	J	K	L				
1457	Data set is too small to compute reliable and meaningful statistics and estimates!															
1458	The data set for variable Cesium was not processed!															
1459																
1460	It is suggested to collect at least 8 to 10 observations before using these statistical methods!															
1461	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.															
1462																
1463																
1464																
1465	Chromium															
1466																
1467	General Statistics															
1468	Number of Valid Data				68				Number of Detected Data				68			
1469	Number of Distinct Detected Data				63				Number of Non-Detect Data				0			
1470	Number of Missing Values				52				Percent Non-Detects				0.00%			
1471																
1472	Raw Statistics						Log-transformed Statistics									
1473	Minimum Detected				12.9				Minimum Detected				2.557			
1474	Maximum Detected				298				Maximum Detected				5.697			
1475	Mean of Detected				64.85				Mean of Detected				3.883			
1476	SD of Detected				52.12				SD of Detected				0.764			
1477	Minimum Non-Detect				N/A				Minimum Non-Detect				N/A			
1478	Maximum Non-Detect				N/A				Maximum Non-Detect				N/A			
1479																
1480																
1481	UCL Statistics															
1482	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
1483	Lilliefors Test Statistic				0.199				Lilliefors Test Statistic				0.163			
1484	5% Lilliefors Critical Value				0.107				5% Lilliefors Critical Value				0.107			
1485	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level									
1486																
1487	Assuming Normal Distribution						Assuming Lognormal Distribution									
1488	DL/2 Substitution Method								DL/2 Substitution Method							
1489	Mean				64.85				Mean				3.883			
1490	SD				52.12				SD				0.764			
1491	95% DL/2 (t) UCL				75.4				95% H-Stat (DL/2) UCL				78.72			
1492																
1493	Maximum Likelihood Estimate(MLE) Method				N/A				Log ROS Method							
1494	MLE method failed to converge properly						Mean in Log Scale				N/A					
1495							SD in Log Scale				N/A					
1496							Mean in Original Scale				N/A					
1497							SD in Original Scale				N/A					
1498							95% Percentile Bootstrap UCL				N/A					
1499							95% BCA Bootstrap UCL				N/A					
1500																
1501	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
1502	k star (bias corrected)				1.805				Data do not follow a Discernable Distribution (0.05)							
1503	Theta Star				35.93											
1504	nu star				245.5											
1505																
1506	A-D Test Statistic				2.279				Nonparametric Statistics							
1507	5% A-D Critical Value				0.765				Kaplan-Meier (KM) Method							
1508	K-S Test Statistic				0.765				Mean				64.85			

	A	B	C	D	E	F	G	H	I	J	K	L		
1509	5% K-S Critical Value					0.11						SD	51.74	
1510	Data not Gamma Distributed at 5% Significance Level											SE of Mean	6.321	
1511												95% KM (t) UCL	75.4	
1512	Assuming Gamma Distribution											95% KM (z) UCL	75.25	
1513	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	75.4	
1514	Minimum						12.9						95% KM (bootstrap t) UCL	77.33
1515	Maximum						298						95% KM (BCA) UCL	74.7
1516	Mean						64.85						95% KM (Percentile Bootstrap) UCL	75.68
1517	Median						40.45						95% KM (Chebyshev) UCL	92.41
1518	SD						52.12						97.5% KM (Chebyshev) UCL	104.3
1519	k star						1.805						99% KM (Chebyshev) UCL	127.7
1520	Theta star						35.93							
1521	Nu star						245.5						Potential UCLs to Use	
1522	AppChi2						210.2						95% KM (Chebyshev) UCL	92.41
1523	95% Gamma Approximate UCL						75.74							
1524	95% Adjusted Gamma UCL						75.99							
1525	Note: DL/2 is not a recommended method.													
1526														
1527														
1528	Chrysene													
1529														
1530	General Statistics													
1531	Number of Valid Data					45	Number of Detected Data					37		
1532	Number of Distinct Detected Data					14	Number of Non-Detect Data					8		
1533	Number of Missing Values					74	Percent Non-Detects					17.78%		
1534														
1535	Raw Statistics						Log-transformed Statistics							
1536	Minimum Detected					0.4	Minimum Detected					-0.916		
1537	Maximum Detected					14	Maximum Detected					2.639		
1538	Mean of Detected					3.054	Mean of Detected					0.44		
1539	SD of Detected					4.229	SD of Detected					1.098		
1540	Minimum Non-Detect					4	Minimum Non-Detect					1.386		
1541	Maximum Non-Detect					6	Maximum Non-Detect					1.792		
1542														
1543	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					39		
1544	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					6		
1545	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					86.67%		
1546														
1547	UCL Statistics													
1548	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1549	Shapiro Wilk Test Statistic					0.613	Shapiro Wilk Test Statistic					0.882		
1550	5% Shapiro Wilk Critical Value					0.936	5% Shapiro Wilk Critical Value					0.936		
1551	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1552														
1553	Assuming Normal Distribution						Assuming Lognormal Distribution							
1554	DL/2 Substitution Method						DL/2 Substitution Method							
1555	Mean						2.933	Mean						0.513
1556	SD						3.837	SD						1.008
1557	95% DL/2 (t) UCL						3.894	95% H-Stat (DL/2) UCL						4.393
1558														
1559	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
1560	Mean						12.21	Mean in Log Scale						0.389

	A	B	C	D	E	F	G	H	I	J	K	L
1561					SD	2.422					SD in Log Scale	1.023
1562					95% MLE (t) UCL	12.82					Mean in Original Scale	2.746
1563					95% MLE (Tiku) UCL	13.87					SD in Original Scale	3.893
1564											95% Percentile Bootstrap UCL	3.722
1565											95% BCA Bootstrap UCL	3.831
1566												
1567	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1568					k star (bias corrected)	0.815	Data do not follow a Discernable Distribution (0.05)					
1569					Theta Star	3.746						
1570					nu star	60.33						
1571												
1572					A-D Test Statistic	2.762	Nonparametric Statistics					
1573					5% A-D Critical Value	0.783					Kaplan-Meier (KM) Method	
1574					K-S Test Statistic	0.783					Mean	2.737
1575					5% K-S Critical Value	0.15					SD	3.86
1576	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.586
1577											95% KM (t) UCL	3.722
1578	Assuming Gamma Distribution										95% KM (z) UCL	3.701
1579					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	3.72
1580					Minimum	0.4					95% KM (bootstrap t) UCL	4.076
1581					Maximum	14					95% KM (BCA) UCL	3.811
1582					Mean	3.05					95% KM (Percentile Bootstrap) UCL	3.729
1583					Median	2					95% KM (Chebyshev) UCL	5.292
1584					SD	3.838					97.5% KM (Chebyshev) UCL	6.398
1585					k star	0.971					99% KM (Chebyshev) UCL	8.571
1586					Theta star	3.143						
1587					Nu star	87.35	Potential UCLs to Use					
1588					AppChi2	66.8					95% KM (Chebyshev) UCL	5.292
1589					95% Gamma Approximate UCL	3.988						
1590					95% Adjusted Gamma UCL	4.024						
1591	Note: DL/2 is not a recommended method.											
1592												
1593												
1594	Cobalt											
1595												
1596	General Statistics											
1597					Number of Valid Data	68					Number of Detected Data	68
1598					Number of Distinct Detected Data	63					Number of Non-Detect Data	0
1599					Number of Missing Values	52					Percent Non-Detects	0.00%
1600												
1601	Raw Statistics						Log-transformed Statistics					
1602					Minimum Detected	4.7					Minimum Detected	1.548
1603					Maximum Detected	86.8					Maximum Detected	4.464
1604					Mean of Detected	27.01					Mean of Detected	2.98
1605					SD of Detected	21.36					SD of Detected	0.815
1606					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
1607					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
1608												
1609												
1610	UCL Statistics											
1611	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1612					Lilliefors Test Statistic	0.228					Lilliefors Test Statistic	0.145

	A	B	C	D	E	F	G	H	I	J	K	L
1613	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
1614	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1615												
1616	Assuming Normal Distribution					Assuming Lognormal Distribution						
1617	DL/2 Substitution Method					DL/2 Substitution Method						
1618	Mean					27.01	Mean					2.98
1619	SD					21.36	SD					0.815
1620	95% DL/2 (t) UCL					31.33	95% H-Stat (DL/2) UCL					33.76
1621												
1622	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1623	MLE method failed to converge properly					Mean in Log Scale					N/A	
1624						SD in Log Scale					N/A	
1625						Mean in Original Scale					N/A	
1626						SD in Original Scale					N/A	
1627						95% Percentile Bootstrap UCL					N/A	
1628						95% BCA Bootstrap UCL					N/A	
1629												
1630	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1631	k star (bias corrected)					1.663	Data do not follow a Discernable Distribution (0.05)					
1632	Theta Star					16.24						
1633	nu star					226.1						
1634												
1635	A-D Test Statistic					2.189	Nonparametric Statistics					
1636	5% A-D Critical Value					0.766	Kaplan-Meier (KM) Method					
1637	K-S Test Statistic					0.766	Mean					27.01
1638	5% K-S Critical Value					0.11	SD					21.2
1639	Data not Gamma Distributed at 5% Significance Level					SE of Mean					2.59	
1640						95% KM (t) UCL					31.33	
1641	Assuming Gamma Distribution					95% KM (z) UCL					31.27	
1642	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					31.33	
1643	Minimum					4.7	95% KM (bootstrap t) UCL					31.75
1644	Maximum					86.8	95% KM (BCA) UCL					31.74
1645	Mean					27.01	95% KM (Percentile Bootstrap) UCL					31.45
1646	Median					14.8	95% KM (Chebyshev) UCL					38.29
1647	SD					21.36	97.5% KM (Chebyshev) UCL					43.18
1648	k star					1.663	99% KM (Chebyshev) UCL					52.77
1649	Theta star					16.24						
1650	Nu star					226.1	Potential UCLs to Use					
1651	AppChi2					192.3	95% KM (Chebyshev) UCL					38.29
1652	95% Gamma Approximate UCL					31.75						
1653	95% Adjusted Gamma UCL					31.86						
1654	Note: DL/2 is not a recommended method.											
1655												
1656												
1657	Copper											
1658												
1659	General Statistics											
1660	Number of Valid Data					71	Number of Detected Data					71
1661	Number of Distinct Detected Data					68	Number of Non-Detect Data					0
1662	Number of Missing Values					52	Percent Non-Detects					0.00%
1663												
1664	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
1665				Minimum Detected		26				Minimum Detected		3.258	
1666				Maximum Detected		3790				Maximum Detected		8.24	
1667				Mean of Detected		1091				Mean of Detected		6.504	
1668				SD of Detected		979.8				SD of Detected		1.1	
1669				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
1670				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
1671													
1672													
1673				UCL Statistics									
1674	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1675				Lilliefors Test Statistic		0.209				Lilliefors Test Statistic		0.122	
1676				5% Lilliefors Critical Value		0.105				5% Lilliefors Critical Value		0.105	
1677	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1678													
1679	Assuming Normal Distribution						Assuming Lognormal Distribution						
1680				DL/2 Substitution Method						DL/2 Substitution Method			
1681				Mean		1091				Mean		6.504	
1682				SD		979.8				SD		1.1	
1683				95% DL/2 (t) UCL		1285				95% H-Stat (DL/2) UCL		1664	
1684													
1685				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1686	MLE method failed to converge properly										Mean in Log Scale		N/A
1687										SD in Log Scale		N/A	
1688										Mean in Original Scale		N/A	
1689										SD in Original Scale		N/A	
1690										95% Percentile Bootstrap UCL		N/A	
1691										95% BCA Bootstrap UCL		N/A	
1692													
1693	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1694				k star (bias corrected)		1.117	Data do not follow a Discernable Distribution (0.05)						
1695				Theta Star		976.7							
1696				nu star		158.6							
1697													
1698				A-D Test Statistic		1.375	Nonparametric Statistics						
1699				5% A-D Critical Value		0.777	Kaplan-Meier (KM) Method						
1700				K-S Test Statistic		0.777				Mean		1091	
1701				5% K-S Critical Value		0.108				SD		972.8	
1702	Data not Gamma Distributed at 5% Significance Level										SE of Mean		116.3
1703										95% KM (t) UCL		1285	
1704	Assuming Gamma Distribution										95% KM (z) UCL		1282
1705	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		1285
1706				Minimum		26				95% KM (bootstrap t) UCL		1300	
1707				Maximum		3790				95% KM (BCA) UCL		1272	
1708				Mean		1091				95% KM (Percentile Bootstrap) UCL		1289	
1709				Median		636				95% KM (Chebyshev) UCL		1598	
1710				SD		979.8				97.5% KM (Chebyshev) UCL		1817	
1711				k star		1.117				99% KM (Chebyshev) UCL		2248	
1712				Theta star		976.7							
1713				Nu star		158.6	Potential UCLs to Use						
1714				AppChi2		130.5				95% KM (Chebyshev) UCL		1598	
1715				95% Gamma Approximate UCL		1326							
1716				95% Adjusted Gamma UCL		1331							

	A	B	C	D	E	F	G	H	I	J	K	L	
1717	Note: DL/2 is not a recommended method.												
1718													
1719													
1720	Dibenz(a,h)anthracene												
1721													
1722	General Statistics												
1723	Number of Valid Data					45		Number of Detected Data					13
1724	Number of Distinct Detected Data					7		Number of Non-Detect Data					32
1725	Number of Missing Values					74		Percent Non-Detects					71.11%
1726													
1727	Raw Statistics						Log-transformed Statistics						
1728	Minimum Detected					0.2		Minimum Detected					-1.609
1729	Maximum Detected					3		Maximum Detected					1.099
1730	Mean of Detected					1.177		Mean of Detected					-0.262
1731	SD of Detected					1.134		SD of Detected					0.946
1732	Minimum Non-Detect					4		Minimum Non-Detect					1.386
1733	Maximum Non-Detect					7		Maximum Non-Detect					1.946
1734													
1735	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					45	
1736	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
1737	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
1738													
1739	UCL Statistics												
1740	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1741	Shapiro Wilk Test Statistic					0.723		Shapiro Wilk Test Statistic					0.841
1742	5% Shapiro Wilk Critical Value					0.866		5% Shapiro Wilk Critical Value					0.866
1743	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1744													
1745	Assuming Normal Distribution						Assuming Lognormal Distribution						
1746	DL/2 Substitution Method							DL/2 Substitution Method					
1747	Mean					2.162		Mean					0.585
1748	SD					0.93		SD					0.748
1749	95% DL/2 (t) UCL					2.395		95% H-Stat (DL/2) UCL					4.715
1750													
1751	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1752	MLE method failed to converge properly						Mean in Log Scale					-0.262	
1753							SD in Log Scale					0.846	
1754							Mean in Original Scale					1.087	
1755							SD in Original Scale					0.94	
1756							95% Percentile Bootstrap UCL					1.307	
1757							95% BCA Bootstrap UCL					1.347	
1758													
1759	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1760	k star (bias corrected)					1.066		Data do not follow a Discernable Distribution (0.05)					
1761	Theta Star					1.105							
1762	nu star					27.7							
1763													
1764	A-D Test Statistic					1.241		Nonparametric Statistics					
1765	5% A-D Critical Value					0.753		Kaplan-Meier (KM) Method					
1766	K-S Test Statistic					0.753		Mean					1.177
1767	5% K-S Critical Value					0.242		SD					1.09
1768	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.315	

	A	B	C	D	E	F	G	H	I	J	K	L
1769											95% KM (t) UCL	1.706
1770	Assuming Gamma Distribution										95% KM (z) UCL	1.694
1771	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1.721
1772	Minimum					1E-09					95% KM (bootstrap t) UCL	1.909
1773	Maximum					3					95% KM (BCA) UCL	1.733
1774	Mean					1.2					95% KM (Percentile Bootstrap) UCL	1.711
1775	Median					1					95% KM (Chebyshev) UCL	2.548
1776	SD					0.948					97.5% KM (Chebyshev) UCL	3.142
1777	k star					0.32					99% KM (Chebyshev) UCL	4.307
1778	Theta star					3.746						
1779	Nu star					28.83					Potential UCLs to Use	
1780	AppChi2					17.58					95% KM (t) UCL	1.706
1781	95% Gamma Approximate UCL					1.968					95% KM (% Bootstrap) UCL	1.711
1782	95% Adjusted Gamma UCL					2.002						
1783	Note: DL/2 is not a recommended method.											
1784												
1785												
1786	Dibenzofuran											
1787												
1788	General Statistics											
1789	Number of Valid Data					45					Number of Detected Data	18
1790	Number of Distinct Detected Data					7					Number of Non-Detect Data	27
1791	Number of Missing Values					74					Percent Non-Detects	60.00%
1792												
1793	Raw Statistics					Log-transformed Statistics						
1794	Minimum Detected					0.2					Minimum Detected	-1.609
1795	Maximum Detected					2					Maximum Detected	0.693
1796	Mean of Detected					0.711					Mean of Detected	-0.6
1797	SD of Detected					0.549					SD of Detected	0.744
1798	Minimum Non-Detect					4					Minimum Non-Detect	1.386
1799	Maximum Non-Detect					6					Maximum Non-Detect	1.792
1800												
1801	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	45
1802	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	0
1803	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	100.00%
1804												
1805	UCL Statistics											
1806	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1807	Shapiro Wilk Test Statistic					0.803					Shapiro Wilk Test Statistic	0.915
1808	5% Shapiro Wilk Critical Value					0.897					5% Shapiro Wilk Critical Value	0.897
1809	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1810												
1811	Assuming Normal Distribution					Assuming Lognormal Distribution						
1812	DL/2 Substitution Method										DL/2 Substitution Method	
1813	Mean					1.784					Mean	0.303
1814	SD					0.991					SD	0.885
1815	95% DL/2 (t) UCL					2.033					95% H-Stat (DL/2) UCL	4.434
1816												
1817	Maximum Likelihood Estimate(MLE) Method					N/A					Log ROS Method	
1818	MLE method failed to converge properly										Mean in Log Scale	-0.6
1819											SD in Log Scale	0.679
1820											Mean in Original Scale	0.685

	A	B	C	D	E	F	G	H	I	J	K	L
1821						SD in Original Scale					0.475	
1822						95% Percentile Bootstrap UCL					0.8	
1823						95% BCA Bootstrap UCL					0.818	
1824												
1825	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1826	k star (bias corrected)					1.771	Data appear Gamma Distributed at 5% Significance Level					
1827	Theta Star					0.401						
1828	nu star					63.76						
1829												
1830	A-D Test Statistic					0.63	Nonparametric Statistics					
1831	5% A-D Critical Value					0.752	Kaplan-Meier (KM) Method					
1832	K-S Test Statistic					0.752					Mean	0.711
1833	5% K-S Critical Value					0.206					SD	0.533
1834	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.129
1835											95% KM (t) UCL	0.928
1836	Assuming Gamma Distribution										95% KM (z) UCL	0.924
1837	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.932
1838	Minimum					1E-09					95% KM (bootstrap t) UCL	1.028
1839	Maximum					2					95% KM (BCA) UCL	0.922
1840	Mean					0.718					95% KM (Percentile Bootstrap) UCL	0.929
1841	Median					0.767					95% KM (Chebyshev) UCL	1.275
1842	SD					0.469					97.5% KM (Chebyshev) UCL	1.519
1843	k star					0.813					99% KM (Chebyshev) UCL	1.998
1844	Theta star					0.884						
1845	Nu star					73.14	Potential UCLs to Use					
1846	AppChi2					54.45					95% KM (t) UCL	0.928
1847	95% Gamma Approximate UCL					0.965						
1848	95% Adjusted Gamma UCL					0.974						
1849	Note: DL/2 is not a recommended method.											
1850												
1851												
1852	Fluoranthene											
1853												
1854	General Statistics											
1855	Number of Valid Data					45	Number of Detected Data				38	
1856	Number of Distinct Detected Data					17	Number of Non-Detect Data				7	
1857	Number of Missing Values					74	Percent Non-Detects				15.56%	
1858												
1859	Raw Statistics					Log-transformed Statistics						
1860	Minimum Detected					0.2	Minimum Detected				-1.609	
1861	Maximum Detected					36	Maximum Detected				3.584	
1862	Mean of Detected					5.3	Mean of Detected				0.633	
1863	SD of Detected					8.997	SD of Detected				1.368	
1864	Minimum Non-Detect					4	Minimum Non-Detect				1.386	
1865	Maximum Non-Detect					6	Maximum Non-Detect				1.792	
1866												
1867	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					38	
1868	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					7	
1869	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					84.44%	
1870												
1871	UCL Statistics											
1872	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						

	A	B	C	D	E	F	G	H	I	J	K	L
1873	Shapiro Wilk Test Statistic					0.588	Shapiro Wilk Test Statistic					0.905
1874	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938
1875	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1876												
1877	Assuming Normal Distribution					Assuming Lognormal Distribution						
1878	DL/2 Substitution Method						DL/2 Substitution Method					
1879	Mean					4.853	Mean					0.671
1880	SD					8.319	SD					1.258
1881	95% DL/2 (t) UCL					6.937	95% H-Stat (DL/2) UCL					7.13
1882												
1883	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1884	MLE yields a negative mean						Mean in Log Scale					0.556
1885							SD in Log Scale					1.287
1886							Mean in Original Scale					4.684
1887							SD in Original Scale					8.382
1888							95% Percentile Bootstrap UCL					6.703
1889							95% BCA Bootstrap UCL					7.276
1890												
1891	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1892	k star (bias corrected)					0.568	Data do not follow a Discernable Distribution (0.05)					
1893	Theta Star					9.336						
1894	nu star					43.15						
1895												
1896	A-D Test Statistic					3.107	Nonparametric Statistics					
1897	5% A-D Critical Value					0.803	Kaplan-Meier (KM) Method					
1898	K-S Test Statistic					0.803	Mean					4.673
1899	5% K-S Critical Value					0.15	SD					8.298
1900	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.255
1901							95% KM (t) UCL					6.782
1902	Assuming Gamma Distribution						95% KM (z) UCL					6.738
1903	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.778
1904	Minimum					0.2	95% KM (bootstrap t) UCL					7.739
1905	Maximum					36	95% KM (BCA) UCL					6.718
1906	Mean					5.173	95% KM (Percentile Bootstrap) UCL					6.825
1907	Median					2	95% KM (Chebyshev) UCL					10.14
1908	SD					8.305	97.5% KM (Chebyshev) UCL					12.51
1909	k star					0.646	99% KM (Chebyshev) UCL					17.16
1910	Theta star					8.008						
1911	Nu star					58.14	Potential UCLs to Use					
1912	AppChi2					41.61	95% KM (Chebyshev) UCL					10.14
1913	95% Gamma Approximate UCL					7.228						
1914	95% Adjusted Gamma UCL					7.309						
1915	Note: DL/2 is not a recommended method.											
1916												
1917												
1918	Fluorene											
1919												
1920	General Statistics											
1921	Number of Valid Data					45	Number of Detected Data					7
1922	Number of Distinct Detected Data					5	Number of Non-Detect Data					38
1923	Number of Missing Values					74	Percent Non-Detects					84.44%
1924												

	A	B	C	D	E	F	G	H	I	J	K	L
1925	Raw Statistics						Log-transformed Statistics					
1926	Minimum Detected				0.2		Minimum Detected				-1.609	
1927	Maximum Detected				3		Maximum Detected				1.099	
1928	Mean of Detected				1.371		Mean of Detected				-0.00583	
1929	SD of Detected				1.003		SD of Detected				0.966	
1930	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
1931	Maximum Non-Detect				6		Maximum Non-Detect				1.792	
1932												
1933	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				45	
1934	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
1935	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
1936												
1937	Warning: There are only 7 Detected Values in this data											
1938	Note: It should be noted that even though bootstrap may be performed on this data set											
1939	the resulting calculations may not be reliable enough to draw conclusions											
1940												
1941	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1942												
1943												
1944	UCL Statistics											
1945	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1946	Shapiro Wilk Test Statistic				0.931		Shapiro Wilk Test Statistic				0.923	
1947	5% Shapiro Wilk Critical Value				0.803		5% Shapiro Wilk Critical Value				0.803	
1948	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1949												
1950	Assuming Normal Distribution						Assuming Lognormal Distribution					
1951	DL/2 Substitution Method						DL/2 Substitution Method					
1952	Mean				2.358		Mean				0.779	
1953	SD				0.645		SD				0.509	
1954	95% DL/2 (t) UCL				2.519		95% H-Stat (DL/2) UCL				3.637	
1955												
1956	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1957	MLE method failed to converge properly						Mean in Log Scale				-0.00583	
1958							SD in Log Scale				0.972	
1959							Mean in Original Scale				1.527	
1960							SD in Original Scale				1.484	
1961							95% Percentile Bootstrap UCL				1.903	
1962							95% BCA Bootstrap UCL				1.962	
1963												
1964	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1965	k star (bias corrected)				1.068		Data appear Normal at 5% Significance Level					
1966	Theta Star				1.284							
1967	nu star				14.95							
1968												
1969	A-D Test Statistic				0.288		Nonparametric Statistics					
1970	5% A-D Critical Value				0.719		Kaplan-Meier (KM) Method					
1971	K-S Test Statistic				0.719		Mean				1.371	
1972	5% K-S Critical Value				0.316		SD				0.928	
1973	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.379	
1974							95% KM (t) UCL				2.008	
1975	Assuming Gamma Distribution						95% KM (z) UCL				1.995	
1976	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				2.052	

	A	B	C	D	E	F	G	H	I	J	K	L
1977					Minimum	1E-09				95% KM (bootstrap t) UCL		2.22
1978					Maximum	3				95% KM (BCA) UCL		2.029
1979					Mean	1.382				95% KM (Percentile Bootstrap) UCL		2
1980					Median	1.384				95% KM (Chebyshev) UCL		3.024
1981					SD	0.947				97.5% KM (Chebyshev) UCL		3.739
1982					k star	0.378				99% KM (Chebyshev) UCL		5.143
1983					Theta star	3.652						
1984					Nu star	34.06				Potential UCLs to Use		
1985					AppChi2	21.72				95% KM (t) UCL		2.008
1986					95% Gamma Approximate UCL	2.168				95% KM (Percentile Bootstrap) UCL		2
1987					95% Adjusted Gamma UCL	2.201						
1988	Note: DL/2 is not a recommended method.											
1989												
1990												
1991	Gallium											
1992												
1993	General Statistics											
1994					Number of Valid Data	1				Number of Detected Data		1
1995					Number of Distinct Detected Data	1				Number of Non-Detect Data		0
1996					Number of Missing Values	111				Percent Non-Detects		0.00%
1997												
1998	Warning: This data set only has 1 observations!											
1999	Data set is too small to compute reliable and meaningful statistics and estimates!											
2000	The data set for variable Gallium was not processed!											
2001												
2002	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2003	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2004												
2005												
2006												
2007	Hexachlorobenzene											
2008												
2009	General Statistics											
2010					Number of Valid Data	45				Number of Detected Data		1
2011					Number of Distinct Detected Data	1				Number of Non-Detect Data		44
2012					Number of Missing Values	74				Percent Non-Detects		97.78%
2013												
2014	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
2015	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
2016												
2017	The data set for variable Hexachlorobenzene was not processed!											
2018												
2019												
2020												
2021	Indeno(1,2,3-cd)pyrene											
2022												
2023	General Statistics											
2024					Number of Valid Data	45				Number of Detected Data		27
2025					Number of Distinct Detected Data	13				Number of Non-Detect Data		18
2026					Number of Missing Values	74				Percent Non-Detects		40.00%
2027												
2028	Raw Statistics						Log-transformed Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
2029	Minimum Detected					0.2	Minimum Detected					-1.609
2030	Maximum Detected					11	Maximum Detected					2.398
2031	Mean of Detected					1.993	Mean of Detected					0.0262
2032	SD of Detected					2.837	SD of Detected					1.081
2033	Minimum Non-Detect					4	Minimum Non-Detect					1.386
2034	Maximum Non-Detect					6	Maximum Non-Detect					1.792
2035												
2036	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					41
2037	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					4
2038	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					91.11%
2039												
2040	UCL Statistics											
2041	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2042	Shapiro Wilk Test Statistic					0.622	Shapiro Wilk Test Statistic					0.9
2043	5% Shapiro Wilk Critical Value					0.923	5% Shapiro Wilk Critical Value					0.923
2044	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2045												
2046	Assuming Normal Distribution						Assuming Lognormal Distribution					
2047	DL/2 Substitution Method						DL/2 Substitution Method					
2048	Mean					2.207	Mean					0.382
2049	SD					2.211	SD					0.946
2050	95% DL/2 (t) UCL					2.76	95% H-Stat (DL/2) UCL					4.093
2051												
2052	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2053	MLE yields a negative mean						Mean in Log Scale					-0.0827
2054							SD in Log Scale					0.94
2055							Mean in Original Scale					1.578
2056							SD in Original Scale					2.271
2057							95% Percentile Bootstrap UCL					2.153
2058							95% BCA Bootstrap UCL					2.317
2059												
2060	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2061	k star (bias corrected)					0.81	Data do not follow a Discernable Distribution (0.05)					
2062	Theta Star					2.46						
2063	nu star					43.74						
2064												
2065	A-D Test Statistic					2.177	Nonparametric Statistics					
2066	5% A-D Critical Value					0.778	Kaplan-Meier (KM) Method					
2067	K-S Test Statistic					0.778	Mean					1.557
2068	5% K-S Critical Value					0.174	SD					2.262
2069	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.355
2070							95% KM (t) UCL					2.153
2071	Assuming Gamma Distribution						95% KM (z) UCL					2.141
2072	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.15
2073	Minimum					0.2	95% KM (bootstrap t) UCL					2.458
2074	Maximum					11	95% KM (BCA) UCL					2.152
2075	Mean					1.998	95% KM (Percentile Bootstrap) UCL					2.14
2076	Median					1.639	95% KM (Chebyshev) UCL					3.103
2077	SD					2.193	97.5% KM (Chebyshev) UCL					3.772
2078	k star					1.302	99% KM (Chebyshev) UCL					5.085
2079	Theta star					1.534						
2080	Nu star					117.2	Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
2081	AppChi2				93.21	95% KM (Chebyshev) UCL					3.103	
2082	95% Gamma Approximate UCL				2.512							
2083	95% Adjusted Gamma UCL				2.531							
2084	Note: DL/2 is not a recommended method.											
2085												
2086												
2087	Iron											
2088												
2089	General Statistics											
2090	Number of Valid Data				68	Number of Detected Data				68		
2091	Number of Distinct Detected Data				68	Number of Non-Detect Data				0		
2092	Number of Missing Values				52	Percent Non-Detects				0.00%		
2093												
2094	Raw Statistics						Log-transformed Statistics					
2095	Minimum Detected				12000	Minimum Detected				9.393		
2096	Maximum Detected				254000	Maximum Detected				12.45		
2097	Mean of Detected				97107	Mean of Detected				11.18		
2098	SD of Detected				71891	SD of Detected				0.812		
2099	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
2100	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
2101												
2102												
2103	UCL Statistics											
2104	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2105	Lilliefors Test Statistic				0.209	Lilliefors Test Statistic				0.117		
2106	5% Lilliefors Critical Value				0.107	5% Lilliefors Critical Value				0.107		
2107	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2108												
2109	Assuming Normal Distribution						Assuming Lognormal Distribution					
2110	DL/2 Substitution Method					DL/2 Substitution Method						
2111	Mean				97107	Mean				11.18		
2112	SD				71891	SD				0.812		
2113	95% DL/2 (t) UCL				111648	95% H-Stat (DL/2) UCL				122699		
2114												
2115	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
2116	MLE method failed to converge properly						Mean in Log Scale				N/A	
2117							SD in Log Scale				N/A	
2118							Mean in Original Scale				N/A	
2119							SD in Original Scale				N/A	
2120							95% Percentile Bootstrap UCL				N/A	
2121							95% BCA Bootstrap UCL				N/A	
2122												
2123	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2124	k star (bias corrected)				1.731	Data do not follow a Discernable Distribution (0.05)						
2125	Theta Star				56083							
2126	nu star				235.5							
2127												
2128	A-D Test Statistic				2.012	Nonparametric Statistics						
2129	5% A-D Critical Value				0.766	Kaplan-Meier (KM) Method						
2130	K-S Test Statistic				0.766	Mean				97107		
2131	5% K-S Critical Value				0.11	SD				71361		
2132	Data not Gamma Distributed at 5% Significance Level						SE of Mean				8718	

	A	B	C	D	E	F	G	H	I	J	K	L	
2133											95% KM (t) UCL	111648	
2134	Assuming Gamma Distribution										95% KM (z) UCL	111447	
2135	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	111648	
2136	Minimum					12000						95% KM (bootstrap t) UCL	111607
2137	Maximum					254000						95% KM (BCA) UCL	111566
2138	Mean					97107						95% KM (Percentile Bootstrap) UCL	111149
2139	Median					62350						95% KM (Chebyshev) UCL	135109
2140	SD					71891						97.5% KM (Chebyshev) UCL	151552
2141	k star					1.731						99% KM (Chebyshev) UCL	183852
2142	Theta star					56083							
2143	Nu star					235.5						Potential UCLs to Use	
2144	AppChi2					201						95% KM (Chebyshev) UCL	135109
2145	95% Gamma Approximate UCL					113790							
2146	95% Adjusted Gamma UCL					114180							
2147	Note: DL/2 is not a recommended method.												
2148													
2149													
2150	Lanthanum												
2151													
2152	General Statistics												
2153	Number of Valid Data					1	Number of Detected Data					1	
2154	Number of Distinct Detected Data					1	Number of Non-Detect Data					0	
2155	Number of Missing Values					111	Percent Non-Detects					0.00%	
2156													
2157	Warning: This data set only has 1 observations!												
2158	Data set is too small to compute reliable and meaningful statistics and estimates!												
2159	The data set for variable Lanthanum was not processed!												
2160													
2161	It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
2162	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
2163													
2164													
2165													
2166	Lead												
2167													
2168	General Statistics												
2169	Number of Valid Data					71	Number of Detected Data					71	
2170	Number of Distinct Detected Data					67	Number of Non-Detect Data					0	
2171	Number of Missing Values					52	Percent Non-Detects					0.00%	
2172													
2173	Raw Statistics					Log-transformed Statistics							
2174	Minimum Detected					33.6	Minimum Detected					3.515	
2175	Maximum Detected					2760	Maximum Detected					7.923	
2176	Mean of Detected					339.1	Mean of Detected					5.574	
2177	SD of Detected					362.6	SD of Detected					0.649	
2178	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
2179	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
2180													
2181													
2182	UCL Statistics												
2183	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
2184	Lilliefors Test Statistic					0.247	Lilliefors Test Statistic					0.0988	

	A	B	C	D	E	F	G	H	I	J	K	L		
2185	5% Lilliefors Critical Value					0.105	5% Lilliefors Critical Value					0.105		
2186	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
2187														
2188	Assuming Normal Distribution						Assuming Lognormal Distribution							
2189	DL/2 Substitution Method						DL/2 Substitution Method							
2190	Mean						339.1	Mean						5.574
2191	SD						362.6	SD						0.649
2192	95% DL/2 (t) UCL						410.9	95% H-Stat (DL/2) UCL						378.1
2193														
2194	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
2195	MLE method failed to converge properly						Mean in Log Scale						N/A	
2196							SD in Log Scale						N/A	
2197							Mean in Original Scale						N/A	
2198							SD in Original Scale						N/A	
2199							95% Percentile Bootstrap UCL						N/A	
2200							95% BCA Bootstrap UCL						N/A	
2201														
2202	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2203	k star (bias corrected)						2.048	Data appear Lognormal at 5% Significance Level						
2204	Theta Star						165.6							
2205	nu star						290.8							
2206														
2207	A-D Test Statistic						2.682	Nonparametric Statistics						
2208	5% A-D Critical Value						0.763	Kaplan-Meier (KM) Method						
2209	K-S Test Statistic						0.763	Mean						339.1
2210	5% K-S Critical Value						0.107	SD						360
2211	Data not Gamma Distributed at 5% Significance Level						SE of Mean						43.03	
2212							95% KM (t) UCL						410.9	
2213	Assuming Gamma Distribution						95% KM (z) UCL						409.9	
2214	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						410.9	
2215	Minimum						33.6	95% KM (bootstrap t) UCL						470.7
2216	Maximum						2760	95% KM (BCA) UCL						411.1
2217	Mean						339.1	95% KM (Percentile Bootstrap) UCL						413.2
2218	Median						246	95% KM (Chebyshev) UCL						526.7
2219	SD						362.6	97.5% KM (Chebyshev) UCL						607.9
2220	k star						2.048	99% KM (Chebyshev) UCL						767.3
2221	Theta star						165.6							
2222	Nu star						290.8	Potential UCLs to Use						
2223	AppChi2						252.3	95% KM (BCA) UCL						411.1
2224	95% Gamma Approximate UCL						390.9							
2225	95% Adjusted Gamma UCL						392							
2226	Note: DL/2 is not a recommended method.													
2227														
2228														
2229	Lithium													
2230														
2231	General Statistics													
2232	Number of Valid Data						1	Number of Detected Data						1
2233	Number of Distinct Detected Data						1	Number of Non-Detect Data						0
2234	Number of Missing Values						111	Percent Non-Detects						0.00%
2235														
2236	Warning: This data set only has 1 observations!													

	A	B	C	D	E	F	G	H	I	J	K	L
2237	Data set is too small to compute reliable and meaningful statistics and estimates!											
2238	The data set for variable Lithium was not processed!											
2239												
2240	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2241	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2242												
2243												
2244												
2245	Magnesium											
2246												
2247	General Statistics											
2248	Number of Valid Data				68		Number of Detected Data				68	
2249	Number of Distinct Detected Data				67		Number of Non-Detect Data				0	
2250	Number of Missing Values				52		Percent Non-Detects				0.00%	
2251												
2252	Raw Statistics						Log-transformed Statistics					
2253	Minimum Detected				3960		Minimum Detected				8.284	
2254	Maximum Detected				26600		Maximum Detected				10.19	
2255	Mean of Detected				9174		Mean of Detected				9.019	
2256	SD of Detected				4783		SD of Detected				0.438	
2257	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
2258	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
2259												
2260												
2261	UCL Statistics											
2262	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2263	Lilliefors Test Statistic				0.229		Lilliefors Test Statistic				0.146	
2264	5% Lilliefors Critical Value				0.107		5% Lilliefors Critical Value				0.107	
2265	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2266												
2267	Assuming Normal Distribution						Assuming Lognormal Distribution					
2268	DL/2 Substitution Method						DL/2 Substitution Method					
2269	Mean				9174		Mean				9.019	
2270	SD				4783		SD				0.438	
2271	95% DL/2 (t) UCL				10141		95% H-Stat (DL/2) UCL				10024	
2272												
2273	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
2274	MLE method failed to converge properly						Mean in Log Scale				N/A	
2275							SD in Log Scale				N/A	
2276							Mean in Original Scale				N/A	
2277							SD in Original Scale				N/A	
2278							95% Percentile Bootstrap UCL				N/A	
2279							95% BCA Bootstrap UCL				N/A	
2280												
2281	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2282	k star (bias corrected)				4.723		Data do not follow a Discernable Distribution (0.05)					
2283	Theta Star				1942							
2284	nu star				642.3							
2285												
2286	A-D Test Statistic				2.723		Nonparametric Statistics					
2287	5% A-D Critical Value				0.754		Kaplan-Meier (KM) Method					
2288	K-S Test Statistic				0.754		Mean				9174	

	A	B	C	D	E	F	G	H	I	J	K	L	
2289	5% K-S Critical Value					0.108	SD					4748	
2290	Data not Gamma Distributed at 5% Significance Level					SE of Mean					580		
2291						95% KM (t) UCL					10141		
2292	Assuming Gamma Distribution					95% KM (z) UCL					10128		
2293	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					10141		
2294	Minimum					3960	95% KM (bootstrap t) UCL					10312	
2295	Maximum					26600	95% KM (BCA) UCL					10213	
2296	Mean					9174	95% KM (Percentile Bootstrap) UCL					10136	
2297	Median					7830	95% KM (Chebyshev) UCL					11702	
2298	SD					4783	97.5% KM (Chebyshev) UCL					12796	
2299	k star					4.723	99% KM (Chebyshev) UCL					14945	
2300	Theta star					1942							
2301	Nu star					642.3	Potential UCLs to Use						
2302	AppChi2					584.5	95% KM (Chebyshev) UCL					11702	
2303	95% Gamma Approximate UCL					10081							
2304	95% Adjusted Gamma UCL					10101							
2305	Note: DL/2 is not a recommended method.												
2306													
2307													
2308	Manganese												
2309													
2310	General Statistics												
2311	Number of Valid Data					68	Number of Detected Data					68	
2312	Number of Distinct Detected Data					66	Number of Non-Detect Data					0	
2313	Number of Missing Values					52	Percent Non-Detects					0.00%	
2314													
2315	Raw Statistics					Log-transformed Statistics							
2316	Minimum Detected					208	Minimum Detected					5.338	
2317	Maximum Detected					5860	Maximum Detected					8.676	
2318	Mean of Detected					1888	Mean of Detected					7.208	
2319	SD of Detected					1431	SD of Detected					0.875	
2320	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
2321	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
2322													
2323													
2324	UCL Statistics												
2325	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
2326	Lilliefors Test Statistic					0.194	Lilliefors Test Statistic					0.128	
2327	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107	
2328	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
2329													
2330	Assuming Normal Distribution					Assuming Lognormal Distribution							
2331	DL/2 Substitution Method					DL/2 Substitution Method							
2332	Mean					1888	Mean					7.208	
2333	SD					1431	SD					0.875	
2334	95% DL/2 (t) UCL					2178	95% H-Stat (DL/2) UCL					2490	
2335													
2336	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
2337	MLE method failed to converge properly					Mean in Log Scale							N/A
2338						SD in Log Scale							N/A
2339						Mean in Original Scale							N/A
2340						SD in Original Scale							N/A

	A	B	C	D	E	F	G	H	I	J	K	L
2341											95% Percentile Bootstrap UCL	N/A
2342											95% BCA Bootstrap UCL	N/A
2343												
2344	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2345					k star (bias corrected)	1.577	Data do not follow a Discernable Distribution (0.05)					
2346					Theta Star	1197						
2347					nu star	214.5						
2348												
2349					A-D Test Statistic	1.472	Nonparametric Statistics					
2350					5% A-D Critical Value	0.767	Kaplan-Meier (KM) Method					
2351					K-S Test Statistic	0.767	Mean					
2352					5% K-S Critical Value	0.11	SD					
2353	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
2354							95% KM (t) UCL					
2355	Assuming Gamma Distribution						95% KM (z) UCL					
2356	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
2357					Minimum	208	95% KM (bootstrap t) UCL					
2358					Maximum	5860	95% KM (BCA) UCL					
2359					Mean	1888	95% KM (Percentile Bootstrap) UCL					
2360					Median	1205	95% KM (Chebyshev) UCL					
2361					SD	1431	97.5% KM (Chebyshev) UCL					
2362					k star	1.577	99% KM (Chebyshev) UCL					
2363					Theta star	1197						
2364					Nu star	214.5	Potential UCLs to Use					
2365					AppChi2	181.6	95% KM (Chebyshev) UCL					
2366					95% Gamma Approximate UCL	2230						
2367					95% Adjusted Gamma UCL	2238						
2368	Note: DL/2 is not a recommended method.											
2369												
2370												
2371	Mercury											
2372												
2373	General Statistics											
2374					Number of Valid Data	66					Number of Detected Data	54
2375					Number of Distinct Detected Data	37					Number of Non-Detect Data	12
2376					Number of Missing Values	54					Percent Non-Detects	18.18%
2377												
2378	Raw Statistics						Log-transformed Statistics					
2379					Minimum Detected	0.005					Minimum Detected	-5.298
2380					Maximum Detected	0.68					Maximum Detected	-0.386
2381					Mean of Detected	0.156					Mean of Detected	-2.223
2382					SD of Detected	0.141					SD of Detected	0.924
2383					Minimum Non-Detect	0.05					Minimum Non-Detect	-2.996
2384					Maximum Non-Detect	0.07					Maximum Non-Detect	-2.659
2385												
2386	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
2387	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
2388	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
2389												
2390	UCL Statistics											
2391	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2392					Lilliefors Test Statistic	0.2					Lilliefors Test Statistic	0.0863

	A	B	C	D	E	F	G	H	I	J	K	L
2393	5% Lilliefors Critical Value					0.121	5% Lilliefors Critical Value					0.121
2394	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2395												
2396	Assuming Normal Distribution						Assuming Lognormal Distribution					
2397	DL/2 Substitution Method						DL/2 Substitution Method					
2398	Mean					0.132	Mean					-2.468
2399	SD					0.136	SD					0.986
2400	95% DL/2 (t) UCL					0.16	95% H-Stat (DL/2) UCL					0.285
2401												
2402	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2403	Mean					0.0957	Mean in Log Scale					-2.478
2404	SD					0.178	SD in Log Scale					1.009
2405	95% MLE (t) UCL					0.132	Mean in Original Scale					0.132
2406	95% MLE (Tiku) UCL					0.136	SD in Original Scale					0.136
2407							95% Percentile Bootstrap UCL					0.16
2408							95% BCA Bootstrap UCL					0.166
2409												
2410	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2411	k star (bias corrected)					1.452	Data appear Gamma Distributed at 5% Significance Level					
2412	Theta Star					0.107						
2413	nu star					156.8						
2414												
2415	A-D Test Statistic					0.425	Nonparametric Statistics					
2416	5% A-D Critical Value					0.768	Kaplan-Meier (KM) Method					
2417	K-S Test Statistic					0.768	Mean					0.133
2418	5% K-S Critical Value					0.123	SD					0.135
2419	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0169
2420							95% KM (t) UCL					0.161
2421	Assuming Gamma Distribution						95% KM (z) UCL					0.16
2422	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.161
2423	Minimum					1E-09	95% KM (bootstrap t) UCL					0.168
2424	Maximum					0.68	95% KM (BCA) UCL					0.161
2425	Mean					0.135	95% KM (Percentile Bootstrap) UCL					0.162
2426	Median					0.0925	95% KM (Chebyshev) UCL					0.206
2427	SD					0.135	97.5% KM (Chebyshev) UCL					0.238
2428	k star					0.51	99% KM (Chebyshev) UCL					0.3
2429	Theta star					0.265						
2430	Nu star					67.25	Potential UCLs to Use					
2431	AppChi2					49.38	95% KM (BCA) UCL					0.161
2432	95% Gamma Approximate UCL					0.184						
2433	95% Adjusted Gamma UCL					0.185						
2434	Note: DL/2 is not a recommended method.											
2435												
2436												
2437	Methoxychlor											
2438												
2439	General Statistics											
2440	Number of Valid Data					58	Number of Detected Data					1
2441	Number of Distinct Detected Data					1	Number of Non-Detect Data					57
2442	Number of Missing Values					61	Percent Non-Detects					98.28%
2443												
2444	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											

	A	B	C	D	E	F	G	H	I	J	K	L
2445	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
2446												
2447	The data set for variable Methoxychlor was not processed!											
2448												
2449												
2450												
2451	Molybdenum											
2452												
2453	General Statistics											
2454	Number of Valid Data				1		Number of Detected Data				1	
2455	Number of Distinct Detected Data				1		Number of Non-Detect Data				0	
2456	Number of Missing Values				111		Percent Non-Detects				0.00%	
2457												
2458	Warning: This data set only has 1 observations!											
2459	Data set is too small to compute reliable and meaningful statistics and estimates!											
2460	The data set for variable Molybdenum was not processed!											
2461												
2462	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2463	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2464												
2465												
2466												
2467	Naphthalene											
2468												
2469	General Statistics											
2470	Number of Valid Data				45		Number of Detected Data				16	
2471	Number of Distinct Detected Data				4		Number of Non-Detect Data				29	
2472	Number of Missing Values				74		Percent Non-Detects				64.44%	
2473												
2474	Raw Statistics						Log-transformed Statistics					
2475	Minimum Detected				0.9		Minimum Detected				-0.105	
2476	Maximum Detected				3		Maximum Detected				1.099	
2477	Mean of Detected				1.619		Mean of Detected				0.391	
2478	SD of Detected				0.725		SD of Detected				0.437	
2479	Minimum Non-Detect				0.4		Minimum Non-Detect				-0.916	
2480	Maximum Non-Detect				6		Maximum Non-Detect				1.792	
2481												
2482	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				45	
2483	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
2484	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
2485												
2486	Warning: There are only 4 Distinct Detected Values in this data											
2487	Note: It should be noted that even though bootstrap may be performed on this data set											
2488	the resulting calculations may not be reliable enough to draw conclusions											
2489												
2490	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
2491												
2492												
2493	UCL Statistics											
2494	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2495	Shapiro Wilk Test Statistic				0.786		Shapiro Wilk Test Statistic				0.789	
2496	5% Shapiro Wilk Critical Value				0.887		5% Shapiro Wilk Critical Value				0.887	

	A	B	C	D	E	F	G	H	I	J	K	L		
2497	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
2498														
2499	Assuming Normal Distribution						Assuming Lognormal Distribution							
2500	DL/2 Substitution Method						DL/2 Substitution Method							
2501	Mean						1.879	Mean						0.556
2502	SD						0.585	SD						0.458
2503	95% DL/2 (t) UCL						2.025	95% H-Stat (DL/2) UCL						2.786
2504														
2505	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
2506	MLE method failed to converge properly						Mean in Log Scale						0.336	
2507														
2508														
2509														
2510														
2511														
2512														
2513	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2514	k star (bias corrected)						4.638	Data do not follow a Discernable Distribution (0.05)						
2515	Theta Star						0.349							
2516	nu star						148.4							
2517														
2518	A-D Test Statistic						1.661	Nonparametric Statistics						
2519	5% A-D Critical Value						0.741	Kaplan-Meier (KM) Method						
2520	K-S Test Statistic						0.741	Mean						1.576
2521	5% K-S Critical Value						0.216	SD						0.702
2522	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.176	
2523														
2524	Assuming Gamma Distribution						95% KM (z) UCL						1.866	
2525	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						1.873	
2526	Minimum						0.224	95% KM (bootstrap t) UCL						1.917
2527	Maximum						3	95% KM (BCA) UCL						1.867
2528	Mean						1.669	95% KM (Percentile Bootstrap) UCL						1.867
2529	Median						1.786	95% KM (Chebyshev) UCL						2.343
2530	SD						0.538	97.5% KM (Chebyshev) UCL						2.674
2531	k star						6.942	99% KM (Chebyshev) UCL						3.325
2532	Theta star						0.24							
2533	Nu star						624.8	Potential UCLs to Use						
2534	AppChi2						567.8	95% KM (t) UCL						1.872
2535	95% Gamma Approximate UCL						1.837	95% KM (% Bootstrap) UCL						1.867
2536	95% Adjusted Gamma UCL						1.843							
2537	Note: DL/2 is not a recommended method.													
2538														
2539														
2540	Nickel													
2541														
2542	General Statistics													
2543	Number of Valid Data						68	Number of Detected Data						68
2544	Number of Distinct Detected Data						50	Number of Non-Detect Data						0
2545	Number of Missing Values						52	Percent Non-Detects						0.00%
2546														
2547	Raw Statistics						Log-transformed Statistics							
2548	Minimum Detected						6.6	Minimum Detected						1.887

	A	B	C	D	E	F	G	H	I	J	K	L
2549	Maximum Detected					25.8	Maximum Detected					3.25
2550	Mean of Detected					12.34	Mean of Detected					2.486
2551	SD of Detected					3.01	SD of Detected					0.228
2552	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2553	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2554												
2555												
2556	UCL Statistics											
2557	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2558	Lilliefors Test Statistic					0.125	Lilliefors Test Statistic					0.078
2559	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
2560	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2561												
2562	Assuming Normal Distribution						Assuming Lognormal Distribution					
2563	DL/2 Substitution Method						DL/2 Substitution Method					
2564	Mean					12.34	Mean					2.486
2565	SD					3.01	SD					0.228
2566	95% DL/2 (t) UCL					12.94	95% H-Stat (DL/2) UCL					12.93
2567												
2568	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2569	MLE method failed to converge properly						Mean in Log Scale					N/A
2570							SD in Log Scale					N/A
2571							Mean in Original Scale					N/A
2572							SD in Original Scale					N/A
2573							95% Percentile Bootstrap UCL					N/A
2574							95% BCA Bootstrap UCL					N/A
2575												
2576	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2577	k star (bias corrected)					18.27	Data appear Gamma Distributed at 5% Significance Level					
2578	Theta Star					0.675						
2579	nu star					2485						
2580												
2581	A-D Test Statistic					0.43	Nonparametric Statistics					
2582	5% A-D Critical Value					0.749	Kaplan-Meier (KM) Method					
2583	K-S Test Statistic					0.749	Mean					12.34
2584	5% K-S Critical Value					0.108	SD					2.988
2585	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.365
2586							95% KM (t) UCL					12.94
2587	Assuming Gamma Distribution						95% KM (z) UCL					12.94
2588	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					12.94
2589	Minimum					6.6	95% KM (bootstrap t) UCL					13.03
2590	Maximum					25.8	95% KM (BCA) UCL					12.92
2591	Mean					12.34	95% KM (Percentile Bootstrap) UCL					12.94
2592	Median					12.05	95% KM (Chebyshev) UCL					13.93
2593	SD					3.01	97.5% KM (Chebyshev) UCL					14.61
2594	k star					18.27	99% KM (Chebyshev) UCL					15.97
2595	Theta star					0.675						
2596	Nu star					2485	Potential UCLs to Use					
2597	AppChi2					2370	95% KM (BCA) UCL					12.92
2598	95% Gamma Approximate UCL					12.93						
2599	95% Adjusted Gamma UCL					12.95						
2600	Note: DL/2 is not a recommended method.											

	A	B	C	D	E	F	G	H	I	J	K	L	
2601													
2602													
2603	Phenanthrene												
2604													
2605	General Statistics												
2606	Number of Valid Data					45		Number of Detected Data					41
2607	Number of Distinct Detected Data					18		Number of Non-Detect Data					4
2608	Number of Missing Values					74		Percent Non-Detects					8.89%
2609													
2610	Raw Statistics						Log-transformed Statistics						
2611	Minimum Detected					0.2		Minimum Detected					-1.609
2612	Maximum Detected					36		Maximum Detected					3.584
2613	Mean of Detected					4.422		Mean of Detected					0.233
2614	SD of Detected					8.573		SD of Detected					1.474
2615	Minimum Non-Detect					5		Minimum Non-Detect					1.609
2616	Maximum Non-Detect					6		Maximum Non-Detect					1.792
2617													
2618	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					38	
2619	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					7	
2620	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					84.44%	
2621													
2622	UCL Statistics												
2623	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2624	Shapiro Wilk Test Statistic					0.535		Shapiro Wilk Test Statistic					0.889
2625	5% Shapiro Wilk Critical Value					0.941		5% Shapiro Wilk Critical Value					0.941
2626	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2627													
2628	Assuming Normal Distribution						Assuming Lognormal Distribution						
2629	DL/2 Substitution Method					DL/2 Substitution Method							
2630	Mean					4.262		Mean					0.298
2631	SD					8.191		SD					1.421
2632	95% DL/2 (t) UCL					6.314		95% H-Stat (DL/2) UCL					7.271
2633													
2634	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
2635	MLE yields a negative mean						Mean in Log Scale					0.201	
2636							SD in Log Scale					1.42	
2637							Mean in Original Scale					4.121	
2638							SD in Original Scale					8.234	
2639							95% Percentile Bootstrap UCL					6.228	
2640							95% BCA Bootstrap UCL					6.731	
2641													
2642	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2643	k star (bias corrected)					0.485		Data do not follow a Discernable Distribution (0.05)					
2644	Theta Star					9.116							
2645	nu star					39.77							
2646													
2647	A-D Test Statistic					3.701		Nonparametric Statistics					
2648	5% A-D Critical Value					0.813		Kaplan-Meier (KM) Method					
2649	K-S Test Statistic					0.813		Mean					4.12
2650	5% K-S Critical Value					0.146		SD					8.144
2651	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.23	
2652							95% KM (t) UCL					6.186	

	A	B	C	D	E	F	G	H	I	J	K	L
2653	Assuming Gamma Distribution						95% KM (z) UCL					6.143
2654	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.184
2655	Minimum				1E-09		95% KM (bootstrap t) UCL					7.169
2656	Maximum				36		95% KM (BCA) UCL					6.501
2657	Mean				4.295		95% KM (Percentile Bootstrap) UCL					6.124
2658	Median				0.9		95% KM (Chebyshev) UCL					9.48
2659	SD				8.22		97.5% KM (Chebyshev) UCL					11.8
2660	k star				0.393		99% KM (Chebyshev) UCL					16.36
2661	Theta star				10.94							
2662	Nu star				35.35		Potential UCLs to Use					
2663	AppChi2				22.74		95% KM (Chebyshev) UCL					9.48
2664	95% Gamma Approximate UCL				6.675							
2665	95% Adjusted Gamma UCL				6.775							
2666	Note: DL/2 is not a recommended method.											
2667												
2668												
2669	Potassium											
2670												
2671	General Statistics											
2672	Number of Valid Data				68		Number of Detected Data				68	
2673	Number of Distinct Detected Data				59		Number of Non-Detect Data				0	
2674	Number of Missing Values				52		Percent Non-Detects				0.00%	
2675												
2676	Raw Statistics						Log-transformed Statistics					
2677	Minimum Detected				779		Minimum Detected				6.658	
2678	Maximum Detected				6870		Maximum Detected				8.835	
2679	Mean of Detected				2276		Mean of Detected				7.576	
2680	SD of Detected				1311		SD of Detected				0.555	
2681	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
2682	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
2683												
2684												
2685	UCL Statistics											
2686	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2687	Lilliefors Test Statistic				0.19		Lilliefors Test Statistic				0.152	
2688	5% Lilliefors Critical Value				0.107		5% Lilliefors Critical Value				0.107	
2689	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2690												
2691	Assuming Normal Distribution						Assuming Lognormal Distribution					
2692	DL/2 Substitution Method						DL/2 Substitution Method					
2693	Mean				2276		Mean				7.576	
2694	SD				1311		SD				0.555	
2695	95% DL/2 (t) UCL				2542		95% H-Stat (DL/2) UCL				2586	
2696												
2697	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2698	MLE method failed to converge properly						Mean in Log Scale				N/A	
2699							SD in Log Scale				N/A	
2700							Mean in Original Scale				N/A	
2701							SD in Original Scale				N/A	
2702							95% Percentile Bootstrap UCL				N/A	
2703							95% BCA Bootstrap UCL				N/A	
2704												

	A	B	C	D	E	F	G	H	I	J	K	L
2705	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2706	k star (bias corrected)					3.255	Data do not follow a Discernable Distribution (0.05)					
2707	Theta Star					699.2						
2708	nu star					442.7						
2709												
2710	A-D Test Statistic					2.656	Nonparametric Statistics					
2711	5% A-D Critical Value					0.757	Kaplan-Meier (KM) Method					
2712	K-S Test Statistic					0.757	Mean					2276
2713	5% K-S Critical Value					0.109	SD					1301
2714	Data not Gamma Distributed at 5% Significance Level						SE of Mean					159
2715							95% KM (t) UCL					2542
2716	Assuming Gamma Distribution						95% KM (z) UCL					2538
2717	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2542
2718	Minimum					779	95% KM (bootstrap t) UCL					2555
2719	Maximum					6870	95% KM (BCA) UCL					2536
2720	Mean					2276	95% KM (Percentile Bootstrap) UCL					2546
2721	Median					1785	95% KM (Chebyshev) UCL					2969
2722	SD					1311	97.5% KM (Chebyshev) UCL					3269
2723	k star					3.255	99% KM (Chebyshev) UCL					3858
2724	Theta star					699.2						
2725	Nu star					442.7	Potential UCLs to Use					
2726	AppChi2					395	95% KM (Chebyshev) UCL					2969
2727	95% Gamma Approximate UCL					2552						
2728	95% Adjusted Gamma UCL					2558						
2729	Note: DL/2 is not a recommended method.											
2730												
2731												
2732	Pyrene											
2733												
2734	General Statistics											
2735	Number of Valid Data					45	Number of Detected Data					38
2736	Number of Distinct Detected Data					17	Number of Non-Detect Data					7
2737	Number of Missing Values					74	Percent Non-Detects					15.56%
2738												
2739	Raw Statistics						Log-transformed Statistics					
2740	Minimum Detected					0.2	Minimum Detected					-1.609
2741	Maximum Detected					36	Maximum Detected					3.584
2742	Mean of Detected					4.758	Mean of Detected					0.486
2743	SD of Detected					8.425	SD of Detected					1.373
2744	Minimum Non-Detect					4	Minimum Non-Detect					1.386
2745	Maximum Non-Detect					6	Maximum Non-Detect					1.792
2746												
2747	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					39
2748	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					6
2749	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					86.67%
2750												
2751	UCL Statistics											
2752	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2753	Shapiro Wilk Test Statistic					0.575	Shapiro Wilk Test Statistic					0.897
2754	5% Shapiro Wilk Critical Value					0.938	5% Shapiro Wilk Critical Value					0.938
2755	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2756												

	A	B	C	D	E	F	G	H	I	J	K	L		
2757	Assuming Normal Distribution						Assuming Lognormal Distribution							
2758	DL/2 Substitution Method						DL/2 Substitution Method							
2759	Mean						4.396	Mean						0.547
2760	SD						7.774	SD						1.268
2761	95% DL/2 (t) UCL						6.343	95% H-Stat (DL/2) UCL						6.546
2762														
2763	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
2764	MLE yields a negative mean							Mean in Log Scale						0.424
2765								SD in Log Scale						1.289
2766								Mean in Original Scale						4.218
2767								SD in Original Scale						7.835
2768								95% Percentile Bootstrap UCL						6.335
2769								95% BCA Bootstrap UCL						6.72
2770														
2771	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2772	k star (bias corrected)						0.55	Data do not follow a Discernable Distribution (0.05)						
2773	Theta Star						8.643							
2774	nu star						41.84							
2775														
2776	A-D Test Statistic						3.299	Nonparametric Statistics						
2777	5% A-D Critical Value						0.805	Kaplan-Meier (KM) Method						
2778	K-S Test Statistic						0.805	Mean						4.213
2779	5% K-S Critical Value						0.151	SD						7.755
2780	Data not Gamma Distributed at 5% Significance Level							SE of Mean						1.174
2781								95% KM (t) UCL						6.185
2782	Assuming Gamma Distribution							95% KM (z) UCL						6.143
2783	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						6.181
2784	Minimum						0.2	95% KM (bootstrap t) UCL						7.301
2785	Maximum						36	95% KM (BCA) UCL						6.291
2786	Mean						4.661	95% KM (Percentile Bootstrap) UCL						6.273
2787	Median						1	95% KM (Chebyshev) UCL						9.328
2788	SD						7.775	97.5% KM (Chebyshev) UCL						11.54
2789	k star						0.626	99% KM (Chebyshev) UCL						15.89
2790	Theta star						7.441							
2791	Nu star						56.38	Potential UCLs to Use						
2792	AppChi2						40.12	95% KM (Chebyshev) UCL						9.328
2793	95% Gamma Approximate UCL						6.55							
2794	95% Adjusted Gamma UCL						6.625							
2795	Note: DL/2 is not a recommended method.													
2796														
2797														
2798	Rubidium													
2799														
2800	General Statistics													
2801	Number of Valid Data						1	Number of Detected Data						1
2802	Number of Distinct Detected Data						1	Number of Non-Detect Data						0
2803	Number of Missing Values						111	Percent Non-Detects						0.00%
2804														
2805	Warning: This data set only has 1 observations!													
2806	Data set is too small to compute reliable and meaningful statistics and estimates!													
2807	The data set for variable Rubidium was not processed!													
2808														

	A	B	C	D	E	F	G	H	I	J	K	L
2809	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2810	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2811												
2812												
2813												
2814	Scandium											
2815												
2816	General Statistics											
2817	Number of Valid Data				1		Number of Detected Data				1	
2818	Number of Distinct Detected Data				1		Number of Non-Detect Data				0	
2819	Number of Missing Values				111		Percent Non-Detects				0.00%	
2820												
2821	Warning: This data set only has 1 observations!											
2822	Data set is too small to compute reliable and meaningful statistics and estimates!											
2823	The data set for variable Scandium was not processed!											
2824												
2825	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2826	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2827												
2828												
2829												
2830	Selenium											
2831												
2832	General Statistics											
2833	Number of Valid Data				48		Number of Detected Data				21	
2834	Number of Distinct Detected Data				18		Number of Non-Detect Data				27	
2835	Number of Missing Values				72		Percent Non-Detects				56.25%	
2836												
2837	Raw Statistics						Log-transformed Statistics					
2838	Minimum Detected				1.1		Minimum Detected				0.0953	
2839	Maximum Detected				19.5		Maximum Detected				2.97	
2840	Mean of Detected				5.576		Mean of Detected				1.375	
2841	SD of Detected				4.794		SD of Detected				0.864	
2842	Minimum Non-Detect				0.67		Minimum Non-Detect				-0.4	
2843	Maximum Non-Detect				5		Maximum Non-Detect				1.609	
2844												
2845	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				40	
2846	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				8	
2847	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				83.33%	
2848												
2849	UCL Statistics											
2850	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2851	Shapiro Wilk Test Statistic				0.845		Shapiro Wilk Test Statistic				0.947	
2852	5% Shapiro Wilk Critical Value				0.908		5% Shapiro Wilk Critical Value				0.908	
2853	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2854												
2855	Assuming Normal Distribution						Assuming Lognormal Distribution					
2856	DL/2 Substitution Method						DL/2 Substitution Method					
2857	Mean				3.152		Mean				0.583	
2858	SD				3.848		SD				1.081	
2859	95% DL/2 (t) UCL				4.083		95% H-Stat (DL/2) UCL				3.623	
2860												

	A	B	C	D	E	F	G	H	I	J	K	L
2861	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
2862	Mean					11.44	Mean in Log Scale					0.349
2863	SD					4.014	SD in Log Scale					1.13
2864	95% MLE (t) UCL					12.41	Mean in Original Scale					2.837
2865	95% MLE (Tiku) UCL					13.77	SD in Original Scale					3.974
2866							95% Percentile Bootstrap UCL					3.875
2867							95% BCA Bootstrap UCL					4.015
2868												
2869	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
2870	k star (bias corrected)					1.406	Data appear Gamma Distributed at 5% Significance Level					
2871	Theta Star					3.966						
2872	nu star					59.05						
2873												
2874	A-D Test Statistic					0.467	Nonparametric Statistics					
2875	5% A-D Critical Value					0.757	Kaplan-Meier (KM) Method					
2876	K-S Test Statistic					0.757	Mean					3.173
2877	5% K-S Critical Value					0.193	SD					3.772
2878	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.562
2879							95% KM (t) UCL					4.116
2880	Assuming Gamma Distribution						95% KM (z) UCL					4.097
2881	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					4.018
2882	Minimum					1E-09	95% KM (bootstrap t) UCL					4.404
2883	Maximum					19.5	95% KM (BCA) UCL					4.226
2884	Mean					4.928	95% KM (Percentile Bootstrap) UCL					4.159
2885	Median					4.45	95% KM (Chebyshev) UCL					5.622
2886	SD					3.666	97.5% KM (Chebyshev) UCL					6.682
2887	k star					0.546	99% KM (Chebyshev) UCL					8.764
2888	Theta star					9.033						
2889	Nu star					52.37	Potential UCLs to Use					
2890	AppChi2					36.75	95% KM (t) UCL					4.116
2891	95% Gamma Approximate UCL					7.022						
2892	95% Adjusted Gamma UCL					7.101						
2893	Note: DL/2 is not a recommended method.											
2894												
2895												
2896	Silver											
2897												
2898	General Statistics											
2899	Number of Valid Data					67	Number of Detected Data					26
2900	Number of Distinct Detected Data					24	Number of Non-Detect Data					41
2901	Number of Missing Values					53	Percent Non-Detects					61.19%
2902												
2903	Raw Statistics					Log-transformed Statistics						
2904	Minimum Detected					0.71	Minimum Detected					-0.342
2905	Maximum Detected					12.6	Maximum Detected					2.534
2906	Mean of Detected					5.454	Mean of Detected					1.477
2907	SD of Detected					3.398	SD of Detected					0.721
2908	Minimum Non-Detect					0.93	Minimum Non-Detect					-0.0726
2909	Maximum Non-Detect					1.5	Maximum Non-Detect					0.405
2910												
2911	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					42
2912	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					25

	A	B	C	D	E	F	G	H	I	J	K	L	
2913	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					62.69%	
2914													
2915	UCL Statistics												
2916	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2917	Lilliefors Test Statistic			0.922			Lilliefors Test Statistic			0.951			
2918	5% Lilliefors Critical Value			0.92			5% Lilliefors Critical Value			0.92			
2919	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2920													
2921	Assuming Normal Distribution						Assuming Lognormal Distribution						
2922	DL/2 Substitution Method						DL/2 Substitution Method						
2923	Mean			2.465			Mean			0.224			
2924	SD			3.183			SD			1.103			
2925	95% DL/2 (t) UCL			3.114			95% H-Stat (DL/2) UCL			1.952			
2926													
2927	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method
2928	MLE yields a negative mean						Mean in Log Scale			0.364			
2929							SD in Log Scale			1.092			
2930							Mean in Original Scale			2.618			
2931							SD in Original Scale			3.107			
2932							95% Percentile Bootstrap UCL			3.274			
2933							95% BCA Bootstrap UCL			3.327			
2934													
2935	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2936	k star (bias corrected)			2.174			Data appear Normal at 5% Significance Level						
2937	Theta Star			2.509									
2938	nu star			113.1									
2939													
2940	A-D Test Statistic			0.439			Nonparametric Statistics						
2941	5% A-D Critical Value			0.754			Kaplan-Meier (KM) Method						
2942	K-S Test Statistic			0.754			Mean			2.551			
2943	5% K-S Critical Value			0.173			SD			3.107			
2944	Data appear Gamma Distributed at 5% Significance Level						SE of Mean			0.387			
2945							95% KM (t) UCL			3.197			
2946	Assuming Gamma Distribution						95% KM (z) UCL			3.188			
2947	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			3.154			
2948	Minimum			0.71			95% KM (bootstrap t) UCL			3.216			
2949	Maximum			12.6			95% KM (BCA) UCL			3.952			
2950	Mean			5.442			95% KM (Percentile Bootstrap) UCL			3.615			
2951	Median			5.412			95% KM (Chebyshev) UCL			4.238			
2952	SD			2.096			97.5% KM (Chebyshev) UCL			4.968			
2953	k star			5.745			99% KM (Chebyshev) UCL			6.403			
2954	Theta star			0.947									
2955	Nu star			769.9			Potential UCLs to Use						
2956	AppChi2			706.5			95% KM (t) UCL			3.197			
2957	95% Gamma Approximate UCL			5.93			95% KM (Percentile Bootstrap) UCL			3.615			
2958	95% Adjusted Gamma UCL			5.941									
2959	Note: DL/2 is not a recommended method.												
2960													
2961													
2962	Sodium												
2963													
2964	General Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
2965	Number of Valid Data					68	Number of Detected Data					67
2966	Number of Distinct Detected Data					65	Number of Non-Detect Data					1
2967	Number of Missing Values					52	Percent Non-Detects					1.47%
2968												
2969	Raw Statistics						Log-transformed Statistics					
2970	Minimum Detected					102	Minimum Detected					4.625
2971	Maximum Detected					5080	Maximum Detected					8.533
2972	Mean of Detected					1057	Mean of Detected					6.587
2973	SD of Detected					905	SD of Detected					0.921
2974	Minimum Non-Detect					197	Minimum Non-Detect					5.283
2975	Maximum Non-Detect					197	Maximum Non-Detect					5.283
2976												
2977												
2978	UCL Statistics											
2979	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2980	Lilliefors Test Statistic					0.151	Lilliefors Test Statistic					0.102
2981	5% Lilliefors Critical Value					0.108	5% Lilliefors Critical Value					0.108
2982	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2983												
2984	Assuming Normal Distribution						Assuming Lognormal Distribution					
2985	DL/2 Substitution Method						DL/2 Substitution Method					
2986	Mean					1043	Mean					6.558
2987	SD					905.7	SD					0.946
2988	95% DL/2 (t) UCL					1226	95% H-Stat (DL/2) UCL					1431
2989												
2990	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2991	Mean					1001	Mean in Log Scale					6.563
2992	SD					959	SD in Log Scale					0.936
2993	95% MLE (t) UCL					1195	Mean in Original Scale					1043
2994	95% MLE (Tiku) UCL					1188	SD in Original Scale					905.1
2995							95% Percentile Bootstrap UCL					1222
2996							95% BCA Bootstrap UCL					1256
2997												
2998	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2999	k star (bias corrected)					1.418	Data appear Lognormal at 5% Significance Level					
3000	Theta Star					745.2						
3001	nu star					190.1						
3002												
3003	A-D Test Statistic					0.911	Nonparametric Statistics					
3004	5% A-D Critical Value					0.769	Kaplan-Meier (KM) Method					
3005	K-S Test Statistic					0.769	Mean					1043
3006	5% K-S Critical Value					0.111	SD					898.4
3007	Data not Gamma Distributed at 5% Significance Level						SE of Mean					109.8
3008							95% KM (t) UCL					1227
3009	Assuming Gamma Distribution						95% KM (z) UCL					1224
3010	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1227
3011	Minimum					1E-09	95% KM (bootstrap t) UCL					1267
3012	Maximum					5080	95% KM (BCA) UCL					1240
3013	Mean					1041	95% KM (Percentile Bootstrap) UCL					1225
3014	Median					751	95% KM (Chebyshev) UCL					1522
3015	SD					907.3	97.5% KM (Chebyshev) UCL					1729
3016	k star					0.756	99% KM (Chebyshev) UCL					2136

	A	B	C	D	E	F	G	H	I	J	K	L
3017	Theta star					1378						
3018	Nu star					102.8	Potential UCLs to Use					
3019	AppChi2					80.41	95% KM (Chebyshev) UCL					1522
3020	95% Gamma Approximate UCL					1331						
3021	95% Adjusted Gamma UCL					1339						
3022	Note: DL/2 is not a recommended method.											
3023												
3024												
3025	Strontium, stable											
3026												
3027	General Statistics											
3028	Number of Valid Data					1	Number of Detected Data					1
3029	Number of Distinct Detected Data					1	Number of Non-Detect Data					0
3030	Number of Missing Values					111	Percent Non-Detects					0.00%
3031												
3032	Warning: This data set only has 1 observations!											
3033	Data set is too small to compute reliable and meaningful statistics and estimates!											
3034	The data set for variable Strontium, stable was not processed!											
3035												
3036	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3037	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3038												
3039												
3040												
3041	Thallium											
3042												
3043	General Statistics											
3044	Number of Valid Data					68	Number of Detected Data					7
3045	Number of Distinct Detected Data					6	Number of Non-Detect Data					61
3046	Number of Missing Values					52	Percent Non-Detects					89.71%
3047												
3048	Raw Statistics						Log-transformed Statistics					
3049	Minimum Detected					0.1	Minimum Detected					-2.303
3050	Maximum Detected					4.6	Maximum Detected					1.526
3051	Mean of Detected					1.714	Mean of Detected					0.132
3052	SD of Detected					1.428	SD of Detected					1.186
3053	Minimum Non-Detect					0.76	Minimum Non-Detect					-0.274
3054	Maximum Non-Detect					3.7	Maximum Non-Detect					1.308
3055												
3056	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					67
3057	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
3058	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					98.53%
3059												
3060	Warning: There are only 7 Detected Values in this data											
3061	Note: It should be noted that even though bootstrap may be performed on this data set											
3062	the resulting calculations may not be reliable enough to draw conclusions											
3063												
3064	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
3065												
3066												
3067	UCL Statistics											
3068	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
3069	Lilliefors Test Statistic					0.843	Lilliefors Test Statistic					0.826
3070	5% Lilliefors Critical Value					0.803	5% Lilliefors Critical Value					0.803
3071	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
3072												
3073	Assuming Normal Distribution						Assuming Lognormal Distribution					
3074	DL/2 Substitution Method						DL/2 Substitution Method					
3075	Mean					1.196	Mean					0.0374
3076	SD					0.62	SD					0.59
3077	95% DL/2 (t) UCL					1.322	95% H-Stat (DL/2) UCL					1.439
3078												
3079	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
3080	MLE method failed to converge properly						Mean in Log Scale					-1.28
3081							SD in Log Scale					0.919
3082							Mean in Original Scale					0.454
3083							SD in Original Scale					0.648
3084							95% Percentile Bootstrap UCL					0.586
3085							95% BCA Bootstrap UCL					0.62
3086												
3087	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
3088	k star (bias corrected)					0.878	Data appear Normal at 5% Significance Level					
3089	Theta Star					1.952						
3090	nu star					12.3						
3091												
3092	A-D Test Statistic					0.462	Nonparametric Statistics					
3093	5% A-D Critical Value					0.723	Kaplan-Meier (KM) Method					
3094	K-S Test Statistic					0.723	Mean					0.512
3095	5% K-S Critical Value					0.318	SD					0.781
3096	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.161
3097							95% KM (t) UCL					0.78
3098	Assuming Gamma Distribution						95% KM (z) UCL					0.777
3099	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.034
3100	Minimum					1E-09	95% KM (bootstrap t) UCL					0.771
3101	Maximum					6.155	95% KM (BCA) UCL					1.398
3102	Mean					2.531	95% KM (Percentile Bootstrap) UCL					1.353
3103	Median					2.244	95% KM (Chebyshev) UCL					1.213
3104	SD					1.7	97.5% KM (Chebyshev) UCL					1.516
3105	k star					0.874	99% KM (Chebyshev) UCL					2.111
3106	Theta star					2.896						
3107	Nu star					118.8	Potential UCLs to Use					
3108	AppChi2					94.67	95% KM (t) UCL					0.78
3109	95% Gamma Approximate UCL					3.177	95% KM (Percentile Bootstrap) UCL					1.353
3110	95% Adjusted Gamma UCL					3.193						
3111	Note: DL/2 is not a recommended method.											
3112												
3113												
3114	Thorium											
3115												
3116	General Statistics											
3117	Number of Valid Data					1	Number of Detected Data					1
3118	Number of Distinct Detected Data					1	Number of Non-Detect Data					0
3119	Number of Missing Values					111	Percent Non-Detects					0.00%
3120												

	A	B	C	D	E	F	G	H	I	J	K	L
3121	Warning: This data set only has 1 observations!											
3122	Data set is too small to compute reliable and meaningful statistics and estimates!											
3123	The data set for variable Thorium was not processed!											
3124												
3125	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3126	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3127												
3128												
3129												
3130	Titanium											
3131												
3132	General Statistics											
3133	Number of Valid Data				1		Number of Detected Data				1	
3134	Number of Distinct Detected Data				1		Number of Non-Detect Data				0	
3135	Number of Missing Values				111		Percent Non-Detects				0.00%	
3136												
3137	Warning: This data set only has 1 observations!											
3138	Data set is too small to compute reliable and meaningful statistics and estimates!											
3139	The data set for variable Titanium was not processed!											
3140												
3141	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3142	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3143												
3144												
3145												
3146	Uranium											
3147												
3148	General Statistics											
3149	Number of Valid Data				46		Number of Detected Data				19	
3150	Number of Distinct Detected Data				19		Number of Non-Detect Data				27	
3151	Number of Missing Values				74		Percent Non-Detects				58.70%	
3152												
3153	Raw Statistics						Log-transformed Statistics					
3154	Minimum Detected				4.6		Minimum Detected				1.526	
3155	Maximum Detected				84.3		Maximum Detected				4.434	
3156	Mean of Detected				35.32		Mean of Detected				3.141	
3157	SD of Detected				29.26		SD of Detected				1.018	
3158	Minimum Non-Detect				8.1		Minimum Non-Detect				2.092	
3159	Maximum Non-Detect				29.9		Maximum Non-Detect				3.398	
3160												
3161	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				38	
3162	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				8	
3163	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				82.61%	
3164												
3165	UCL Statistics											
3166	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
3167	Shapiro Wilk Test Statistic				0.849		Shapiro Wilk Test Statistic				0.913	
3168	5% Shapiro Wilk Critical Value				0.901		5% Shapiro Wilk Critical Value				0.901	
3169	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
3170												
3171	Assuming Normal Distribution						Assuming Lognormal Distribution					
3172	DL/2 Substitution Method						DL/2 Substitution Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
3173					Mean	21.07					Mean	2.688	
3174					SD	22.18					SD	0.783	
3175					95% DL/2 (t) UCL	26.56					95% H-Stat (DL/2) UCL	27.48	
3176													
3177					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
3178					MLE yields a negative mean						Mean in Log Scale	2.586	
3179											SD in Log Scale	0.816	
3180											Mean in Original Scale	19.98	
3181											SD in Original Scale	22.67	
3182											95% Percentile Bootstrap UCL	25.55	
3183											95% BCA Bootstrap UCL	26.5	
3184													
3185					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
3186					k star (bias corrected)	1.15					Data appear Gamma Distributed at 5% Significance Level		
3187					Theta Star	30.72							
3188					nu star	43.68							
3189													
3190					A-D Test Statistic	0.634					Nonparametric Statistics		
3191					5% A-D Critical Value	0.761					Kaplan-Meier (KM) Method		
3192					K-S Test Statistic	0.761					Mean	20.1	
3193					5% K-S Critical Value	0.203					SD	22.66	
3194					Data appear Gamma Distributed at 5% Significance Level						SE of Mean	3.573	
3195											95% KM (t) UCL	26.1	
3196					Assuming Gamma Distribution						95% KM (z) UCL	25.97	
3197					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	26.05	
3198					Minimum	4.6					95% KM (bootstrap t) UCL	27.09	
3199					Maximum	84.3					95% KM (BCA) UCL	26.13	
3200					Mean	35.16					95% KM (Percentile Bootstrap) UCL	26.03	
3201					Median	35.54					95% KM (Chebyshev) UCL	35.67	
3202					SD	18.76					97.5% KM (Chebyshev) UCL	42.41	
3203					k star	2.776					99% KM (Chebyshev) UCL	55.65	
3204					Theta star	12.67							
3205					Nu star	255.4					Potential UCLs to Use		
3206					AppChi2	219.4					95% KM (t) UCL	26.1	
3207					95% Gamma Approximate UCL	40.93							
3208					95% Adjusted Gamma UCL	41.14							
3209					Note: DL/2 is not a recommended method.								
3210													
3211													
3212					Vanadium								
3213													
3214					General Statistics								
3215					Number of Valid Data	68					Number of Detected Data	68	
3216					Number of Distinct Detected Data	56					Number of Non-Detect Data	0	
3217					Number of Missing Values	52					Percent Non-Detects	0.00%	
3218													
3219					Raw Statistics						Log-transformed Statistics		
3220					Minimum Detected	19.8					Minimum Detected	2.986	
3221					Maximum Detected	77.1					Maximum Detected	4.345	
3222					Mean of Detected	30.64					Mean of Detected	3.376	
3223					SD of Detected	10.51					SD of Detected	0.294	
3224					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
3225	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
3226												
3227												
3228	UCL Statistics											
3229	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
3230	Lilliefors Test Statistic					0.183	Lilliefors Test Statistic					0.134
3231	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
3232	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
3233												
3234	Assuming Normal Distribution						Assuming Lognormal Distribution					
3235	DL/2 Substitution Method						DL/2 Substitution Method					
3236	Mean					30.64	Mean					3.376
3237	SD					10.51	SD					0.294
3238	95% DL/2 (t) UCL					32.76	95% H-Stat (DL/2) UCL					32.52
3239												
3240	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
3241	MLE method failed to converge properly						Mean in Log Scale					N/A
3242							SD in Log Scale					N/A
3243							Mean in Original Scale					N/A
3244							SD in Original Scale					N/A
3245							95% Percentile Bootstrap UCL					N/A
3246							95% BCA Bootstrap UCL					N/A
3247												
3248	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
3249	k star (bias corrected)					10.45	Data do not follow a Discernable Distribution (0.05)					
3250	Theta Star					2.931						
3251	nu star					1422						
3252												
3253	A-D Test Statistic					1.621	Nonparametric Statistics					
3254	5% A-D Critical Value					0.751	Kaplan-Meier (KM) Method					
3255	K-S Test Statistic					0.751	Mean					30.64
3256	5% K-S Critical Value					0.108	SD					10.43
3257	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.274
3258							95% KM (t) UCL					32.76
3259	Assuming Gamma Distribution						95% KM (z) UCL					32.73
3260	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					32.76
3261	Minimum					19.8	95% KM (bootstrap t) UCL					33.19
3262	Maximum					77.1	95% KM (BCA) UCL					32.9
3263	Mean					30.64	95% KM (Percentile Bootstrap) UCL					32.85
3264	Median					28.2	95% KM (Chebyshev) UCL					36.19
3265	SD					10.51	97.5% KM (Chebyshev) UCL					38.59
3266	k star					10.45	99% KM (Chebyshev) UCL					43.31
3267	Theta star					2.931						
3268	Nu star					1422	Potential UCLs to Use					
3269	AppChi2					1335	95% KM (Chebyshev) UCL					36.19
3270	95% Gamma Approximate UCL					32.62						
3271	95% Adjusted Gamma UCL					32.67						
3272	Note: DL/2 is not a recommended method.											
3273												
3274												
3275	Zinc											
3276												

	A	B	C	D	E	F	G	H	I	J	K	L
3277	General Statistics											
3278	Number of Valid Data					71	Number of Detected Data					71
3279	Number of Distinct Detected Data					69	Number of Non-Detect Data					0
3280	Number of Missing Values					52	Percent Non-Detects					0.00%
3281												
3282	Raw Statistics						Log-transformed Statistics					
3283	Minimum Detected					249	Minimum Detected					5.517
3284	Maximum Detected					26600	Maximum Detected					10.19
3285	Mean of Detected					8452	Mean of Detected					8.638
3286	SD of Detected					6808	SD of Detected					0.999
3287	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
3288	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
3289												
3290												
3291	UCL Statistics											
3292	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
3293	Lilliefors Test Statistic					0.164	Lilliefors Test Statistic					0.0966
3294	5% Lilliefors Critical Value					0.105	5% Lilliefors Critical Value					0.105
3295	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
3296												
3297	Assuming Normal Distribution						Assuming Lognormal Distribution					
3298	DL/2 Substitution Method						DL/2 Substitution Method					
3299	Mean					8452	Mean					8.638
3300	SD					6808	SD					0.999
3301	95% DL/2 (t) UCL					9799	95% H-Stat (DL/2) UCL					12151
3302												
3303	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
3304	MLE method failed to converge properly						Mean in Log Scale					N/A
3305							SD in Log Scale					N/A
3306							Mean in Original Scale					N/A
3307							SD in Original Scale					N/A
3308							95% Percentile Bootstrap UCL					N/A
3309							95% BCA Bootstrap UCL					N/A
3310												
3311	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
3312	k star (bias corrected)					1.331	Data Follow Appr. Gamma Distribution at 5% Significance Level					
3313	Theta Star					6350						
3314	nu star					189						
3315												
3316	A-D Test Statistic					1.105	Nonparametric Statistics					
3317	5% A-D Critical Value					0.772	Kaplan-Meier (KM) Method					
3318	K-S Test Statistic					0.772	Mean					8452
3319	5% K-S Critical Value					0.108	SD					6760
3320	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					808
3321							95% KM (t) UCL					9799
3322	Assuming Gamma Distribution						95% KM (z) UCL					9781
3323	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9799
3324	Minimum					249	95% KM (bootstrap t) UCL					9884
3325	Maximum					26600	95% KM (BCA) UCL					9761
3326	Mean					8452	95% KM (Percentile Bootstrap) UCL					9799
3327	Median					5900	95% KM (Chebyshev) UCL					11974
3328	SD					6808	97.5% KM (Chebyshev) UCL					13498

	A	B	C	D	E	F	G	H	I	J	K	L
3329					k star	1.331					99% KM (Chebyshev) UCL	16492
3330					Theta star	6350						
3331					Nu star	189				Potential UCLs to Use		
3332					AppChi2	158.2					95% KM (Chebyshev) UCL	11974
3333					95% Gamma Approximate UCL	10098						
3334					95% Adjusted Gamma UCL	10135						
3335	Note: DL/2 is not a recommended method.											
3336												

	A	B	C	D	E	F	G	H	I	J	K	L						
1	General UCL Statistics for Data Sets with Non-Detects																	
2	User Selected Options																	
3	From File			C:\Documents and Settings\visitor\Desktop\UCR Desktop\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL														
4	Full Precision			OFF														
5	Confidence Coefficient			95%														
6	Number of Bootstrap Operations			2000														
7																		
8																		
9	Arsenic																	
10																		
11	General Statistics																	
12	Number of Valid Data				41				Number of Detected Data				39					
13	Number of Distinct Detected Data				34				Number of Non-Detect Data				2					
14	Number of Missing Values				36				Percent Non-Detects				4.88%					
15																		
16	Raw Statistics						Log-transformed Statistics											
17	Minimum Detected			2			Minimum Detected			0.693								
18	Maximum Detected			26.9			Maximum Detected			3.292								
19	Mean of Detected			9.833			Mean of Detected			2.116								
20	SD of Detected			5.578			SD of Detected			0.625								
21	Minimum Non-Detect			2.1			Minimum Non-Detect			0.742								
22	Maximum Non-Detect			4.5			Maximum Non-Detect			1.504								
23																		
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						10					
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						31					
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						24.39%					
27																		
28	UCL Statistics																	
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only											
30	Shapiro Wilk Test Statistic			0.92			Shapiro Wilk Test Statistic			0.95								
31	5% Shapiro Wilk Critical Value			0.939			5% Shapiro Wilk Critical Value			0.939								
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level											
33																		
34	Assuming Normal Distribution						Assuming Lognormal Distribution											
35	DL/2 Substitution Method						DL/2 Substitution Method											
36	Mean			9.434			Mean			2.034								
37	SD			5.724			SD			0.716								
38	95% DL/2 (t) UCL			10.94			95% H-Stat (DL/2) UCL			11.44								
39																		
40	Maximum Likelihood Estimate(MLE) Method						Log ROS Method											
41	Mean			8.846			Mean in Log Scale			2.062								
42	SD			6.547			SD in Log Scale			0.657								
43	95% MLE (t) UCL			10.57			Mean in Original Scale			9.493								
44	95% MLE (Tiku) UCL			10.64			SD in Original Scale			5.648								
45							95% Percentile Bootstrap UCL			10.9								
46							95% BCA Bootstrap UCL			11.16								
47																		
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only											
49	k star (bias corrected)			2.878			Data appear Gamma Distributed at 5% Significance Level											
50	Theta Star			3.416														
51	nu star			224.5														
52																		

	A	B	C	D	E	F	G	H	I	J	K	L
53	A-D Test Statistic					0.481	Nonparametric Statistics					
54	5% A-D Critical Value					0.754	Kaplan-Meier (KM) Method					
55	K-S Test Statistic					0.754	Mean					9.48
56	5% K-S Critical Value					0.142	SD					5.596
57	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.886
58							95% KM (t) UCL					10.97
59	Assuming Gamma Distribution						95% KM (z) UCL					10.94
60	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10.97
61	Minimum					1E-09	95% KM (bootstrap t) UCL					11.21
62	Maximum					26.9	95% KM (BCA) UCL					11.02
63	Mean					9.436	95% KM (Percentile Bootstrap) UCL					10.91
64	Median					9.4	95% KM (Chebyshev) UCL					13.34
65	SD					5.732	97.5% KM (Chebyshev) UCL					15.01
66	k star					0.789	99% KM (Chebyshev) UCL					18.29
67	Theta star					11.95						
68	Nu star					64.72	Potential UCLs to Use					
69	AppChi2					47.21	95% KM (BCA) UCL					11.02
70	95% Gamma Approximate UCL					12.94						
71	95% Adjusted Gamma UCL					13.09						
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Cadmium											
76												
77	General Statistics											
78	Number of Valid Data					41	Number of Detected Data					41
79	Number of Distinct Detected Data					32	Number of Non-Detect Data					0
80	Number of Missing Values					36	Percent Non-Detects					0.00%
81												
82	Raw Statistics						Log-transformed Statistics					
83	Minimum Detected					0.14	Minimum Detected					-1.966
84	Maximum Detected					8.4	Maximum Detected					2.128
85	Mean of Detected					2.975	Mean of Detected					0.809
86	SD of Detected					1.999	SD of Detected					0.861
87	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
88	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
89												
90												
91	UCL Statistics											
92	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
93	Shapiro Wilk Test Statistic					0.93	Shapiro Wilk Test Statistic					0.934
94	5% Shapiro Wilk Critical Value					0.941	5% Shapiro Wilk Critical Value					0.941
95	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
96												
97	Assuming Normal Distribution						Assuming Lognormal Distribution					
98	DL/2 Substitution Method						DL/2 Substitution Method					
99	Mean					2.975	Mean					0.809
100	SD					1.999	SD					0.861
101	95% DL/2 (t) UCL					3.501	95% H-Stat (DL/2) UCL					4.397
102												
103	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
104	MLE method failed to converge properly						Mean in Log Scale					N/A

	A	B	C	D	E	F	G	H	I	J	K	L
105											SD in Log Scale	N/A
106											Mean in Original Scale	N/A
107											SD in Original Scale	N/A
108											95% Percentile Bootstrap UCL	N/A
109											95% BCA Bootstrap UCL	N/A
110												
111	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
112					k star (bias corrected)	1.805	Data appear Gamma Distributed at 5% Significance Level					
113					Theta Star	1.648						
114					nu star	148						
115												
116					A-D Test Statistic	0.253	Nonparametric Statistics					
117					5% A-D Critical Value	0.76	Kaplan-Meier (KM) Method					
118					K-S Test Statistic	0.76				Mean	2.975	
119					5% K-S Critical Value	0.14				SD	1.975	
120	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	0.312	
121										95% KM (t) UCL	3.501	
122	Assuming Gamma Distribution									95% KM (z) UCL	3.489	
123	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	3.501	
124					Minimum	0.14				95% KM (bootstrap t) UCL	3.546	
125					Maximum	8.4				95% KM (BCA) UCL	3.515	
126					Mean	2.975				95% KM (Percentile Bootstrap) UCL	3.498	
127					Median	2.6				95% KM (Chebyshev) UCL	4.336	
128					SD	1.999				97.5% KM (Chebyshev) UCL	4.925	
129					k star	1.805				99% KM (Chebyshev) UCL	6.082	
130					Theta star	1.648						
131					Nu star	148	Potential UCLs to Use					
132					AppChi2	120.9				95% KM (Chebyshev) UCL	4.336	
133					95% Gamma Approximate UCL	3.643						
134					95% Adjusted Gamma UCL	3.67						
135	Note: DL/2 is not a recommended method.											
136												
137												
138	Copper											
139												
140	General Statistics											
141					Number of Valid Data	41				Number of Detected Data	41	
142					Number of Distinct Detected Data	41				Number of Non-Detect Data	0	
143					Number of Missing Values	36				Percent Non-Detects	0.00%	
144												
145	Raw Statistics						Log-transformed Statistics					
146					Minimum Detected	14.3				Minimum Detected	2.66	
147					Maximum Detected	1460				Maximum Detected	7.286	
148					Mean of Detected	342.1				Mean of Detected	5.082	
149					SD of Detected	433.1				SD of Detected	1.277	
150					Minimum Non-Detect	N/A				Minimum Non-Detect	N/A	
151					Maximum Non-Detect	N/A				Maximum Non-Detect	N/A	
152												
153												
154	UCL Statistics											
155	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
156					Shapiro Wilk Test Statistic	0.707				Shapiro Wilk Test Statistic	0.952	

	A	B	C	D	E	F	G	H	I	J	K	L
157	5% Shapiro Wilk Critical Value					0.941	5% Shapiro Wilk Critical Value					0.941
158	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
159												
160	Assuming Normal Distribution						Assuming Lognormal Distribution					
161	DL/2 Substitution Method						DL/2 Substitution Method					
162	Mean					342.1	Mean					5.082
163	SD					433.1	SD					1.277
164	95% DL/2 (t) UCL					456	95% H-Stat (DL/2) UCL					625.2
165												
166	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
167	MLE method failed to converge properly						Mean in Log Scale					N/A
168							SD in Log Scale					N/A
169							Mean in Original Scale					N/A
170							SD in Original Scale					N/A
171							95% Percentile Bootstrap UCL					N/A
172							95% BCA Bootstrap UCL					N/A
173												
174	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
175	k star (bias corrected)					0.748	Data appear Lognormal at 5% Significance Level					
176	Theta Star					457.4						
177	nu star					61.33						
178												
179	A-D Test Statistic					1.433	Nonparametric Statistics					
180	5% A-D Critical Value					0.788	Kaplan-Meier (KM) Method					
181	K-S Test Statistic					0.788	Mean					342.1
182	5% K-S Critical Value					0.143	SD					427.8
183	Data not Gamma Distributed at 5% Significance Level						SE of Mean					67.64
184							95% KM (t) UCL					456
185	Assuming Gamma Distribution						95% KM (z) UCL					453.4
186	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					456
187	Minimum					14.3	95% KM (bootstrap t) UCL					471.9
188	Maximum					1460	95% KM (BCA) UCL					460.2
189	Mean					342.1	95% KM (Percentile Bootstrap) UCL					453.7
190	Median					132	95% KM (Chebyshev) UCL					636.9
191	SD					433.1	97.5% KM (Chebyshev) UCL					764.5
192	k star					0.748	99% KM (Chebyshev) UCL					1015
193	Theta star					457.4						
194	Nu star					61.33	Potential UCLs to Use					
195	AppChi2					44.32	95% KM (Chebyshev) UCL					636.9
196	95% Gamma Approximate UCL					473.4						
197	95% Adjusted Gamma UCL					479.1						
198	Note: DL/2 is not a recommended method.											
199												
200												
201	Lead											
202												
203	General Statistics											
204	Number of Valid Data					41	Number of Detected Data					41
205	Number of Distinct Detected Data					38	Number of Non-Detect Data					0
206	Number of Missing Values					36	Percent Non-Detects					0.00%
207												
208	Raw Statistics						Log-transformed Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L	
209				Minimum Detected		16				Minimum Detected		2.773	
210				Maximum Detected		1590				Maximum Detected		7.371	
211				Mean of Detected		237.8				Mean of Detected		5.096	
212				SD of Detected		261				SD of Detected		0.918	
213				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
214				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
215													
216													
217				UCL Statistics									
218	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
219				Shapiro Wilk Test Statistic		0.61				Shapiro Wilk Test Statistic		0.923	
220				5% Shapiro Wilk Critical Value		0.941				5% Shapiro Wilk Critical Value		0.941	
221	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
222													
223	Assuming Normal Distribution						Assuming Lognormal Distribution						
224				DL/2 Substitution Method						DL/2 Substitution Method			
225				Mean		237.8				Mean		5.096	
226				SD		261				SD		0.918	
227				95% DL/2 (t) UCL		306.5				95% H-Stat (DL/2) UCL		345.9	
228													
229				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
230	MLE method failed to converge properly										Mean in Log Scale		N/A
231										SD in Log Scale		N/A	
232										Mean in Original Scale		N/A	
233										SD in Original Scale		N/A	
234										95% Percentile Bootstrap UCL		N/A	
235										95% BCA Bootstrap UCL		N/A	
236													
237	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
238				k star (bias corrected)		1.384				Data do not follow a Discernable Distribution (0.05)			
239				Theta Star		171.8							
240				nu star		113.5							
241													
242				A-D Test Statistic		1.286				Nonparametric Statistics			
243				5% A-D Critical Value		0.767				Kaplan-Meier (KM) Method			
244				K-S Test Statistic		0.767				Mean		237.8	
245				5% K-S Critical Value		0.141				SD		257.8	
246	Data not Gamma Distributed at 5% Significance Level										SE of Mean		40.76
247										95% KM (t) UCL		306.5	
248	Assuming Gamma Distribution										95% KM (z) UCL		304.9
249				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		306.5	
250				Minimum		16				95% KM (bootstrap t) UCL		366.6	
251				Maximum		1590				95% KM (BCA) UCL		313.4	
252				Mean		237.8				95% KM (Percentile Bootstrap) UCL		307.4	
253				Median		190				95% KM (Chebyshev) UCL		415.5	
254				SD		261				97.5% KM (Chebyshev) UCL		492.4	
255				k star		1.384				99% KM (Chebyshev) UCL		643.4	
256				Theta star		171.8							
257				Nu star		113.5				Potential UCLs to Use			
258				AppChi2		89.93				95% KM (Chebyshev) UCL		415.5	
259				95% Gamma Approximate UCL		300.3							
260				95% Adjusted Gamma UCL		302.8							

	A	B	C	D	E	F	G	H	I	J	K	L		
261	Note: DL/2 is not a recommended method.													
262														
263														
264	Zinc													
265														
266	General Statistics													
267	Number of Valid Data					41		Number of Detected Data					41	
268	Number of Distinct Detected Data					39		Number of Non-Detect Data					0	
269	Number of Missing Values					36		Percent Non-Detects					0.00%	
270														
271	Raw Statistics						Log-transformed Statistics							
272	Minimum Detected					93.1		Minimum Detected					4.534	
273	Maximum Detected					24900		Maximum Detected					10.12	
274	Mean of Detected					3166		Mean of Detected					7.272	
275	SD of Detected					4714		SD of Detected					1.302	
276	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
277	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
278														
279														
280	UCL Statistics													
281	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
282	Shapiro Wilk Test Statistic					0.632		Shapiro Wilk Test Statistic					0.974	
283	5% Shapiro Wilk Critical Value					0.941		5% Shapiro Wilk Critical Value					0.941	
284	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
285														
286	Assuming Normal Distribution						Assuming Lognormal Distribution							
287	DL/2 Substitution Method							DL/2 Substitution Method						
288	Mean					3166		Mean					7.272	
289	SD					4714		SD					1.302	
290	95% DL/2 (t) UCL					4405		95% H-Stat (DL/2) UCL					5866	
291														
292	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
293	MLE method failed to converge properly						Mean in Log Scale					N/A		
294							SD in Log Scale					N/A		
295							Mean in Original Scale					N/A		
296							SD in Original Scale					N/A		
297							95% Percentile Bootstrap UCL					N/A		
298							95% BCA Bootstrap UCL					N/A		
299														
300	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
301	k star (bias corrected)					0.719		Data appear Lognormal at 5% Significance Level						
302	Theta Star					4403								
303	nu star					58.96								
304														
305	A-D Test Statistic					1.248		Nonparametric Statistics						
306	5% A-D Critical Value					0.789		Kaplan-Meier (KM) Method						
307	K-S Test Statistic					0.789		Mean					3166	
308	5% K-S Critical Value					0.143		SD					4657	
309	Data not Gamma Distributed at 5% Significance Level						SE of Mean					736.3		
310							95% KM (t) UCL					4405		
311	Assuming Gamma Distribution						95% KM (z) UCL					4377		
312	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					4405	

	A	B	C	D	E	F	G	H	I	J	K	L
313					Minimum	93.1				95% KM (bootstrap t) UCL		4934
314					Maximum	24900				95% KM (BCA) UCL		4453
315					Mean	3166				95% KM (Percentile Bootstrap) UCL		4408
316					Median	1310				95% KM (Chebyshev) UCL		6375
317					SD	4714				97.5% KM (Chebyshev) UCL		7764
318					k star	0.719				99% KM (Chebyshev) UCL		10491
319					Theta star	4403						
320					Nu star	58.96				Potential UCLs to Use		
321					AppChi2	42.3				95% KM (Chebyshev) UCL		6375
322					95% Gamma Approximate UCL	4412						
323					95% Adjusted Gamma UCL	4466						
324	Note: DL/2 is not a recommended method.											
325												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			C:\Documents and Settings\visitor\Desktop\UCR Desktop\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	2006 TEQ_D/F											
10												
11	General Statistics											
12	Number of Valid Data				7		Number of Detected Data				7	
13	Number of Distinct Detected Data				7		Number of Non-Detect Data				0	
14	Number of Missing Values				47		Percent Non-Detects				0.00%	
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.0718			Minimum Detected			-2.634		
18	Maximum Detected			3.421			Maximum Detected			1.23		
19	Mean of Detected			0.939			Mean of Detected			-1.278		
20	SD of Detected			1.42			SD of Detected			1.668		
21	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A		
22	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A		
23												
24												
25	Warning: There are only 7 Detected Values in this data											
26	Note: It should be noted that even though bootstrap may be performed on this data set											
27	the resulting calculations may not be reliable enough to draw conclusions											
28												
29	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
30												
31												
32	UCL Statistics											
33	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
34	Shapiro Wilk Test Statistic			0.675			Shapiro Wilk Test Statistic			0.787		
35	5% Shapiro Wilk Critical Value			0.803			5% Shapiro Wilk Critical Value			0.803		
36	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
37												
38	Assuming Normal Distribution						Assuming Lognormal Distribution					
39	DL/2 Substitution Method						DL/2 Substitution Method					
40	Mean			0.939			Mean			-1.278		
41	SD			1.42			SD			1.668		
42	95% DL/2 (t) UCL			1.981			95% H-Stat (DL/2) UCL			54.28		
43												
44	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
45	MLE method failed to converge properly						Mean in Log Scale			N/A		
46							SD in Log Scale			N/A		
47							Mean in Original Scale			N/A		
48							SD in Original Scale			N/A		
49							95% Percentile Bootstrap UCL			N/A		
50							95% BCA Bootstrap UCL			N/A		
51												
52	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
53	k star (bias corrected)					0.392	Data do not follow a Discernable Distribution (0.05)					
54	Theta Star					2.393						
55	nu star					5.492						
56												
57	A-D Test Statistic					0.939	Nonparametric Statistics					
58	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
59	K-S Test Statistic					0.75	Mean					0.939
60	5% K-S Critical Value					0.327	SD					1.314
61	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.537
62							95% KM (t) UCL					1.981
63	Assuming Gamma Distribution						95% KM (z) UCL					1.821
64	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.981
65	Minimum					0.0718	95% KM (bootstrap t) UCL					20
66	Maximum					3.421	95% KM (BCA) UCL					1.874
67	Mean					0.939	95% KM (Percentile Bootstrap) UCL					1.864
68	Median					0.149	95% KM (Chebyshev) UCL					3.278
69	SD					1.42	97.5% KM (Chebyshev) UCL					4.29
70	k star					0.392	99% KM (Chebyshev) UCL					6.278
71	Theta star					2.393						
72	Nu star					5.492	Potential UCLs to Use					
73	AppChi2					1.386	99% KM (Chebyshev) UCL					6.278
74	95% Gamma Approximate UCL					3.719						
75	95% Adjusted Gamma UCL					6.001						
76	Warning: Recommended UCL exceeds the maximum observation											
77	Note: DL/2 is not a recommended method.											
78												
79												
80	2-Methylnaphthalene											
81												
82	General Statistics											
83	Number of Valid Data					27	Number of Detected Data					12
84	Number of Distinct Detected Data					10	Number of Non-Detect Data					15
85	Number of Missing Values					34	Percent Non-Detects					55.56%
86												
87	Raw Statistics						Log-transformed Statistics					
88	Minimum Detected					0.2	Minimum Detected					-1.609
89	Maximum Detected					30	Maximum Detected					3.401
90	Mean of Detected					3.75	Mean of Detected					0.117
91	SD of Detected					8.469	SD of Detected					1.361
92	Minimum Non-Detect					4	Minimum Non-Detect					1.386
93	Maximum Non-Detect					10	Maximum Non-Detect					2.303
94												
95	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					26
96	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
97	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					96.30%
98												
99	UCL Statistics											
100	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
101	Shapiro Wilk Test Statistic					0.457	Shapiro Wilk Test Statistic					0.861
102	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
103	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
104												

	A	B	C	D	E	F	G	H	I	J	K	L		
105	Assuming Normal Distribution						Assuming Lognormal Distribution							
106	DL/2 Substitution Method						DL/2 Substitution Method							
107	Mean						3.111	Mean						0.556
108	SD						5.583	SD						0.997
109	95% DL/2 (t) UCL						4.944	95% H-Stat (DL/2) UCL						11.97
110														
111	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
112	MLE method failed to converge properly							Mean in Log Scale						-0.0979
113								SD in Log Scale						1.056
114								Mean in Original Scale						2.205
115								SD in Original Scale						5.708
116								95% Percentile Bootstrap UCL						4.273
117								95% BCA Bootstrap UCL						5.677
118														
119	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
120	k star (bias corrected)						0.448	Data appear Lognormal at 5% Significance Level						
121	Theta Star						8.368							
122	nu star						10.76							
123														
124	A-D Test Statistic						1.628	Nonparametric Statistics						
125	5% A-D Critical Value						0.783	Kaplan-Meier (KM) Method						
126	K-S Test Statistic						0.783	Mean						2.13
127	5% K-S Critical Value						0.258	SD						5.618
128	Data not Gamma Distributed at 5% Significance Level							SE of Mean						1.137
129								95% KM (t) UCL						4.069
130	Assuming Gamma Distribution							95% KM (z) UCL						4
131	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						4.025
132	Minimum						1E-09	95% KM (bootstrap t) UCL						14.01
133	Maximum						30	95% KM (BCA) UCL						4.141
134	Mean						3.663	95% KM (Percentile Bootstrap) UCL						4.21
135	Median						2.492	95% KM (Chebyshev) UCL						7.086
136	SD						5.652	97.5% KM (Chebyshev) UCL						9.231
137	k star						0.443	99% KM (Chebyshev) UCL						13.44
138	Theta star						8.27							
139	Nu star						23.92	Potential UCLs to Use						
140	AppChi2						13.79	95% KM (BCA) UCL						4.141
141	95% Gamma Approximate UCL						6.355							
142	95% Adjusted Gamma UCL						6.59							
143	Note: DL/2 is not a recommended method.													
144														
145														
146	4,4'-DDE													
147														
148	General Statistics													
149	Number of Valid Data						28	Number of Detected Data						1
150	Number of Distinct Detected Data						1	Number of Non-Detect Data						27
151	Number of Missing Values						33	Percent Non-Detects						96.43%
152														
153	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
154	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
155														
156	The data set for variable 4,4'-DDE was not processed!													

	A	B	C	D	E	F	G	H	I	J	K	L	
157													
158													
159													
160	4,4'-DDT												
161													
162	General Statistics												
163	Number of Valid Data					28		Number of Detected Data					3
164	Number of Distinct Detected Data					2		Number of Non-Detect Data					25
165	Number of Missing Values					33		Percent Non-Detects					89.29%
166													
167	Raw Statistics						Log-transformed Statistics						
168	Minimum Detected					0.15		Minimum Detected					-1.897
169	Maximum Detected					0.42		Maximum Detected					-0.868
170	Mean of Detected					0.24		Mean of Detected					-1.554
171	SD of Detected					0.156		SD of Detected					0.594
172	Minimum Non-Detect					0.69		Minimum Non-Detect					-0.371
173	Maximum Non-Detect					3.3		Maximum Non-Detect					1.194
174													
175	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					28	
176	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
177	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
178													
179	Warning: Data set has only 2 Distinct Detected Values.												
180	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
181	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
182													
183	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
184													
185	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
186	Those methods will return a 'N/A' value on your output display!												
187													
188	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
189	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
190													
191													
192	UCL Statistics												
193	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
194	Shapiro Wilk Test Statistic					0.75		Shapiro Wilk Test Statistic					0.75
195	5% Shapiro Wilk Critical Value					0.767		5% Shapiro Wilk Critical Value					0.767
196	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
197													
198	Assuming Normal Distribution						Assuming Lognormal Distribution						
199	DL/2 Substitution Method							DL/2 Substitution Method					
200	Mean					0.458		Mean					-0.885
201	SD					0.268		SD					0.438
202	95% DL/2 (t) UCL					0.544		95% H-Stat (DL/2) UCL					0.67
203													
204	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
205	MLE method failed to converge properly						Mean in Log Scale					-1.554	
206							SD in Log Scale					0.279	
207							Mean in Original Scale					0.22	
208							SD in Original Scale					0.066	

	A	B	C	D	E	F	G	H	I	J	K	L
209											95% Percentile Bootstrap UCL	0.241
210											95% BCA Bootstrap UCL	0.244
211												
212	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
213					k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)					
214					Theta Star	N/A						
215					nu star	N/A						
216												
217					A-D Test Statistic	0.62	Nonparametric Statistics					
218					5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method					
219					K-S Test Statistic	N/A	Mean					
220					5% K-S Critical Value	N/A	SD					
221	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
222							95% KM (t) UCL					
223	Assuming Gamma Distribution						95% KM (z) UCL					
224	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
225					Minimum	N/A	95% KM (bootstrap t) UCL					
226					Maximum	N/A	95% KM (BCA) UCL					
227					Mean	N/A	95% KM (Percentile Bootstrap) UCL					
228					Median	N/A	95% KM (Chebyshev) UCL					
229					SD	N/A	97.5% KM (Chebyshev) UCL					
230					k star	N/A	99% KM (Chebyshev) UCL					
231					Theta star	N/A						
232					Nu star	N/A	Potential UCLs to Use					
233					AppChi2	N/A	95% KM (t) UCL					
234					95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL					
235					95% Adjusted Gamma UCL	N/A						
236	Note: DL/2 is not a recommended method.											
237												
238												
239	Acenaphthene											
240												
241	General Statistics											
242					Number of Valid Data	27					Number of Detected Data	3
243					Number of Distinct Detected Data	3					Number of Non-Detect Data	24
244					Number of Missing Values	34					Percent Non-Detects	88.89%
245												
246	Raw Statistics						Log-transformed Statistics					
247					Minimum Detected	0.3					Minimum Detected	-1.204
248					Maximum Detected	3					Maximum Detected	1.099
249					Mean of Detected	1.433					Mean of Detected	-0.0351
250					SD of Detected	1.401					SD of Detected	1.152
251					Minimum Non-Detect	4					Minimum Non-Detect	1.386
252					Maximum Non-Detect	10					Maximum Non-Detect	2.303
253												
254	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
255	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
256	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
257												
258	Warning: There are only 3 Distinct Detected Values in this data set											
259	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
260	Those methods will return a 'N/A' value on your output display!											

	A	B	C	D	E	F	G	H	I	J	K	L		
261														
262	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
263	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
264														
265														
266	UCL Statistics													
267	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
268	Shapiro Wilk Test Statistic			0.928			Shapiro Wilk Test Statistic			0.999				
269	5% Shapiro Wilk Critical Value			0.767			5% Shapiro Wilk Critical Value			0.767				
270	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
271														
272	Assuming Normal Distribution						Assuming Lognormal Distribution							
273	DL/2 Substitution Method						DL/2 Substitution Method							
274	Mean			2.752			Mean			0.903				
275	SD			1.12			SD			0.552				
276	95% DL/2 (t) UCL			3.12			95% H-Stat (DL/2) UCL			4.832				
277														
278	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
279	MLE method failed to converge properly						Mean in Log Scale			-0.0351				
280							SD in Log Scale			1.095				
281							Mean in Original Scale			1.654				
282							SD in Original Scale			1.829				
283							95% Percentile Bootstrap UCL			2.24				
284							95% BCA Bootstrap UCL			2.421				
285														
286	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
287	k star (bias corrected)			N/A			Data appear Normal at 5% Significance Level							
288	Theta Star			N/A										
289	nu star			N/A										
290														
291	A-D Test Statistic			0.252			Nonparametric Statistics							
292	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method							
293	K-S Test Statistic			N/A			Mean			1.433				
294	5% K-S Critical Value			N/A			SD			1.144				
295	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.809				
296							95% KM (t) UCL			2.813				
297	Assuming Gamma Distribution						95% KM (z) UCL			2.764				
298	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			3.092				
299	Minimum			N/A			95% KM (bootstrap t) UCL			5.863				
300	Maximum			N/A			95% KM (BCA) UCL			N/A				
301	Mean			N/A			95% KM (Percentile Bootstrap) UCL			3				
302	Median			N/A			95% KM (Chebyshev) UCL			4.96				
303	SD			N/A			97.5% KM (Chebyshev) UCL			6.485				
304	k star			N/A			99% KM (Chebyshev) UCL			9.483				
305	Theta star			N/A										
306	Nu star			N/A			Potential UCLs to Use							
307	AppChi2			N/A			95% KM (t) UCL			2.813				
308	95% Gamma Approximate UCL			N/A			95% KM (Percentile Bootstrap) UCL			3				
309	95% Adjusted Gamma UCL			N/A										
310	Note: DL/2 is not a recommended method.													
311														
312														

	A	B	C	D	E	F	G	H	I	J	K	L		
313	Acenaphthylene													
314														
315	General Statistics													
316	Number of Valid Data					27		Number of Detected Data					2	
317	Number of Distinct Detected Data					2		Number of Non-Detect Data					25	
318	Number of Missing Values					34		Percent Non-Detects					92.59%	
319														
320	Raw Statistics						Log-transformed Statistics							
321	Minimum Detected					0.2		Minimum Detected					-1.609	
322	Maximum Detected					1		Maximum Detected					0	
323	Mean of Detected					0.6		Mean of Detected					-0.805	
324	SD of Detected					0.566		SD of Detected					1.138	
325	Minimum Non-Detect					4		Minimum Non-Detect					1.386	
326	Maximum Non-Detect					13		Maximum Non-Detect					2.565	
327														
328	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						27	
329	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0	
330	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%	
331														
332	Warning: Data set has only 2 Distinct Detected Values.													
333	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.													
334	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).													
335														
336	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.													
337														
338	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.													
339	Those methods will return a 'N/A' value on your output display!													
340														
341	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
342	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
343														
344														
345	UCL Statistics													
346	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
347	Shapiro Wilk Test Statistic					1		Shapiro Wilk Test Statistic					1	
348	5% Shapiro Wilk Critical Value					N/A		5% Shapiro Wilk Critical Value					N/A	
349	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
350														
351	Assuming Normal Distribution						Assuming Lognormal Distribution							
352	DL/2 Substitution Method							DL/2 Substitution Method						
353	Mean					2.878		Mean					0.917	
354	SD					1.34		SD					0.641	
355	95% DL/2 (t) UCL					3.318		95% H-Stat (DL/2) UCL					5.297	
356														
357	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
358	MLE method failed to converge properly						Mean in Log Scale						N/A	
359							SD in Log Scale						N/A	
360							Mean in Original Scale						N/A	
361							SD in Original Scale						N/A	
362							95% Percentile Bootstrap UCL						N/A	
363							95% BCA Bootstrap UCL						N/A	
364														

	A	B	C	D	E	F	G	H	I	J	K	L	
365	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
366	k star (bias corrected)					N/A	Data do not follow a Discernable Distribution (0.05)						
367	Theta Star					N/A							
368	nu star					N/A							
369													
370	A-D Test Statistic					0.358	Nonparametric Statistics						
371	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method						
372	K-S Test Statistic					N/A						Mean	0.6
373	5% K-S Critical Value					N/A						SD	0.4
374	Data not Gamma Distributed at 5% Significance Level											SE of Mean	0.4
375												95% KM (t) UCL	1.282
376	Assuming Gamma Distribution											95% KM (z) UCL	1.258
377	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	1.547
378	Minimum					N/A						95% KM (bootstrap t) UCL	#NUM!
379	Maximum					N/A						95% KM (BCA) UCL	1
380	Mean					N/A						95% KM (Percentile Bootstrap) UCL	N/A
381	Median					N/A						95% KM (Chebyshev) UCL	2.344
382	SD					N/A						97.5% KM (Chebyshev) UCL	3.098
383	k star					N/A						99% KM (Chebyshev) UCL	4.58
384	Theta star					N/A							
385	Nu star					N/A	Potential UCLs to Use						
386	AppChi2					N/A						95% KM (BCA) UCL	1
387	95% Gamma Approximate UCL					N/A							
388	95% Adjusted Gamma UCL					N/A							
389	Note: DL/2 is not a recommended method.												
390													
391													
392	Aluminum												
393													
394	General Statistics												
395	Number of Valid Data					28	Number of Detected Data					28	
396	Number of Distinct Detected Data					27	Number of Non-Detect Data					0	
397	Number of Missing Values					34	Percent Non-Detects					0.00%	
398													
399	Raw Statistics						Log-transformed Statistics						
400	Minimum Detected					2530	Minimum Detected					7.836	
401	Maximum Detected					23600	Maximum Detected					10.07	
402	Mean of Detected					8415	Mean of Detected					8.933	
403	SD of Detected					4243	SD of Detected					0.461	
404	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
405	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
406													
407													
408	UCL Statistics												
409	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
410	Shapiro Wilk Test Statistic					0.852	Shapiro Wilk Test Statistic					0.973	
411	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924	
412	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
413													
414	Assuming Normal Distribution						Assuming Lognormal Distribution						
415	DL/2 Substitution Method						DL/2 Substitution Method						
416	Mean					8415	Mean					8.933	

	A	B	C	D	E	F	G	H	I	J	K	L
417					SD	4243					SD	0.461
418					95% DL/2 (t) UCL	9781				95% H-Stat (DL/2) UCL		9990
419												
420					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
421					MLE method failed to converge properly						Mean in Log Scale	N/A
422											SD in Log Scale	N/A
423											Mean in Original Scale	N/A
424											SD in Original Scale	N/A
425											95% Percentile Bootstrap UCL	N/A
426											95% BCA Bootstrap UCL	N/A
427												
428					Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only				
429					k star (bias corrected)	4.434	Data appear Gamma Distributed at 5% Significance Level					
430					Theta Star	1898						
431					nu star	248.3						
432												
433					A-D Test Statistic	0.426	Nonparametric Statistics					
434					5% A-D Critical Value	0.749					Kaplan-Meier (KM) Method	
435					K-S Test Statistic	0.749					Mean	8415
436					5% K-S Critical Value	0.166					SD	4167
437					Data appear Gamma Distributed at 5% Significance Level						SE of Mean	801.9
438											95% KM (t) UCL	9781
439					Assuming Gamma Distribution						95% KM (z) UCL	9734
440					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	9781
441					Minimum	2530					95% KM (bootstrap t) UCL	10230
442					Maximum	23600					95% KM (BCA) UCL	9867
443					Mean	8415					95% KM (Percentile Bootstrap) UCL	9750
444					Median	7475					95% KM (Chebyshev) UCL	11911
445					SD	4243					97.5% KM (Chebyshev) UCL	13423
446					k star	4.434					99% KM (Chebyshev) UCL	16395
447					Theta star	1898						
448					Nu star	248.3	Potential UCLs to Use					
449					AppChi2	212.8					95% KM (BCA) UCL	9867
450					95% Gamma Approximate UCL	9818						
451					95% Adjusted Gamma UCL	9913						
452	Note: DL/2 is not a recommended method.											
453												
454												
455	Anthracene											
456												
457	General Statistics											
458					Number of Valid Data	27					Number of Detected Data	4
459					Number of Distinct Detected Data	4					Number of Non-Detect Data	23
460					Number of Missing Values	34					Percent Non-Detects	85.19%
461												
462	Raw Statistics					Log-transformed Statistics						
463					Minimum Detected	0.4					Minimum Detected	-0.916
464					Maximum Detected	3					Maximum Detected	1.099
465					Mean of Detected	1.125					Mean of Detected	-0.255
466					SD of Detected	1.253					SD of Detected	0.918
467					Minimum Non-Detect	4					Minimum Non-Detect	1.386
468					Maximum Non-Detect	13					Maximum Non-Detect	2.565

	A	B	C	D	E	F	G	H	I	J	K	L	
469													
470	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27	
471	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
472	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
473													
474	Warning: There are only 4 Distinct Detected Values in this data												
475	Note: It should be noted that even though bootstrap may be performed on this data set												
476	the resulting calculations may not be reliable enough to draw conclusions												
477													
478	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
479													
480													
481	UCL Statistics												
482	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
483	Shapiro Wilk Test Statistic				0.691		Shapiro Wilk Test Statistic				0.793		
484	5% Shapiro Wilk Critical Value				0.748		5% Shapiro Wilk Critical Value				0.748		
485	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
486													
487	Assuming Normal Distribution						Assuming Lognormal Distribution						
488	DL/2 Substitution Method						DL/2 Substitution Method						
489	Mean				2.759		Mean				0.853		
490	SD				1.403		SD				0.655		
491	95% DL/2 (t) UCL				3.22		95% H-Stat (DL/2) UCL				6.014		
492													
493	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method						
494	MLE method failed to converge properly						Mean in Log Scale				-0.255		
495							SD in Log Scale				0.736		
496							Mean in Original Scale				1.009		
497							SD in Original Scale				0.794		
498							95% Percentile Bootstrap UCL				1.267		
499							95% BCA Bootstrap UCL				1.308		
500													
501	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
502	k star (bias corrected)				0.538		Data appear Lognormal at 5% Significance Level						
503	Theta Star				2.092								
504	nu star				4.302								
505													
506	A-D Test Statistic				0.679		Nonparametric Statistics						
507	5% A-D Critical Value				0.663		Kaplan-Meier (KM) Method						
508	K-S Test Statistic				0.663		Mean				1.125		
509	5% K-S Critical Value				0.4		SD				1.085		
510	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.626		
511							95% KM (t) UCL				2.193		
512	Assuming Gamma Distribution						95% KM (z) UCL				2.155		
513	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				2.335		
514	Minimum				1E-09		95% KM (bootstrap t) UCL				15.77		
515	Maximum				3.143		95% KM (BCA) UCL				2.375		
516	Mean				1.127		95% KM (Percentile Bootstrap) UCL				2.388		
517	Median				0.94		95% KM (Chebyshev) UCL				3.855		
518	SD				0.978		97.5% KM (Chebyshev) UCL				5.036		
519	k star				0.317		99% KM (Chebyshev) UCL				7.357		
520	Theta star				3.56								

	A	B	C	D	E	F	G	H	I	J	K	L
521					Nu star	17.09	Potential UCLs to Use					
522					AppChi2	8.738	95% KM (t) UCL					2.193
523			95% Gamma Approximate UCL			2.204	95% KM (% Bootstrap) UCL					2.388
524			95% Adjusted Gamma UCL			N/A						
525	Note: DL/2 is not a recommended method.											
526												
527												
528	Antimony											
529												
530	General Statistics											
531	Number of Valid Data					21	Number of Detected Data					5
532	Number of Distinct Detected Data					5	Number of Non-Detect Data					16
533	Number of Missing Values					37	Percent Non-Detects					76.19%
534												
535	Raw Statistics						Log-transformed Statistics					
536	Minimum Detected					1	Minimum Detected					0
537	Maximum Detected					2.4	Maximum Detected					0.875
538	Mean of Detected					1.72	Mean of Detected					0.499
539	SD of Detected					0.54	SD of Detected					0.34
540	Minimum Non-Detect					0.3	Minimum Non-Detect					-1.204
541	Maximum Non-Detect					14	Maximum Non-Detect					2.639
542												
543	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					21
544	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
545	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
546												
547	Warning: There are only 5 Detected Values in this data											
548	Note: It should be noted that even though bootstrap may be performed on this data set											
549	the resulting calculations may not be reliable enough to draw conclusions											
550												
551	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
552												
553												
554	UCL Statistics											
555	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
556	Shapiro Wilk Test Statistic					0.99	Shapiro Wilk Test Statistic					0.964
557	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
558	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
559												
560	Assuming Normal Distribution						Assuming Lognormal Distribution					
561	DL/2 Substitution Method						DL/2 Substitution Method					
562	Mean					1.763	Mean					-0.0191
563	SD					1.735	SD					1.234
564	95% DL/2 (t) UCL					2.416	95% H-Stat (DL/2) UCL					5.823
565												
566	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
567	MLE method failed to converge properly						Mean in Log Scale					-0.218
568							SD in Log Scale					0.465
569							Mean in Original Scale					0.907
570							SD in Original Scale					0.535
571							95% Percentile Bootstrap UCL					1.094
572							95% BCA Bootstrap UCL					1.14

	A	B	C	D	E	F	G	H	I	J	K	L
573												
574	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
575	k star (bias corrected)				4.771		Data appear Normal at 5% Significance Level					
576	Theta Star				0.361							
577	nu star				47.71							
578												
579	A-D Test Statistic				0.209		Nonparametric Statistics					
580	5% A-D Critical Value				0.679		Kaplan-Meier (KM) Method					
581	K-S Test Statistic				0.679						Mean	1.257
582	5% K-S Critical Value				0.358						SD	0.45
583	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.134
584											95% KM (t) UCL	1.489
585	Assuming Gamma Distribution										95% KM (z) UCL	1.478
586	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1.528
587	Minimum				1						95% KM (bootstrap t) UCL	1.465
588	Maximum				2.4						95% KM (BCA) UCL	2.033
589	Mean				1.766						95% KM (Percentile Bootstrap) UCL	1.927
590	Median				1.754						95% KM (Chebyshev) UCL	1.843
591	SD				0.249						97.5% KM (Chebyshev) UCL	2.097
592	k star				39.26						99% KM (Chebyshev) UCL	2.595
593	Theta star				0.045							
594	Nu star				1649		Potential UCLs to Use					
595	AppChi2				1556						95% KM (t) UCL	1.489
596	95% Gamma Approximate UCL				1.872						95% KM (Percentile Bootstrap) UCL	1.927
597	95% Adjusted Gamma UCL				1.88							
598	Note: DL/2 is not a recommended method.											
599												
600												
601	Arsenic											
602												
603	General Statistics											
604	Number of Valid Data				33		Number of Detected Data				31	
605	Number of Distinct Detected Data				25		Number of Non-Detect Data				2	
606	Number of Missing Values				34		Percent Non-Detects				6.06%	
607												
608	Raw Statistics						Log-transformed Statistics					
609	Minimum Detected				0.95		Minimum Detected				-0.0513	
610	Maximum Detected				26.2		Maximum Detected				3.266	
611	Mean of Detected				5.056		Mean of Detected				1.226	
612	SD of Detected				5.166		SD of Detected				0.892	
613	Minimum Non-Detect				3.9		Minimum Non-Detect				1.361	
614	Maximum Non-Detect				4.2		Maximum Non-Detect				1.435	
615												
616	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				18	
617	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				15	
618	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				54.55%	
619												
620	UCL Statistics											
621	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
622	Shapiro Wilk Test Statistic				0.734		Shapiro Wilk Test Statistic				0.936	
623	5% Shapiro Wilk Critical Value				0.929		5% Shapiro Wilk Critical Value				0.929	
624	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L		
625														
626	Assuming Normal Distribution						Assuming Lognormal Distribution							
627	DL/2 Substitution Method						DL/2 Substitution Method							
628	Mean						4.873	Mean						1.195
629	SD						5.056	SD						0.873
630	95% DL/2 (t) UCL						6.364	95% H-Stat (DL/2) UCL						6.723
631														
632	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
633	Mean						2.677	Mean in Log Scale						1.189
634	SD						7.386	SD in Log Scale						0.876
635	95% MLE (t) UCL						4.855	Mean in Original Scale						4.863
636	95% MLE (Tiku) UCL						5.54	SD in Original Scale						5.062
637							95% Percentile Bootstrap UCL						6.351	
638							95% BCA Bootstrap UCL						6.619	
639														
640	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
641	k star (bias corrected)						1.296	Data appear Lognormal at 5% Significance Level						
642	Theta Star						3.902							
643	nu star						80.35							
644														
645	A-D Test Statistic						0.883	Nonparametric Statistics						
646	5% A-D Critical Value						0.766	Kaplan-Meier (KM) Method						
647	K-S Test Statistic						0.766	Mean						4.853
648	5% K-S Critical Value						0.161	SD						4.993
649	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.884	
650							95% KM (t) UCL						6.351	
651	Assuming Gamma Distribution						95% KM (z) UCL						6.308	
652	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						6.35	
653	Minimum						0.95	95% KM (bootstrap t) UCL						7.021
654	Maximum						26.2	95% KM (BCA) UCL						6.447
655	Mean						4.891	95% KM (Percentile Bootstrap) UCL						6.378
656	Median						2.331	95% KM (Chebyshev) UCL						8.707
657	SD						5.046	97.5% KM (Chebyshev) UCL						10.37
658	k star						1.334	99% KM (Chebyshev) UCL						13.65
659	Theta star						3.666							
660	Nu star						88.05	Potential UCLs to Use						
661	AppChi2						67.42	95% KM (Chebyshev) UCL						8.707
662	95% Gamma Approximate UCL						6.388							
663	95% Adjusted Gamma UCL						6.478							
664	Note: DL/2 is not a recommended method.													
665														
666														
667	Barium													
668														
669	General Statistics													
670	Number of Valid Data						28	Number of Detected Data						28
671	Number of Distinct Detected Data						27	Number of Non-Detect Data						0
672	Number of Missing Values						34	Percent Non-Detects						0.00%
673														
674	Raw Statistics						Log-transformed Statistics							
675	Minimum Detected						29.6	Minimum Detected						3.388
676	Maximum Detected						853	Maximum Detected						6.749

	A	B	C	D	E	F	G	H	I	J	K	L
677	Mean of Detected					168.4	Mean of Detected					4.698
678	SD of Detected					183.2	SD of Detected					0.92
679	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
680	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
681												
682												
683	UCL Statistics											
684	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
685	Shapiro Wilk Test Statistic					0.722	Shapiro Wilk Test Statistic					0.941
686	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924
687	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
688												
689	Assuming Normal Distribution						Assuming Lognormal Distribution					
690	DL/2 Substitution Method						DL/2 Substitution Method					
691	Mean					168.4	Mean					4.698
692	SD					183.2	SD					0.92
693	95% DL/2 (t) UCL					227.4	95% H-Stat (DL/2) UCL					254.4
694												
695	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
696	MLE method failed to converge properly						Mean in Log Scale					N/A
697												
698												
699												
700												
701												
702												
703	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
704	k star (bias corrected)					1.191	Data Follow Appr. Gamma Distribution at 5% Significance Level					
705	Theta Star					141.4						
706	nu star					66.68						
707												
708	A-D Test Statistic					0.789	Nonparametric Statistics					
709	5% A-D Critical Value					0.767	Kaplan-Meier (KM) Method					
710	K-S Test Statistic					0.767	Mean					168.4
711	5% K-S Critical Value					0.169	SD					179.9
712	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					34.62
713												
714	Assuming Gamma Distribution						95% KM (t) UCL					227.4
715	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL					225.4
716	Minimum					29.6	95% KM (jackknife) UCL					227.4
717	Maximum					853	95% KM (bootstrap t) UCL					262.9
718	Mean					168.4	95% KM (BCA) UCL					230.4
719	Median					104	95% KM (Percentile Bootstrap) UCL					227.9
720	SD					183.2	95% KM (Chebyshev) UCL					319.3
721	k star					1.191	97.5% KM (Chebyshev) UCL					384.6
722	Theta star					141.4	99% KM (Chebyshev) UCL					512.9
723	Nu star					66.68	Potential UCLs to Use					
724	AppChi2					48.89	95% KM (Chebyshev) UCL					319.3
725	95% Gamma Approximate UCL					229.7						
726	95% Adjusted Gamma UCL					234.2						
727	Note: DL/2 is not a recommended method.											
728												

	A	B	C	D	E	F	G	H	I	J	K	L		
729														
730	Benzo(a)anthracene													
731														
732	General Statistics													
733	Number of Valid Data					27		Number of Detected Data					12	
734	Number of Distinct Detected Data					7		Number of Non-Detect Data					15	
735	Number of Missing Values					34		Percent Non-Detects					55.56%	
736														
737	Raw Statistics						Log-transformed Statistics							
738	Minimum Detected					0.4		Minimum Detected					-0.916	
739	Maximum Detected					7		Maximum Detected					1.946	
740	Mean of Detected					2.017		Mean of Detected					0.168	
741	SD of Detected					2.412		SD of Detected					1.028	
742	Minimum Non-Detect					4		Minimum Non-Detect					1.386	
743	Maximum Non-Detect					10		Maximum Non-Detect					2.303	
744														
745	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						27	
746	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0	
747	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%	
748														
749	UCL Statistics													
750	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
751	Shapiro Wilk Test Statistic					0.667		Shapiro Wilk Test Statistic					0.871	
752	5% Shapiro Wilk Critical Value					0.859		5% Shapiro Wilk Critical Value					0.859	
753	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
754														
755	Assuming Normal Distribution						Assuming Lognormal Distribution							
756	DL/2 Substitution Method							DL/2 Substitution Method						
757	Mean					2.341		Mean					0.579	
758	SD					1.742		SD					0.798	
759	95% DL/2 (t) UCL					2.912		95% H-Stat (DL/2) UCL					7.888	
760														
761	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
762	MLE method failed to converge properly						Mean in Log Scale						0.00804	
763							SD in Log Scale						0.806	
764							Mean in Original Scale						1.468	
765							SD in Original Scale						1.7	
766							95% Percentile Bootstrap UCL						2.037	
767							95% BCA Bootstrap UCL						2.214	
768														
769	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
770	k star (bias corrected)					0.861		Data Follow Appr. Gamma Distribution at 5% Significance Level						
771	Theta Star					2.343								
772	nu star					20.66								
773														
774	A-D Test Statistic					0.919		Nonparametric Statistics						
775	5% A-D Critical Value					0.755		Kaplan-Meier (KM) Method						
776	K-S Test Statistic					0.755		Mean					1.498	
777	5% K-S Critical Value					0.252		SD					1.743	
778	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean						0.394	
779							95% KM (t) UCL						2.171	
780	Assuming Gamma Distribution						95% KM (z) UCL						2.147	

	A	B	C	D	E	F	G	H	I	J	K	L	
781	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.168	
782					Minimum	0.4	95% KM (bootstrap t) UCL					2.552	
783					Maximum	7	95% KM (BCA) UCL					2.155	
784					Mean	1.958	95% KM (Percentile Bootstrap) UCL					2.152	
785					Median	1.855	95% KM (Chebyshev) UCL					3.218	
786					SD	1.601	97.5% KM (Chebyshev) UCL					3.962	
787					k star	1.931	99% KM (Chebyshev) UCL					5.424	
788					Theta star	1.014							
789					Nu star	104.3	Potential UCLs to Use						
790					AppChi2	81.69	95% KM (t) UCL					2.171	
791					95% Gamma Approximate UCL		2.499						
792					95% Adjusted Gamma UCL		2.538						
793	Note: DL/2 is not a recommended method.												
794													
795													
796	Benzo(a)pyrene												
797													
798	General Statistics												
799					Number of Valid Data	27					Number of Detected Data	8	
800					Number of Distinct Detected Data	7					Number of Non-Detect Data	19	
801					Number of Missing Values	34					Percent Non-Detects	70.37%	
802													
803	Raw Statistics						Log-transformed Statistics						
804					Minimum Detected	0.5					Minimum Detected	-0.693	
805					Maximum Detected	4					Maximum Detected	1.386	
806					Mean of Detected	1.55					Mean of Detected	0.132	
807					SD of Detected	1.324					SD of Detected	0.823	
808					Minimum Non-Detect	4					Minimum Non-Detect	1.386	
809					Maximum Non-Detect	10					Maximum Non-Detect	2.303	
810													
811	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	27
812	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	0
813	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	100.00%
814													
815	Warning: There are only 8 Detected Values in this data												
816	Note: It should be noted that even though bootstrap may be performed on this data set												
817	the resulting calculations may not be reliable enough to draw conclusions												
818													
819	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
820													
821													
822	UCL Statistics												
823	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
824					Shapiro Wilk Test Statistic	0.815					Shapiro Wilk Test Statistic	0.884	
825					5% Shapiro Wilk Critical Value	0.818					5% Shapiro Wilk Critical Value	0.818	
826	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
827													
828	Assuming Normal Distribution						Assuming Lognormal Distribution						
829					DL/2 Substitution Method						DL/2 Substitution Method		
830					Mean	2.367					Mean	0.71	
831					SD	1.152					SD	0.623	
832					95% DL/2 (t) UCL	2.745					95% H-Stat (DL/2) UCL	5.888	

	A	B	C	D	E	F	G	H	I	J	K	L
833												
834	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
835	MLE method failed to converge properly						Mean in Log Scale					0.0246
836							SD in Log Scale					0.605
837							Mean in Original Scale					1.235
838							SD in Original Scale					0.849
839							95% Percentile Bootstrap UCL					1.509
840							95% BCA Bootstrap UCL					1.591
841												
842	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
843	k star (bias corrected)					1.197	Data appear Gamma Distributed at 5% Significance Level					
844	Theta Star					1.295						
845	nu star					19.16						
846												
847	A-D Test Statistic					0.53	Nonparametric Statistics					
848	5% A-D Critical Value					0.726	Kaplan-Meier (KM) Method					
849	K-S Test Statistic					0.726	Mean					1.375
850	5% K-S Critical Value					0.298	SD					1.089
851	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.379
852							95% KM (t) UCL					2.022
853	Assuming Gamma Distribution						95% KM (z) UCL					1.999
854	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.052
855	Minimum					0.5	95% KM (bootstrap t) UCL					2.468
856	Maximum					4	95% KM (BCA) UCL					2
857	Mean					1.58	95% KM (Percentile Bootstrap) UCL					2.031
858	Median					1.605	95% KM (Chebyshev) UCL					3.029
859	SD					0.697	97.5% KM (Chebyshev) UCL					3.744
860	k star					4.934	99% KM (Chebyshev) UCL					5.15
861	Theta star					0.32						
862	Nu star					266.4	Potential UCLs to Use					
863	AppChi2					229.6	95% KM (t) UCL					2.022
864	95% Gamma Approximate UCL					1.833						
865	95% Adjusted Gamma UCL					1.851						
866	Note: DL/2 is not a recommended method.											
867												
868												
869	Benzo(b)fluoranthene											
870												
871	General Statistics											
872	Number of Valid Data					27	Number of Detected Data					9
873	Number of Distinct Detected Data					8	Number of Non-Detect Data					18
874	Number of Missing Values					34	Percent Non-Detects					66.67%
875												
876	Raw Statistics						Log-transformed Statistics					
877	Minimum Detected					0.7	Minimum Detected					-0.357
878	Maximum Detected					9	Maximum Detected					2.197
879	Mean of Detected					2.711	Mean of Detected					0.566
880	SD of Detected					2.911	SD of Detected					0.937
881	Minimum Non-Detect					4	Minimum Non-Detect					1.386
882	Maximum Non-Detect					10	Maximum Non-Detect					2.303
883												
884	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27

	A	B	C	D	E	F	G	H	I	J	K	L
885	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
886	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
887												
888	Warning: There are only 9 Detected Values in this data											
889	Note: It should be noted that even though bootstrap may be performed on this data set											
890	the resulting calculations may not be reliable enough to draw conclusions											
891												
892	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
893												
894												
895	UCL Statistics											
896	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
897	Shapiro Wilk Test Statistic			0.74			Shapiro Wilk Test Statistic			0.862		
898	5% Shapiro Wilk Critical Value			0.829			5% Shapiro Wilk Critical Value			0.829		
899	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
900												
901	Assuming Normal Distribution						Assuming Lognormal Distribution					
902	DL/2 Substitution Method						DL/2 Substitution Method					
903	Mean			2.7			Mean			0.819		
904	SD			1.78			SD			0.602		
905	95% DL/2 (t) UCL			3.284			95% H-Stat (DL/2) UCL			5.791		
906												
907	Maximum Likelihood Estimate(MLE) Method						N/A					
908	MLE method failed to converge properly						Log ROS Method					
909							Mean in Log Scale			0.332		
910							SD in Log Scale			0.678		
911							Mean in Original Scale			1.827		
912							SD in Original Scale			1.817		
913							95% Percentile Bootstrap UCL			2.414		
914							95% BCA Bootstrap UCL			2.562		
915	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
916	k star (bias corrected)			0.941			Data appear Lognormal at 5% Significance Level					
917	Theta Star			2.88								
918	nu star			16.95								
919												
920	A-D Test Statistic			0.755			Nonparametric Statistics					
921	5% A-D Critical Value			0.738			Kaplan-Meier (KM) Method					
922	K-S Test Statistic			0.738			Mean			1.832		
923	5% K-S Critical Value			0.285			SD			1.868		
924	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.462		
925							95% KM (t) UCL			2.62		
926	Assuming Gamma Distribution						95% KM (z) UCL			2.592		
927	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			2.627		
928	Minimum			0.7			95% KM (bootstrap t) UCL			3.248		
929	Maximum			9			95% KM (BCA) UCL			2.661		
930	Mean			2.56			95% KM (Percentile Bootstrap) UCL			2.604		
931	Median			2.38			95% KM (Chebyshev) UCL			3.846		
932	SD			1.704			97.5% KM (Chebyshev) UCL			4.718		
933	k star			2.801			99% KM (Chebyshev) UCL			6.43		
934	Theta star			0.914								
935	Nu star			151.2			Potential UCLs to Use					
936	AppChi2			123.8			95% KM (t) UCL			2.62		

	A	B	C	D	E	F	G	H	I	J	K	L
937	95% Gamma Approximate UCL					3.127	95% KM (% Bootstrap) UCL					2.604
938	95% Adjusted Gamma UCL					3.167						
939	Note: DL/2 is not a recommended method.											
940												
941												
942	Benzo(ghi)perylene											
943												
944	General Statistics											
945	Number of Valid Data					27	Number of Detected Data					11
946	Number of Distinct Detected Data					5	Number of Non-Detect Data					16
947	Number of Missing Values					34	Percent Non-Detects					59.26%
948												
949	Raw Statistics						Log-transformed Statistics					
950	Minimum Detected					0.2	Minimum Detected					-1.609
951	Maximum Detected					2	Maximum Detected					0.693
952	Mean of Detected					0.982	Mean of Detected					-0.313
953	SD of Detected					0.717	SD of Detected					0.857
954	Minimum Non-Detect					4	Minimum Non-Detect					1.386
955	Maximum Non-Detect					10	Maximum Non-Detect					2.303
956												
957	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27
958	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
959	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
960												
961	UCL Statistics											
962	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
963	Shapiro Wilk Test Statistic					0.836	Shapiro Wilk Test Statistic					0.895
964	5% Shapiro Wilk Critical Value					0.85	5% Shapiro Wilk Critical Value					0.85
965	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
966												
967	Assuming Normal Distribution						Assuming Lognormal Distribution					
968	DL/2 Substitution Method						DL/2 Substitution Method					
969	Mean					2.011	Mean					0.44
970	SD					1.189	SD					0.857
971	95% DL/2 (t) UCL					2.402	95% H-Stat (DL/2) UCL					6.93
972												
973	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
974	MLE method failed to converge properly						Mean in Log Scale					-0.313
975							SD in Log Scale					0.713
976							Mean in Original Scale					0.918
977							SD in Original Scale					0.608
978							95% Percentile Bootstrap UCL					1.108
979							95% BCA Bootstrap UCL					1.124
980												
981	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
982	k star (bias corrected)					1.404	Data appear Gamma Distributed at 5% Significance Level					
983	Theta Star					0.699						
984	nu star					30.88						
985												
986	A-D Test Statistic					0.493	Nonparametric Statistics					
987	5% A-D Critical Value					0.74	Kaplan-Meier (KM) Method					
988	K-S Test Statistic					0.74	Mean					0.982

	A	B	C	D	E	F	G	H	I	J	K	L	
989	5% K-S Critical Value					0.259	SD					0.683	
990	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.216	
991							95% KM (t) UCL					1.35	
992	Assuming Gamma Distribution						95% KM (z) UCL					1.337	
993	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.361	
994	Minimum						0.0841	95% KM (bootstrap t) UCL					1.453
995	Maximum						2	95% KM (BCA) UCL					1.338
996	Mean						0.992	95% KM (Percentile Bootstrap) UCL					1.338
997	Median						1	95% KM (Chebyshev) UCL					1.924
998	SD						0.602	97.5% KM (Chebyshev) UCL					2.331
999	k star						1.877	99% KM (Chebyshev) UCL					3.132
1000	Theta star						0.528						
1001	Nu star						101.4	Potential UCLs to Use					
1002	AppChi2						79.14	95% KM (t) UCL					1.35
1003	95% Gamma Approximate UCL						1.27						
1004	95% Adjusted Gamma UCL						1.291						
1005	Note: DL/2 is not a recommended method.												
1006													
1007													
1008	Benzo(k)fluoranthene												
1009													
1010	General Statistics												
1011	Number of Valid Data					27	Number of Detected Data					7	
1012	Number of Distinct Detected Data					6	Number of Non-Detect Data					20	
1013	Number of Missing Values					34	Percent Non-Detects					74.07%	
1014													
1015	Raw Statistics						Log-transformed Statistics						
1016	Minimum Detected					0.2	Minimum Detected					-1.609	
1017	Maximum Detected					5	Maximum Detected					1.609	
1018	Mean of Detected					1.429	Mean of Detected					-0.131	
1019	SD of Detected					1.678	SD of Detected					1.045	
1020	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
1021	Maximum Non-Detect					13	Maximum Non-Detect					2.565	
1022													
1023	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27	
1024	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
1025	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
1026													
1027	Warning: There are only 7 Detected Values in this data												
1028	Note: It should be noted that even though bootstrap may be performed on this data set												
1029	the resulting calculations may not be reliable enough to draw conclusions												
1030													
1031	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
1032													
1033													
1034	UCL Statistics												
1035	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1036	Shapiro Wilk Test Statistic					0.732	Shapiro Wilk Test Statistic					0.972	
1037	5% Shapiro Wilk Critical Value					0.803	5% Shapiro Wilk Critical Value					0.803	
1038	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1039													
1040	Assuming Normal Distribution						Assuming Lognormal Distribution						

	A	B	C	D	E	F	G	H	I	J	K	L
1041	DL/2 Substitution Method					DL/2 Substitution Method						
1042	Mean					2.63	Mean					0.732
1043	SD					1.617	SD					0.797
1044	95% DL/2 (t) UCL					3.16	95% H-Stat (DL/2) UCL					7.722
1045												
1046	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1047	MLE method failed to converge properly					Mean in Log Scale					-0.325	
1048						SD in Log Scale					0.72	
1049						Mean in Original Scale					0.955	
1050						SD in Original Scale					0.94	
1051						95% Percentile Bootstrap UCL					1.261	
1052						95% BCA Bootstrap UCL					1.415	
1053												
1054	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1055	k star (bias corrected)					0.76	Data appear Gamma Distributed at 5% Significance Level					
1056	Theta Star					1.879						
1057	nu star					10.64						
1058												
1059	A-D Test Statistic					0.38	Nonparametric Statistics					
1060	5% A-D Critical Value					0.725	Kaplan-Meier (KM) Method					
1061	K-S Test Statistic					0.725	Mean					1.053
1062	5% K-S Critical Value					0.319	SD					1.088
1063	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.334	
1064						95% KM (t) UCL					1.623	
1065	Assuming Gamma Distribution					95% KM (z) UCL					1.602	
1066	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.639	
1067	Minimum					0.2	95% KM (bootstrap t) UCL					2.361
1068	Maximum					5	95% KM (BCA) UCL					1.645
1069	Mean					1.387	95% KM (Percentile Bootstrap) UCL					1.658
1070	Median					1.37	95% KM (Chebyshev) UCL					2.51
1071	SD					0.827	97.5% KM (Chebyshev) UCL					3.14
1072	k star					3.442	99% KM (Chebyshev) UCL					4.378
1073	Theta star					0.403						
1074	Nu star					185.9	Potential UCLs to Use					
1075	AppChi2					155.3	95% KM (t) UCL					1.623
1076	95% Gamma Approximate UCL					1.659						
1077	95% Adjusted Gamma UCL					1.679						
1078	Note: DL/2 is not a recommended method.											
1079												
1080												
1081	Beryllium											
1082												
1083	General Statistics											
1084	Number of Valid Data					28	Number of Detected Data					28
1085	Number of Distinct Detected Data					25	Number of Non-Detect Data					0
1086	Number of Missing Values					34	Percent Non-Detects					0.00%
1087												
1088	Raw Statistics					Log-transformed Statistics						
1089	Minimum Detected					0.22	Minimum Detected					-1.514
1090	Maximum Detected					2.4	Maximum Detected					0.875
1091	Mean of Detected					0.662	Mean of Detected					-0.576
1092	SD of Detected					0.456	SD of Detected					0.551

	A	B	C	D	E	F	G	H	I	J	K	L
1093	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
1094	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
1095												
1096												
1097	UCL Statistics											
1098	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1099	Shapiro Wilk Test Statistic				0.759	Shapiro Wilk Test Statistic				0.949		
1100	5% Shapiro Wilk Critical Value				0.924	5% Shapiro Wilk Critical Value				0.924		
1101	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1102												
1103	Assuming Normal Distribution						Assuming Lognormal Distribution					
1104	DL/2 Substitution Method					DL/2 Substitution Method						
1105	Mean				0.662	Mean				-0.576		
1106	SD				0.456	SD				0.551		
1107	95% DL/2 (t) UCL				0.809	95% H-Stat (DL/2) UCL				0.807		
1108												
1109	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1110	MLE method failed to converge properly						Mean in Log Scale				N/A	
1111							SD in Log Scale				N/A	
1112							Mean in Original Scale				N/A	
1113							SD in Original Scale				N/A	
1114							95% Percentile Bootstrap UCL				N/A	
1115							95% BCA Bootstrap UCL				N/A	
1116												
1117	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1118	k star (bias corrected)				2.895	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1119	Theta Star				0.229							
1120	nu star				162.1							
1121												
1122	A-D Test Statistic				0.846	Nonparametric Statistics						
1123	5% A-D Critical Value				0.753	Kaplan-Meier (KM) Method						
1124	K-S Test Statistic				0.753	Mean				0.662		
1125	5% K-S Critical Value				0.166	SD				0.448		
1126	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean				0.0861	
1127							95% KM (t) UCL				0.809	
1128	Assuming Gamma Distribution						95% KM (z) UCL				0.804	
1129	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.809		
1130	Minimum				0.22	95% KM (bootstrap t) UCL				0.898		
1131	Maximum				2.4	95% KM (BCA) UCL				0.805		
1132	Mean				0.662	95% KM (Percentile Bootstrap) UCL				0.802		
1133	Median				0.545	95% KM (Chebyshev) UCL				1.038		
1134	SD				0.456	97.5% KM (Chebyshev) UCL				1.2		
1135	k star				2.895	99% KM (Chebyshev) UCL				1.519		
1136	Theta star				0.229							
1137	Nu star				162.1	Potential UCLs to Use						
1138	AppChi2				133.7	95% KM (BCA) UCL				0.805		
1139	95% Gamma Approximate UCL				0.803							
1140	95% Adjusted Gamma UCL				0.813							
1141	Note: DL/2 is not a recommended method.											
1142												
1143												
1144	Bis(2-chloroethyl)ether											

	A	B	C	D	E	F	G	H	I	J	K	L		
1145														
1146	General Statistics													
1147	Number of Valid Data					27		Number of Detected Data					1	
1148	Number of Distinct Detected Data					1		Number of Non-Detect Data					26	
1149	Number of Missing Values					34		Percent Non-Detects					96.30%	
1150														
1151	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
1152	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
1153														
1154	The data set for variable Bis(2-chloroethyl)ether was not processed!													
1155														
1156														
1157														
1158	Cadmium													
1159														
1160	General Statistics													
1161	Number of Valid Data					33		Number of Detected Data					32	
1162	Number of Distinct Detected Data					26		Number of Non-Detect Data					1	
1163	Number of Missing Values					34		Percent Non-Detects					3.03%	
1164														
1165	Raw Statistics						Log-transformed Statistics							
1166	Minimum Detected					0.11		Minimum Detected					-2.207	
1167	Maximum Detected					7.37		Maximum Detected					1.997	
1168	Mean of Detected					1.855		Mean of Detected					-0.203	
1169	SD of Detected					2.165		SD of Detected					1.407	
1170	Minimum Non-Detect					0.57		Minimum Non-Detect					-0.562	
1171	Maximum Non-Detect					0.57		Maximum Non-Detect					-0.562	
1172														
1173														
1174	UCL Statistics													
1175	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1176	Shapiro Wilk Test Statistic					0.784		Shapiro Wilk Test Statistic					0.906	
1177	5% Shapiro Wilk Critical Value					0.93		5% Shapiro Wilk Critical Value					0.93	
1178	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1179														
1180	Assuming Normal Distribution						Assuming Lognormal Distribution							
1181	DL/2 Substitution Method							DL/2 Substitution Method						
1182	Mean					1.807		Mean					-0.234	
1183	SD					2.148		SD					1.397	
1184	95% DL/2 (t) UCL					2.441		95% H-Stat (DL/2) UCL					4.154	
1185														
1186	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
1187	Mean					0.691		Mean in Log Scale					-0.235	
1188	SD					3.349		SD in Log Scale					1.397	
1189	95% MLE (t) UCL					1.679		Mean in Original Scale					1.807	
1190	95% MLE (Tiku) UCL					1.888		SD in Original Scale					2.148	
1191								95% Percentile Bootstrap UCL					2.442	
1192								95% BCA Bootstrap UCL					2.552	
1193														
1194	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1195	k star (bias corrected)					0.684		Data do not follow a Discernable Distribution (0.05)						
1196	Theta Star					2.71								

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1250	MLE method failed to converge properly						Mean in Log Scale					N/A
1251							SD in Log Scale					N/A
1252							Mean in Original Scale					N/A
1253							SD in Original Scale					N/A
1254							95% Percentile Bootstrap UCL					N/A
1255							95% BCA Bootstrap UCL					N/A
1256												
1257	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1258	k star (bias corrected)					0.931	Data do not follow a Discernable Distribution (0.05)					
1259	Theta Star					11534						
1260	nu star					52.16						
1261												
1262	A-D Test Statistic					1.569	Nonparametric Statistics					
1263	5% A-D Critical Value					0.773	Kaplan-Meier (KM) Method					
1264	K-S Test Statistic					0.773	Mean					10744
1265	5% K-S Critical Value					0.17	SD					15395
1266	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2963
1267							95% KM (t) UCL					15790
1268	Assuming Gamma Distribution						95% KM (z) UCL					15617
1269	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					15790
1270	Minimum					1900	95% KM (bootstrap t) UCL					21260
1271	Maximum					76500	95% KM (BCA) UCL					15464
1272	Mean					10744	95% KM (Percentile Bootstrap) UCL					15945
1273	Median					5470	95% KM (Chebyshev) UCL					23658
1274	SD					15677	97.5% KM (Chebyshev) UCL					29246
1275	k star					0.931	99% KM (Chebyshev) UCL					40222
1276	Theta star					11534						
1277	Nu star					52.16	Potential UCLs to Use					
1278	AppChi2					36.57	95% KM (Chebyshev) UCL					23658
1279	95% Gamma Approximate UCL					15323						
1280	95% Adjusted Gamma UCL					15670						
1281	Note: DL/2 is not a recommended method.											
1282												
1283												
1284	Chromium											
1285												
1286	General Statistics											
1287	Number of Valid Data					28	Number of Detected Data					28
1288	Number of Distinct Detected Data					27	Number of Non-Detect Data					0
1289	Number of Missing Values					34	Percent Non-Detects					0.00%
1290												
1291	Raw Statistics						Log-transformed Statistics					
1292	Minimum Detected					5.2	Minimum Detected					1.649
1293	Maximum Detected					68.5	Maximum Detected					4.227
1294	Mean of Detected					19.82	Mean of Detected					2.814
1295	SD of Detected					13.71	SD of Detected					0.576
1296	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1297	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1298												
1299												
1300	UCL Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
1301	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1302	Shapiro Wilk Test Statistic					0.761	Shapiro Wilk Test Statistic					0.952
1303	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924
1304	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1305												
1306	Assuming Normal Distribution						Assuming Lognormal Distribution					
1307	DL/2 Substitution Method						DL/2 Substitution Method					
1308	Mean					19.82	Mean					2.814
1309	SD					13.71	SD					0.576
1310	95% DL/2 (t) UCL					24.23	95% H-Stat (DL/2) UCL					24.6
1311												
1312	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1313	MLE method failed to converge properly						Mean in Log Scale					N/A
1314							SD in Log Scale					N/A
1315							Mean in Original Scale					N/A
1316							SD in Original Scale					N/A
1317							95% Percentile Bootstrap UCL					N/A
1318							95% BCA Bootstrap UCL					N/A
1319												
1320	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1321	k star (bias corrected)					2.755	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1322	Theta Star					7.195						
1323	nu star					154.3						
1324												
1325	A-D Test Statistic					0.834	Nonparametric Statistics					
1326	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method					
1327	K-S Test Statistic					0.753	Mean					19.82
1328	5% K-S Critical Value					0.167	SD					13.46
1329	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					2.59
1330							95% KM (t) UCL					24.23
1331	Assuming Gamma Distribution						95% KM (z) UCL					24.08
1332	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					24.23
1333	Minimum					5.2	95% KM (bootstrap t) UCL					26.49
1334	Maximum					68.5	95% KM (BCA) UCL					24.52
1335	Mean					19.82	95% KM (Percentile Bootstrap) UCL					24.37
1336	Median					17.9	95% KM (Chebyshev) UCL					31.11
1337	SD					13.71	97.5% KM (Chebyshev) UCL					36
1338	k star					2.755	99% KM (Chebyshev) UCL					45.59
1339	Theta star					7.195						
1340	Nu star					154.3	Potential UCLs to Use					
1341	AppChi2					126.6	95% KM (BCA) UCL					24.52
1342	95% Gamma Approximate UCL					24.16						
1343	95% Adjusted Gamma UCL					24.46						
1344	Note: DL/2 is not a recommended method.											
1345												
1346												
1347	Chrysene											
1348												
1349	General Statistics											
1350	Number of Valid Data					27	Number of Detected Data					21
1351	Number of Distinct Detected Data					9	Number of Non-Detect Data					6
1352	Number of Missing Values					34	Percent Non-Detects					22.22%

	A	B	C	D	E	F	G	H	I	J	K	L	
1353													
1354	Raw Statistics						Log-transformed Statistics						
1355				Minimum Detected		0.2				Minimum Detected		-1.609	
1356				Maximum Detected		17				Maximum Detected		2.833	
1357				Mean of Detected		2.019				Mean of Detected		-0.198	
1358				SD of Detected		3.775				SD of Detected		1.287	
1359				Minimum Non-Detect		4				Minimum Non-Detect		1.386	
1360				Maximum Non-Detect		10				Maximum Non-Detect		2.303	
1361													
1362	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		26
1363	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		1
1364	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		96.30%
1365													
1366	UCL Statistics												
1367	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1368				Shapiro Wilk Test Statistic		0.504				Shapiro Wilk Test Statistic		0.894	
1369				5% Shapiro Wilk Critical Value		0.908				5% Shapiro Wilk Critical Value		0.908	
1370	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1371													
1372	Assuming Normal Distribution						Assuming Lognormal Distribution						
1373				DL/2 Substitution Method						DL/2 Substitution Method			
1374				Mean		2.181				Mean		0.057	
1375				SD		3.365				SD		1.239	
1376				95% DL/2 (t) UCL		3.286				95% H-Stat (DL/2) UCL		6.239	
1377													
1378				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1379	MLE method failed to converge properly										Mean in Log Scale		-0.24
1380										SD in Log Scale		1.153	
1381										Mean in Original Scale		1.738	
1382										SD in Original Scale		3.358	
1383										95% Percentile Bootstrap UCL		2.889	
1384										95% BCA Bootstrap UCL		3.367	
1385													
1386	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1387				k star (bias corrected)		0.61				Data do not follow a Discernable Distribution (0.05)			
1388				Theta Star		3.311							
1389				nu star		25.61							
1390													
1391				A-D Test Statistic		1.332				Nonparametric Statistics			
1392				5% A-D Critical Value		0.79				Kaplan-Meier (KM) Method			
1393				K-S Test Statistic		0.79				Mean		1.795	
1394				5% K-S Critical Value		0.198				SD		3.31	
1395	Data not Gamma Distributed at 5% Significance Level										SE of Mean		0.661
1396										95% KM (t) UCL		2.922	
1397	Assuming Gamma Distribution										95% KM (z) UCL		2.882
1398	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		2.917
1399				Minimum		0.2				95% KM (bootstrap t) UCL		4.876	
1400				Maximum		17				95% KM (BCA) UCL		2.97	
1401				Mean		2.013				95% KM (Percentile Bootstrap) UCL		3.015	
1402				Median		1				95% KM (Chebyshev) UCL		4.676	
1403				SD		3.313				97.5% KM (Chebyshev) UCL		5.923	
1404				k star		0.771				99% KM (Chebyshev) UCL		8.373	

	A	B	C	D	E	F	G	H	I	J	K	L	
1405					Theta star	2.61							
1406					Nu star	41.65	Potential UCLs to Use						
1407					AppChi2	27.86	97.5% KM (Chebyshev) UCL					5.923	
1408					95% Gamma Approximate UCL	3.01							
1409					95% Adjusted Gamma UCL	3.09							
1410	Note: DL/2 is not a recommended method.												
1411													
1412													
1413	Cobalt												
1414													
1415	General Statistics												
1416					Number of Valid Data	28					Number of Detected Data	28	
1417					Number of Distinct Detected Data	20					Number of Non-Detect Data	0	
1418					Number of Missing Values	34					Percent Non-Detects	0.00%	
1419													
1420	Raw Statistics						Log-transformed Statistics						
1421					Minimum Detected	2.8					Minimum Detected	1.03	
1422					Maximum Detected	20.9					Maximum Detected	3.04	
1423					Mean of Detected	6.668					Mean of Detected	1.764	
1424					SD of Detected	4.029					SD of Detected	0.501	
1425					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
1426					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
1427													
1428													
1429	UCL Statistics												
1430	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1431					Shapiro Wilk Test Statistic	0.777					Shapiro Wilk Test Statistic	0.937	
1432					5% Shapiro Wilk Critical Value	0.924					5% Shapiro Wilk Critical Value	0.924	
1433	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1434													
1435	Assuming Normal Distribution						Assuming Lognormal Distribution						
1436					DL/2 Substitution Method						DL/2 Substitution Method		
1437					Mean	6.668					Mean	1.764	
1438					SD	4.029					SD	0.501	
1439					95% DL/2 (t) UCL	7.965					95% H-Stat (DL/2) UCL	7.985	
1440													
1441					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1442	MLE method failed to converge properly										Mean in Log Scale	N/A	
1443											SD in Log Scale	N/A	
1444											Mean in Original Scale	N/A	
1445											SD in Original Scale	N/A	
1446											95% Percentile Bootstrap UCL	N/A	
1447											95% BCA Bootstrap UCL	N/A	
1448													
1449	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1450					k star (bias corrected)	3.522	Data appear Lognormal at 5% Significance Level						
1451					Theta Star	1.893							
1452					nu star	197.3							
1453													
1454					A-D Test Statistic	0.81	Nonparametric Statistics						
1455					5% A-D Critical Value	0.75	Kaplan-Meier (KM) Method						
1456					K-S Test Statistic	0.75	Mean						6.668

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	5% K-S Critical Value					0.166	SD					3.957	
1458	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.761	
1459							95% KM (t) UCL					7.965	
1460	Assuming Gamma Distribution						95% KM (z) UCL					7.92	
1461	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					7.965	
1462	Minimum						2.8	95% KM (bootstrap t) UCL					8.584
1463	Maximum						20.9	95% KM (BCA) UCL					8.036
1464	Mean						6.668	95% KM (Percentile Bootstrap) UCL					8.036
1465	Median						5.95	95% KM (Chebyshev) UCL					9.987
1466	SD						4.029	97.5% KM (Chebyshev) UCL					11.42
1467	k star						3.522	99% KM (Chebyshev) UCL					14.24
1468	Theta star						1.893						
1469	Nu star						197.3	Potential UCLs to Use					
1470	AppChi2						165.8	95% KM (Chebyshev) UCL					9.987
1471	95% Gamma Approximate UCL						7.935						
1472	95% Adjusted Gamma UCL						8.021						
1473	Note: DL/2 is not a recommended method.												
1474													
1475													
1476	Copper												
1477													
1478	General Statistics												
1479	Number of Valid Data					33	Number of Detected Data					33	
1480	Number of Distinct Detected Data					32	Number of Non-Detect Data					0	
1481	Number of Missing Values					34	Percent Non-Detects					0.00%	
1482													
1483	Raw Statistics						Log-transformed Statistics						
1484	Minimum Detected					5.8	Minimum Detected					1.758	
1485	Maximum Detected					106	Maximum Detected					4.663	
1486	Mean of Detected					32.06	Mean of Detected					3.156	
1487	SD of Detected					26.05	SD of Detected					0.807	
1488	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1489	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1490													
1491													
1492	UCL Statistics												
1493	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1494	Shapiro Wilk Test Statistic					0.844	Shapiro Wilk Test Statistic					0.933	
1495	5% Shapiro Wilk Critical Value					0.931	5% Shapiro Wilk Critical Value					0.931	
1496	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1497													
1498	Assuming Normal Distribution						Assuming Lognormal Distribution						
1499	DL/2 Substitution Method						DL/2 Substitution Method						
1500	Mean					32.06	Mean					3.156	
1501	SD					26.05	SD					0.807	
1502	95% DL/2 (t) UCL					39.75	95% H-Stat (DL/2) UCL					44.51	
1503													
1504	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1505	MLE method failed to converge properly						Mean in Log Scale					N/A	
1506							SD in Log Scale					N/A	
1507							Mean in Original Scale					N/A	
1508							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
1509											95% Percentile Bootstrap UCL	N/A
1510											95% BCA Bootstrap UCL	N/A
1511												
1512	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1513					k star (bias corrected)	1.613	Data appear Lognormal at 5% Significance Level					
1514					Theta Star	19.87						
1515					nu star	106.5						
1516												
1517					A-D Test Statistic	0.972	Nonparametric Statistics					
1518					5% A-D Critical Value	0.762	Kaplan-Meier (KM) Method					
1519					K-S Test Statistic	0.762	Mean					
1520					5% K-S Critical Value	0.156	SD					
1521	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
1522							95% KM (t) UCL					
1523	Assuming Gamma Distribution						95% KM (z) UCL					
1524	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
1525					Minimum	5.8	95% KM (bootstrap t) UCL					
1526					Maximum	106	95% KM (BCA) UCL					
1527					Mean	32.06	95% KM (Percentile Bootstrap) UCL					
1528					Median	23.5	95% KM (Chebyshev) UCL					
1529					SD	26.05	97.5% KM (Chebyshev) UCL					
1530					k star	1.613	99% KM (Chebyshev) UCL					
1531					Theta star	19.87						
1532					Nu star	106.5	Potential UCLs to Use					
1533					AppChi2	83.66	95% KM (Chebyshev) UCL					
1534					95% Gamma Approximate UCL	40.81						
1535					95% Adjusted Gamma UCL	41.32						
1536	Note: DL/2 is not a recommended method.											
1537												
1538												
1539	Dibenz(a,h)anthracene											
1540												
1541	General Statistics											
1542					Number of Valid Data	27					Number of Detected Data	7
1543					Number of Distinct Detected Data	5					Number of Non-Detect Data	20
1544					Number of Missing Values	34					Percent Non-Detects	74.07%
1545												
1546	Raw Statistics						Log-transformed Statistics					
1547					Minimum Detected	0.4					Minimum Detected	-0.916
1548					Maximum Detected	3					Maximum Detected	1.099
1549					Mean of Detected	0.914					Mean of Detected	-0.376
1550					SD of Detected	0.942					SD of Detected	0.721
1551					Minimum Non-Detect	4					Minimum Non-Detect	1.386
1552					Maximum Non-Detect	10					Maximum Non-Detect	2.303
1553												
1554	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
1555	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
1556	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
1557												
1558	Warning: There are only 7 Detected Values in this data											
1559	Note: It should be noted that even though bootstrap may be performed on this data set											
1560	the resulting calculations may not be reliable enough to draw conclusions											

	A	B	C	D	E	F	G	H	I	J	K	L			
1561															
1562	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.														
1563															
1564															
1565	UCL Statistics														
1566	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only								
1567	Shapiro Wilk Test Statistic			0.619			Shapiro Wilk Test Statistic			0.779					
1568	5% Shapiro Wilk Critical Value			0.803			5% Shapiro Wilk Critical Value			0.803					
1569	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level								
1570															
1571	Assuming Normal Distribution						Assuming Lognormal Distribution								
1572	DL/2 Substitution Method						DL/2 Substitution Method								
1573	Mean			2.274			Mean			0.618					
1574	SD			1.226			SD			0.738					
1575	95% DL/2 (t) UCL			2.676			95% H-Stat (DL/2) UCL			6.6					
1576															
1577	Maximum Likelihood Estimate(MLE) Method						Log ROS Method								
1578	MLE method failed to converge properly						Mean in Log Scale			-0.376					
1579							SD in Log Scale			0.577					
1580							Mean in Original Scale			0.82					
1581							SD in Original Scale			0.582					
1582							95% Percentile Bootstrap UCL			1.007					
1583							95% BCA Bootstrap UCL			1.064					
1584															
1585	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only								
1586	k star (bias corrected)			1.179			Data do not follow a Discernable Distribution (0.05)								
1587	Theta Star			0.776											
1588	nu star			16.5											
1589															
1590	A-D Test Statistic			0.953			Nonparametric Statistics								
1591	5% A-D Critical Value			0.716			Kaplan-Meier (KM) Method								
1592	K-S Test Statistic			0.716			Mean			0.914					
1593	5% K-S Critical Value			0.316			SD			0.872					
1594	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.356					
1595							95% KM (t) UCL			1.522					
1596	Assuming Gamma Distribution						95% KM (z) UCL			1.5					
1597	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			1.558					
1598	Minimum			1E-09			95% KM (bootstrap t) UCL			6.435					
1599	Maximum			3			95% KM (BCA) UCL			1.525					
1600	Mean			0.921			95% KM (Percentile Bootstrap) UCL			1.56					
1601	Median			0.796			95% KM (Chebyshev) UCL			2.467					
1602	SD			0.676			97.5% KM (Chebyshev) UCL			3.139					
1603	k star			0.57			99% KM (Chebyshev) UCL			4.458					
1604	Theta star			1.617											
1605	Nu star			30.78			Potential UCLs to Use								
1606	AppChi2						19.1			95% KM (t) UCL			1.522		
1607	95% Gamma Approximate UCL			1.484			95% KM (% Bootstrap) UCL			1.56					
1608	95% Adjusted Gamma UCL			1.531											
1609	Note: DL/2 is not a recommended method.														
1610															
1611															
1612	Dibenzofuran														

	A	B	C	D	E	F	G	H	I	J	K	L
1613												
1614	General Statistics											
1615	Number of Valid Data					27	Number of Detected Data					10
1616	Number of Distinct Detected Data					7	Number of Non-Detect Data					17
1617	Number of Missing Values					34	Percent Non-Detects					62.96%
1618												
1619	Raw Statistics						Log-transformed Statistics					
1620	Minimum Detected					0.2	Minimum Detected					-1.609
1621	Maximum Detected					10	Maximum Detected					2.303
1622	Mean of Detected					1.76	Mean of Detected					-0.373
1623	SD of Detected					3.111	SD of Detected					1.28
1624	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1625	Maximum Non-Detect					10	Maximum Non-Detect					2.303
1626												
1627	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					26
1628	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1629	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					96.30%
1630												
1631	UCL Statistics											
1632	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1633	Shapiro Wilk Test Statistic					0.568	Shapiro Wilk Test Statistic					0.839
1634	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
1635	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1636												
1637	Assuming Normal Distribution						Assuming Lognormal Distribution					
1638	DL/2 Substitution Method						DL/2 Substitution Method					
1639	Mean					2.337	Mean					0.451
1640	SD					2.027	SD					1.02
1641	95% DL/2 (t) UCL					3.003	95% H-Stat (DL/2) UCL					11.34
1642												
1643	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1644	MLE method failed to converge properly						Mean in Log Scale					-0.621
1645							SD in Log Scale					0.942
1646							Mean in Original Scale					1.009
1647							SD in Original Scale					1.943
1648							95% Percentile Bootstrap UCL					1.694
1649							95% BCA Bootstrap UCL					2.181
1650												
1651	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1652	k star (bias corrected)					0.522	Data do not follow a Discernable Distribution (0.05)					
1653	Theta Star					3.37						
1654	nu star					10.44						
1655												
1656	A-D Test Statistic					1.23	Nonparametric Statistics					
1657	5% A-D Critical Value					0.765	Kaplan-Meier (KM) Method					
1658	K-S Test Statistic					0.765	Mean					1.005
1659	5% K-S Critical Value					0.278	SD					1.959
1660	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.421
1661							95% KM (t) UCL					1.722
1662	Assuming Gamma Distribution						95% KM (z) UCL					1.697
1663	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.704
1664	Minimum					1E-09	95% KM (bootstrap t) UCL					4.312

	A	B	C	D	E	F	G	H	I	J	K	L	
1665					Maximum	10				95% KM (BCA) UCL		1.786	
1666					Mean	1.632				95% KM (Percentile Bootstrap) UCL		1.729	
1667					Median	1.207				95% KM (Chebyshev) UCL		2.838	
1668					SD	1.945				97.5% KM (Chebyshev) UCL		3.632	
1669					k star	0.487				99% KM (Chebyshev) UCL		5.19	
1670					Theta star	3.354							
1671					Nu star	26.28				Potential UCLs to Use			
1672					AppChi2	15.6				95% KM (BCA) UCL		1.786	
1673					95% Gamma Approximate UCL	2.75							
1674					95% Adjusted Gamma UCL	2.847							
1675	Note: DL/2 is not a recommended method.												
1676													
1677													
1678	Fluoranthene												
1679													
1680	General Statistics												
1681					Number of Valid Data	27				Number of Detected Data		14	
1682					Number of Distinct Detected Data	9				Number of Non-Detect Data		13	
1683					Number of Missing Values	34				Percent Non-Detects		48.15%	
1684													
1685	Raw Statistics						Log-transformed Statistics						
1686					Minimum Detected	0.2				Minimum Detected		-1.609	
1687					Maximum Detected	9				Maximum Detected		2.197	
1688					Mean of Detected	2.864				Mean of Detected		0.52	
1689					SD of Detected	2.783				SD of Detected		1.195	
1690					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
1691					Maximum Non-Detect	13				Maximum Non-Detect		2.565	
1692													
1693	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						27
1694	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
1695	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
1696													
1697	UCL Statistics												
1698	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1699					Shapiro Wilk Test Statistic	0.841				Shapiro Wilk Test Statistic		0.938	
1700					5% Shapiro Wilk Critical Value	0.874				5% Shapiro Wilk Critical Value		0.874	
1701	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1702													
1703	Assuming Normal Distribution						Assuming Lognormal Distribution						
1704					DL/2 Substitution Method					DL/2 Substitution Method			
1705					Mean	2.8				Mean		0.713	
1706					SD	2.189				SD		0.909	
1707					95% DL/2 (t) UCL	3.519				95% H-Stat (DL/2) UCL		8.991	
1708													
1709					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1710	MLE method failed to converge properly						Mean in Log Scale						0.285
1711							SD in Log Scale						0.976
1712							Mean in Original Scale						2.067
1713							SD in Original Scale						2.188
1714							95% Percentile Bootstrap UCL						2.784
1715							95% BCA Bootstrap UCL						2.887
1716													

	A	B	C	D	E	F	G	H	I	J	K	L
1717	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1718	k star (bias corrected)				0.893		Data appear Gamma Distributed at 5% Significance Level					
1719	Theta Star				3.209							
1720	nu star				24.99							
1721												
1722	A-D Test Statistic				0.242		Nonparametric Statistics					
1723	5% A-D Critical Value				0.759		Kaplan-Meier (KM) Method					
1724	K-S Test Statistic				0.759						Mean	2.247
1725	5% K-S Critical Value				0.235						SD	2.235
1726	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.506
1727											95% KM (t) UCL	3.109
1728	Assuming Gamma Distribution										95% KM (z) UCL	3.079
1729	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	3.111
1730	Minimum				0.2						95% KM (bootstrap t) UCL	3.367
1731	Maximum				9						95% KM (BCA) UCL	3.153
1732	Mean				2.872						95% KM (Percentile Bootstrap) UCL	3.066
1733	Median				2.885						95% KM (Chebyshev) UCL	4.451
1734	SD				1.968						97.5% KM (Chebyshev) UCL	5.404
1735	k star				1.768						99% KM (Chebyshev) UCL	7.277
1736	Theta star				1.624							
1737	Nu star				95.49		Potential UCLs to Use					
1738	AppChi2				73.95						95% KM (BCA) UCL	3.153
1739	95% Gamma Approximate UCL				3.709							
1740	95% Adjusted Gamma UCL				3.77							
1741	Note: DL/2 is not a recommended method.											
1742												
1743												
1744	Fluorene											
1745												
1746	General Statistics											
1747	Number of Valid Data				27		Number of Detected Data				5	
1748	Number of Distinct Detected Data				5		Number of Non-Detect Data				22	
1749	Number of Missing Values				34		Percent Non-Detects				81.48%	
1750												
1751	Raw Statistics						Log-transformed Statistics					
1752	Minimum Detected				0.2		Minimum Detected				-1.609	
1753	Maximum Detected				3		Maximum Detected				1.099	
1754	Mean of Detected				1.02		Mean of Detected				-0.445	
1755	SD of Detected				1.15		SD of Detected				1.063	
1756	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
1757	Maximum Non-Detect				10		Maximum Non-Detect				2.303	
1758												
1759	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				27	
1760	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
1761	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
1762												
1763	Warning: There are only 5 Detected Values in this data											
1764	Note: It should be noted that even though bootstrap may be performed on this data set											
1765	the resulting calculations may not be reliable enough to draw conclusions											
1766												
1767	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1768												

	A	B	C	D	E	F	G	H	I	J	K	L	
1769													
1770	UCL Statistics												
1771	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1772	Shapiro Wilk Test Statistic					0.779	Shapiro Wilk Test Statistic					0.967	
1773	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762	
1774	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1775													
1776	Assuming Normal Distribution						Assuming Lognormal Distribution						
1777	DL/2 Substitution Method						DL/2 Substitution Method						
1778	Mean					2.448	Mean					0.713	
1779	SD					1.155	SD					0.747	
1780	95% DL/2 (t) UCL					2.827	95% H-Stat (DL/2) UCL					6.233	
1781													
1782	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1783	MLE method failed to converge properly						Mean in Log Scale					-0.445	
1784	SD in Log Scale												0.94
1785	Mean in Original Scale												0.966
1786	SD in Original Scale												0.924
1787	95% Percentile Bootstrap UCL												1.273
1788	95% BCA Bootstrap UCL												1.313
1789													
1790	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1791	k star (bias corrected)					0.619	Data appear Normal at 5% Significance Level						
1792	Theta Star					1.647							
1793	nu star					6.193							
1794													
1795	A-D Test Statistic					0.31	Nonparametric Statistics						
1796	5% A-D Critical Value					0.689	Kaplan-Meier (KM) Method						
1797	K-S Test Statistic					0.689	Mean					1.02	
1798	5% K-S Critical Value					0.363	SD					1.028	
1799	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.514	
1800	95% KM (t) UCL												1.897
1801	Assuming Gamma Distribution						95% KM (z) UCL						1.866
1802	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						1.982
1803	Minimum					1E-09	95% KM (bootstrap t) UCL					4.743	
1804	Maximum					3	95% KM (BCA) UCL					1.98	
1805	Mean					1.034	95% KM (Percentile Bootstrap) UCL					2	
1806	Median					0.879	95% KM (Chebyshev) UCL					3.261	
1807	SD					0.92	97.5% KM (Chebyshev) UCL					4.231	
1808	k star					0.225	99% KM (Chebyshev) UCL					6.136	
1809	Theta star					4.587							
1810	Nu star					12.17	Potential UCLs to Use						
1811	AppChi2					5.337	95% KM (t) UCL					1.897	
1812	95% Gamma Approximate UCL					2.356	95% KM (Percentile Bootstrap) UCL					2	
1813	95% Adjusted Gamma UCL					2.49							
1814	Note: DL/2 is not a recommended method.												
1815													
1816													
1817	Indeno(1,2,3-cd)pyrene												
1818													
1819	General Statistics												
1820	Number of Valid Data					27	Number of Detected Data					10	

	A	B	C	D	E	F	G	H	I	J	K	L
1821	Number of Distinct Detected Data					7	Number of Non-Detect Data					17
1822	Number of Missing Values					34	Percent Non-Detects					62.96%
1823												
1824	Raw Statistics						Log-transformed Statistics					
1825	Minimum Detected					0.2	Minimum Detected					-1.609
1826	Maximum Detected					5	Maximum Detected					1.609
1827	Mean of Detected					1.52	Mean of Detected					-0.102
1828	SD of Detected					1.539	SD of Detected					1.143
1829	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1830	Maximum Non-Detect					9	Maximum Non-Detect					2.197
1831												
1832	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27
1833	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
1834	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
1835												
1836	UCL Statistics											
1837	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1838	Shapiro Wilk Test Statistic					0.837	Shapiro Wilk Test Statistic					0.934
1839	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842
1840	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1841												
1842	Assuming Normal Distribution						Assuming Lognormal Distribution					
1843	DL/2 Substitution Method						DL/2 Substitution Method					
1844	Mean					2.193	Mean					0.542
1845	SD					1.179	SD					0.862
1846	95% DL/2 (t) UCL					2.579	95% H-Stat (DL/2) UCL					6.989
1847												
1848	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1849	MLE method failed to converge properly						Mean in Log Scale					-0.227
1850							SD in Log Scale					0.879
1851							Mean in Original Scale					1.147
1852							SD in Original Scale					1.074
1853							95% Percentile Bootstrap UCL					1.515
1854							95% BCA Bootstrap UCL					1.581
1855												
1856	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1857	k star (bias corrected)					0.834	Data appear Gamma Distributed at 5% Significance Level					
1858	Theta Star					1.822						
1859	nu star					16.69						
1860												
1861	A-D Test Statistic					0.299	Nonparametric Statistics					
1862	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method					
1863	K-S Test Statistic					0.747	Mean					1.317
1864	5% K-S Critical Value					0.273	SD					1.229
1865	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.366
1866							95% KM (t) UCL					1.941
1867	Assuming Gamma Distribution						95% KM (z) UCL					1.919
1868	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.958
1869	Minimum					0.2	95% KM (bootstrap t) UCL					2.135
1870	Maximum					5	95% KM (BCA) UCL					1.952
1871	Mean					1.55	95% KM (Percentile Bootstrap) UCL					1.921
1872	Median					1.544	95% KM (Chebyshev) UCL					2.911

	A	B	C	D	E	F	G	H	I	J	K	L	
1873					SD	0.931				97.5% KM (Chebyshev) UCL		3.601	
1874					k star	2.36				99% KM (Chebyshev) UCL		4.955	
1875					Theta star	0.657							
1876					Nu star	127.5				Potential UCLs to Use			
1877					AppChi2	102.4				95% KM (t) UCL		1.941	
1878					95% Gamma Approximate UCL	1.93							
1879					95% Adjusted Gamma UCL	1.957							
1880	Note: DL/2 is not a recommended method.												
1881													
1882													
1883	Iron												
1884													
1885	General Statistics												
1886					Number of Valid Data	28				Number of Detected Data		28	
1887					Number of Distinct Detected Data	27				Number of Non-Detect Data		0	
1888					Number of Missing Values	34				Percent Non-Detects		0.00%	
1889													
1890	Raw Statistics						Log-transformed Statistics						
1891					Minimum Detected	5140				Minimum Detected		8.545	
1892					Maximum Detected	39000				Maximum Detected		10.57	
1893					Mean of Detected	16647				Mean of Detected		9.617	
1894					SD of Detected	7696				SD of Detected		0.469	
1895					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1896					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1897													
1898													
1899	UCL Statistics												
1900	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1901					Shapiro Wilk Test Statistic	0.928				Shapiro Wilk Test Statistic		0.968	
1902					5% Shapiro Wilk Critical Value	0.924				5% Shapiro Wilk Critical Value		0.924	
1903	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1904													
1905	Assuming Normal Distribution						Assuming Lognormal Distribution						
1906					DL/2 Substitution Method					DL/2 Substitution Method			
1907					Mean	16647				Mean		9.617	
1908					SD	7696				SD		0.469	
1909					95% DL/2 (t) UCL	19125				95% H-Stat (DL/2) UCL		19941	
1910													
1911					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1912	MLE method failed to converge properly										Mean in Log Scale		N/A
1913											SD in Log Scale		N/A
1914											Mean in Original Scale		N/A
1915											SD in Original Scale		N/A
1916											95% Percentile Bootstrap UCL		N/A
1917											95% BCA Bootstrap UCL		N/A
1918													
1919	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1920					k star (bias corrected)	4.513				Data appear Normal at 5% Significance Level			
1921					Theta Star	3689							
1922					nu star	252.7							
1923													
1924					A-D Test Statistic	0.441				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L		
1925	5% A-D Critical Value					0.749	Kaplan-Meier (KM) Method							
1926	K-S Test Statistic					0.749	Mean					16647		
1927	5% K-S Critical Value					0.166	SD					7558		
1928	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1454		
1929							95% KM (t) UCL					19125		
1930	Assuming Gamma Distribution						95% KM (z) UCL					19040		
1931	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					19125		
1932	Minimum						5140	95% KM (bootstrap t) UCL					19458	
1933	Maximum						39000	95% KM (BCA) UCL					18982	
1934	Mean						16647	95% KM (Percentile Bootstrap) UCL					19098	
1935	Median						16900	95% KM (Chebyshev) UCL					22987	
1936	SD						7696	97.5% KM (Chebyshev) UCL					25730	
1937	k star						4.513	99% KM (Chebyshev) UCL					31119	
1938	Theta star						3689							
1939	Nu star						252.7	Potential UCLs to Use						
1940	AppChi2						216.9	95% KM (t) UCL					19125	
1941	95% Gamma Approximate UCL					19395	95% KM (Percentile Bootstrap) UCL					19098		
1942	95% Adjusted Gamma UCL					19580								
1943	Note: DL/2 is not a recommended method.													
1944														
1945														
1946	Lead													
1947														
1948	General Statistics													
1949	Number of Valid Data					33	Number of Detected Data					33		
1950	Number of Distinct Detected Data					33	Number of Non-Detect Data					0		
1951	Number of Missing Values					34	Percent Non-Detects					0.00%		
1952														
1953	Raw Statistics						Log-transformed Statistics							
1954	Minimum Detected					4	Minimum Detected					1.386		
1955	Maximum Detected					444	Maximum Detected					6.096		
1956	Mean of Detected					85.39	Mean of Detected					3.539		
1957	SD of Detected					105	SD of Detected					1.506		
1958	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A		
1959	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A		
1960														
1961														
1962	UCL Statistics													
1963	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1964	Shapiro Wilk Test Statistic					0.779	Shapiro Wilk Test Statistic					0.903		
1965	5% Shapiro Wilk Critical Value					0.931	5% Shapiro Wilk Critical Value					0.931		
1966	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1967														
1968	Assuming Normal Distribution						Assuming Lognormal Distribution							
1969	DL/2 Substitution Method						DL/2 Substitution Method							
1970	Mean						85.39	Mean						3.539
1971	SD						105	SD						1.506
1972	95% DL/2 (t) UCL						116.4	95% H-Stat (DL/2) UCL						241.4
1973														
1974	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1975	MLE method failed to converge properly						Mean in Log Scale						N/A	
1976							SD in Log Scale						N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
1977						Mean in Original Scale					N/A	
1978						SD in Original Scale					N/A	
1979						95% Percentile Bootstrap UCL					N/A	
1980						95% BCA Bootstrap UCL					N/A	
1981												
1982	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1983	k star (bias corrected)					0.629	Data do not follow a Discernable Distribution (0.05)					
1984	Theta Star					135.8						
1985	nu star					41.49						
1986												
1987	A-D Test Statistic					1.059	Nonparametric Statistics					
1988	5% A-D Critical Value					0.795	Kaplan-Meier (KM) Method					
1989	K-S Test Statistic					0.795	Mean					85.39
1990	5% K-S Critical Value					0.16	SD					103.4
1991	Data not Gamma Distributed at 5% Significance Level					SE of Mean					18.28	
1992						95% KM (t) UCL					116.4	
1993	Assuming Gamma Distribution					95% KM (z) UCL					115.5	
1994	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					116.4	
1995	Minimum					4	95% KM (bootstrap t) UCL					124.9
1996	Maximum					444	95% KM (BCA) UCL					115.1
1997	Mean					85.39	95% KM (Percentile Bootstrap) UCL					115.7
1998	Median					49.4	95% KM (Chebyshev) UCL					165.1
1999	SD					105	97.5% KM (Chebyshev) UCL					199.5
2000	k star					0.629	99% KM (Chebyshev) UCL					267.2
2001	Theta star					135.8						
2002	Nu star					41.49	Potential UCLs to Use					
2003	AppChi2					27.73	99% KM (Chebyshev) UCL					267.2
2004	95% Gamma Approximate UCL					127.8						
2005	95% Adjusted Gamma UCL					130.5						
2006	Note: DL/2 is not a recommended method.											
2007												
2008												
2009	Magnesium											
2010												
2011	General Statistics											
2012	Number of Valid Data					28	Number of Detected Data					28
2013	Number of Distinct Detected Data					27	Number of Non-Detect Data					0
2014	Number of Missing Values					34	Percent Non-Detects					0.00%
2015												
2016	Raw Statistics					Log-transformed Statistics						
2017	Minimum Detected					1760	Minimum Detected					7.473
2018	Maximum Detected					21800	Maximum Detected					9.99
2019	Mean of Detected					6606	Mean of Detected					8.574
2020	SD of Detected					5159	SD of Detected					0.647
2021	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2022	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2023												
2024												
2025	UCL Statistics											
2026	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
2027	Shapiro Wilk Test Statistic					0.755	Shapiro Wilk Test Statistic					0.94
2028	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924

	A	B	C	D	E	F	G	H	I	J	K	L
2029	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2030												
2031	Assuming Normal Distribution						Assuming Lognormal Distribution					
2032	DL/2 Substitution Method						DL/2 Substitution Method					
2033	Mean				6606		Mean				8.574	
2034	SD				5159		SD				0.647	
2035	95% DL/2 (t) UCL				8266		95% H-Stat (DL/2) UCL				8443	
2036												
2037	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2038	MLE method failed to converge properly						Mean in Log Scale				N/A	
2039							SD in Log Scale				N/A	
2040							Mean in Original Scale				N/A	
2041							SD in Original Scale				N/A	
2042							95% Percentile Bootstrap UCL				N/A	
2043							95% BCA Bootstrap UCL				N/A	
2044												
2045	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2046	k star (bias corrected)				2.175		Data Follow Appr. Gamma Distribution at 5% Significance Level					
2047	Theta Star				3037							
2048	nu star				121.8							
2049												
2050	A-D Test Statistic				0.974		Nonparametric Statistics					
2051	5% A-D Critical Value				0.756		Kaplan-Meier (KM) Method					
2052	K-S Test Statistic				0.756		Mean				6606	
2053	5% K-S Critical Value				0.167		SD				5066	
2054	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean				974.9	
2055							95% KM (t) UCL				8266	
2056	Assuming Gamma Distribution						95% KM (z) UCL				8209	
2057	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				8266	
2058	Minimum				1760		95% KM (bootstrap t) UCL				9023	
2059	Maximum				21800		95% KM (BCA) UCL				8284	
2060	Mean				6606		95% KM (Percentile Bootstrap) UCL				8269	
2061	Median				5425		95% KM (Chebyshev) UCL				10855	
2062	SD				5159		97.5% KM (Chebyshev) UCL				12694	
2063	k star				2.175		99% KM (Chebyshev) UCL				16306	
2064	Theta star				3037							
2065	Nu star				121.8		Potential UCLs to Use					
2066	AppChi2				97.31		95% KM (BCA) UCL				8284	
2067	95% Gamma Approximate UCL				8268							
2068	95% Adjusted Gamma UCL				8384							
2069	Note: DL/2 is not a recommended method.											
2070												
2071												
2072	Manganese											
2073												
2074	General Statistics											
2075	Number of Valid Data				28		Number of Detected Data				28	
2076	Number of Distinct Detected Data				26		Number of Non-Detect Data				0	
2077	Number of Missing Values				34		Percent Non-Detects				0.00%	
2078												
2079	Raw Statistics						Log-transformed Statistics					
2080	Minimum Detected				91.9		Minimum Detected				4.521	

	A	B	C	D	E	F	G	H	I	J	K	L	
2081				Maximum Detected		1060				Maximum Detected		6.966	
2082				Mean of Detected		291.7				Mean of Detected		5.515	
2083				SD of Detected		197.5				SD of Detected		0.55	
2084				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
2085				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
2086													
2087													
2088				UCL Statistics									
2089	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2090				Shapiro Wilk Test Statistic		0.767				Shapiro Wilk Test Statistic		0.967	
2091				5% Shapiro Wilk Critical Value		0.924				5% Shapiro Wilk Critical Value		0.924	
2092	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2093													
2094	Assuming Normal Distribution						Assuming Lognormal Distribution						
2095				DL/2 Substitution Method						DL/2 Substitution Method			
2096				Mean		291.7				Mean		5.515	
2097				SD		197.5				SD		0.55	
2098				95% DL/2 (t) UCL		355.3				95% H-Stat (DL/2) UCL		356.6	
2099													
2100				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
2101	MLE method failed to converge properly										Mean in Log Scale		N/A
2102										SD in Log Scale		N/A	
2103										Mean in Original Scale		N/A	
2104										SD in Original Scale		N/A	
2105										95% Percentile Bootstrap UCL		N/A	
2106										95% BCA Bootstrap UCL		N/A	
2107													
2108	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2109				k star (bias corrected)		2.946				Data appear Gamma Distributed at 5% Significance Level			
2110				Theta Star		99.02							
2111				nu star		165							
2112													
2113				A-D Test Statistic		0.612				Nonparametric Statistics			
2114				5% A-D Critical Value		0.753				Kaplan-Meier (KM) Method			
2115				K-S Test Statistic		0.753				Mean		291.7	
2116				5% K-S Critical Value		0.166				SD		194	
2117	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		37.33
2118										95% KM (t) UCL		355.3	
2119	Assuming Gamma Distribution										95% KM (z) UCL		353.1
2120	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		355.3
2121				Minimum		91.9				95% KM (bootstrap t) UCL		389	
2122				Maximum		1060				95% KM (BCA) UCL		359	
2123				Mean		291.7				95% KM (Percentile Bootstrap) UCL		356.2	
2124				Median		235				95% KM (Chebyshev) UCL		454.4	
2125				SD		197.5				97.5% KM (Chebyshev) UCL		524.8	
2126				k star		2.946				99% KM (Chebyshev) UCL		663.1	
2127				Theta star		99.02							
2128				Nu star		165				Potential UCLs to Use			
2129				AppChi2		136.3				95% KM (BCA) UCL		359	
2130				95% Gamma Approximate UCL		353.1							
2131				95% Adjusted Gamma UCL		357.3							
2132	Note: DL/2 is not a recommended method.												

	A	B	C	D	E	F	G	H	I	J	K	L	
2133													
2134													
2135	Mercury												
2136													
2137	General Statistics												
2138	Number of Valid Data					28		Number of Detected Data					20
2139	Number of Distinct Detected Data					19		Number of Non-Detect Data					8
2140	Number of Missing Values					34		Percent Non-Detects					28.57%
2141													
2142	Raw Statistics						Log-transformed Statistics						
2143	Minimum Detected					0.004		Minimum Detected					-5.521
2144	Maximum Detected					0.81		Maximum Detected					-0.211
2145	Mean of Detected					0.237		Mean of Detected					-2.337
2146	SD of Detected					0.25		SD of Detected					1.713
2147	Minimum Non-Detect					0.098		Minimum Non-Detect					-2.323
2148	Maximum Non-Detect					0.11		Maximum Non-Detect					-2.207
2149													
2150	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16	
2151	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					12	
2152	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					57.14%	
2153													
2154	UCL Statistics												
2155	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2156	Shapiro Wilk Test Statistic					0.848		Shapiro Wilk Test Statistic					0.899
2157	5% Shapiro Wilk Critical Value					0.905		5% Shapiro Wilk Critical Value					0.905
2158	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2159													
2160	Assuming Normal Distribution						Assuming Lognormal Distribution						
2161	DL/2 Substitution Method					DL/2 Substitution Method							
2162	Mean					0.184		Mean					-2.513
2163	SD					0.226		SD					1.465
2164	95% DL/2 (t) UCL					0.257		95% H-Stat (DL/2) UCL					0.899
2165													
2166	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
2167	Mean					0.0361		Mean in Log Scale					-2.795
2168	SD					0.375		SD in Log Scale					1.647
2169	95% MLE (t) UCL					0.157		Mean in Original Scale					0.176
2170	95% MLE (Tiku) UCL					0.199		SD in Original Scale					0.231
2171							95% Percentile Bootstrap UCL					0.249	
2172							95% BCA Bootstrap UCL					0.26	
2173													
2174	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2175	k star (bias corrected)					0.608		Data appear Gamma Distributed at 5% Significance Level					
2176	Theta Star					0.39							
2177	nu star					24.33							
2178													
2179	A-D Test Statistic					0.338		Nonparametric Statistics					
2180	5% A-D Critical Value					0.786		Kaplan-Meier (KM) Method					
2181	K-S Test Statistic					0.786		Mean					0.178
2182	5% K-S Critical Value					0.202		SD					0.226
2183	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.044	
2184							95% KM (t) UCL					0.253	

	A	B	C	D	E	F	G	H	I	J	K	L	
2185	Assuming Gamma Distribution						95% KM (z) UCL					0.251	
2186	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.253	
2187	Minimum						0.004	95% KM (bootstrap t) UCL					0.28
2188	Maximum						0.81	95% KM (BCA) UCL					0.25
2189	Mean						0.211	95% KM (Percentile Bootstrap) UCL					0.255
2190	Median						0.136	95% KM (Chebyshev) UCL					0.37
2191	SD						0.219	97.5% KM (Chebyshev) UCL					0.453
2192	k star						0.739	99% KM (Chebyshev) UCL					0.616
2193	Theta star						0.286						
2194	Nu star						41.4	Potential UCLs to Use					
2195	AppChi2						27.65	95% KM (Chebyshev) UCL					0.37
2196	95% Gamma Approximate UCL						0.316						
2197	95% Adjusted Gamma UCL						0.324						
2198	Note: DL/2 is not a recommended method.												
2199													
2200													
2201	Methoxychlor												
2202													
2203	General Statistics												
2204	Number of Valid Data						28	Number of Detected Data					3
2205	Number of Distinct Detected Data						3	Number of Non-Detect Data					25
2206	Number of Missing Values						33	Percent Non-Detects					89.29%
2207													
2208	Raw Statistics						Log-transformed Statistics						
2209	Minimum Detected						0.75	Minimum Detected					-0.288
2210	Maximum Detected						3.4	Maximum Detected					1.224
2211	Mean of Detected						1.667	Mean of Detected					0.258
2212	SD of Detected						1.502	SD of Detected					0.839
2213	Minimum Non-Detect						3.4	Minimum Non-Detect					1.224
2214	Maximum Non-Detect						17	Maximum Non-Detect					2.833
2215													
2216	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					28	
2217	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
2218	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
2219													
2220	Warning: There are only 3 Distinct Detected Values in this data set												
2221	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
2222	Those methods will return a 'N/A' value on your output display!												
2223													
2224	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
2225	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
2226													
2227													
2228	UCL Statistics												
2229	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2230	Shapiro Wilk Test Statistic						0.778	Shapiro Wilk Test Statistic					0.812
2231	5% Shapiro Wilk Critical Value						0.767	5% Shapiro Wilk Critical Value					0.767
2232	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2233													
2234	Assuming Normal Distribution						Assuming Lognormal Distribution						
2235	DL/2 Substitution Method						DL/2 Substitution Method						
2236	Mean						2.377	Mean					0.764

	A	B	C	D	E	F	G	H	I	J	K	L	
2237					SD	1.367					SD	0.434	
2238					95% DL/2 (t) UCL	2.817				95% H-Stat (DL/2) UCL		2.979	
2239													
2240					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
2241					MLE method failed to converge properly						Mean in Log Scale	0.0144	
2242											SD in Log Scale	0.409	
2243											Mean in Original Scale	1.111	
2244											SD in Original Scale	0.571	
2245											95% Percentile Bootstrap UCL	1.292	
2246											95% BCA Bootstrap UCL	1.376	
2247													
2248					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
2249					k star (bias corrected)	N/A					Data appear Normal at 5% Significance Level		
2250					Theta Star	N/A							
2251					nu star	N/A							
2252													
2253					A-D Test Statistic	0.542					Nonparametric Statistics		
2254					5% A-D Critical Value	N/A					Kaplan-Meier (KM) Method		
2255					K-S Test Statistic	N/A					Mean	1.233	
2256					5% K-S Critical Value	N/A					SD	0.97	
2257					Data not Gamma Distributed at 5% Significance Level						SE of Mean	0.486	
2258											95% KM (t) UCL	2.061	
2259					Assuming Gamma Distribution						95% KM (z) UCL	2.032	
2260					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	2.033	
2261					Minimum	N/A					95% KM (bootstrap t) UCL	11.03	
2262					Maximum	N/A					95% KM (BCA) UCL	3.4	
2263					Mean	N/A					95% KM (Percentile Bootstrap) UCL	N/A	
2264					Median	N/A					95% KM (Chebyshev) UCL	3.351	
2265					SD	N/A					97.5% KM (Chebyshev) UCL	4.267	
2266					k star	N/A					99% KM (Chebyshev) UCL	6.067	
2267					Theta star	N/A							
2268					Nu star	N/A					Potential UCLs to Use		
2269					AppChi2	N/A					95% KM (t) UCL	2.061	
2270					95% Gamma Approximate UCL	N/A					95% KM (Percentile Bootstrap) UCL	N/A	
2271					95% Adjusted Gamma UCL	N/A							
2272					Note: DL/2 is not a recommended method.								
2273													
2274													
2275					Naphthalene								
2276													
2277					General Statistics								
2278					Number of Valid Data	27					Number of Detected Data	8	
2279					Number of Distinct Detected Data	5					Number of Non-Detect Data	19	
2280					Number of Missing Values	34					Percent Non-Detects	70.37%	
2281													
2282					Raw Statistics						Log-transformed Statistics		
2283					Minimum Detected	1					Minimum Detected	0	
2284					Maximum Detected	42.5					Maximum Detected	3.75	
2285					Mean of Detected	10.44					Mean of Detected	1.261	
2286					SD of Detected	15.7					SD of Detected	1.567	
2287					Minimum Non-Detect	3.5					Minimum Non-Detect	1.253	
2288					Maximum Non-Detect	7.7					Maximum Non-Detect	2.041	

	A	B	C	D	E	F	G	H	I	J	K	L
2289												
2290	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				25	
2291	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				2	
2292	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				92.59%	
2293												
2294	Warning: There are only 8 Detected Values in this data											
2295	Note: It should be noted that even though bootstrap may be performed on this data set											
2296	the resulting calculations may not be reliable enough to draw conclusions											
2297												
2298	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
2299												
2300												
2301	UCL Statistics											
2302	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2303	Shapiro Wilk Test Statistic			0.69			Shapiro Wilk Test Statistic			0.802		
2304	5% Shapiro Wilk Critical Value			0.818			5% Shapiro Wilk Critical Value			0.818		
2305	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2306												
2307	Assuming Normal Distribution						Assuming Lognormal Distribution					
2308	DL/2 Substitution Method						DL/2 Substitution Method					
2309	Mean			4.556			Mean			0.875		
2310	SD			9.037			SD			0.867		
2311	95% DL/2 (t) UCL			7.522			95% H-Stat (DL/2) UCL			6.4		
2312												
2313	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
2314	MLE method failed to converge properly						Mean in Log Scale			0.633		
2315							SD in Log Scale			1.022		
2316							Mean in Original Scale			4.262		
2317							SD in Original Scale			9.145		
2318							95% Percentile Bootstrap UCL			7.569		
2319							95% BCA Bootstrap UCL			9.256		
2320												
2321	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2322	k star (bias corrected)			0.442			Data Follow Appr. Gamma Distribution at 5% Significance Level					
2323	Theta Star			23.62								
2324	nu star			7.07								
2325												
2326	A-D Test Statistic			0.865			Nonparametric Statistics					
2327	5% A-D Critical Value			0.757			Kaplan-Meier (KM) Method					
2328	K-S Test Statistic			0.757			Mean			4.086		
2329	5% K-S Critical Value			0.308			SD			9.022		
2330	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean			1.881		
2331							95% KM (t) UCL			7.295		
2332	Assuming Gamma Distribution						95% KM (z) UCL			7.181		
2333	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			7.166		
2334	Minimum			1			95% KM (bootstrap t) UCL			16.72		
2335	Maximum			42.5			95% KM (BCA) UCL			7.289		
2336	Mean			10.04			95% KM (Percentile Bootstrap) UCL			7.496		
2337	Median			9.156			95% KM (Chebyshev) UCL			12.29		
2338	SD			8.683			97.5% KM (Chebyshev) UCL			15.83		
2339	k star			1.378			99% KM (Chebyshev) UCL			22.8		
2340	Theta star			7.282								

	A	B	C	D	E	F	G	H	I	J	K	L
2341					Nu star	74.44	Potential UCLs to Use					
2342					AppChi2	55.57	95% KM (t) UCL					7.295
2343			95% Gamma Approximate UCL			13.45						
2344			95% Adjusted Gamma UCL			13.7						
2345	Note: DL/2 is not a recommended method.											
2346												
2347												
2348	Nickel											
2349												
2350	General Statistics											
2351	Number of Valid Data				28	Number of Detected Data				28		
2352	Number of Distinct Detected Data				26	Number of Non-Detect Data				0		
2353	Number of Missing Values				34	Percent Non-Detects				0.00%		
2354												
2355	Raw Statistics						Log-transformed Statistics					
2356	Minimum Detected				4.9	Minimum Detected				1.589		
2357	Maximum Detected				52.8	Maximum Detected				3.967		
2358	Mean of Detected				16.4	Mean of Detected				2.622		
2359	SD of Detected				11.38	SD of Detected				0.579		
2360	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
2361	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
2362												
2363												
2364	UCL Statistics											
2365	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2366	Shapiro Wilk Test Statistic				0.753	Shapiro Wilk Test Statistic				0.935		
2367	5% Shapiro Wilk Critical Value				0.924	5% Shapiro Wilk Critical Value				0.924		
2368	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2369												
2370	Assuming Normal Distribution						Assuming Lognormal Distribution					
2371	DL/2 Substitution Method					DL/2 Substitution Method						
2372	Mean				16.4	Mean				2.622		
2373	SD				11.38	SD				0.579		
2374	95% DL/2 (t) UCL				20.06	95% H-Stat (DL/2) UCL				20.36		
2375												
2376	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
2377	MLE method failed to converge properly						Mean in Log Scale				N/A	
2378							SD in Log Scale				N/A	
2379							Mean in Original Scale				N/A	
2380							SD in Original Scale				N/A	
2381							95% Percentile Bootstrap UCL				N/A	
2382							95% BCA Bootstrap UCL				N/A	
2383												
2384	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2385	k star (bias corrected)				2.714	Data Follow Appr. Gamma Distribution at 5% Significance Level						
2386	Theta Star				6.043							
2387	nu star				152							
2388												
2389	A-D Test Statistic				0.952	Nonparametric Statistics						
2390	5% A-D Critical Value				0.754	Kaplan-Meier (KM) Method						
2391	K-S Test Statistic				0.754	Mean				16.4		
2392	5% K-S Critical Value				0.167	SD				11.17		

	A	B	C	D	E	F	G	H	I	J	K	L		
2393	Data follow Appr. Gamma Distribution at 5% Significance Level											SE of Mean	2.15	
2394											95% KM (t) UCL	20.06		
2395	Assuming Gamma Distribution											95% KM (z) UCL	19.94	
2396	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	20.06	
2397					Minimum	4.9					95% KM (bootstrap t) UCL	22.25		
2398					Maximum	52.8					95% KM (BCA) UCL	20.54		
2399					Mean	16.4					95% KM (Percentile Bootstrap) UCL	20.06		
2400					Median	15.7					95% KM (Chebyshev) UCL	25.77		
2401					SD	11.38					97.5% KM (Chebyshev) UCL	29.83		
2402					k star	2.714					99% KM (Chebyshev) UCL	37.79		
2403					Theta star	6.043								
2404					Nu star	152					Potential UCLs to Use			
2405					AppChi2	124.5					95% KM (BCA) UCL	20.54		
2406					95% Gamma Approximate UCL		20.02							
2407					95% Adjusted Gamma UCL		20.27							
2408	Note: DL/2 is not a recommended method.													
2409														
2410														
2411	Phenanthrene													
2412														
2413	General Statistics													
2414					Number of Valid Data		27				Number of Detected Data		15	
2415					Number of Distinct Detected Data		9				Number of Non-Detect Data		12	
2416					Number of Missing Values		34				Percent Non-Detects		44.44%	
2417														
2418	Raw Statistics						Log-transformed Statistics							
2419					Minimum Detected		0.2				Minimum Detected		-1.609	
2420					Maximum Detected		40.5				Maximum Detected		3.701	
2421					Mean of Detected		4.813				Mean of Detected		0.444	
2422					SD of Detected		10.38				SD of Detected		1.375	
2423					Minimum Non-Detect		4				Minimum Non-Detect		1.386	
2424					Maximum Non-Detect		6				Maximum Non-Detect		1.792	
2425														
2426	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect		25
2427	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected		2
2428	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage		92.59%
2429														
2430	UCL Statistics													
2431	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2432					Shapiro Wilk Test Statistic		0.471				Shapiro Wilk Test Statistic		0.919	
2433					5% Shapiro Wilk Critical Value		0.881				5% Shapiro Wilk Critical Value		0.881	
2434	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
2435														
2436	Assuming Normal Distribution						Assuming Lognormal Distribution							
2437					DL/2 Substitution Method						DL/2 Substitution Method			
2438					Mean		3.674				Mean		0.601	
2439					SD		7.729				SD		1.03	
2440					95% DL/2 (t) UCL		6.211				95% H-Stat (DL/2) UCL		11.79	
2441														
2442					Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
2443	MLE method failed to converge properly											Mean in Log Scale		0.205
2444												SD in Log Scale		1.157

	A	B	C	D	E	F	G	H	I	J	K	L	
2445							Mean in Original Scale					3.189	
2446							SD in Original Scale					7.853	
2447							95% Percentile Bootstrap UCL					6.008	
2448							95% BCA Bootstrap UCL					7.654	
2449													
2450	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
2451	k star (bias corrected)				0.488	Data appear Lognormal at 5% Significance Level							
2452	Theta Star				9.864								
2453	nu star				14.64								
2454													
2455	A-D Test Statistic				1.47	Nonparametric Statistics							
2456	5% A-D Critical Value				0.789	Kaplan-Meier (KM) Method							
2457	K-S Test Statistic				0.789						Mean	3.149	
2458	5% K-S Critical Value				0.233						SD	7.717	
2459	Data not Gamma Distributed at 5% Significance Level										SE of Mean	1.543	
2460											95% KM (t) UCL	5.78	
2461	Assuming Gamma Distribution										95% KM (z) UCL	5.686	
2462	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	5.741	
2463	Minimum				0.2						95% KM (bootstrap t) UCL	15.99	
2464	Maximum				40.5						95% KM (BCA) UCL	5.815	
2465	Mean				4.694						95% KM (Percentile Bootstrap) UCL	5.902	
2466	Median				3.611						95% KM (Chebyshev) UCL	9.873	
2467	SD				7.648						97.5% KM (Chebyshev) UCL	12.78	
2468	k star				0.835						99% KM (Chebyshev) UCL	18.5	
2469	Theta star				5.619								
2470	Nu star				45.11						Potential UCLs to Use		
2471	AppChi2				30.7						97.5% KM (Chebyshev) UCL	12.78	
2472	95% Gamma Approximate UCL				6.896								
2473	95% Adjusted Gamma UCL				7.071								
2474	Note: DL/2 is not a recommended method.												
2475													
2476													
2477	Potassium												
2478													
2479	General Statistics												
2480	Number of Valid Data				28					Number of Detected Data	28		
2481	Number of Distinct Detected Data				27					Number of Non-Detect Data	0		
2482	Number of Missing Values				34					Percent Non-Detects	0.00%		
2483													
2484	Raw Statistics					Log-transformed Statistics							
2485	Minimum Detected				503					Minimum Detected	6.221		
2486	Maximum Detected				5260					Maximum Detected	8.568		
2487	Mean of Detected				1277					Mean of Detected	6.965		
2488	SD of Detected				993.5					SD of Detected	0.577		
2489	Minimum Non-Detect				N/A					Minimum Non-Detect	N/A		
2490	Maximum Non-Detect				N/A					Maximum Non-Detect	N/A		
2491													
2492													
2493	UCL Statistics												
2494	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
2495	Shapiro Wilk Test Statistic				0.698					Shapiro Wilk Test Statistic	0.928		
2496	5% Shapiro Wilk Critical Value				0.924					5% Shapiro Wilk Critical Value	0.924		

	A	B	C	D	E	F	G	H	I	J	K	L
2497	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2498												
2499	Assuming Normal Distribution						Assuming Lognormal Distribution					
2500	DL/2 Substitution Method						DL/2 Substitution Method					
2501	Mean				1277		Mean				6.965	
2502	SD				993.5		SD				0.577	
2503	95% DL/2 (t) UCL				1597		95% H-Stat (DL/2) UCL				1564	
2504												
2505	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2506	MLE method failed to converge properly						Mean in Log Scale				N/A	
2507							SD in Log Scale				N/A	
2508							Mean in Original Scale				N/A	
2509							SD in Original Scale				N/A	
2510							95% Percentile Bootstrap UCL				N/A	
2511							95% BCA Bootstrap UCL				N/A	
2512												
2513	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2514	k star (bias corrected)				2.548		Data Follow Appr. Gamma Distribution at 5% Significance Level					
2515	Theta Star				501.3							
2516	nu star				142.7							
2517												
2518	A-D Test Statistic				0.954		Nonparametric Statistics					
2519	5% A-D Critical Value				0.754		Kaplan-Meier (KM) Method					
2520	K-S Test Statistic				0.754		Mean				1277	
2521	5% K-S Critical Value				0.167		SD				975.6	
2522	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean				187.8	
2523							95% KM (t) UCL				1597	
2524	Assuming Gamma Distribution						95% KM (z) UCL				1586	
2525	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1597	
2526	Minimum				503		95% KM (bootstrap t) UCL				1820	
2527	Maximum				5260		95% KM (BCA) UCL				1629	
2528	Mean				1277		95% KM (Percentile Bootstrap) UCL				1609	
2529	Median				1015		95% KM (Chebyshev) UCL				2096	
2530	SD				993.5		97.5% KM (Chebyshev) UCL				2450	
2531	k star				2.548		99% KM (Chebyshev) UCL				3145	
2532	Theta star				501.3							
2533	Nu star				142.7		Potential UCLs to Use					
2534	AppChi2				116.1		95% KM (BCA) UCL				1629	
2535	95% Gamma Approximate UCL				1570							
2536	95% Adjusted Gamma UCL				1590							
2537	Note: DL/2 is not a recommended method.											
2538												
2539												
2540	Pyrene											
2541												
2542	General Statistics											
2543	Number of Valid Data				27		Number of Detected Data				19	
2544	Number of Distinct Detected Data				9		Number of Non-Detect Data				8	
2545	Number of Missing Values				34		Percent Non-Detects				29.63%	
2546												
2547	Raw Statistics						Log-transformed Statistics					
2548	Minimum Detected				0.2		Minimum Detected				-1.609	

	A	B	C	D	E	F	G	H	I	J	K	L
2549	Maximum Detected					12	Maximum Detected					2.485
2550	Mean of Detected					2.121	Mean of Detected					-0.0675
2551	SD of Detected					3.084	SD of Detected					1.324
2552	Minimum Non-Detect					4	Minimum Non-Detect					1.386
2553	Maximum Non-Detect					6	Maximum Non-Detect					1.792
2554												
2555	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					25
2556	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					2
2557	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					92.59%
2558												
2559	UCL Statistics											
2560	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2561	Shapiro Wilk Test Statistic					0.659	Shapiro Wilk Test Statistic					0.904
2562	5% Shapiro Wilk Critical Value					0.901	5% Shapiro Wilk Critical Value					0.901
2563	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2564												
2565	Assuming Normal Distribution						Assuming Lognormal Distribution					
2566	DL/2 Substitution Method						DL/2 Substitution Method					
2567	Mean					2.159	Mean					0.189
2568	SD					2.574	SD					1.176
2569	95% DL/2 (t) UCL					3.004	95% H-Stat (DL/2) UCL					8.249
2570												
2571	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2572	MLE method failed to converge properly						Mean in Log Scale					-0.182
2573							SD in Log Scale					1.172
2574							Mean in Original Scale					1.719
2575							SD in Original Scale					2.654
2576							95% Percentile Bootstrap UCL					2.582
2577							95% BCA Bootstrap UCL					2.94
2578												
2579	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2580	k star (bias corrected)					0.652	Data Follow Appr. Gamma Distribution at 5% Significance Level					
2581	Theta Star					3.252						
2582	nu star					24.79						
2583												
2584	A-D Test Statistic					0.868	Nonparametric Statistics					
2585	5% A-D Critical Value					0.78	Kaplan-Meier (KM) Method					
2586	K-S Test Statistic					0.78	Mean					1.768
2587	5% K-S Critical Value					0.206	SD					2.619
2588	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.529
2589							95% KM (t) UCL					2.67
2590	Assuming Gamma Distribution						95% KM (z) UCL					2.638
2591	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.665
2592	Minimum					0.2	95% KM (bootstrap t) UCL					3.392
2593	Maximum					12	95% KM (BCA) UCL					2.711
2594	Mean					2.137	95% KM (Percentile Bootstrap) UCL					2.706
2595	Median					1.735	95% KM (Chebyshev) UCL					4.073
2596	SD					2.579	97.5% KM (Chebyshev) UCL					5.071
2597	k star					0.905	99% KM (Chebyshev) UCL					7.031
2598	Theta star					2.362						
2599	Nu star					48.85	Potential UCLs to Use					
2600	AppChi2					33.8	95% KM (Chebyshev) UCL					4.073

	A	B	C	D	E	F	G	H	I	J	K	L
2601	95% Gamma Approximate UCL					3.087						
2602	95% Adjusted Gamma UCL					3.162						
2603	Note: DL/2 is not a recommended method.											
2604												
2605												
2606	Selenium											
2607												
2608	General Statistics											
2609	Number of Valid Data					10	Number of Detected Data					5
2610	Number of Distinct Detected Data					5	Number of Non-Detect Data					5
2611	Number of Missing Values					46	Percent Non-Detects					50.00%
2612												
2613	Raw Statistics						Log-transformed Statistics					
2614	Minimum Detected					2.3	Minimum Detected					0.833
2615	Maximum Detected					9.6	Maximum Detected					2.262
2616	Mean of Detected					5.14	Mean of Detected					1.53
2617	SD of Detected					2.73	SD of Detected					0.516
2618	Minimum Non-Detect					0.68	Minimum Non-Detect					-0.386
2619	Maximum Non-Detect					7.7	Maximum Non-Detect					2.041
2620												
2621	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					9
2622	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
2623	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					90.00%
2624												
2625	Warning: There are only 5 Detected Values in this data											
2626	Note: It should be noted that even though bootstrap may be performed on this data set											
2627	the resulting calculations may not be reliable enough to draw conclusions											
2628												
2629	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
2630												
2631												
2632	UCL Statistics											
2633	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2634	Shapiro Wilk Test Statistic					0.895	Shapiro Wilk Test Statistic					0.969
2635	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
2636	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2637												
2638	Assuming Normal Distribution						Assuming Lognormal Distribution					
2639	DL/2 Substitution Method						DL/2 Substitution Method					
2640	Mean					3.604	Mean					1.006
2641	SD					2.575	SD					0.894
2642	95% DL/2 (t) UCL					5.097	95% H-Stat (DL/2) UCL					11.69
2643												
2644	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2645	MLE method failed to converge properly						Mean in Log Scale					1.112
2646							SD in Log Scale					0.588
2647							Mean in Original Scale					3.599
2648							SD in Original Scale					2.465
2649							95% Percentile Bootstrap UCL					4.951
2650							95% BCA Bootstrap UCL					5.279
2651												
2652	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
2653	k star (bias corrected)					2.068	Data appear Normal at 5% Significance Level					
2654	Theta Star					2.485						
2655	nu star					20.68						
2656												
2657	A-D Test Statistic					0.28	Nonparametric Statistics					
2658	5% A-D Critical Value					0.681	Kaplan-Meier (KM) Method					
2659	K-S Test Statistic					0.681	Mean					3.878
2660	5% K-S Critical Value					0.358	SD					2.207
2661	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.802
2662							95% KM (t) UCL					5.348
2663	Assuming Gamma Distribution						95% KM (z) UCL					5.197
2664	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5.334
2665	Minimum					2.14	95% KM (bootstrap t) UCL					5.663
2666	Maximum					9.6	95% KM (BCA) UCL					6.24
2667	Mean					4.958	95% KM (Percentile Bootstrap) UCL					5.646
2668	Median					4.371	95% KM (Chebyshev) UCL					7.373
2669	SD					2.201	97.5% KM (Chebyshev) UCL					8.886
2670	k star					4.035	99% KM (Chebyshev) UCL					11.86
2671	Theta star					1.229						
2672	Nu star					80.69	Potential UCLs to Use					
2673	AppChi2					60.99	95% KM (t) UCL					5.348
2674	95% Gamma Approximate UCL					6.559	95% KM (Percentile Bootstrap) UCL					5.646
2675	95% Adjusted Gamma UCL					6.894						
2676	Note: DL/2 is not a recommended method.											
2677												
2678												
2679	Silver											
2680												
2681	General Statistics											
2682	Number of Valid Data					28	Number of Detected Data					1
2683	Number of Distinct Detected Data					1	Number of Non-Detect Data					27
2684	Number of Missing Values					34	Percent Non-Detects					96.43%
2685												
2686	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
2687	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
2688												
2689	The data set for variable Silver was not processed!											
2690												
2691												
2692												
2693	Sodium											
2694												
2695	General Statistics											
2696	Number of Valid Data					28	Number of Detected Data					20
2697	Number of Distinct Detected Data					19	Number of Non-Detect Data					8
2698	Number of Missing Values					34	Percent Non-Detects					28.57%
2699												
2700	Raw Statistics						Log-transformed Statistics					
2701	Minimum Detected					19.5	Minimum Detected					2.97
2702	Maximum Detected					466	Maximum Detected					6.144
2703	Mean of Detected					170.7	Mean of Detected					4.923
2704	SD of Detected					113	SD of Detected					0.735

	A	B	C	D	E	F	G	H	I	J	K	L
2705	Minimum Non-Detect					90.5	Minimum Non-Detect					4.505
2706	Maximum Non-Detect					124	Maximum Non-Detect					4.82
2707												
2708	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					14
2709	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					14
2710	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					50.00%
2711												
2712	UCL Statistics											
2713	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2714	Shapiro Wilk Test Statistic					0.848	Shapiro Wilk Test Statistic					0.915
2715	5% Shapiro Wilk Critical Value					0.905	5% Shapiro Wilk Critical Value					0.905
2716	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2717												
2718	Assuming Normal Distribution						Assuming Lognormal Distribution					
2719	DL/2 Substitution Method						DL/2 Substitution Method					
2720	Mean					136.9	Mean					4.647
2721	SD					109.3	SD					0.762
2722	95% DL/2 (t) UCL					172.1	95% H-Stat (DL/2) UCL					206.9
2723												
2724	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2725	Mean					108.6	Mean in Log Scale					4.65
2726	SD					142.2	SD in Log Scale					0.76
2727	95% MLE (t) UCL					154.4	Mean in Original Scale					137.1
2728	95% MLE (Tiku) UCL					165.4	SD in Original Scale					109.2
2729							95% Percentile Bootstrap UCL					171.9
2730							95% BCA Bootstrap UCL					179.6
2731												
2732	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2733	k star (bias corrected)					2.124	Data appear Gamma Distributed at 5% Significance Level					
2734	Theta Star					80.36						
2735	nu star					84.97						
2736												
2737	A-D Test Statistic					0.464	Nonparametric Statistics					
2738	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
2739	K-S Test Statistic					0.75	Mean					139.3
2740	5% K-S Critical Value					0.196	SD					107
2741	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					21.44
2742							95% KM (t) UCL					175.8
2743	Assuming Gamma Distribution						95% KM (z) UCL					174.5
2744	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					176.4
2745	Minimum					19.5	95% KM (bootstrap t) UCL					183.2
2746	Maximum					466	95% KM (BCA) UCL					178.7
2747	Mean					153.6	95% KM (Percentile Bootstrap) UCL					175.4
2748	Median					127.1	95% KM (Chebyshev) UCL					232.7
2749	SD					99.3	97.5% KM (Chebyshev) UCL					273.2
2750	k star					2.674	99% KM (Chebyshev) UCL					352.6
2751	Theta star					57.44						
2752	Nu star					149.7	Potential UCLs to Use					
2753	AppChi2					122.4	95% KM (Percentile Bootstrap) UCL					175.4
2754	95% Gamma Approximate UCL					187.8						
2755	95% Adjusted Gamma UCL					190.2						
2756	Note: DL/2 is not a recommended method.											

	A	B	C	D	E	F	G	H	I	J	K	L	
2757													
2758													
2759	Thallium												
2760													
2761	General Statistics												
2762	Number of Valid Data					28	Number of Detected Data					1	
2763	Number of Distinct Detected Data					1	Number of Non-Detect Data					27	
2764	Number of Missing Values					34	Percent Non-Detects					96.43%	
2765													
2766	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
2767	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
2768													
2769	The data set for variable Thallium was not processed!												
2770													
2771													
2772													
2773	Uranium												
2774													
2775	General Statistics												
2776	Number of Valid Data					27	Number of Detected Data					7	
2777	Number of Distinct Detected Data					6	Number of Non-Detect Data					20	
2778	Number of Missing Values					35	Percent Non-Detects					74.07%	
2779													
2780	Raw Statistics						Log-transformed Statistics						
2781	Minimum Detected					5.6	Minimum Detected					1.723	
2782	Maximum Detected					23.7	Maximum Detected					3.165	
2783	Mean of Detected					10.09	Mean of Detected					2.198	
2784	SD of Detected					6.199	SD of Detected					0.471	
2785	Minimum Non-Detect					16	Minimum Non-Detect					2.773	
2786	Maximum Non-Detect					46.7	Maximum Non-Detect					3.844	
2787													
2788	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						27
2789	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
2790	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
2791													
2792	Warning: There are only 7 Detected Values in this data												
2793	Note: It should be noted that even though bootstrap may be performed on this data set												
2794	the resulting calculations may not be reliable enough to draw conclusions												
2795													
2796	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
2797													
2798													
2799	UCL Statistics												
2800	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2801	Shapiro Wilk Test Statistic					0.686	Shapiro Wilk Test Statistic					0.836	
2802	5% Shapiro Wilk Critical Value					0.803	5% Shapiro Wilk Critical Value					0.803	
2803	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2804													
2805	Assuming Normal Distribution						Assuming Lognormal Distribution						
2806	DL/2 Substitution Method						DL/2 Substitution Method						
2807	Mean					11.2	Mean					2.358	
2808	SD					4.32	SD					0.334	

	A	B	C	D	E	F	G	H	I	J	K	L
2809	95% DL/2 (t) UCL					12.62	95% H-Stat (DL/2) UCL					17.54
2810												
2811	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2812	MLE method failed to converge properly						Mean in Log Scale					2.115
2813							SD in Log Scale					0.232
2814							Mean in Original Scale					8.579
2815							SD in Original Scale					3.115
2816							95% Percentile Bootstrap UCL					9.751
2817							95% BCA Bootstrap UCL					10.32
2818												
2819	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2820	k star (bias corrected)					2.708	Data Follow Appr. Gamma Distribution at 5% Significance Level					
2821	Theta Star					3.725						
2822	nu star					37.91						
2823												
2824	A-D Test Statistic					0.751	Nonparametric Statistics					
2825	5% A-D Critical Value					0.71	Kaplan-Meier (KM) Method					
2826	K-S Test Statistic					0.71	Mean					8.611
2827	5% K-S Critical Value					0.313	SD					3.775
2828	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					1.057
2829							95% KM (t) UCL					10.41
2830	Assuming Gamma Distribution						95% KM (z) UCL					10.35
2831	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10.43
2832	Minimum					5.6	95% KM (bootstrap t) UCL					11.4
2833	Maximum					23.7	95% KM (BCA) UCL					10.38
2834	Mean					10.3	95% KM (Percentile Bootstrap) UCL					10.42
2835	Median					10.31	95% KM (Chebyshev) UCL					13.22
2836	SD					2.981	97.5% KM (Chebyshev) UCL					15.21
2837	k star					15.25	99% KM (Chebyshev) UCL					19.13
2838	Theta star					0.675						
2839	Nu star					823.4	Potential UCLs to Use					
2840	AppChi2					757.8	95% KM (t) UCL					10.41
2841	95% Gamma Approximate UCL					11.19						
2842	95% Adjusted Gamma UCL					11.25						
2843	Note: DL/2 is not a recommended method.											
2844												
2845												
2846	Vanadium											
2847												
2848	General Statistics											
2849	Number of Valid Data					28	Number of Detected Data				28	
2850	Number of Distinct Detected Data					27	Number of Non-Detect Data				0	
2851	Number of Missing Values					34	Percent Non-Detects				0.00%	
2852												
2853	Raw Statistics						Log-transformed Statistics					
2854	Minimum Detected					7.7	Minimum Detected				2.041	
2855	Maximum Detected					71.4	Maximum Detected				4.268	
2856	Mean of Detected					27.49	Mean of Detected				3.237	
2857	SD of Detected					11.82	SD of Detected				0.399	
2858	Minimum Non-Detect					N/A	Minimum Non-Detect				N/A	
2859	Maximum Non-Detect					N/A	Maximum Non-Detect				N/A	
2860												

	A	B	C	D	E	F	G	H	I	J	K	L	
2861													
2862	UCL Statistics												
2863	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2864	Shapiro Wilk Test Statistic					0.827	Shapiro Wilk Test Statistic					0.935	
2865	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924	
2866	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2867													
2868	Assuming Normal Distribution						Assuming Lognormal Distribution						
2869	DL/2 Substitution Method						DL/2 Substitution Method						
2870	Mean					27.49	Mean					3.237	
2871	SD					11.82	SD					0.399	
2872	95% DL/2 (t) UCL					31.29	95% H-Stat (DL/2) UCL					31.82	
2873													
2874	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
2875	MLE method failed to converge properly						Mean in Log Scale					N/A	
2876							SD in Log Scale					N/A	
2877							Mean in Original Scale					N/A	
2878							SD in Original Scale					N/A	
2879							95% Percentile Bootstrap UCL					N/A	
2880							95% BCA Bootstrap UCL					N/A	
2881													
2882	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2883	k star (bias corrected)					6.014	Data appear Gamma Distributed at 5% Significance Level						
2884	Theta Star					4.571							
2885	nu star					336.8							
2886													
2887	A-D Test Statistic					0.699	Nonparametric Statistics						
2888	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method						
2889	K-S Test Statistic					0.747	Mean					27.49	
2890	5% K-S Critical Value					0.166	SD					11.6	
2891	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2.233	
2892							95% KM (t) UCL					31.29	
2893	Assuming Gamma Distribution						95% KM (z) UCL					31.16	
2894	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					31.29	
2895	Minimum					7.7	95% KM (bootstrap t) UCL					32.72	
2896	Maximum					71.4	95% KM (BCA) UCL					31.72	
2897	Mean					27.49	95% KM (Percentile Bootstrap) UCL					31.29	
2898	Median					26.35	95% KM (Chebyshev) UCL					37.22	
2899	SD					11.82	97.5% KM (Chebyshev) UCL					41.44	
2900	k star					6.014	99% KM (Chebyshev) UCL					49.71	
2901	Theta star					4.571							
2902	Nu star					336.8	Potential UCLs to Use						
2903	AppChi2					295.2	95% KM (BCA) UCL					31.72	
2904	95% Gamma Approximate UCL					31.36							
2905	95% Adjusted Gamma UCL					31.61							
2906	Note: DL/2 is not a recommended method.												
2907													
2908													
2909	Zinc												
2910													
2911	General Statistics												
2912	Number of Valid Data					33	Number of Detected Data					33	

	A	B	C	D	E	F	G	H	I	J	K	L
2913	Number of Distinct Detected Data					33	Number of Non-Detect Data					0
2914	Number of Missing Values					34	Percent Non-Detects					0.00%
2915												
2916	Raw Statistics						Log-transformed Statistics					
2917	Minimum Detected					26.7	Minimum Detected					3.285
2918	Maximum Detected					1340	Maximum Detected					7.2
2919	Mean of Detected					298.7	Mean of Detected					5.001
2920	SD of Detected					355.5	SD of Detected					1.242
2921	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2922	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2923												
2924												
2925	UCL Statistics											
2926	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2927	Shapiro Wilk Test Statistic					0.757	Shapiro Wilk Test Statistic					0.919
2928	5% Shapiro Wilk Critical Value					0.931	5% Shapiro Wilk Critical Value					0.931
2929	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2930												
2931	Assuming Normal Distribution						Assuming Lognormal Distribution					
2932	DL/2 Substitution Method						DL/2 Substitution Method					
2933	Mean					298.7	Mean					5.001
2934	SD					355.5	SD					1.242
2935	95% DL/2 (t) UCL					403.5	95% H-Stat (DL/2) UCL					582.3
2936												
2937	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2938	MLE method failed to converge properly						Mean in Log Scale					N/A
2939							SD in Log Scale					N/A
2940							Mean in Original Scale					N/A
2941							SD in Original Scale					N/A
2942							95% Percentile Bootstrap UCL					N/A
2943							95% BCA Bootstrap UCL					N/A
2944												
2945	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2946	k star (bias corrected)					0.787	Data Follow Appr. Gamma Distribution at 5% Significance Level					
2947	Theta Star					379.3						
2948	nu star					51.97						
2949												
2950	A-D Test Statistic					1.04	Nonparametric Statistics					
2951	5% A-D Critical Value					0.783	Kaplan-Meier (KM) Method					
2952	K-S Test Statistic					0.783	Mean					298.7
2953	5% K-S Critical Value					0.159	SD					350
2954	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					61.88
2955							95% KM (t) UCL					403.5
2956	Assuming Gamma Distribution						95% KM (z) UCL					400.5
2957	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					403.5
2958	Minimum					26.7	95% KM (bootstrap t) UCL					432.3
2959	Maximum					1340	95% KM (BCA) UCL					407.2
2960	Mean					298.7	95% KM (Percentile Bootstrap) UCL					401.3
2961	Median					166	95% KM (Chebyshev) UCL					568.4
2962	SD					355.5	97.5% KM (Chebyshev) UCL					685.1
2963	k star					0.787	99% KM (Chebyshev) UCL					914.4
2964	Theta star					379.3						

	A	B	C	D	E	F	G	H	I	J	K	L
2965					Nu star	51.97	Potential UCLs to Use					
2966					AppChi2	36.41	95% KM (Chebyshev) UCL					568.4
2967					95% Gamma Approximate UCL		426.3					
2968					95% Adjusted Gamma UCL		434.3					
2969	Note: DL/2 is not a recommended method.											
2970												

	A	B	C	D	E	F	G	H	I	J	K	L				
1				General UCL Statistics for Data Sets with Non-Detects												
2	User Selected Options															
3	From File			C:\Documents and Settings\visitor\Desktop\UCR Desktop\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL												
4	Full Precision			OFF												
5	Confidence Coefficient			95%												
6	Number of Bootstrap Operations			2000												
7																
8																
9	2,4'-DDE															
10																
11	General Statistics															
12	Number of Valid Data				29				Number of Detected Data				1			
13	Number of Distinct Detected Data				1				Number of Non-Detect Data				28			
14	Number of Missing Values				41				Percent Non-Detects				96.55%			
15																
16	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!															
17	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).															
18																
19	The data set for variable 2,4'-DDE was not processed!															
20																
21																
22																
23	2006 TEQ_D/F															
24																
25	General Statistics															
26	Number of Valid Data				6				Number of Detected Data				6			
27	Number of Distinct Detected Data				6				Number of Non-Detect Data				0			
28	Number of Missing Values				59				Percent Non-Detects				0.00%			
29																
30	Raw Statistics						Log-transformed Statistics									
31	Minimum Detected			0.106			Minimum Detected			-2.248						
32	Maximum Detected			2.569			Maximum Detected			0.944						
33	Mean of Detected			0.784			Mean of Detected			-0.918						
34	SD of Detected			0.99			SD of Detected			1.254						
35	Minimum Non-Detect			N/A			Minimum Non-Detect			N/A						
36	Maximum Non-Detect			N/A			Maximum Non-Detect			N/A						
37																
38																
39	Warning: There are only 6 Detected Values in this data															
40	Note: It should be noted that even though bootstrap may be performed on this data set															
41	the resulting calculations may not be reliable enough to draw conclusions															
42																
43	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.															
44																
45																
46	UCL Statistics															
47	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
48	Shapiro Wilk Test Statistic			0.751			Shapiro Wilk Test Statistic			0.891						
49	5% Shapiro Wilk Critical Value			0.788			5% Shapiro Wilk Critical Value			0.788						
50	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
51																
52	Assuming Normal Distribution						Assuming Lognormal Distribution									

	A	B	C	D	E	F	G	H	I	J	K	L
53	DL/2 Substitution Method					DL/2 Substitution Method						
54	Mean					0.784	Mean					-0.918
55	SD					0.99	SD					1.254
56	95% DL/2 (t) UCL					1.599	95% H-Stat (DL/2) UCL					14.48
57												
58	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
59	MLE method failed to converge properly					Mean in Log Scale					N/A	
60						SD in Log Scale					N/A	
61						Mean in Original Scale					N/A	
62						SD in Original Scale					N/A	
63						95% Percentile Bootstrap UCL					N/A	
64						95% BCA Bootstrap UCL					N/A	
65												
66	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
67	k star (bias corrected)					0.546	Data appear Gamma Distributed at 5% Significance Level					
68	Theta Star					1.437						
69	nu star					6.55						
70												
71	A-D Test Statistic					0.568	Nonparametric Statistics					
72	5% A-D Critical Value					0.718	Kaplan-Meier (KM) Method					
73	K-S Test Statistic					0.718	Mean					0.784
74	5% K-S Critical Value					0.342	SD					0.904
75	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.404	
76						95% KM (t) UCL					1.599	
77	Assuming Gamma Distribution					95% KM (z) UCL					1.449	
78	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.599	
79	Minimum					0.106	95% KM (bootstrap t) UCL					9.583
80	Maximum					2.569	95% KM (BCA) UCL					1.398
81	Mean					0.784	95% KM (Percentile Bootstrap) UCL					1.391
82	Median					0.256	95% KM (Chebyshev) UCL					2.547
83	SD					0.99	97.5% KM (Chebyshev) UCL					3.309
84	k star					0.546	99% KM (Chebyshev) UCL					4.807
85	Theta star					1.437						
86	Nu star					6.55	Potential UCLs to Use					
87	AppChi2					1.927	95% KM (Chebyshev) UCL					2.547
88	95% Gamma Approximate UCL					2.666						
89	95% Adjusted Gamma UCL					4.45						
90	Note: DL/2 is not a recommended method.											
91												
92												
93	2-Methylnaphthalene											
94												
95	General Statistics											
96	Number of Valid Data					29	Number of Detected Data					9
97	Number of Distinct Detected Data					5	Number of Non-Detect Data					20
98	Number of Missing Values					41	Percent Non-Detects					68.97%
99												
100	Raw Statistics					Log-transformed Statistics						
101	Minimum Detected					0.2	Minimum Detected					-1.609
102	Maximum Detected					4	Maximum Detected					1.386
103	Mean of Detected					0.778	Mean of Detected					-0.899
104	SD of Detected					1.239	SD of Detected					1.043

	A	B	C	D	E	F	G	H	I	J	K	L
105	Minimum Non-Detect					4	Minimum Non-Detect					1.386
106	Maximum Non-Detect					6	Maximum Non-Detect					1.792
107												
108	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					29
109	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
110	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
111												
112	Warning: There are only 9 Detected Values in this data											
113	Note: It should be noted that even though bootstrap may be performed on this data set											
114	the resulting calculations may not be reliable enough to draw conclusions											
115												
116	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
117												
118												
119	UCL Statistics											
120	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
121	Shapiro Wilk Test Statistic					0.549	Shapiro Wilk Test Statistic					0.758
122	5% Shapiro Wilk Critical Value					0.829	5% Shapiro Wilk Critical Value					0.829
123	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
124												
125	Assuming Normal Distribution						Assuming Lognormal Distribution					
126	DL/2 Substitution Method						DL/2 Substitution Method					
127	Mean					1.948	Mean					0.34
128	SD					1.076	SD					1.019
129	95% DL/2 (t) UCL					2.288	95% H-Stat (DL/2) UCL					7.517
130												
131	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
132	MLE method failed to converge properly						Mean in Log Scale					-0.985
133							SD in Log Scale					0.838
134							Mean in Original Scale					0.563
135							SD in Original Scale					0.739
136							95% Percentile Bootstrap UCL					0.805
137							95% BCA Bootstrap UCL					0.945
138												
139	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
140	k star (bias corrected)					0.676	Data do not follow a Discernable Distribution (0.05)					
141	Theta Star					1.151						
142	nu star					12.17						
143												
144	A-D Test Statistic					1.242	Nonparametric Statistics					
145	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method					
146	K-S Test Statistic					0.747	Mean					0.634
147	5% K-S Critical Value					0.288	SD					0.97
148	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.281
149							95% KM (t) UCL					1.112
150	Assuming Gamma Distribution						95% KM (z) UCL					1.096
151	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.114
152	Minimum					0.2	95% KM (bootstrap t) UCL					2.824
153	Maximum					4	95% KM (BCA) UCL					1.2
154	Mean					0.74	95% KM (Percentile Bootstrap) UCL					1.166
155	Median					0.644	95% KM (Chebyshev) UCL					1.86
156	SD					0.69	97.5% KM (Chebyshev) UCL					2.39

	A	B	C	D	E	F	G	H	I	J	K	L	
157					k star	2				99% KM (Chebyshev) UCL		3.432	
158					Theta star	0.37							
159					Nu star	116				Potential UCLs to Use			
160					AppChi2	92.14				95% KM (BCA) UCL		1.2	
161					95% Gamma Approximate UCL	0.931							
162					95% Adjusted Gamma UCL	0.944							
163	Note: DL/2 is not a recommended method.												
164													
165													
166	4,4'-DDE												
167													
168	General Statistics												
169					Number of Valid Data	36				Number of Detected Data		4	
170					Number of Distinct Detected Data	4				Number of Non-Detect Data		32	
171					Number of Missing Values	34				Percent Non-Detects		88.89%	
172													
173	Raw Statistics						Log-transformed Statistics						
174					Minimum Detected	0.19				Minimum Detected		-1.661	
175					Maximum Detected	5.2				Maximum Detected		1.649	
176					Mean of Detected	1.703				Mean of Detected		-0.189	
177					SD of Detected	2.349				SD of Detected		1.382	
178					Minimum Non-Detect	0.69				Minimum Non-Detect		-0.371	
179					Maximum Non-Detect	4.2				Maximum Non-Detect		1.435	
180													
181	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						35
182	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1
183	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						97.22%
184													
185	Warning: There are only 4 Distinct Detected Values in this data												
186	Note: It should be noted that even though bootstrap may be performed on this data set												
187	the resulting calculations may not be reliable enough to draw conclusions												
188													
189	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
190													
191													
192	UCL Statistics												
193	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
194					Shapiro Wilk Test Statistic	0.74				Shapiro Wilk Test Statistic		0.969	
195					5% Shapiro Wilk Critical Value	0.748				5% Shapiro Wilk Critical Value		0.748	
196	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
197													
198	Assuming Normal Distribution						Assuming Lognormal Distribution						
199					DL/2 Substitution Method					DL/2 Substitution Method			
200					Mean	0.845				Mean		-0.521	
201					SD	0.959				SD		0.752	
202					95% DL/2 (t) UCL	1.115				95% H-Stat (DL/2) UCL		1.021	
203													
204					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
205	MLE method failed to converge properly						Mean in Log Scale						-1.1
206							SD in Log Scale						0.603
207							Mean in Original Scale						0.467
208							SD in Original Scale						0.824

	A	B	C	D	E	F	G	H	I	J	K	L
209											95% Percentile Bootstrap UCL	0.738
210											95% BCA Bootstrap UCL	0.874
211												
212	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
213				k star (bias corrected)		0.372	Data appear Gamma Distributed at 5% Significance Level					
214				Theta Star		4.58						
215				nu star		2.974						
216												
217				A-D Test Statistic		0.375	Nonparametric Statistics					
218				5% A-D Critical Value		0.669	Kaplan-Meier (KM) Method					
219				K-S Test Statistic		0.669	Mean					
220				5% K-S Critical Value		0.404	SD					
221	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
222							95% KM (t) UCL					
223	Assuming Gamma Distribution						95% KM (z) UCL					
224	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
225				Minimum		1E-09	95% KM (bootstrap t) UCL					
226				Maximum		5.2	95% KM (BCA) UCL					
227				Mean		1.431	95% KM (Percentile Bootstrap) UCL					
228				Median		1.562	95% KM (Chebyshev) UCL					
229				SD		1.033	97.5% KM (Chebyshev) UCL					
230				k star		0.211	99% KM (Chebyshev) UCL					
231				Theta star		6.769						
232				Nu star		15.22	Potential UCLs to Use					
233				AppChi2		7.414	95% KM (t) UCL					
234				95% Gamma Approximate UCL		2.937						
235				95% Adjusted Gamma UCL		N/A						
236	Note: DL/2 is not a recommended method.											
237												
238												
239	4,4'-DDT											
240												
241	General Statistics											
242				Number of Valid Data		36					Number of Detected Data	3
243				Number of Distinct Detected Data		3					Number of Non-Detect Data	33
244				Number of Missing Values		34					Percent Non-Detects	91.67%
245												
246	Raw Statistics						Log-transformed Statistics					
247				Minimum Detected		1.4					Minimum Detected	0.336
248				Maximum Detected		10					Maximum Detected	2.303
249				Mean of Detected		7					Mean of Detected	1.634
250				SD of Detected		4.854					SD of Detected	1.124
251				Minimum Non-Detect		0.69					Minimum Non-Detect	-0.371
252				Maximum Non-Detect		4.2					Maximum Non-Detect	1.435
253												
254	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
255	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
256	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
257												
258	Warning: There are only 3 Distinct Detected Values in this data set											
259	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
260	Those methods will return a 'N/A' value on your output display!											

	A	B	C	D	E	F	G	H	I	J	K	L			
261															
262	It is necessary to have 4 or more Distinct Values for bootstrap methods.														
263	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.														
264															
265															
266	UCL Statistics														
267	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only								
268	Shapiro Wilk Test Statistic			0.785			Shapiro Wilk Test Statistic			0.766					
269	5% Shapiro Wilk Critical Value			0.767			5% Shapiro Wilk Critical Value			0.767					
270	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level								
271															
272	Assuming Normal Distribution						Assuming Lognormal Distribution								
273	DL/2 Substitution Method						DL/2 Substitution Method								
274	Mean			1.252			Mean			-0.385					
275	SD			2.189			SD			0.918					
276	95% DL/2 (t) UCL			1.868			95% H-Stat (DL/2) UCL			1.241					
277															
278	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method		
279	MLE method failed to converge properly						Mean in Log Scale			-3.827					
280							SD in Log Scale			1.917					
281							Mean in Original Scale			0.602					
282							SD in Original Scale			2.275					
283							95% Percentile Bootstrap UCL			1.374					
284							95% BCA Bootstrap UCL			1.638					
285															
286	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only								
287	k star (bias corrected)			N/A			Data appear Normal at 5% Significance Level								
288	Theta Star			N/A											
289	nu star			N/A											
290															
291	A-D Test Statistic			0.592			Nonparametric Statistics								
292	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method								
293	K-S Test Statistic			N/A			Mean			1.867					
294	5% K-S Critical Value			N/A			SD			1.925					
295	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.393					
296							95% KM (t) UCL			2.53					
297	Assuming Gamma Distribution						95% KM (z) UCL			2.513					
298	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			7.084					
299	Minimum			N/A			95% KM (bootstrap t) UCL			2.206					
300	Maximum			N/A			95% KM (BCA) UCL			N/A					
301	Mean			N/A			95% KM (Percentile Bootstrap) UCL			N/A					
302	Median			N/A			95% KM (Chebyshev) UCL			3.579					
303	SD			N/A			97.5% KM (Chebyshev) UCL			4.32					
304	k star			N/A			99% KM (Chebyshev) UCL			5.776					
305	Theta star			N/A											
306	Nu star			N/A			Potential UCLs to Use								
307	AppChi2						N/A			95% KM (t) UCL			2.53		
308	95% Gamma Approximate UCL			N/A			95% KM (Percentile Bootstrap) UCL			N/A					
309	95% Adjusted Gamma UCL			N/A											
310	Note: DL/2 is not a recommended method.														
311															
312															

	A	B	C	D	E	F	G	H	I	J	K	L
313	Aluminum											
314												
315	General Statistics											
316	Number of Valid Data					36	Number of Detected Data					36
317	Number of Distinct Detected Data					36	Number of Non-Detect Data					0
318	Number of Missing Values					35	Percent Non-Detects					0.00%
319												
320	Raw Statistics						Log-transformed Statistics					
321	Minimum Detected					3000	Minimum Detected					8.006
322	Maximum Detected					21200	Maximum Detected					9.962
323	Mean of Detected					8064	Mean of Detected					8.894
324	SD of Detected					3805	SD of Detected					0.459
325	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
326	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
327												
328												
329	UCL Statistics											
330	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
331	Shapiro Wilk Test Statistic					0.902	Shapiro Wilk Test Statistic					0.966
332	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
333	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
334												
335	Assuming Normal Distribution						Assuming Lognormal Distribution					
336	DL/2 Substitution Method						DL/2 Substitution Method					
337	Mean					8064	Mean					8.894
338	SD					3805	SD					0.459
339	95% DL/2 (t) UCL					9135	95% H-Stat (DL/2) UCL					9369
340												
341	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
342	MLE method failed to converge properly						Mean in Log Scale					N/A
343							SD in Log Scale					N/A
344							Mean in Original Scale					N/A
345							SD in Original Scale					N/A
346							95% Percentile Bootstrap UCL					N/A
347							95% BCA Bootstrap UCL					N/A
348												
349	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
350	k star (bias corrected)					4.689	Data appear Gamma Distributed at 5% Significance Level					
351	Theta Star					1720						
352	nu star					337.6						
353												
354	A-D Test Statistic					0.449	Nonparametric Statistics					
355	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
356	K-S Test Statistic					0.75	Mean					8064
357	5% K-S Critical Value					0.147	SD					3752
358	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					634.1
359							95% KM (t) UCL					9135
360	Assuming Gamma Distribution						95% KM (z) UCL					9107
361	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9135
362	Minimum					3000	95% KM (bootstrap t) UCL					9287
363	Maximum					21200	95% KM (BCA) UCL					9249
364	Mean					8064	95% KM (Percentile Bootstrap) UCL					9136

	A	B	C	D	E	F	G	H	I	J	K	L	
365					Median	7245				95% KM (Chebyshev) UCL		10828	
366					SD	3805				97.5% KM (Chebyshev) UCL		12024	
367					k star	4.689				99% KM (Chebyshev) UCL		14373	
368					Theta star	1720							
369					Nu star	337.6			Potential UCLs to Use				
370					AppChi2	296				95% KM (BCA) UCL		9249	
371					95% Gamma Approximate UCL	9196							
372					95% Adjusted Gamma UCL	9251							
373	Note: DL/2 is not a recommended method.												
374													
375													
376	Antimony												
377													
378	General Statistics												
379					Number of Valid Data	28				Number of Detected Data		10	
380					Number of Distinct Detected Data	8				Number of Non-Detect Data		18	
381					Number of Missing Values	41				Percent Non-Detects		64.29%	
382													
383	Raw Statistics						Log-transformed Statistics						
384					Minimum Detected	0.35				Minimum Detected		-1.05	
385					Maximum Detected	3.5				Maximum Detected		1.253	
386					Mean of Detected	1.84				Mean of Detected		0.433	
387					SD of Detected	0.989				SD of Detected		0.7	
388					Minimum Non-Detect	0.29				Minimum Non-Detect		-1.238	
389					Maximum Non-Detect	8.6				Maximum Non-Detect		2.152	
390													
391	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						28
392	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
393	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
394													
395	UCL Statistics												
396	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
397					Shapiro Wilk Test Statistic	0.942				Shapiro Wilk Test Statistic		0.882	
398					5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value		0.842	
399	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
400													
401	Assuming Normal Distribution						Assuming Lognormal Distribution						
402					DL/2 Substitution Method					DL/2 Substitution Method			
403					Mean	1.689				Mean		0.0237	
404					SD	1.432				SD		1.121	
405					95% DL/2 (t) UCL	2.15				95% H-Stat (DL/2) UCL		3.133	
406													
407					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
408	MLE method failed to converge properly						Mean in Log Scale						-0.406
409							SD in Log Scale						0.829
410							Mean in Original Scale						0.951
411							SD in Original Scale						0.9
412							95% Percentile Bootstrap UCL						1.224
413							95% BCA Bootstrap UCL						1.294
414													
415	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
416					k star (bias corrected)	2.154				Data appear Normal at 5% Significance Level			

	A	B	C	D	E	F	G	H	I	J	K	L
417	Theta Star					0.854						
418	nu star					43.07						
419												
420	A-D Test Statistic					0.419	Nonparametric Statistics					
421	5% A-D Critical Value					0.732	Kaplan-Meier (KM) Method					
422	K-S Test Statistic					0.732	Mean					1.066
423	5% K-S Critical Value					0.268	SD					0.983
424	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.226
425							95% KM (t) UCL					1.451
426	Assuming Gamma Distribution						95% KM (z) UCL					1.438
427	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.405
428	Minimum					0.35	95% KM (bootstrap t) UCL					1.466
429	Maximum					3.5	95% KM (BCA) UCL					1.937
430	Mean					1.968	95% KM (Percentile Bootstrap) UCL					1.824
431	Median					1.88	95% KM (Chebyshev) UCL					2.053
432	SD					0.7	97.5% KM (Chebyshev) UCL					2.48
433	k star					5.525	99% KM (Chebyshev) UCL					3.318
434	Theta star					0.356						
435	Nu star					309.4	Potential UCLs to Use					
436	AppChi2					269.7	95% KM (t) UCL					1.451
437	95% Gamma Approximate UCL					2.258	95% KM (Percentile Bootstrap) UCL					1.824
438	95% Adjusted Gamma UCL					2.277						
439	Note: DL/2 is not a recommended method.											
440												
441												
442	Aroclor-1260											
443												
444	General Statistics											
445	Number of Valid Data					36	Number of Detected Data					1
446	Number of Distinct Detected Data					1	Number of Non-Detect Data					35
447	Number of Missing Values					34	Percent Non-Detects					97.22%
448												
449	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
450	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
451												
452	The data set for variable Aroclor-1260 was not processed!											
453												
454												
455												
456	Arsenic											
457												
458	General Statistics											
459	Number of Valid Data					36	Number of Detected Data					35
460	Number of Distinct Detected Data					31	Number of Non-Detect Data					1
461	Number of Missing Values					35	Percent Non-Detects					2.78%
462												
463	Raw Statistics						Log-transformed Statistics					
464	Minimum Detected					0.65	Minimum Detected					-0.431
465	Maximum Detected					19	Maximum Detected					2.944
466	Mean of Detected					4.361	Mean of Detected					1.185
467	SD of Detected					3.745	SD of Detected					0.764
468	Minimum Non-Detect					2.6	Minimum Non-Detect					0.956

	A	B	C	D	E	F	G	H	I	J	K	L
469	Maximum Non-Detect					2.6	Maximum Non-Detect					0.956
470												
471												
472	UCL Statistics											
473	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
474	Shapiro Wilk Test Statistic					0.784	Shapiro Wilk Test Statistic					0.982
475	5% Shapiro Wilk Critical Value					0.934	5% Shapiro Wilk Critical Value					0.934
476	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
477												
478	Assuming Normal Distribution						Assuming Lognormal Distribution					
479	DL/2 Substitution Method						DL/2 Substitution Method					
480	Mean					4.276	Mean					1.159
481	SD					3.726	SD					0.768
482	95% DL/2 (t) UCL					5.326	95% H-Stat (DL/2) UCL					5.701
483												
484	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
485	Mean					2.616	Mean in Log Scale					1.168
486	SD					5.471	SD in Log Scale					0.759
487	95% MLE (t) UCL					4.157	Mean in Original Scale					4.29
488	95% MLE (Tiku) UCL					4.463	SD in Original Scale					3.716
489							95% Percentile Bootstrap UCL					5.353
490							95% BCA Bootstrap UCL					5.446
491												
492	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
493	k star (bias corrected)					1.743	Data Follow Appr. Gamma Distribution at 5% Significance Level					
494	Theta Star					2.502						
495	nu star					122						
496												
497	A-D Test Statistic					0.592	Nonparametric Statistics					
498	5% A-D Critical Value					0.761	Kaplan-Meier (KM) Method					
499	K-S Test Statistic					0.761	Mean					4.29
500	5% K-S Critical Value					0.151	SD					3.665
501	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.62
502							95% KM (t) UCL					5.337
503	Assuming Gamma Distribution						95% KM (z) UCL					5.31
504	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5.337
505	Minimum					0.65	95% KM (bootstrap t) UCL					5.749
506	Maximum					19	95% KM (BCA) UCL					5.285
507	Mean					4.295	95% KM (Percentile Bootstrap) UCL					5.36
508	Median					2.65	95% KM (Chebyshev) UCL					6.992
509	SD					3.713	97.5% KM (Chebyshev) UCL					8.162
510	k star					1.754	99% KM (Chebyshev) UCL					10.46
511	Theta star					2.448						
512	Nu star					126.3	Potential UCLs to Use					
513	AppChi2					101.4	95% KM (Chebyshev) UCL					6.992
514	95% Gamma Approximate UCL					5.353						
515	95% Adjusted Gamma UCL					5.407						
516	Note: DL/2 is not a recommended method.											
517												
518												
519	Barium											
520												

	A	B	C	D	E	F	G	H	I	J	K	L
521	General Statistics											
522	Number of Valid Data					36	Number of Detected Data					36
523	Number of Distinct Detected Data					35	Number of Non-Detect Data					0
524	Number of Missing Values					35	Percent Non-Detects					0.00%
525												
526	Raw Statistics						Log-transformed Statistics					
527	Minimum Detected					29.2	Minimum Detected					3.374
528	Maximum Detected					1030	Maximum Detected					6.937
529	Mean of Detected					157.6	Mean of Detected					4.544
530	SD of Detected					214.7	SD of Detected					0.928
531	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
532	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
533												
534												
535	UCL Statistics											
536	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
537	Shapiro Wilk Test Statistic					0.605	Shapiro Wilk Test Statistic					0.911
538	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
539	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
540												
541	Assuming Normal Distribution						Assuming Lognormal Distribution					
542	DL/2 Substitution Method						DL/2 Substitution Method					
543	Mean					157.6	Mean					4.544
544	SD					214.7	SD					0.928
545	95% DL/2 (t) UCL					218.1	95% H-Stat (DL/2) UCL					207.6
546												
547	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
548	MLE method failed to converge properly						Mean in Log Scale					N/A
549							SD in Log Scale					N/A
550							Mean in Original Scale					N/A
551							SD in Original Scale					N/A
552							95% Percentile Bootstrap UCL					N/A
553							95% BCA Bootstrap UCL					N/A
554												
555	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
556	k star (bias corrected)					1.031	Data do not follow a Discernable Distribution (0.05)					
557	Theta Star					152.8						
558	nu star					74.26						
559												
560	A-D Test Statistic					2.205	Nonparametric Statistics					
561	5% A-D Critical Value					0.774	Kaplan-Meier (KM) Method					
562	K-S Test Statistic					0.774	Mean					157.6
563	5% K-S Critical Value					0.151	SD					211.7
564	Data not Gamma Distributed at 5% Significance Level						SE of Mean					35.78
565							95% KM (t) UCL					218.1
566	Assuming Gamma Distribution						95% KM (z) UCL					216.5
567	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					218.1
568	Minimum					29.2	95% KM (bootstrap t) UCL					257.2
569	Maximum					1030	95% KM (BCA) UCL					224.3
570	Mean					157.6	95% KM (Percentile Bootstrap) UCL					221.4
571	Median					76.85	95% KM (Chebyshev) UCL					313.6
572	SD					214.7	97.5% KM (Chebyshev) UCL					381.1

	A	B	C	D	E	F	G	H	I	J	K	L	
573					k star	1.031				99% KM (Chebyshev) UCL		513.6	
574					Theta star	152.8							
575					Nu star	74.26				Potential UCLs to Use			
576					AppChi2	55.42				95% KM (Chebyshev) UCL		313.6	
577					95% Gamma Approximate UCL	211.2							
578					95% Adjusted Gamma UCL	214.1							
579	Note: DL/2 is not a recommended method.												
580													
581													
582	Benzo(a)anthracene												
583													
584	General Statistics												
585					Number of Valid Data	29				Number of Detected Data		11	
586					Number of Distinct Detected Data	6				Number of Non-Detect Data		18	
587					Number of Missing Values	41				Percent Non-Detects		62.07%	
588													
589	Raw Statistics						Log-transformed Statistics						
590					Minimum Detected	0.2				Minimum Detected		-1.609	
591					Maximum Detected	2				Maximum Detected		0.693	
592					Mean of Detected	0.664				Mean of Detected		-0.745	
593					SD of Detected	0.671				SD of Detected		0.787	
594					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
595					Maximum Non-Detect	6				Maximum Non-Detect		1.792	
596													
597	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		29
598	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
599	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
600													
601	UCL Statistics												
602	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
603					Shapiro Wilk Test Statistic	0.642				Shapiro Wilk Test Statistic		0.841	
604					5% Shapiro Wilk Critical Value	0.85				5% Shapiro Wilk Critical Value		0.85	
605	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
606													
607	Assuming Normal Distribution						Assuming Lognormal Distribution						
608					DL/2 Substitution Method					DL/2 Substitution Method			
609					Mean	1.803				Mean		0.279	
610					SD	1.036				SD		0.949	
611					95% DL/2 (t) UCL	2.131				95% H-Stat (DL/2) UCL		7.095	
612													
613					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
614	MLE method failed to converge properly										Mean in Log Scale		-0.745
615										SD in Log Scale		0.68	
616										Mean in Original Scale		0.605	
617										SD in Original Scale		0.488	
618										95% Percentile Bootstrap UCL		0.758	
619										95% BCA Bootstrap UCL		0.801	
620													
621	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
622					k star (bias corrected)	1.253				Data do not follow a Discernable Distribution (0.05)			
623					Theta Star	0.529							
624					nu star	27.58							

	A	B	C	D	E	F	G	H	I	J	K	L	
625													
626				A-D Test Statistic		1.153	Nonparametric Statistics						
627				5% A-D Critical Value		0.741	Kaplan-Meier (KM) Method						
628				K-S Test Statistic		0.741	Mean					0.664	
629				5% K-S Critical Value		0.259	SD					0.64	
630	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.202	
631							95% KM (t) UCL					1.008	
632	Assuming Gamma Distribution						95% KM (z) UCL					0.997	
633	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.018	
634	Minimum						1E-09	95% KM (bootstrap t) UCL					2.264
635	Maximum						2	95% KM (BCA) UCL					1.043
636	Mean						0.67	95% KM (Percentile Bootstrap) UCL					1.025
637	Median						0.5	95% KM (Chebyshev) UCL					1.546
638	SD						0.536	97.5% KM (Chebyshev) UCL					1.928
639	k star						0.567	99% KM (Chebyshev) UCL					2.677
640	Theta star						1.18						
641	Nu star						32.9	Potential UCLs to Use					
642	AppChi2						20.79	95% KM (t) UCL					1.008
643	95% Gamma Approximate UCL						1.06	95% KM (% Bootstrap) UCL					1.025
644	95% Adjusted Gamma UCL						1.09						
645	Note: DL/2 is not a recommended method.												
646													
647													
648	Benzo(a)pyrene												
649													
650	General Statistics												
651	Number of Valid Data					29	Number of Detected Data					4	
652	Number of Distinct Detected Data					3	Number of Non-Detect Data					25	
653	Number of Missing Values					41	Percent Non-Detects					86.21%	
654													
655	Raw Statistics						Log-transformed Statistics						
656	Minimum Detected					0.4	Minimum Detected					-0.916	
657	Maximum Detected					2	Maximum Detected					0.693	
658	Mean of Detected					1.25	Mean of Detected					-0.0102	
659	SD of Detected					0.87	SD of Detected					0.829	
660	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
661	Maximum Non-Detect					6	Maximum Non-Detect					1.792	
662													
663	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					29	
664	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
665	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
666													
667	Warning: There are only 3 Distinct Detected Values in this data set												
668	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
669	Those methods will return a 'N/A' value on your output display!												
670													
671	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
672	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
673													
674													
675	UCL Statistics												
676	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						

	A	B	C	D	E	F	G	H	I	J	K	L
677	Shapiro Wilk Test Statistic					0.784	Shapiro Wilk Test Statistic					0.83
678	5% Shapiro Wilk Critical Value					0.748	5% Shapiro Wilk Critical Value					0.748
679	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
680												
681	Assuming Normal Distribution						Assuming Lognormal Distribution					
682	DL/2 Substitution Method						DL/2 Substitution Method					
683	Mean					2.276	Mean					0.758
684	SD					0.607	SD					0.437
685	95% DL/2 (t) UCL					2.468	95% H-Stat (DL/2) UCL					3.728
686												
687	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
688	MLE method failed to converge properly						Mean in Log Scale					-0.0102
689							SD in Log Scale					0.825
690							Mean in Original Scale					1.352
691							SD in Original Scale					1.093
692							95% Percentile Bootstrap UCL					1.681
693							95% BCA Bootstrap UCL					1.729
694												
695	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
696	k star (bias corrected)					0.741	Data appear Normal at 5% Significance Level					
697	Theta Star					1.688						
698	nu star					5.924						
699												
700	A-D Test Statistic					0.544	Nonparametric Statistics					
701	5% A-D Critical Value					0.66	Kaplan-Meier (KM) Method					
702	K-S Test Statistic					0.66	Mean					1.25
703	5% K-S Critical Value					0.398	SD					0.753
704	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.435
705							95% KM (t) UCL					1.99
706	Assuming Gamma Distribution						95% KM (z) UCL					1.965
707	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.089
708	Minimum					0.133	95% KM (bootstrap t) UCL					2.126
709	Maximum					2.684	95% KM (BCA) UCL					2
710	Mean					1.267	95% KM (Percentile Bootstrap) UCL					2
711	Median					1.193	95% KM (Chebyshev) UCL					3.146
712	SD					0.795	97.5% KM (Chebyshev) UCL					3.966
713	k star					1.812	99% KM (Chebyshev) UCL					5.578
714	Theta star					0.699						
715	Nu star					105.1	Potential UCLs to Use					
716	AppChi2					82.45	95% KM (t) UCL					1.99
717	95% Gamma Approximate UCL					1.615	95% KM (Percentile Bootstrap) UCL					2
718	95% Adjusted Gamma UCL					N/A						
719	Note: DL/2 is not a recommended method.											
720												
721												
722	Benzo(b)fluoranthene											
723												
724	General Statistics											
725	Number of Valid Data					29	Number of Detected Data					6
726	Number of Distinct Detected Data					5	Number of Non-Detect Data					23
727	Number of Missing Values					41	Percent Non-Detects					79.31%
728												

	A	B	C	D	E	F	G	H	I	J	K	L
729	Raw Statistics						Log-transformed Statistics					
730	Minimum Detected				0.4		Minimum Detected				-0.916	
731	Maximum Detected				5		Maximum Detected				1.609	
732	Mean of Detected				1.683		Mean of Detected				-0.0068	
733	SD of Detected				1.908		SD of Detected				1.096	
734	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
735	Maximum Non-Detect				6		Maximum Non-Detect				1.792	
736												
737	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				29	
738	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
739	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
740												
741	Warning: There are only 6 Detected Values in this data											
742	Note: It should be noted that even though bootstrap may be performed on this data set											
743	the resulting calculations may not be reliable enough to draw conclusions											
744												
745	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
746												
747												
748	UCL Statistics											
749	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
750	Shapiro Wilk Test Statistic				0.758		Shapiro Wilk Test Statistic				0.829	
751	5% Shapiro Wilk Critical Value				0.788		5% Shapiro Wilk Critical Value				0.788	
752	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
753												
754	Assuming Normal Distribution						Assuming Lognormal Distribution					
755	DL/2 Substitution Method						DL/2 Substitution Method					
756	Mean				2.279		Mean				0.695	
757	SD				0.927		SD				0.606	
758	95% DL/2 (t) UCL				2.572		95% H-Stat (DL/2) UCL				4.669	
759												
760	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
761	MLE method failed to converge properly						Mean in Log Scale				-0.268	
762							SD in Log Scale				0.792	
763							Mean in Original Scale				1.06	
764							SD in Original Scale				1.022	
765							95% Percentile Bootstrap UCL				1.381	
766							95% BCA Bootstrap UCL				1.462	
767												
768	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
769	k star (bias corrected)				0.653		Data appear Gamma Distributed at 5% Significance Level					
770	Theta Star				2.577							
771	nu star				7.837							
772												
773	A-D Test Statistic				0.651		Nonparametric Statistics					
774	5% A-D Critical Value				0.714		Kaplan-Meier (KM) Method					
775	K-S Test Statistic				0.714		Mean				1.186	
776	5% K-S Critical Value				0.34		SD				1.262	
777	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.502	
778							95% KM (t) UCL				2.04	
779	Assuming Gamma Distribution						95% KM (z) UCL				2.012	
780	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				2.124	

	A	B	C	D	E	F	G	H	I	J	K	L	
781					Minimum	0.4				95% KM (bootstrap t) UCL		5.105	
782					Maximum	5				95% KM (BCA) UCL		2.169	
783					Mean	1.671				95% KM (Percentile Bootstrap) UCL		2.076	
784					Median	1.666				95% KM (Chebyshev) UCL		3.376	
785					SD	0.808				97.5% KM (Chebyshev) UCL		4.323	
786					k star	4.252				99% KM (Chebyshev) UCL		6.185	
787					Theta star	0.393							
788					Nu star	246.6				Potential UCLs to Use			
789					AppChi2	211.3				95% KM (t) UCL		2.04	
790					95% Gamma Approximate UCL	1.95							
791					95% Adjusted Gamma UCL	1.969							
792	Note: DL/2 is not a recommended method.												
793													
794													
795	Benzo(ghi)perylene												
796													
797	General Statistics												
798					Number of Valid Data	29				Number of Detected Data		3	
799					Number of Distinct Detected Data	2				Number of Non-Detect Data		26	
800					Number of Missing Values	41				Percent Non-Detects		89.66%	
801													
802	Raw Statistics						Log-transformed Statistics						
803					Minimum Detected	0.2				Minimum Detected		-1.609	
804					Maximum Detected	2				Maximum Detected		0.693	
805					Mean of Detected	1.4				Mean of Detected		-0.0744	
806					SD of Detected	1.039				SD of Detected		1.329	
807					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
808					Maximum Non-Detect	7				Maximum Non-Detect		1.946	
809													
810	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						29
811	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
812	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
813													
814	Warning: Data set has only 2 Distinct Detected Values.												
815	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
816	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
817													
818	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
819													
820	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
821	Those methods will return a 'N/A' value on your output display!												
822													
823	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
824	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
825													
826													
827	UCL Statistics												
828	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
829					Shapiro Wilk Test Statistic	0.75				Shapiro Wilk Test Statistic		0.75	
830					5% Shapiro Wilk Critical Value	0.767				5% Shapiro Wilk Critical Value		0.767	
831	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
832													

	A	B	C	D	E	F	G	H	I	J	K	L		
833	Assuming Normal Distribution						Assuming Lognormal Distribution							
834	DL/2 Substitution Method						DL/2 Substitution Method							
835	Mean						2.386	Mean						0.802
836	SD						0.595	SD						0.493
837	95% DL/2 (t) UCL						2.574	95% H-Stat (DL/2) UCL						3.735
838														
839	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
840	MLE method failed to converge properly							Mean in Log Scale						-0.0744
841								SD in Log Scale						1.283
842								Mean in Original Scale						1.888
843								SD in Original Scale						2.359
844								95% Percentile Bootstrap UCL						2.647
845								95% BCA Bootstrap UCL						2.774
846														
847	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only						
848	k star (bias corrected)						N/A	Data do not follow a Discernable Distribution (0.05)						
849	Theta Star						N/A							
850	nu star						N/A							
851														
852	A-D Test Statistic						0.627	Nonparametric Statistics						
853	5% A-D Critical Value						N/A	Kaplan-Meier (KM) Method						
854	K-S Test Statistic						N/A	Mean						1.4
855	5% K-S Critical Value						N/A	SD						0.849
856	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.6
857								95% KM (t) UCL						2.421
858	Assuming Gamma Distribution							95% KM (z) UCL						2.387
859	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						2.628
860	Minimum						N/A	95% KM (bootstrap t) UCL						2.4
861	Maximum						N/A	95% KM (BCA) UCL						N/A
862	Mean						N/A	95% KM (Percentile Bootstrap) UCL						N/A
863	Median						N/A	95% KM (Chebyshev) UCL						4.015
864	SD						N/A	97.5% KM (Chebyshev) UCL						5.147
865	k star						N/A	99% KM (Chebyshev) UCL						7.37
866	Theta star						N/A							
867	Nu star						N/A	Potential UCLs to Use						
868	AppChi2						N/A	95% KM (BCA) UCL						N/A
869	95% Gamma Approximate UCL						N/A							
870	95% Adjusted Gamma UCL						N/A							
871	Note: DL/2 is not a recommended method.													
872														
873														
874	Benzo(k)fluoranthene													
875														
876	General Statistics													
877	Number of Valid Data						29	Number of Detected Data						5
878	Number of Distinct Detected Data						4	Number of Non-Detect Data						24
879	Number of Missing Values						41	Percent Non-Detects						82.76%
880														
881	Raw Statistics							Log-transformed Statistics						
882	Minimum Detected						0.4	Minimum Detected						-0.916
883	Maximum Detected						2	Maximum Detected						0.693
884	Mean of Detected						1.14	Mean of Detected						-0.0795

	A	B	C	D	E	F	G	H	I	J	K	L
885	SD of Detected					0.792	SD of Detected					0.734
886	Minimum Non-Detect					4	Minimum Non-Detect					1.386
887	Maximum Non-Detect					6	Maximum Non-Detect					1.792
888												
889	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					29
890	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
891	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
892												
893	Warning: There are only 4 Distinct Detected Values in this data											
894	Note: It should be noted that even though bootstrap may be performed on this data set											
895	the resulting calculations may not be reliable enough to draw conclusions											
896												
897	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
898												
899												
900	UCL Statistics											
901	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
902	Shapiro Wilk Test Statistic					0.782	Shapiro Wilk Test Statistic					0.858
903	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
904	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
905												
906	Assuming Normal Distribution						Assuming Lognormal Distribution					
907	DL/2 Substitution Method						DL/2 Substitution Method					
908	Mean					2.214	Mean					0.714
909	SD					0.672	SD					0.482
910	95% DL/2 (t) UCL					2.426	95% H-Stat (DL/2) UCL					4.024
911												
912	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
913	MLE method failed to converge properly						Mean in Log Scale					-0.0795
914							SD in Log Scale					0.708
915							Mean in Original Scale					1.167
916							SD in Original Scale					0.812
917							95% Percentile Bootstrap UCL					1.421
918							95% BCA Bootstrap UCL					1.428
919												
920	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
921	k star (bias corrected)					1.145	Data appear Normal at 5% Significance Level					
922	Theta Star					0.996						
923	nu star					11.45						
924												
925	A-D Test Statistic					0.549	Nonparametric Statistics					
926	5% A-D Critical Value					0.683	Kaplan-Meier (KM) Method					
927	K-S Test Statistic					0.683	Mean					1.14
928	5% K-S Critical Value					0.36	SD					0.709
929	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.354
930							95% KM (t) UCL					1.743
931	Assuming Gamma Distribution						95% KM (z) UCL					1.723
932	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.802
933	Minimum					1E-09	95% KM (bootstrap t) UCL					4.171
934	Maximum					2.255	95% KM (BCA) UCL					1.72
935	Mean					1.139	95% KM (Percentile Bootstrap) UCL					1.74
936	Median					1.157	95% KM (Chebyshev) UCL					2.685

	A	B	C	D	E	F	G	H	I	J	K	L	
937					SD	0.713				97.5% KM (Chebyshev) UCL		3.353	
938					k star	0.593				99% KM (Chebyshev) UCL		4.666	
939					Theta star	1.92							
940					Nu star	34.4				Potential UCLs to Use			
941					AppChi2	21.99				95% KM (t) UCL		1.743	
942					95% Gamma Approximate UCL	1.782				95% KM (Percentile Bootstrap) UCL		1.74	
943					95% Adjusted Gamma UCL	1.832							
944	Note: DL/2 is not a recommended method.												
945													
946													
947	Beryllium												
948													
949	General Statistics												
950					Number of Valid Data	36				Number of Detected Data		36	
951					Number of Distinct Detected Data	27				Number of Non-Detect Data		0	
952					Number of Missing Values	35				Percent Non-Detects		0.00%	
953													
954	Raw Statistics						Log-transformed Statistics						
955					Minimum Detected	0.25				Minimum Detected		-1.386	
956					Maximum Detected	1.5				Maximum Detected		0.405	
957					Mean of Detected	0.613				Mean of Detected		-0.596	
958					SD of Detected	0.296				SD of Detected		0.467	
959					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
960					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
961													
962													
963	UCL Statistics												
964	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
965					Shapiro Wilk Test Statistic	0.909				Shapiro Wilk Test Statistic		0.968	
966					5% Shapiro Wilk Critical Value	0.935				5% Shapiro Wilk Critical Value		0.935	
967	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
968													
969	Assuming Normal Distribution						Assuming Lognormal Distribution						
970					DL/2 Substitution Method					DL/2 Substitution Method			
971					Mean	0.613				Mean		-0.596	
972					SD	0.296				SD		0.467	
973					95% DL/2 (t) UCL	0.696				95% H-Stat (DL/2) UCL		0.713	
974													
975					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
976	MLE method failed to converge properly										Mean in Log Scale		N/A
977											SD in Log Scale		N/A
978											Mean in Original Scale		N/A
979											SD in Original Scale		N/A
980											95% Percentile Bootstrap UCL		N/A
981											95% BCA Bootstrap UCL		N/A
982													
983	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
984					k star (bias corrected)	4.47				Data appear Gamma Distributed at 5% Significance Level			
985					Theta Star	0.137							
986					nu star	321.8							
987													
988					A-D Test Statistic	0.321				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L	
989	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method						
990	K-S Test Statistic					0.75	Mean					0.613	
991	5% K-S Critical Value					0.147	SD					0.292	
992	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0494	
993							95% KM (t) UCL					0.696	
994	Assuming Gamma Distribution						95% KM (z) UCL					0.694	
995	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.696	
996	Minimum						0.25	95% KM (bootstrap t) UCL					0.708
997	Maximum						1.5	95% KM (BCA) UCL					0.7
998	Mean						0.613	95% KM (Percentile Bootstrap) UCL					0.693
999	Median						0.545	95% KM (Chebyshev) UCL					0.828
1000	SD						0.296	97.5% KM (Chebyshev) UCL					0.921
1001	k star						4.47	99% KM (Chebyshev) UCL					1.104
1002	Theta star						0.137						
1003	Nu star						321.8	Potential UCLs to Use					
1004	AppChi2						281.3	95% KM (BCA) UCL					0.7
1005	95% Gamma Approximate UCL						0.701						
1006	95% Adjusted Gamma UCL						0.705						
1007	Note: DL/2 is not a recommended method.												
1008													
1009													
1010	Cadmium												
1011													
1012	General Statistics												
1013	Number of Valid Data					36	Number of Detected Data					35	
1014	Number of Distinct Detected Data					29	Number of Non-Detect Data					1	
1015	Number of Missing Values					35	Percent Non-Detects					2.78%	
1016													
1017	Raw Statistics						Log-transformed Statistics						
1018	Minimum Detected					0.057	Minimum Detected					-2.865	
1019	Maximum Detected					11.1	Maximum Detected					2.407	
1020	Mean of Detected					1.758	Mean of Detected					-0.692	
1021	SD of Detected					2.832	SD of Detected					1.573	
1022	Minimum Non-Detect					0.55	Minimum Non-Detect					-0.598	
1023	Maximum Non-Detect					0.55	Maximum Non-Detect					-0.598	
1024													
1025													
1026	UCL Statistics												
1027	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1028	Shapiro Wilk Test Statistic					0.647	Shapiro Wilk Test Statistic					0.851	
1029	5% Shapiro Wilk Critical Value					0.934	5% Shapiro Wilk Critical Value					0.934	
1030	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1031													
1032	Assuming Normal Distribution						Assuming Lognormal Distribution						
1033	DL/2 Substitution Method						DL/2 Substitution Method						
1034	Mean					1.716	Mean					-0.708	
1035	SD					2.802	SD					1.553	
1036	95% DL/2 (t) UCL					2.506	95% H-Stat (DL/2) UCL					3.493	
1037													
1038	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1039	Mean					5.801	Mean in Log Scale					-0.708	
1040	SD					2.605	SD in Log Scale					1.553	

	A	B	C	D	E	F	G	H	I	J	K	L	
1041	95% MLE (t) UCL					6.535	Mean in Original Scale					1.717	
1042	95% MLE (Tiku) UCL					7.179	SD in Original Scale					2.802	
1043							95% Percentile Bootstrap UCL					2.545	
1044							95% BCA Bootstrap UCL					2.687	
1045													
1046	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1047	k star (bias corrected)					0.481	Data do not follow a Discernable Distribution (0.05)						
1048	Theta Star					3.655							
1049	nu star					33.66							
1050													
1051	A-D Test Statistic					3.43	Nonparametric Statistics						
1052	5% A-D Critical Value					0.812	Kaplan-Meier (KM) Method						
1053	K-S Test Statistic					0.812	Mean					1.715	
1054	5% K-S Critical Value					0.157	SD					2.764	
1055	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.467	
1056							95% KM (t) UCL					2.505	
1057	Assuming Gamma Distribution						95% KM (z) UCL						2.484
1058	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.505	
1059	Minimum					0.057	95% KM (bootstrap t) UCL					2.75	
1060	Maximum					11.1	95% KM (BCA) UCL					2.57	
1061	Mean					1.713	95% KM (Percentile Bootstrap) UCL					2.502	
1062	Median					0.26	95% KM (Chebyshev) UCL					3.753	
1063	SD					2.804	97.5% KM (Chebyshev) UCL					4.634	
1064	k star					0.479	99% KM (Chebyshev) UCL					6.366	
1065	Theta star					3.574							
1066	Nu star					34.51	Potential UCLs to Use						
1067	AppChi2					22.07	99% KM (Chebyshev) UCL					6.366	
1068	95% Gamma Approximate UCL					2.678							
1069	95% Adjusted Gamma UCL					2.734							
1070	Note: DL/2 is not a recommended method.												
1071													
1072													
1073	Calcium												
1074													
1075	General Statistics												
1076	Number of Valid Data					36	Number of Detected Data					36	
1077	Number of Distinct Detected Data					34	Number of Non-Detect Data					0	
1078	Number of Missing Values					35	Percent Non-Detects					0.00%	
1079													
1080	Raw Statistics						Log-transformed Statistics						
1081	Minimum Detected					879	Minimum Detected					6.779	
1082	Maximum Detected					34900	Maximum Detected					10.46	
1083	Mean of Detected					8521	Mean of Detected					8.718	
1084	SD of Detected					7330	SD of Detected					0.852	
1085	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1086	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1087													
1088													
1089	UCL Statistics												
1090	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1091	Shapiro Wilk Test Statistic					0.823	Shapiro Wilk Test Statistic					0.98	
1092	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935	

	A	B	C	D	E	F	G	H	I	J	K	L
1093	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1094												
1095	Assuming Normal Distribution						Assuming Lognormal Distribution					
1096	DL/2 Substitution Method						DL/2 Substitution Method					
1097					Mean	8521					Mean	8.718
1098					SD	7330					SD	0.852
1099					95% DL/2 (t) UCL	10585					95% H-Stat (DL/2) UCL	12090
1100												
1101	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1102	MLE method failed to converge properly										Mean in Log Scale	N/A
1103											SD in Log Scale	N/A
1104											Mean in Original Scale	N/A
1105											SD in Original Scale	N/A
1106											95% Percentile Bootstrap UCL	N/A
1107											95% BCA Bootstrap UCL	N/A
1108												
1109	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1110					k star (bias corrected)	1.531	Data appear Gamma Distributed at 5% Significance Level					
1111					Theta Star	5567						
1112					nu star	110.2						
1113												
1114					A-D Test Statistic	0.422	Nonparametric Statistics					
1115					5% A-D Critical Value	0.764					Kaplan-Meier (KM) Method	
1116					K-S Test Statistic	0.764					Mean	8521
1117					5% K-S Critical Value	0.149					SD	7227
1118	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	1222
1119											95% KM (t) UCL	10585
1120	Assuming Gamma Distribution										95% KM (z) UCL	10531
1121	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	10585
1122					Minimum	879					95% KM (bootstrap t) UCL	11185
1123					Maximum	34900					95% KM (BCA) UCL	10804
1124					Mean	8521					95% KM (Percentile Bootstrap) UCL	10700
1125					Median	5820					95% KM (Chebyshev) UCL	13846
1126					SD	7330					97.5% KM (Chebyshev) UCL	16150
1127					k star	1.531					99% KM (Chebyshev) UCL	20676
1128					Theta star	5567						
1129					Nu star	110.2	Potential UCLs to Use					
1130					AppChi2	86.97					95% KM (Chebyshev) UCL	13846
1131					95% Gamma Approximate UCL	10797						
1132					95% Adjusted Gamma UCL	10915						
1133	Note: DL/2 is not a recommended method.											
1134												
1135												
1136	Caprolactam											
1137												
1138	General Statistics											
1139					Number of Valid Data	29					Number of Detected Data	1
1140					Number of Distinct Detected Data	1					Number of Non-Detect Data	28
1141					Number of Missing Values	41					Percent Non-Detects	96.55%
1142												
1143	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
1144	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											

	A	B	C	D	E	F	G	H	I	J	K	L
1145												
1146	The data set for variable Caprolactam was not processed!											
1147												
1148												
1149												
1150	Chromium											
1151												
1152	General Statistics											
1153	Number of Valid Data				36		Number of Detected Data				36	
1154	Number of Distinct Detected Data				33		Number of Non-Detect Data				0	
1155	Number of Missing Values				35		Percent Non-Detects				0.00%	
1156												
1157	Raw Statistics						Log-transformed Statistics					
1158	Minimum Detected				5.5		Minimum Detected				1.705	
1159	Maximum Detected				34.9		Maximum Detected				3.552	
1160	Mean of Detected				17.41		Mean of Detected				2.76	
1161	SD of Detected				7.273		SD of Detected				0.469	
1162	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1163	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1164												
1165												
1166	UCL Statistics											
1167	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1168	Shapiro Wilk Test Statistic				0.971		Shapiro Wilk Test Statistic				0.95	
1169	5% Shapiro Wilk Critical Value				0.935		5% Shapiro Wilk Critical Value				0.935	
1170	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1171												
1172	Assuming Normal Distribution						Assuming Lognormal Distribution					
1173	DL/2 Substitution Method						DL/2 Substitution Method					
1174	Mean				17.41		Mean				2.76	
1175	SD				7.273		SD				0.469	
1176	95% DL/2 (t) UCL				19.46		95% H-Stat (DL/2) UCL				20.49	
1177												
1178	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1179	MLE method failed to converge properly						Mean in Log Scale				N/A	
1180							SD in Log Scale				N/A	
1181							Mean in Original Scale				N/A	
1182							SD in Original Scale				N/A	
1183							95% Percentile Bootstrap UCL				N/A	
1184							95% BCA Bootstrap UCL				N/A	
1185												
1186	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1187	k star (bias corrected)				4.885		Data appear Normal at 5% Significance Level					
1188	Theta Star				3.565							
1189	nu star				351.7							
1190												
1191	A-D Test Statistic				0.313		Nonparametric Statistics					
1192	5% A-D Critical Value				0.75		Kaplan-Meier (KM) Method					
1193	K-S Test Statistic				0.75		Mean				17.41	
1194	5% K-S Critical Value				0.147		SD				7.171	
1195	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				1.212	
1196							95% KM (t) UCL				19.46	

	A	B	C	D	E	F	G	H	I	J	K	L
1197	Assuming Gamma Distribution						95% KM (z) UCL				19.41	
1198	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				19.46	
1199	Minimum						5.5	95% KM (bootstrap t) UCL				19.61
1200	Maximum						34.9	95% KM (BCA) UCL				19.55
1201	Mean						17.41	95% KM (Percentile Bootstrap) UCL				19.42
1202	Median						16.9	95% KM (Chebyshev) UCL				22.7
1203	SD						7.273	97.5% KM (Chebyshev) UCL				24.98
1204	k star						4.885	99% KM (Chebyshev) UCL				29.47
1205	Theta star						3.565					
1206	Nu star						351.7	Potential UCLs to Use				
1207	AppChi2						309.2	95% KM (t) UCL				19.46
1208	95% Gamma Approximate UCL						19.8	95% KM (Percentile Bootstrap) UCL				19.42
1209	95% Adjusted Gamma UCL						19.92					
1210	Note: DL/2 is not a recommended method.											
1211												
1212												
1213	Chrysene											
1214												
1215	General Statistics											
1216	Number of Valid Data						29	Number of Detected Data				18
1217	Number of Distinct Detected Data						9	Number of Non-Detect Data				11
1218	Number of Missing Values						41	Percent Non-Detects				37.93%
1219												
1220	Raw Statistics						Log-transformed Statistics					
1221	Minimum Detected						0.2	Minimum Detected				-1.609
1222	Maximum Detected						5	Maximum Detected				1.609
1223	Mean of Detected						0.9	Mean of Detected				-0.614
1224	SD of Detected						1.335	SD of Detected				0.855
1225	Minimum Non-Detect						4	Minimum Non-Detect				1.386
1226	Maximum Non-Detect						6	Maximum Non-Detect				1.792
1227												
1228	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				29	
1229	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
1230	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
1231												
1232	UCL Statistics											
1233	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1234	Shapiro Wilk Test Statistic						0.502	Shapiro Wilk Test Statistic				0.762
1235	5% Shapiro Wilk Critical Value						0.897	5% Shapiro Wilk Critical Value				0.897
1236	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1237												
1238	Assuming Normal Distribution						Assuming Lognormal Distribution					
1239	DL/2 Substitution Method						DL/2 Substitution Method					
1240	Mean						1.507	Mean				-0.0376
1241	SD						1.326	SD				1.008
1242	95% DL/2 (t) UCL						1.926	95% H-Stat (DL/2) UCL				5.996
1243												
1244	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method				
1245	MLE method failed to converge properly						Mean in Log Scale				-0.652	
1246							SD in Log Scale				0.728	
1247							Mean in Original Scale				0.765	
1248							SD in Original Scale				1.066	

	A	B	C	D	E	F	G	H	I	J	K	L
1249											95% Percentile Bootstrap UCL	1.105
1250											95% BCA Bootstrap UCL	1.258
1251												
1252	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1253					k star (bias corrected)	0.971	Data do not follow a Discernable Distribution (0.05)					
1254					Theta Star	0.927						
1255					nu star	34.96						
1256												
1257					A-D Test Statistic	2.719	Nonparametric Statistics					
1258					5% A-D Critical Value	0.764	Kaplan-Meier (KM) Method					
1259					K-S Test Statistic	0.764					Mean	0.796
1260					5% K-S Critical Value	0.209					SD	1.148
1261	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.245
1262											95% KM (t) UCL	1.213
1263	Assuming Gamma Distribution										95% KM (z) UCL	1.199
1264	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1.213
1265					Minimum	0.2					95% KM (bootstrap t) UCL	2.718
1266					Maximum	5					95% KM (BCA) UCL	1.222
1267					Mean	0.899					95% KM (Percentile Bootstrap) UCL	1.238
1268					Median	0.8					95% KM (Chebyshev) UCL	1.865
1269					SD	1.04					97.5% KM (Chebyshev) UCL	2.328
1270					k star	1.576					99% KM (Chebyshev) UCL	3.238
1271					Theta star	0.571						
1272					Nu star	91.42	Potential UCLs to Use					
1273					AppChi2	70.37					95% KM (BCA) UCL	1.222
1274					95% Gamma Approximate UCL	1.168						
1275					95% Adjusted Gamma UCL	1.187						
1276	Note: DL/2 is not a recommended method.											
1277												
1278												
1279	Cobalt											
1280												
1281	General Statistics											
1282					Number of Valid Data	36					Number of Detected Data	36
1283					Number of Distinct Detected Data	33					Number of Non-Detect Data	0
1284					Number of Missing Values	35					Percent Non-Detects	0.00%
1285												
1286	Raw Statistics					Log-transformed Statistics						
1287					Minimum Detected	2.3					Minimum Detected	0.833
1288					Maximum Detected	11.6					Maximum Detected	2.451
1289					Mean of Detected	6.328					Mean of Detected	1.758
1290					SD of Detected	2.518					SD of Detected	0.439
1291					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
1292					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
1293												
1294												
1295	UCL Statistics											
1296	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1297					Shapiro Wilk Test Statistic	0.965					Shapiro Wilk Test Statistic	0.95
1298					5% Shapiro Wilk Critical Value	0.935					5% Shapiro Wilk Critical Value	0.935
1299	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1300												

	A	B	C	D	E	F	G	H	I	J	K	L		
1301	Assuming Normal Distribution						Assuming Lognormal Distribution							
1302	DL/2 Substitution Method						DL/2 Substitution Method							
1303	Mean						6.328	Mean						1.758
1304	SD						2.518	SD						0.439
1305	95% DL/2 (t) UCL						7.037	95% H-Stat (DL/2) UCL						7.341
1306														
1307	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1308	MLE method failed to converge properly							Mean in Log Scale						N/A
1309								SD in Log Scale						N/A
1310								Mean in Original Scale						N/A
1311								SD in Original Scale						N/A
1312								95% Percentile Bootstrap UCL						N/A
1313								95% BCA Bootstrap UCL						N/A
1314														
1315	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1316	k star (bias corrected)						5.458	Data appear Normal at 5% Significance Level						
1317	Theta Star						1.159							
1318	nu star						393							
1319														
1320	A-D Test Statistic						0.274	Nonparametric Statistics						
1321	5% A-D Critical Value						0.75	Kaplan-Meier (KM) Method						
1322	K-S Test Statistic						0.75	Mean						6.328
1323	5% K-S Critical Value						0.147	SD						2.483
1324	Data appear Gamma Distributed at 5% Significance Level							SE of Mean						0.42
1325								95% KM (t) UCL						7.037
1326	Assuming Gamma Distribution							95% KM (z) UCL						7.018
1327	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						7.037
1328	Minimum						2.3	95% KM (bootstrap t) UCL						7.034
1329	Maximum						11.6	95% KM (BCA) UCL						6.975
1330	Mean						6.328	95% KM (Percentile Bootstrap) UCL						7.033
1331	Median						6	95% KM (Chebyshev) UCL						8.157
1332	SD						2.518	97.5% KM (Chebyshev) UCL						8.949
1333	k star						5.458	99% KM (Chebyshev) UCL						10.5
1334	Theta star						1.159							
1335	Nu star						393	Potential UCLs to Use						
1336	AppChi2						348	95% KM (t) UCL						7.037
1337	95% Gamma Approximate UCL						7.145	95% KM (Percentile Bootstrap) UCL						7.033
1338	95% Adjusted Gamma UCL						7.185							
1339	Note: DL/2 is not a recommended method.													
1340														
1341														
1342	Copper													
1343														
1344	General Statistics													
1345	Number of Valid Data						36	Number of Detected Data						36
1346	Number of Distinct Detected Data						34	Number of Non-Detect Data						0
1347	Number of Missing Values						35	Percent Non-Detects						0.00%
1348														
1349	Raw Statistics						Log-transformed Statistics							
1350	Minimum Detected						4.2	Minimum Detected						1.435
1351	Maximum Detected						164	Maximum Detected						5.1
1352	Mean of Detected						25.81	Mean of Detected						2.872

	A	B	C	D	E	F	G	H	I	J	K	L
1353	SD of Detected					29.83	SD of Detected					0.826
1354	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1355	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1356												
1357												
1358	UCL Statistics											
1359	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1360	Shapiro Wilk Test Statistic					0.631	Shapiro Wilk Test Statistic					0.963
1361	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
1362	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1363												
1364	Assuming Normal Distribution						Assuming Lognormal Distribution					
1365	DL/2 Substitution Method						DL/2 Substitution Method					
1366	Mean					25.81	Mean					2.872
1367	SD					29.83	SD					0.826
1368	95% DL/2 (t) UCL					34.21	95% H-Stat (DL/2) UCL					33.76
1369												
1370	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1371	MLE method failed to converge properly						Mean in Log Scale					N/A
1372							SD in Log Scale					N/A
1373							Mean in Original Scale					N/A
1374							SD in Original Scale					N/A
1375							95% Percentile Bootstrap UCL					N/A
1376							95% BCA Bootstrap UCL					N/A
1377												
1378	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1379	k star (bias corrected)					1.36	Data appear Lognormal at 5% Significance Level					
1380	Theta Star					18.98						
1381	nu star					97.88						
1382												
1383	A-D Test Statistic					1.313	Nonparametric Statistics					
1384	5% A-D Critical Value					0.767	Kaplan-Meier (KM) Method					
1385	K-S Test Statistic					0.767	Mean					25.81
1386	5% K-S Critical Value					0.15	SD					29.41
1387	Data not Gamma Distributed at 5% Significance Level						SE of Mean					4.972
1388							95% KM (t) UCL					34.21
1389	Assuming Gamma Distribution						95% KM (z) UCL					33.99
1390	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					34.21
1391	Minimum					4.2	95% KM (bootstrap t) UCL					40.89
1392	Maximum					164	95% KM (BCA) UCL					33.44
1393	Mean					25.81	95% KM (Percentile Bootstrap) UCL					33.94
1394	Median					16	95% KM (Chebyshev) UCL					47.48
1395	SD					29.83	97.5% KM (Chebyshev) UCL					56.86
1396	k star					1.36	99% KM (Chebyshev) UCL					75.28
1397	Theta star					18.98						
1398	Nu star					97.88	Potential UCLs to Use					
1399	AppChi2					76.06	95% KM (Chebyshev) UCL					47.48
1400	95% Gamma Approximate UCL					33.21						
1401	95% Adjusted Gamma UCL					33.6						
1402	Note: DL/2 is not a recommended method.											
1403												
1404												

	A	B	C	D	E	F	G	H	I	J	K	L
1405	Dibenz(a,h)anthracene											
1406												
1407	General Statistics											
1408	Number of Valid Data				29		Number of Detected Data				2	
1409	Number of Distinct Detected Data				2		Number of Non-Detect Data				27	
1410	Number of Missing Values				41		Percent Non-Detects				93.10%	
1411												
1412	Raw Statistics						Log-transformed Statistics					
1413	Minimum Detected				0.7		Minimum Detected				-0.357	
1414	Maximum Detected				1		Maximum Detected				0	
1415	Mean of Detected				0.85		Mean of Detected				-0.178	
1416	SD of Detected				0.212		SD of Detected				0.252	
1417	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
1418	Maximum Non-Detect				7		Maximum Non-Detect				1.946	
1419												
1420	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				29	
1421	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
1422	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
1423												
1424	Warning: Data set has only 2 Distinct Detected Values.											
1425	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
1426	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
1427												
1428	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
1429												
1430	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
1431	Those methods will return a 'N/A' value on your output display!											
1432												
1433	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
1434	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
1435												
1436												
1437	UCL Statistics											
1438	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1439	Shapiro Wilk Test Statistic				1		Shapiro Wilk Test Statistic				1	
1440	5% Shapiro Wilk Critical Value				N/A		5% Shapiro Wilk Critical Value				N/A	
1441	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1442												
1443	Assuming Normal Distribution						Assuming Lognormal Distribution					
1444	DL/2 Substitution Method						DL/2 Substitution Method					
1445	Mean				2.386		Mean				0.829	
1446	SD				0.586		SD				0.324	
1447	95% DL/2 (t) UCL				2.571		95% H-Stat (DL/2) UCL				3.206	
1448												
1449	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1450	MLE method failed to converge properly						Mean in Log Scale				N/A	
1451							SD in Log Scale				N/A	
1452							Mean in Original Scale				N/A	
1453							SD in Original Scale				N/A	
1454							95% Percentile Bootstrap UCL				N/A	
1455							95% BCA Bootstrap UCL				N/A	
1456												

	A	B	C	D	E	F	G	H	I	J	K	L
1457	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1458	k star (bias corrected)				N/A		Data do not follow a Discernable Distribution (0.05)					
1459	Theta Star				N/A							
1460	nu star				N/A							
1461												
1462	A-D Test Statistic				0.359		Nonparametric Statistics					
1463	5% A-D Critical Value				N/A		Kaplan-Meier (KM) Method					
1464	K-S Test Statistic				N/A						Mean	0.85
1465	5% K-S Critical Value				N/A						SD	0.15
1466	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.15
1467											95% KM (t) UCL	1.105
1468	Assuming Gamma Distribution										95% KM (z) UCL	1.097
1469	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1.205
1470	Minimum				N/A						95% KM (bootstrap t) UCL	#NUM!
1471	Maximum				N/A						95% KM (BCA) UCL	1
1472	Mean				N/A						95% KM (Percentile Bootstrap) UCL	1
1473	Median				N/A						95% KM (Chebyshev) UCL	1.504
1474	SD				N/A						97.5% KM (Chebyshev) UCL	1.787
1475	k star				N/A						99% KM (Chebyshev) UCL	2.342
1476	Theta star				N/A							
1477	Nu star				N/A		Potential UCLs to Use					
1478	AppChi2				N/A						95% KM (t) UCL	1.105
1479	95% Gamma Approximate UCL				N/A						95% KM (% Bootstrap) UCL	1
1480	95% Adjusted Gamma UCL				N/A							
1481	Warning: Recommended UCL exceeds the maximum observation											
1482	Note: DL/2 is not a recommended method.											
1483												
1484												
1485	Dibenzofuran											
1486												
1487	General Statistics											
1488	Number of Valid Data				29		Number of Detected Data				2	
1489	Number of Distinct Detected Data				2		Number of Non-Detect Data				27	
1490	Number of Missing Values				41		Percent Non-Detects				93.10%	
1491												
1492	Raw Statistics						Log-transformed Statistics					
1493	Minimum Detected				0.5		Minimum Detected				-0.693	
1494	Maximum Detected				2		Maximum Detected				0.693	
1495	Mean of Detected				1.25		Mean of Detected				0	
1496	SD of Detected				1.061		SD of Detected				0.98	
1497	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
1498	Maximum Non-Detect				7		Maximum Non-Detect				1.946	
1499												
1500	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				29	
1501	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
1502	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
1503												
1504	Warning: Data set has only 2 Distinct Detected Values.											
1505	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
1506	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
1507												
1508	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											

	A	B	C	D	E	F	G	H	I	J	K	L		
1509														
1510	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.													
1511	Those methods will return a 'N/A' value on your output display!													
1512														
1513	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
1514	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
1515														
1516														
1517	UCL Statistics													
1518	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1519	Shapiro Wilk Test Statistic						1	Shapiro Wilk Test Statistic						1
1520	5% Shapiro Wilk Critical Value						N/A	5% Shapiro Wilk Critical Value						N/A
1521	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1522														
1523	Assuming Normal Distribution						Assuming Lognormal Distribution							
1524	DL/2 Substitution Method						DL/2 Substitution Method							
1525	Mean						2.414	Mean						0.841
1526	SD						0.552	SD						0.337
1527	95% DL/2 (t) UCL						2.588	95% H-Stat (DL/2) UCL						3.251
1528														
1529	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1530	MLE method failed to converge properly						Mean in Log Scale						N/A	
1531							SD in Log Scale						N/A	
1532							Mean in Original Scale						N/A	
1533							SD in Original Scale						N/A	
1534							95% Percentile Bootstrap UCL						N/A	
1535							95% BCA Bootstrap UCL						N/A	
1536														
1537	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1538	k star (bias corrected)						N/A	Data do not follow a Discernable Distribution (0.05)						
1539	Theta Star						N/A							
1540	nu star						N/A							
1541														
1542	A-D Test Statistic						0.359	Nonparametric Statistics						
1543	5% A-D Critical Value						N/A	Kaplan-Meier (KM) Method						
1544	K-S Test Statistic						N/A	Mean						1.25
1545	5% K-S Critical Value						N/A	SD						0.75
1546	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.75	
1547							95% KM (t) UCL						2.526	
1548	Assuming Gamma Distribution						95% KM (z) UCL						2.484	
1549	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						3.023	
1550	Minimum						N/A	95% KM (bootstrap t) UCL						#NUM!
1551	Maximum						N/A	95% KM (BCA) UCL						N/A
1552	Mean						N/A	95% KM (Percentile Bootstrap) UCL						2
1553	Median						N/A	95% KM (Chebyshev) UCL						4.519
1554	SD						N/A	97.5% KM (Chebyshev) UCL						5.934
1555	k star						N/A	99% KM (Chebyshev) UCL						8.712
1556	Theta star						N/A							
1557	Nu star						N/A	Potential UCLs to Use						
1558	AppChi2						N/A	95% KM (t) UCL						2.526
1559	95% Gamma Approximate UCL						N/A	95% KM (% Bootstrap) UCL						2
1560	95% Adjusted Gamma UCL						N/A							

	A	B	C	D	E	F	G	H	I	J	K	L	
1561	Warning: Recommended UCL exceeds the maximum observation												
1562	Note: DL/2 is not a recommended method.												
1563													
1564													
1565	Fluoranthene												
1566													
1567	General Statistics												
1568	Number of Valid Data					29		Number of Detected Data					16
1569	Number of Distinct Detected Data					5		Number of Non-Detect Data					13
1570	Number of Missing Values					41		Percent Non-Detects					44.83%
1571													
1572	Raw Statistics						Log-transformed Statistics						
1573	Minimum Detected					0.2		Minimum Detected					-1.609
1574	Maximum Detected					5		Maximum Detected					1.609
1575	Mean of Detected					0.706		Mean of Detected					-0.896
1576	SD of Detected					1.181		SD of Detected					0.897
1577	Minimum Non-Detect					4		Minimum Non-Detect					1.386
1578	Maximum Non-Detect					6		Maximum Non-Detect					1.792
1579													
1580	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					29	
1581	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
1582	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
1583													
1584	UCL Statistics												
1585	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1586	Shapiro Wilk Test Statistic					0.456		Shapiro Wilk Test Statistic					0.778
1587	5% Shapiro Wilk Critical Value					0.887		5% Shapiro Wilk Critical Value					0.887
1588	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1589													
1590	Assuming Normal Distribution						Assuming Lognormal Distribution						
1591	DL/2 Substitution Method							DL/2 Substitution Method					
1592	Mean					1.493		Mean					-0.0944
1593	SD					1.257		SD					1.122
1594	95% DL/2 (t) UCL					1.89		95% H-Stat (DL/2) UCL					7.677
1595													
1596	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1597	MLE method failed to converge properly						Mean in Log Scale					-0.942	
1598							SD in Log Scale					0.757	
1599							Mean in Original Scale					0.581	
1600							SD in Original Scale					0.889	
1601							95% Percentile Bootstrap UCL					0.891	
1602							95% BCA Bootstrap UCL					1.102	
1603													
1604	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1605	k star (bias corrected)					0.892		Data do not follow a Discernable Distribution (0.05)					
1606	Theta Star					0.792							
1607	nu star					28.54							
1608													
1609	A-D Test Statistic					1.905		Nonparametric Statistics					
1610	5% A-D Critical Value					0.762		Kaplan-Meier (KM) Method					
1611	K-S Test Statistic					0.762		Mean					0.59
1612	5% K-S Critical Value					0.221		SD					0.91

	A	B	C	D	E	F	G	H	I	J	K	L	
1613	Data not Gamma Distributed at 5% Significance Level											SE of Mean	0.187
1614											95% KM (t) UCL	0.908	
1615	Assuming Gamma Distribution											95% KM (z) UCL	0.897
1616	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.906	
1617				Minimum		0.2					95% KM (bootstrap t) UCL	1.442	
1618				Maximum		5					95% KM (BCA) UCL	0.964	
1619				Mean		0.706					95% KM (Percentile Bootstrap) UCL	0.926	
1620				Median		0.688					95% KM (Chebyshev) UCL	1.405	
1621				SD		0.864					97.5% KM (Chebyshev) UCL	1.758	
1622				k star		1.637					99% KM (Chebyshev) UCL	2.452	
1623				Theta star		0.431							
1624				Nu star		94.92					Potential UCLs to Use		
1625				AppChi2		73.45					95% KM (t) UCL	0.908	
1626				95% Gamma Approximate UCL		0.912					95% KM (% Bootstrap) UCL	0.926	
1627				95% Adjusted Gamma UCL		0.926							
1628	Note: DL/2 is not a recommended method.												
1629													
1630													
1631	Hexachlorobenzene												
1632													
1633	General Statistics												
1634				Number of Valid Data		29					Number of Detected Data	1	
1635				Number of Distinct Detected Data		1					Number of Non-Detect Data	28	
1636				Number of Missing Values		41					Percent Non-Detects	96.55%	
1637													
1638	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
1639	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
1640													
1641	The data set for variable Hexachlorobenzene was not processed!												
1642													
1643													
1644													
1645	Indeno(1,2,3-cd)pyrene												
1646													
1647	General Statistics												
1648				Number of Valid Data		29					Number of Detected Data	2	
1649				Number of Distinct Detected Data		2					Number of Non-Detect Data	27	
1650				Number of Missing Values		41					Percent Non-Detects	93.10%	
1651													
1652	Raw Statistics						Log-transformed Statistics						
1653				Minimum Detected		2					Minimum Detected	0.693	
1654				Maximum Detected		3					Maximum Detected	1.099	
1655				Mean of Detected		2.5					Mean of Detected	0.896	
1656				SD of Detected		0.707					SD of Detected	0.287	
1657				Minimum Non-Detect		4					Minimum Non-Detect	1.386	
1658				Maximum Non-Detect		7					Maximum Non-Detect	1.946	
1659													
1660	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	29
1661	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	0
1662	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	100.00%
1663													
1664	Warning: Data set has only 2 Distinct Detected Values.												

	A	B	C	D	E	F	G	H	I	J	K	L
1665	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
1666	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
1667												
1668	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
1669												
1670	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
1671	Those methods will return a 'N/A' value on your output display!											
1672												
1673	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
1674	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
1675												
1676												
1677	UCL Statistics											
1678	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1679	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1		
1680	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A		
1681	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1682												
1683	Assuming Normal Distribution						Assuming Lognormal Distribution					
1684	DL/2 Substitution Method						DL/2 Substitution Method					
1685	Mean			2.5			Mean			0.903		
1686	SD			0.423			SD			0.168		
1687	95% DL/2 (t) UCL			2.633			95% H-Stat (DL/2) UCL			2.878		
1688												
1689	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
1690	MLE method failed to converge properly						Mean in Log Scale			N/A		
1691							SD in Log Scale			N/A		
1692							Mean in Original Scale			N/A		
1693							SD in Original Scale			N/A		
1694							95% Percentile Bootstrap UCL			N/A		
1695							95% BCA Bootstrap UCL			N/A		
1696												
1697	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1698	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
1699	Theta Star			N/A								
1700	nu star			N/A								
1701												
1702	A-D Test Statistic			0.359			Nonparametric Statistics					
1703	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
1704	K-S Test Statistic			N/A			Mean			2.5		
1705	5% K-S Critical Value			N/A			SD			0.5		
1706	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.5		
1707							95% KM (t) UCL			3.351		
1708	Assuming Gamma Distribution						95% KM (z) UCL			3.322		
1709	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			3.682		
1710	Minimum			N/A			95% KM (bootstrap t) UCL			#NUM!		
1711	Maximum			N/A			95% KM (BCA) UCL			N/A		
1712	Mean			N/A			95% KM (Percentile Bootstrap) UCL			3		
1713	Median			N/A			95% KM (Chebyshev) UCL			4.679		
1714	SD			N/A			97.5% KM (Chebyshev) UCL			5.622		
1715	k star			N/A			99% KM (Chebyshev) UCL			7.475		
1716	Theta star			N/A								

	A	B	C	D	E	F	G	H	I	J	K	L	
1717					Nu star	N/A	Potential UCLs to Use						
1718					AppChi2	N/A					95% KM (t) UCL	3.351	
1719					95% Gamma Approximate UCL	N/A					95% KM (% Bootstrap) UCL	3	
1720					95% Adjusted Gamma UCL	N/A							
1721	Warning: Recommended UCL exceeds the maximum observation												
1722	Note: DL/2 is not a recommended method.												
1723													
1724													
1725	Iron												
1726													
1727	General Statistics												
1728					Number of Valid Data	36					Number of Detected Data	36	
1729					Number of Distinct Detected Data	33					Number of Non-Detect Data	0	
1730					Number of Missing Values	35					Percent Non-Detects	0.00%	
1731													
1732	Raw Statistics						Log-transformed Statistics						
1733					Minimum Detected	5180					Minimum Detected	8.553	
1734					Maximum Detected	29800					Maximum Detected	10.3	
1735					Mean of Detected	15031					Mean of Detected	9.531	
1736					SD of Detected	6090					SD of Detected	0.439	
1737					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
1738					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
1739													
1740													
1741	UCL Statistics												
1742	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1743					Shapiro Wilk Test Statistic	0.969					Shapiro Wilk Test Statistic	0.965	
1744					5% Shapiro Wilk Critical Value	0.935					5% Shapiro Wilk Critical Value	0.935	
1745	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1746													
1747	Assuming Normal Distribution						Assuming Lognormal Distribution						
1748					DL/2 Substitution Method						DL/2 Substitution Method		
1749					Mean	15031					Mean	9.531	
1750					SD	6090					SD	0.439	
1751					95% DL/2 (t) UCL	16746					95% H-Stat (DL/2) UCL	17423	
1752													
1753					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
1754	MLE method failed to converge properly											Mean in Log Scale	N/A
1755											SD in Log Scale	N/A	
1756											Mean in Original Scale	N/A	
1757											SD in Original Scale	N/A	
1758											95% Percentile Bootstrap UCL	N/A	
1759											95% BCA Bootstrap UCL	N/A	
1760													
1761	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1762					k star (bias corrected)	5.434	Data appear Normal at 5% Significance Level						
1763					Theta Star	2766							
1764					nu star	391.3							
1765													
1766					A-D Test Statistic	0.175	Nonparametric Statistics						
1767					5% A-D Critical Value	0.75					Kaplan-Meier (KM) Method		
1768					K-S Test Statistic	0.75					Mean	15031	

	A	B	C	D	E	F	G	H	I	J	K	L	
1769	5% K-S Critical Value					0.147	SD					6005	
1770	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1015	
1771							95% KM (t) UCL					16746	
1772	Assuming Gamma Distribution						95% KM (z) UCL					16701	
1773	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					16746	
1774	Minimum						5180	95% KM (bootstrap t) UCL					16905
1775	Maximum						29800	95% KM (BCA) UCL					16778
1776	Mean						15031	95% KM (Percentile Bootstrap) UCL					16701
1777	Median						14600	95% KM (Chebyshev) UCL					19456
1778	SD						6090	97.5% KM (Chebyshev) UCL					21370
1779	k star						5.434	99% KM (Chebyshev) UCL					25131
1780	Theta star						2766						
1781	Nu star						391.3	Potential UCLs to Use					
1782	AppChi2						346.4	95% KM (t) UCL					16746
1783	95% Gamma Approximate UCL						16977	95% KM (Percentile Bootstrap) UCL					16701
1784	95% Adjusted Gamma UCL						17071						
1785	Note: DL/2 is not a recommended method.												
1786													
1787													
1788	Lead												
1789													
1790	General Statistics												
1791	Number of Valid Data					36	Number of Detected Data					36	
1792	Number of Distinct Detected Data					33	Number of Non-Detect Data					0	
1793	Number of Missing Values					35	Percent Non-Detects					0.00%	
1794													
1795	Raw Statistics						Log-transformed Statistics						
1796	Minimum Detected					2.6	Minimum Detected					0.956	
1797	Maximum Detected					841	Maximum Detected					6.735	
1798	Mean of Detected					83.59	Mean of Detected					3.031	
1799	SD of Detected					165.4	SD of Detected					1.612	
1800	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
1801	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
1802													
1803													
1804	UCL Statistics												
1805	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1806	Shapiro Wilk Test Statistic					0.551	Shapiro Wilk Test Statistic					0.872	
1807	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935	
1808	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1809													
1810	Assuming Normal Distribution						Assuming Lognormal Distribution						
1811	DL/2 Substitution Method						DL/2 Substitution Method						
1812	Mean					83.59	Mean					3.031	
1813	SD					165.4	SD					1.612	
1814	95% DL/2 (t) UCL					130.2	95% H-Stat (DL/2) UCL					179.7	
1815													
1816	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1817	MLE method failed to converge properly						Mean in Log Scale					N/A	
1818							SD in Log Scale					N/A	
1819							Mean in Original Scale					N/A	
1820							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L	
1821											95% Percentile Bootstrap UCL	N/A	
1822											95% BCA Bootstrap UCL	N/A	
1823													
1824	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1825					k star (bias corrected)	0.441	Data do not follow a Discernable Distribution (0.05)						
1826					Theta Star	189.4							
1827					nu star	31.77							
1828													
1829					A-D Test Statistic	3.279	Nonparametric Statistics						
1830					5% A-D Critical Value	0.821	Kaplan-Meier (KM) Method						
1831					K-S Test Statistic	0.821	Mean						83.59
1832					5% K-S Critical Value	0.156	SD						163.1
1833	Data not Gamma Distributed at 5% Significance Level						SE of Mean						27.56
1834							95% KM (t) UCL						130.2
1835	Assuming Gamma Distribution						95% KM (z) UCL						128.9
1836	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						130.2
1837					Minimum	2.6	95% KM (bootstrap t) UCL						173.7
1838					Maximum	841	95% KM (BCA) UCL						133.9
1839					Mean	83.59	95% KM (Percentile Bootstrap) UCL						132.5
1840					Median	12.15	95% KM (Chebyshev) UCL						203.7
1841					SD	165.4	97.5% KM (Chebyshev) UCL						255.7
1842					k star	0.441	99% KM (Chebyshev) UCL						357.8
1843					Theta star	189.4							
1844					Nu star	31.77	Potential UCLs to Use						
1845					AppChi2	19.89	99% KM (Chebyshev) UCL						357.8
1846					95% Gamma Approximate UCL	133.5							
1847					95% Adjusted Gamma UCL	136.4							
1848	Note: DL/2 is not a recommended method.												
1849													
1850													
1851	Magnesium												
1852													
1853	General Statistics												
1854					Number of Valid Data	36					Number of Detected Data	36	
1855					Number of Distinct Detected Data	36					Number of Non-Detect Data	0	
1856					Number of Missing Values	35					Percent Non-Detects	0.00%	
1857													
1858	Raw Statistics						Log-transformed Statistics						
1859					Minimum Detected	1390					Minimum Detected	7.237	
1860					Maximum Detected	21400					Maximum Detected	9.971	
1861					Mean of Detected	5655					Mean of Detected	8.462	
1862					SD of Detected	4105					SD of Detected	0.577	
1863					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
1864					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
1865													
1866													
1867	UCL Statistics												
1868	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1869					Shapiro Wilk Test Statistic	0.735					Shapiro Wilk Test Statistic	0.976	
1870					5% Shapiro Wilk Critical Value	0.935					5% Shapiro Wilk Critical Value	0.935	
1871	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1872													

	A	B	C	D	E	F	G	H	I	J	K	L		
1873	Assuming Normal Distribution						Assuming Lognormal Distribution							
1874	DL/2 Substitution Method						DL/2 Substitution Method							
1875	Mean						5655	Mean						8.462
1876	SD						4105	SD						0.577
1877	95% DL/2 (t) UCL						6811	95% H-Stat (DL/2) UCL						6773
1878														
1879	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1880	MLE method failed to converge properly							Mean in Log Scale						N/A
1881								SD in Log Scale						N/A
1882								Mean in Original Scale						N/A
1883								SD in Original Scale						N/A
1884								95% Percentile Bootstrap UCL						N/A
1885								95% BCA Bootstrap UCL						N/A
1886														
1887	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1888	k star (bias corrected)						2.735	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1889	Theta Star						2068							
1890	nu star						196.9							
1891														
1892	A-D Test Statistic						0.775	Nonparametric Statistics						
1893	5% A-D Critical Value						0.754	Kaplan-Meier (KM) Method						
1894	K-S Test Statistic						0.754	Mean						5655
1895	5% K-S Critical Value						0.148	SD						4048
1896	Data follow Appr. Gamma Distribution at 5% Significance Level							SE of Mean						684.2
1897								95% KM (t) UCL						6811
1898	Assuming Gamma Distribution							95% KM (z) UCL						6780
1899	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						6811
1900	Minimum						1390	95% KM (bootstrap t) UCL						7677
1901	Maximum						21400	95% KM (BCA) UCL						6887
1902	Mean						5655	95% KM (Percentile Bootstrap) UCL						6847
1903	Median						4645	95% KM (Chebyshev) UCL						8637
1904	SD						4105	97.5% KM (Chebyshev) UCL						9928
1905	k star						2.735	99% KM (Chebyshev) UCL						12462
1906	Theta star						2068							
1907	Nu star						196.9	Potential UCLs to Use						
1908	AppChi2						165.4	95% KM (BCA) UCL						6887
1909	95% Gamma Approximate UCL						6731							
1910	95% Adjusted Gamma UCL						6784							
1911	Note: DL/2 is not a recommended method.													
1912														
1913														
1914	Manganese													
1915														
1916	General Statistics													
1917	Number of Valid Data						36	Number of Detected Data						36
1918	Number of Distinct Detected Data						35	Number of Non-Detect Data						0
1919	Number of Missing Values						35	Percent Non-Detects						0.00%
1920														
1921	Raw Statistics						Log-transformed Statistics							
1922	Minimum Detected						103	Minimum Detected						4.635
1923	Maximum Detected						572	Maximum Detected						6.349
1924	Mean of Detected						286.2	Mean of Detected						5.553

	A	B	C	D	E	F	G	H	I	J	K	L
1925	SD of Detected					126.7	SD of Detected					0.477
1926	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1927	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1928												
1929												
1930	UCL Statistics											
1931	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1932	Shapiro Wilk Test Statistic					0.943	Shapiro Wilk Test Statistic					0.946
1933	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
1934	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1935												
1936	Assuming Normal Distribution						Assuming Lognormal Distribution					
1937	DL/2 Substitution Method						DL/2 Substitution Method					
1938	Mean					286.2	Mean					5.553
1939	SD					126.7	SD					0.477
1940	95% DL/2 (t) UCL					321.8	95% H-Stat (DL/2) UCL					336.9
1941												
1942	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1943	MLE method failed to converge properly						Mean in Log Scale					N/A
1944							SD in Log Scale					N/A
1945							Mean in Original Scale					N/A
1946							SD in Original Scale					N/A
1947							95% Percentile Bootstrap UCL					N/A
1948							95% BCA Bootstrap UCL					N/A
1949												
1950	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1951	k star (bias corrected)					4.6	Data appear Normal at 5% Significance Level					
1952	Theta Star					62.21						
1953	nu star					331.2						
1954												
1955	A-D Test Statistic					0.384	Nonparametric Statistics					
1956	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
1957	K-S Test Statistic					0.75	Mean					286.2
1958	5% K-S Critical Value					0.147	SD					124.9
1959	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					21.11
1960							95% KM (t) UCL					321.8
1961	Assuming Gamma Distribution						95% KM (z) UCL					320.9
1962	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					321.8
1963	Minimum					103	95% KM (bootstrap t) UCL					322.8
1964	Maximum					572	95% KM (BCA) UCL					320.9
1965	Mean					286.2	95% KM (Percentile Bootstrap) UCL					323.1
1966	Median					267.5	95% KM (Chebyshev) UCL					378.2
1967	SD					126.7	97.5% KM (Chebyshev) UCL					418
1968	k star					4.6	99% KM (Chebyshev) UCL					496.2
1969	Theta star					62.21						
1970	Nu star					331.2	Potential UCLs to Use					
1971	AppChi2					290.1	95% KM (t) UCL					321.8
1972	95% Gamma Approximate UCL					326.8	95% KM (Percentile Bootstrap) UCL					323.1
1973	95% Adjusted Gamma UCL					328.8						
1974	Note: DL/2 is not a recommended method.											
1975												
1976												

	A	B	C	D	E	F	G	H	I	J	K	L	
1977	Mercury												
1978													
1979	General Statistics												
1980	Number of Valid Data					36		Number of Detected Data					21
1981	Number of Distinct Detected Data					19		Number of Non-Detect Data					15
1982	Number of Missing Values					35		Percent Non-Detects					41.67%
1983													
1984	Raw Statistics						Log-transformed Statistics						
1985	Minimum Detected					0.0063		Minimum Detected					-5.067
1986	Maximum Detected					1.6		Maximum Detected					0.47
1987	Mean of Detected					0.309		Mean of Detected					-2.569
1988	SD of Detected					0.428		SD of Detected					1.957
1989	Minimum Non-Detect					0.05		Minimum Non-Detect					-2.996
1990	Maximum Non-Detect					0.14		Maximum Non-Detect					-1.966
1991													
1992	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					26	
1993	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					10	
1994	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					72.22%	
1995													
1996	UCL Statistics												
1997	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1998	Shapiro Wilk Test Statistic					0.75		Shapiro Wilk Test Statistic					0.874
1999	5% Shapiro Wilk Critical Value					0.908		5% Shapiro Wilk Critical Value					0.908
2000	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2001													
2002	Assuming Normal Distribution						Assuming Lognormal Distribution						
2003	DL/2 Substitution Method							DL/2 Substitution Method					
2004	Mean					0.203		Mean					-2.727
2005	SD					0.348		SD					1.499
2006	95% DL/2 (t) UCL					0.301		95% H-Stat (DL/2) UCL					0.414
2007													
2008	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
2009	MLE yields a negative mean						Mean in Log Scale					-3.146	
2010							SD in Log Scale					1.703	
2011							Mean in Original Scale					0.191	
2012							SD in Original Scale					0.354	
2013							95% Percentile Bootstrap UCL					0.293	
2014							95% BCA Bootstrap UCL					0.311	
2015													
2016	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2017	k star (bias corrected)					0.427		Data do not follow a Discernable Distribution (0.05)					
2018	Theta Star					0.724							
2019	nu star					17.93							
2020													
2021	A-D Test Statistic					1.136		Nonparametric Statistics					
2022	5% A-D Critical Value					0.813		Kaplan-Meier (KM) Method					
2023	K-S Test Statistic					0.813		Mean					0.187
2024	5% K-S Critical Value					0.201		SD					0.35
2025	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0598	
2026							95% KM (t) UCL					0.288	
2027	Assuming Gamma Distribution						95% KM (z) UCL					0.285	
2028	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					0.287

	A	B	C	D	E	F	G	H	I	J	K	L	
2029					Minimum	0.0063				95% KM (bootstrap t) UCL		0.338	
2030					Maximum	1.6				95% KM (BCA) UCL		0.3	
2031					Mean	0.309				95% KM (Percentile Bootstrap) UCL		0.283	
2032					Median	0.306				95% KM (Chebyshev) UCL		0.448	
2033					SD	0.324				97.5% KM (Chebyshev) UCL		0.561	
2034					k star	0.694				99% KM (Chebyshev) UCL		0.782	
2035					Theta star	0.446							
2036					Nu star	49.97				Potential UCLs to Use			
2037					AppChi2	34.74				99% KM (Chebyshev) UCL		0.782	
2038					95% Gamma Approximate UCL	0.445							
2039					95% Adjusted Gamma UCL	0.453							
2040	Note: DL/2 is not a recommended method.												
2041													
2042													
2043	Naphthalene												
2044													
2045	General Statistics												
2046					Number of Valid Data	29				Number of Detected Data		2	
2047					Number of Distinct Detected Data	2				Number of Non-Detect Data		27	
2048					Number of Missing Values	41				Percent Non-Detects		93.10%	
2049													
2050	Raw Statistics						Log-transformed Statistics						
2051					Minimum Detected	1				Minimum Detected		0	
2052					Maximum Detected	4				Maximum Detected		1.386	
2053					Mean of Detected	2.5				Mean of Detected		0.693	
2054					SD of Detected	2.121				SD of Detected		0.98	
2055					Minimum Non-Detect	0.4				Minimum Non-Detect		-0.916	
2056					Maximum Non-Detect	5.1				Maximum Non-Detect		1.629	
2057													
2058	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						29
2059	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
2060	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
2061													
2062	Warning: Data set has only 2 Distinct Detected Values.												
2063	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
2064	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
2065													
2066	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
2067													
2068	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
2069	Those methods will return a 'N/A' value on your output display!												
2070													
2071	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
2072	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
2073													
2074													
2075	UCL Statistics												
2076	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2077					Shapiro Wilk Test Statistic	1				Shapiro Wilk Test Statistic		1	
2078					5% Shapiro Wilk Critical Value	N/A				5% Shapiro Wilk Critical Value		N/A	
2079	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2080													

	A	B	C	D	E	F	G	H	I	J	K	L		
2081	Assuming Normal Distribution						Assuming Lognormal Distribution							
2082	DL/2 Substitution Method						DL/2 Substitution Method							
2083	Mean						1.655	Mean						0.2
2084	SD						0.928	SD						0.961
2085	95% DL/2 (t) UCL						1.948	95% H-Stat (DL/2) UCL						2.907
2086														
2087	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
2088	MLE method failed to converge properly							Mean in Log Scale						N/A
2089								SD in Log Scale						N/A
2090								Mean in Original Scale						N/A
2091								SD in Original Scale						N/A
2092								95% Percentile Bootstrap UCL						N/A
2093								95% BCA Bootstrap UCL						N/A
2094														
2095	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only						
2096	k star (bias corrected)						N/A	Data do not follow a Discernable Distribution (0.05)						
2097	Theta Star						N/A							
2098	nu star						N/A							
2099														
2100	A-D Test Statistic						0.359	Nonparametric Statistics						
2101	5% A-D Critical Value						N/A	Kaplan-Meier (KM) Method						
2102	K-S Test Statistic						N/A	Mean						1.176
2103	5% K-S Critical Value						N/A	SD						0.706
2104	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.242
2105								95% KM (t) UCL						1.588
2106	Assuming Gamma Distribution							95% KM (z) UCL						1.575
2107	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						3.109
2108	Minimum						N/A	95% KM (bootstrap t) UCL						#NUM!
2109	Maximum						N/A	95% KM (BCA) UCL						N/A
2110	Mean						N/A	95% KM (Percentile Bootstrap) UCL						N/A
2111	Median						N/A	95% KM (Chebyshev) UCL						2.232
2112	SD						N/A	97.5% KM (Chebyshev) UCL						2.688
2113	k star						N/A	99% KM (Chebyshev) UCL						3.585
2114	Theta star						N/A							
2115	Nu star						N/A	Potential UCLs to Use						
2116	AppChi2						N/A	95% KM (t) UCL						1.588
2117	95% Gamma Approximate UCL						N/A	95% KM (% Bootstrap) UCL						N/A
2118	95% Adjusted Gamma UCL						N/A							
2119	Note: DL/2 is not a recommended method.													
2120														
2121														
2122	Nickel													
2123														
2124	General Statistics													
2125	Number of Valid Data						36	Number of Detected Data						36
2126	Number of Distinct Detected Data						34	Number of Non-Detect Data						0
2127	Number of Missing Values						35	Percent Non-Detects						0.00%
2128														
2129	Raw Statistics							Log-transformed Statistics						
2130	Minimum Detected						4.1	Minimum Detected						1.411
2131	Maximum Detected						25.4	Maximum Detected						3.235
2132	Mean of Detected						15.77	Mean of Detected						2.656

	A	B	C	D	E	F	G	H	I	J	K	L
2133	SD of Detected					6.4	SD of Detected					0.495
2134	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2135	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2136												
2137												
2138	UCL Statistics											
2139	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2140	Shapiro Wilk Test Statistic					0.946	Shapiro Wilk Test Statistic					0.902
2141	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
2142	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2143												
2144	Assuming Normal Distribution						Assuming Lognormal Distribution					
2145	DL/2 Substitution Method						DL/2 Substitution Method					
2146	Mean					15.77	Mean					2.656
2147	SD					6.4	SD					0.495
2148	95% DL/2 (t) UCL					17.57	95% H-Stat (DL/2) UCL					18.88
2149												
2150	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2151	MLE method failed to converge properly						Mean in Log Scale					N/A
2152							SD in Log Scale					N/A
2153							Mean in Original Scale					N/A
2154							SD in Original Scale					N/A
2155							95% Percentile Bootstrap UCL					N/A
2156							95% BCA Bootstrap UCL					N/A
2157												
2158	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2159	k star (bias corrected)					4.645	Data appear Normal at 5% Significance Level					
2160	Theta Star					3.396						
2161	nu star					334.4						
2162												
2163	A-D Test Statistic					0.625	Nonparametric Statistics					
2164	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
2165	K-S Test Statistic					0.75	Mean					15.77
2166	5% K-S Critical Value					0.147	SD					6.31
2167	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1.067
2168							95% KM (t) UCL					17.57
2169	Assuming Gamma Distribution						95% KM (z) UCL					17.53
2170	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					17.57
2171	Minimum					4.1	95% KM (bootstrap t) UCL					17.53
2172	Maximum					25.4	95% KM (BCA) UCL					17.46
2173	Mean					15.77	95% KM (Percentile Bootstrap) UCL					17.5
2174	Median					15.65	95% KM (Chebyshev) UCL					20.42
2175	SD					6.4	97.5% KM (Chebyshev) UCL					22.43
2176	k star					4.645	99% KM (Chebyshev) UCL					26.38
2177	Theta star					3.396						
2178	Nu star					334.4	Potential UCLs to Use					
2179	AppChi2					293.1	95% KM (t) UCL					17.57
2180	95% Gamma Approximate UCL					18	95% KM (Percentile Bootstrap) UCL					17.5
2181	95% Adjusted Gamma UCL					18.11						
2182	Note: DL/2 is not a recommended method.											
2183												
2184												

	A	B	C	D	E	F	G	H	I	J	K	L	
2185	Phenanthrene												
2186													
2187	General Statistics												
2188	Number of Valid Data					29		Number of Detected Data					8
2189	Number of Distinct Detected Data					5		Number of Non-Detect Data					21
2190	Number of Missing Values					41		Percent Non-Detects					72.41%
2191													
2192	Raw Statistics						Log-transformed Statistics						
2193	Minimum Detected					0.2		Minimum Detected					-1.609
2194	Maximum Detected					6		Maximum Detected					1.792
2195	Mean of Detected					1.3		Mean of Detected					-0.522
2196	SD of Detected					1.997		SD of Detected					1.251
2197	Minimum Non-Detect					4		Minimum Non-Detect					1.386
2198	Maximum Non-Detect					6		Maximum Non-Detect					1.792
2199													
2200	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					28	
2201	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1	
2202	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					96.55%	
2203													
2204	Warning: There are only 8 Detected Values in this data												
2205	Note: It should be noted that even though bootstrap may be performed on this data set												
2206	the resulting calculations may not be reliable enough to draw conclusions												
2207													
2208	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
2209													
2210													
2211	UCL Statistics												
2212	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2213	Shapiro Wilk Test Statistic					0.638		Shapiro Wilk Test Statistic					0.858
2214	5% Shapiro Wilk Critical Value					0.818		5% Shapiro Wilk Critical Value					0.818
2215	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2216													
2217	Assuming Normal Distribution						Assuming Lognormal Distribution						
2218	DL/2 Substitution Method							DL/2 Substitution Method					
2219	Mean					2.134		Mean					0.499
2220	SD					1.166		SD					0.904
2221	95% DL/2 (t) UCL					2.503		95% H-Stat (DL/2) UCL					6.657
2222													
2223	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
2224	MLE method failed to converge properly						Mean in Log Scale					-0.751	
2225							SD in Log Scale					0.959	
2226							Mean in Original Scale					0.788	
2227							SD in Original Scale					1.124	
2228							95% Percentile Bootstrap UCL					1.152	
2229							95% BCA Bootstrap UCL					1.34	
2230													
2231	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2232	k star (bias corrected)					0.559		Data appear Gamma Distributed at 5% Significance Level					
2233	Theta Star					2.324							
2234	nu star					8.95							
2235													
2236	A-D Test Statistic					0.744		Nonparametric Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L	
2237	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method						
2238	K-S Test Statistic					0.745	Mean					0.814	
2239	5% K-S Critical Value					0.304	SD					1.153	
2240	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.31	
2241							95% KM (t) UCL					1.341	
2242	Assuming Gamma Distribution						95% KM (z) UCL					1.323	
2243	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.354	
2244	Minimum						0.2	95% KM (bootstrap t) UCL					1.93
2245	Maximum						6	95% KM (BCA) UCL					1.448
2246	Mean						1.277	95% KM (Percentile Bootstrap) UCL					1.338
2247	Median						1.237	95% KM (Chebyshev) UCL					2.164
2248	SD						1.015	97.5% KM (Chebyshev) UCL					2.749
2249	k star						2.137	99% KM (Chebyshev) UCL					3.897
2250	Theta star						0.598						
2251	Nu star						123.9	Potential UCLs to Use					
2252	AppChi2						99.22	95% KM (t) UCL					1.341
2253	95% Gamma Approximate UCL						1.596						
2254	95% Adjusted Gamma UCL						1.617						
2255	Note: DL/2 is not a recommended method.												
2256													
2257													
2258	Potassium												
2259													
2260	General Statistics												
2261	Number of Valid Data					36	Number of Detected Data					36	
2262	Number of Distinct Detected Data					36	Number of Non-Detect Data					0	
2263	Number of Missing Values					35	Percent Non-Detects					0.00%	
2264													
2265	Raw Statistics						Log-transformed Statistics						
2266	Minimum Detected					372	Minimum Detected					5.919	
2267	Maximum Detected					2410	Maximum Detected					7.787	
2268	Mean of Detected					1245	Mean of Detected					7	
2269	SD of Detected					604.9	SD of Detected					0.529	
2270	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
2271	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
2272													
2273													
2274	UCL Statistics												
2275	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2276	Shapiro Wilk Test Statistic					0.933	Shapiro Wilk Test Statistic					0.951	
2277	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935	
2278	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2279													
2280	Assuming Normal Distribution						Assuming Lognormal Distribution						
2281	DL/2 Substitution Method						DL/2 Substitution Method						
2282	Mean					1245	Mean					7	
2283	SD					604.9	SD					0.529	
2284	95% DL/2 (t) UCL					1415	95% H-Stat (DL/2) UCL					1500	
2285													
2286	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method
2287	MLE method failed to converge properly						Mean in Log Scale					N/A	
2288							SD in Log Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L	
2289										Mean in Original Scale		N/A	
2290										SD in Original Scale		N/A	
2291										95% Percentile Bootstrap UCL		N/A	
2292										95% BCA Bootstrap UCL		N/A	
2293													
2294	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
2295					k star (bias corrected)	3.789	Data appear Gamma Distributed at 5% Significance Level						
2296					Theta Star	328.6							
2297					nu star	272.8							
2298													
2299					A-D Test Statistic	0.304	Nonparametric Statistics						
2300					5% A-D Critical Value	0.752	Kaplan-Meier (KM) Method						
2301					K-S Test Statistic	0.752					Mean	1245	
2302					5% K-S Critical Value	0.147					SD	596.5	
2303	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	100.8	
2304												95% KM (t) UCL	1415
2305	Assuming Gamma Distribution										95% KM (z) UCL	1411	
2306	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1415	
2307					Minimum	372						95% KM (bootstrap t) UCL	1429
2308					Maximum	2410						95% KM (BCA) UCL	1405
2309					Mean	1245						95% KM (Percentile Bootstrap) UCL	1406
2310					Median	1185						95% KM (Chebyshev) UCL	1685
2311					SD	604.9						97.5% KM (Chebyshev) UCL	1875
2312					k star	3.789						99% KM (Chebyshev) UCL	2248
2313					Theta star	328.6							
2314					Nu star	272.8	Potential UCLs to Use						
2315					AppChi2	235.5						95% KM (BCA) UCL	1405
2316					95% Gamma Approximate UCL	1442							
2317					95% Adjusted Gamma UCL	1452							
2318	Note: DL/2 is not a recommended method.												
2319													
2320													
2321	Pyrene												
2322													
2323	General Statistics												
2324					Number of Valid Data	29					Number of Detected Data	12	
2325					Number of Distinct Detected Data	7					Number of Non-Detect Data	17	
2326					Number of Missing Values	41					Percent Non-Detects	58.62%	
2327													
2328	Raw Statistics						Log-transformed Statistics						
2329					Minimum Detected	0.2					Minimum Detected	-1.609	
2330					Maximum Detected	4					Maximum Detected	1.386	
2331					Mean of Detected	0.8					Mean of Detected	-0.596	
2332					SD of Detected	1.035					SD of Detected	0.768	
2333					Minimum Non-Detect	4					Minimum Non-Detect	1.386	
2334					Maximum Non-Detect	6					Maximum Non-Detect	1.792	
2335													
2336	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						29
2337	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
2338	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
2339													
2340	UCL Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
2341	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2342	Shapiro Wilk Test Statistic					0.522	Shapiro Wilk Test Statistic					0.84
2343	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
2344	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2345												
2346	Assuming Normal Distribution						Assuming Lognormal Distribution					
2347	DL/2 Substitution Method						DL/2 Substitution Method					
2348	Mean					1.745	Mean					0.263
2349	SD					1.072	SD					0.885
2350	95% DL/2 (t) UCL					2.083	95% H-Stat (DL/2) UCL					6.033
2351												
2352	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2353	MLE method failed to converge properly						Mean in Log Scale					-0.642
2354							SD in Log Scale					0.633
2355							Mean in Original Scale					0.673
2356							SD in Original Scale					0.699
2357							95% Percentile Bootstrap UCL					0.912
2358							95% BCA Bootstrap UCL					1.016
2359												
2360	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2361	k star (bias corrected)					1.171	Data do not follow a Discernable Distribution (0.05)					
2362	Theta Star					0.683						
2363	nu star					28.1						
2364												
2365	A-D Test Statistic					1.35	Nonparametric Statistics					
2366	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method					
2367	K-S Test Statistic					0.746	Mean					0.703
2368	5% K-S Critical Value					0.25	SD					0.832
2369	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.209
2370							95% KM (t) UCL					1.058
2371	Assuming Gamma Distribution						95% KM (z) UCL					1.047
2372	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.058
2373	Minimum					0.2	95% KM (bootstrap t) UCL					1.749
2374	Maximum					4	95% KM (BCA) UCL					1.123
2375	Mean					0.781	95% KM (Percentile Bootstrap) UCL					1.081
2376	Median					0.721	95% KM (Chebyshev) UCL					1.614
2377	SD					0.66	97.5% KM (Chebyshev) UCL					2.008
2378	k star					2.848	99% KM (Chebyshev) UCL					2.782
2379	Theta star					0.274						
2380	Nu star					165.2	Potential UCLs to Use					
2381	AppChi2					136.5	95% KM (t) UCL					1.058
2382	95% Gamma Approximate UCL					0.946	95% KM (% Bootstrap) UCL					1.081
2383	95% Adjusted Gamma UCL					0.957						
2384	Note: DL/2 is not a recommended method.											
2385												
2386												
2387	Selenium											
2388												
2389	General Statistics											
2390	Number of Valid Data					22	Number of Detected Data					6
2391	Number of Distinct Detected Data					6	Number of Non-Detect Data					16
2392	Number of Missing Values					47	Percent Non-Detects					72.73%

	A	B	C	D	E	F	G	H	I	J	K	L	
2393													
2394	Raw Statistics						Log-transformed Statistics						
2395				Minimum Detected		0.84				Minimum Detected		-0.174	
2396				Maximum Detected		5				Maximum Detected		1.609	
2397				Mean of Detected		2.823				Mean of Detected		0.873	
2398				SD of Detected		1.565				SD of Detected		0.676	
2399				Minimum Non-Detect		0.72				Minimum Non-Detect		-0.329	
2400				Maximum Non-Detect		7.1				Maximum Non-Detect		1.96	
2401													
2402	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		22
2403	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
2404	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
2405													
2406	Warning: There are only 6 Detected Values in this data												
2407	Note: It should be noted that even though bootstrap may be performed on this data set												
2408	the resulting calculations may not be reliable enough to draw conclusions												
2409													
2410	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
2411													
2412													
2413	UCL Statistics												
2414	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2415				Shapiro Wilk Test Statistic		0.958				Shapiro Wilk Test Statistic		0.928	
2416				5% Shapiro Wilk Critical Value		0.788				5% Shapiro Wilk Critical Value		0.788	
2417	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2418													
2419	Assuming Normal Distribution						Assuming Lognormal Distribution						
2420				DL/2 Substitution Method						DL/2 Substitution Method			
2421				Mean		1.84				Mean		0.312	
2422				SD		1.272				SD		0.867	
2423				95% DL/2 (t) UCL		2.307				95% H-Stat (DL/2) UCL		3.042	
2424													
2425				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
2426	MLE method failed to converge properly										Mean in Log Scale		-0.0297
2427										SD in Log Scale		0.706	
2428										Mean in Original Scale		1.298	
2429										SD in Original Scale		1.24	
2430										95% Percentile Bootstrap UCL		1.728	
2431										95% BCA Bootstrap UCL		1.856	
2432													
2433	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2434				k star (bias corrected)		1.703				Data appear Normal at 5% Significance Level			
2435				Theta Star		1.658							
2436				nu star		20.43							
2437													
2438				A-D Test Statistic		0.282				Nonparametric Statistics			
2439				5% A-D Critical Value		0.701				Kaplan-Meier (KM) Method			
2440				K-S Test Statistic		0.701				Mean		1.602	
2441				5% K-S Critical Value		0.334				SD		1.239	
2442	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		0.339
2443										95% KM (t) UCL		2.185	
2444	Assuming Gamma Distribution										95% KM (z) UCL		2.16

	A	B	C	D	E	F	G	H	I	J	K	L
2445	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.134
2446					Minimum	0.84	95% KM (bootstrap t) UCL					2.153
2447					Maximum	5.357	95% KM (BCA) UCL					3.7
2448					Mean	3.258	95% KM (Percentile Bootstrap) UCL					2.902
2449					Median	3.24	95% KM (Chebyshev) UCL					3.08
2450					SD	1.177	97.5% KM (Chebyshev) UCL					3.72
2451					k star	5.693	99% KM (Chebyshev) UCL					4.977
2452					Theta star	0.572						
2453					Nu star	250.5	Potential UCLs to Use					
2454					AppChi2	214.8	95% KM (t) UCL					2.185
2455			95% Gamma Approximate UCL			3.799	95% KM (Percentile Bootstrap) UCL					2.902
2456			95% Adjusted Gamma UCL			3.843						
2457	Note: DL/2 is not a recommended method.											
2458												
2459												
2460	Silver											
2461												
2462	General Statistics											
2463	Number of Valid Data				36	Number of Detected Data				7		
2464	Number of Distinct Detected Data				7	Number of Non-Detect Data				29		
2465	Number of Missing Values				35	Percent Non-Detects				80.56%		
2466												
2467	Raw Statistics						Log-transformed Statistics					
2468	Minimum Detected				0.76	Minimum Detected				-0.274		
2469	Maximum Detected				1.9	Maximum Detected				0.642		
2470	Mean of Detected				1.313	Mean of Detected				0.202		
2471	SD of Detected				0.507	SD of Detected				0.415		
2472	Minimum Non-Detect				0.86	Minimum Non-Detect				-0.151		
2473	Maximum Non-Detect				2	Maximum Non-Detect				0.693		
2474												
2475	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				36	
2476	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
2477	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
2478												
2479	Warning: There are only 7 Detected Values in this data											
2480	Note: It should be noted that even though bootstrap may be performed on this data set											
2481	the resulting calculations may not be reliable enough to draw conclusions											
2482												
2483	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
2484												
2485												
2486	UCL Statistics											
2487	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2488	Shapiro Wilk Test Statistic				0.84	Shapiro Wilk Test Statistic				0.824		
2489	5% Shapiro Wilk Critical Value				0.803	5% Shapiro Wilk Critical Value				0.803		
2490	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2491												
2492	Assuming Normal Distribution						Assuming Lognormal Distribution					
2493	DL/2 Substitution Method						DL/2 Substitution Method					
2494	Mean				0.714	Mean				-0.428		
2495	SD				0.379	SD				0.392		
2496	95% DL/2 (t) UCL				0.821	95% H-Stat (DL/2) UCL				0.717		

	A	B	C	D	E	F	G	H	I	J	K	L
2497												
2498	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2499	MLE method failed to converge properly						Mean in Log Scale					-0.113
2500							SD in Log Scale					0.286
2501							Mean in Original Scale					0.933
2502							SD in Original Scale					0.315
2503							95% Percentile Bootstrap UCL					1.024
2504							95% BCA Bootstrap UCL					1.04
2505												
2506	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2507	k star (bias corrected)					4.236	Data appear Normal at 5% Significance Level					
2508	Theta Star					0.31						
2509	nu star					59.3						
2510												
2511	A-D Test Statistic					0.635	Nonparametric Statistics					
2512	5% A-D Critical Value					0.709	Kaplan-Meier (KM) Method					
2513	K-S Test Statistic					0.709	Mean					0.9
2514	5% K-S Critical Value					0.313	SD					0.297
2515	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.058
2516							95% KM (t) UCL					0.998
2517	Assuming Gamma Distribution						95% KM (z) UCL					0.996
2518	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.999
2519	Minimum					0.76	95% KM (bootstrap t) UCL					1.013
2520	Maximum					1.9	95% KM (BCA) UCL					1.426
2521	Mean					1.307	95% KM (Percentile Bootstrap) UCL					1.048
2522	Median					1.319	95% KM (Chebyshev) UCL					1.153
2523	SD					0.231	97.5% KM (Chebyshev) UCL					1.262
2524	k star					27.96	99% KM (Chebyshev) UCL					1.477
2525	Theta star					0.0468						
2526	Nu star					2013	Potential UCLs to Use					
2527	AppChi2					1910	95% KM (t) UCL					0.998
2528	95% Gamma Approximate UCL					1.378	95% KM (Percentile Bootstrap) UCL					1.048
2529	95% Adjusted Gamma UCL					1.381						
2530	Note: DL/2 is not a recommended method.											
2531												
2532												
2533	Sodium											
2534												
2535	General Statistics											
2536	Number of Valid Data					36	Number of Detected Data					36
2537	Number of Distinct Detected Data					31	Number of Non-Detect Data					0
2538	Number of Missing Values					35	Percent Non-Detects					0.00%
2539												
2540	Raw Statistics						Log-transformed Statistics					
2541	Minimum Detected					42.1	Minimum Detected					3.74
2542	Maximum Detected					301	Maximum Detected					5.707
2543	Mean of Detected					170.9	Mean of Detected					5.035
2544	SD of Detected					73.31	SD of Detected					0.496
2545	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2546	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2547												
2548												

	A	B	C	D	E	F	G	H	I	J	K	L	
2549	UCL Statistics												
2550	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2551	Shapiro Wilk Test Statistic					0.936	Shapiro Wilk Test Statistic					0.923	
2552	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935	
2553	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2554													
2555	Assuming Normal Distribution						Assuming Lognormal Distribution						
2556	DL/2 Substitution Method						DL/2 Substitution Method						
2557	Mean					170.9	Mean					5.035	
2558	SD					73.31	SD					0.496	
2559	95% DL/2 (t) UCL					191.6	95% H-Stat (DL/2) UCL					203.9	
2560													
2561	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
2562	MLE method failed to converge properly						Mean in Log Scale						N/A
2563	SD in Log Scale												N/A
2564	Mean in Original Scale												N/A
2565	SD in Original Scale												N/A
2566	95% Percentile Bootstrap UCL												N/A
2567	95% BCA Bootstrap UCL												N/A
2568													
2569	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2570	k star (bias corrected)					4.478	Data appear Normal at 5% Significance Level						
2571	Theta Star					38.17							
2572	nu star					322.4							
2573													
2574	A-D Test Statistic					0.688	Nonparametric Statistics						
2575	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method						
2576	K-S Test Statistic					0.75	Mean					170.9	
2577	5% K-S Critical Value					0.147	SD					72.29	
2578	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					12.22	
2579	95% KM (t) UCL												191.6
2580	Assuming Gamma Distribution						95% KM (z) UCL						191
2581	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						191.6
2582	Minimum					42.1	95% KM (bootstrap t) UCL					191.3	
2583	Maximum					301	95% KM (BCA) UCL					193.2	
2584	Mean					170.9	95% KM (Percentile Bootstrap) UCL					191.6	
2585	Median					158	95% KM (Chebyshev) UCL					224.2	
2586	SD					73.31	97.5% KM (Chebyshev) UCL					247.2	
2587	k star					4.478	99% KM (Chebyshev) UCL					292.5	
2588	Theta star					38.17							
2589	Nu star					322.4	Potential UCLs to Use						
2590	AppChi2					281.8	95% KM (t) UCL					191.6	
2591	95% Gamma Approximate UCL					195.5	95% KM (Percentile Bootstrap) UCL					191.6	
2592	95% Adjusted Gamma UCL					196.7							
2593	Note: DL/2 is not a recommended method.												
2594													
2595													
2596	trans-Nonachlor												
2597													
2598	General Statistics												
2599	Number of Valid Data					29	Number of Detected Data					1	
2600	Number of Distinct Detected Data					1	Number of Non-Detect Data					28	

	A	B	C	D	E	F	G	H	I	J	K	L
2601	Number of Missing Values					41	Percent Non-Detects					96.55%
2602												
2603	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
2604	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
2605												
2606	The data set for variable trans-Nonachlor was not processed!											
2607												
2608												
2609												
2610	Uranium											
2611												
2612	General Statistics											
2613	Number of Valid Data					29	Number of Detected Data					3
2614	Number of Distinct Detected Data					3	Number of Non-Detect Data					26
2615	Number of Missing Values					42	Percent Non-Detects					89.66%
2616												
2617	Raw Statistics						Log-transformed Statistics					
2618	Minimum Detected					5.1	Minimum Detected					1.629
2619	Maximum Detected					11.5	Maximum Detected					2.442
2620	Mean of Detected					8.333	Mean of Detected					2.067
2621	SD of Detected					3.201	SD of Detected					0.41
2622	Minimum Non-Detect					6.4	Minimum Non-Detect					1.856
2623	Maximum Non-Detect					30.2	Maximum Non-Detect					3.408
2624												
2625	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					29
2626	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
2627	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
2628												
2629	Warning: There are only 3 Distinct Detected Values in this data set											
2630	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
2631	Those methods will return a 'N/A' value on your output display!											
2632												
2633	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
2634	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
2635												
2636												
2637	UCL Statistics											
2638	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2639	Shapiro Wilk Test Statistic					1	Shapiro Wilk Test Statistic					0.983
2640	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
2641	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2642												
2643	Assuming Normal Distribution						Assuming Lognormal Distribution					
2644	DL/2 Substitution Method						DL/2 Substitution Method					
2645	Mean					10.39	Mean					2.294
2646	SD					2.676	SD					0.348
2647	95% DL/2 (t) UCL					11.24	95% H-Stat (DL/2) UCL					13.95
2648												
2649	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2650	MLE method failed to converge properly						Mean in Log Scale					1.873
2651							SD in Log Scale					0.182
2652							Mean in Original Scale					6.622

	A	B	C	D	E	F	G	H	I	J	K	L
2653						SD in Original Scale					1.331	
2654						95% Percentile Bootstrap UCL					7.041	
2655						95% BCA Bootstrap UCL					7.136	
2656												
2657	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
2658	k star (bias corrected)				N/A	Data appear Normal at 5% Significance Level						
2659	Theta Star				N/A							
2660	nu star				N/A							
2661												
2662	A-D Test Statistic				0.258	Nonparametric Statistics						
2663	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method						
2664	K-S Test Statistic				N/A	Mean					7.04	
2665	5% K-S Critical Value				N/A	SD					2.57	
2666	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.408	
2667						95% KM (t) UCL					9.435	
2668	Assuming Gamma Distribution					95% KM (z) UCL					9.356	
2669	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					9.64	
2670	Minimum				N/A	95% KM (bootstrap t) UCL					9.198	
2671	Maximum				N/A	95% KM (BCA) UCL					N/A	
2672	Mean				N/A	95% KM (Percentile Bootstrap) UCL					11.5	
2673	Median				N/A	95% KM (Chebyshev) UCL					13.18	
2674	SD				N/A	97.5% KM (Chebyshev) UCL					15.83	
2675	k star				N/A	99% KM (Chebyshev) UCL					21.05	
2676	Theta star				N/A							
2677	Nu star				N/A	Potential UCLs to Use						
2678	AppChi2				N/A	95% KM (t) UCL					9.435	
2679	95% Gamma Approximate UCL				N/A	95% KM (Percentile Bootstrap) UCL					11.5	
2680	95% Adjusted Gamma UCL				N/A							
2681	Note: DL/2 is not a recommended method.											
2682												
2683												
2684	Vanadium											
2685												
2686	General Statistics											
2687	Number of Valid Data				36	Number of Detected Data				36		
2688	Number of Distinct Detected Data				35	Number of Non-Detect Data				0		
2689	Number of Missing Values				35	Percent Non-Detects				0.00%		
2690												
2691	Raw Statistics					Log-transformed Statistics						
2692	Minimum Detected				9.1	Minimum Detected				2.208		
2693	Maximum Detected				40	Maximum Detected				3.689		
2694	Mean of Detected				24.51	Mean of Detected				3.133		
2695	SD of Detected				8.243	SD of Detected				0.389		
2696	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
2697	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
2698												
2699												
2700	UCL Statistics											
2701	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
2702	Shapiro Wilk Test Statistic				0.966	Shapiro Wilk Test Statistic				0.914		
2703	5% Shapiro Wilk Critical Value				0.935	5% Shapiro Wilk Critical Value				0.935		
2704	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L		
2705														
2706	Assuming Normal Distribution						Assuming Lognormal Distribution							
2707	DL/2 Substitution Method						DL/2 Substitution Method							
2708	Mean						24.51	Mean						3.133
2709	SD						8.243	SD						0.389
2710	95% DL/2 (t) UCL						26.83	95% H-Stat (DL/2) UCL						27.92
2711														
2712	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
2713	MLE method failed to converge properly						Mean in Log Scale						N/A	
2714							SD in Log Scale						N/A	
2715							Mean in Original Scale						N/A	
2716							SD in Original Scale						N/A	
2717							95% Percentile Bootstrap UCL						N/A	
2718							95% BCA Bootstrap UCL						N/A	
2719														
2720	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2721	k star (bias corrected)						7.156	Data appear Normal at 5% Significance Level						
2722	Theta Star						3.424							
2723	nu star						515.2							
2724														
2725	A-D Test Statistic						0.61	Nonparametric Statistics						
2726	5% A-D Critical Value						0.749	Kaplan-Meier (KM) Method						
2727	K-S Test Statistic						0.749	Mean						24.51
2728	5% K-S Critical Value						0.147	SD						8.128
2729	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						1.374	
2730							95% KM (t) UCL						26.83	
2731	Assuming Gamma Distribution						95% KM (z) UCL						26.77	
2732	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						26.83	
2733	Minimum						9.1	95% KM (bootstrap t) UCL						26.87
2734	Maximum						40	95% KM (BCA) UCL						26.74
2735	Mean						24.51	95% KM (Percentile Bootstrap) UCL						26.68
2736	Median						24.7	95% KM (Chebyshev) UCL						30.49
2737	SD						8.243	97.5% KM (Chebyshev) UCL						33.09
2738	k star						7.156	99% KM (Chebyshev) UCL						38.18
2739	Theta star						3.424							
2740	Nu star						515.2	Potential UCLs to Use						
2741	AppChi2						463.6	95% KM (t) UCL						26.83
2742	95% Gamma Approximate UCL						27.24	95% KM (Percentile Bootstrap) UCL						26.68
2743	95% Adjusted Gamma UCL						27.37							
2744	Note: DL/2 is not a recommended method.													
2745														
2746														
2747	Zinc													
2748														
2749	General Statistics													
2750	Number of Valid Data						36	Number of Detected Data						36
2751	Number of Distinct Detected Data						36	Number of Non-Detect Data						0
2752	Number of Missing Values						35	Percent Non-Detects						0.00%
2753														
2754	Raw Statistics						Log-transformed Statistics							
2755	Minimum Detected						16	Minimum Detected						2.773
2756	Maximum Detected						1460	Maximum Detected						7.286

	A	B	C	D	E	F	G	H	I	J	K	L
2757	Mean of Detected					224.3	Mean of Detected					4.563
2758	SD of Detected					348.6	SD of Detected					1.218
2759	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2760	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2761												
2762												
2763	UCL Statistics											
2764	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2765	Shapiro Wilk Test Statistic					0.622	Shapiro Wilk Test Statistic					0.865
2766	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
2767	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2768												
2769	Assuming Normal Distribution						Assuming Lognormal Distribution					
2770	DL/2 Substitution Method						DL/2 Substitution Method					
2771	Mean					224.3	Mean					4.563
2772	SD					348.6	SD					1.218
2773	95% DL/2 (t) UCL					322.5	95% H-Stat (DL/2) UCL					347.2
2774												
2775	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2776	MLE method failed to converge properly						Mean in Log Scale					N/A
2777												
2778												
2779												
2780												
2781												
2782												
2783	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2784	k star (bias corrected)					0.669	Data do not follow a Discernable Distribution (0.05)					
2785	Theta Star					335.1						
2786	nu star					48.19						
2787												
2788	A-D Test Statistic					3.323	Nonparametric Statistics					
2789	5% A-D Critical Value					0.792	Kaplan-Meier (KM) Method					
2790	K-S Test Statistic					0.792	Mean					224.3
2791	5% K-S Critical Value					0.153	SD					343.7
2792	Data not Gamma Distributed at 5% Significance Level						SE of Mean					58.1
2793												
2794	Assuming Gamma Distribution						95% KM (t) UCL					322.5
2795	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL					319.9
2796	Minimum					16	95% KM (jackknife) UCL					322.5
2797	Maximum					1460	95% KM (bootstrap t) UCL					369.8
2798	Mean					224.3	95% KM (BCA) UCL					318.4
2799	Median					61.85	95% KM (Percentile Bootstrap) UCL					326.9
2800	SD					348.6	95% KM (Chebyshev) UCL					477.5
2801	k star					0.669	97.5% KM (Chebyshev) UCL					587.1
2802	Theta star					335.1	99% KM (Chebyshev) UCL					802.3
2803	Nu star					48.19	Potential UCLs to Use					
2804	AppChi2					33.26	97.5% KM (Chebyshev) UCL					587.1
2805	95% Gamma Approximate UCL					325						
2806	95% Adjusted Gamma UCL					330.6						
2807	Note: DL/2 is not a recommended method.											
2808												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	General UCL Statistics for Data Sets with Non-Detects													
2	User Selected Options													
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL\Sed_Reach4b.wst											
4	Full Precision		OFF											
5	Confidence Coefficient		95%											
6	Number of Bootstrap Operations		2000											
7														
8														
9	2,4'-DDE													
10														
11	General Statistics													
12	Number of Valid Data				49		Number of Detected Data				5			
13	Number of Distinct Detected Data				5		Number of Non-Detect Data				44			
14	Number of Missing Values				61		Percent Non-Detects				89.80%			
15														
16	Raw Statistics						Log-transformed Statistics							
17	Minimum Detected			0.09			Minimum Detected			-2.408				
18	Maximum Detected			17			Maximum Detected			2.833				
19	Mean of Detected			3.742			Mean of Detected			-0.319				
20	SD of Detected			7.416			SD of Detected			1.939				
21	Minimum Non-Detect			0.67			Minimum Non-Detect			-0.4				
22	Maximum Non-Detect			1.5			Maximum Non-Detect			0.405				
23														
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				48			
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				1			
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				97.96%			
27														
28	Warning: There are only 5 Detected Values in this data													
29	Note: It should be noted that even though bootstrap may be performed on this data set													
30	the resulting calculations may not be reliable enough to draw conclusions													
31														
32	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.													
33														
34														
35	UCL Statistics													
36	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
37	Shapiro Wilk Test Statistic			0.585			Shapiro Wilk Test Statistic			0.903				
38	5% Shapiro Wilk Critical Value			0.762			5% Shapiro Wilk Critical Value			0.762				
39	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
40														
41	Assuming Normal Distribution						Assuming Lognormal Distribution							
42	DL/2 Substitution Method						DL/2 Substitution Method							
43	Mean			0.735			Mean			-0.885				
44	SD			2.374			SD			0.612				
45	95% DL/2 (t) UCL			1.303			95% H-Stat (DL/2) UCL			0.589				
46														
47	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method							
48	MLE method failed to converge properly						Mean in Log Scale			-1.343				
49							SD in Log Scale			0.942				
50							Mean in Original Scale			0.646				
51							SD in Original Scale			2.394				
52							95% Percentile Bootstrap UCL			1.329				

	A	B	C	D	E	F	G	H	I	J	K	L	
53										95% BCA Bootstrap UCL		1.717	
54													
55	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
56				k star (bias corrected)		0.294	Data Follow Appr. Gamma Distribution at 5% Significance Level						
57				Theta Star		12.73							
58				nu star		2.939							
59													
60				A-D Test Statistic		0.693	Nonparametric Statistics						
61				5% A-D Critical Value		0.725	Kaplan-Meier (KM) Method						
62				K-S Test Statistic		0.725				Mean		0.678	
63				5% K-S Critical Value		0.376				SD		2.364	
64	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean		0.394
65										95% KM (t) UCL		1.339	
66	Assuming Gamma Distribution										95% KM (z) UCL		1.326
67	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		1.305
68				Minimum		1E-09				95% KM (bootstrap t) UCL		3.493	
69				Maximum		17				95% KM (BCA) UCL		1.487	
70				Mean		3.414				95% KM (Percentile Bootstrap) UCL		1.49	
71				Median		3.93				95% KM (Chebyshev) UCL		2.397	
72				SD		2.988				97.5% KM (Chebyshev) UCL		3.141	
73				k star		0.219				99% KM (Chebyshev) UCL		4.602	
74				Theta star		15.57							
75				Nu star		21.49	Potential UCLs to Use						
76				AppChi2		11.96				95% KM (t) UCL		1.339	
77				95% Gamma Approximate UCL		6.136							
78				95% Adjusted Gamma UCL		6.249							
79	Note: DL/2 is not a recommended method.												
80													
81													
82	2,4'-DDT												
83													
84	General Statistics												
85				Number of Valid Data		49				Number of Detected Data		10	
86				Number of Distinct Detected Data		10				Number of Non-Detect Data		39	
87				Number of Missing Values		61				Percent Non-Detects		79.59%	
88													
89	Raw Statistics						Log-transformed Statistics						
90				Minimum Detected		0.19				Minimum Detected		-1.661	
91				Maximum Detected		57				Maximum Detected		4.043	
92				Mean of Detected		6.457				Mean of Detected		-0.0688	
93				SD of Detected		17.78				SD of Detected		1.652	
94				Minimum Non-Detect		0.67				Minimum Non-Detect		-0.4	
95				Maximum Non-Detect		1.5				Maximum Non-Detect		0.405	
96													
97	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		46
98	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		3
99	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		93.88%
100													
101	UCL Statistics												
102	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
103				Shapiro Wilk Test Statistic		0.4				Shapiro Wilk Test Statistic		0.795	
104				5% Shapiro Wilk Critical Value		0.842				5% Shapiro Wilk Critical Value		0.842	

	A	B	C	D	E	F	G	H	I	J	K	L		
105	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
106														
107	Assuming Normal Distribution						Assuming Lognormal Distribution							
108	DL/2 Substitution Method						DL/2 Substitution Method							
109	Mean						1.633	Mean						-0.764
110	SD						8.084	SD						0.813
111	95% DL/2 (t) UCL						3.57	95% H-Stat (DL/2) UCL						0.785
112														
113	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
114	MLE yields a negative mean						Mean in Log Scale						-0.784	
115							SD in Log Scale						0.938	
116							Mean in Original Scale						1.666	
117							SD in Original Scale						8.081	
118							95% Percentile Bootstrap UCL						3.966	
119							95% BCA Bootstrap UCL						5.279	
120														
121	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
122	k star (bias corrected)						0.31	Data do not follow a Discernable Distribution (0.05)						
123	Theta Star						20.81							
124	nu star						6.206							
125														
126	A-D Test Statistic						1.828	Nonparametric Statistics						
127	5% A-D Critical Value						0.805	Kaplan-Meier (KM) Method						
128	K-S Test Statistic						0.805	Mean						1.617
129	5% K-S Critical Value						0.286	SD						8.004
130	Data not Gamma Distributed at 5% Significance Level						SE of Mean						1.206	
131							95% KM (t) UCL						3.64	
132	Assuming Gamma Distribution						95% KM (z) UCL						3.601	
133	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						3.556	
134	Minimum						0.19	95% KM (bootstrap t) UCL						32.12
135	Maximum						57	95% KM (BCA) UCL						3.972
136	Mean						5.856	95% KM (Percentile Bootstrap) UCL						3.894
137	Median						4.049	95% KM (Chebyshev) UCL						6.873
138	SD						8.856	97.5% KM (Chebyshev) UCL						9.148
139	k star						0.794	99% KM (Chebyshev) UCL						13.62
140	Theta star						7.372							
141	Nu star						77.85	Potential UCLs to Use						
142	AppChi2						58.52	95% KM (Chebyshev) UCL						6.873
143	95% Gamma Approximate UCL						7.79							
144	95% Adjusted Gamma UCL						7.858							
145	Note: DL/2 is not a recommended method.													
146														
147														
148	2006 TEQ_D/F													
149														
150	General Statistics													
151	Number of Valid Data						13	Number of Detected Data						13
152	Number of Distinct Detected Data						13	Number of Non-Detect Data						0
153	Number of Missing Values						96	Percent Non-Detects						0.00%
154														
155	Raw Statistics						Log-transformed Statistics							
156	Minimum Detected						0.0693	Minimum Detected						-2.669

	A	B	C	D	E	F	G	H	I	J	K	L	
157				Maximum Detected		0.602				Maximum Detected		-0.507	
158				Mean of Detected		0.26				Mean of Detected		-1.607	
159				SD of Detected		0.182				SD of Detected		0.789	
160				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
161				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
162													
163													
164				UCL Statistics									
165	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
166				Shapiro Wilk Test Statistic		0.882				Shapiro Wilk Test Statistic		0.898	
167				5% Shapiro Wilk Critical Value		0.866				5% Shapiro Wilk Critical Value		0.866	
168	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
169													
170	Assuming Normal Distribution						Assuming Lognormal Distribution						
171				DL/2 Substitution Method						DL/2 Substitution Method			
172				Mean		0.26				Mean		-1.607	
173				SD		0.182				SD		0.789	
174				95% DL/2 (t) UCL		0.35				95% H-Stat (DL/2) UCL		0.483	
175													
176				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
177	MLE method failed to converge properly										Mean in Log Scale		N/A
178										SD in Log Scale		N/A	
179										Mean in Original Scale		N/A	
180										SD in Original Scale		N/A	
181										95% Percentile Bootstrap UCL		N/A	
182										95% BCA Bootstrap UCL		N/A	
183													
184	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
185				k star (bias corrected)		1.639				Data appear Normal at 5% Significance Level			
186				Theta Star		0.159							
187				nu star		42.6							
188													
189				A-D Test Statistic		0.512				Nonparametric Statistics			
190				5% A-D Critical Value		0.743				Kaplan-Meier (KM) Method			
191				K-S Test Statistic		0.743				Mean		0.26	
192				5% K-S Critical Value		0.239				SD		0.175	
193	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		0.0504
194										95% KM (t) UCL		0.35	
195	Assuming Gamma Distribution										95% KM (z) UCL		0.343
196	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.35
197				Minimum		0.0693				95% KM (bootstrap t) UCL		0.372	
198				Maximum		0.602				95% KM (BCA) UCL		0.341	
199				Mean		0.26				95% KM (Percentile Bootstrap) UCL		0.339	
200				Median		0.294				95% KM (Chebyshev) UCL		0.48	
201				SD		0.182				97.5% KM (Chebyshev) UCL		0.575	
202				k star		1.639				99% KM (Chebyshev) UCL		0.762	
203				Theta star		0.159							
204				Nu star		42.6				Potential UCLs to Use			
205				AppChi2		28.64				95% KM (t) UCL		0.35	
206				95% Gamma Approximate UCL		0.387				95% KM (Percentile Bootstrap) UCL		0.339	
207				95% Adjusted Gamma UCL		0.411							
208	Note: DL/2 is not a recommended method.												

	A	B	C	D	E	F	G	H	I	J	K	L
209												
210												
211	2-Methylnaphthalene											
212												
213	General Statistics											
214	Number of Valid Data					49	Number of Detected Data					19
215	Number of Distinct Detected Data					6	Number of Non-Detect Data					30
216	Number of Missing Values					61	Percent Non-Detects					61.22%
217												
218	Raw Statistics						Log-transformed Statistics					
219	Minimum Detected					0.2	Minimum Detected					-1.609
220	Maximum Detected					1	Maximum Detected					0
221	Mean of Detected					0.405	Mean of Detected					-1.032
222	SD of Detected					0.227	SD of Detected					0.505
223	Minimum Non-Detect					4	Minimum Non-Detect					1.386
224	Maximum Non-Detect					8	Maximum Non-Detect					2.079
225												
226	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49
227	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
228	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
229												
230	UCL Statistics											
231	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
232	Shapiro Wilk Test Statistic					0.816	Shapiro Wilk Test Statistic					0.888
233	5% Shapiro Wilk Critical Value					0.901	5% Shapiro Wilk Critical Value					0.901
234	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
235												
236	Assuming Normal Distribution						Assuming Lognormal Distribution					
237	DL/2 Substitution Method						DL/2 Substitution Method					
238	Mean					1.647	Mean					0.138
239	SD					1.052	SD					0.996
240	95% DL/2 (t) UCL					1.899	95% H-Stat (DL/2) UCL					4.54
241												
242	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
243	MLE method failed to converge properly						Mean in Log Scale					-1.032
244							SD in Log Scale					0.465
245							Mean in Original Scale					0.397
246							SD in Original Scale					0.196
247							95% Percentile Bootstrap UCL					0.445
248							95% BCA Bootstrap UCL					0.448
249												
250	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
251	k star (bias corrected)					3.448	Data do not follow a Discernable Distribution (0.05)					
252	Theta Star					0.118						
253	nu star					131						
254												
255	A-D Test Statistic					1.01	Nonparametric Statistics					
256	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
257	K-S Test Statistic					0.745	Mean					0.405
258	5% K-S Critical Value					0.199	SD					0.221
259	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0521
260							95% KM (t) UCL					0.493

	A	B	C	D	E	F	G	H	I	J	K	L			
261	Assuming Gamma Distribution						95% KM (z) UCL					0.491			
262	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.494			
263					Minimum	0.00224	95% KM (bootstrap t) UCL					0.517			
264					Maximum	1	95% KM (BCA) UCL					0.489			
265					Mean	0.408	95% KM (Percentile Bootstrap) UCL					0.493			
266					Median	0.4	95% KM (Chebyshev) UCL					0.633			
267					SD	0.193	97.5% KM (Chebyshev) UCL					0.731			
268					k star	2.608	99% KM (Chebyshev) UCL					0.924			
269					Theta star	0.156									
270					Nu star	255.6	Potential UCLs to Use								
271					AppChi2	219.5	95% KM (t) UCL					0.493			
272					95% Gamma Approximate UCL		0.475	95% KM (% Bootstrap) UCL					0.493		
273					95% Adjusted Gamma UCL		0.477								
274	Note: DL/2 is not a recommended method.														
275															
276															
277	4,4'-DDD														
278															
279	General Statistics														
280					Number of Valid Data		49					Number of Detected Data		1	
281					Number of Distinct Detected Data		1					Number of Non-Detect Data		48	
282					Number of Missing Values		61					Percent Non-Detects		97.96%	
283															
284	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!														
285	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).														
286															
287	The data set for variable 4,4'-DDD was not processed!														
288															
289															
290															
291	4,4'-DDE														
292															
293	General Statistics														
294					Number of Valid Data		49					Number of Detected Data		11	
295					Number of Distinct Detected Data		11					Number of Non-Detect Data		38	
296					Number of Missing Values		61					Percent Non-Detects		77.55%	
297															
298	Raw Statistics						Log-transformed Statistics								
299					Minimum Detected		0.072					Minimum Detected		-2.631	
300					Maximum Detected		63					Maximum Detected		4.143	
301					Mean of Detected		6.424					Mean of Detected		-0.368	
302					SD of Detected		18.78					SD of Detected		1.861	
303					Minimum Non-Detect		0.67					Minimum Non-Detect		-0.4	
304					Maximum Non-Detect		1.5					Maximum Non-Detect		0.405	
305															
306	Note: Data have multiple DLs - Use of KM Method is recommended												Number treated as Non-Detect		46
307	For all methods (except KM, DL/2, and ROS Methods),												Number treated as Detected		3
308	Observations < Largest ND are treated as NDs												Single DL Non-Detect Percentage		93.88%
309															
310	UCL Statistics														
311	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only								
312					Shapiro Wilk Test Statistic		0.379					Shapiro Wilk Test Statistic		0.892	

	A	B	C	D	E	F	G	H	I	J	K	L
313	5% Shapiro Wilk Critical Value					0.85	5% Shapiro Wilk Critical Value					0.85
314	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
315												
316	Assuming Normal Distribution					Assuming Lognormal Distribution						
317	DL/2 Substitution Method					DL/2 Substitution Method						
318	Mean					1.751	Mean					-0.81
319	SD					8.941	SD					0.896
320	95% DL/2 (t) UCL					3.893	95% H-Stat (DL/2) UCL					0.893
321												
322	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
323	MLE yields a negative mean					Mean in Log Scale					-1.481	
324						SD in Log Scale					1.194	
325						Mean in Original Scale					1.597	
326						SD in Original Scale					8.965	
327						95% Percentile Bootstrap UCL					4.151	
328						95% BCA Bootstrap UCL					6.666	
329												
330	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
331	k star (bias corrected)					0.285	Data appear Lognormal at 5% Significance Level					
332	Theta Star					22.56						
333	nu star					6.264						
334												
335	A-D Test Statistic					1.66	Nonparametric Statistics					
336	5% A-D Critical Value					0.819	Kaplan-Meier (KM) Method					
337	K-S Test Statistic					0.819	Mean					1.601
338	5% K-S Critical Value					0.276	SD					8.873
339	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.33	
340						95% KM (t) UCL					3.831	
341	Assuming Gamma Distribution					95% KM (z) UCL					3.788	
342	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					3.75	
343	Minimum					1E-09	95% KM (bootstrap t) UCL					37.12
344	Maximum					63	95% KM (BCA) UCL					4.226
345	Mean					5.913	95% KM (Percentile Bootstrap) UCL					4.167
346	Median					6.277	95% KM (Chebyshev) UCL					7.398
347	SD					8.928	97.5% KM (Chebyshev) UCL					9.906
348	k star					0.535	99% KM (Chebyshev) UCL					14.83
349	Theta star					11.05						
350	Nu star					52.47	Potential UCLs to Use					
351	AppChi2					36.83	95% KM (Chebyshev) UCL					7.398
352	95% Gamma Approximate UCL					8.424						
353	95% Adjusted Gamma UCL					8.516						
354	Note: DL/2 is not a recommended method.											
355												
356												
357	4,4'-DDT											
358												
359	General Statistics											
360	Number of Valid Data					49	Number of Detected Data					25
361	Number of Distinct Detected Data					22	Number of Non-Detect Data					24
362	Number of Missing Values					61	Percent Non-Detects					48.98%
363												
364	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
365				Minimum Detected		0.1				Minimum Detected		-2.303	
366				Maximum Detected		200				Maximum Detected		5.298	
367				Mean of Detected		9.268				Mean of Detected		-0.434	
368				SD of Detected		39.8				SD of Detected		1.761	
369				Minimum Non-Detect		0.68				Minimum Non-Detect		-0.386	
370				Maximum Non-Detect		1.5				Maximum Non-Detect		0.405	
371													
372	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		43
373	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		6
374	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		87.76%
375													
376	UCL Statistics												
377	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
378				Shapiro Wilk Test Statistic		0.238				Shapiro Wilk Test Statistic		0.839	
379				5% Shapiro Wilk Critical Value		0.918				5% Shapiro Wilk Critical Value		0.918	
380	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
381													
382	Assuming Normal Distribution						Assuming Lognormal Distribution						
383				DL/2 Substitution Method						DL/2 Substitution Method			
384				Mean		4.924				Mean		-0.68	
385				SD		28.5				SD		1.276	
386				95% DL/2 (t) UCL		11.75				95% H-Stat (DL/2) UCL		2.073	
387													
388				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
389	MLE yields a negative mean										Mean in Log Scale		-0.933
390											SD in Log Scale		1.395
391											Mean in Original Scale		4.858
392											SD in Original Scale		28.51
393											95% Percentile Bootstrap UCL		12.94
394											95% BCA Bootstrap UCL		17.26
395													
396	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
397				k star (bias corrected)		0.259	Data do not follow a Discernable Distribution (0.05)						
398				Theta Star		35.72							
399				nu star		12.97							
400													
401				A-D Test Statistic		4.374	Nonparametric Statistics						
402				5% A-D Critical Value		0.867	Kaplan-Meier (KM) Method						
403				K-S Test Statistic		0.867				Mean		4.832	
404				5% K-S Critical Value		0.191				SD		28.22	
405	Data not Gamma Distributed at 5% Significance Level										SE of Mean		4.115
406											95% KM (t) UCL		11.73
407	Assuming Gamma Distribution										95% KM (z) UCL		11.6
408	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		11.66
409				Minimum		0.1				95% KM (bootstrap t) UCL		132.6	
410				Maximum		200				95% KM (BCA) UCL		13.02	
411				Mean		9.703				95% KM (Percentile Bootstrap) UCL		12.93	
412				Median		6.456				95% KM (Chebyshev) UCL		22.77	
413				SD		28.18				97.5% KM (Chebyshev) UCL		30.53	
414				k star		0.453				99% KM (Chebyshev) UCL		45.77	
415				Theta star		21.42							
416				Nu star		44.38	Potential UCLs to Use						

	A	B	C	D	E	F	G	H	I	J	K	L
417	AppChi2					30.1	97.5% KM (Chebyshev) UCL					30.53
418	95% Gamma Approximate UCL					14.31						
419	95% Adjusted Gamma UCL					14.48						
420	Note: DL/2 is not a recommended method.											
421												
422												
423	Acenaphthene											
424												
425	General Statistics											
426	Number of Valid Data					49	Number of Detected Data					2
427	Number of Distinct Detected Data					2	Number of Non-Detect Data					47
428	Number of Missing Values					61	Percent Non-Detects					95.92%
429												
430	Raw Statistics						Log-transformed Statistics					
431	Minimum Detected					0.4	Minimum Detected					-0.916
432	Maximum Detected					0.9	Maximum Detected					-0.105
433	Mean of Detected					0.65	Mean of Detected					-0.511
434	SD of Detected					0.354	SD of Detected					0.573
435	Minimum Non-Detect					4	Minimum Non-Detect					1.386
436	Maximum Non-Detect					9	Maximum Non-Detect					2.197
437												
438	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49
439	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
440	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
441												
442	Warning: Data set has only 2 Distinct Detected Values.											
443	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
444	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
445												
446	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
447												
448	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
449	Those methods will return a 'N/A' value on your output display!											
450												
451	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
452	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
453												
454												
455	UCL Statistics											
456	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
457	Shapiro Wilk Test Statistic					1	Shapiro Wilk Test Statistic					1
458	5% Shapiro Wilk Critical Value					N/A	5% Shapiro Wilk Critical Value					N/A
459	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
460												
461	Assuming Normal Distribution						Assuming Lognormal Distribution					
462	DL/2 Substitution Method						DL/2 Substitution Method					
463	Mean					2.353	Mean					0.813
464	SD					0.607	SD					0.338
465	95% DL/2 (t) UCL					2.498	95% H-Stat (DL/2) UCL					2.905
466												
467	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
468	MLE method failed to converge properly						Mean in Log Scale					N/A

	A	B	C	D	E	F	G	H	I	J	K	L
469											SD in Log Scale	N/A
470											Mean in Original Scale	N/A
471											SD in Original Scale	N/A
472											95% Percentile Bootstrap UCL	N/A
473											95% BCA Bootstrap UCL	N/A
474												
475	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
476					k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)					
477					Theta Star	N/A						
478					nu star	N/A						
479												
480					A-D Test Statistic	0.359	Nonparametric Statistics					
481					5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method					
482					K-S Test Statistic	N/A	Mean					0.65
483					5% K-S Critical Value	N/A	SD					0.25
484	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.25
485							95% KM (t) UCL					1.069
486	Assuming Gamma Distribution						95% KM (z) UCL					1.061
487	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.237
488					Minimum	N/A	95% KM (bootstrap t) UCL					1.15
489					Maximum	N/A	95% KM (BCA) UCL					0.9
490					Mean	N/A	95% KM (Percentile Bootstrap) UCL					0.9
491					Median	N/A	95% KM (Chebyshev) UCL					1.74
492					SD	N/A	97.5% KM (Chebyshev) UCL					2.211
493					k star	N/A	99% KM (Chebyshev) UCL					3.137
494					Theta star	N/A						
495					Nu star	N/A	Potential UCLs to Use					
496					AppChi2	N/A	95% KM (t) UCL					1.069
497					95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL					0.9
498					95% Adjusted Gamma UCL	N/A						
499	Warning: Recommended UCL exceeds the maximum observation											
500	Note: DL/2 is not a recommended method.											
501												
502												
503	alpha-Chlordane											
504												
505	General Statistics											
506					Number of Valid Data	49					Number of Detected Data	1
507					Number of Distinct Detected Data	1					Number of Non-Detect Data	48
508					Number of Missing Values	61					Percent Non-Detects	97.96%
509												
510	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
511	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
512												
513	The data set for variable alpha-Chlordane was not processed!											
514												
515												
516												
517	Aluminum											
518												
519	General Statistics											
520					Number of Valid Data	49					Number of Detected Data	49

	A	B	C	D	E	F	G	H	I	J	K	L
521	Number of Distinct Detected Data					47	Number of Non-Detect Data					0
522	Number of Missing Values					62	Percent Non-Detects					0.00%
523												
524	Raw Statistics						Log-transformed Statistics					
525	Minimum Detected					2760	Minimum Detected					7.923
526	Maximum Detected					14400	Maximum Detected					9.575
527	Mean of Detected					8901	Mean of Detected					9.04
528	SD of Detected					2807	SD of Detected					0.344
529	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
530	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
531												
532												
533	UCL Statistics											
534	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
535	Shapiro Wilk Test Statistic					0.967	Shapiro Wilk Test Statistic					0.956
536	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947
537	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
538												
539	Assuming Normal Distribution						Assuming Lognormal Distribution					
540	DL/2 Substitution Method						DL/2 Substitution Method					
541	Mean					8901	Mean					9.04
542	SD					2807	SD					0.344
543	95% DL/2 (t) UCL					9574	95% H-Stat (DL/2) UCL					9765
544												
545	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
546	MLE method failed to converge properly						Mean in Log Scale					N/A
547							SD in Log Scale					N/A
548							Mean in Original Scale					N/A
549							SD in Original Scale					N/A
550							95% Percentile Bootstrap UCL					N/A
551							95% BCA Bootstrap UCL					N/A
552												
553	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
554	k star (bias corrected)					8.905	Data appear Normal at 5% Significance Level					
555	Theta Star					999.6						
556	nu star					872.7						
557												
558	A-D Test Statistic					0.321	Nonparametric Statistics					
559	5% A-D Critical Value					0.75	Kaplan-Meier (KM) Method					
560	K-S Test Statistic					0.75	Mean					8901
561	5% K-S Critical Value					0.127	SD					2778
562	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					401
563							95% KM (t) UCL					9574
564	Assuming Gamma Distribution						95% KM (z) UCL					9561
565	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9574
566	Minimum					2760	95% KM (bootstrap t) UCL					9570
567	Maximum					14400	95% KM (BCA) UCL					9537
568	Mean					8901	95% KM (Percentile Bootstrap) UCL					9525
569	Median					8330	95% KM (Chebyshev) UCL					10649
570	SD					2807	97.5% KM (Chebyshev) UCL					11405
571	k star					8.905	99% KM (Chebyshev) UCL					12891
572	Theta star					999.6						

	A	B	C	D	E	F	G	H	I	J	K	L
573					Nu star	872.7	Potential UCLs to Use					
574					AppChi2	805.1	95% KM (t) UCL					9574
575			95% Gamma Approximate UCL			9648	95% KM (Percentile Bootstrap) UCL					9525
576			95% Adjusted Gamma UCL			9672						
577	Note: DL/2 is not a recommended method.											
578												
579												
580	Anthracene											
581												
582	General Statistics											
583	Number of Valid Data				49	Number of Detected Data				1		
584	Number of Distinct Detected Data				1	Number of Non-Detect Data				48		
585	Number of Missing Values				61	Percent Non-Detects				97.96%		
586												
587	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
588	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
589												
590	The data set for variable Anthracene was not processed!											
591												
592												
593												
594	Antimony											
595												
596	General Statistics											
597	Number of Valid Data				28	Number of Detected Data				14		
598	Number of Distinct Detected Data				10	Number of Non-Detect Data				14		
599	Number of Missing Values				83	Percent Non-Detects				50.00%		
600												
601	Raw Statistics					Log-transformed Statistics						
602	Minimum Detected				0.53	Minimum Detected				-0.635		
603	Maximum Detected				1.6	Maximum Detected				0.47		
604	Mean of Detected				1.078	Mean of Detected				0.0303		
605	SD of Detected				0.311	SD of Detected				0.324		
606	Minimum Non-Detect				0.27	Minimum Non-Detect				-1.309		
607	Maximum Non-Detect				6.3	Maximum Non-Detect				1.841		
608												
609	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				28		
610	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0		
611	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%		
612												
613	UCL Statistics											
614	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
615	Shapiro Wilk Test Statistic				0.972	Shapiro Wilk Test Statistic				0.923		
616	5% Shapiro Wilk Critical Value				0.874	5% Shapiro Wilk Critical Value				0.874		
617	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
618												
619	Assuming Normal Distribution					Assuming Lognormal Distribution						
620	DL/2 Substitution Method					DL/2 Substitution Method						
621	Mean				0.941	Mean				-0.307		
622	SD				0.702	SD				0.735		
623	95% DL/2 (t) UCL				1.167	95% H-Stat (DL/2) UCL				1.303		
624												

	A	B	C	D	E	F	G	H	I	J	K	L
625	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
626	MLE method failed to converge properly						Mean in Log Scale					-0.239
627							SD in Log Scale					0.38
628							Mean in Original Scale					0.845
629							SD in Original Scale					0.331
630							95% Percentile Bootstrap UCL					0.949
631							95% BCA Bootstrap UCL					0.956
632												
633	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
634	k star (bias corrected)					8.962	Data appear Normal at 5% Significance Level					
635	Theta Star					0.12						
636	nu star					250.9						
637												
638	A-D Test Statistic					0.345	Nonparametric Statistics					
639	5% A-D Critical Value					0.734	Kaplan-Meier (KM) Method					
640	K-S Test Statistic					0.734	Mean					0.862
641	5% K-S Critical Value					0.229	SD					0.343
642	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0735
643							95% KM (t) UCL					0.988
644	Assuming Gamma Distribution						95% KM (z) UCL					0.983
645	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.98
646	Minimum					0.53	95% KM (bootstrap t) UCL					0.978
647	Maximum					1.6	95% KM (BCA) UCL					1.079
648	Mean					1.073	95% KM (Percentile Bootstrap) UCL					1.036
649	Median					1.061	95% KM (Chebyshev) UCL					1.183
650	SD					0.259	97.5% KM (Chebyshev) UCL					1.321
651	k star					14.4	99% KM (Chebyshev) UCL					1.594
652	Theta star					0.0746						
653	Nu star					806.2	Potential UCLs to Use					
654	AppChi2					741.3	95% KM (t) UCL					0.988
655	95% Gamma Approximate UCL					1.167	95% KM (Percentile Bootstrap) UCL					1.036
656	95% Adjusted Gamma UCL					1.173						
657	Note: DL/2 is not a recommended method.											
658												
659												
660	Arsenic											
661												
662	General Statistics											
663	Number of Valid Data					49	Number of Detected Data					46
664	Number of Distinct Detected Data					38	Number of Non-Detect Data					3
665	Number of Missing Values					62	Percent Non-Detects					6.12%
666												
667	Raw Statistics						Log-transformed Statistics					
668	Minimum Detected					1.8	Minimum Detected					0.588
669	Maximum Detected					16.3	Maximum Detected					2.791
670	Mean of Detected					5.515	Mean of Detected					1.557
671	SD of Detected					3.293	SD of Detected					0.545
672	Minimum Non-Detect					0.76	Minimum Non-Detect					-0.274
673	Maximum Non-Detect					0.97	Maximum Non-Detect					-0.0305
674												
675	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					3
676	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					46

	A	B	C	D	E	F	G	H	I	J	K	L
677	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					6.12%
678												
679	UCL Statistics											
680	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
681	Shapiro Wilk Test Statistic					0.859	Shapiro Wilk Test Statistic					0.973
682	5% Shapiro Wilk Critical Value					0.945	5% Shapiro Wilk Critical Value					0.945
683	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
684												
685	Assuming Normal Distribution						Assuming Lognormal Distribution					
686	DL/2 Substitution Method						DL/2 Substitution Method					
687	Mean					5.204	Mean					1.411
688	SD					3.417	SD					0.784
689	95% DL/2 (t) UCL					6.023	95% H-Stat (DL/2) UCL					6.368
690												
691	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
692	Mean					5.131	Mean in Log Scale					1.479
693	SD					3.514	SD in Log Scale					0.612
694	95% MLE (t) UCL					5.973	Mean in Original Scale					5.258
695	95% MLE (Tiku) UCL					5.958	SD in Original Scale					3.346
696							95% Percentile Bootstrap UCL					6.058
697							95% BCA Bootstrap UCL					6.162
698												
699	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
700	k star (bias corrected)					3.273	Data appear Gamma Distributed at 5% Significance Level					
701	Theta Star					1.685						
702	nu star					301.1						
703												
704	A-D Test Statistic					0.593	Nonparametric Statistics					
705	5% A-D Critical Value					0.754	Kaplan-Meier (KM) Method					
706	K-S Test Statistic					0.754	Mean					5.288
707	5% K-S Critical Value					0.131	SD					3.279
708	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.474
709							95% KM (t) UCL					6.082
710	Assuming Gamma Distribution						95% KM (z) UCL					6.067
711	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.077
712	Minimum					1E-09	95% KM (bootstrap t) UCL					6.212
713	Maximum					16.3	95% KM (BCA) UCL					6.161
714	Mean					5.178	95% KM (Percentile Bootstrap) UCL					6.073
715	Median					4.2	95% KM (Chebyshev) UCL					7.352
716	SD					3.457	97.5% KM (Chebyshev) UCL					8.245
717	k star					0.432	99% KM (Chebyshev) UCL					10
718	Theta star					11.99						
719	Nu star					42.34	Potential UCLs to Use					
720	AppChi2					28.42	95% KM (BCA) UCL					6.161
721	95% Gamma Approximate UCL					7.713						
722	95% Adjusted Gamma UCL					7.808						
723	Note: DL/2 is not a recommended method.											
724												
725												
726	Barium											
727												
728	General Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
729	Number of Valid Data					49	Number of Detected Data					49
730	Number of Distinct Detected Data					47	Number of Non-Detect Data					0
731	Number of Missing Values					62	Percent Non-Detects					0.00%
732												
733	Raw Statistics						Log-transformed Statistics					
734	Minimum Detected					20.6	Minimum Detected					3.025
735	Maximum Detected					162	Maximum Detected					5.088
736	Mean of Detected					82.05	Mean of Detected					4.319
737	SD of Detected					34.43	SD of Detected					0.435
738	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
739	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
740												
741												
742	UCL Statistics											
743	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
744	Shapiro Wilk Test Statistic					0.932	Shapiro Wilk Test Statistic					0.972
745	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947
746	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
747												
748	Assuming Normal Distribution						Assuming Lognormal Distribution					
749	DL/2 Substitution Method						DL/2 Substitution Method					
750	Mean					82.05	Mean					4.319
751	SD					34.43	SD					0.435
752	95% DL/2 (t) UCL					90.3	95% H-Stat (DL/2) UCL					92.73
753												
754	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
755	MLE method failed to converge properly						Mean in Log Scale					N/A
756							SD in Log Scale					N/A
757							Mean in Original Scale					N/A
758							SD in Original Scale					N/A
759							95% Percentile Bootstrap UCL					N/A
760							95% BCA Bootstrap UCL					N/A
761												
762	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
763	k star (bias corrected)					5.488	Data appear Gamma Distributed at 5% Significance Level					
764	Theta Star					14.95						
765	nu star					537.9						
766												
767	A-D Test Statistic					0.328	Nonparametric Statistics					
768	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method					
769	K-S Test Statistic					0.753	Mean					82.05
770	5% K-S Critical Value					0.127	SD					34.08
771	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					4.919
772							95% KM (t) UCL					90.3
773	Assuming Gamma Distribution						95% KM (z) UCL					90.14
774	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					90.3
775	Minimum					20.6	95% KM (bootstrap t) UCL					91.1
776	Maximum					162	95% KM (BCA) UCL					89.84
777	Mean					82.05	95% KM (Percentile Bootstrap) UCL					90.19
778	Median					75.9	95% KM (Chebyshev) UCL					103.5
779	SD					34.43	97.5% KM (Chebyshev) UCL					112.8
780	k star					5.488	99% KM (Chebyshev) UCL					131

	A	B	C	D	E	F	G	H	I	J	K	L
781	Theta star					14.95						
782	Nu star					537.9	Potential UCLs to Use					
783	AppChi2					485.1	95% KM (BCA) UCL					89.84
784	95% Gamma Approximate UCL					90.98						
785	95% Adjusted Gamma UCL					91.26						
786	Note: DL/2 is not a recommended method.											
787												
788												
789	Benzo(a)anthracene											
790												
791	General Statistics											
792	Number of Valid Data					49	Number of Detected Data					8
793	Number of Distinct Detected Data					6	Number of Non-Detect Data					41
794	Number of Missing Values					61	Percent Non-Detects					83.67%
795												
796	Raw Statistics						Log-transformed Statistics					
797	Minimum Detected					0.2	Minimum Detected					-1.609
798	Maximum Detected					12	Maximum Detected					2.485
799	Mean of Detected					1.9	Mean of Detected					-0.539
800	SD of Detected					4.091	SD of Detected					1.367
801	Minimum Non-Detect					4	Minimum Non-Detect					1.386
802	Maximum Non-Detect					8	Maximum Non-Detect					2.079
803												
804	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					48
805	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
806	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.96%
807												
808	Warning: There are only 8 Detected Values in this data											
809	Note: It should be noted that even though bootstrap may be performed on this data set											
810	the resulting calculations may not be reliable enough to draw conclusions											
811												
812	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
813												
814												
815	UCL Statistics											
816	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
817	Shapiro Wilk Test Statistic					0.479	Shapiro Wilk Test Statistic					0.792
818	5% Shapiro Wilk Critical Value					0.818	5% Shapiro Wilk Critical Value					0.818
819	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
820												
821	Assuming Normal Distribution						Assuming Lognormal Distribution					
822	DL/2 Substitution Method						DL/2 Substitution Method					
823	Mean					2.28	Mean					0.618
824	SD					1.611	SD					0.747
825	95% DL/2 (t) UCL					2.666	95% H-Stat (DL/2) UCL					3.572
826												
827	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
828	MLE method failed to converge properly						Mean in Log Scale					-0.837
829							SD in Log Scale					1.041
830							Mean in Original Scale					0.837
831							SD in Original Scale					1.726
832							95% Percentile Bootstrap UCL					1.308

	A	B	C	D	E	F	G	H	I	J	K	L	
833										95% BCA Bootstrap UCL		1.569	
834													
835	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
836					k star (bias corrected)	0.416	Data do not follow a Discernable Distribution (0.05)						
837					Theta Star	4.564							
838					nu star	6.661							
839													
840					A-D Test Statistic	1.275	Nonparametric Statistics						
841					5% A-D Critical Value	0.76	Kaplan-Meier (KM) Method						
842					K-S Test Statistic	0.76						Mean	0.693
843					5% K-S Critical Value	0.308						SD	1.656
844	Data not Gamma Distributed at 5% Significance Level											SE of Mean	0.273
845												95% KM (t) UCL	1.151
846	Assuming Gamma Distribution											95% KM (z) UCL	1.142
847	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	1.137
848					Minimum	1E-09						95% KM (bootstrap t) UCL	2.034
849					Maximum	12						95% KM (BCA) UCL	1.169
850					Mean	1.804						95% KM (Percentile Bootstrap) UCL	1.17
851					Median	1.859						95% KM (Chebyshev) UCL	1.883
852					SD	1.843						97.5% KM (Chebyshev) UCL	2.398
853					k star	0.282						99% KM (Chebyshev) UCL	3.41
854					Theta star	6.401							
855					Nu star	27.61	Potential UCLs to Use						
856					AppChi2	16.63						95% KM (BCA) UCL	1.169
857					95% Gamma Approximate UCL	2.995							
858					95% Adjusted Gamma UCL	3.043							
859	Note: DL/2 is not a recommended method.												
860													
861													
862	Benzo(a)pyrene												
863													
864	General Statistics												
865					Number of Valid Data	49					Number of Detected Data	4	
866					Number of Distinct Detected Data	3					Number of Non-Detect Data	45	
867					Number of Missing Values	61					Percent Non-Detects	91.84%	
868													
869	Raw Statistics						Log-transformed Statistics						
870					Minimum Detected	0.4					Minimum Detected	-0.916	
871					Maximum Detected	11					Maximum Detected	2.398	
872					Mean of Detected	3.2					Mean of Detected	0.141	
873					SD of Detected	5.208					SD of Detected	1.565	
874					Minimum Non-Detect	4					Minimum Non-Detect	1.386	
875					Maximum Non-Detect	9					Maximum Non-Detect	2.197	
876													
877	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	48
878	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	1
879	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	97.96%
880													
881	Warning: There are only 3 Distinct Detected Values in this data set												
882	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
883	Those methods will return a 'N/A' value on your output display!												
884													

	A	B	C	D	E	F	G	H	I	J	K	L	
885	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
886	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
887													
888													
889	UCL Statistics												
890	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
891	Shapiro Wilk Test Statistic						Shapiro Wilk Test Statistic						0.804
892	5% Shapiro Wilk Critical Value						5% Shapiro Wilk Critical Value						0.748
893	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
894													
895	Assuming Normal Distribution						Assuming Lognormal Distribution						
896	DL/2 Substitution Method						DL/2 Substitution Method						
897	Mean						Mean						0.804
898	SD						SD						0.472
899	95% DL/2 (t) UCL						95% H-Stat (DL/2) UCL						3.339
900													
901	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
902	MLE method failed to converge properly						Mean in Log Scale						-0.504
903													
904													
905													
906													
907													
908													
909	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
910	k star (bias corrected)						Data appear Gamma Distributed at 5% Significance Level						
911	Theta Star												
912	nu star												
913													
914	A-D Test Statistic						Nonparametric Statistics						
915	5% A-D Critical Value						Kaplan-Meier (KM) Method						
916	K-S Test Statistic						Mean						0.812
917	5% K-S Critical Value						SD						1.497
918	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						0.305
919													
920	Assuming Gamma Distribution						95% KM (z) UCL						1.314
921	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						1.346
922	Minimum						95% KM (bootstrap t) UCL						1.555
923	Maximum						95% KM (BCA) UCL						1.612
924	Mean						95% KM (Percentile Bootstrap) UCL						1.612
925	Median						95% KM (Chebyshev) UCL						2.141
926	SD						97.5% KM (Chebyshev) UCL						2.716
927	k star						99% KM (Chebyshev) UCL						3.846
928	Theta star												
929	Nu star						Potential UCLs to Use						
930	AppChi2						95% KM (t) UCL						1.324
931	95% Gamma Approximate UCL												
932	95% Adjusted Gamma UCL						N/A						
933	Note: DL/2 is not a recommended method.												
934													
935													
936	Benzo(b)fluoranthene												

	A	B	C	D	E	F	G	H	I	J	K	L		
937														
938	General Statistics													
939	Number of Valid Data					49		Number of Detected Data					6	
940	Number of Distinct Detected Data					6		Number of Non-Detect Data					43	
941	Number of Missing Values					61		Percent Non-Detects					87.76%	
942														
943	Raw Statistics						Log-transformed Statistics							
944	Minimum Detected					0.2		Minimum Detected					-1.609	
945	Maximum Detected					12		Maximum Detected					2.485	
946	Mean of Detected					2.767		Mean of Detected					0.139	
947	SD of Detected					4.563		SD of Detected					1.374	
948	Minimum Non-Detect					4		Minimum Non-Detect					1.386	
949	Maximum Non-Detect					9		Maximum Non-Detect					2.197	
950														
951	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						48	
952	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1	
953	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						97.96%	
954														
955	Warning: There are only 6 Detected Values in this data													
956	Note: It should be noted that even though bootstrap may be performed on this data set													
957	the resulting calculations may not be reliable enough to draw conclusions													
958														
959	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.													
960														
961														
962	UCL Statistics													
963	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
964	Shapiro Wilk Test Statistic					0.615		Shapiro Wilk Test Statistic					0.947	
965	5% Shapiro Wilk Critical Value					0.788		5% Shapiro Wilk Critical Value					0.788	
966	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
967														
968	Assuming Normal Distribution						Assuming Lognormal Distribution							
969	DL/2 Substitution Method							DL/2 Substitution Method						
970	Mean					2.451		Mean					0.773	
971	SD					1.551		SD					0.531	
972	95% DL/2 (t) UCL					2.823		95% H-Stat (DL/2) UCL					3.496	
973														
974	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
975	MLE method failed to converge properly						Mean in Log Scale						-0.271	
976							SD in Log Scale						1.006	
977							Mean in Original Scale						1.295	
978							SD in Original Scale						1.854	
979							95% Percentile Bootstrap UCL						1.78	
980							95% BCA Bootstrap UCL						1.966	
981														
982	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
983	k star (bias corrected)					0.456		Data appear Gamma Distributed at 5% Significance Level						
984	Theta Star					6.07								
985	nu star					5.47								
986														
987	A-D Test Statistic					0.576		Nonparametric Statistics						
988	5% A-D Critical Value					0.725		Kaplan-Meier (KM) Method						

	A	B	C	D	E	F	G	H	I	J	K	L	
989	K-S Test Statistic					0.725	Mean					1.146	
990	5% K-S Critical Value					0.345	SD					1.676	
991	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.379	
992							95% KM (t) UCL					1.781	
993	Assuming Gamma Distribution						95% KM (z) UCL					1.769	
994	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.811	
995	Minimum						1E-09	95% KM (bootstrap t) UCL					2.608
996	Maximum						12	95% KM (BCA) UCL					1.773
997	Mean						2.514	95% KM (Percentile Bootstrap) UCL					1.799
998	Median						2.74	95% KM (Chebyshev) UCL					2.797
999	SD						1.97	97.5% KM (Chebyshev) UCL					3.511
1000	k star						0.293	99% KM (Chebyshev) UCL					4.914
1001	Theta star						8.587						
1002	Nu star						28.69	Potential UCLs to Use					
1003	AppChi2						17.46	95% KM (t) UCL					1.781
1004	95% Gamma Approximate UCL						4.129						
1005	95% Adjusted Gamma UCL						4.193						
1006	Note: DL/2 is not a recommended method.												
1007													
1008													
1009	Benzo(ghi)perylene												
1010													
1011	General Statistics												
1012	Number of Valid Data					49	Number of Detected Data					5	
1013	Number of Distinct Detected Data					4	Number of Non-Detect Data					44	
1014	Number of Missing Values					61	Percent Non-Detects					89.80%	
1015													
1016	Raw Statistics						Log-transformed Statistics						
1017	Minimum Detected					0.3	Minimum Detected					-1.204	
1018	Maximum Detected					5	Maximum Detected					1.609	
1019	Mean of Detected					1.42	Mean of Detected					-0.285	
1020	SD of Detected					2.02	SD of Detected					1.152	
1021	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
1022	Maximum Non-Detect					9	Maximum Non-Detect					2.197	
1023													
1024	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49	
1025	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
1026	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
1027													
1028	Warning: There are only 4 Distinct Detected Values in this data												
1029	Note: It should be noted that even though bootstrap may be performed on this data set												
1030	the resulting calculations may not be reliable enough to draw conclusions												
1031													
1032	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
1033													
1034													
1035	UCL Statistics												
1036	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1037	Shapiro Wilk Test Statistic					0.654	Shapiro Wilk Test Statistic					0.823	
1038	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762	
1039	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1040													

	A	B	C	D	E	F	G	H	I	J	K	L		
1041	Assuming Normal Distribution						Assuming Lognormal Distribution							
1042	DL/2 Substitution Method						DL/2 Substitution Method							
1043	Mean						2.318	Mean						0.749
1044	SD						0.814	SD						0.514
1045	95% DL/2 (t) UCL						2.513	95% H-Stat (DL/2) UCL						3.374
1046														
1047	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1048	MLE method failed to converge properly							Mean in Log Scale						-0.677
1049								SD in Log Scale						0.798
1050								Mean in Original Scale						0.713
1051								SD in Original Scale						0.774
1052								95% Percentile Bootstrap UCL						0.902
1053								95% BCA Bootstrap UCL						0.981
1054														
1055	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only						
1056	k star (bias corrected)						0.5	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1057	Theta Star						2.839							
1058	nu star						5.001							
1059														
1060	A-D Test Statistic						0.701	Nonparametric Statistics						
1061	5% A-D Critical Value						0.694	Kaplan-Meier (KM) Method						
1062	K-S Test Statistic						0.694	Mean						0.627
1063	5% K-S Critical Value						0.365	SD						0.721
1064	Data follow Appr. Gamma Distribution at 5% Significance Level							SE of Mean						0.189
1065								95% KM (t) UCL						0.943
1066	Assuming Gamma Distribution							95% KM (z) UCL						0.937
1067	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.972
1068	Minimum						1E-09	95% KM (bootstrap t) UCL						2.526
1069	Maximum						5	95% KM (BCA) UCL						1
1070	Mean						1.241	95% KM (Percentile Bootstrap) UCL						1
1071	Median						1.356	95% KM (Chebyshev) UCL						1.449
1072	SD						0.92	97.5% KM (Chebyshev) UCL						1.805
1073	k star						0.297	99% KM (Chebyshev) UCL						2.504
1074	Theta star						4.173							
1075	Nu star						29.15	Potential UCLs to Use						
1076	AppChi2						17.82	95% KM (t) UCL						0.943
1077	95% Gamma Approximate UCL						2.03							
1078	95% Adjusted Gamma UCL						2.061							
1079	Note: DL/2 is not a recommended method.													
1080														
1081														
1082	Benzo(k)fluoranthene													
1083														
1084	General Statistics													
1085	Number of Valid Data						49	Number of Detected Data						5
1086	Number of Distinct Detected Data						5	Number of Non-Detect Data						44
1087	Number of Missing Values						61	Percent Non-Detects						89.80%
1088														
1089	Raw Statistics							Log-transformed Statistics						
1090	Minimum Detected						0.4	Minimum Detected						-0.916
1091	Maximum Detected						10	Maximum Detected						2.303
1092	Mean of Detected						2.52	Mean of Detected						0.0673

	A	B	C	D	E	F	G	H	I	J	K	L
1093	SD of Detected					4.188	SD of Detected					1.297
1094	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1095	Maximum Non-Detect					9	Maximum Non-Detect					2.197
1096												
1097	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					48
1098	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1099	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.96%
1100												
1101	Warning: There are only 5 Detected Values in this data											
1102	Note: It should be noted that even though bootstrap may be performed on this data set											
1103	the resulting calculations may not be reliable enough to draw conclusions											
1104												
1105	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1106												
1107												
1108	UCL Statistics											
1109	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1110	Shapiro Wilk Test Statistic					0.602	Shapiro Wilk Test Statistic					0.791
1111	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
1112	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1113												
1114	Assuming Normal Distribution						Assuming Lognormal Distribution					
1115	DL/2 Substitution Method						DL/2 Substitution Method					
1116	Mean					2.42	Mean					0.781
1117	SD					1.298	SD					0.477
1118	95% DL/2 (t) UCL					2.731	95% H-Stat (DL/2) UCL					3.302
1119												
1120	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1121	MLE method failed to converge properly						Mean in Log Scale					-0.376
1122							SD in Log Scale					0.893
1123							Mean in Original Scale					1.071
1124							SD in Original Scale					1.494
1125							95% Percentile Bootstrap UCL					1.458
1126							95% BCA Bootstrap UCL					1.642
1127												
1128	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1129	k star (bias corrected)					0.415	Data appear Lognormal at 5% Significance Level					
1130	Theta Star					6.07						
1131	nu star					4.152						
1132												
1133	A-D Test Statistic					0.842	Nonparametric Statistics					
1134	5% A-D Critical Value					0.701	Kaplan-Meier (KM) Method					
1135	K-S Test Statistic					0.701	Mean					0.841
1136	5% K-S Critical Value					0.368	SD					1.341
1137	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.246
1138							95% KM (t) UCL					1.253
1139	Assuming Gamma Distribution						95% KM (z) UCL					1.245
1140	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.246
1141	Minimum					1E-09	95% KM (bootstrap t) UCL					1.865
1142	Maximum					10	95% KM (BCA) UCL					1.269
1143	Mean					2.256	95% KM (Percentile Bootstrap) UCL					1.316
1144	Median					2.615	95% KM (Chebyshev) UCL					1.911

	A	B	C	D	E	F	G	H	I	J	K	L	
1145					SD	1.855				97.5% KM (Chebyshev) UCL		2.375	
1146					k star	0.205				99% KM (Chebyshev) UCL		3.285	
1147					Theta star	10.99							
1148					Nu star	20.12				Potential UCLs to Use			
1149					AppChi2	10.94				95% KM (BCA) UCL		1.269	
1150					95% Gamma Approximate UCL	4.149							
1151					95% Adjusted Gamma UCL	4.228							
1152	Note: DL/2 is not a recommended method.												
1153													
1154													
1155	Beryllium												
1156													
1157	General Statistics												
1158					Number of Valid Data	49				Number of Detected Data		49	
1159					Number of Distinct Detected Data	37				Number of Non-Detect Data		0	
1160					Number of Missing Values	62				Percent Non-Detects		0.00%	
1161													
1162	Raw Statistics						Log-transformed Statistics						
1163					Minimum Detected	0.21				Minimum Detected		-1.561	
1164					Maximum Detected	1.5				Maximum Detected		0.405	
1165					Mean of Detected	0.717				Mean of Detected		-0.402	
1166					SD of Detected	0.273				SD of Detected		0.38	
1167					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1168					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1169													
1170													
1171	UCL Statistics												
1172	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1173					Shapiro Wilk Test Statistic	0.931				Shapiro Wilk Test Statistic		0.978	
1174					5% Shapiro Wilk Critical Value	0.947				5% Shapiro Wilk Critical Value		0.947	
1175	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1176													
1177	Assuming Normal Distribution						Assuming Lognormal Distribution						
1178					DL/2 Substitution Method					DL/2 Substitution Method			
1179					Mean	0.717				Mean		-0.402	
1180					SD	0.273				SD		0.38	
1181					95% DL/2 (t) UCL	0.782				95% H-Stat (DL/2) UCL		0.793	
1182													
1183					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1184	MLE method failed to converge properly										Mean in Log Scale		N/A
1185											SD in Log Scale		N/A
1186											Mean in Original Scale		N/A
1187											SD in Original Scale		N/A
1188											95% Percentile Bootstrap UCL		N/A
1189											95% BCA Bootstrap UCL		N/A
1190													
1191	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1192					k star (bias corrected)	6.954				Data appear Gamma Distributed at 5% Significance Level			
1193					Theta Star	0.103							
1194					nu star	681.5							
1195													
1196					A-D Test Statistic	0.544				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L
1197	5% A-D Critical Value					0.752	Kaplan-Meier (KM) Method					
1198	K-S Test Statistic					0.752	Mean					0.717
1199	5% K-S Critical Value					0.127	SD					0.27
1200	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.039
1201							95% KM (t) UCL					0.782
1202	Assuming Gamma Distribution						95% KM (z) UCL					0.781
1203	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.782
1204	Minimum					0.21	95% KM (bootstrap t) UCL					0.789
1205	Maximum					1.5	95% KM (BCA) UCL					0.779
1206	Mean					0.717	95% KM (Percentile Bootstrap) UCL					0.78
1207	Median					0.65	95% KM (Chebyshev) UCL					0.886
1208	SD					0.273	97.5% KM (Chebyshev) UCL					0.96
1209	k star					6.954	99% KM (Chebyshev) UCL					1.104
1210	Theta star					0.103						
1211	Nu star					681.5	Potential UCLs to Use					
1212	AppChi2					621.9	95% KM (BCA) UCL					0.779
1213	95% Gamma Approximate UCL					0.785						
1214	95% Adjusted Gamma UCL					0.787						
1215	Note: DL/2 is not a recommended method.											
1216												
1217												
1218	Bis(2-ethylhexyl)phthalate											
1219												
1220	General Statistics											
1221	Number of Valid Data					49	Number of Detected Data					1
1222	Number of Distinct Detected Data					1	Number of Non-Detect Data					48
1223	Number of Missing Values					61	Percent Non-Detects					97.96%
1224												
1225	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
1226	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
1227												
1228	The data set for variable Bis(2-ethylhexyl)phthalate was not processed!											
1229												
1230												
1231												
1232	Cadmium											
1233												
1234	General Statistics											
1235	Number of Valid Data					49	Number of Detected Data					39
1236	Number of Distinct Detected Data					32	Number of Non-Detect Data					10
1237	Number of Missing Values					62	Percent Non-Detects					20.41%
1238												
1239	Raw Statistics						Log-transformed Statistics					
1240	Minimum Detected					0.052	Minimum Detected					-2.957
1241	Maximum Detected					3.1	Maximum Detected					1.131
1242	Mean of Detected					0.682	Mean of Detected					-0.959
1243	SD of Detected					0.792	SD of Detected					1.093
1244	Minimum Non-Detect					0.076	Minimum Non-Detect					-2.577
1245	Maximum Non-Detect					0.56	Maximum Non-Detect					-0.58
1246												
1247	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					37
1248	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					12

	A	B	C	D	E	F	G	H	I	J	K	L
1249	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					75.51%
1250												
1251	UCL Statistics											
1252	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1253	Shapiro Wilk Test Statistic					0.727	Shapiro Wilk Test Statistic					0.959
1254	5% Shapiro Wilk Critical Value					0.939	5% Shapiro Wilk Critical Value					0.939
1255	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1256												
1257	Assuming Normal Distribution						Assuming Lognormal Distribution					
1258	DL/2 Substitution Method						DL/2 Substitution Method					
1259	Mean					0.585	Mean					-1.123
1260	SD					0.732	SD					1.078
1261	95% DL/2 (t) UCL					0.76	95% H-Stat (DL/2) UCL					0.799
1262												
1263	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1264	MLE yields a negative mean						Mean in Log Scale					-1.143
1265							SD in Log Scale					1.073
1266							Mean in Original Scale					0.579
1267							SD in Original Scale					0.735
1268							95% Percentile Bootstrap UCL					0.758
1269							95% BCA Bootstrap UCL					0.785
1270												
1271	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1272	k star (bias corrected)					0.941	Data appear Lognormal at 5% Significance Level					
1273	Theta Star					0.725						
1274	nu star					73.42						
1275												
1276	A-D Test Statistic					1.292	Nonparametric Statistics					
1277	5% A-D Critical Value					0.778	Kaplan-Meier (KM) Method					
1278	K-S Test Statistic					0.778	Mean					0.582
1279	5% K-S Critical Value					0.146	SD					0.727
1280	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.106
1281							95% KM (t) UCL					0.759
1282	Assuming Gamma Distribution						95% KM (z) UCL					0.756
1283	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.759
1284	Minimum					1E-09	95% KM (bootstrap t) UCL					0.809
1285	Maximum					3.1	95% KM (BCA) UCL					0.761
1286	Mean					0.64	95% KM (Percentile Bootstrap) UCL					0.761
1287	Median					0.37	95% KM (Chebyshev) UCL					1.043
1288	SD					0.719	97.5% KM (Chebyshev) UCL					1.242
1289	k star					0.643	99% KM (Chebyshev) UCL					1.633
1290	Theta star					0.995						
1291	Nu star					63.05	Potential UCLs to Use					
1292	AppChi2					45.78	95% KM (Chebyshev) UCL					1.043
1293	95% Gamma Approximate UCL					0.881						
1294	95% Adjusted Gamma UCL					0.89						
1295	Note: DL/2 is not a recommended method.											
1296												
1297												
1298	Calcium											
1299												
1300	General Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
1301	Number of Valid Data					49	Number of Detected Data					49
1302	Number of Distinct Detected Data					48	Number of Non-Detect Data					0
1303	Number of Missing Values					62	Percent Non-Detects					0.00%
1304												
1305	Raw Statistics						Log-transformed Statistics					
1306	Minimum Detected					1320	Minimum Detected					7.185
1307	Maximum Detected					16600	Maximum Detected					9.717
1308	Mean of Detected					5033	Mean of Detected					8.267
1309	SD of Detected					4008	SD of Detected					0.696
1310	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1311	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1312												
1313												
1314	UCL Statistics											
1315	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1316	Shapiro Wilk Test Statistic					0.786	Shapiro Wilk Test Statistic					0.924
1317	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947
1318	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1319												
1320	Assuming Normal Distribution						Assuming Lognormal Distribution					
1321	DL/2 Substitution Method						DL/2 Substitution Method					
1322	Mean					5033	Mean					8.267
1323	SD					4008	SD					0.696
1324	95% DL/2 (t) UCL					5994	95% H-Stat (DL/2) UCL					6082
1325												
1326	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1327	MLE method failed to converge properly						Mean in Log Scale					N/A
1328							SD in Log Scale					N/A
1329							Mean in Original Scale					N/A
1330							SD in Original Scale					N/A
1331							95% Percentile Bootstrap UCL					N/A
1332							95% BCA Bootstrap UCL					N/A
1333												
1334	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1335	k star (bias corrected)					1.986	Data do not follow a Discernable Distribution (0.05)					
1336	Theta Star					2534						
1337	nu star					194.6						
1338												
1339	A-D Test Statistic					1.94	Nonparametric Statistics					
1340	5% A-D Critical Value					0.762	Kaplan-Meier (KM) Method					
1341	K-S Test Statistic					0.762	Mean					5033
1342	5% K-S Critical Value					0.128	SD					3967
1343	Data not Gamma Distributed at 5% Significance Level						SE of Mean					572.5
1344							95% KM (t) UCL					5994
1345	Assuming Gamma Distribution						95% KM (z) UCL					5975
1346	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5994
1347	Minimum					1320	95% KM (bootstrap t) UCL					6165
1348	Maximum					16600	95% KM (BCA) UCL					6012
1349	Mean					5033	95% KM (Percentile Bootstrap) UCL					5982
1350	Median					3240	95% KM (Chebyshev) UCL					7529
1351	SD					4008	97.5% KM (Chebyshev) UCL					8609
1352	k star					1.986	99% KM (Chebyshev) UCL					10730

	A	B	C	D	E	F	G	H	I	J	K	L	
1353					Theta star	2534							
1354					Nu star	194.6	Potential UCLs to Use						
1355					AppChi2	163.4	95% KM (Chebyshev) UCL					7529	
1356					95% Gamma Approximate UCL	5997							
1357					95% Adjusted Gamma UCL	6029							
1358	Note: DL/2 is not a recommended method.												
1359													
1360													
1361	Caprolactam												
1362													
1363	General Statistics												
1364					Number of Valid Data	49					Number of Detected Data	2	
1365					Number of Distinct Detected Data	2					Number of Non-Detect Data	47	
1366					Number of Missing Values	61					Percent Non-Detects	95.92%	
1367													
1368	Raw Statistics						Log-transformed Statistics						
1369					Minimum Detected	43					Minimum Detected	3.761	
1370					Maximum Detected	55					Maximum Detected	4.007	
1371					Mean of Detected	49					Mean of Detected	3.884	
1372					SD of Detected	8.485					SD of Detected	0.174	
1373					Minimum Non-Detect	83					Minimum Non-Detect	4.419	
1374					Maximum Non-Detect	180					Maximum Non-Detect	5.193	
1375													
1376	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	49
1377	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	0
1378	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	100.00%
1379													
1380	Warning: Data set has only 2 Distinct Detected Values.												
1381	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
1382	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
1383													
1384	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
1385													
1386	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
1387	Those methods will return a 'N/A' value on your output display!												
1388													
1389	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
1390	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
1391													
1392													
1393	UCL Statistics												
1394	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1395					Shapiro Wilk Test Statistic	1					Shapiro Wilk Test Statistic	1	
1396					5% Shapiro Wilk Critical Value	N/A					5% Shapiro Wilk Critical Value	N/A	
1397	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1398													
1399	Assuming Normal Distribution						Assuming Lognormal Distribution						
1400					DL/2 Substitution Method						DL/2 Substitution Method		
1401					Mean	48.72					Mean	3.873	
1402					SD	9.22					SD	0.158	
1403					95% DL/2 (t) UCL	50.93					95% H-Stat (DL/2) UCL	52.52	
1404													

	A	B	C	D	E	F	G	H	I	J	K	L
1405	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1406	MLE method failed to converge properly						Mean in Log Scale					N/A
1407							SD in Log Scale					N/A
1408							Mean in Original Scale					N/A
1409							SD in Original Scale					N/A
1410							95% Percentile Bootstrap UCL					N/A
1411							95% BCA Bootstrap UCL					N/A
1412												
1413	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1414	k star (bias corrected)					N/A	Data do not follow a Discernable Distribution (0.05)					
1415	Theta Star					N/A						
1416	nu star					N/A						
1417												
1418	A-D Test Statistic					0.359	Nonparametric Statistics					
1419	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
1420	K-S Test Statistic					N/A	Mean					49
1421	5% K-S Critical Value					N/A	SD					6
1422	Data not Gamma Distributed at 5% Significance Level						SE of Mean					6
1423							95% KM (t) UCL					59.06
1424	Assuming Gamma Distribution						95% KM (z) UCL					58.87
1425	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					63.09
1426	Minimum					N/A	95% KM (bootstrap t) UCL					61
1427	Maximum					N/A	95% KM (BCA) UCL					55
1428	Mean					N/A	95% KM (Percentile Bootstrap) UCL					55
1429	Median					N/A	95% KM (Chebyshev) UCL					75.15
1430	SD					N/A	97.5% KM (Chebyshev) UCL					86.47
1431	k star					N/A	99% KM (Chebyshev) UCL					108.7
1432	Theta star					N/A						
1433	Nu star					N/A	Potential UCLs to Use					
1434	AppChi2					N/A	95% KM (t) UCL					59.06
1435	95% Gamma Approximate UCL					N/A	95% KM (% Bootstrap) UCL					55
1436	95% Adjusted Gamma UCL					N/A						
1437	Warning: Recommended UCL exceeds the maximum observation											
1438	Note: DL/2 is not a recommended method.											
1439												
1440												
1441	Chromium											
1442												
1443	General Statistics											
1444	Number of Valid Data					49	Number of Detected Data					49
1445	Number of Distinct Detected Data					43	Number of Non-Detect Data					0
1446	Number of Missing Values					62	Percent Non-Detects					0.00%
1447												
1448	Raw Statistics						Log-transformed Statistics					
1449	Minimum Detected					4.6	Minimum Detected					1.526
1450	Maximum Detected					39.9	Maximum Detected					3.686
1451	Mean of Detected					17.95	Mean of Detected					2.789
1452	SD of Detected					8.155	SD of Detected					0.457
1453	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1454	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1455												
1456												

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	UCL Statistics												
1458	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1459	Shapiro Wilk Test Statistic					0.917	Shapiro Wilk Test Statistic					0.977	
1460	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947	
1461	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1462													
1463	Assuming Normal Distribution						Assuming Lognormal Distribution						
1464	DL/2 Substitution Method						DL/2 Substitution Method						
1465	Mean					17.95	Mean					2.789	
1466	SD					8.155	SD					0.457	
1467	95% DL/2 (t) UCL					19.9	95% H-Stat (DL/2) UCL					20.4	
1468													
1469	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1470	MLE method failed to converge properly						Mean in Log Scale						N/A
1471													
1472													
1473													
1474													
1475													
1476													
1477	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1478	k star (bias corrected)					4.918	Data appear Gamma Distributed at 5% Significance Level						
1479	Theta Star					3.65							
1480	nu star					481.9							
1481													
1482	A-D Test Statistic					0.377	Nonparametric Statistics						
1483	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method						
1484	K-S Test Statistic					0.753	Mean					17.95	
1485	5% K-S Critical Value					0.127	SD					8.071	
1486	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						1.165
1487													
1488	Assuming Gamma Distribution						95% KM (z) UCL						19.87
1489	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						19.9
1490	Minimum					4.6	95% KM (bootstrap t) UCL						20.16
1491	Maximum					39.9	95% KM (BCA) UCL						19.67
1492	Mean					17.95	95% KM (Percentile Bootstrap) UCL						19.88
1493	Median					16.6	95% KM (Chebyshev) UCL						23.03
1494	SD					8.155	97.5% KM (Chebyshev) UCL						25.23
1495	k star					4.918	99% KM (Chebyshev) UCL						29.54
1496	Theta star					3.65							
1497	Nu star					481.9	Potential UCLs to Use						
1498	AppChi2					432	95% KM (BCA) UCL					19.67	
1499	95% Gamma Approximate UCL					20.02							
1500	95% Adjusted Gamma UCL					20.09							
1501	Note: DL/2 is not a recommended method.												
1502													
1503													
1504	Chrysene												
1505													
1506	General Statistics												
1507	Number of Valid Data					49	Number of Detected Data					14	
1508	Number of Distinct Detected Data					7	Number of Non-Detect Data					35	

	A	B	C	D	E	F	G	H	I	J	K	L
1509	Number of Missing Values					61	Percent Non-Detects					71.43%
1510												
1511	Raw Statistics						Log-transformed Statistics					
1512	Minimum Detected					0.2	Minimum Detected					-1.609
1513	Maximum Detected					12	Maximum Detected					2.485
1514	Mean of Detected					1.614	Mean of Detected					-0.285
1515	SD of Detected					3.062	SD of Detected					1.094
1516	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1517	Maximum Non-Detect					8	Maximum Non-Detect					2.079
1518												
1519	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					48
1520	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1521	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.96%
1522												
1523	UCL Statistics											
1524	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1525	Shapiro Wilk Test Statistic					0.464	Shapiro Wilk Test Statistic					0.871
1526	5% Shapiro Wilk Critical Value					0.874	5% Shapiro Wilk Critical Value					0.874
1527	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1528												
1529	Assuming Normal Distribution						Assuming Lognormal Distribution					
1530	DL/2 Substitution Method						DL/2 Substitution Method					
1531	Mean					2.114	Mean					0.509
1532	SD					1.66	SD					0.774
1533	95% DL/2 (t) UCL					2.512	95% H-Stat (DL/2) UCL					3.663
1534												
1535	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1536	MLE method failed to converge properly						Mean in Log Scale					-0.41
1537							SD in Log Scale					0.91
1538							Mean in Original Scale					1.084
1539							SD in Original Scale					1.74
1540							95% Percentile Bootstrap UCL					1.552
1541							95% BCA Bootstrap UCL					1.79
1542												
1543	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1544	k star (bias corrected)					0.66	Data do not follow a Discernable Distribution (0.05)					
1545	Theta Star					2.444						
1546	nu star					18.49						
1547												
1548	A-D Test Statistic					1.471	Nonparametric Statistics					
1549	5% A-D Critical Value					0.769	Kaplan-Meier (KM) Method					
1550	K-S Test Statistic					0.769	Mean					1.044
1551	5% K-S Critical Value					0.237	SD					1.713
1552	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.3
1553							95% KM (t) UCL					1.547
1554	Assuming Gamma Distribution						95% KM (z) UCL					1.537
1555	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.545
1556	Minimum					0.2	95% KM (bootstrap t) UCL					1.97
1557	Maximum					12	95% KM (BCA) UCL					1.593
1558	Mean					1.585	95% KM (Percentile Bootstrap) UCL					1.56
1559	Median					1.541	95% KM (Chebyshev) UCL					2.352
1560	SD					1.635	97.5% KM (Chebyshev) UCL					2.918

	A	B	C	D	E	F	G	H	I	J	K	L	
1561					k star	2.042				99% KM (Chebyshev) UCL		4.029	
1562					Theta star	0.776							
1563					Nu star	200.1				Potential UCLs to Use			
1564					AppChi2	168.4				95% KM (BCA) UCL		1.593	
1565					95% Gamma Approximate UCL	1.884							
1566					95% Adjusted Gamma UCL	1.894							
1567	Note: DL/2 is not a recommended method.												
1568													
1569													
1570	Cobalt												
1571													
1572	General Statistics												
1573					Number of Valid Data	49				Number of Detected Data		49	
1574					Number of Distinct Detected Data	38				Number of Non-Detect Data		0	
1575					Number of Missing Values	62				Percent Non-Detects		0.00%	
1576													
1577	Raw Statistics						Log-transformed Statistics						
1578					Minimum Detected	2.1				Minimum Detected		0.742	
1579					Maximum Detected	15				Maximum Detected		2.708	
1580					Mean of Detected	7.378				Mean of Detected		1.929	
1581					SD of Detected	2.752				SD of Detected		0.387	
1582					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1583					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1584													
1585													
1586	UCL Statistics												
1587	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1588					Shapiro Wilk Test Statistic	0.952				Shapiro Wilk Test Statistic		0.974	
1589					5% Shapiro Wilk Critical Value	0.947				5% Shapiro Wilk Critical Value		0.947	
1590	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1591													
1592	Assuming Normal Distribution						Assuming Lognormal Distribution						
1593					DL/2 Substitution Method					DL/2 Substitution Method			
1594					Mean	7.378				Mean		1.929	
1595					SD	2.752				SD		0.387	
1596					95% DL/2 (t) UCL	8.037				95% H-Stat (DL/2) UCL		8.199	
1597													
1598					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1599	MLE method failed to converge properly										Mean in Log Scale		N/A
1600										SD in Log Scale		N/A	
1601										Mean in Original Scale		N/A	
1602										SD in Original Scale		N/A	
1603										95% Percentile Bootstrap UCL		N/A	
1604										95% BCA Bootstrap UCL		N/A	
1605													
1606	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1607					k star (bias corrected)	6.884				Data appear Normal at 5% Significance Level			
1608					Theta Star	1.072							
1609					nu star	674.6							
1610													
1611					A-D Test Statistic	0.477				Nonparametric Statistics			
1612					5% A-D Critical Value	0.752				Kaplan-Meier (KM) Method			

	A	B	C	D	E	F	G	H	I	J	K	L	
1613	K-S Test Statistic					0.752	Mean					7.378	
1614	5% K-S Critical Value					0.127	SD					2.723	
1615	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.393	
1616							95% KM (t) UCL					8.037	
1617	Assuming Gamma Distribution						95% KM (z) UCL					8.024	
1618	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					8.037	
1619	Minimum						2.1	95% KM (bootstrap t) UCL					8.066
1620	Maximum						15	95% KM (BCA) UCL					8.071
1621	Mean						7.378	95% KM (Percentile Bootstrap) UCL					8.027
1622	Median						6.6	95% KM (Chebyshev) UCL					9.091
1623	SD						2.752	97.5% KM (Chebyshev) UCL					9.832
1624	k star						6.884	99% KM (Chebyshev) UCL					11.29
1625	Theta star						1.072						
1626	Nu star						674.6	Potential UCLs to Use					
1627	AppChi2						615.4	95% KM (t) UCL					8.037
1628	95% Gamma Approximate UCL						8.088	95% KM (Percentile Bootstrap) UCL					8.027
1629	95% Adjusted Gamma UCL						8.111						
1630	Note: DL/2 is not a recommended method.												
1631													
1632													
1633	Copper												
1634													
1635	General Statistics												
1636	Number of Valid Data					49	Number of Detected Data					48	
1637	Number of Distinct Detected Data					45	Number of Non-Detect Data					1	
1638	Number of Missing Values					62	Percent Non-Detects					2.04%	
1639													
1640	Raw Statistics						Log-transformed Statistics						
1641	Minimum Detected					3	Minimum Detected					1.099	
1642	Maximum Detected					28.7	Maximum Detected					3.357	
1643	Mean of Detected					14.43	Mean of Detected					2.569	
1644	SD of Detected					6.274	SD of Detected					0.473	
1645	Minimum Non-Detect					8.7	Minimum Non-Detect					2.163	
1646	Maximum Non-Detect					8.7	Maximum Non-Detect					2.163	
1647													
1648													
1649	UCL Statistics												
1650	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1651	Shapiro Wilk Test Statistic					0.948	Shapiro Wilk Test Statistic					0.965	
1652	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947	
1653	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1654													
1655	Assuming Normal Distribution						Assuming Lognormal Distribution						
1656	DL/2 Substitution Method						DL/2 Substitution Method						
1657	Mean					14.22	Mean					2.546	
1658	SD					6.373	SD					0.494	
1659	95% DL/2 (t) UCL					15.75	95% H-Stat (DL/2) UCL					16.35	
1660													
1661	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1662	Mean					14.05	Mean in Log Scale					2.554	
1663	SD					6.621	SD in Log Scale					0.479	
1664	95% MLE (t) UCL					15.64	Mean in Original Scale					14.26	

	A	B	C	D	E	F	G	H	I	J	K	L
1665	95% MLE (Tiku) UCL					15.65	SD in Original Scale					6.312
1666							95% Percentile Bootstrap UCL					15.82
1667							95% BCA Bootstrap UCL					15.7
1668												
1669	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1670	k star (bias corrected)					4.833	Data appear Normal at 5% Significance Level					
1671	Theta Star					2.985						
1672	nu star					464						
1673												
1674	A-D Test Statistic					0.294	Nonparametric Statistics					
1675	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method					
1676	K-S Test Statistic					0.753	Mean					14.26
1677	5% K-S Critical Value					0.128	SD					6.257
1678	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.904
1679							95% KM (t) UCL					15.78
1680	Assuming Gamma Distribution						95% KM (z) UCL					15.75
1681	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					15.78
1682	Minimum					3	95% KM (bootstrap t) UCL					15.77
1683	Maximum					28.7	95% KM (BCA) UCL					15.8
1684	Mean					14.23	95% KM (Percentile Bootstrap) UCL					15.78
1685	Median					12.8	95% KM (Chebyshev) UCL					18.2
1686	SD					6.355	97.5% KM (Chebyshev) UCL					19.91
1687	k star					4.56	99% KM (Chebyshev) UCL					23.26
1688	Theta star					3.121						
1689	Nu star					446.9	Potential UCLs to Use					
1690	AppChi2					398.9	95% KM (t) UCL					15.78
1691	95% Gamma Approximate UCL					15.95	95% KM (Percentile Bootstrap) UCL					15.78
1692	95% Adjusted Gamma UCL					16						
1693	Note: DL/2 is not a recommended method.											
1694												
1695												
1696	Dibenz(a,h)anthracene											
1697												
1698	General Statistics											
1699	Number of Valid Data					49	Number of Detected Data					1
1700	Number of Distinct Detected Data					1	Number of Non-Detect Data					48
1701	Number of Missing Values					61	Percent Non-Detects					97.96%
1702												
1703	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
1704	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
1705												
1706	The data set for variable Dibenz(a,h)anthracene was not processed!											
1707												
1708												
1709												
1710	Dibenzofuran											
1711												
1712	General Statistics											
1713	Number of Valid Data					49	Number of Detected Data					1
1714	Number of Distinct Detected Data					1	Number of Non-Detect Data					48
1715	Number of Missing Values					61	Percent Non-Detects					97.96%
1716												

	A	B	C	D	E	F	G	H	I	J	K	L
1717	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
1718	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
1719												
1720	The data set for variable Dibenzofuran was not processed!											
1721												
1722												
1723												
1724	Fluoranthene											
1725												
1726	General Statistics											
1727	Number of Valid Data					49	Number of Detected Data					15
1728	Number of Distinct Detected Data					10	Number of Non-Detect Data					34
1729	Number of Missing Values					61	Percent Non-Detects					69.39%
1730												
1731	Raw Statistics						Log-transformed Statistics					
1732	Minimum Detected					0.2	Minimum Detected					-1.609
1733	Maximum Detected					27	Maximum Detected					3.296
1734	Mean of Detected					2.453	Mean of Detected					-0.255
1735	SD of Detected					6.804	SD of Detected					1.123
1736	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1737	Maximum Non-Detect					6	Maximum Non-Detect					1.792
1738												
1739	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					48
1740	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1741	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.96%
1742												
1743	UCL Statistics											
1744	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1745	Shapiro Wilk Test Statistic					0.333	Shapiro Wilk Test Statistic					0.75
1746	5% Shapiro Wilk Critical Value					0.881	5% Shapiro Wilk Critical Value					0.881
1747	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1748												
1749	Assuming Normal Distribution						Assuming Lognormal Distribution					
1750	DL/2 Substitution Method						DL/2 Substitution Method					
1751	Mean					2.333	Mean					0.489
1752	SD					3.683	SD					0.792
1753	95% DL/2 (t) UCL					3.215	95% H-Stat (DL/2) UCL					3.719
1754												
1755	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1756	MLE method failed to converge properly						Mean in Log Scale					-0.365
1757							SD in Log Scale					0.918
1758							Mean in Original Scale					1.379
1759							SD in Original Scale					3.794
1760							95% Percentile Bootstrap UCL					2.441
1761							95% BCA Bootstrap UCL					3.291
1762												
1763	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1764	k star (bias corrected)					0.48	Data do not follow a Discernable Distribution (0.05)					
1765	Theta Star					5.113						
1766	nu star					14.39						
1767												
1768	A-D Test Statistic					2.969	Nonparametric Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
1769	5% A-D Critical Value					0.79	Kaplan-Meier (KM) Method					
1770	K-S Test Statistic					0.79	Mean					1.237
1771	5% K-S Critical Value					0.233	SD					3.742
1772	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.562
1773							95% KM (t) UCL					2.179
1774	Assuming Gamma Distribution						95% KM (z) UCL					2.161
1775	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.159
1776	Minimum					1E-09	95% KM (bootstrap t) UCL					7.438
1777	Maximum					27	95% KM (BCA) UCL					2.31
1778	Mean					2.414	95% KM (Percentile Bootstrap) UCL					2.331
1779	Median					1.856	95% KM (Chebyshev) UCL					3.686
1780	SD					3.852	97.5% KM (Chebyshev) UCL					4.746
1781	k star					0.314	99% KM (Chebyshev) UCL					6.827
1782	Theta star					7.675						
1783	Nu star					30.82	Potential UCLs to Use					
1784	AppChi2					19.14	95% KM (BCA) UCL					2.31
1785	95% Gamma Approximate UCL					3.887						
1786	95% Adjusted Gamma UCL					3.945						
1787	Note: DL/2 is not a recommended method.											
1788												
1789												
1790	Fluorene											
1791												
1792	General Statistics											
1793	Number of Valid Data					49	Number of Detected Data					1
1794	Number of Distinct Detected Data					1	Number of Non-Detect Data					48
1795	Number of Missing Values					61	Percent Non-Detects					97.96%
1796												
1797	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
1798	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
1799												
1800	The data set for variable Fluorene was not processed!											
1801												
1802												
1803												
1804	gamma-Chlordane											
1805												
1806	General Statistics											
1807	Number of Valid Data					49	Number of Detected Data					2
1808	Number of Distinct Detected Data					2	Number of Non-Detect Data					47
1809	Number of Missing Values					61	Percent Non-Detects					95.92%
1810												
1811	Raw Statistics						Log-transformed Statistics					
1812	Minimum Detected					0.075	Minimum Detected					-2.59
1813	Maximum Detected					0.84	Maximum Detected					-0.174
1814	Mean of Detected					0.458	Mean of Detected					-1.382
1815	SD of Detected					0.541	SD of Detected					1.708
1816	Minimum Non-Detect					0.33	Minimum Non-Detect					-1.109
1817	Maximum Non-Detect					2.6	Maximum Non-Detect					0.956
1818												
1819	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49
1820	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0

	A	B	C	D	E	F	G	H	I	J	K	L
1821	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
1822												
1823	Warning: Data set has only 2 Distinct Detected Values.											
1824	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
1825	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
1826												
1827	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
1828												
1829	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
1830	Those methods will return a 'N/A' value on your output display!											
1831												
1832	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
1833	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
1834												
1835												
1836	UCL Statistics											
1837	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1838	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1		
1839	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A		
1840	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1841												
1842	Assuming Normal Distribution						Assuming Lognormal Distribution					
1843	DL/2 Substitution Method						DL/2 Substitution Method					
1844	Mean			0.227			Mean			-1.606		
1845	SD			0.186			SD			0.402		
1846	95% DL/2 (t) UCL			0.271			95% H-Stat (DL/2) UCL			0.247		
1847												
1848	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
1849	MLE method failed to converge properly						Mean in Log Scale			N/A		
1850							SD in Log Scale			N/A		
1851							Mean in Original Scale			N/A		
1852							SD in Original Scale			N/A		
1853							95% Percentile Bootstrap UCL			N/A		
1854							95% BCA Bootstrap UCL			N/A		
1855												
1856	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1857	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
1858	Theta Star			N/A								
1859	nu star			N/A								
1860												
1861	A-D Test Statistic			0.357			Nonparametric Statistics					
1862	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
1863	K-S Test Statistic			N/A			Mean			0.0909		
1864	5% K-S Critical Value			N/A			SD			0.109		
1865	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.0223		
1866							95% KM (t) UCL			0.128		
1867	Assuming Gamma Distribution						95% KM (z) UCL			0.128		
1868	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			0.589		
1869	Minimum			N/A			95% KM (bootstrap t) UCL			#NUM!		
1870	Maximum			N/A			95% KM (BCA) UCL			N/A		
1871	Mean			N/A			95% KM (Percentile Bootstrap) UCL			N/A		
1872	Median			N/A			95% KM (Chebyshev) UCL			0.188		

	A	B	C	D	E	F	G	H	I	J	K	L		
1873					SD	N/A				97.5% KM (Chebyshev) UCL		0.23		
1874					k star	N/A				99% KM (Chebyshev) UCL		0.313		
1875					Theta star	N/A								
1876					Nu star	N/A				Potential UCLs to Use				
1877					AppChi2	N/A				95% KM (Chebyshev) UCL		0.188		
1878					95% Gamma Approximate UCL	N/A								
1879					95% Adjusted Gamma UCL	N/A								
1880	Note: DL/2 is not a recommended method.													
1881														
1882														
1883	Hexachlorobenzene													
1884														
1885	General Statistics													
1886					Number of Valid Data	49				Number of Detected Data		3		
1887					Number of Distinct Detected Data	3				Number of Non-Detect Data		46		
1888					Number of Missing Values	61				Percent Non-Detects		93.88%		
1889														
1890	Raw Statistics						Log-transformed Statistics							
1891					Minimum Detected	1.1				Minimum Detected		0.0953		
1892					Maximum Detected	8.5				Maximum Detected		2.14		
1893					Mean of Detected	3.733				Mean of Detected		0.902		
1894					SD of Detected	4.136				SD of Detected		1.089		
1895					Minimum Non-Detect	0.33				Minimum Non-Detect		-1.109		
1896					Maximum Non-Detect	2.6				Maximum Non-Detect		0.956		
1897														
1898	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						48	
1899	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1	
1900	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						97.96%	
1901														
1902	Warning: There are only 3 Distinct Detected Values in this data set													
1903	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.													
1904	Those methods will return a 'N/A' value on your output display!													
1905														
1906	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
1907	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
1908														
1909														
1910	UCL Statistics													
1911	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1912					Shapiro Wilk Test Statistic	0.8				Shapiro Wilk Test Statistic		0.882		
1913					5% Shapiro Wilk Critical Value	0.767				5% Shapiro Wilk Critical Value		0.767		
1914	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1915														
1916	Assuming Normal Distribution						Assuming Lognormal Distribution							
1917					DL/2 Substitution Method					DL/2 Substitution Method				
1918					Mean	0.434				Mean		-1.457		
1919					SD	1.21				SD		0.72		
1920					95% DL/2 (t) UCL	0.723				95% H-Stat (DL/2) UCL		0.327		
1921														
1922	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
1923	MLE method failed to converge properly												Mean in Log Scale	-5.135
1924													SD in Log Scale	2.362

	A	B	C	D	E	F	G	H	I	J	K	L	
1925						Mean in Original Scale					0.243		
1926						SD in Original Scale					1.235		
1927						95% Percentile Bootstrap UCL					0.583		
1928						95% BCA Bootstrap UCL					0.804		
1929													
1930	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
1931	k star (bias corrected)				N/A		Data appear Normal at 5% Significance Level						
1932	Theta Star				N/A								
1933	nu star				N/A								
1934													
1935	A-D Test Statistic				0.459		Nonparametric Statistics						
1936	5% A-D Critical Value				N/A		Kaplan-Meier (KM) Method						
1937	K-S Test Statistic				N/A						Mean	1.261	
1938	5% K-S Critical Value				N/A						SD	1.047	
1939	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.183	
1940											95% KM (t) UCL	1.569	
1941	Assuming Gamma Distribution										95% KM (z) UCL	1.563	
1942	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	1.624
1943	Minimum				N/A							95% KM (bootstrap t) UCL	2.859
1944	Maximum				N/A							95% KM (BCA) UCL	N/A
1945	Mean				N/A							95% KM (Percentile Bootstrap) UCL	N/A
1946	Median				N/A							95% KM (Chebyshev) UCL	2.06
1947	SD				N/A							97.5% KM (Chebyshev) UCL	2.406
1948	k star				N/A							99% KM (Chebyshev) UCL	3.085
1949	Theta star				N/A								
1950	Nu star				N/A							Potential UCLs to Use	
1951	AppChi2				N/A							95% KM (t) UCL	1.569
1952	95% Gamma Approximate UCL				N/A							95% KM (Percentile Bootstrap) UCL	N/A
1953	95% Adjusted Gamma UCL				N/A								
1954	Note: DL/2 is not a recommended method.												
1955													
1956													
1957	Indeno(1,2,3-cd)pyrene												
1958													
1959	General Statistics												
1960	Number of Valid Data				49		Number of Detected Data				6		
1961	Number of Distinct Detected Data				4		Number of Non-Detect Data				43		
1962	Number of Missing Values				61		Percent Non-Detects				87.76%		
1963													
1964	Raw Statistics					Log-transformed Statistics							
1965	Minimum Detected				0.2		Minimum Detected				-1.609		
1966	Maximum Detected				7		Maximum Detected				1.946		
1967	Mean of Detected				1.533		Mean of Detected				-0.484		
1968	SD of Detected				2.688		SD of Detected				1.316		
1969	Minimum Non-Detect				4		Minimum Non-Detect				1.386		
1970	Maximum Non-Detect				8		Maximum Non-Detect				2.079		
1971													
1972	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		49
1973	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
1974	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
1975													
1976	Warning: There are only 4 Distinct Detected Values in this data												

	A	B	C	D	E	F	G	H	I	J	K	L	
1977	Note: It should be noted that even though bootstrap may be performed on this data set												
1978	the resulting calculations may not be reliable enough to draw conclusions												
1979													
1980	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
1981													
1982													
1983	UCL Statistics												
1984	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1985	Shapiro Wilk Test Statistic					0.571	Shapiro Wilk Test Statistic					0.834	
1986	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788	
1987	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1988													
1989	Assuming Normal Distribution						Assuming Lognormal Distribution						
1990	DL/2 Substitution Method						DL/2 Substitution Method						
1991	Mean					2.249	Mean					0.68	
1992	SD					0.978	SD					0.627	
1993	95% DL/2 (t) UCL					2.483	95% H-Stat (DL/2) UCL					3.637	
1994													
1995	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1996	MLE method failed to converge properly						Mean in Log Scale					-0.868	
1997													
1998													
1999													
2000													
2001													
2002													
2003	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2004	k star (bias corrected)					0.445	Data appear Lognormal at 5% Significance Level						
2005	Theta Star					3.446							
2006	nu star					5.339							
2007													
2008	A-D Test Statistic					0.842	Nonparametric Statistics						
2009	5% A-D Critical Value					0.726	Kaplan-Meier (KM) Method						
2010	K-S Test Statistic					0.726	Mean					0.577	
2011	5% K-S Critical Value					0.345	SD					0.963	
2012	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.183	
2013													
2014	Assuming Gamma Distribution						95% KM (z) UCL						0.878
2015	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.883
2016	Minimum					1E-09	95% KM (bootstrap t) UCL						1.083
2017	Maximum					7	95% KM (BCA) UCL						0.927
2018	Mean					1.396	95% KM (Percentile Bootstrap) UCL						0.893
2019	Median					1.51	95% KM (Chebyshev) UCL						1.375
2020	SD					1.192	97.5% KM (Chebyshev) UCL						1.72
2021	k star					0.232	99% KM (Chebyshev) UCL						2.399
2022	Theta star					6.021							
2023	Nu star					22.72	Potential UCLs to Use						
2024	AppChi2					12.88	95% KM (BCA) UCL					0.927	
2025	95% Gamma Approximate UCL					2.462							
2026	95% Adjusted Gamma UCL					2.506							
2027	Note: DL/2 is not a recommended method.												
2028													

	A	B	C	D	E	F	G	H	I	J	K	L		
2029														
2030	Iron													
2031														
2032	General Statistics													
2033	Number of Valid Data					49		Number of Detected Data					49	
2034	Number of Distinct Detected Data					44		Number of Non-Detect Data					0	
2035	Number of Missing Values					62		Percent Non-Detects					0.00%	
2036														
2037	Raw Statistics						Log-transformed Statistics							
2038	Minimum Detected					4930		Minimum Detected					8.503	
2039	Maximum Detected					27500		Maximum Detected					10.22	
2040	Mean of Detected					16889		Mean of Detected					9.692	
2041	SD of Detected					4734		SD of Detected					0.309	
2042	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
2043	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
2044														
2045														
2046	UCL Statistics													
2047	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2048	Shapiro Wilk Test Statistic					0.973		Shapiro Wilk Test Statistic					0.937	
2049	5% Shapiro Wilk Critical Value					0.947		5% Shapiro Wilk Critical Value					0.947	
2050	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
2051														
2052	Assuming Normal Distribution						Assuming Lognormal Distribution							
2053	DL/2 Substitution Method							DL/2 Substitution Method						
2054	Mean					16889		Mean					9.692	
2055	SD					4734		SD					0.309	
2056	95% DL/2 (t) UCL					18023		95% H-Stat (DL/2) UCL					18340	
2057														
2058	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
2059	MLE method failed to converge properly						Mean in Log Scale						N/A	
2060							SD in Log Scale						N/A	
2061							Mean in Original Scale						N/A	
2062							SD in Original Scale						N/A	
2063							95% Percentile Bootstrap UCL						N/A	
2064							95% BCA Bootstrap UCL						N/A	
2065														
2066	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2067	k star (bias corrected)					11.19		Data appear Normal at 5% Significance Level						
2068	Theta Star					1510								
2069	nu star					1096								
2070														
2071	A-D Test Statistic					0.421		Nonparametric Statistics						
2072	5% A-D Critical Value					0.749		Kaplan-Meier (KM) Method						
2073	K-S Test Statistic					0.749		Mean					16889	
2074	5% K-S Critical Value					0.126		SD					4685	
2075	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						676.3	
2076							95% KM (t) UCL						18023	
2077	Assuming Gamma Distribution						95% KM (z) UCL						18001	
2078	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						18023	
2079	Minimum					4930		95% KM (bootstrap t) UCL					18024	
2080	Maximum					27500		95% KM (BCA) UCL					18053	

	A	B	C	D	E	F	G	H	I	J	K	L
2081					Mean	16889					95% KM (Percentile Bootstrap) UCL	17968
2082					Median	16000					95% KM (Chebyshev) UCL	19837
2083					SD	4734					97.5% KM (Chebyshev) UCL	21112
2084					k star	11.19					99% KM (Chebyshev) UCL	23617
2085					Theta star	1510						
2086					Nu star	1096					Potential UCLs to Use	
2087					AppChi2	1020					95% KM (t) UCL	18023
2088					95% Gamma Approximate UCL	18144					95% KM (Percentile Bootstrap) UCL	17968
2089					95% Adjusted Gamma UCL	18184						
2090	Note: DL/2 is not a recommended method.											
2091												
2092												
2093	Lead											
2094												
2095	General Statistics											
2096					Number of Valid Data	49					Number of Detected Data	49
2097					Number of Distinct Detected Data	44					Number of Non-Detect Data	0
2098					Number of Missing Values	62					Percent Non-Detects	0.00%
2099												
2100	Raw Statistics						Log-transformed Statistics					
2101					Minimum Detected	3.1					Minimum Detected	1.131
2102					Maximum Detected	119					Maximum Detected	4.779
2103					Mean of Detected	20.3					Mean of Detected	2.597
2104					SD of Detected	24.49					SD of Detected	0.833
2105					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
2106					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
2107												
2108												
2109	UCL Statistics											
2110	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2111					Shapiro Wilk Test Statistic	0.625					Shapiro Wilk Test Statistic	0.934
2112					5% Shapiro Wilk Critical Value	0.947					5% Shapiro Wilk Critical Value	0.947
2113	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2114												
2115	Assuming Normal Distribution						Assuming Lognormal Distribution					
2116					DL/2 Substitution Method						DL/2 Substitution Method	
2117					Mean	20.3					Mean	2.597
2118					SD	24.49					SD	0.833
2119					95% DL/2 (t) UCL	26.17					95% H-Stat (DL/2) UCL	24.6
2120												
2121					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
2122	MLE method failed to converge properly										Mean in Log Scale	N/A
2123											SD in Log Scale	N/A
2124											Mean in Original Scale	N/A
2125											SD in Original Scale	N/A
2126											95% Percentile Bootstrap UCL	N/A
2127											95% BCA Bootstrap UCL	N/A
2128												
2129	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2130					k star (bias corrected)	1.281					Data do not follow a Discernable Distribution (0.05)	
2131					Theta Star	15.85						
2132					nu star	125.5						

	A	B	C	D	E	F	G	H	I	J	K	L	
2133													
2134				A-D Test Statistic		2.519	Nonparametric Statistics						
2135				5% A-D Critical Value		0.771	Kaplan-Meier (KM) Method						
2136				K-S Test Statistic		0.771	Mean					20.3	
2137				5% K-S Critical Value		0.129	SD					24.24	
2138	Data not Gamma Distributed at 5% Significance Level						SE of Mean					3.498	
2139							95% KM (t) UCL					26.17	
2140	Assuming Gamma Distribution						95% KM (z) UCL					26.06	
2141	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					26.17	
2142				Minimum		3.1	95% KM (bootstrap t) UCL					29.66	
2143				Maximum		119	95% KM (BCA) UCL					26.93	
2144				Mean		20.3	95% KM (Percentile Bootstrap) UCL					26.17	
2145				Median		11.1	95% KM (Chebyshev) UCL					35.55	
2146				SD		24.49	97.5% KM (Chebyshev) UCL					42.15	
2147				k star		1.281	99% KM (Chebyshev) UCL					55.11	
2148				Theta star		15.85							
2149				Nu star		125.5	Potential UCLs to Use						
2150				AppChi2		100.6	95% KM (Chebyshev) UCL					35.55	
2151				95% Gamma Approximate UCL		25.32							
2152				95% Adjusted Gamma UCL		25.49							
2153	Note: DL/2 is not a recommended method.												
2154													
2155													
2156	Magnesium												
2157													
2158	General Statistics												
2159				Number of Valid Data		49	Number of Detected Data					49	
2160				Number of Distinct Detected Data		49	Number of Non-Detect Data					0	
2161				Number of Missing Values		62	Percent Non-Detects					0.00%	
2162													
2163	Raw Statistics						Log-transformed Statistics						
2164				Minimum Detected		1540	Minimum Detected					7.34	
2165				Maximum Detected		8630	Maximum Detected					9.063	
2166				Mean of Detected		4637	Mean of Detected					8.374	
2167				SD of Detected		1714	SD of Detected					0.379	
2168				Minimum Non-Detect		N/A	Minimum Non-Detect					N/A	
2169				Maximum Non-Detect		N/A	Maximum Non-Detect					N/A	
2170													
2171													
2172	UCL Statistics												
2173	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2174				Shapiro Wilk Test Statistic		0.945	Shapiro Wilk Test Statistic					0.974	
2175				5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value					0.947	
2176	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2177													
2178	Assuming Normal Distribution						Assuming Lognormal Distribution						
2179				DL/2 Substitution Method			DL/2 Substitution Method						
2180				Mean		4637	Mean					8.374	
2181				SD		1714	SD					0.379	
2182				95% DL/2 (t) UCL		5047	95% H-Stat (DL/2) UCL					5134	
2183													
2184	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					

	A	B	C	D	E	F	G	H	I	J	K	L
2185	MLE method failed to converge properly							Mean in Log Scale				N/A
2186								SD in Log Scale				N/A
2187								Mean in Original Scale				N/A
2188								SD in Original Scale				N/A
2189								95% Percentile Bootstrap UCL				N/A
2190								95% BCA Bootstrap UCL				N/A
2191												
2192	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only				
2193	k star (bias corrected)					7.048	Data appear Gamma Distributed at 5% Significance Level					
2194	Theta Star					657.9						
2195	nu star					690.7						
2196												
2197	A-D Test Statistic					0.411	Nonparametric Statistics					
2198	5% A-D Critical Value					0.751	Kaplan-Meier (KM) Method					
2199	K-S Test Statistic					0.751					Mean	4637
2200	5% K-S Critical Value					0.127					SD	1696
2201	Data appear Gamma Distributed at 5% Significance Level							SE of Mean				244.9
2202								95% KM (t) UCL				5047
2203	Assuming Gamma Distribution							95% KM (z) UCL				5039
2204	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL				5047
2205	Minimum					1540	95% KM (bootstrap t) UCL				5080	
2206	Maximum					8630	95% KM (BCA) UCL				5059	
2207	Mean					4637	95% KM (Percentile Bootstrap) UCL				5052	
2208	Median					4120	95% KM (Chebyshev) UCL				5704	
2209	SD					1714	97.5% KM (Chebyshev) UCL				6166	
2210	k star					7.048	99% KM (Chebyshev) UCL				7073	
2211	Theta star					657.9						
2212	Nu star					690.7	Potential UCLs to Use					
2213	AppChi2					630.7	95% KM (BCA) UCL				5059	
2214	95% Gamma Approximate UCL					5078						
2215	95% Adjusted Gamma UCL					5092						
2216	Note: DL/2 is not a recommended method.											
2217												
2218												
2219	Manganese											
2220												
2221	General Statistics											
2222	Number of Valid Data					49	Number of Detected Data				49	
2223	Number of Distinct Detected Data					46	Number of Non-Detect Data				0	
2224	Number of Missing Values					62	Percent Non-Detects				0.00%	
2225												
2226	Raw Statistics						Log-transformed Statistics					
2227	Minimum Detected					95.3	Minimum Detected				4.557	
2228	Maximum Detected					641	Maximum Detected				6.463	
2229	Mean of Detected					275.6	Mean of Detected				5.498	
2230	SD of Detected					140.3	SD of Detected				0.496	
2231	Minimum Non-Detect					N/A	Minimum Non-Detect				N/A	
2232	Maximum Non-Detect					N/A	Maximum Non-Detect				N/A	
2233												
2234												
2235	UCL Statistics											
2236	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
2237	Shapiro Wilk Test Statistic					0.9	Shapiro Wilk Test Statistic					0.964
2238	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947
2239	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2240												
2241	Assuming Normal Distribution						Assuming Lognormal Distribution					
2242	DL/2 Substitution Method						DL/2 Substitution Method					
2243	Mean					275.6	Mean					5.498
2244	SD					140.3	SD					0.496
2245	95% DL/2 (t) UCL					309.2	95% H-Stat (DL/2) UCL					316
2246												
2247	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2248	MLE method failed to converge properly						Mean in Log Scale					N/A
2249							SD in Log Scale					N/A
2250							Mean in Original Scale					N/A
2251							SD in Original Scale					N/A
2252							95% Percentile Bootstrap UCL					N/A
2253							95% BCA Bootstrap UCL					N/A
2254												
2255	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2256	k star (bias corrected)					4.046	Data appear Gamma Distributed at 5% Significance Level					
2257	Theta Star					68.12						
2258	nu star					396.6						
2259												
2260	A-D Test Statistic					0.589	Nonparametric Statistics					
2261	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method					
2262	K-S Test Statistic					0.753	Mean					275.6
2263	5% K-S Critical Value					0.127	SD					138.8
2264	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					20.04
2265							95% KM (t) UCL					309.2
2266	Assuming Gamma Distribution						95% KM (z) UCL					308.6
2267	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					309.2
2268	Minimum					95.3	95% KM (bootstrap t) UCL					313.7
2269	Maximum					641	95% KM (BCA) UCL					311.9
2270	Mean					275.6	95% KM (Percentile Bootstrap) UCL					309.9
2271	Median					222	95% KM (Chebyshev) UCL					363
2272	SD					140.3	97.5% KM (Chebyshev) UCL					400.8
2273	k star					4.046	99% KM (Chebyshev) UCL					475
2274	Theta star					68.12						
2275	Nu star					396.6	Potential UCLs to Use					
2276	AppChi2					351.4	95% KM (BCA) UCL					311.9
2277	95% Gamma Approximate UCL					311.1						
2278	95% Adjusted Gamma UCL					312.2						
2279	Note: DL/2 is not a recommended method.											
2280												
2281												
2282	Mercury											
2283												
2284	General Statistics											
2285	Number of Valid Data					46	Number of Detected Data					35
2286	Number of Distinct Detected Data					27	Number of Non-Detect Data					11
2287	Number of Missing Values					65	Percent Non-Detects					23.91%
2288												

	A	B	C	D	E	F	G	H	I	J	K	L
2289	Raw Statistics						Log-transformed Statistics					
2290	Minimum Detected				0.005		Minimum Detected				-5.298	
2291	Maximum Detected				0.34		Maximum Detected				-1.079	
2292	Mean of Detected				0.0516		Mean of Detected				-3.703	
2293	SD of Detected				0.0809		SD of Detected				1.127	
2294	Minimum Non-Detect				0.012		Minimum Non-Detect				-4.423	
2295	Maximum Non-Detect				0.11		Maximum Non-Detect				-2.207	
2296												
2297	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				42	
2298	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				4	
2299	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				91.30%	
2300												
2301	UCL Statistics											
2302	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2303	Shapiro Wilk Test Statistic				0.581		Shapiro Wilk Test Statistic				0.919	
2304	5% Shapiro Wilk Critical Value				0.934		5% Shapiro Wilk Critical Value				0.934	
2305	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2306												
2307	Assuming Normal Distribution						Assuming Lognormal Distribution					
2308	DL/2 Substitution Method						DL/2 Substitution Method					
2309	Mean				0.0497		Mean				-3.617	
2310	SD				0.0709		SD				1.071	
2311	95% DL/2 (t) UCL				0.0673		95% H-Stat (DL/2) UCL				0.0898	
2312												
2313	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
2314	MLE yields a negative mean						Mean in Log Scale				-3.81	
2315							SD in Log Scale				1.051	
2316							Mean in Original Scale				0.0439	
2317							SD in Original Scale				0.0719	
2318							95% Percentile Bootstrap UCL				0.0617	
2319							95% BCA Bootstrap UCL				0.0673	
2320												
2321	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2322	k star (bias corrected)				0.753		Data do not follow a Discernable Distribution (0.05)					
2323	Theta Star				0.0685							
2324	nu star				52.72							
2325												
2326	A-D Test Statistic				2.38		Nonparametric Statistics					
2327	5% A-D Critical Value				0.785		Kaplan-Meier (KM) Method					
2328	K-S Test Statistic				0.785		Mean				0.0442	
2329	5% K-S Critical Value				0.154		SD				0.0713	
2330	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.0108	
2331							95% KM (t) UCL				0.0623	
2332	Assuming Gamma Distribution						95% KM (z) UCL				0.0619	
2333	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0622	
2334	Minimum				0.005		95% KM (bootstrap t) UCL				0.072	
2335	Maximum				0.34		95% KM (BCA) UCL				0.0625	
2336	Mean				0.0503		95% KM (Percentile Bootstrap) UCL				0.0622	
2337	Median				0.0255		95% KM (Chebyshev) UCL				0.0911	
2338	SD				0.0711		97.5% KM (Chebyshev) UCL				0.111	
2339	k star				0.935		99% KM (Chebyshev) UCL				0.151	
2340	Theta star				0.0538							

	A	B	C	D	E	F	G	H	I	J	K	L
2341					Nu star	86	Potential UCLs to Use					
2342					AppChi2	65.63	95% KM (Chebyshev) UCL					0.0911
2343			95% Gamma Approximate UCL			0.0659						
2344			95% Adjusted Gamma UCL			0.0665						
2345	Note: DL/2 is not a recommended method.											
2346												
2347												
2348	Methoxychlor											
2349												
2350	General Statistics											
2351	Number of Valid Data				49	Number of Detected Data				1		
2352	Number of Distinct Detected Data				1	Number of Non-Detect Data				48		
2353	Number of Missing Values				61	Percent Non-Detects				97.96%		
2354												
2355	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
2356	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
2357												
2358	The data set for variable Methoxychlor was not processed!											
2359												
2360												
2361												
2362	Naphthalene											
2363												
2364	General Statistics											
2365	Number of Valid Data				49	Number of Detected Data				10		
2366	Number of Distinct Detected Data				4	Number of Non-Detect Data				39		
2367	Number of Missing Values				61	Percent Non-Detects				79.59%		
2368												
2369	Raw Statistics						Log-transformed Statistics					
2370	Minimum Detected				0.5	Minimum Detected				-0.693		
2371	Maximum Detected				3	Maximum Detected				1.099		
2372	Mean of Detected				1.25	Mean of Detected				0.11		
2373	SD of Detected				0.717	SD of Detected				0.477		
2374	Minimum Non-Detect				3.4	Minimum Non-Detect				1.224		
2375	Maximum Non-Detect				6.6	Maximum Non-Detect				1.887		
2376												
2377	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				49	
2378	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
2379	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
2380												
2381	Warning: There are only 4 Distinct Detected Values in this data											
2382	Note: It should be noted that even though bootstrap may be performed on this data set											
2383	the resulting calculations may not be reliable enough to draw conclusions											
2384												
2385	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
2386												
2387												
2388	UCL Statistics											
2389	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2390	Shapiro Wilk Test Statistic				0.673	Shapiro Wilk Test Statistic				0.771		
2391	5% Shapiro Wilk Critical Value				0.842	5% Shapiro Wilk Critical Value				0.842		
2392	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L		
2393														
2394	Assuming Normal Distribution						Assuming Lognormal Distribution							
2395	DL/2 Substitution Method						DL/2 Substitution Method							
2396	Mean						1.803	Mean						0.545
2397	SD						0.49	SD						0.323
2398	95% DL/2 (t) UCL						1.92	95% H-Stat (DL/2) UCL						2.392
2399														
2400	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
2401	MLE method failed to converge properly						Mean in Log Scale						0.11	
2402							SD in Log Scale						0.341	
2403							Mean in Original Scale						1.184	
2404							SD in Original Scale						0.445	
2405							95% Percentile Bootstrap UCL						1.287	
2406							95% BCA Bootstrap UCL						1.303	
2407														
2408	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2409	k star (bias corrected)						3.268	Data do not follow a Discernable Distribution (0.05)						
2410	Theta Star						0.382							
2411	nu star						65.37							
2412														
2413	A-D Test Statistic						1.513	Nonparametric Statistics						
2414	5% A-D Critical Value						0.729	Kaplan-Meier (KM) Method						
2415	K-S Test Statistic						0.729	Mean						1.25
2416	5% K-S Critical Value						0.268	SD						0.68
2417	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.227	
2418							95% KM (t) UCL						1.63	
2419	Assuming Gamma Distribution						95% KM (z) UCL						1.623	
2420	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						1.647	
2421	Minimum						0.432	95% KM (bootstrap t) UCL						#NUM!
2422	Maximum						3	95% KM (BCA) UCL						1.6
2423	Mean						1.274	95% KM (Percentile Bootstrap) UCL						1.667
2424	Median						1.243	95% KM (Chebyshev) UCL						2.238
2425	SD						0.459	97.5% KM (Chebyshev) UCL						2.666
2426	k star						7.321	99% KM (Chebyshev) UCL						3.506
2427	Theta star						0.174							
2428	Nu star						717.4	Potential UCLs to Use						
2429	AppChi2						656.3	95% KM (t) UCL						1.63
2430	95% Gamma Approximate UCL						1.393	95% KM (% Bootstrap) UCL						1.667
2431	95% Adjusted Gamma UCL						1.396							
2432	Note: DL/2 is not a recommended method.													
2433														
2434														
2435	Nickel													
2436														
2437	General Statistics													
2438	Number of Valid Data						49	Number of Detected Data						49
2439	Number of Distinct Detected Data						46	Number of Non-Detect Data						0
2440	Number of Missing Values						62	Percent Non-Detects						0.00%
2441														
2442	Raw Statistics						Log-transformed Statistics							
2443	Minimum Detected						2.8	Minimum Detected						1.03
2444	Maximum Detected						40.1	Maximum Detected						3.691

	A	B	C	D	E	F	G	H	I	J	K	L
2445	Mean of Detected					15.77	Mean of Detected					2.637
2446	SD of Detected					7.849	SD of Detected					0.513
2447	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2448	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2449												
2450												
2451	UCL Statistics											
2452	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2453	Shapiro Wilk Test Statistic					0.924	Shapiro Wilk Test Statistic					0.98
2454	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947
2455	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2456												
2457	Assuming Normal Distribution						Assuming Lognormal Distribution					
2458	DL/2 Substitution Method						DL/2 Substitution Method					
2459	Mean					15.77	Mean					2.637
2460	SD					7.849	SD					0.513
2461	95% DL/2 (t) UCL					17.65	95% H-Stat (DL/2) UCL					18.33
2462												
2463	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2464	MLE method failed to converge properly						Mean in Log Scale					N/A
2465												
2466												
2467												
2468												
2469												
2470												
2471	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2472	k star (bias corrected)					4.049	Data appear Gamma Distributed at 5% Significance Level					
2473	Theta Star					3.895						
2474	nu star					396.8						
2475												
2476	A-D Test Statistic					0.287	Nonparametric Statistics					
2477	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method					
2478	K-S Test Statistic					0.753	Mean					15.77
2479	5% K-S Critical Value					0.127	SD					7.768
2480	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1.121
2481												
2482	Assuming Gamma Distribution						95% KM (t) UCL					17.65
2483	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL					17.62
2484	Minimum					2.8	95% KM (jackknife) UCL					17.65
2485	Maximum					40.1	95% KM (bootstrap t) UCL					17.93
2486	Mean					15.77	95% KM (BCA) UCL					17.75
2487	Median					14	95% KM (Percentile Bootstrap) UCL					17.67
2488	SD					7.849	95% KM (Chebyshev) UCL					20.66
2489	k star					4.049	97.5% KM (Chebyshev) UCL					22.77
2490	Theta star					3.895	99% KM (Chebyshev) UCL					26.93
2491	Nu star					396.8	Potential UCLs to Use					
2492	AppChi2					351.7	95% KM (BCA) UCL					17.75
2493	95% Gamma Approximate UCL					17.8						
2494	95% Adjusted Gamma UCL					17.86						
2495	Note: DL/2 is not a recommended method.											
2496												

	A	B	C	D	E	F	G	H	I	J	K	L
2497												
2498	Phenanthrene											
2499												
2500	General Statistics											
2501	Number of Valid Data					49	Number of Detected Data					12
2502	Number of Distinct Detected Data					7	Number of Non-Detect Data					37
2503	Number of Missing Values					61	Percent Non-Detects					75.51%
2504												
2505	Raw Statistics						Log-transformed Statistics					
2506	Minimum Detected					0.2	Minimum Detected					-1.609
2507	Maximum Detected					6	Maximum Detected					1.792
2508	Mean of Detected					0.933	Mean of Detected					-0.683
2509	SD of Detected					1.619	SD of Detected					0.958
2510	Minimum Non-Detect					4	Minimum Non-Detect					1.386
2511	Maximum Non-Detect					8	Maximum Non-Detect					2.079
2512												
2513	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49
2514	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
2515	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
2516												
2517	UCL Statistics											
2518	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2519	Shapiro Wilk Test Statistic					0.471	Shapiro Wilk Test Statistic					0.836
2520	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
2521	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2522												
2523	Assuming Normal Distribution						Assuming Lognormal Distribution					
2524	DL/2 Substitution Method						DL/2 Substitution Method					
2525	Mean					1.994	Mean					0.465
2526	SD					1.043	SD					0.815
2527	95% DL/2 (t) UCL					2.244	95% H-Stat (DL/2) UCL					4.024
2528												
2529	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2530	MLE method failed to converge properly						Mean in Log Scale					-0.815
2531							SD in Log Scale					0.781
2532							Mean in Original Scale					0.637
2533							SD in Original Scale					0.863
2534							95% Percentile Bootstrap UCL					0.863
2535							95% BCA Bootstrap UCL					0.973
2536												
2537	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2538	k star (bias corrected)					0.765	Data do not follow a Discernable Distribution (0.05)					
2539	Theta Star					1.219						
2540	nu star					18.37						
2541												
2542	A-D Test Statistic					1.389	Nonparametric Statistics					
2543	5% A-D Critical Value					0.759	Kaplan-Meier (KM) Method					
2544	K-S Test Statistic					0.759	Mean					0.588
2545	5% K-S Critical Value					0.253	SD					0.836
2546	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.146
2547							95% KM (t) UCL					0.833
2548	Assuming Gamma Distribution						95% KM (z) UCL					0.829

	A	B	C	D	E	F	G	H	I	J	K	L	
2549	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.832	
2550					Minimum	0.2	95% KM (bootstrap t) UCL					1.093	
2551					Maximum	6	95% KM (BCA) UCL					0.846	
2552					Mean	0.9	95% KM (Percentile Bootstrap) UCL					0.846	
2553					Median	0.851	95% KM (Chebyshev) UCL					1.226	
2554					SD	0.837	97.5% KM (Chebyshev) UCL					1.502	
2555					k star	2.185	99% KM (Chebyshev) UCL					2.045	
2556					Theta star	0.412							
2557					Nu star	214.2	Potential UCLs to Use						
2558					AppChi2	181.3	95% KM (t) UCL					0.833	
2559			95% Gamma Approximate UCL			1.063	95% KM (% Bootstrap) UCL					0.846	
2560			95% Adjusted Gamma UCL			1.068							
2561	Note: DL/2 is not a recommended method.												
2562													
2563													
2564	Potassium												
2565													
2566	General Statistics												
2567			Number of Valid Data			49			Number of Detected Data			49	
2568			Number of Distinct Detected Data			46			Number of Non-Detect Data			0	
2569			Number of Missing Values			62			Percent Non-Detects			0.00%	
2570													
2571	Raw Statistics					Log-transformed Statistics							
2572			Minimum Detected			317			Minimum Detected			5.759	
2573			Maximum Detected			3060			Maximum Detected			8.026	
2574			Mean of Detected			1389			Mean of Detected			7.142	
2575			SD of Detected			592.3			SD of Detected			0.455	
2576			Minimum Non-Detect			N/A			Minimum Non-Detect			N/A	
2577			Maximum Non-Detect			N/A			Maximum Non-Detect			N/A	
2578													
2579													
2580	UCL Statistics												
2581	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
2582			Shapiro Wilk Test Statistic			0.959			Shapiro Wilk Test Statistic			0.977	
2583			5% Shapiro Wilk Critical Value			0.947			5% Shapiro Wilk Critical Value			0.947	
2584	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
2585													
2586	Assuming Normal Distribution					Assuming Lognormal Distribution							
2587			DL/2 Substitution Method						DL/2 Substitution Method				
2588			Mean			1389			Mean			7.142	
2589			SD			592.3			SD			0.455	
2590			95% DL/2 (t) UCL			1531			95% H-Stat (DL/2) UCL			1583	
2591													
2592			Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method				
2593	MLE method failed to converge properly					Mean in Log Scale							N/A
2594						SD in Log Scale							N/A
2595						Mean in Original Scale							N/A
2596						SD in Original Scale							N/A
2597						95% Percentile Bootstrap UCL							N/A
2598						95% BCA Bootstrap UCL							N/A
2599													
2600	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							

	A	B	C	D	E	F	G	H	I	J	K	L
2601	k star (bias corrected)					5.141	Data appear Normal at 5% Significance Level					
2602	Theta Star					270.2						
2603	nu star					503.8						
2604												
2605	A-D Test Statistic					0.211	Nonparametric Statistics					
2606	5% A-D Critical Value					0.753	Kaplan-Meier (KM) Method					
2607	K-S Test Statistic					0.753	Mean					1389
2608	5% K-S Critical Value					0.127	SD					586.3
2609	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					84.62
2610							95% KM (t) UCL					1531
2611	Assuming Gamma Distribution						95% KM (z) UCL					1528
2612	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1531
2613	Minimum					317	95% KM (bootstrap t) UCL					1539
2614	Maximum					3060	95% KM (BCA) UCL					1527
2615	Mean					1389	95% KM (Percentile Bootstrap) UCL					1530
2616	Median					1240	95% KM (Chebyshev) UCL					1758
2617	SD					592.3	97.5% KM (Chebyshev) UCL					1917
2618	k star					5.141	99% KM (Chebyshev) UCL					2231
2619	Theta star					270.2						
2620	Nu star					503.8	Potential UCLs to Use					
2621	AppChi2					452.7	95% KM (t) UCL					1531
2622	95% Gamma Approximate UCL					1546	95% KM (Percentile Bootstrap) UCL					1530
2623	95% Adjusted Gamma UCL					1551						
2624	Note: DL/2 is not a recommended method.											
2625												
2626												
2627	Pyrene											
2628												
2629	General Statistics											
2630	Number of Valid Data					49	Number of Detected Data					14
2631	Number of Distinct Detected Data					9	Number of Non-Detect Data					35
2632	Number of Missing Values					61	Percent Non-Detects					71.43%
2633												
2634	Raw Statistics						Log-transformed Statistics					
2635	Minimum Detected					0.2	Minimum Detected					-1.609
2636	Maximum Detected					22	Maximum Detected					3.091
2637	Mean of Detected					2.093	Mean of Detected					-0.403
2638	SD of Detected					5.735	SD of Detected					1.1
2639	Minimum Non-Detect					4	Minimum Non-Detect					1.386
2640	Maximum Non-Detect					8	Maximum Non-Detect					2.079
2641												
2642	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					48
2643	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
2644	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.96%
2645												
2646	UCL Statistics											
2647	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2648	Shapiro Wilk Test Statistic					0.334	Shapiro Wilk Test Statistic					0.693
2649	5% Shapiro Wilk Critical Value					0.874	5% Shapiro Wilk Critical Value					0.874
2650	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2651												
2652	Assuming Normal Distribution						Assuming Lognormal Distribution					

	A	B	C	D	E	F	G	H	I	J	K	L
2653	DL/2 Substitution Method					DL/2 Substitution Method						
2654	Mean					2.261	Mean					0.48
2655	SD					3.005	SD					0.814
2656	95% DL/2 (t) UCL					2.981	95% H-Stat (DL/2) UCL					4.067
2657												
2658	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2659	MLE method failed to converge properly					Mean in Log Scale					-0.518	
2660						SD in Log Scale					0.867	
2661						Mean in Original Scale					1.133	
2662						SD in Original Scale					3.085	
2663						95% Percentile Bootstrap UCL					1.995	
2664						95% BCA Bootstrap UCL					2.558	
2665												
2666	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
2667	k star (bias corrected)					0.479	Data do not follow a Discernable Distribution (0.05)					
2668	Theta Star					4.372						
2669	nu star					13.4						
2670												
2671	A-D Test Statistic					3.071	Nonparametric Statistics					
2672	5% A-D Critical Value					0.789	Kaplan-Meier (KM) Method					
2673	K-S Test Statistic					0.789	Mean					0.999
2674	5% K-S Critical Value					0.241	SD					3.041
2675	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.454	
2676						95% KM (t) UCL					1.761	
2677	Assuming Gamma Distribution					95% KM (z) UCL					1.747	
2678	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.742	
2679	Minimum					1E-09	95% KM (bootstrap t) UCL					5.242
2680	Maximum					22	95% KM (BCA) UCL					1.922
2681	Mean					2.072	95% KM (Percentile Bootstrap) UCL					1.838
2682	Median					1.523	95% KM (Chebyshev) UCL					2.98
2683	SD					3.163	97.5% KM (Chebyshev) UCL					3.837
2684	k star					0.314	99% KM (Chebyshev) UCL					5.521
2685	Theta star					6.593						
2686	Nu star					30.79	Potential UCLs to Use					
2687	AppChi2					19.12	95% KM (BCA) UCL					1.922
2688	95% Gamma Approximate UCL					3.337						
2689	95% Adjusted Gamma UCL					3.386						
2690	Note: DL/2 is not a recommended method.											
2691												
2692												
2693	Selenium											
2694												
2695	General Statistics											
2696	Number of Valid Data					21	Number of Detected Data					6
2697	Number of Distinct Detected Data					6	Number of Non-Detect Data					15
2698	Number of Missing Values					60	Percent Non-Detects					71.43%
2699												
2700	Raw Statistics					Log-transformed Statistics						
2701	Minimum Detected					2	Minimum Detected					0.693
2702	Maximum Detected					4.8	Maximum Detected					1.569
2703	Mean of Detected					3.333	Mean of Detected					1.133
2704	SD of Detected					1.332	SD of Detected					0.418

	A	B	C	D	E	F	G	H	I	J	K	L
2705	Minimum Non-Detect					1	Minimum Non-Detect					0
2706	Maximum Non-Detect					4	Maximum Non-Detect					1.386
2707												
2708	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					18
2709	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
2710	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					85.71%
2711												
2712	Warning: There are only 6 Detected Values in this data											
2713	Note: It should be noted that even though bootstrap may be performed on this data set											
2714	the resulting calculations may not be reliable enough to draw conclusions											
2715												
2716	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
2717												
2718												
2719	UCL Statistics											
2720	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2721	Shapiro Wilk Test Statistic					0.802	Shapiro Wilk Test Statistic					0.801
2722	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788
2723	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2724												
2725	Assuming Normal Distribution						Assuming Lognormal Distribution					
2726	DL/2 Substitution Method						DL/2 Substitution Method					
2727	Mean					1.981	Mean					0.551
2728	SD					1.149	SD					0.52
2729	95% DL/2 (t) UCL					2.413	95% H-Stat (DL/2) UCL					2.187
2730												
2731	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2732	Mean					3.024	Mean in Log Scale					0.674
2733	SD					0.931	SD in Log Scale					0.399
2734	95% MLE (t) UCL					3.374	Mean in Original Scale					2.139
2735	95% MLE (Tiku) UCL					4.123	SD in Original Scale					1.055
2736							95% Percentile Bootstrap UCL					2.527
2737							95% BCA Bootstrap UCL					2.575
2738												
2739	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2740	k star (bias corrected)					3.713	Data appear Normal at 5% Significance Level					
2741	Theta Star					0.898						
2742	nu star					44.55						
2743												
2744	A-D Test Statistic					0.689	Nonparametric Statistics					
2745	5% A-D Critical Value					0.698	Kaplan-Meier (KM) Method					
2746	K-S Test Statistic					0.698	Mean					2.413
2747	5% K-S Critical Value					0.333	SD					0.876
2748	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.211
2749							95% KM (t) UCL					2.777
2750	Assuming Gamma Distribution						95% KM (z) UCL					2.76
2751	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.728
2752	Minimum					2	95% KM (bootstrap t) UCL					2.83
2753	Maximum					4.8	95% KM (BCA) UCL					4.276
2754	Mean					3.418	95% KM (Percentile Bootstrap) UCL					2.957
2755	Median					3.592	95% KM (Chebyshev) UCL					3.333
2756	SD					0.74	97.5% KM (Chebyshev) UCL					3.731

	A	B	C	D	E	F	G	H	I	J	K	L	
2757					k star	17.54				99% KM (Chebyshev) UCL		4.513	
2758					Theta star	0.195							
2759					Nu star	736.8				Potential UCLs to Use			
2760					AppChi2	674.9				95% KM (t) UCL		2.777	
2761					95% Gamma Approximate UCL	3.732				95% KM (Percentile Bootstrap) UCL		2.957	
2762					95% Adjusted Gamma UCL	3.757							
2763	Note: DL/2 is not a recommended method.												
2764													
2765													
2766	Sodium												
2767													
2768	General Statistics												
2769					Number of Valid Data	49				Number of Detected Data		41	
2770					Number of Distinct Detected Data	40				Number of Non-Detect Data		8	
2771					Number of Missing Values	62				Percent Non-Detects		16.33%	
2772													
2773	Raw Statistics						Log-transformed Statistics						
2774					Minimum Detected	56.3				Minimum Detected		4.031	
2775					Maximum Detected	291				Maximum Detected		5.673	
2776					Mean of Detected	127.4				Mean of Detected		4.77	
2777					SD of Detected	53.63				SD of Detected		0.392	
2778					Minimum Non-Detect	45.4				Minimum Non-Detect		3.816	
2779					Maximum Non-Detect	153				Maximum Non-Detect		5.03	
2780													
2781	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						40
2782	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						9
2783	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						81.63%
2784													
2785	UCL Statistics												
2786	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2787					Shapiro Wilk Test Statistic	0.9				Shapiro Wilk Test Statistic		0.979	
2788					5% Shapiro Wilk Critical Value	0.941				5% Shapiro Wilk Critical Value		0.941	
2789	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2790													
2791	Assuming Normal Distribution						Assuming Lognormal Distribution						
2792					DL/2 Substitution Method					DL/2 Substitution Method			
2793					Mean	114.5				Mean		4.614	
2794					SD	57.57				SD		0.528	
2795					95% DL/2 (t) UCL	128.3				95% H-Stat (DL/2) UCL		129.7	
2796													
2797					Maximum Likelihood Estimate(MLE) Method					Log ROS Method			
2798					Mean	219.1				Mean in Log Scale		4.684	
2799					SD	42.44				SD in Log Scale		0.422	
2800					95% MLE (t) UCL	229.3				Mean in Original Scale		118.3	
2801					95% MLE (Tiku) UCL	242.2				SD in Original Scale		53.64	
2802										95% Percentile Bootstrap UCL		131.2	
2803										95% BCA Bootstrap UCL		131.7	
2804													
2805	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2806					k star (bias corrected)	6.159				Data appear Gamma Distributed at 5% Significance Level			
2807					Theta Star	20.69							
2808					nu star	505							

	A	B	C	D	E	F	G	H	I	J	K	L	
2809													
2810				A-D Test Statistic		0.363	Nonparametric Statistics						
2811				5% A-D Critical Value		0.751	Kaplan-Meier (KM) Method						
2812				K-S Test Statistic		0.751	Mean					118.8	
2813				5% K-S Critical Value		0.138	SD					52.94	
2814	Data appear Gamma Distributed at 5% Significance Level							SE of Mean					7.72
2815							95% KM (t) UCL					131.7	
2816	Assuming Gamma Distribution							95% KM (z) UCL					131.5
2817	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					131.7
2818				Minimum		11.82	95% KM (bootstrap t) UCL					134.5	
2819				Maximum		291	95% KM (BCA) UCL					133.3	
2820				Mean		120.9	95% KM (Percentile Bootstrap) UCL					131.8	
2821				Median		112.7	95% KM (Chebyshev) UCL					152.4	
2822				SD		53.58	97.5% KM (Chebyshev) UCL					167	
2823				k star		4.629	99% KM (Chebyshev) UCL					195.6	
2824				Theta star		26.12							
2825				Nu star		453.7	Potential UCLs to Use						
2826				AppChi2		405.3	95% KM (BCA) UCL					133.3	
2827				95% Gamma Approximate UCL		135.3							
2828				95% Adjusted Gamma UCL		135.8							
2829	Note: DL/2 is not a recommended method.												
2830													
2831													
2832	Uranium												
2833													
2834	General Statistics												
2835				Number of Valid Data		49	Number of Detected Data					12	
2836				Number of Distinct Detected Data		11	Number of Non-Detect Data					37	
2837				Number of Missing Values		62	Percent Non-Detects					75.51%	
2838													
2839	Raw Statistics						Log-transformed Statistics						
2840				Minimum Detected		4.7	Minimum Detected					1.548	
2841				Maximum Detected		13.4	Maximum Detected					2.595	
2842				Mean of Detected		9.808	Mean of Detected					2.241	
2843				SD of Detected		2.721	SD of Detected					0.318	
2844				Minimum Non-Detect		9.8	Minimum Non-Detect					2.282	
2845				Maximum Non-Detect		37.7	Maximum Non-Detect					3.63	
2846													
2847	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49	
2848	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
2849	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
2850													
2851	UCL Statistics												
2852	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2853				Shapiro Wilk Test Statistic		0.949	Shapiro Wilk Test Statistic					0.903	
2854				5% Shapiro Wilk Critical Value		0.859	5% Shapiro Wilk Critical Value					0.859	
2855	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2856													
2857	Assuming Normal Distribution						Assuming Lognormal Distribution						
2858				DL/2 Substitution Method			DL/2 Substitution Method						
2859				Mean		10.53	Mean					2.33	
2860				SD		2.224	SD					0.233	

	A	B	C	D	E	F	G	H	I	J	K	L
2861	95% DL/2 (t) UCL					11.06	95% H-Stat (DL/2) UCL					14.13
2862												
2863	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2864	MLE method failed to converge properly						Mean in Log Scale					2.221
2865							SD in Log Scale					0.173
2866							Mean in Original Scale					9.348
2867							SD in Original Scale					1.525
2868							95% Percentile Bootstrap UCL					9.699
2869							95% BCA Bootstrap UCL					9.717
2870												
2871	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2872	k star (bias corrected)					9.101	Data appear Normal at 5% Significance Level					
2873	Theta Star					1.078						
2874	nu star					218.4						
2875												
2876	A-D Test Statistic					0.403	Nonparametric Statistics					
2877	5% A-D Critical Value					0.731	Kaplan-Meier (KM) Method					
2878	K-S Test Statistic					0.731	Mean					9.636
2879	5% K-S Critical Value					0.245	SD					2.615
2880	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.771
2881							95% KM (t) UCL					10.93
2882	Assuming Gamma Distribution						95% KM (z) UCL					10.9
2883	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10.97
2884	Minimum					4.7	95% KM (bootstrap t) UCL					10.96
2885	Maximum					13.4	95% KM (BCA) UCL					10.8
2886	Mean					10.36	95% KM (Percentile Bootstrap) UCL					10.85
2887	Median					10.66	95% KM (Chebyshev) UCL					13
2888	SD					1.543	97.5% KM (Chebyshev) UCL					14.45
2889	k star					34.97	99% KM (Chebyshev) UCL					17.31
2890	Theta star					0.296						
2891	Nu star					3427	Potential UCLs to Use					
2892	AppChi2					3292	95% KM (t) UCL					10.93
2893	95% Gamma Approximate UCL					10.79	95% KM (Percentile Bootstrap) UCL					10.85
2894	95% Adjusted Gamma UCL					10.8						
2895	Note: DL/2 is not a recommended method.											
2896												
2897												
2898	Vanadium											
2899												
2900	General Statistics											
2901	Number of Valid Data					49	Number of Detected Data				49	
2902	Number of Distinct Detected Data					46	Number of Non-Detect Data				0	
2903	Number of Missing Values					62	Percent Non-Detects				0.00%	
2904												
2905	Raw Statistics						Log-transformed Statistics					
2906	Minimum Detected					8.7	Minimum Detected				2.163	
2907	Maximum Detected					43.1	Maximum Detected				3.764	
2908	Mean of Detected					24.12	Mean of Detected				3.139	
2909	SD of Detected					7.105	SD of Detected				0.304	
2910	Minimum Non-Detect					N/A	Minimum Non-Detect				N/A	
2911	Maximum Non-Detect					N/A	Maximum Non-Detect				N/A	
2912												

	A	B	C	D	E	F	G	H	I	J	K	L		
2913														
2914	UCL Statistics													
2915	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2916	Shapiro Wilk Test Statistic				0.969		Shapiro Wilk Test Statistic				0.975			
2917	5% Shapiro Wilk Critical Value				0.947		5% Shapiro Wilk Critical Value				0.947			
2918	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
2919														
2920	Assuming Normal Distribution						Assuming Lognormal Distribution							
2921	DL/2 Substitution Method						DL/2 Substitution Method							
2922	Mean				24.12		Mean				3.139			
2923	SD				7.105		SD				0.304			
2924	95% DL/2 (t) UCL				25.82		95% H-Stat (DL/2) UCL				26.1			
2925														
2926	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
2927	MLE method failed to converge properly						Mean in Log Scale				N/A			
2928														
2929														
2930														
2931														
2932														
2933														
2934	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2935	k star (bias corrected)				10.93		Data appear Normal at 5% Significance Level							
2936	Theta Star				2.206									
2937	nu star				1072									
2938														
2939	A-D Test Statistic				0.34		Nonparametric Statistics							
2940	5% A-D Critical Value				0.749		Kaplan-Meier (KM) Method							
2941	K-S Test Statistic				0.749		Mean				24.12			
2942	5% K-S Critical Value				0.126		SD				7.032			
2943	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				1.015			
2944														
2945	Assuming Gamma Distribution						95% KM (t) UCL				25.82			
2946	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL				25.79			
2947	Minimum				8.7		95% KM (jackknife) UCL				25.82			
2948	Maximum				43.1		95% KM (bootstrap t) UCL				25.81			
2949	Mean				24.12		95% KM (BCA) UCL				25.72			
2950	Median				22.8		95% KM (Percentile Bootstrap) UCL				25.76			
2951	SD				7.105		95% KM (Chebyshev) UCL				28.54			
2952	k star				10.93		97.5% KM (Chebyshev) UCL				30.46			
2953	Theta star				2.206		99% KM (Chebyshev) UCL				34.22			
2954	Nu star				1072		Potential UCLs to Use							
2955	AppChi2				996.5		95% KM (t) UCL				25.82			
2956	95% Gamma Approximate UCL				25.94		95% KM (Percentile Bootstrap) UCL				25.76			
2957	95% Adjusted Gamma UCL				25.99									
2958	Note: DL/2 is not a recommended method.													
2959														
2960														
2961	Zinc													
2962														
2963	General Statistics													
2964	Number of Valid Data				49		Number of Detected Data				49			

	A	B	C	D	E	F	G	H	I	J	K	L
2965	Number of Distinct Detected Data					48	Number of Non-Detect Data					0
2966	Number of Missing Values					62	Percent Non-Detects					0.00%
2967												
2968	Raw Statistics						Log-transformed Statistics					
2969	Minimum Detected					21.3	Minimum Detected					3.059
2970	Maximum Detected					366	Maximum Detected					5.903
2971	Mean of Detected					103.1	Mean of Detected					4.377
2972	SD of Detected					83.67	SD of Detected					0.703
2973	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2974	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2975												
2976												
2977	UCL Statistics											
2978	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2979	Shapiro Wilk Test Statistic					0.784	Shapiro Wilk Test Statistic					0.949
2980	5% Shapiro Wilk Critical Value					0.947	5% Shapiro Wilk Critical Value					0.947
2981	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2982												
2983	Assuming Normal Distribution						Assuming Lognormal Distribution					
2984	DL/2 Substitution Method						DL/2 Substitution Method					
2985	Mean					103.1	Mean					4.377
2986	SD					83.67	SD					0.703
2987	95% DL/2 (t) UCL					123.2	95% H-Stat (DL/2) UCL					125.3
2988												
2989	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2990	MLE method failed to converge properly						Mean in Log Scale					N/A
2991							SD in Log Scale					N/A
2992							Mean in Original Scale					N/A
2993							SD in Original Scale					N/A
2994							95% Percentile Bootstrap UCL					N/A
2995							95% BCA Bootstrap UCL					N/A
2996												
2997	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2998	k star (bias corrected)					1.971	Data appear Lognormal at 5% Significance Level					
2999	Theta Star					52.33						
3000	nu star					193.1						
3001												
3002	A-D Test Statistic					1.295	Nonparametric Statistics					
3003	5% A-D Critical Value					0.762	Kaplan-Meier (KM) Method					
3004	K-S Test Statistic					0.762	Mean					103.1
3005	5% K-S Critical Value					0.128	SD					82.81
3006	Data not Gamma Distributed at 5% Significance Level						SE of Mean					11.95
3007							95% KM (t) UCL					123.2
3008	Assuming Gamma Distribution						95% KM (z) UCL					122.8
3009	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					123.2
3010	Minimum					21.3	95% KM (bootstrap t) UCL					128.2
3011	Maximum					366	95% KM (BCA) UCL					126.2
3012	Mean					103.1	95% KM (Percentile Bootstrap) UCL					123.7
3013	Median					79.8	95% KM (Chebyshev) UCL					155.2
3014	SD					83.67	97.5% KM (Chebyshev) UCL					177.8
3015	k star					1.971	99% KM (Chebyshev) UCL					222.1
3016	Theta star					52.33						

	A	B	C	D	E	F	G	H	I	J	K	L
3017					Nu star	193.1	Potential UCLs to Use					
3018					AppChi2	162	95% KM (Chebyshev) UCL					155.2
3019					95% Gamma Approximate UCL		123					
3020					95% Adjusted Gamma UCL		123.6					
3021	Note: DL/2 is not a recommended method.											
3022												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			C:\Documents and Settings\visitor\Desktop\UCR Desktop\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	2006 TEQ_D/F											
10												
11	General Statistics											
12	Number of Valid Data				3		Number of Detected Data				3	
13	Number of Distinct Detected Data				3		Number of Non-Detect Data				0	
14	Number of Missing Values				24		Percent Non-Detects				0.00%	
15												
16	Warning: This data set only has 3 observations!											
17	Data set is too small to compute reliable and meaningful statistics and estimates!											
18	The data set for variable 2006 TEQ_D/F was not processed!											
19												
20	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
21	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
22												
23												
24												
25	2-Methylnaphthalene											
26												
27	General Statistics											
28	Number of Valid Data				17		Number of Detected Data				15	
29	Number of Distinct Detected Data				5		Number of Non-Detect Data				2	
30	Number of Missing Values				19		Percent Non-Detects				11.76%	
31												
32	Raw Statistics						Log-transformed Statistics					
33	Minimum Detected			0.2			Minimum Detected			-1.609		
34	Maximum Detected			0.7			Maximum Detected			-0.357		
35	Mean of Detected			0.373			Mean of Detected			-1.03		
36	SD of Detected			0.122			SD of Detected			0.302		
37	Minimum Non-Detect			4			Minimum Non-Detect			1.386		
38	Maximum Non-Detect			4			Maximum Non-Detect			1.386		
39												
40												
41	UCL Statistics											
42	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
43	Shapiro Wilk Test Statistic			0.839			Shapiro Wilk Test Statistic			0.898		
44	5% Shapiro Wilk Critical Value			0.881			5% Shapiro Wilk Critical Value			0.881		
45	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
46												
47	Assuming Normal Distribution						Assuming Lognormal Distribution					
48	DL/2 Substitution Method						DL/2 Substitution Method					
49	Mean			0.565			Mean			-0.827		
50	SD			0.552			SD			0.638		
51	95% DL/2 (t) UCL			0.799			95% H-Stat (DL/2) UCL			1.128		
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
54	MLE method failed to converge properly						Mean in Log Scale					-1.03
55							SD in Log Scale					0.287
56							Mean in Original Scale					0.372
57							SD in Original Scale					0.116
58							95% Percentile Bootstrap UCL					0.42
59							95% BCA Bootstrap UCL					0.427
60												
61	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
62	k star (bias corrected)					9.183	Data appear Lognormal at 5% Significance Level					
63	Theta Star					0.0407						
64	nu star					275.5						
65												
66	A-D Test Statistic					0.907	Nonparametric Statistics					
67	5% A-D Critical Value					0.737	Kaplan-Meier (KM) Method					
68	K-S Test Statistic					0.737	Mean					0.373
69	5% K-S Critical Value					0.221	SD					0.118
70	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0316
71							95% KM (t) UCL					0.428
72	Assuming Gamma Distribution						95% KM (z) UCL					0.425
73	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.429
74	Minimum					0.2	95% KM (bootstrap t) UCL					0.449
75	Maximum					0.7	95% KM (BCA) UCL					0.433
76	Mean					0.375	95% KM (Percentile Bootstrap) UCL					0.425
77	Median					0.339	95% KM (Chebyshev) UCL					0.511
78	SD					0.116	97.5% KM (Chebyshev) UCL					0.571
79	k star					10.41	99% KM (Chebyshev) UCL					0.687
80	Theta star					0.036						
81	Nu star					354.1	Potential UCLs to Use					
82	AppChi2					311.5	95% KM (Chebyshev) UCL					0.511
83	95% Gamma Approximate UCL					0.426						
84	95% Adjusted Gamma UCL					0.432						
85	Note: DL/2 is not a recommended method.											
86												
87												
88	4,4'-DDT											
89												
90	General Statistics											
91	Number of Valid Data					17	Number of Detected Data					4
92	Number of Distinct Detected Data					4	Number of Non-Detect Data					13
93	Number of Missing Values					19	Percent Non-Detects					76.47%
94												
95	Raw Statistics						Log-transformed Statistics					
96	Minimum Detected					0.094	Minimum Detected					-2.364
97	Maximum Detected					0.26	Maximum Detected					-1.347
98	Mean of Detected					0.166	Mean of Detected					-1.873
99	SD of Detected					0.0746	SD of Detected					0.456
100	Minimum Non-Detect					0.68	Minimum Non-Detect					-0.386
101	Maximum Non-Detect					1.6	Maximum Non-Detect					0.47
102												
103	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					17
104	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0

	A	B	C	D	E	F	G	H	I	J	K	L
105	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
106												
107	Warning: There are only 4 Distinct Detected Values in this data											
108	Note: It should be noted that even though bootstrap may be performed on this data set											
109	the resulting calculations may not be reliable enough to draw conclusions											
110												
111	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
112												
113												
114	UCL Statistics											
115	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
116	Shapiro Wilk Test Statistic			0.947			Shapiro Wilk Test Statistic			0.965		
117	5% Shapiro Wilk Critical Value			0.748			5% Shapiro Wilk Critical Value			0.748		
118	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
119												
120	Assuming Normal Distribution						Assuming Lognormal Distribution					
121	DL/2 Substitution Method						DL/2 Substitution Method					
122	Mean			0.362			Mean			-1.123		
123	SD			0.158			SD			0.515		
124	95% DL/2 (t) UCL			0.429			95% H-Stat (DL/2) UCL			0.951		
125												
126	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
127	MLE method failed to converge properly						Mean in Log Scale			-1.873		
128							SD in Log Scale			0.248		
129							Mean in Original Scale			0.158		
130							SD in Original Scale			0.0406		
131							95% Percentile Bootstrap UCL			0.174		
132							95% BCA Bootstrap UCL			0.178		
133												
134	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
135	k star (bias corrected)			1.823			Data appear Normal at 5% Significance Level					
136	Theta Star			0.0911								
137	nu star			14.58								
138												
139	A-D Test Statistic			0.259			Nonparametric Statistics					
140	5% A-D Critical Value			0.658			Kaplan-Meier (KM) Method					
141	K-S Test Statistic			0.658			Mean			0.166		
142	5% K-S Critical Value			0.396			SD			0.0646		
143	Data appear Gamma Distributed at 5% Significance Level						SE of Mean			0.0373		
144							95% KM (t) UCL			0.231		
145	Assuming Gamma Distribution						95% KM (z) UCL			0.227		
146	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			0.239		
147	Minimum			0.094			95% KM (bootstrap t) UCL			0.262		
148	Maximum			0.26			95% KM (BCA) UCL			0.225		
149	Mean			0.169			95% KM (Percentile Bootstrap) UCL			0.237		
150	Median			0.172			95% KM (Chebyshev) UCL			0.329		
151	SD			0.0406			97.5% KM (Chebyshev) UCL			0.399		
152	k star			14.05			99% KM (Chebyshev) UCL			0.537		
153	Theta star			0.0121								
154	Nu star			477.8			Potential UCLs to Use					
155	AppChi2			428.1			95% KM (t) UCL			0.231		
156	95% Gamma Approximate UCL			0.189			95% KM (Percentile Bootstrap) UCL			0.237		

	A	B	C	D	E	F	G	H	I	J	K	L	
157	95% Adjusted Gamma UCL					N/A							
158	Note: DL/2 is not a recommended method.												
159													
160													
161	Acenaphthylene												
162													
163	General Statistics												
164	Number of Valid Data					17		Number of Detected Data					1
165	Number of Distinct Detected Data					1		Number of Non-Detect Data					16
166	Number of Missing Values					19		Percent Non-Detects					94.12%
167													
168	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
169	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
170													
171	The data set for variable Acenaphthylene was not processed!												
172													
173													
174													
175	alpha-BHC												
176													
177	General Statistics												
178	Number of Valid Data					17		Number of Detected Data					1
179	Number of Distinct Detected Data					1		Number of Non-Detect Data					16
180	Number of Missing Values					19		Percent Non-Detects					94.12%
181													
182	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
183	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
184													
185	The data set for variable alpha-BHC was not processed!												
186													
187													
188													
189	Aluminum												
190													
191	General Statistics												
192	Number of Valid Data					17		Number of Detected Data					17
193	Number of Distinct Detected Data					17		Number of Non-Detect Data					0
194	Number of Missing Values					20		Percent Non-Detects					0.00%
195													
196	Raw Statistics						Log-transformed Statistics						
197	Minimum Detected					5070		Minimum Detected					8.531
198	Maximum Detected					10900		Maximum Detected					9.297
199	Mean of Detected					7639		Mean of Detected					8.917
200	SD of Detected					1730		SD of Detected					0.229
201	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A
202	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A
203													
204													
205	UCL Statistics												
206	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
207	Shapiro Wilk Test Statistic					0.965		Shapiro Wilk Test Statistic					0.968
208	5% Shapiro Wilk Critical Value					0.892		5% Shapiro Wilk Critical Value					0.892

	A	B	C	D	E	F	G	H	I	J	K	L
209	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
210												
211	Assuming Normal Distribution						Assuming Lognormal Distribution					
212	DL/2 Substitution Method						DL/2 Substitution Method					
213	Mean				7639		Mean				8.917	
214	SD				1730		SD				0.229	
215	95% DL/2 (t) UCL				8371		95% H-Stat (DL/2) UCL				8488	
216												
217	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
218	MLE method failed to converge properly						Mean in Log Scale				N/A	
219							SD in Log Scale				N/A	
220							Mean in Original Scale				N/A	
221							SD in Original Scale				N/A	
222							95% Percentile Bootstrap UCL				N/A	
223							95% BCA Bootstrap UCL				N/A	
224												
225	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
226	k star (bias corrected)				17.06		Data appear Normal at 5% Significance Level					
227	Theta Star				447.9							
228	nu star				579.9							
229												
230	A-D Test Statistic				0.193		Nonparametric Statistics					
231	5% A-D Critical Value				0.738		Kaplan-Meier (KM) Method					
232	K-S Test Statistic				0.738		Mean				7639	
233	5% K-S Critical Value				0.209		SD				1678	
234	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				419.5	
235							95% KM (t) UCL				8371	
236	Assuming Gamma Distribution						95% KM (z) UCL				8329	
237	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				8371	
238	Minimum				5070		95% KM (bootstrap t) UCL				8407	
239	Maximum				10900		95% KM (BCA) UCL				8309	
240	Mean				7639		95% KM (Percentile Bootstrap) UCL				8348	
241	Median				7540		95% KM (Chebyshev) UCL				9467	
242	SD				1730		97.5% KM (Chebyshev) UCL				10259	
243	k star				17.06		99% KM (Chebyshev) UCL				11813	
244	Theta star				447.9							
245	Nu star				579.9		Potential UCLs to Use					
246	AppChi2				525		95% KM (t) UCL				8371	
247	95% Gamma Approximate UCL				8437		95% KM (Percentile Bootstrap) UCL				8348	
248	95% Adjusted Gamma UCL				8526							
249	Note: DL/2 is not a recommended method.											
250												
251												
252	Anthracene											
253												
254	General Statistics											
255	Number of Valid Data				17		Number of Detected Data				1	
256	Number of Distinct Detected Data				1		Number of Non-Detect Data				16	
257	Number of Missing Values				19		Percent Non-Detects				94.12%	
258												
259	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
260	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											

	A	B	C	D	E	F	G	H	I	J	K	L		
261														
262	The data set for variable Anthracene was not processed!													
263														
264														
265														
266	Arsenic													
267														
268	General Statistics													
269	Number of Valid Data					17		Number of Detected Data					17	
270	Number of Distinct Detected Data					16		Number of Non-Detect Data					0	
271	Number of Missing Values					20		Percent Non-Detects					0.00%	
272														
273	Raw Statistics						Log-transformed Statistics							
274	Minimum Detected					1.2		Minimum Detected					0.182	
275	Maximum Detected					13.7		Maximum Detected					2.617	
276	Mean of Detected					7.271		Mean of Detected					1.842	
277	SD of Detected					3.495		SD of Detected					0.609	
278	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
279	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
280														
281														
282	UCL Statistics													
283	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
284	Shapiro Wilk Test Statistic					0.973		Shapiro Wilk Test Statistic					0.911	
285	5% Shapiro Wilk Critical Value					0.892		5% Shapiro Wilk Critical Value					0.892	
286	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
287														
288	Assuming Normal Distribution						Assuming Lognormal Distribution							
289	DL/2 Substitution Method							DL/2 Substitution Method						
290	Mean					7.271		Mean					1.842	
291	SD					3.495		SD					0.609	
292	95% DL/2 (t) UCL					8.751		95% H-Stat (DL/2) UCL					10.53	
293														
294	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
295	MLE method failed to converge properly						Mean in Log Scale					N/A		
296							SD in Log Scale					N/A		
297							Mean in Original Scale					N/A		
298							SD in Original Scale					N/A		
299							95% Percentile Bootstrap UCL					N/A		
300							95% BCA Bootstrap UCL					N/A		
301														
302	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
303	k star (bias corrected)					3.081		Data appear Normal at 5% Significance Level						
304	Theta Star					2.36								
305	nu star					104.8								
306														
307	A-D Test Statistic					0.22		Nonparametric Statistics						
308	5% A-D Critical Value					0.744		Kaplan-Meier (KM) Method						
309	K-S Test Statistic					0.744		Mean					7.271	
310	5% K-S Critical Value					0.21		SD					3.391	
311	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.848		
312							95% KM (t) UCL					8.751		

	A	B	C	D	E	F	G	H	I	J	K	L		
313	Assuming Gamma Distribution						95% KM (z) UCL					8.665		
314	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					8.751		
315	Minimum						1.2	95% KM (bootstrap t) UCL					8.747	
316	Maximum						13.7	95% KM (BCA) UCL					8.659	
317	Mean						7.271	95% KM (Percentile Bootstrap) UCL					8.665	
318	Median						6.7	95% KM (Chebyshev) UCL					10.97	
319	SD						3.495	97.5% KM (Chebyshev) UCL					12.56	
320	k star						3.081	99% KM (Chebyshev) UCL					15.71	
321	Theta star						2.36							
322	Nu star						104.8	Potential UCLs to Use						
323	AppChi2						82.14	95% KM (t) UCL					8.751	
324	95% Gamma Approximate UCL						9.273	95% KM (Percentile Bootstrap) UCL					8.665	
325	95% Adjusted Gamma UCL						9.516							
326	Note: DL/2 is not a recommended method.													
327														
328														
329	Barium													
330														
331	General Statistics													
332	Number of Valid Data						17	Number of Detected Data						17
333	Number of Distinct Detected Data						17	Number of Non-Detect Data						0
334	Number of Missing Values						20	Percent Non-Detects						0.00%
335														
336	Raw Statistics						Log-transformed Statistics							
337	Minimum Detected						33.6	Minimum Detected						3.515
338	Maximum Detected						152	Maximum Detected						5.024
339	Mean of Detected						71.79	Mean of Detected						4.183
340	SD of Detected						33.59	SD of Detected						0.432
341	Minimum Non-Detect						N/A	Minimum Non-Detect						N/A
342	Maximum Non-Detect						N/A	Maximum Non-Detect						N/A
343														
344														
345	UCL Statistics													
346	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
347	Shapiro Wilk Test Statistic						0.843	Shapiro Wilk Test Statistic						0.934
348	5% Shapiro Wilk Critical Value						0.892	5% Shapiro Wilk Critical Value						0.892
349	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
350														
351	Assuming Normal Distribution						Assuming Lognormal Distribution							
352	DL/2 Substitution Method						DL/2 Substitution Method							
353	Mean						71.79	Mean						4.183
354	SD						33.59	SD						0.432
355	95% DL/2 (t) UCL						86.02	95% H-Stat (DL/2) UCL						89
356														
357	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
358	MLE method failed to converge properly						Mean in Log Scale						N/A	
359							SD in Log Scale						N/A	
360							Mean in Original Scale						N/A	
361							SD in Original Scale						N/A	
362							95% Percentile Bootstrap UCL						N/A	
363							95% BCA Bootstrap UCL						N/A	
364														

	A	B	C	D	E	F	G	H	I	J	K	L
365	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
366	k star (bias corrected)				4.709		Data appear Gamma Distributed at 5% Significance Level					
367	Theta Star				15.25							
368	nu star				160.1							
369												
370	A-D Test Statistic				0.611		Nonparametric Statistics					
371	5% A-D Critical Value				0.741		Kaplan-Meier (KM) Method					
372	K-S Test Statistic				0.741						Mean	71.79
373	5% K-S Critical Value				0.21						SD	32.58
374	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	8.146
375											95% KM (t) UCL	86.02
376	Assuming Gamma Distribution										95% KM (z) UCL	85.19
377	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	86.02
378	Minimum				33.6						95% KM (bootstrap t) UCL	92.76
379	Maximum				152						95% KM (BCA) UCL	86.09
380	Mean				71.79						95% KM (Percentile Bootstrap) UCL	85.6
381	Median				63.2						95% KM (Chebyshev) UCL	107.3
382	SD				33.59						97.5% KM (Chebyshev) UCL	122.7
383	k star				4.709						99% KM (Chebyshev) UCL	152.8
384	Theta star				15.25							
385	Nu star				160.1		Potential UCLs to Use					
386	AppChi2				131.9						95% KM (BCA) UCL	86.09
387	95% Gamma Approximate UCL				87.18							
388	95% Adjusted Gamma UCL				88.99							
389	Note: DL/2 is not a recommended method.											
390												
391												
392	Benzo(a)anthracene											
393												
394	General Statistics											
395	Number of Valid Data				17		Number of Detected Data				1	
396	Number of Distinct Detected Data				1		Number of Non-Detect Data				16	
397	Number of Missing Values				19		Percent Non-Detects				94.12%	
398												
399	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
400	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
401												
402	The data set for variable Benzo(a)anthracene was not processed!											
403												
404												
405												
406	Benzo(a)pyrene											
407												
408	General Statistics											
409	Number of Valid Data				17		Number of Detected Data				1	
410	Number of Distinct Detected Data				1		Number of Non-Detect Data				16	
411	Number of Missing Values				19		Percent Non-Detects				94.12%	
412												
413	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
414	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
415												
416	The data set for variable Benzo(a)pyrene was not processed!											

	A	B	C	D	E	F	G	H	I	J	K	L			
417															
418															
419															
420	Benzo(b)fluoranthene														
421															
422	General Statistics														
423	Number of Valid Data					17		Number of Detected Data					2		
424	Number of Distinct Detected Data					2		Number of Non-Detect Data					15		
425	Number of Missing Values					19		Percent Non-Detects					88.24%		
426															
427	Raw Statistics						Log-transformed Statistics								
428	Minimum Detected					0.3		Minimum Detected					-1.204		
429	Maximum Detected					14		Maximum Detected					2.639		
430	Mean of Detected					7.15		Mean of Detected					0.718		
431	SD of Detected					9.687		SD of Detected					2.717		
432	Minimum Non-Detect					4		Minimum Non-Detect					1.386		
433	Maximum Non-Detect					6		Maximum Non-Detect					1.792		
434															
435	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16			
436	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1			
437	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					94.12%			
438															
439	Warning: Data set has only 2 Distinct Detected Values.														
440	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.														
441	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).														
442															
443	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.														
444															
445	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.														
446	Those methods will return a 'N/A' value on your output display!														
447															
448	It is necessary to have 4 or more Distinct Values for bootstrap methods.														
449	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.														
450															
451															
452	UCL Statistics														
453	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only								
454	Shapiro Wilk Test Statistic					1		Shapiro Wilk Test Statistic					1		
455	5% Shapiro Wilk Critical Value					N/A		5% Shapiro Wilk Critical Value					N/A		
456	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level								
457															
458	Assuming Normal Distribution						Assuming Lognormal Distribution								
459	DL/2 Substitution Method							DL/2 Substitution Method							
460	Mean					2.812		Mean					0.783		
461	SD					2.941		SD					0.695		
462	95% DL/2 (t) UCL					4.057		95% H-Stat (DL/2) UCL					4.635		
463															
464	Maximum Likelihood Estimate(MLE) Method						N/A		Log ROS Method						
465	MLE method failed to converge properly						Mean in Log Scale					N/A			
466								SD in Log Scale					N/A		
467								Mean in Original Scale					N/A		
468								SD in Original Scale					N/A		

	A	B	C	D	E	F	G	H	I	J	K	L
469						95% Percentile Bootstrap UCL					N/A	
470						95% BCA Bootstrap UCL					N/A	
471												
472	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
473	k star (bias corrected)					N/A	Data do not follow a Discernable Distribution (0.05)					
474	Theta Star					N/A						
475	nu star					N/A						
476												
477	A-D Test Statistic					0.355	Nonparametric Statistics					
478	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
479	K-S Test Statistic					N/A	Mean					1.106
480	5% K-S Critical Value					N/A	SD					3.224
481	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.106
482							95% KM (t) UCL					3.036
483	Assuming Gamma Distribution						95% KM (z) UCL					2.925
484	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10.26
485	Minimum					N/A	95% KM (bootstrap t) UCL					1.106
486	Maximum					N/A	95% KM (BCA) UCL					N/A
487	Mean					N/A	95% KM (Percentile Bootstrap) UCL					14
488	Median					N/A	95% KM (Chebyshev) UCL					5.925
489	SD					N/A	97.5% KM (Chebyshev) UCL					8.011
490	k star					N/A	99% KM (Chebyshev) UCL					12.11
491	Theta star					N/A						
492	Nu star					N/A	Potential UCLs to Use					
493	AppChi2					N/A	99% KM (Chebyshev) UCL					12.11
494	95% Gamma Approximate UCL					N/A						
495	95% Adjusted Gamma UCL					N/A						
496	Note: DL/2 is not a recommended method.											
497												
498												
499	Benzo(ghi)perylene											
500												
501	General Statistics											
502	Number of Valid Data					17	Number of Detected Data					2
503	Number of Distinct Detected Data					2	Number of Non-Detect Data					15
504	Number of Missing Values					19	Percent Non-Detects					88.24%
505												
506	Raw Statistics						Log-transformed Statistics					
507	Minimum Detected					0.9	Minimum Detected					-0.105
508	Maximum Detected					6	Maximum Detected					1.792
509	Mean of Detected					3.45	Mean of Detected					0.843
510	SD of Detected					3.606	SD of Detected					1.341
511	Minimum Non-Detect					4	Minimum Non-Detect					1.386
512	Maximum Non-Detect					6	Maximum Non-Detect					1.792
513												
514	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16
515	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
516	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					94.12%
517												
518	Warning: Data set has only 2 Distinct Detected Values.											
519	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
520	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											

	A	B	C	D	E	F	G	H	I	J	K	L
521												
522	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
523												
524	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
525	Those methods will return a 'N/A' value on your output display!											
526												
527	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
528	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
529												
530												
531	UCL Statistics											
532	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
533	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1		
534	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A		
535	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
536												
537	Assuming Normal Distribution						Assuming Lognormal Distribution					
538	DL/2 Substitution Method						DL/2 Substitution Method					
539	Mean			2.376			Mean			0.798		
540	SD			1.047			SD			0.365		
541	95% DL/2 (t) UCL			2.82			95% H-Stat (DL/2) UCL			3.164		
542												
543	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
544	MLE method failed to converge properly						Mean in Log Scale			N/A		
545							SD in Log Scale			N/A		
546							Mean in Original Scale			N/A		
547							SD in Original Scale			N/A		
548							95% Percentile Bootstrap UCL			N/A		
549							95% BCA Bootstrap UCL			N/A		
550												
551	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
552	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
553	Theta Star			N/A								
554	nu star			N/A								
555												
556	A-D Test Statistic			0.358			Nonparametric Statistics					
557	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
558	K-S Test Statistic			N/A			Mean			1.2		
559	5% K-S Critical Value			N/A			SD			1.2		
560	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.412		
561							95% KM (t) UCL			1.919		
562	Assuming Gamma Distribution						95% KM (z) UCL			1.877		
563	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			4.607		
564	Minimum			N/A			95% KM (bootstrap t) UCL			#NUM!		
565	Maximum			N/A			95% KM (BCA) UCL			6		
566	Mean			N/A			95% KM (Percentile Bootstrap) UCL			6		
567	Median			N/A			95% KM (Chebyshev) UCL			2.994		
568	SD			N/A			97.5% KM (Chebyshev) UCL			3.77		
569	k star			N/A			99% KM (Chebyshev) UCL			5.295		
570	Theta star			N/A								
571	Nu star			N/A			Potential UCLs to Use					
572	AppChi2			N/A			95% KM (BCA) UCL			6		

	A	B	C	D	E	F	G	H	I	J	K	L
573	95% Gamma Approximate UCL					N/A						
574	95% Adjusted Gamma UCL					N/A						
575	Note: DL/2 is not a recommended method.											
576												
577												
578	Benzo(k)fluoranthene											
579												
580	General Statistics											
581	Number of Valid Data					17	Number of Detected Data					2
582	Number of Distinct Detected Data					2	Number of Non-Detect Data					15
583	Number of Missing Values					19	Percent Non-Detects					88.24%
584												
585	Raw Statistics						Log-transformed Statistics					
586	Minimum Detected					0.3	Minimum Detected					-1.204
587	Maximum Detected					10	Maximum Detected					2.303
588	Mean of Detected					5.15	Mean of Detected					0.549
589	SD of Detected					6.859	SD of Detected					2.48
590	Minimum Non-Detect					4	Minimum Non-Detect					1.386
591	Maximum Non-Detect					6	Maximum Non-Detect					1.792
592												
593	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16
594	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
595	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					94.12%
596												
597	Warning: Data set has only 2 Distinct Detected Values.											
598	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
599	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
600												
601	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
602												
603	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
604	Those methods will return a 'N/A' value on your output display!											
605												
606	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
607	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
608												
609												
610	UCL Statistics											
611	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
612	Shapiro Wilk Test Statistic					1	Shapiro Wilk Test Statistic					1
613	5% Shapiro Wilk Critical Value					N/A	5% Shapiro Wilk Critical Value					N/A
614	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
615												
616	Assuming Normal Distribution						Assuming Lognormal Distribution					
617	DL/2 Substitution Method						DL/2 Substitution Method					
618	Mean					2.576	Mean					0.763
619	SD					2	SD					0.641
620	95% DL/2 (t) UCL					3.423	95% H-Stat (DL/2) UCL					4.356
621												
622	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
623	MLE method failed to converge properly						Mean in Log Scale					N/A
624							SD in Log Scale					N/A

	A	B	C	D	E	F	G	H	I	J	K	L
625						Mean in Original Scale					N/A	
626						SD in Original Scale					N/A	
627						95% Percentile Bootstrap UCL					N/A	
628						95% BCA Bootstrap UCL					N/A	
629												
630	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
631	k star (bias corrected)				N/A	Data do not follow a Discernable Distribution (0.05)						
632	Theta Star				N/A							
633	nu star				N/A							
634												
635	A-D Test Statistic				0.355	Nonparametric Statistics						
636	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method						
637	K-S Test Statistic				N/A						Mean	0.871
638	5% K-S Critical Value				N/A						SD	2.282
639	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.783
640											95% KM (t) UCL	2.237
641	Assuming Gamma Distribution										95% KM (z) UCL	2.158
642	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	7.35
643	Minimum				N/A						95% KM (bootstrap t) UCL	#NUM!
644	Maximum				N/A						95% KM (BCA) UCL	10
645	Mean				N/A						95% KM (Percentile Bootstrap) UCL	N/A
646	Median				N/A						95% KM (Chebyshev) UCL	4.283
647	SD				N/A						97.5% KM (Chebyshev) UCL	5.759
648	k star				N/A						99% KM (Chebyshev) UCL	8.66
649	Theta star				N/A							
650	Nu star				N/A						Potential UCLs to Use	
651	AppChi2				N/A						99% KM (Chebyshev) UCL	8.66
652	95% Gamma Approximate UCL				N/A							
653	95% Adjusted Gamma UCL				N/A							
654	Note: DL/2 is not a recommended method.											
655												
656												
657	Beryllium											
658												
659	General Statistics											
660	Number of Valid Data				17	Number of Detected Data				17		
661	Number of Distinct Detected Data				17	Number of Non-Detect Data				0		
662	Number of Missing Values				20	Percent Non-Detects				0.00%		
663												
664	Raw Statistics					Log-transformed Statistics						
665	Minimum Detected				0.32	Minimum Detected				-1.139		
666	Maximum Detected				1.1	Maximum Detected				0.0953		
667	Mean of Detected				0.615	Mean of Detected				-0.533		
668	SD of Detected				0.2	SD of Detected				0.309		
669	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
670	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
671												
672												
673	UCL Statistics											
674	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
675	Shapiro Wilk Test Statistic				0.913	Shapiro Wilk Test Statistic				0.974		
676	5% Shapiro Wilk Critical Value				0.892	5% Shapiro Wilk Critical Value				0.892		

	A	B	C	D	E	F	G	H	I	J	K	L		
677	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
678														
679	Assuming Normal Distribution						Assuming Lognormal Distribution							
680	DL/2 Substitution Method						DL/2 Substitution Method							
681	Mean						0.615	Mean						-0.533
682	SD						0.2	SD						0.309
683	95% DL/2 (t) UCL						0.699	95% H-Stat (DL/2) UCL						0.711
684														
685	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
686	MLE method failed to converge properly						Mean in Log Scale						N/A	
687							SD in Log Scale						N/A	
688							Mean in Original Scale						N/A	
689							SD in Original Scale						N/A	
690							95% Percentile Bootstrap UCL						N/A	
691							95% BCA Bootstrap UCL						N/A	
692														
693	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
694	k star (bias corrected)						9.119	Data appear Normal at 5% Significance Level						
695	Theta Star						0.0674							
696	nu star						310.1							
697														
698	A-D Test Statistic						0.313	Nonparametric Statistics						
699	5% A-D Critical Value						0.739	Kaplan-Meier (KM) Method						
700	K-S Test Statistic						0.739	Mean						0.615
701	5% K-S Critical Value						0.209	SD						0.194
702	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						0.0485	
703							95% KM (t) UCL						0.699	
704	Assuming Gamma Distribution						95% KM (z) UCL						0.695	
705	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.699	
706	Minimum						0.32	95% KM (bootstrap t) UCL						0.726
707	Maximum						1.1	95% KM (BCA) UCL						0.694
708	Mean						0.615	95% KM (Percentile Bootstrap) UCL						0.697
709	Median						0.57	95% KM (Chebyshev) UCL						0.826
710	SD						0.2	97.5% KM (Chebyshev) UCL						0.918
711	k star						9.119	99% KM (Chebyshev) UCL						1.098
712	Theta star						0.0674							
713	Nu star						310.1	Potential UCLs to Use						
714	AppChi2						270.3	95% KM (t) UCL						0.699
715	95% Gamma Approximate UCL						0.705	95% KM (Percentile Bootstrap) UCL						0.697
716	95% Adjusted Gamma UCL						0.716							
717	Note: DL/2 is not a recommended method.													
718														
719														
720	Cadmium													
721														
722	General Statistics													
723	Number of Valid Data						17	Number of Detected Data						8
724	Number of Distinct Detected Data						7	Number of Non-Detect Data						9
725	Number of Missing Values						20	Percent Non-Detects						52.94%
726														
727	Raw Statistics						Log-transformed Statistics							
728	Minimum Detected						0.044	Minimum Detected						-3.124

	A	B	C	D	E	F	G	H	I	J	K	L	
729				Maximum Detected		4.4				Maximum Detected		1.482	
730				Mean of Detected		0.64				Mean of Detected		-1.905	
731				SD of Detected		1.52				SD of Detected		1.451	
732				Minimum Non-Detect		0.058				Minimum Non-Detect		-2.847	
733				Maximum Non-Detect		0.58				Maximum Non-Detect		-0.545	
734													
735	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				16	
736	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				1	
737	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				94.12%	
738													
739	Warning: There are only 8 Detected Values in this data												
740	Note: It should be noted that even though bootstrap may be performed on this data set												
741	the resulting calculations may not be reliable enough to draw conclusions												
742													
743	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
744													
745													
746	UCL Statistics												
747	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
748				Shapiro Wilk Test Statistic		0.447				Shapiro Wilk Test Statistic		0.731	
749				5% Shapiro Wilk Critical Value		0.818				5% Shapiro Wilk Critical Value		0.818	
750	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
751													
752	Assuming Normal Distribution						Assuming Lognormal Distribution						
753				DL/2 Substitution Method						DL/2 Substitution Method			
754				Mean		0.395				Mean		-1.983	
755				SD		1.036				SD		1.195	
756				95% DL/2 (t) UCL		0.834				95% H-Stat (DL/2) UCL		0.485	
757													
758				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
759	MLE method failed to converge properly										Mean in Log Scale		-2.451
760										SD in Log Scale		1.175	
761										Mean in Original Scale		0.334	
762										SD in Original Scale		1.049	
763										95% Percentile Bootstrap UCL		0.837	
764										95% BCA Bootstrap UCL		1.103	
765													
766	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
767				k star (bias corrected)		0.361	Data do not follow a Discernable Distribution (0.05)						
768				Theta Star		1.774							
769				nu star		5.771							
770													
771				A-D Test Statistic		1.635	Nonparametric Statistics						
772				5% A-D Critical Value		0.772	Kaplan-Meier (KM) Method						
773				K-S Test Statistic		0.772				Mean		0.34	
774				5% K-S Critical Value		0.311				SD		1.016	
775	Data not Gamma Distributed at 5% Significance Level										SE of Mean		0.264
776										95% KM (t) UCL		0.8	
777	Assuming Gamma Distribution										95% KM (z) UCL		0.774
778	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.782
779				Minimum		1E-09				95% KM (bootstrap t) UCL		6.265	
780				Maximum		4.4				95% KM (BCA) UCL		0.862	

	A	B	C	D	E	F	G	H	I	J	K	L
781					Mean	0.568					95% KM (Percentile Bootstrap) UCL	0.845
782					Median	0.14					95% KM (Chebyshev) UCL	1.489
783					SD	1.094					97.5% KM (Chebyshev) UCL	1.986
784					k star	0.183					99% KM (Chebyshev) UCL	2.963
785					Theta star	3.098						
786					Nu star	6.23				Potential UCLs to Use		
787					AppChi2	1.758					95% KM (BCA) UCL	0.862
788					95% Gamma Approximate UCL		2.011					
789					95% Adjusted Gamma UCL		2.323					
790	Note: DL/2 is not a recommended method.											
791												
792												
793	Calcium											
794												
795	General Statistics											
796					Number of Valid Data	17					Number of Detected Data	17
797					Number of Distinct Detected Data	17					Number of Non-Detect Data	0
798					Number of Missing Values	20					Percent Non-Detects	0.00%
799												
800	Raw Statistics						Log-transformed Statistics					
801					Minimum Detected	2180					Minimum Detected	7.687
802					Maximum Detected	40800					Maximum Detected	10.62
803					Mean of Detected	11317					Mean of Detected	9.02
804					SD of Detected	9355					SD of Detected	0.861
805					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
806					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
807												
808												
809	UCL Statistics											
810	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
811					Shapiro Wilk Test Statistic	0.803					Shapiro Wilk Test Statistic	0.918
812					5% Shapiro Wilk Critical Value	0.892					5% Shapiro Wilk Critical Value	0.892
813	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
814												
815	Assuming Normal Distribution						Assuming Lognormal Distribution					
816					DL/2 Substitution Method						DL/2 Substitution Method	
817					Mean	11317					Mean	9.02
818					SD	9355					SD	0.861
819					95% DL/2 (t) UCL	15278					95% H-Stat (DL/2) UCL	20299
820												
821					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
822	MLE method failed to converge properly										Mean in Log Scale	N/A
823											SD in Log Scale	N/A
824											Mean in Original Scale	N/A
825											SD in Original Scale	N/A
826											95% Percentile Bootstrap UCL	N/A
827											95% BCA Bootstrap UCL	N/A
828												
829	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
830					k star (bias corrected)	1.471					Data appear Gamma Distributed at 5% Significance Level	
831					Theta Star	7695						
832					nu star	50.01						

	A	B	C	D	E	F	G	H	I	J	K	L	
833													
834				A-D Test Statistic		0.476	Nonparametric Statistics						
835				5% A-D Critical Value		0.753	Kaplan-Meier (KM) Method						
836				K-S Test Statistic		0.753					Mean	11317	
837				5% K-S Critical Value		0.212					SD	9076	
838	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	2269	
839											95% KM (t) UCL	15278	
840	Assuming Gamma Distribution										95% KM (z) UCL	15049	
841	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	15278	
842				Minimum		2180					95% KM (bootstrap t) UCL	16808	
843				Maximum		40800					95% KM (BCA) UCL	15668	
844				Mean		11317					95% KM (Percentile Bootstrap) UCL	15388	
845				Median		11300					95% KM (Chebyshev) UCL	21207	
846				SD		9355					97.5% KM (Chebyshev) UCL	25486	
847				k star		1.471					99% KM (Chebyshev) UCL	33892	
848				Theta star		7695							
849				Nu star		50.01	Potential UCLs to Use						
850				AppChi2		34.77					95% KM (Chebyshev) UCL	21207	
851				95% Gamma Approximate UCL		16276							
852				95% Adjusted Gamma UCL		16924							
853	Note: DL/2 is not a recommended method.												
854													
855													
856	Chromium												
857													
858	General Statistics												
859				Number of Valid Data		17					Number of Detected Data	17	
860				Number of Distinct Detected Data		17					Number of Non-Detect Data	0	
861				Number of Missing Values		20					Percent Non-Detects	0.00%	
862													
863	Raw Statistics						Log-transformed Statistics						
864				Minimum Detected		6.2					Minimum Detected	1.825	
865				Maximum Detected		19.3					Maximum Detected	2.96	
866				Mean of Detected		11.08					Mean of Detected	2.364	
867				SD of Detected		3.42					SD of Detected	0.292	
868				Minimum Non-Detect		N/A					Minimum Non-Detect	N/A	
869				Maximum Non-Detect		N/A					Maximum Non-Detect	N/A	
870													
871													
872	UCL Statistics												
873	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
874				Shapiro Wilk Test Statistic		0.915					Shapiro Wilk Test Statistic	0.978	
875				5% Shapiro Wilk Critical Value		0.892					5% Shapiro Wilk Critical Value	0.892	
876	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
877													
878	Assuming Normal Distribution						Assuming Lognormal Distribution						
879				DL/2 Substitution Method							DL/2 Substitution Method		
880				Mean		11.08					Mean	2.364	
881				SD		3.42					SD	0.292	
882				95% DL/2 (t) UCL		12.53					95% H-Stat (DL/2) UCL	12.71	
883													
884	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					

	A	B	C	D	E	F	G	H	I	J	K	L
885	MLE method failed to converge properly						Mean in Log Scale					N/A
886							SD in Log Scale					N/A
887							Mean in Original Scale					N/A
888							SD in Original Scale					N/A
889							95% Percentile Bootstrap UCL					N/A
890							95% BCA Bootstrap UCL					N/A
891												
892	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
893	k star (bias corrected)				10.16		Data appear Normal at 5% Significance Level					
894	Theta Star				1.091							
895	nu star				345.4							
896												
897	A-D Test Statistic				0.282		Nonparametric Statistics					
898	5% A-D Critical Value				0.739		Kaplan-Meier (KM) Method					
899	K-S Test Statistic				0.739		Mean					11.08
900	5% K-S Critical Value				0.209		SD					3.318
901	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.83
902							95% KM (t) UCL					12.53
903	Assuming Gamma Distribution						95% KM (z) UCL					12.45
904	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					12.53
905	Minimum				6.2		95% KM (bootstrap t) UCL					13.03
906	Maximum				19.3		95% KM (BCA) UCL					12.41
907	Mean				11.08		95% KM (Percentile Bootstrap) UCL					12.56
908	Median				10.2		95% KM (Chebyshev) UCL					14.7
909	SD				3.42		97.5% KM (Chebyshev) UCL					16.26
910	k star				10.16		99% KM (Chebyshev) UCL					19.34
911	Theta star				1.091							
912	Nu star				345.4		Potential UCLs to Use					
913	AppChi2				303.3		95% KM (t) UCL					12.53
914	95% Gamma Approximate UCL				12.62		95% KM (Percentile Bootstrap) UCL					12.56
915	95% Adjusted Gamma UCL				12.79							
916	Note: DL/2 is not a recommended method.											
917												
918												
919	Chrysene											
920												
921	General Statistics											
922	Number of Valid Data				17		Number of Detected Data				3	
923	Number of Distinct Detected Data				3		Number of Non-Detect Data				14	
924	Number of Missing Values				19		Percent Non-Detects				82.35%	
925												
926	Raw Statistics						Log-transformed Statistics					
927	Minimum Detected				0.2		Minimum Detected				-1.609	
928	Maximum Detected				20		Maximum Detected				2.996	
929	Mean of Detected				6.967		Mean of Detected				0.343	
930	SD of Detected				11.29		SD of Detected				2.381	
931	Minimum Non-Detect				4		Minimum Non-Detect				1.386	
932	Maximum Non-Detect				6		Maximum Non-Detect				1.792	
933												
934	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				16	
935	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				1	
936	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				94.12%	

	A	B	C	D	E	F	G	H	I	J	K	L
937												
938	Warning: There are only 3 Distinct Detected Values in this data set											
939	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
940	Those methods will return a 'N/A' value on your output display!											
941												
942	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
943	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
944												
945												
946	UCL Statistics											
947	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
948	Shapiro Wilk Test Statistic				0.769		Shapiro Wilk Test Statistic				0.935	
949	5% Shapiro Wilk Critical Value				0.767		5% Shapiro Wilk Critical Value				0.767	
950	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
951												
952	Assuming Normal Distribution						Assuming Lognormal Distribution					
953	DL/2 Substitution Method						DL/2 Substitution Method					
954	Mean				3.082		Mean				0.718	
955	SD				4.414		SD				0.872	
956	95% DL/2 (t) UCL				4.952		95% H-Stat (DL/2) UCL				6.945	
957												
958	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
959	MLE method failed to converge properly						Mean in Log Scale				-0.741	
960							SD in Log Scale				1.534	
961							Mean in Original Scale				1.849	
962							SD in Original Scale				4.752	
963							95% Percentile Bootstrap UCL				4.059	
964							95% BCA Bootstrap UCL				5.416	
965												
966	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
967	k star (bias corrected)				N/A		Data appear Normal at 5% Significance Level					
968	Theta Star				N/A							
969	nu star				N/A							
970												
971	A-D Test Statistic				0.409		Nonparametric Statistics					
972	5% A-D Critical Value				N/A		Kaplan-Meier (KM) Method					
973	K-S Test Statistic				N/A		Mean				1.6	
974	5% K-S Critical Value				N/A		SD				4.606	
975	Data not Gamma Distributed at 5% Significance Level						SE of Mean				1.382	
976							95% KM (t) UCL				4.012	
977	Assuming Gamma Distribution						95% KM (z) UCL				3.872	
978	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				3.685	
979	Minimum				N/A		95% KM (bootstrap t) UCL				15.69	
980	Maximum				N/A		95% KM (BCA) UCL				20	
981	Mean				N/A		95% KM (Percentile Bootstrap) UCL				N/A	
982	Median				N/A		95% KM (Chebyshev) UCL				7.622	
983	SD				N/A		97.5% KM (Chebyshev) UCL				10.23	
984	k star				N/A		99% KM (Chebyshev) UCL				15.35	
985	Theta star				N/A							
986	Nu star				N/A		Potential UCLs to Use					
987	AppChi2				N/A		95% KM (t) UCL				4.012	
988	95% Gamma Approximate UCL				N/A		95% KM (Percentile Bootstrap) UCL				N/A	

	A	B	C	D	E	F	G	H	I	J	K	L	
989	95% Adjusted Gamma UCL					N/A							
990	Note: DL/2 is not a recommended method.												
991													
992													
993	Cobalt												
994													
995	General Statistics												
996	Number of Valid Data					17		Number of Detected Data					17
997	Number of Distinct Detected Data					16		Number of Non-Detect Data					0
998	Number of Missing Values					20		Percent Non-Detects					0.00%
999													
1000	Raw Statistics						Log-transformed Statistics						
1001	Minimum Detected				3		Minimum Detected				1.099		
1002	Maximum Detected				14.2		Maximum Detected				2.653		
1003	Mean of Detected				5.735		Mean of Detected				1.671		
1004	SD of Detected				2.679		SD of Detected				0.376		
1005	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A		
1006	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A		
1007													
1008													
1009	UCL Statistics												
1010	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1011	Shapiro Wilk Test Statistic				0.76		Shapiro Wilk Test Statistic				0.926		
1012	5% Shapiro Wilk Critical Value				0.892		5% Shapiro Wilk Critical Value				0.892		
1013	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1014													
1015	Assuming Normal Distribution						Assuming Lognormal Distribution						
1016	DL/2 Substitution Method						DL/2 Substitution Method						
1017	Mean				5.735		Mean				1.671		
1018	SD				2.679		SD				0.376		
1019	95% DL/2 (t) UCL				6.87		95% H-Stat (DL/2) UCL				6.839		
1020													
1021	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method						
1022	MLE method failed to converge properly						Mean in Log Scale				N/A		
1023							SD in Log Scale				N/A		
1024							Mean in Original Scale				N/A		
1025							SD in Original Scale				N/A		
1026							95% Percentile Bootstrap UCL				N/A		
1027							95% BCA Bootstrap UCL				N/A		
1028													
1029	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1030	k star (bias corrected)				5.627		Data appear Gamma Distributed at 5% Significance Level						
1031	Theta Star				1.019								
1032	nu star				191.3								
1033													
1034	A-D Test Statistic				0.714		Nonparametric Statistics						
1035	5% A-D Critical Value				0.741		Kaplan-Meier (KM) Method						
1036	K-S Test Statistic				0.741		Mean				5.735		
1037	5% K-S Critical Value				0.209		SD				2.599		
1038	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.65		
1039							95% KM (t) UCL				6.87		
1040	Assuming Gamma Distribution						95% KM (z) UCL				6.804		

	A	B	C	D	E	F	G	H	I	J	K	L	
1041	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.87	
1042					Minimum	3	95% KM (bootstrap t) UCL					7.836	
1043					Maximum	14.2	95% KM (BCA) UCL					6.959	
1044					Mean	5.735	95% KM (Percentile Bootstrap) UCL					6.853	
1045					Median	5	95% KM (Chebyshev) UCL					8.568	
1046					SD	2.679	97.5% KM (Chebyshev) UCL					9.793	
1047					k star	5.627	99% KM (Chebyshev) UCL					12.2	
1048					Theta star	1.019							
1049					Nu star	191.3	Potential UCLs to Use						
1050					AppChi2	160.3	95% KM (BCA) UCL					6.959	
1051					95% Gamma Approximate UCL		6.844						
1052					95% Adjusted Gamma UCL		6.973						
1053	Note: DL/2 is not a recommended method.												
1054													
1055													
1056	Copper												
1057													
1058	General Statistics												
1059					Number of Valid Data	17					Number of Detected Data	16	
1060					Number of Distinct Detected Data	15					Number of Non-Detect Data	1	
1061					Number of Missing Values	20					Percent Non-Detects	5.88%	
1062													
1063	Raw Statistics					Log-transformed Statistics							
1064					Minimum Detected	7.3					Minimum Detected	1.988	
1065					Maximum Detected	28.2					Maximum Detected	3.339	
1066					Mean of Detected	11.43					Mean of Detected	2.371	
1067					SD of Detected	5.129					SD of Detected	0.346	
1068					Minimum Non-Detect	7					Minimum Non-Detect	1.946	
1069					Maximum Non-Detect	7					Maximum Non-Detect	1.946	
1070													
1071													
1072	UCL Statistics												
1073	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1074					Shapiro Wilk Test Statistic	0.708					Shapiro Wilk Test Statistic	0.871	
1075					5% Shapiro Wilk Critical Value	0.887					5% Shapiro Wilk Critical Value	0.887	
1076	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
1077													
1078	Assuming Normal Distribution					Assuming Lognormal Distribution							
1079					DL/2 Substitution Method						DL/2 Substitution Method		
1080					Mean	10.96					Mean	2.305	
1081					SD	5.326					SD	0.431	
1082					95% DL/2 (t) UCL	13.22					95% H-Stat (DL/2) UCL	12.4	
1083													
1084	Maximum Likelihood Estimate(MLE) Method					Log ROS Method							
1085					Mean	11					Mean in Log Scale	2.323	
1086					SD	5.157					SD in Log Scale	0.388	
1087					95% MLE (t) UCL	13.18					Mean in Original Scale	11.04	
1088					95% MLE (Tiku) UCL	13.06					SD in Original Scale	5.222	
1089											95% Percentile Bootstrap UCL	13.22	
1090											95% BCA Bootstrap UCL	13.7	
1091													
1092	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							

	A	B	C	D	E	F	G	H	I	J	K	L		
1093				k star (bias corrected)		6.362	Data Follow Appr. Gamma Distribution at 5% Significance Level							
1094				Theta Star		1.797								
1095				nu star		203.6								
1096														
1097				A-D Test Statistic		0.879	Nonparametric Statistics							
1098				5% A-D Critical Value		0.74	Kaplan-Meier (KM) Method							
1099				K-S Test Statistic		0.74						Mean	11.19	
1100				5% K-S Critical Value		0.215						SD	4.915	
1101	Data follow Appr. Gamma Distribution at 5% Significance Level												SE of Mean	1.231
1102												95% KM (t) UCL	13.34	
1103	Assuming Gamma Distribution												95% KM (z) UCL	13.21
1104	Gamma ROS Statistics using Extrapolated Data												95% KM (jackknife) UCL	13.33
1105				Minimum		3.086						95% KM (bootstrap t) UCL	15.37	
1106				Maximum		28.2						95% KM (BCA) UCL	13.31	
1107				Mean		10.94						95% KM (Percentile Bootstrap) UCL	13.31	
1108				Median		9.5						95% KM (Chebyshev) UCL	16.55	
1109				SD		5.363						97.5% KM (Chebyshev) UCL	18.88	
1110				k star		4.51						99% KM (Chebyshev) UCL	23.44	
1111				Theta star		2.426								
1112				Nu star		153.3	Potential UCLs to Use							
1113				AppChi2		125.7						95% KM (BCA) UCL	13.31	
1114				95% Gamma Approximate UCL		13.34								
1115				95% Adjusted Gamma UCL		13.63								
1116	Note: DL/2 is not a recommended method.													
1117														
1118														
1119	Dibenz(a,h)anthracene													
1120														
1121	General Statistics													
1122				Number of Valid Data		17					Number of Detected Data	1		
1123				Number of Distinct Detected Data		1					Number of Non-Detect Data	16		
1124				Number of Missing Values		19					Percent Non-Detects	94.12%		
1125														
1126	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
1127	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
1128														
1129	The data set for variable Dibenz(a,h)anthracene was not processed!													
1130														
1131														
1132														
1133	Fluoranthene													
1134														
1135	General Statistics													
1136				Number of Valid Data		17					Number of Detected Data	3		
1137				Number of Distinct Detected Data		3					Number of Non-Detect Data	14		
1138				Number of Missing Values		19					Percent Non-Detects	82.35%		
1139														
1140	Raw Statistics						Log-transformed Statistics							
1141				Minimum Detected		0.4					Minimum Detected	-0.916		
1142				Maximum Detected		9					Maximum Detected	2.197		
1143				Mean of Detected		4.467					Mean of Detected	0.889		
1144				SD of Detected		4.319					SD of Detected	1.615		

	A	B	C	D	E	F	G	H	I	J	K	L	
1145	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
1146	Maximum Non-Detect					6	Maximum Non-Detect					1.792	
1147													
1148	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16	
1149	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1	
1150	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					94.12%	
1151													
1152	Warning: There are only 3 Distinct Detected Values in this data set												
1153	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
1154	Those methods will return a 'N/A' value on your output display!												
1155													
1156	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
1157	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
1158													
1159													
1160	UCL Statistics												
1161	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1162	Shapiro Wilk Test Statistic					0.991	Shapiro Wilk Test Statistic					0.929	
1163	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767	
1164	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1165													
1166	Assuming Normal Distribution						Assuming Lognormal Distribution						
1167	DL/2 Substitution Method						DL/2 Substitution Method						
1168	Mean					2.612	Mean					0.802	
1169	SD					1.798	SD					0.59	
1170	95% DL/2 (t) UCL					3.373	95% H-Stat (DL/2) UCL					4.17	
1171													
1172	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1173	MLE method failed to converge properly						Mean in Log Scale					-0.593	
1174							SD in Log Scale					1.252	
1175							Mean in Original Scale					1.266	
1176							SD in Original Scale					2.203	
1177							95% Percentile Bootstrap UCL					2.176	
1178							95% BCA Bootstrap UCL					2.782	
1179													
1180	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1181	k star (bias corrected)					N/A	Data appear Normal at 5% Significance Level						
1182	Theta Star					N/A							
1183	nu star					N/A							
1184													
1185	A-D Test Statistic					0.286	Nonparametric Statistics						
1186	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method						
1187	K-S Test Statistic					N/A	Mean					1.188	
1188	5% K-S Critical Value					N/A	SD					2.178	
1189	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.668	
1190							95% KM (t) UCL					2.354	
1191	Assuming Gamma Distribution						95% KM (z) UCL					2.287	
1192	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.533	
1193	Minimum					N/A	95% KM (bootstrap t) UCL					1.753	
1194	Maximum					N/A	95% KM (BCA) UCL					9	
1195	Mean					N/A	95% KM (Percentile Bootstrap) UCL					9	
1196	Median					N/A	95% KM (Chebyshev) UCL					4.1	

	A	B	C	D	E	F	G	H	I	J	K	L	
1197					SD	N/A				97.5% KM (Chebyshev) UCL		5.36	
1198					k star	N/A				99% KM (Chebyshev) UCL		7.834	
1199					Theta star	N/A							
1200					Nu star	N/A				Potential UCLs to Use			
1201					AppChi2	N/A				95% KM (t) UCL		2.354	
1202					95% Gamma Approximate UCL	N/A				95% KM (Percentile Bootstrap) UCL		9	
1203					95% Adjusted Gamma UCL	N/A							
1204	Note: DL/2 is not a recommended method.												
1205													
1206													
1207	Indeno(1,2,3-cd)pyrene												
1208													
1209	General Statistics												
1210					Number of Valid Data	17				Number of Detected Data		2	
1211					Number of Distinct Detected Data	2				Number of Non-Detect Data		15	
1212					Number of Missing Values	19				Percent Non-Detects		88.24%	
1213													
1214	Raw Statistics						Log-transformed Statistics						
1215					Minimum Detected	0.3				Minimum Detected		-1.204	
1216					Maximum Detected	10				Maximum Detected		2.303	
1217					Mean of Detected	5.15				Mean of Detected		0.549	
1218					SD of Detected	6.859				SD of Detected		2.48	
1219					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
1220					Maximum Non-Detect	6				Maximum Non-Detect		1.792	
1221													
1222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						16
1223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1
1224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						94.12%
1225													
1226	Warning: Data set has only 2 Distinct Detected Values.												
1227	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
1228	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
1229													
1230	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
1231													
1232	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
1233	Those methods will return a 'N/A' value on your output display!												
1234													
1235	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
1236	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
1237													
1238													
1239	UCL Statistics												
1240	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1241					Shapiro Wilk Test Statistic	1				Shapiro Wilk Test Statistic		1	
1242					5% Shapiro Wilk Critical Value	N/A				5% Shapiro Wilk Critical Value		N/A	
1243	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1244													
1245	Assuming Normal Distribution						Assuming Lognormal Distribution						
1246					DL/2 Substitution Method					DL/2 Substitution Method			
1247					Mean	2.576				Mean		0.763	
1248					SD	2				SD		0.641	

	A	B	C	D	E	F	G	H	I	J	K	L						
1249	95% DL/2 (t) UCL					3.423	95% H-Stat (DL/2) UCL					4.356						
1250																		
1251	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method											
1252	MLE method failed to converge properly						Mean in Log Scale					N/A						
1253																		
1254																		
1255																		
1256																		
1257																		
1258																		
1259	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only											
1260	k star (bias corrected)					N/A	Data do not follow a Discernable Distribution (0.05)											
1261	Theta Star					N/A												
1262	nu star					N/A												
1263																		
1264	A-D Test Statistic					0.355	Nonparametric Statistics											
1265	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method											
1266	K-S Test Statistic					N/A	Mean					0.871						
1267	5% K-S Critical Value					N/A	SD					2.282						
1268	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.783						
1269																		
1270	Assuming Gamma Distribution						95% KM (z) UCL					2.158						
1271	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					7.35						
1272	Minimum					N/A	95% KM (bootstrap t) UCL					0.871						
1273	Maximum					N/A	95% KM (BCA) UCL					10						
1274	Mean					N/A	95% KM (Percentile Bootstrap) UCL					N/A						
1275	Median					N/A	95% KM (Chebyshev) UCL					4.283						
1276	SD					N/A	97.5% KM (Chebyshev) UCL					5.759						
1277	k star					N/A	99% KM (Chebyshev) UCL					8.66						
1278	Theta star					N/A												
1279	Nu star					N/A	Potential UCLs to Use											
1280	AppChi2					N/A	99% KM (Chebyshev) UCL					8.66						
1281	95% Gamma Approximate UCL					N/A												
1282	95% Adjusted Gamma UCL					N/A												
1283	Note: DL/2 is not a recommended method.																	
1284																		
1285																		
1286	Iron																	
1287																		
1288	General Statistics																	
1289	Number of Valid Data					17	Number of Detected Data					17						
1290	Number of Distinct Detected Data					15	Number of Non-Detect Data					0						
1291	Number of Missing Values					20	Percent Non-Detects					0.00%						
1292																		
1293	Raw Statistics						Log-transformed Statistics											
1294	Minimum Detected					10200	Minimum Detected					9.23						
1295	Maximum Detected					24800	Maximum Detected					10.12						
1296	Mean of Detected					14941	Mean of Detected					9.592						
1297	SD of Detected					3265	SD of Detected					0.201						
1298	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A						
1299	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A						
1300																		

	A	B	C	D	E	F	G	H	I	J	K	L		
1301														
1302	UCL Statistics													
1303	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1304	Shapiro Wilk Test Statistic				0.872		Shapiro Wilk Test Statistic				0.95			
1305	5% Shapiro Wilk Critical Value				0.892		5% Shapiro Wilk Critical Value				0.892			
1306	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1307														
1308	Assuming Normal Distribution						Assuming Lognormal Distribution							
1309	DL/2 Substitution Method						DL/2 Substitution Method							
1310	Mean				14941		Mean				9.592			
1311	SD				3265		SD				0.201			
1312	95% DL/2 (t) UCL				16324		95% H-Stat (DL/2) UCL				16354			
1313														
1314	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
1315	MLE method failed to converge properly						Mean in Log Scale				N/A			
1316														
1317														
1318														
1319														
1320														
1321														
1322	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1323	k star (bias corrected)				20.87		Data appear Gamma Distributed at 5% Significance Level							
1324	Theta Star				715.9									
1325	nu star				709.6									
1326														
1327	A-D Test Statistic				0.375		Nonparametric Statistics							
1328	5% A-D Critical Value				0.738		Kaplan-Meier (KM) Method							
1329	K-S Test Statistic				0.738		Mean				14941			
1330	5% K-S Critical Value				0.209		SD				3167			
1331	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				791.8			
1332														
1333	Assuming Gamma Distribution						95% KM (t) UCL							
1334	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL							
1335	Minimum				10200		95% KM (jackknife) UCL							
1336	Maximum				24800		95% KM (bootstrap t) UCL							
1337	Mean				14941		95% KM (BCA) UCL							
1338	Median				14800		95% KM (Percentile Bootstrap) UCL							
1339	SD				3265		95% KM (Chebyshev) UCL							
1340	k star				20.87		97.5% KM (Chebyshev) UCL							
1341	Theta star				715.9		99% KM (Chebyshev) UCL							
1342	Nu star				709.6		Potential UCLs to Use							
1343	AppChi2				648.8		95% KM (BCA) UCL				16171			
1344	95% Gamma Approximate UCL				16342									
1345	95% Adjusted Gamma UCL				16496									
1346	Note: DL/2 is not a recommended method.													
1347														
1348														
1349	Lead													
1350														
1351	General Statistics													
1352	Number of Valid Data				17		Number of Detected Data				17			

	A	B	C	D	E	F	G	H	I	J	K	L
1353	Number of Distinct Detected Data					17	Number of Non-Detect Data					0
1354	Number of Missing Values					20	Percent Non-Detects					0.00%
1355												
1356	Raw Statistics						Log-transformed Statistics					
1357	Minimum Detected					4.4	Minimum Detected					1.482
1358	Maximum Detected					48.9	Maximum Detected					3.89
1359	Mean of Detected					9.659	Mean of Detected					2.046
1360	SD of Detected					10.36	SD of Detected					0.558
1361	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1362	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1363												
1364												
1365	UCL Statistics											
1366	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1367	Shapiro Wilk Test Statistic					0.452	Shapiro Wilk Test Statistic					0.762
1368	5% Shapiro Wilk Critical Value					0.892	5% Shapiro Wilk Critical Value					0.892
1369	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1370												
1371	Assuming Normal Distribution						Assuming Lognormal Distribution					
1372	DL/2 Substitution Method						DL/2 Substitution Method					
1373	Mean					9.659	Mean					2.046
1374	SD					10.36	SD					0.558
1375	95% DL/2 (t) UCL					14.04	95% H-Stat (DL/2) UCL					12.11
1376												
1377	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1378	MLE method failed to converge properly						Mean in Log Scale					N/A
1379							SD in Log Scale					N/A
1380							Mean in Original Scale					N/A
1381							SD in Original Scale					N/A
1382							95% Percentile Bootstrap UCL					N/A
1383							95% BCA Bootstrap UCL					N/A
1384												
1385	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1386	k star (bias corrected)					2.019	Data do not follow a Discernable Distribution (0.05)					
1387	Theta Star					4.783						
1388	nu star					68.66						
1389												
1390	A-D Test Statistic					2.002	Nonparametric Statistics					
1391	5% A-D Critical Value					0.748	Kaplan-Meier (KM) Method					
1392	K-S Test Statistic					0.748	Mean					9.659
1393	5% K-S Critical Value					0.211	SD					10.05
1394	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.512
1395							95% KM (t) UCL					14.04
1396	Assuming Gamma Distribution						95% KM (z) UCL					13.79
1397	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					14.04
1398	Minimum					4.4	95% KM (bootstrap t) UCL					27.05
1399	Maximum					48.9	95% KM (BCA) UCL					14.65
1400	Mean					9.659	95% KM (Percentile Bootstrap) UCL					14.31
1401	Median					6.8	95% KM (Chebyshev) UCL					20.61
1402	SD					10.36	97.5% KM (Chebyshev) UCL					25.35
1403	k star					2.019	99% KM (Chebyshev) UCL					34.66
1404	Theta star					4.783						

	A	B	C	D	E	F	G	H	I	J	K	L
1405					Nu star	68.66	Potential UCLs to Use					
1406					AppChi2	50.59	95% KM (Chebyshev) UCL					20.61
1407			95% Gamma Approximate UCL			13.11						
1408			95% Adjusted Gamma UCL			13.54						
1409	Note: DL/2 is not a recommended method.											
1410												
1411												
1412	Magnesium											
1413												
1414	General Statistics											
1415	Number of Valid Data					17	Number of Detected Data					17
1416	Number of Distinct Detected Data					16	Number of Non-Detect Data					0
1417	Number of Missing Values					20	Percent Non-Detects					0.00%
1418												
1419	Raw Statistics						Log-transformed Statistics					
1420	Minimum Detected					3560	Minimum Detected					8.178
1421	Maximum Detected					9140	Maximum Detected					9.12
1422	Mean of Detected					6006	Mean of Detected					8.672
1423	SD of Detected					1467	SD of Detected					0.251
1424	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1425	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1426												
1427												
1428	UCL Statistics											
1429	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1430	Shapiro Wilk Test Statistic					0.972	Shapiro Wilk Test Statistic					0.972
1431	5% Shapiro Wilk Critical Value					0.892	5% Shapiro Wilk Critical Value					0.892
1432	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1433												
1434	Assuming Normal Distribution						Assuming Lognormal Distribution					
1435	DL/2 Substitution Method						DL/2 Substitution Method					
1436	Mean					6006	Mean					8.672
1437	SD					1467	SD					0.251
1438	95% DL/2 (t) UCL					6627	95% H-Stat (DL/2) UCL					6752
1439												
1440	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1441	MLE method failed to converge properly						Mean in Log Scale					N/A
1442							SD in Log Scale					N/A
1443							Mean in Original Scale					N/A
1444							SD in Original Scale					N/A
1445							95% Percentile Bootstrap UCL					N/A
1446							95% BCA Bootstrap UCL					N/A
1447												
1448	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1449	k star (bias corrected)					14.41	Data appear Normal at 5% Significance Level					
1450	Theta Star					416.9						
1451	nu star					489.8						
1452												
1453	A-D Test Statistic					0.287	Nonparametric Statistics					
1454	5% A-D Critical Value					0.738	Kaplan-Meier (KM) Method					
1455	K-S Test Statistic					0.738	Mean					6006
1456	5% K-S Critical Value					0.209	SD					1423

	A	B	C	D	E	F	G	H	I	J	K	L	
1457	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	355.9
1458											95% KM (t) UCL	6627	
1459	Assuming Gamma Distribution											95% KM (z) UCL	6591
1460	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	6627
1461				Minimum		3560						95% KM (bootstrap t) UCL	6646
1462				Maximum		9140						95% KM (BCA) UCL	6566
1463				Mean		6006						95% KM (Percentile Bootstrap) UCL	6579
1464				Median		6270						95% KM (Chebyshev) UCL	7557
1465				SD		1467						97.5% KM (Chebyshev) UCL	8228
1466				k star		14.41						99% KM (Chebyshev) UCL	9547
1467				Theta star		416.9							
1468				Nu star		489.8					Potential UCLs to Use		
1469				AppChi2		439.5						95% KM (t) UCL	6627
1470				95% Gamma Approximate UCL		6694						95% KM (Percentile Bootstrap) UCL	6579
1471				95% Adjusted Gamma UCL		6770							
1472	Note: DL/2 is not a recommended method.												
1473													
1474													
1475	Manganese												
1476													
1477	General Statistics												
1478				Number of Valid Data		17					Number of Detected Data	17	
1479				Number of Distinct Detected Data		16					Number of Non-Detect Data	0	
1480				Number of Missing Values		20					Percent Non-Detects	0.00%	
1481													
1482	Raw Statistics						Log-transformed Statistics						
1483				Minimum Detected		181					Minimum Detected	5.198	
1484				Maximum Detected		458					Maximum Detected	6.127	
1485				Mean of Detected		276.5					Mean of Detected	5.587	
1486				SD of Detected		77.79					SD of Detected	0.268	
1487				Minimum Non-Detect		N/A					Minimum Non-Detect	N/A	
1488				Maximum Non-Detect		N/A					Maximum Non-Detect	N/A	
1489													
1490													
1491	UCL Statistics												
1492	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1493				Shapiro Wilk Test Statistic		0.92					Shapiro Wilk Test Statistic	0.961	
1494				5% Shapiro Wilk Critical Value		0.892					5% Shapiro Wilk Critical Value	0.892	
1495	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1496													
1497	Assuming Normal Distribution						Assuming Lognormal Distribution						
1498				DL/2 Substitution Method							DL/2 Substitution Method		
1499				Mean		276.5					Mean	5.587	
1500				SD		77.79					SD	0.268	
1501				95% DL/2 (t) UCL		309.4					95% H-Stat (DL/2) UCL	313.1	
1502													
1503				Maximum Likelihood Estimate(MLE) Method		N/A					Log ROS Method		
1504	MLE method failed to converge properly											Mean in Log Scale	N/A
1505											SD in Log Scale	N/A	
1506											Mean in Original Scale	N/A	
1507											SD in Original Scale	N/A	
1508											95% Percentile Bootstrap UCL	N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
1509							95% BCA Bootstrap UCL					N/A
1510												
1511	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1512	k star (bias corrected)					12.04	Data appear Normal at 5% Significance Level					
1513	Theta Star					22.96						
1514	nu star					409.4						
1515												
1516	A-D Test Statistic					0.299	Nonparametric Statistics					
1517	5% A-D Critical Value					0.738	Kaplan-Meier (KM) Method					
1518	K-S Test Statistic					0.738	Mean					276.5
1519	5% K-S Critical Value					0.209	SD					75.46
1520	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					18.87
1521							95% KM (t) UCL					309.4
1522	Assuming Gamma Distribution						95% KM (z) UCL					307.5
1523	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					309.4
1524	Minimum					181	95% KM (bootstrap t) UCL					317.8
1525	Maximum					458	95% KM (BCA) UCL					311.3
1526	Mean					276.5	95% KM (Percentile Bootstrap) UCL					308.2
1527	Median					267	95% KM (Chebyshev) UCL					358.7
1528	SD					77.79	97.5% KM (Chebyshev) UCL					394.3
1529	k star					12.04	99% KM (Chebyshev) UCL					464.2
1530	Theta star					22.96						
1531	Nu star					409.4	Potential UCLs to Use					
1532	AppChi2					363.5	95% KM (t) UCL					309.4
1533	95% Gamma Approximate UCL					311.4	95% KM (Percentile Bootstrap) UCL					308.2
1534	95% Adjusted Gamma UCL					315.3						
1535	Note: DL/2 is not a recommended method.											
1536												
1537												
1538	Mercury											
1539												
1540	General Statistics											
1541	Number of Valid Data					17	Number of Detected Data					9
1542	Number of Distinct Detected Data					8	Number of Non-Detect Data					8
1543	Number of Missing Values					20	Percent Non-Detects					47.06%
1544												
1545	Raw Statistics						Log-transformed Statistics					
1546	Minimum Detected					0.004	Minimum Detected					-5.521
1547	Maximum Detected					0.15	Maximum Detected					-1.897
1548	Mean of Detected					0.0241	Mean of Detected					-4.562
1549	SD of Detected					0.0474	SD of Detected					1.097
1550	Minimum Non-Detect					0.009	Minimum Non-Detect					-4.711
1551	Maximum Non-Detect					0.11	Maximum Non-Detect					-2.207
1552												
1553	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16
1554	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1555	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					94.12%
1556												
1557	Warning: There are only 9 Detected Values in this data											
1558	Note: It should be noted that even though bootstrap may be performed on this data set											
1559	the resulting calculations may not be reliable enough to draw conclusions											
1560												

	A	B	C	D	E	F	G	H	I	J	K	L		
1561	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.													
1562														
1563														
1564	UCL Statistics													
1565	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1566	Shapiro Wilk Test Statistic						0.466	Shapiro Wilk Test Statistic						0.757
1567	5% Shapiro Wilk Critical Value						0.829	5% Shapiro Wilk Critical Value						0.829
1568	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1569														
1570	Assuming Normal Distribution						Assuming Lognormal Distribution							
1571	DL/2 Substitution Method							DL/2 Substitution Method						
1572	Mean						0.0311	Mean						-4.094
1573	SD						0.0371	SD						1.169
1574	95% DL/2 (t) UCL						0.0468	95% H-Stat (DL/2) UCL						0.136
1575														
1576	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
1577	MLE method failed to converge properly							Mean in Log Scale						-4.715
1578								SD in Log Scale						0.826
1579								Mean in Original Scale						0.0165
1580								SD in Original Scale						0.0346
1581								95% Percentile Bootstrap UCL						0.0332
1582								95% BCA Bootstrap UCL						0.0417
1583														
1584	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1585	k star (bias corrected)						0.554	Data do not follow a Discernable Distribution (0.05)						
1586	Theta Star						0.0435							
1587	nu star						9.966							
1588														
1589	A-D Test Statistic						1.57	Nonparametric Statistics						
1590	5% A-D Critical Value						0.754	Kaplan-Meier (KM) Method						
1591	K-S Test Statistic						0.754	Mean						0.0163
1592	5% K-S Critical Value						0.29	SD						0.0337
1593	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.0087
1594								95% KM (t) UCL						0.0315
1595	Assuming Gamma Distribution							95% KM (z) UCL						0.0306
1596	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.0311
1597	Minimum						1E-09	95% KM (bootstrap t) UCL						0.152
1598	Maximum						0.15	95% KM (BCA) UCL						0.0331
1599	Mean						0.0243	95% KM (Percentile Bootstrap) UCL						0.0325
1600	Median						0.0104	95% KM (Chebyshev) UCL						0.0542
1601	SD						0.0366	97.5% KM (Chebyshev) UCL						0.0706
1602	k star						0.402	99% KM (Chebyshev) UCL						0.103
1603	Theta star						0.0606							
1604	Nu star						13.65	Potential UCLs to Use						
1605	AppChi2						6.335	97.5% KM (Chebyshev) UCL						0.0706
1606	95% Gamma Approximate UCL						0.0524							
1607	95% Adjusted Gamma UCL						0.0571							
1608	Note: DL/2 is not a recommended method.													
1609														
1610														
1611	Naphthalene													
1612														

	A	B	C	D	E	F	G	H	I	J	K	L		
1613	General Statistics													
1614	Number of Valid Data					17		Number of Detected Data					11	
1615	Number of Distinct Detected Data					2		Number of Non-Detect Data					6	
1616	Number of Missing Values					19		Percent Non-Detects					35.29%	
1617														
1618	Raw Statistics						Log-transformed Statistics							
1619	Minimum Detected					1		Minimum Detected					0	
1620	Maximum Detected					2		Maximum Detected					0.693	
1621	Mean of Detected					1.182		Mean of Detected					0.126	
1622	SD of Detected					0.405		SD of Detected					0.28	
1623	Minimum Non-Detect					3.5		Minimum Non-Detect					1.253	
1624	Maximum Non-Detect					8.6		Maximum Non-Detect					2.152	
1625														
1626	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						17	
1627	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0	
1628	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%	
1629														
1630	Warning: Data set has only 2 Distinct Detected Values.													
1631	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.													
1632	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).													
1633														
1634	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.													
1635														
1636	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.													
1637	Those methods will return a 'N/A' value on your output display!													
1638														
1639	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
1640	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
1641														
1642														
1643	UCL Statistics													
1644	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1645	Shapiro Wilk Test Statistic					0.486		Shapiro Wilk Test Statistic					0.486	
1646	5% Shapiro Wilk Critical Value					0.85		5% Shapiro Wilk Critical Value					0.85	
1647	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1648														
1649	Assuming Normal Distribution						Assuming Lognormal Distribution							
1650	DL/2 Substitution Method							DL/2 Substitution Method						
1651	Mean					1.574		Mean					0.353	
1652	SD					0.849		SD					0.435	
1653	95% DL/2 (t) UCL					1.933		95% H-Stat (DL/2) UCL					3.455	
1654														
1655	Maximum Likelihood Estimate(MLE) Method						N/A		Log ROS Method					
1656	MLE method failed to converge properly						Mean in Log Scale						0.126	
1657							SD in Log Scale						0.227	
1658							Mean in Original Scale						1.166	
1659							SD in Original Scale						0.325	
1660							95% Percentile Bootstrap UCL						1.306	
1661							95% BCA Bootstrap UCL						1.349	
1662														
1663	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1664	k star (bias corrected)					9.043		Data do not follow a Discernable Distribution (0.05)						

	A	B	C	D	E	F	G	H	I	J	K	L
1665	Theta Star					0.131						
1666	nu star					199						
1667												
1668	A-D Test Statistic					3.053	Nonparametric Statistics					
1669	5% A-D Critical Value					0.729	Kaplan-Meier (KM) Method					
1670	K-S Test Statistic					0.729	Mean					1.182
1671	5% K-S Critical Value					0.255	SD					0.386
1672	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.122
1673							95% KM (t) UCL					1.395
1674	Assuming Gamma Distribution						95% KM (z) UCL					1.382
1675	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.398
1676	Minimum					1	95% KM (bootstrap t) UCL					#NUM!
1677	Maximum					2	95% KM (BCA) UCL					1.385
1678	Mean					1.194	95% KM (Percentile Bootstrap) UCL					1.385
1679	Median					1	95% KM (Chebyshev) UCL					1.713
1680	SD					0.326	97.5% KM (Chebyshev) UCL					1.944
1681	k star					15.02	99% KM (Chebyshev) UCL					2.395
1682	Theta star					0.0795						
1683	Nu star					510.6	Potential UCLs to Use					
1684	AppChi2					459.2	95% KM (BCA) UCL					1.385
1685	95% Gamma Approximate UCL					1.328						
1686	95% Adjusted Gamma UCL					1.343						
1687	Note: DL/2 is not a recommended method.											
1688												
1689												
1690	Nickel											
1691												
1692	General Statistics											
1693	Number of Valid Data					17	Number of Detected Data					17
1694	Number of Distinct Detected Data					15	Number of Non-Detect Data					0
1695	Number of Missing Values					20	Percent Non-Detects					0.00%
1696												
1697	Raw Statistics						Log-transformed Statistics					
1698	Minimum Detected					6.1	Minimum Detected					1.808
1699	Maximum Detected					16.5	Maximum Detected					2.803
1700	Mean of Detected					9.347	Mean of Detected					2.204
1701	SD of Detected					2.57	SD of Detected					0.252
1702	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1703	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1704												
1705												
1706	UCL Statistics											
1707	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1708	Shapiro Wilk Test Statistic					0.881	Shapiro Wilk Test Statistic					0.955
1709	5% Shapiro Wilk Critical Value					0.892	5% Shapiro Wilk Critical Value					0.892
1710	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1711												
1712	Assuming Normal Distribution						Assuming Lognormal Distribution					
1713	DL/2 Substitution Method						DL/2 Substitution Method					
1714	Mean					9.347	Mean					2.204
1715	SD					2.57	SD					0.252
1716	95% DL/2 (t) UCL					10.44	95% H-Stat (DL/2) UCL					10.49

	A	B	C	D	E	F	G	H	I	J	K	L
1717												
1718	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1719	MLE method failed to converge properly						Mean in Log Scale					N/A
1720							SD in Log Scale					N/A
1721							Mean in Original Scale					N/A
1722							SD in Original Scale					N/A
1723							95% Percentile Bootstrap UCL					N/A
1724							95% BCA Bootstrap UCL					N/A
1725												
1726	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1727	k star (bias corrected)					13.29	Data appear Gamma Distributed at 5% Significance Level					
1728	Theta Star					0.703						
1729	nu star					451.9						
1730												
1731	A-D Test Statistic					0.398	Nonparametric Statistics					
1732	5% A-D Critical Value					0.738	Kaplan-Meier (KM) Method					
1733	K-S Test Statistic					0.738	Mean					9.347
1734	5% K-S Critical Value					0.209	SD					2.493
1735	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.623
1736							95% KM (t) UCL					10.44
1737	Assuming Gamma Distribution						95% KM (z) UCL					10.37
1738	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10.44
1739	Minimum					6.1	95% KM (bootstrap t) UCL					10.77
1740	Maximum					16.5	95% KM (BCA) UCL					10.41
1741	Mean					9.347	95% KM (Percentile Bootstrap) UCL					10.44
1742	Median					9.2	95% KM (Chebyshev) UCL					12.06
1743	SD					2.57	97.5% KM (Chebyshev) UCL					13.24
1744	k star					13.29	99% KM (Chebyshev) UCL					15.55
1745	Theta star					0.703						
1746	Nu star					451.9	Potential UCLs to Use					
1747	AppChi2					403.6	95% KM (BCA) UCL					10.41
1748	95% Gamma Approximate UCL					10.47						
1749	95% Adjusted Gamma UCL					10.59						
1750	Note: DL/2 is not a recommended method.											
1751												
1752												
1753	Phenanthrene											
1754												
1755	General Statistics											
1756	Number of Valid Data					17	Number of Detected Data					5
1757	Number of Distinct Detected Data					2	Number of Non-Detect Data					12
1758	Number of Missing Values					19	Percent Non-Detects					70.59%
1759												
1760	Raw Statistics						Log-transformed Statistics					
1761	Minimum Detected					0.2	Minimum Detected					-1.609
1762	Maximum Detected					2	Maximum Detected					0.693
1763	Mean of Detected					0.92	Mean of Detected					-0.688
1764	SD of Detected					0.986	SD of Detected					1.261
1765	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1766	Maximum Non-Detect					6	Maximum Non-Detect					1.792
1767												
1768	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					17

	A	B	C	D	E	F	G	H	I	J	K	L
1769	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
1770	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
1771												
1772	Warning: Data set has only 2 Distinct Detected Values.											
1773	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
1774	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
1775												
1776	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
1777												
1778	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
1779	Those methods will return a 'N/A' value on your output display!											
1780												
1781	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
1782	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
1783												
1784												
1785	UCL Statistics											
1786	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1787	Shapiro Wilk Test Statistic				0.684		Shapiro Wilk Test Statistic				0.684	
1788	5% Shapiro Wilk Critical Value				0.762		5% Shapiro Wilk Critical Value				0.762	
1789	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1790												
1791	Assuming Normal Distribution						Assuming Lognormal Distribution					
1792	DL/2 Substitution Method						DL/2 Substitution Method					
1793	Mean				1.859		Mean				0.361	
1794	SD				0.862		SD				0.951	
1795	95% DL/2 (t) UCL				2.224		95% H-Stat (DL/2) UCL				9.205	
1796												
1797	Maximum Likelihood Estimate(MLE) Method						N/A					
1798	MLE method failed to converge properly						Log ROS Method					
1799							Mean in Log Scale				-0.688	
1800							SD in Log Scale				1.039	
1801							Mean in Original Scale				0.817	
1802							SD in Original Scale				0.823	
1803							95% Percentile Bootstrap UCL				1.142	
1804							95% BCA Bootstrap UCL				1.174	
1805	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1806	k star (bias corrected)				0.517		Data do not follow a Discernable Distribution (0.05)					
1807	Theta Star				1.78							
1808	nu star				5.169							
1809												
1810	A-D Test Statistic				0.935		Nonparametric Statistics					
1811	5% A-D Critical Value				0.692		Kaplan-Meier (KM) Method					
1812	K-S Test Statistic				0.692		Mean				0.92	
1813	5% K-S Critical Value				0.365		SD				0.882	
1814	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.441	
1815							95% KM (t) UCL				1.69	
1816	Assuming Gamma Distribution						95% KM (z) UCL				1.645	
1817	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1.755	
1818	Minimum				1E-09		95% KM (bootstrap t) UCL				#NUM!	
1819	Maximum				2.497		95% KM (BCA) UCL				1.64	
1820	Mean				0.917		95% KM (Percentile Bootstrap) UCL				1.64	

	A	B	C	D	E	F	G	H	I	J	K	L	
1821					Median	0.573				95% KM (Chebyshev) UCL		2.842	
1822					SD	0.825				97.5% KM (Chebyshev) UCL		3.673	
1823					k star	0.376				99% KM (Chebyshev) UCL		5.307	
1824					Theta star	2.436							
1825					Nu star	12.8				Potential UCLs to Use			
1826					AppChi2	5.758				95% KM (BCA) UCL		1.64	
1827					95% Gamma Approximate UCL	2.038							
1828					95% Adjusted Gamma UCL	2.227							
1829	Note: DL/2 is not a recommended method.												
1830													
1831													
1832	Potassium												
1833													
1834	General Statistics												
1835					Number of Valid Data	17				Number of Detected Data		17	
1836					Number of Distinct Detected Data	17				Number of Non-Detect Data		0	
1837					Number of Missing Values	20				Percent Non-Detects		0.00%	
1838													
1839	Raw Statistics						Log-transformed Statistics						
1840					Minimum Detected	881				Minimum Detected		6.781	
1841					Maximum Detected	1880				Maximum Detected		7.539	
1842					Mean of Detected	1431				Mean of Detected		7.242	
1843					SD of Detected	316.9				SD of Detected		0.23	
1844					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
1845					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
1846													
1847													
1848	UCL Statistics												
1849	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1850					Shapiro Wilk Test Statistic	0.935				Shapiro Wilk Test Statistic		0.933	
1851					5% Shapiro Wilk Critical Value	0.892				5% Shapiro Wilk Critical Value		0.892	
1852	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1853													
1854	Assuming Normal Distribution						Assuming Lognormal Distribution						
1855					DL/2 Substitution Method					DL/2 Substitution Method			
1856					Mean	1431				Mean		7.242	
1857					SD	316.9				SD		0.23	
1858					95% DL/2 (t) UCL	1565				95% H-Stat (DL/2) UCL		1592	
1859													
1860					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1861	MLE method failed to converge properly										Mean in Log Scale		N/A
1862											SD in Log Scale		N/A
1863											Mean in Original Scale		N/A
1864											SD in Original Scale		N/A
1865											95% Percentile Bootstrap UCL		N/A
1866											95% BCA Bootstrap UCL		N/A
1867													
1868	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1869					k star (bias corrected)	17.12				Data appear Normal at 5% Significance Level			
1870					Theta Star	83.58							
1871					nu star	582.2							
1872													

	A	B	C	D	E	F	G	H	I	J	K	L
1873	A-D Test Statistic					0.479	Nonparametric Statistics					
1874	5% A-D Critical Value					0.738	Kaplan-Meier (KM) Method					
1875	K-S Test Statistic					0.738	Mean					1431
1876	5% K-S Critical Value					0.209	SD					307.4
1877	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					76.86
1878							95% KM (t) UCL					1565
1879	Assuming Gamma Distribution						95% KM (z) UCL					1558
1880	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1565
1881	Minimum					881	95% KM (bootstrap t) UCL					1560
1882	Maximum					1880	95% KM (BCA) UCL					1559
1883	Mean					1431	95% KM (Percentile Bootstrap) UCL					1551
1884	Median					1410	95% KM (Chebyshev) UCL					1766
1885	SD					316.9	97.5% KM (Chebyshev) UCL					1911
1886	k star					17.12	99% KM (Chebyshev) UCL					2196
1887	Theta star					83.58						
1888	Nu star					582.2	Potential UCLs to Use					
1889	AppChi2					527.3	95% KM (t) UCL					1565
1890	95% Gamma Approximate UCL					1580	95% KM (Percentile Bootstrap) UCL					1551
1891	95% Adjusted Gamma UCL					1597						
1892	Note: DL/2 is not a recommended method.											
1893												
1894												
1895	Pyrene											
1896												
1897	General Statistics											
1898	Number of Valid Data					17	Number of Detected Data					3
1899	Number of Distinct Detected Data					3	Number of Non-Detect Data					14
1900	Number of Missing Values					19	Percent Non-Detects					82.35%
1901												
1902	Raw Statistics						Log-transformed Statistics					
1903	Minimum Detected					0.4	Minimum Detected					-0.916
1904	Maximum Detected					7	Maximum Detected					1.946
1905	Mean of Detected					4.133	Mean of Detected					0.88
1906	SD of Detected					3.384	SD of Detected					1.564
1907	Minimum Non-Detect					4	Minimum Non-Detect					1.386
1908	Maximum Non-Detect					6	Maximum Non-Detect					1.792
1909												
1910	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					16
1911	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
1912	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					94.12%
1913												
1914	Warning: There are only 3 Distinct Detected Values in this data set											
1915	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
1916	Those methods will return a 'N/A' value on your output display!											
1917												
1918	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
1919	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
1920												
1921												
1922	UCL Statistics											
1923	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1924	Shapiro Wilk Test Statistic					0.951	Shapiro Wilk Test Statistic					0.837

	A	B	C	D	E	F	G	H	I	J	K	L
1925	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
1926	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1927												
1928	Assuming Normal Distribution					Assuming Lognormal Distribution						
1929	DL/2 Substitution Method					DL/2 Substitution Method						
1930	Mean					2.553	Mean					0.8
1931	SD					1.455	SD					0.572
1932	95% DL/2 (t) UCL					3.169	95% H-Stat (DL/2) UCL					4.084
1933												
1934	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1935	MLE method failed to converge properly					Mean in Log Scale					-0.562	
1936						SD in Log Scale					1.21	
1937						Mean in Original Scale					1.217	
1938						SD in Original Scale					1.888	
1939						95% Percentile Bootstrap UCL					1.972	
1940						95% BCA Bootstrap UCL					2.279	
1941												
1942	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1943	k star (bias corrected)					N/A	Data appear Normal at 5% Significance Level					
1944	Theta Star					N/A						
1945	nu star					N/A						
1946												
1947	A-D Test Statistic					0.44	Nonparametric Statistics					
1948	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
1949	K-S Test Statistic					N/A	Mean					1.097
1950	5% K-S Critical Value					N/A	SD					1.87
1951	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.57	
1952						95% KM (t) UCL					2.093	
1953	Assuming Gamma Distribution					95% KM (z) UCL					2.036	
1954	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					4.026	
1955	Minimum					N/A	95% KM (bootstrap t) UCL					1.503
1956	Maximum					N/A	95% KM (BCA) UCL					7
1957	Mean					N/A	95% KM (Percentile Bootstrap) UCL					7
1958	Median					N/A	95% KM (Chebyshev) UCL					3.584
1959	SD					N/A	97.5% KM (Chebyshev) UCL					4.659
1960	k star					N/A	99% KM (Chebyshev) UCL					6.773
1961	Theta star					N/A						
1962	Nu star					N/A	Potential UCLs to Use					
1963	AppChi2					N/A	95% KM (t) UCL					2.093
1964	95% Gamma Approximate UCL					N/A	95% KM (Percentile Bootstrap) UCL					7
1965	95% Adjusted Gamma UCL					N/A						
1966	Note: DL/2 is not a recommended method.											
1967												
1968												
1969	Selenium											
1970												
1971	General Statistics											
1972	Number of Valid Data					14	Number of Detected Data					11
1973	Number of Distinct Detected Data					10	Number of Non-Detect Data					3
1974	Number of Missing Values					23	Percent Non-Detects					21.43%
1975												
1976	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L	
1977				Minimum Detected		1.6				Minimum Detected		0.47	
1978				Maximum Detected		3.8				Maximum Detected		1.335	
1979				Mean of Detected		2.927				Mean of Detected		1.048	
1980				SD of Detected		0.657				SD of Detected		0.252	
1981				Minimum Non-Detect		2.6				Minimum Non-Detect		0.956	
1982				Maximum Non-Detect		3.9				Maximum Non-Detect		1.361	
1983													
1984	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		14
1985	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
1986	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
1987													
1988	UCL Statistics												
1989	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1990				Shapiro Wilk Test Statistic		0.955				Shapiro Wilk Test Statistic		0.905	
1991				5% Shapiro Wilk Critical Value		0.85				5% Shapiro Wilk Critical Value		0.85	
1992	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1993													
1994	Assuming Normal Distribution						Assuming Lognormal Distribution						
1995				DL/2 Substitution Method						DL/2 Substitution Method			
1996				Mean		2.629				Mean		0.911	
1997				SD		0.84				SD		0.361	
1998				95% DL/2 (t) UCL		3.026				95% H-Stat (DL/2) UCL		3.133	
1999													
2000				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
2001	MLE method failed to converge properly										Mean in Log Scale		1.009
2002											SD in Log Scale		0.238
2003											Mean in Original Scale		2.814
2004											SD in Original Scale		0.629
2005											95% Percentile Bootstrap UCL		3.069
2006											95% BCA Bootstrap UCL		3.081
2007													
2008	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2009				k star (bias corrected)		13.88				Data appear Normal at 5% Significance Level			
2010				Theta Star		0.211							
2011				nu star		305.3							
2012													
2013				A-D Test Statistic		0.34				Nonparametric Statistics			
2014				5% A-D Critical Value		0.729				Kaplan-Meier (KM) Method			
2015				K-S Test Statistic		0.729				Mean		2.819	
2016				5% K-S Critical Value		0.255				SD		0.646	
2017	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		0.195
2018											95% KM (t) UCL		3.165
2019	Assuming Gamma Distribution										95% KM (z) UCL		3.14
2020	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		3.171
2021				Minimum		1.6				95% KM (bootstrap t) UCL		3.137	
2022				Maximum		3.8				95% KM (BCA) UCL		3.121	
2023				Mean		2.887				95% KM (Percentile Bootstrap) UCL		3.123	
2024				Median		2.95				95% KM (Chebyshev) UCL		3.669	
2025				SD		0.603				97.5% KM (Chebyshev) UCL		4.037	
2026				k star		17.51				99% KM (Chebyshev) UCL		4.759	
2027				Theta star		0.165							
2028				Nu star		490.2				Potential UCLs to Use			

	A	B	C	D	E	F	G	H	I	J	K	L
2029	AppChi2					439.8	95% KM (t) UCL					3.165
2030	95% Gamma Approximate UCL					3.218	95% KM (Percentile Bootstrap) UCL					3.123
2031	95% Adjusted Gamma UCL					3.265						
2032	Note: DL/2 is not a recommended method.											
2033												
2034												
2035	Sodium											
2036												
2037	General Statistics											
2038	Number of Valid Data					17	Number of Detected Data					14
2039	Number of Distinct Detected Data					14	Number of Non-Detect Data					3
2040	Number of Missing Values					20	Percent Non-Detects					17.65%
2041												
2042	Raw Statistics						Log-transformed Statistics					
2043	Minimum Detected					57.2	Minimum Detected					4.047
2044	Maximum Detected					198	Maximum Detected					5.288
2045	Mean of Detected					105.9	Mean of Detected					4.596
2046	SD of Detected					40.79	SD of Detected					0.374
2047	Minimum Non-Detect					92	Minimum Non-Detect					4.522
2048	Maximum Non-Detect					136	Maximum Non-Detect					4.913
2049												
2050	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					13
2051	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					4
2052	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					76.47%
2053												
2054	UCL Statistics											
2055	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2056	Shapiro Wilk Test Statistic					0.919	Shapiro Wilk Test Statistic					0.957
2057	5% Shapiro Wilk Critical Value					0.874	5% Shapiro Wilk Critical Value					0.874
2058	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2059												
2060	Assuming Normal Distribution						Assuming Lognormal Distribution					
2061	DL/2 Substitution Method						DL/2 Substitution Method					
2062	Mean					97.16	Mean					4.495
2063	SD					41.75	SD					0.412
2064	95% DL/2 (t) UCL					114.8	95% H-Stat (DL/2) UCL					115.4
2065												
2066	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2067	Mean					105.2	Mean in Log Scale					4.553
2068	SD					41.44	SD in Log Scale					0.352
2069	95% MLE (t) UCL					122.7	Mean in Original Scale					100.9
2070	95% MLE (Tiku) UCL					142.5	SD in Original Scale					38.44
2071							95% Percentile Bootstrap UCL					116.2
2072							95% BCA Bootstrap UCL					117.6
2073												
2074	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2075	k star (bias corrected)					6.147	Data appear Normal at 5% Significance Level					
2076	Theta Star					17.22						
2077	nu star					172.1						
2078												
2079	A-D Test Statistic					0.332	Nonparametric Statistics					
2080	5% A-D Critical Value					0.736	Kaplan-Meier (KM) Method					

	A	B	C	D	E	F	G	H	I	J	K	L
2081	K-S Test Statistic					0.736	Mean					100.7
2082	5% K-S Critical Value					0.229	SD					37.97
2083	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					9.708
2084							95% KM (t) UCL					117.6
2085	Assuming Gamma Distribution						95% KM (z) UCL					116.6
2086	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					117.6
2087	Minimum					57.2	95% KM (bootstrap t) UCL					120.7
2088	Maximum					198	95% KM (BCA) UCL					116.3
2089	Mean					104.4	95% KM (Percentile Bootstrap) UCL					116.3
2090	Median					97.6	95% KM (Chebyshev) UCL					143
2091	SD					37.09	97.5% KM (Chebyshev) UCL					161.3
2092	k star					7.617	99% KM (Chebyshev) UCL					197.3
2093	Theta star					13.71						
2094	Nu star					259	Potential UCLs to Use					
2095	AppChi2					222.7	95% KM (t) UCL					117.6
2096	95% Gamma Approximate UCL					121.4	95% KM (Percentile Bootstrap) UCL					116.3
2097	95% Adjusted Gamma UCL					123.4						
2098	Note: DL/2 is not a recommended method.											
2099												
2100												
2101	Uranium											
2102												
2103	General Statistics											
2104	Number of Valid Data					17	Number of Detected Data					3
2105	Number of Distinct Detected Data					3	Number of Non-Detect Data					14
2106	Number of Missing Values					20	Percent Non-Detects					82.35%
2107												
2108	Raw Statistics						Log-transformed Statistics					
2109	Minimum Detected					6.3	Minimum Detected					1.841
2110	Maximum Detected					6.9	Maximum Detected					1.932
2111	Mean of Detected					6.533	Mean of Detected					1.876
2112	SD of Detected					0.321	SD of Detected					0.0486
2113	Minimum Non-Detect					18.2	Minimum Non-Detect					2.901
2114	Maximum Non-Detect					25.6	Maximum Non-Detect					3.243
2115												
2116	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					17
2117	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
2118	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
2119												
2120	Warning: There are only 3 Distinct Detected Values in this data set											
2121	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
2122	Those methods will return a 'N/A' value on your output display!											
2123												
2124	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
2125	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
2126												
2127												
2128	UCL Statistics											
2129	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2130	Shapiro Wilk Test Statistic					0.871	Shapiro Wilk Test Statistic					0.875
2131	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
2132	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
2133												
2134	Assuming Normal Distribution						Assuming Lognormal Distribution					
2135	DL/2 Substitution Method						DL/2 Substitution Method					
2136	Mean					9.594	Mean					2.244
2137	SD					1.761	SD					0.198
2138	95% DL/2 (t) UCL					10.34	95% H-Stat (DL/2) UCL					15.16
2139												
2140	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2141	MLE method failed to converge properly						Mean in Log Scale					1.876
2142							SD in Log Scale					0.0225
2143							Mean in Original Scale					6.53
2144							SD in Original Scale					0.148
2145							95% Percentile Bootstrap UCL					6.591
2146							95% BCA Bootstrap UCL					6.595
2147												
2148	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2149	k star (bias corrected)					N/A	Data appear Normal at 5% Significance Level					
2150	Theta Star					N/A						
2151	nu star					N/A						
2152												
2153	A-D Test Statistic					0.428	Nonparametric Statistics					
2154	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
2155	K-S Test Statistic					N/A	Mean					6.533
2156	5% K-S Critical Value					N/A	SD					0.262
2157	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.186
2158							95% KM (t) UCL					6.857
2159	Assuming Gamma Distribution						95% KM (z) UCL					6.839
2160	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.918
2161	Minimum					N/A	95% KM (bootstrap t) UCL					8.08
2162	Maximum					N/A	95% KM (BCA) UCL					N/A
2163	Mean					N/A	95% KM (Percentile Bootstrap) UCL					6.9
2164	Median					N/A	95% KM (Chebyshev) UCL					7.342
2165	SD					N/A	97.5% KM (Chebyshev) UCL					7.692
2166	k star					N/A	99% KM (Chebyshev) UCL					8.38
2167	Theta star					N/A						
2168	Nu star					N/A	Potential UCLs to Use					
2169	AppChi2					N/A	95% KM (t) UCL					6.857
2170	95% Gamma Approximate UCL					N/A	95% KM (Percentile Bootstrap) UCL					6.9
2171	95% Adjusted Gamma UCL					N/A						
2172	Note: DL/2 is not a recommended method.											
2173												
2174												
2175	Vanadium											
2176												
2177	General Statistics											
2178	Number of Valid Data					17	Number of Detected Data					17
2179	Number of Distinct Detected Data					17	Number of Non-Detect Data					0
2180	Number of Missing Values					20	Percent Non-Detects					0.00%
2181												
2182	Raw Statistics						Log-transformed Statistics					
2183	Minimum Detected					8.4	Minimum Detected					2.128
2184	Maximum Detected					28.6	Maximum Detected					3.353

	A	B	C	D	E	F	G	H	I	J	K	L
2185	Mean of Detected					16.38	Mean of Detected					2.741
2186	SD of Detected					5.721	SD of Detected					0.34
2187	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
2188	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
2189												
2190												
2191	UCL Statistics											
2192	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2193	Shapiro Wilk Test Statistic					0.918	Shapiro Wilk Test Statistic					0.97
2194	5% Shapiro Wilk Critical Value					0.892	5% Shapiro Wilk Critical Value					0.892
2195	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2196												
2197	Assuming Normal Distribution						Assuming Lognormal Distribution					
2198	DL/2 Substitution Method						DL/2 Substitution Method					
2199	Mean					16.38	Mean					2.741
2200	SD					5.721	SD					0.34
2201	95% DL/2 (t) UCL					18.8	95% H-Stat (DL/2) UCL					19.29
2202												
2203	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2204	MLE method failed to converge properly						Mean in Log Scale					N/A
2205												
2206												
2207												
2208												
2209												
2210												
2211	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2212	k star (bias corrected)					7.702	Data appear Normal at 5% Significance Level					
2213	Theta Star					2.126						
2214	nu star					261.9						
2215												
2216	A-D Test Statistic					0.265	Nonparametric Statistics					
2217	5% A-D Critical Value					0.739	Kaplan-Meier (KM) Method					
2218	K-S Test Statistic					0.739	Mean					16.38
2219	5% K-S Critical Value					0.209	SD					5.55
2220	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1.387
2221												
2222	Assuming Gamma Distribution						95% KM (t) UCL					18.8
2223	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL					18.66
2224	Minimum					8.4	95% KM (jackknife) UCL					18.8
2225	Maximum					28.6	95% KM (bootstrap t) UCL					19.43
2226	Mean					16.38	95% KM (BCA) UCL					18.99
2227	Median					15.3	95% KM (Percentile Bootstrap) UCL					18.64
2228	SD					5.721	95% KM (Chebyshev) UCL					22.42
2229	k star					7.702	97.5% KM (Chebyshev) UCL					25.04
2230	Theta star					2.126	99% KM (Chebyshev) UCL					30.18
2231	Nu star					261.9	Potential UCLs to Use					
2232	AppChi2					225.4	95% KM (t) UCL					18.8
2233	95% Gamma Approximate UCL					19.03	95% KM (Percentile Bootstrap) UCL					18.64
2234	95% Adjusted Gamma UCL					19.33						
2235	Note: DL/2 is not a recommended method.											
2236												

	A	B	C	D	E	F	G	H	I	J	K	L		
2237														
2238	Zinc													
2239														
2240	General Statistics													
2241	Number of Valid Data					17		Number of Detected Data					17	
2242	Number of Distinct Detected Data					17		Number of Non-Detect Data					0	
2243	Number of Missing Values					20		Percent Non-Detects					0.00%	
2244														
2245	Raw Statistics						Log-transformed Statistics							
2246	Minimum Detected					26.5		Minimum Detected					3.277	
2247	Maximum Detected					291		Maximum Detected					5.673	
2248	Mean of Detected					58.38		Mean of Detected					3.853	
2249	SD of Detected					61.42		SD of Detected					0.547	
2250	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
2251	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
2252														
2253														
2254	UCL Statistics													
2255	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2256	Shapiro Wilk Test Statistic					0.447		Shapiro Wilk Test Statistic					0.741	
2257	5% Shapiro Wilk Critical Value					0.892		5% Shapiro Wilk Critical Value					0.892	
2258	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
2259														
2260	Assuming Normal Distribution						Assuming Lognormal Distribution							
2261	DL/2 Substitution Method							DL/2 Substitution Method						
2262	Mean					58.38		Mean					3.853	
2263	SD					61.42		SD					0.547	
2264	95% DL/2 (t) UCL					84.39		95% H-Stat (DL/2) UCL					72.75	
2265														
2266	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
2267	MLE method failed to converge properly						Mean in Log Scale						N/A	
2268							SD in Log Scale						N/A	
2269							Mean in Original Scale						N/A	
2270							SD in Original Scale						N/A	
2271							95% Percentile Bootstrap UCL						N/A	
2272							95% BCA Bootstrap UCL						N/A	
2273														
2274	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2275	k star (bias corrected)					2.09		Data do not follow a Discernable Distribution (0.05)						
2276	Theta Star					27.94								
2277	nu star					71.06								
2278														
2279	A-D Test Statistic					2.214		Nonparametric Statistics						
2280	5% A-D Critical Value					0.747		Kaplan-Meier (KM) Method						
2281	K-S Test Statistic					0.747		Mean					58.38	
2282	5% K-S Critical Value					0.211		SD					59.59	
2283	Data not Gamma Distributed at 5% Significance Level						SE of Mean						14.9	
2284							95% KM (t) UCL						84.39	
2285	Assuming Gamma Distribution						95% KM (z) UCL						82.89	
2286	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						84.39	
2287	Minimum					26.5		95% KM (bootstrap t) UCL					165.1	
2288	Maximum					291		95% KM (BCA) UCL					90.39	

	A	B	C	D	E	F	G	H	I	J	K	L
2289					Mean	58.38					95% KM (Percentile Bootstrap) UCL	86.81
2290					Median	40.7					95% KM (Chebyshev) UCL	123.3
2291					SD	61.42					97.5% KM (Chebyshev) UCL	151.4
2292					k star	2.09					99% KM (Chebyshev) UCL	206.6
2293					Theta star	27.94						
2294					Nu star	71.06				Potential UCLs to Use		
2295					AppChi2	52.65					95% KM (Chebyshev) UCL	123.3
2296					95% Gamma Approximate UCL	78.79						
2297					95% Adjusted Gamma UCL	81.36						
2298	Note: DL/2 is not a recommended method.											
2299												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	General UCL Statistics for Data Sets with Non-Detects													
2	User Selected Options													
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Sediment_ProUCL\Sed_Reach6.wst											
4	Full Precision		OFF											
5	Confidence Coefficient		95%											
6	Number of Bootstrap Operations		2000											
7														
8														
9	2,4'-DDT													
10														
11	General Statistics													
12	Number of Valid Data				24		Number of Detected Data				3			
13	Number of Distinct Detected Data				3		Number of Non-Detect Data				21			
14	Number of Missing Values				29		Percent Non-Detects				87.50%			
15														
16	Raw Statistics						Log-transformed Statistics							
17	Minimum Detected			0.09			Minimum Detected			-2.408				
18	Maximum Detected			0.45			Maximum Detected			-0.799				
19	Mean of Detected			0.29			Mean of Detected			-1.438				
20	SD of Detected			0.183			SD of Detected			0.854				
21	Minimum Non-Detect			0.67			Minimum Non-Detect			-0.4				
22	Maximum Non-Detect			0.94			Maximum Non-Detect			-0.0619				
23														
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			24				
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			0				
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			100.00%				
27														
28	Warning: There are only 3 Distinct Detected Values in this data set													
29	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.													
30	Those methods will return a 'N/A' value on your output display!													
31														
32	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
33	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
34														
35														
36	UCL Statistics													
37	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
38	Shapiro Wilk Test Statistic			0.964			Shapiro Wilk Test Statistic			0.888				
39	5% Shapiro Wilk Critical Value			0.767			5% Shapiro Wilk Critical Value			0.767				
40	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
41														
42	Assuming Normal Distribution						Assuming Lognormal Distribution							
43	DL/2 Substitution Method						DL/2 Substitution Method							
44	Mean			0.359			Mean			-1.059				
45	SD			0.0729			SD			0.31				
46	95% DL/2 (t) UCL			0.384			95% H-Stat (DL/2) UCL			0.486				
47														
48	Maximum Likelihood Estimate(MLE) Method						N/A			Log ROS Method				
49	MLE method failed to converge properly									Mean in Log Scale				
50										SD in Log Scale				
51										Mean in Original Scale				
52										SD in Original Scale				

	A	B	C	D	E	F	G	H	I	J	K	L
53						95% Percentile Bootstrap UCL					0.352	
54						95% BCA Bootstrap UCL					0.359	
55												
56	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
57	k star (bias corrected)				N/A	Data appear Normal at 5% Significance Level						
58	Theta Star				N/A							
59	nu star				N/A							
60												
61	A-D Test Statistic				0.369	Nonparametric Statistics						
62	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method						
63	K-S Test Statistic				N/A	Mean					0.29	
64	5% K-S Critical Value				N/A	SD					0.15	
65	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.106	
66						95% KM (t) UCL					0.471	
67	Assuming Gamma Distribution					95% KM (z) UCL					0.464	
68	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.507	
69	Minimum				N/A	95% KM (bootstrap t) UCL					0.537	
70	Maximum				N/A	95% KM (BCA) UCL					0.45	
71	Mean				N/A	95% KM (Percentile Bootstrap) UCL					N/A	
72	Median				N/A	95% KM (Chebyshev) UCL					0.751	
73	SD				N/A	97.5% KM (Chebyshev) UCL					0.951	
74	k star				N/A	99% KM (Chebyshev) UCL					1.343	
75	Theta star				N/A							
76	Nu star				N/A	Potential UCLs to Use						
77	AppChi2				N/A	95% KM (t) UCL					0.471	
78	95% Gamma Approximate UCL				N/A	95% KM (Percentile Bootstrap) UCL					N/A	
79	95% Adjusted Gamma UCL				N/A							
80	Warning: Recommended UCL exceeds the maximum observation											
81	Note: DL/2 is not a recommended method.											
82												
83												
84	2006 TEQ_D/F											
85												
86	General Statistics											
87	Number of Valid Data				6	Number of Detected Data				6		
88	Number of Distinct Detected Data				6	Number of Non-Detect Data				0		
89	Number of Missing Values				42	Percent Non-Detects				0.00%		
90												
91	Raw Statistics					Log-transformed Statistics						
92	Minimum Detected				0.0889	Minimum Detected				-2.421		
93	Maximum Detected				0.127	Maximum Detected				-2.067		
94	Mean of Detected				0.108	Mean of Detected				-2.23		
95	SD of Detected				0.0127	SD of Detected				0.119		
96	Minimum Non-Detect				N/A	Minimum Non-Detect				N/A		
97	Maximum Non-Detect				N/A	Maximum Non-Detect				N/A		
98												
99												
100	Warning: There are only 6 Detected Values in this data											
101	Note: It should be noted that even though bootstrap may be performed on this data set											
102	the resulting calculations may not be reliable enough to draw conclusions											
103												
104	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											

	A	B	C	D	E	F	G	H	I	J	K	L	
105													
106													
107	UCL Statistics												
108	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
109	Shapiro Wilk Test Statistic					0.974	Shapiro Wilk Test Statistic					0.967	
110	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788	
111	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
112													
113	Assuming Normal Distribution						Assuming Lognormal Distribution						
114	DL/2 Substitution Method						DL/2 Substitution Method						
115	Mean					0.108	Mean					-2.23	
116	SD					0.0127	SD					0.119	
117	95% DL/2 (t) UCL					0.119	95% H-Stat (DL/2) UCL					0.12	
118													
119	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
120	MLE method failed to converge properly						Mean in Log Scale					N/A	
121							SD in Log Scale					N/A	
122							Mean in Original Scale					N/A	
123							SD in Original Scale					N/A	
124							95% Percentile Bootstrap UCL					N/A	
125							95% BCA Bootstrap UCL					N/A	
126													
127	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
128	k star (bias corrected)					43.14	Data appear Normal at 5% Significance Level						
129	Theta Star					0.00251							
130	nu star					517.7							
131													
132	A-D Test Statistic					0.237	Nonparametric Statistics						
133	5% A-D Critical Value					0.696	Kaplan-Meier (KM) Method						
134	K-S Test Statistic					0.696	Mean					0.108	
135	5% K-S Critical Value					0.332	SD					0.0115	
136	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00517	
137							95% KM (t) UCL					0.119	
138	Assuming Gamma Distribution						95% KM (z) UCL					0.117	
139	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.119	
140	Minimum					0.0889	95% KM (bootstrap t) UCL					0.118	
141	Maximum					0.127	95% KM (BCA) UCL					0.116	
142	Mean					0.108	95% KM (Percentile Bootstrap) UCL					0.116	
143	Median					0.108	95% KM (Chebyshev) UCL					0.131	
144	SD					0.0127	97.5% KM (Chebyshev) UCL					0.14	
145	k star					43.14	99% KM (Chebyshev) UCL					0.16	
146	Theta star					0.00251							
147	Nu star					517.7	Potential UCLs to Use						
148	AppChi2					465.9	95% KM (t) UCL					0.119	
149	95% Gamma Approximate UCL					0.12	95% KM (Percentile Bootstrap) UCL					0.116	
150	95% Adjusted Gamma UCL					0.125							
151	Note: DL/2 is not a recommended method.												
152													
153													
154	2-Methylnaphthalene												
155													
156	General Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
157	Number of Valid Data					24	Number of Detected Data					16
158	Number of Distinct Detected Data					5	Number of Non-Detect Data					8
159	Number of Missing Values					29	Percent Non-Detects					33.33%
160												
161	Raw Statistics						Log-transformed Statistics					
162	Minimum Detected					0.2	Minimum Detected					-1.609
163	Maximum Detected					0.7	Maximum Detected					-0.357
164	Mean of Detected					0.375	Mean of Detected					-1.049
165	SD of Detected					0.153	SD of Detected					0.371
166	Minimum Non-Detect					4	Minimum Non-Detect					1.386
167	Maximum Non-Detect					5	Maximum Non-Detect					1.609
168												
169	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					24
170	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
171	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
172												
173	UCL Statistics											
174	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
175	Shapiro Wilk Test Statistic					0.806	Shapiro Wilk Test Statistic					0.874
176	5% Shapiro Wilk Critical Value					0.887	5% Shapiro Wilk Critical Value					0.887
177	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
178												
179	Assuming Normal Distribution						Assuming Lognormal Distribution					
180	DL/2 Substitution Method						DL/2 Substitution Method					
181	Mean					0.938	Mean					-0.459
182	SD					0.828	SD					0.905
183	95% DL/2 (t) UCL					1.227	95% H-Stat (DL/2) UCL					2.684
184												
185	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
186	MLE method failed to converge properly						Mean in Log Scale					-1.049
187							SD in Log Scale					0.34
188							Mean in Original Scale					0.371
189							SD in Original Scale					0.137
190							95% Percentile Bootstrap UCL					0.416
191							95% BCA Bootstrap UCL					0.428
192												
193	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
194	k star (bias corrected)					6.139	Data do not follow a Discernable Distribution (0.05)					
195	Theta Star					0.0611						
196	nu star					196.5						
197												
198	A-D Test Statistic					1.132	Nonparametric Statistics					
199	5% A-D Critical Value					0.74	Kaplan-Meier (KM) Method					
200	K-S Test Statistic					0.74	Mean					0.375
201	5% K-S Critical Value					0.215	SD					0.148
202	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0382
203							95% KM (t) UCL					0.44
204	Assuming Gamma Distribution						95% KM (z) UCL					0.438
205	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.441
206	Minimum					0.196	95% KM (bootstrap t) UCL					0.466
207	Maximum					0.7	95% KM (BCA) UCL					0.438
208	Mean					0.378	95% KM (Percentile Bootstrap) UCL					0.442

	A	B	C	D	E	F	G	H	I	J	K	L	
209					Median	0.325				95% KM (Chebyshev) UCL		0.541	
210					SD	0.136				97.5% KM (Chebyshev) UCL		0.613	
211					k star	7.674				99% KM (Chebyshev) UCL		0.755	
212					Theta star	0.0492							
213					Nu star	368.4				Potential UCLs to Use			
214					AppChi2	324.9				95% KM (BCA) UCL		0.438	
215					95% Gamma Approximate UCL	0.428							
216					95% Adjusted Gamma UCL	0.432							
217	Note: DL/2 is not a recommended method.												
218													
219													
220	4,4'-DDE												
221													
222	General Statistics												
223					Number of Valid Data	24				Number of Detected Data		1	
224					Number of Distinct Detected Data	1				Number of Non-Detect Data		23	
225					Number of Missing Values	29				Percent Non-Detects		95.83%	
226													
227	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
228	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
229													
230	The data set for variable 4,4'-DDE was not processed!												
231													
232													
233													
234	4,4'-DDT												
235													
236	General Statistics												
237					Number of Valid Data	24				Number of Detected Data		6	
238					Number of Distinct Detected Data	6				Number of Non-Detect Data		18	
239					Number of Missing Values	29				Percent Non-Detects		75.00%	
240													
241	Raw Statistics						Log-transformed Statistics						
242					Minimum Detected	0.08				Minimum Detected		-2.526	
243					Maximum Detected	1.5				Maximum Detected		0.405	
244					Mean of Detected	0.61				Mean of Detected		-1.012	
245					SD of Detected	0.622				SD of Detected		1.163	
246					Minimum Non-Detect	0.67				Minimum Non-Detect		-0.4	
247					Maximum Non-Detect	0.94				Maximum Non-Detect		-0.0619	
248													
249	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						22
250	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						2
251	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						91.67%
252													
253	Warning: There are only 6 Detected Values in this data												
254	Note: It should be noted that even though bootstrap may be performed on this data set												
255	the resulting calculations may not be reliable enough to draw conclusions												
256													
257	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
258													
259													
260	UCL Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
261	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
262	Shapiro Wilk Test Statistic					0.795	Shapiro Wilk Test Statistic					0.928
263	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788
264	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
265												
266	Assuming Normal Distribution						Assuming Lognormal Distribution					
267	DL/2 Substitution Method						DL/2 Substitution Method					
268	Mean					0.433	Mean					-0.997
269	SD					0.311	SD					0.552
270	95% DL/2 (t) UCL					0.541	95% H-Stat (DL/2) UCL					0.598
271												
272	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
273	MLE method failed to converge properly						Mean in Log Scale					-1.498
274							SD in Log Scale					0.717
275							Mean in Original Scale					0.308
276							SD in Original Scale					0.349
277							95% Percentile Bootstrap UCL					0.431
278							95% BCA Bootstrap UCL					0.493
279												
280	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
281	k star (bias corrected)					0.662	Data appear Normal at 5% Significance Level					
282	Theta Star					0.921						
283	nu star					7.95						
284												
285	A-D Test Statistic					0.415	Nonparametric Statistics					
286	5% A-D Critical Value					0.714	Kaplan-Meier (KM) Method					
287	K-S Test Statistic					0.714	Mean					0.314
288	5% K-S Critical Value					0.34	SD					0.344
289	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0903
290							95% KM (t) UCL					0.469
291	Assuming Gamma Distribution						95% KM (z) UCL					0.462
292	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.472
293	Minimum					0.08	95% KM (bootstrap t) UCL					0.508
294	Maximum					1.5	95% KM (BCA) UCL					0.475
295	Mean					0.607	95% KM (Percentile Bootstrap) UCL					0.473
296	Median					0.601	95% KM (Chebyshev) UCL					0.707
297	SD					0.296	97.5% KM (Chebyshev) UCL					0.878
298	k star					3.437	99% KM (Chebyshev) UCL					1.212
299	Theta star					0.177						
300	Nu star					165	Potential UCLs to Use					
301	AppChi2					136.3	95% KM (t) UCL					0.469
302	95% Gamma Approximate UCL					0.735	95% KM (Percentile Bootstrap) UCL					0.473
303	95% Adjusted Gamma UCL					0.745						
304	Note: DL/2 is not a recommended method.											
305												
306												
307	Aluminum											
308												
309	General Statistics											
310	Number of Valid Data					24	Number of Detected Data					24
311	Number of Distinct Detected Data					24	Number of Non-Detect Data					0
312	Number of Missing Values					30	Percent Non-Detects					0.00%

	A	B	C	D	E	F	G	H	I	J	K	L	
313													
314	Raw Statistics						Log-transformed Statistics						
315				Minimum Detected		4100				Minimum Detected		8.319	
316				Maximum Detected		15100				Maximum Detected		9.622	
317				Mean of Detected		7832				Mean of Detected		8.926	
318				SD of Detected		2403				SD of Detected		0.286	
319				Minimum Non-Detect		N/A				Minimum Non-Detect		N/A	
320				Maximum Non-Detect		N/A				Maximum Non-Detect		N/A	
321													
322													
323	UCL Statistics												
324	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
325				Shapiro Wilk Test Statistic		0.897				Shapiro Wilk Test Statistic		0.969	
326				5% Shapiro Wilk Critical Value		0.916				5% Shapiro Wilk Critical Value		0.916	
327	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
328													
329	Assuming Normal Distribution						Assuming Lognormal Distribution						
330				DL/2 Substitution Method						DL/2 Substitution Method			
331				Mean		7832				Mean		8.926	
332				SD		2403				SD		0.286	
333				95% DL/2 (t) UCL		8673				95% H-Stat (DL/2) UCL		8728	
334													
335				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
336	MLE method failed to converge properly										Mean in Log Scale		N/A
337										SD in Log Scale		N/A	
338										Mean in Original Scale		N/A	
339										SD in Original Scale		N/A	
340										95% Percentile Bootstrap UCL		N/A	
341										95% BCA Bootstrap UCL		N/A	
342													
343	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
344				k star (bias corrected)		10.99				Data appear Gamma Distributed at 5% Significance Level			
345				Theta Star		712.9							
346				nu star		527.4							
347													
348				A-D Test Statistic		0.506				Nonparametric Statistics			
349				5% A-D Critical Value		0.744				Kaplan-Meier (KM) Method			
350				K-S Test Statistic		0.744				Mean		7832	
351				5% K-S Critical Value		0.178				SD		2353	
352	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		490.6
353										95% KM (t) UCL		8673	
354	Assuming Gamma Distribution										95% KM (z) UCL		8639
355				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		8673	
356				Minimum		4100				95% KM (bootstrap t) UCL		8932	
357				Maximum		15100				95% KM (BCA) UCL		8625	
358				Mean		7832				95% KM (Percentile Bootstrap) UCL		8662	
359				Median		7275				95% KM (Chebyshev) UCL		9970	
360				SD		2403				97.5% KM (Chebyshev) UCL		10896	
361				k star		10.99				99% KM (Chebyshev) UCL		12713	
362				Theta star		712.9							
363				Nu star		527.4				Potential UCLs to Use			
364				AppChi2		475.1				95% KM (BCA) UCL		8625	

	A	B	C	D	E	F	G	H	I	J	K	L
365	95% Gamma Approximate UCL					8694						
366	95% Adjusted Gamma UCL					8758						
367	Note: DL/2 is not a recommended method.											
368												
369												
370	Arsenic											
371												
372	General Statistics											
373	Number of Valid Data					24	Number of Detected Data					20
374	Number of Distinct Detected Data					18	Number of Non-Detect Data					4
375	Number of Missing Values					30	Percent Non-Detects					16.67%
376												
377	Raw Statistics						Log-transformed Statistics					
378	Minimum Detected					1.8	Minimum Detected					0.588
379	Maximum Detected					14.6	Maximum Detected					2.681
380	Mean of Detected					6.525	Mean of Detected					1.76
381	SD of Detected					3.232	SD of Detected					0.502
382	Minimum Non-Detect					0.73	Minimum Non-Detect					-0.315
383	Maximum Non-Detect					3.1	Maximum Non-Detect					1.131
384												
385	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					5
386	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					19
387	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					20.83%
388												
389	UCL Statistics											
390	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
391	Shapiro Wilk Test Statistic					0.926	Shapiro Wilk Test Statistic					0.975
392	5% Shapiro Wilk Critical Value					0.905	5% Shapiro Wilk Critical Value					0.905
393	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
394												
395	Assuming Normal Distribution						Assuming Lognormal Distribution					
396	DL/2 Substitution Method						DL/2 Substitution Method					
397	Mean					5.598	Mean					1.426
398	SD					3.628	SD					0.931
399	95% DL/2 (t) UCL					6.868	95% H-Stat (DL/2) UCL					8.232
400												
401	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
402	Mean					5.545	Mean in Log Scale					1.576
403	SD					3.704	SD in Log Scale					0.622
404	95% MLE (t) UCL					6.841	Mean in Original Scale					5.758
405	95% MLE (Tiku) UCL					6.863	SD in Original Scale					3.42
406							95% Percentile Bootstrap UCL					6.911
407							95% BCA Bootstrap UCL					7.034
408												
409	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
410	k star (bias corrected)					3.851	Data appear Normal at 5% Significance Level					
411	Theta Star					1.694						
412	nu star					154						
413												
414	A-D Test Statistic					0.288	Nonparametric Statistics					
415	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
416	K-S Test Statistic					0.745	Mean					5.738

	A	B	C	D	E	F	G	H	I	J	K	L	
417	5% K-S Critical Value					0.195	SD					3.372	
418	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.706	
419							95% KM (t) UCL					6.948	
420	Assuming Gamma Distribution						95% KM (z) UCL					6.899	
421	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.86	
422	Minimum						1.579	95% KM (bootstrap t) UCL					7.007
423	Maximum						14.6	95% KM (BCA) UCL					7.179
424	Mean						5.781	95% KM (Percentile Bootstrap) UCL					7.046
425	Median						4.9	95% KM (Chebyshev) UCL					8.816
426	SD						3.4	97.5% KM (Chebyshev) UCL					10.15
427	k star						2.709	99% KM (Chebyshev) UCL					12.76
428	Theta star						2.134						
429	Nu star						130	Potential UCLs to Use					
430	AppChi2						104.7	95% KM (t) UCL					6.948
431	95% Gamma Approximate UCL						7.18	95% KM (Percentile Bootstrap) UCL					7.046
432	95% Adjusted Gamma UCL						7.291						
433	Note: DL/2 is not a recommended method.												
434													
435													
436	Barium												
437													
438	General Statistics												
439	Number of Valid Data					24	Number of Detected Data					24	
440	Number of Distinct Detected Data					24	Number of Non-Detect Data					0	
441	Number of Missing Values					30	Percent Non-Detects					0.00%	
442													
443	Raw Statistics						Log-transformed Statistics						
444	Minimum Detected					35.5	Minimum Detected					3.57	
445	Maximum Detected					127	Maximum Detected					4.844	
446	Mean of Detected					60.43	Mean of Detected					4.033	
447	SD of Detected					25.77	SD of Detected					0.357	
448	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A	
449	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A	
450													
451													
452	UCL Statistics												
453	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
454	Shapiro Wilk Test Statistic					0.772	Shapiro Wilk Test Statistic					0.889	
455	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916	
456	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
457													
458	Assuming Normal Distribution						Assuming Lognormal Distribution						
459	DL/2 Substitution Method						DL/2 Substitution Method						
460	Mean					60.43	Mean					4.033	
461	SD					25.77	SD					0.357	
462	95% DL/2 (t) UCL					69.44	95% H-Stat (DL/2) UCL					69.05	
463													
464	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
465	MLE method failed to converge properly						Mean in Log Scale					N/A	
466							SD in Log Scale					N/A	
467							Mean in Original Scale					N/A	
468							SD in Original Scale					N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
469											95% Percentile Bootstrap UCL	N/A
470											95% BCA Bootstrap UCL	N/A
471												
472	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
473					k star (bias corrected)	6.585	Data do not follow a Discernable Distribution (0.05)					
474					Theta Star	9.176						
475					nu star	316.1						
476												
477					A-D Test Statistic	1.274	Nonparametric Statistics					
478					5% A-D Critical Value	0.745	Kaplan-Meier (KM) Method					
479					K-S Test Statistic	0.745	Mean					
480					5% K-S Critical Value	0.178	SD					
481	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
482							95% KM (t) UCL					
483	Assuming Gamma Distribution						95% KM (z) UCL					
484	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
485					Minimum	35.5	95% KM (bootstrap t) UCL					
486					Maximum	127	95% KM (BCA) UCL					
487					Mean	60.43	95% KM (Percentile Bootstrap) UCL					
488					Median	51.25	95% KM (Chebyshev) UCL					
489					SD	25.77	97.5% KM (Chebyshev) UCL					
490					k star	6.585	99% KM (Chebyshev) UCL					
491					Theta star	9.176						
492					Nu star	316.1	Potential UCLs to Use					
493					AppChi2	275.9	95% KM (Chebyshev) UCL					
494					95% Gamma Approximate UCL	69.23						
495					95% Adjusted Gamma UCL	69.89						
496	Note: DL/2 is not a recommended method.											
497												
498												
499	Benzo(a)anthracene											
500												
501	General Statistics											
502					Number of Valid Data	24					Number of Detected Data	2
503					Number of Distinct Detected Data	1					Number of Non-Detect Data	22
504					Number of Missing Values	29					Percent Non-Detects	91.67%
505												
506	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
507	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
508												
509	The data set for variable Benzo(a)anthracene was not processed!											
510												
511												
512												
513	Benzo(a)pyrene											
514												
515	General Statistics											
516					Number of Valid Data	24					Number of Detected Data	2
517					Number of Distinct Detected Data	2					Number of Non-Detect Data	22
518					Number of Missing Values	29					Percent Non-Detects	91.67%
519												
520	Raw Statistics						Log-transformed Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L							
521				Minimum Detected		1				Minimum Detected		0							
522				Maximum Detected		2				Maximum Detected		0.693							
523				Mean of Detected		1.5				Mean of Detected		0.347							
524				SD of Detected		0.707				SD of Detected		0.49							
525				Minimum Non-Detect		4				Minimum Non-Detect		1.386							
526				Maximum Non-Detect		6				Maximum Non-Detect		1.792							
527																			
528	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				24							
529	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				0							
530	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				100.00%							
531																			
532	Warning: Data set has only 2 Distinct Detected Values.																		
533	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.																		
534	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).																		
535																			
536	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.																		
537																			
538	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.																		
539	Those methods will return a 'N/A' value on your output display!																		
540																			
541	It is necessary to have 4 or more Distinct Values for bootstrap methods.																		
542	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.																		
543																			
544																			
545	UCL Statistics																		
546	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only												
547	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1									
548	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A									
549	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level												
550																			
551	Assuming Normal Distribution						Assuming Lognormal Distribution												
552	DL/2 Substitution Method						DL/2 Substitution Method												
553	Mean			2.125			Mean			0.735									
554	SD			0.397			SD			0.205									
555	95% DL/2 (t) UCL			2.264			95% H-Stat (DL/2) UCL			2.773									
556																			
557	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method						
558	MLE method failed to converge properly												Mean in Log Scale						N/A
559													SD in Log Scale						N/A
560													Mean in Original Scale						N/A
561													SD in Original Scale						N/A
562													95% Percentile Bootstrap UCL						N/A
563													95% BCA Bootstrap UCL						N/A
564																			
565	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only												
566	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)												
567	Theta Star			N/A															
568	nu star			N/A															
569																			
570	A-D Test Statistic			0.359			Nonparametric Statistics												
571	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method												
572	K-S Test Statistic			N/A			Mean						1.5						

	A	B	C	D	E	F	G	H	I	J	K	L	
573	5% K-S Critical Value					N/A	SD					0.5	
574	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.5	
575							95% KM (t) UCL					2.357	
576	Assuming Gamma Distribution						95% KM (z) UCL					2.322	
577	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					2.686	
578	Minimum						N/A	95% KM (bootstrap t) UCL					2.5
579	Maximum						N/A	95% KM (BCA) UCL					2
580	Mean						N/A	95% KM (Percentile Bootstrap) UCL					2
581	Median						N/A	95% KM (Chebyshev) UCL					3.679
582	SD						N/A	97.5% KM (Chebyshev) UCL					4.622
583	k star						N/A	99% KM (Chebyshev) UCL					6.475
584	Theta star						N/A						
585	Nu star						N/A	Potential UCLs to Use					
586	AppChi2						N/A	95% KM (t) UCL					2.357
587	95% Gamma Approximate UCL						N/A	95% KM (% Bootstrap) UCL					2
588	95% Adjusted Gamma UCL						N/A						
589	Warning: Recommended UCL exceeds the maximum observation												
590	Note: DL/2 is not a recommended method.												
591													
592													
593	Benzo(b)fluoranthene												
594													
595	General Statistics												
596	Number of Valid Data					24	Number of Detected Data					2	
597	Number of Distinct Detected Data					1	Number of Non-Detect Data					22	
598	Number of Missing Values					29	Percent Non-Detects					91.67%	
599													
600	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
601	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
602													
603	The data set for variable Benzo(b)fluoranthene was not processed!												
604													
605													
606													
607	Benzo(k)fluoranthene												
608													
609	General Statistics												
610	Number of Valid Data					24	Number of Detected Data					2	
611	Number of Distinct Detected Data					2	Number of Non-Detect Data					22	
612	Number of Missing Values					29	Percent Non-Detects					91.67%	
613													
614	Raw Statistics						Log-transformed Statistics						
615	Minimum Detected					1	Minimum Detected					0	
616	Maximum Detected					2	Maximum Detected					0.693	
617	Mean of Detected					1.5	Mean of Detected					0.347	
618	SD of Detected					0.707	SD of Detected					0.49	
619	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
620	Maximum Non-Detect					6	Maximum Non-Detect					1.792	
621													
622	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					24	
623	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
624	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	

	A	B	C	D	E	F	G	H	I	J	K	L
625												
626	Warning: Data set has only 2 Distinct Detected Values.											
627	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
628	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
629												
630	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
631												
632	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
633	Those methods will return a 'N/A' value on your output display!											
634												
635	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
636	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
637												
638												
639	UCL Statistics											
640	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
641	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1		
642	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A		
643	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
644												
645	Assuming Normal Distribution						Assuming Lognormal Distribution					
646	DL/2 Substitution Method						DL/2 Substitution Method					
647	Mean			2.125			Mean			0.735		
648	SD			0.397			SD			0.205		
649	95% DL/2 (t) UCL			2.264			95% H-Stat (DL/2) UCL			2.773		
650												
651	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
652	MLE method failed to converge properly						Mean in Log Scale			N/A		
653							SD in Log Scale			N/A		
654							Mean in Original Scale			N/A		
655							SD in Original Scale			N/A		
656							95% Percentile Bootstrap UCL			N/A		
657							95% BCA Bootstrap UCL			N/A		
658												
659	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
660	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
661	Theta Star			N/A								
662	nu star			N/A								
663												
664	A-D Test Statistic			0.359			Nonparametric Statistics					
665	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
666	K-S Test Statistic			N/A			Mean			1.5		
667	5% K-S Critical Value			N/A			SD			0.5		
668	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.5		
669							95% KM (t) UCL			2.357		
670	Assuming Gamma Distribution						95% KM (z) UCL			2.322		
671	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			2.686		
672	Minimum			N/A			95% KM (bootstrap t) UCL			2.5		
673	Maximum			N/A			95% KM (BCA) UCL			N/A		
674	Mean			N/A			95% KM (Percentile Bootstrap) UCL			N/A		
675	Median			N/A			95% KM (Chebyshev) UCL			3.679		
676	SD			N/A			97.5% KM (Chebyshev) UCL			4.622		

	A	B	C	D	E	F	G	H	I	J	K	L	
677					k star	N/A				99% KM (Chebyshev) UCL		6.475	
678					Theta star	N/A							
679					Nu star	N/A				Potential UCLs to Use			
680					AppChi2	N/A				95% KM (t) UCL		2.357	
681					95% Gamma Approximate UCL	N/A				95% KM (% Bootstrap) UCL		N/A	
682					95% Adjusted Gamma UCL	N/A							
683	Warning: Recommended UCL exceeds the maximum observation												
684	Note: DL/2 is not a recommended method.												
685													
686													
687	Beryllium												
688													
689	General Statistics												
690					Number of Valid Data	24				Number of Detected Data		24	
691					Number of Distinct Detected Data	18				Number of Non-Detect Data		0	
692					Number of Missing Values	30				Percent Non-Detects		0.00%	
693													
694	Raw Statistics						Log-transformed Statistics						
695					Minimum Detected	0.35				Minimum Detected		-1.05	
696					Maximum Detected	1.4				Maximum Detected		0.336	
697					Mean of Detected	0.69				Mean of Detected		-0.428	
698					SD of Detected	0.263				SD of Detected		0.333	
699					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A	
700					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A	
701													
702													
703	UCL Statistics												
704	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
705					Shapiro Wilk Test Statistic	0.819				Shapiro Wilk Test Statistic		0.915	
706					5% Shapiro Wilk Critical Value	0.916				5% Shapiro Wilk Critical Value		0.916	
707	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
708													
709	Assuming Normal Distribution						Assuming Lognormal Distribution						
710					DL/2 Substitution Method					DL/2 Substitution Method			
711					Mean	0.69				Mean		-0.428	
712					SD	0.263				SD		0.333	
713					95% DL/2 (t) UCL	0.783				95% H-Stat (DL/2) UCL		0.783	
714													
715					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
716	MLE method failed to converge properly										Mean in Log Scale		N/A
717											SD in Log Scale		N/A
718											Mean in Original Scale		N/A
719											SD in Original Scale		N/A
720											95% Percentile Bootstrap UCL		N/A
721											95% BCA Bootstrap UCL		N/A
722													
723	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
724					k star (bias corrected)	7.765				Data Follow Appr. Gamma Distribution at 5% Significance Level			
725					Theta Star	0.0889							
726					nu star	372.7							
727													
728					A-D Test Statistic	1.149				Nonparametric Statistics			

	A	B	C	D	E	F	G	H	I	J	K	L
729	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
730	K-S Test Statistic					0.745	Mean					0.69
731	5% K-S Critical Value					0.178	SD					0.258
732	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.0537
733							95% KM (t) UCL					0.783
734	Assuming Gamma Distribution						95% KM (z) UCL					0.779
735	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.783
736	Minimum					0.35	95% KM (bootstrap t) UCL					0.81
737	Maximum					1.4	95% KM (BCA) UCL					0.786
738	Mean					0.69	95% KM (Percentile Bootstrap) UCL					0.791
739	Median					0.61	95% KM (Chebyshev) UCL					0.925
740	SD					0.263	97.5% KM (Chebyshev) UCL					1.026
741	k star					7.765	99% KM (Chebyshev) UCL					1.225
742	Theta star					0.0889						
743	Nu star					372.7	Potential UCLs to Use					
744	AppChi2					329	95% KM (BCA) UCL					0.786
745	95% Gamma Approximate UCL					0.782						
746	95% Adjusted Gamma UCL					0.789						
747	Note: DL/2 is not a recommended method.											
748												
749												
750	Bis(2-ethylhexyl)phthalate											
751												
752	General Statistics											
753	Number of Valid Data					24	Number of Detected Data					1
754	Number of Distinct Detected Data					1	Number of Non-Detect Data					23
755	Number of Missing Values					29	Percent Non-Detects					95.83%
756												
757	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
758	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
759												
760	The data set for variable Bis(2-ethylhexyl)phthalate was not processed!											
761												
762												
763												
764	Cadmium											
765												
766	General Statistics											
767	Number of Valid Data					24	Number of Detected Data					9
768	Number of Distinct Detected Data					9	Number of Non-Detect Data					15
769	Number of Missing Values					30	Percent Non-Detects					62.50%
770												
771	Raw Statistics						Log-transformed Statistics					
772	Minimum Detected					0.036	Minimum Detected					-3.324
773	Maximum Detected					0.64	Maximum Detected					-0.446
774	Mean of Detected					0.235	Mean of Detected					-1.84
775	SD of Detected					0.202	SD of Detected					1.017
776	Minimum Non-Detect					0.047	Minimum Non-Detect					-3.058
777	Maximum Non-Detect					0.62	Maximum Non-Detect					-0.478
778												
779	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					23
780	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1

	A	B	C	D	E	F	G	H	I	J	K	L
781	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					95.83%
782												
783	Warning: There are only 9 Detected Values in this data											
784	Note: It should be noted that even though bootstrap may be performed on this data set											
785	the resulting calculations may not be reliable enough to draw conclusions											
786												
787	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
788												
789												
790	UCL Statistics											
791	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
792	Shapiro Wilk Test Statistic				0.89		Shapiro Wilk Test Statistic				0.939	
793	5% Shapiro Wilk Critical Value				0.829		5% Shapiro Wilk Critical Value				0.829	
794	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
795												
796	Assuming Normal Distribution						Assuming Lognormal Distribution					
797	DL/2 Substitution Method						DL/2 Substitution Method					
798	Mean				0.228		Mean				-1.73	
799	SD				0.135		SD				0.846	
800	95% DL/2 (t) UCL				0.275		95% H-Stat (DL/2) UCL				0.479	
801												
802	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
803	MLE method failed to converge properly						Mean in Log Scale				-2.197	
804							SD in Log Scale				0.746	
805							Mean in Original Scale				0.149	
806							SD in Original Scale				0.141	
807							95% Percentile Bootstrap UCL				0.2	
808							95% BCA Bootstrap UCL				0.215	
809												
810	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
811	k star (bias corrected)				1.017		Data appear Normal at 5% Significance Level					
812	Theta Star				0.232							
813	nu star				18.3							
814												
815	A-D Test Statistic				0.211		Nonparametric Statistics					
816	5% A-D Critical Value				0.736		Kaplan-Meier (KM) Method					
817	K-S Test Statistic				0.736		Mean				0.17	
818	5% K-S Critical Value				0.284		SD				0.159	
819	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.0448	
820							95% KM (t) UCL				0.247	
821	Assuming Gamma Distribution						95% KM (z) UCL				0.244	
822	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.247	
823	Minimum				0.036		95% KM (bootstrap t) UCL				0.268	
824	Maximum				0.64		95% KM (BCA) UCL				0.256	
825	Mean				0.234		95% KM (Percentile Bootstrap) UCL				0.253	
826	Median				0.235		95% KM (Chebyshev) UCL				0.365	
827	SD				0.15		97.5% KM (Chebyshev) UCL				0.45	
828	k star				1.905		99% KM (Chebyshev) UCL				0.616	
829	Theta star				0.123							
830	Nu star				91.46		Potential UCLs to Use					
831	AppChi2				70.41		95% KM (t) UCL				0.247	
832	95% Gamma Approximate UCL				0.304		95% KM (Percentile Bootstrap) UCL				0.253	

	A	B	C	D	E	F	G	H	I	J	K	L
833	95% Adjusted Gamma UCL					0.309						
834	Note: DL/2 is not a recommended method.											
835												
836												
837	Calcium											
838												
839	General Statistics											
840	Number of Valid Data					24	Number of Detected Data					24
841	Number of Distinct Detected Data					23	Number of Non-Detect Data					0
842	Number of Missing Values					30	Percent Non-Detects					0.00%
843												
844	Raw Statistics						Log-transformed Statistics					
845	Minimum Detected					1430	Minimum Detected					7.265
846	Maximum Detected					13200	Maximum Detected					9.488
847	Mean of Detected					5821	Mean of Detected					8.389
848	SD of Detected					4198	SD of Detected					0.789
849	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
850	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
851												
852												
853	UCL Statistics											
854	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
855	Shapiro Wilk Test Statistic					0.858	Shapiro Wilk Test Statistic					0.9
856	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916
857	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
858												
859	Assuming Normal Distribution						Assuming Lognormal Distribution					
860	DL/2 Substitution Method						DL/2 Substitution Method					
861	Mean					5821	Mean					8.389
862	SD					4198	SD					0.789
863	95% DL/2 (t) UCL					7289	95% H-Stat (DL/2) UCL					8701
864												
865	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
866	MLE method failed to converge properly						Mean in Log Scale					N/A
867							SD in Log Scale					N/A
868							Mean in Original Scale					N/A
869							SD in Original Scale					N/A
870							95% Percentile Bootstrap UCL					N/A
871							95% BCA Bootstrap UCL					N/A
872												
873	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
874	k star (bias corrected)					1.718	Data do not follow a Discernable Distribution (0.05)					
875	Theta Star					3389						
876	nu star					82.45						
877												
878	A-D Test Statistic					0.873	Nonparametric Statistics					
879	5% A-D Critical Value					0.756	Kaplan-Meier (KM) Method					
880	K-S Test Statistic					0.756	Mean					5821
881	5% K-S Critical Value					0.18	SD					4109
882	Data not Gamma Distributed at 5% Significance Level						SE of Mean					856.9
883							95% KM (t) UCL					7289
884	Assuming Gamma Distribution						95% KM (z) UCL					7230

	A	B	C	D	E	F	G	H	I	J	K	L
885	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					7289
886					Minimum	1430	95% KM (bootstrap t) UCL					7401
887					Maximum	13200	95% KM (BCA) UCL					7213
888					Mean	5821	95% KM (Percentile Bootstrap) UCL					7225
889					Median	4335	95% KM (Chebyshev) UCL					9556
890					SD	4198	97.5% KM (Chebyshev) UCL					11172
891					k star	1.718	99% KM (Chebyshev) UCL					14347
892					Theta star	3389						
893					Nu star	82.45	Potential UCLs to Use					
894					AppChi2	62.53	95% KM (Chebyshev) UCL					9556
895					95% Gamma Approximate UCL	7676						
896					95% Adjusted Gamma UCL	7829						
897	Note: DL/2 is not a recommended method.											
898												
899												
900	Chromium											
901												
902	General Statistics											
903					Number of Valid Data	24					Number of Detected Data	24
904					Number of Distinct Detected Data	22					Number of Non-Detect Data	0
905					Number of Missing Values	30					Percent Non-Detects	0.00%
906												
907	Raw Statistics					Log-transformed Statistics						
908					Minimum Detected	1.2					Minimum Detected	0.182
909					Maximum Detected	17.2					Maximum Detected	2.845
910					Mean of Detected	10.22					Mean of Detected	2.22
911					SD of Detected	3.585					SD of Detected	0.565
912					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A
913					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A
914												
915												
916	UCL Statistics											
917	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
918					Shapiro Wilk Test Statistic	0.923					Shapiro Wilk Test Statistic	0.695
919					5% Shapiro Wilk Critical Value	0.916					5% Shapiro Wilk Critical Value	0.916
920	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
921												
922	Assuming Normal Distribution					Assuming Lognormal Distribution						
923					DL/2 Substitution Method						DL/2 Substitution Method	
924					Mean	10.22					Mean	2.22
925					SD	3.585					SD	0.565
926					95% DL/2 (t) UCL	11.47					95% H-Stat (DL/2) UCL	13.71
927												
928					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
929	MLE method failed to converge properly										Mean in Log Scale	N/A
930											SD in Log Scale	N/A
931											Mean in Original Scale	N/A
932											SD in Original Scale	N/A
933											95% Percentile Bootstrap UCL	N/A
934											95% BCA Bootstrap UCL	N/A
935												
936	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						

	A	B	C	D	E	F	G	H	I	J	K	L	
937	k star (bias corrected)					4.369	Data appear Normal at 5% Significance Level						
938	Theta Star					2.339							
939	nu star					209.7							
940													
941	A-D Test Statistic					1.807	Nonparametric Statistics						
942	5% A-D Critical Value					0.746	Kaplan-Meier (KM) Method						
943	K-S Test Statistic					0.746						Mean	10.22
944	5% K-S Critical Value					0.178						SD	3.509
945	Data not Gamma Distributed at 5% Significance Level											SE of Mean	0.732
946												95% KM (t) UCL	11.47
947	Assuming Gamma Distribution											95% KM (z) UCL	11.42
948	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	11.47
949	Minimum					1.2						95% KM (bootstrap t) UCL	11.39
950	Maximum					17.2						95% KM (BCA) UCL	11.35
951	Mean					10.22						95% KM (Percentile Bootstrap) UCL	11.43
952	Median					9.85						95% KM (Chebyshev) UCL	13.41
953	SD					3.585						97.5% KM (Chebyshev) UCL	14.79
954	k star					4.369						99% KM (Chebyshev) UCL	17.5
955	Theta star					2.339							
956	Nu star					209.7	Potential UCLs to Use						
957	AppChi2					177.2						95% KM (t) UCL	11.47
958	95% Gamma Approximate UCL					12.09						95% KM (Percentile Bootstrap) UCL	11.43
959	95% Adjusted Gamma UCL					12.24							
960	Note: DL/2 is not a recommended method.												
961													
962													
963	Chrysene												
964													
965	General Statistics												
966	Number of Valid Data					24	Number of Detected Data					3	
967	Number of Distinct Detected Data					2	Number of Non-Detect Data					21	
968	Number of Missing Values					29	Percent Non-Detects					87.50%	
969													
970	Raw Statistics						Log-transformed Statistics						
971	Minimum Detected					0.2	Minimum Detected					-1.609	
972	Maximum Detected					2	Maximum Detected					0.693	
973	Mean of Detected					1.4	Mean of Detected					-0.0744	
974	SD of Detected					1.039	SD of Detected					1.329	
975	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
976	Maximum Non-Detect					6	Maximum Non-Detect					1.792	
977													
978	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					24	
979	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
980	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
981													
982	Warning: Data set has only 2 Distinct Detected Values.												
983	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
984	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
985													
986	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
987													
988	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												

	A	B	C	D	E	F	G	H	I	J	K	L
989	Those methods will return a 'N/A' value on your output display!											
990												
991	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
992	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
993												
994												
995	UCL Statistics											
996	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
997	Shapiro Wilk Test Statistic			0.75			Shapiro Wilk Test Statistic			0.75		
998	5% Shapiro Wilk Critical Value			0.767			5% Shapiro Wilk Critical Value			0.767		
999	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1000												
1001	Assuming Normal Distribution						Assuming Lognormal Distribution					
1002	DL/2 Substitution Method						DL/2 Substitution Method					
1003	Mean			2.092			Mean			0.668		
1004	SD			0.512			SD			0.503		
1005	95% DL/2 (t) UCL			2.271			95% H-Stat (DL/2) UCL			3.625		
1006												
1007	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1008	MLE method failed to converge properly						Mean in Log Scale			-0.0744		
1009							SD in Log Scale			1.317		
1010							Mean in Original Scale			1.978		
1011							SD in Original Scale			2.787		
1012							95% Percentile Bootstrap UCL			2.967		
1013							95% BCA Bootstrap UCL			3.355		
1014												
1015	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1016	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
1017	Theta Star			N/A								
1018	nu star			N/A								
1019												
1020	A-D Test Statistic			0.627			Nonparametric Statistics					
1021	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
1022	K-S Test Statistic			N/A			Mean			1.4		
1023	5% K-S Critical Value			N/A			SD			0.849		
1024	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.6		
1025							95% KM (t) UCL			2.428		
1026	Assuming Gamma Distribution						95% KM (z) UCL			2.387		
1027	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			2.633		
1028	Minimum			N/A			95% KM (bootstrap t) UCL			2.4		
1029	Maximum			N/A			95% KM (BCA) UCL			2		
1030	Mean			N/A			95% KM (Percentile Bootstrap) UCL			2		
1031	Median			N/A			95% KM (Chebyshev) UCL			4.015		
1032	SD			N/A			97.5% KM (Chebyshev) UCL			5.147		
1033	k star			N/A			99% KM (Chebyshev) UCL			7.37		
1034	Theta star			N/A								
1035	Nu star			N/A			Potential UCLs to Use					
1036	AppChi2			N/A			95% KM (BCA) UCL			2		
1037	95% Gamma Approximate UCL			N/A								
1038	95% Adjusted Gamma UCL			N/A								
1039	Note: DL/2 is not a recommended method.											
1040												

	A	B	C	D	E	F	G	H	I	J	K	L		
1041														
1042	Cobalt													
1043														
1044	General Statistics													
1045	Number of Valid Data					24		Number of Detected Data					24	
1046	Number of Distinct Detected Data					17		Number of Non-Detect Data					0	
1047	Number of Missing Values					30		Percent Non-Detects					0.00%	
1048														
1049	Raw Statistics						Log-transformed Statistics							
1050	Minimum Detected					2.7		Minimum Detected					0.993	
1051	Maximum Detected					11		Maximum Detected					2.398	
1052	Mean of Detected					5.238		Mean of Detected					1.602	
1053	SD of Detected					1.964		SD of Detected					0.321	
1054	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
1055	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
1056														
1057														
1058	UCL Statistics													
1059	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1060	Shapiro Wilk Test Statistic					0.793		Shapiro Wilk Test Statistic					0.903	
1061	5% Shapiro Wilk Critical Value					0.916		5% Shapiro Wilk Critical Value					0.916	
1062	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1063														
1064	Assuming Normal Distribution						Assuming Lognormal Distribution							
1065	DL/2 Substitution Method							DL/2 Substitution Method						
1066	Mean					5.238		Mean					1.602	
1067	SD					1.964		SD					0.321	
1068	95% DL/2 (t) UCL					5.925		95% H-Stat (DL/2) UCL					5.906	
1069														
1070	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1071	MLE method failed to converge properly						Mean in Log Scale						N/A	
1072							SD in Log Scale						N/A	
1073							Mean in Original Scale						N/A	
1074							SD in Original Scale						N/A	
1075							95% Percentile Bootstrap UCL						N/A	
1076							95% BCA Bootstrap UCL						N/A	
1077														
1078	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1079	k star (bias corrected)					8.245		Data do not follow a Discernable Distribution (0.05)						
1080	Theta Star					0.635								
1081	nu star					395.8								
1082														
1083	A-D Test Statistic					1.396		Nonparametric Statistics						
1084	5% A-D Critical Value					0.745		Kaplan-Meier (KM) Method						
1085	K-S Test Statistic					0.745		Mean					5.238	
1086	5% K-S Critical Value					0.178		SD					1.923	
1087	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.401	
1088							95% KM (t) UCL						5.925	
1089	Assuming Gamma Distribution						95% KM (z) UCL						5.897	
1090	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						5.925	
1091	Minimum					2.7		95% KM (bootstrap t) UCL					6.224	
1092	Maximum					11		95% KM (BCA) UCL					5.983	

	A	B	C	D	E	F	G	H	I	J	K	L
1093					Mean	5.238			95% KM (Percentile Bootstrap) UCL			5.9
1094					Median	4.5			95% KM (Chebyshev) UCL			6.985
1095					SD	1.964			97.5% KM (Chebyshev) UCL			7.742
1096					k star	8.245			99% KM (Chebyshev) UCL			9.227
1097					Theta star	0.635						
1098					Nu star	395.8			Potential UCLs to Use			
1099					AppChi2	350.7			95% KM (Chebyshev) UCL			6.985
1100			95% Gamma Approximate UCL			5.911						
1101			95% Adjusted Gamma UCL			5.962						
1102	Note: DL/2 is not a recommended method.											
1103												
1104												
1105	Copper											
1106												
1107	General Statistics											
1108			Number of Valid Data			24			Number of Detected Data			21
1109			Number of Distinct Detected Data			17			Number of Non-Detect Data			3
1110			Number of Missing Values			30			Percent Non-Detects			12.50%
1111												
1112	Raw Statistics						Log-transformed Statistics					
1113			Minimum Detected			3.4			Minimum Detected			1.224
1114			Maximum Detected			20.1			Maximum Detected			3.001
1115			Mean of Detected			8.976			Mean of Detected			2.122
1116			SD of Detected			3.759			SD of Detected			0.387
1117			Minimum Non-Detect			6			Minimum Non-Detect			1.792
1118			Maximum Non-Detect			8.5			Maximum Non-Detect			2.14
1119												
1120	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect			14
1121	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected			10
1122	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage			58.33%
1123												
1124	UCL Statistics											
1125	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1126			Shapiro Wilk Test Statistic			0.864			Shapiro Wilk Test Statistic			0.967
1127			5% Shapiro Wilk Critical Value			0.908			5% Shapiro Wilk Critical Value			0.908
1128	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1129												
1130	Assuming Normal Distribution						Assuming Lognormal Distribution					
1131			DL/2 Substitution Method						DL/2 Substitution Method			
1132			Mean			8.321			Mean			2.02
1133			SD			3.932			SD			0.457
1134			95% DL/2 (t) UCL			9.697			95% H-Stat (DL/2) UCL			9.488
1135												
1136			Maximum Likelihood Estimate(MLE) Method						Log ROS Method			
1137			Mean			7.035			Mean in Log Scale			2.071
1138			SD			5.214			SD in Log Scale			0.388
1139			95% MLE (t) UCL			8.859			Mean in Original Scale			8.558
1140			95% MLE (Tiku) UCL			9.569			SD in Original Scale			3.692
1141									95% Percentile Bootstrap UCL			9.844
1142									95% BCA Bootstrap UCL			10.02
1143												
1144	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L	
1145	k star (bias corrected)					6.049	Data appear Gamma Distributed at 5% Significance Level						
1146	Theta Star					1.484							
1147	nu star					254.1							
1148													
1149	A-D Test Statistic					0.453	Nonparametric Statistics						
1150	5% A-D Critical Value					0.744	Kaplan-Meier (KM) Method						
1151	K-S Test Statistic					0.744						Mean	8.574
1152	5% K-S Critical Value					0.19						SD	3.628
1153	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	0.766
1154												95% KM (t) UCL	9.887
1155	Assuming Gamma Distribution											95% KM (z) UCL	9.834
1156	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	9.889
1157	Minimum					3.4						95% KM (bootstrap t) UCL	10.38
1158	Maximum					20.1						95% KM (BCA) UCL	10.07
1159	Mean					8.667						95% KM (Percentile Bootstrap) UCL	9.915
1160	Median					8.011						95% KM (Chebyshev) UCL	11.91
1161	SD					3.649						97.5% KM (Chebyshev) UCL	13.36
1162	k star					6.138						99% KM (Chebyshev) UCL	16.2
1163	Theta star					1.412							
1164	Nu star					294.6	Potential UCLs to Use						
1165	AppChi2					255.9						95% KM (BCA) UCL	10.07
1166	95% Gamma Approximate UCL					9.98							
1167	95% Adjusted Gamma UCL					10.08							
1168	Note: DL/2 is not a recommended method.												
1169													
1170													
1171	Fluoranthene												
1172													
1173	General Statistics												
1174	Number of Valid Data					24	Number of Detected Data					2	
1175	Number of Distinct Detected Data					2	Number of Non-Detect Data					22	
1176	Number of Missing Values					29	Percent Non-Detects					91.67%	
1177													
1178	Raw Statistics						Log-transformed Statistics						
1179	Minimum Detected					2	Minimum Detected					0.693	
1180	Maximum Detected					3	Maximum Detected					1.099	
1181	Mean of Detected					2.5	Mean of Detected					0.896	
1182	SD of Detected					0.707	SD of Detected					0.287	
1183	Minimum Non-Detect					4	Minimum Non-Detect					1.386	
1184	Maximum Non-Detect					6	Maximum Non-Detect					1.792	
1185													
1186	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					24	
1187	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0	
1188	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%	
1189													
1190	Warning: Data set has only 2 Distinct Detected Values.												
1191	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.												
1192	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).												
1193													
1194	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.												
1195													
1196	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												

	A	B	C	D	E	F	G	H	I	J	K	L
1197	Those methods will return a 'N/A' value on your output display!											
1198												
1199	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
1200	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
1201												
1202												
1203	UCL Statistics											
1204	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1205	Shapiro Wilk Test Statistic			1			Shapiro Wilk Test Statistic			1		
1206	5% Shapiro Wilk Critical Value			N/A			5% Shapiro Wilk Critical Value			N/A		
1207	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1208												
1209	Assuming Normal Distribution						Assuming Lognormal Distribution					
1210	DL/2 Substitution Method						DL/2 Substitution Method					
1211	Mean			2.208			Mean			0.781		
1212	SD			0.359			SD			0.148		
1213	95% DL/2 (t) UCL			2.334			95% H-Stat (DL/2) UCL			2.647		
1214												
1215	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
1216	MLE method failed to converge properly						Mean in Log Scale			N/A		
1217							SD in Log Scale			N/A		
1218							Mean in Original Scale			N/A		
1219							SD in Original Scale			N/A		
1220							95% Percentile Bootstrap UCL			N/A		
1221							95% BCA Bootstrap UCL			N/A		
1222												
1223	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1224	k star (bias corrected)			N/A			Data do not follow a Discernable Distribution (0.05)					
1225	Theta Star			N/A								
1226	nu star			N/A								
1227												
1228	A-D Test Statistic			0.359			Nonparametric Statistics					
1229	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
1230	K-S Test Statistic			N/A			Mean			2.5		
1231	5% K-S Critical Value			N/A			SD			0.5		
1232	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.5		
1233							95% KM (t) UCL			3.357		
1234	Assuming Gamma Distribution						95% KM (z) UCL			3.322		
1235	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			3.686		
1236	Minimum			N/A			95% KM (bootstrap t) UCL			3.5		
1237	Maximum			N/A			95% KM (BCA) UCL			3		
1238	Mean			N/A			95% KM (Percentile Bootstrap) UCL			N/A		
1239	Median			N/A			95% KM (Chebyshev) UCL			4.679		
1240	SD			N/A			97.5% KM (Chebyshev) UCL			5.622		
1241	k star			N/A			99% KM (Chebyshev) UCL			7.475		
1242	Theta star			N/A								
1243	Nu star			N/A			Potential UCLs to Use					
1244	AppChi2			N/A			95% KM (t) UCL			3.357		
1245	95% Gamma Approximate UCL			N/A			95% KM (% Bootstrap) UCL			N/A		
1246	95% Adjusted Gamma UCL			N/A								
1247	Warning: Recommended UCL exceeds the maximum observation											
1248	Note: DL/2 is not a recommended method.											

	A	B	C	D	E	F	G	H	I	J	K	L	
1249													
1250													
1251	Indeno(1,2,3-cd)pyrene												
1252													
1253	General Statistics												
1254	Number of Valid Data					24		Number of Detected Data					2
1255	Number of Distinct Detected Data					1		Number of Non-Detect Data					22
1256	Number of Missing Values					29		Percent Non-Detects					91.67%
1257													
1258	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!												
1259	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).												
1260													
1261	The data set for variable Indeno(1,2,3-cd)pyrene was not processed!												
1262													
1263													
1264													
1265	Iron												
1266													
1267	General Statistics												
1268	Number of Valid Data					24		Number of Detected Data					24
1269	Number of Distinct Detected Data					22		Number of Non-Detect Data					0
1270	Number of Missing Values					30		Percent Non-Detects					0.00%
1271													
1272	Raw Statistics						Log-transformed Statistics						
1273	Minimum Detected					9830		Minimum Detected					9.193
1274	Maximum Detected					24900		Maximum Detected					10.12
1275	Mean of Detected					15083		Mean of Detected					9.598
1276	SD of Detected					3438		SD of Detected					0.216
1277	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A
1278	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A
1279													
1280													
1281	UCL Statistics												
1282	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1283	Shapiro Wilk Test Statistic					0.904		Shapiro Wilk Test Statistic					0.952
1284	5% Shapiro Wilk Critical Value					0.916		5% Shapiro Wilk Critical Value					0.916
1285	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1286													
1287	Assuming Normal Distribution						Assuming Lognormal Distribution						
1288	DL/2 Substitution Method							DL/2 Substitution Method					
1289	Mean					15083		Mean					9.598
1290	SD					3438		SD					0.216
1291	95% DL/2 (t) UCL					16286		95% H-Stat (DL/2) UCL					16342
1292													
1293	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1294	MLE method failed to converge properly						Mean in Log Scale						N/A
1295							SD in Log Scale						N/A
1296							Mean in Original Scale						N/A
1297							SD in Original Scale						N/A
1298							95% Percentile Bootstrap UCL						N/A
1299							95% BCA Bootstrap UCL						N/A
1300													

	A	B	C	D	E	F	G	H	I	J	K	L
1301	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1302	k star (bias corrected)				19.17		Data Follow Appr. Gamma Distribution at 5% Significance Level					
1303	Theta Star				786.8							
1304	nu star				920.1							
1305												
1306	A-D Test Statistic				0.598		Nonparametric Statistics					
1307	5% A-D Critical Value				0.742		Kaplan-Meier (KM) Method					
1308	K-S Test Statistic				0.742						Mean	15083
1309	5% K-S Critical Value				0.178						SD	3366
1310	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean	701.8
1311											95% KM (t) UCL	16286
1312	Assuming Gamma Distribution										95% KM (z) UCL	16237
1313	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	16286
1314	Minimum				9830						95% KM (bootstrap t) UCL	16516
1315	Maximum				24900						95% KM (BCA) UCL	16204
1316	Mean				15083						95% KM (Percentile Bootstrap) UCL	16287
1317	Median				14600						95% KM (Chebyshev) UCL	18142
1318	SD				3438						97.5% KM (Chebyshev) UCL	19466
1319	k star				19.17						99% KM (Chebyshev) UCL	22065
1320	Theta star				786.8							
1321	Nu star				920.1		Potential UCLs to Use					
1322	AppChi2				850.7						95% KM (BCA) UCL	16204
1323	95% Gamma Approximate UCL				16313							
1324	95% Adjusted Gamma UCL				16404							
1325	Note: DL/2 is not a recommended method.											
1326												
1327												
1328	Lead											
1329												
1330	General Statistics											
1331	Number of Valid Data				24		Number of Detected Data				24	
1332	Number of Distinct Detected Data				21		Number of Non-Detect Data				0	
1333	Number of Missing Values				30		Percent Non-Detects				0.00%	
1334												
1335	Raw Statistics						Log-transformed Statistics					
1336	Minimum Detected				3.2		Minimum Detected				1.163	
1337	Maximum Detected				13.9		Maximum Detected				2.632	
1338	Mean of Detected				7.171		Mean of Detected				1.913	
1339	SD of Detected				2.562		SD of Detected				0.341	
1340	Minimum Non-Detect				N/A		Minimum Non-Detect				N/A	
1341	Maximum Non-Detect				N/A		Maximum Non-Detect				N/A	
1342												
1343												
1344	UCL Statistics											
1345	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1346	Shapiro Wilk Test Statistic				0.9		Shapiro Wilk Test Statistic				0.961	
1347	5% Shapiro Wilk Critical Value				0.916		5% Shapiro Wilk Critical Value				0.916	
1348	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1349												
1350	Assuming Normal Distribution						Assuming Lognormal Distribution					
1351	DL/2 Substitution Method						DL/2 Substitution Method					
1352	Mean				7.171		Mean				1.913	

	A	B	C	D	E	F	G	H	I	J	K	L			
1353					SD	2.562					SD	0.341			
1354					95% DL/2 (t) UCL	8.067					95% H-Stat (DL/2) UCL	8.189			
1355															
1356					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method				
1357					MLE method failed to converge properly						Mean in Log Scale	N/A			
1358											SD in Log Scale	N/A			
1359											Mean in Original Scale	N/A			
1360											SD in Original Scale	N/A			
1361											95% Percentile Bootstrap UCL	N/A			
1362											95% BCA Bootstrap UCL	N/A			
1363															
1364					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only				
1365					k star (bias corrected)	7.909					Data appear Gamma Distributed at 5% Significance Level				
1366					Theta Star	0.907									
1367					nu star	379.6									
1368															
1369					A-D Test Statistic	0.646					Nonparametric Statistics				
1370					5% A-D Critical Value	0.745					Kaplan-Meier (KM) Method				
1371					K-S Test Statistic	0.745					Mean	7.171			
1372					5% K-S Critical Value	0.178					SD	2.508			
1373					Data appear Gamma Distributed at 5% Significance Level						SE of Mean	0.523			
1374											95% KM (t) UCL	8.067			
1375					Assuming Gamma Distribution						95% KM (z) UCL	8.031			
1376					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	8.067			
1377					Minimum	3.2					95% KM (bootstrap t) UCL	8.25			
1378					Maximum	13.9					95% KM (BCA) UCL	8.038			
1379					Mean	7.171					95% KM (Percentile Bootstrap) UCL	8.017			
1380					Median	6.35					95% KM (Chebyshev) UCL	9.451			
1381					SD	2.562					97.5% KM (Chebyshev) UCL	10.44			
1382					k star	7.909					99% KM (Chebyshev) UCL	12.37			
1383					Theta star	0.907									
1384					Nu star	379.6					Potential UCLs to Use				
1385					AppChi2	335.5					95% KM (BCA) UCL	8.038			
1386					95% Gamma Approximate UCL	8.115									
1387					95% Adjusted Gamma UCL	8.186									
1388					Note: DL/2 is not a recommended method.										
1389															
1390															
1391					Magnesium										
1392															
1393					General Statistics										
1394					Number of Valid Data	24					Number of Detected Data	24			
1395					Number of Distinct Detected Data	24					Number of Non-Detect Data	0			
1396					Number of Missing Values	30					Percent Non-Detects	0.00%			
1397															
1398					Raw Statistics						Log-transformed Statistics				
1399					Minimum Detected	1840					Minimum Detected	7.518			
1400					Maximum Detected	8090					Maximum Detected	8.998			
1401					Mean of Detected	5457					Mean of Detected	8.559			
1402					SD of Detected	1555					SD of Detected	0.325			
1403					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A			
1404					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A			

	A	B	C	D	E	F	G	H	I	J	K	L	
1405													
1406													
1407	UCL Statistics												
1408	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1409	Shapiro Wilk Test Statistic					0.943	Shapiro Wilk Test Statistic					0.883	
1410	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916	
1411	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1412													
1413	Assuming Normal Distribution						Assuming Lognormal Distribution						
1414	DL/2 Substitution Method						DL/2 Substitution Method						
1415	Mean					5457	Mean					8.559	
1416	SD					1555	SD					0.325	
1417	95% DL/2 (t) UCL					6001	95% H-Stat (DL/2) UCL					6224	
1418													
1419	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1420	MLE method failed to converge properly						Mean in Log Scale						N/A
1421							SD in Log Scale						N/A
1422							Mean in Original Scale						N/A
1423							SD in Original Scale						N/A
1424							95% Percentile Bootstrap UCL						N/A
1425							95% BCA Bootstrap UCL						N/A
1426													
1427	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1428	k star (bias corrected)					9.846	Data appear Normal at 5% Significance Level						
1429	Theta Star					554.2							
1430	nu star					472.6							
1431													
1432	A-D Test Statistic					0.558	Nonparametric Statistics						
1433	5% A-D Critical Value					0.744	Kaplan-Meier (KM) Method						
1434	K-S Test Statistic					0.744	Mean					5457	
1435	5% K-S Critical Value					0.178	SD					1522	
1436	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						317.4
1437							95% KM (t) UCL						6001
1438	Assuming Gamma Distribution						95% KM (z) UCL						5979
1439	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						6001
1440	Minimum					1840	95% KM (bootstrap t) UCL						5980
1441	Maximum					8090	95% KM (BCA) UCL						5975
1442	Mean					5457	95% KM (Percentile Bootstrap) UCL						5980
1443	Median					5325	95% KM (Chebyshev) UCL						6840
1444	SD					1555	97.5% KM (Chebyshev) UCL						7439
1445	k star					9.846	99% KM (Chebyshev) UCL						8614
1446	Theta star					554.2							
1447	Nu star					472.6	Potential UCLs to Use						
1448	AppChi2					423.2	95% KM (t) UCL					6001	
1449	95% Gamma Approximate UCL					6094	95% KM (Percentile Bootstrap) UCL						5980
1450	95% Adjusted Gamma UCL					6141							
1451	Note: DL/2 is not a recommended method.												
1452													
1453													
1454	Manganese												
1455													
1456	General Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
1457	Number of Valid Data					24	Number of Detected Data					24
1458	Number of Distinct Detected Data					23	Number of Non-Detect Data					0
1459	Number of Missing Values					30	Percent Non-Detects					0.00%
1460												
1461	Raw Statistics					Log-transformed Statistics						
1462	Minimum Detected					102	Minimum Detected					4.625
1463	Maximum Detected					457	Maximum Detected					6.125
1464	Mean of Detected					256.5	Mean of Detected					5.478
1465	SD of Detected					96.74	SD of Detected					0.386
1466	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1467	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1468												
1469												
1470	UCL Statistics											
1471	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1472	Shapiro Wilk Test Statistic					0.941	Shapiro Wilk Test Statistic					0.97
1473	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916
1474	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1475												
1476	Assuming Normal Distribution					Assuming Lognormal Distribution						
1477	DL/2 Substitution Method						DL/2 Substitution Method					
1478	Mean					256.5	Mean					5.478
1479	SD					96.74	SD					0.386
1480	95% DL/2 (t) UCL					290.3	95% H-Stat (DL/2) UCL					299.9
1481												
1482	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1483	MLE method failed to converge properly						Mean in Log Scale					N/A
1484							SD in Log Scale					N/A
1485							Mean in Original Scale					N/A
1486							SD in Original Scale					N/A
1487							95% Percentile Bootstrap UCL					N/A
1488							95% BCA Bootstrap UCL					N/A
1489												
1490	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1491	k star (bias corrected)					6.482	Data appear Normal at 5% Significance Level					
1492	Theta Star					39.57						
1493	nu star					311.2						
1494												
1495	A-D Test Statistic					0.331	Nonparametric Statistics					
1496	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
1497	K-S Test Statistic					0.745	Mean					256.5
1498	5% K-S Critical Value					0.178	SD					94.71
1499	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					19.75
1500							95% KM (t) UCL					290.3
1501	Assuming Gamma Distribution						95% KM (z) UCL					289
1502	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					290.3
1503	Minimum					102	95% KM (bootstrap t) UCL					294
1504	Maximum					457	95% KM (BCA) UCL					289.8
1505	Mean					256.5	95% KM (Percentile Bootstrap) UCL					288.7
1506	Median					227	95% KM (Chebyshev) UCL					342.6
1507	SD					96.74	97.5% KM (Chebyshev) UCL					379.8
1508	k star					6.482	99% KM (Chebyshev) UCL					453

	A	B	C	D	E	F	G	H	I	J	K	L
1509	Theta star					39.57						
1510	Nu star					311.2	Potential UCLs to Use					
1511	AppChi2					271.3	95% KM (t) UCL					290.3
1512	95% Gamma Approximate UCL					294.2	95% KM (Percentile Bootstrap) UCL					288.7
1513	95% Adjusted Gamma UCL					297.1						
1514	Note: DL/2 is not a recommended method.											
1515												
1516												
1517	Mercury											
1518												
1519	General Statistics											
1520	Number of Valid Data					24	Number of Detected Data					9
1521	Number of Distinct Detected Data					6	Number of Non-Detect Data					15
1522	Number of Missing Values					30	Percent Non-Detects					62.50%
1523												
1524	Raw Statistics						Log-transformed Statistics					
1525	Minimum Detected					0.004	Minimum Detected					-5.521
1526	Maximum Detected					0.017	Maximum Detected					-4.075
1527	Mean of Detected					0.00756	Mean of Detected					-5.025
1528	SD of Detected					0.00461	SD of Detected					0.536
1529	Minimum Non-Detect					0.007	Minimum Non-Detect					-4.962
1530	Maximum Non-Detect					0.11	Maximum Non-Detect					-2.207
1531												
1532	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					24
1533	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
1534	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
1535												
1536	Warning: There are only 9 Detected Values in this data											
1537	Note: It should be noted that even though bootstrap may be performed on this data set											
1538	the resulting calculations may not be reliable enough to draw conclusions											
1539												
1540	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1541												
1542												
1543	UCL Statistics											
1544	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1545	Shapiro Wilk Test Statistic					0.798	Shapiro Wilk Test Statistic					0.867
1546	5% Shapiro Wilk Critical Value					0.829	5% Shapiro Wilk Critical Value					0.829
1547	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1548												
1549	Assuming Normal Distribution						Assuming Lognormal Distribution					
1550	DL/2 Substitution Method						DL/2 Substitution Method					
1551	Mean					0.0283	Mean					-4.089
1552	SD					0.0236	SD					1.148
1553	95% DL/2 (t) UCL					0.0365	95% H-Stat (DL/2) UCL					0.141
1554												
1555	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1556	MLE method failed to converge properly						Mean in Log Scale					-5.094
1557							SD in Log Scale					0.408
1558							Mean in Original Scale					0.0067
1559							SD in Original Scale					0.00325
1560							95% Percentile Bootstrap UCL					0.00785

	A	B	C	D	E	F	G	H	I	J	K	L	
1613	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
1614													
1615													
1616	UCL Statistics												
1617	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1618	Shapiro Wilk Test Statistic					0.762	Shapiro Wilk Test Statistic					0.845	
1619	5% Shapiro Wilk Critical Value					0.866	5% Shapiro Wilk Critical Value					0.866	
1620	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1621													
1622	Assuming Normal Distribution						Assuming Lognormal Distribution						
1623	DL/2 Substitution Method						DL/2 Substitution Method						
1624	Mean					1.444	Mean					0.296	
1625	SD					0.499	SD					0.409	
1626	95% DL/2 (t) UCL					1.618	95% H-Stat (DL/2) UCL					2.988	
1627													
1628	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
1629	MLE method failed to converge properly						Mean in Log Scale					0.0518	
1630							SD in Log Scale					0.357	
1631							Mean in Original Scale					1.121	
1632							SD in Original Scale					0.424	
1633							95% Percentile Bootstrap UCL					1.262	
1634							95% BCA Bootstrap UCL					1.283	
1635													
1636	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1637	k star (bias corrected)					4.719	Data do not follow a Discernable Distribution (0.05)						
1638	Theta Star					0.243							
1639	nu star					122.7							
1640													
1641	A-D Test Statistic					1.257	Nonparametric Statistics						
1642	5% A-D Critical Value					0.735	Kaplan-Meier (KM) Method						
1643	K-S Test Statistic					0.735	Mean					1.146	
1644	5% K-S Critical Value					0.237	SD					0.492	
1645	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.142	
1646							95% KM (t) UCL					1.39	
1647	Assuming Gamma Distribution						95% KM (z) UCL					1.38	
1648	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.394	
1649	Minimum					0.5	95% KM (bootstrap t) UCL					1.518	
1650	Maximum					2	95% KM (BCA) UCL					1.382	
1651	Mean					1.162	95% KM (Percentile Bootstrap) UCL					1.393	
1652	Median					1	95% KM (Chebyshev) UCL					1.766	
1653	SD					0.423	97.5% KM (Chebyshev) UCL					2.034	
1654	k star					7.111	99% KM (Chebyshev) UCL					2.561	
1655	Theta star					0.163							
1656	Nu star					341.3	Potential UCLs to Use						
1657	AppChi2					299.5	95% KM (t) UCL					1.39	
1658	95% Gamma Approximate UCL					1.325	95% KM (% Bootstrap) UCL					1.393	
1659	95% Adjusted Gamma UCL					1.337							
1660	Note: DL/2 is not a recommended method.												
1661													
1662													
1663	Nickel												
1664													

	A	B	C	D	E	F	G	H	I	J	K	L
1665	General Statistics											
1666	Number of Valid Data					24	Number of Detected Data					24
1667	Number of Distinct Detected Data					20	Number of Non-Detect Data					0
1668	Number of Missing Values					30	Percent Non-Detects					0.00%
1669												
1670	Raw Statistics						Log-transformed Statistics					
1671	Minimum Detected					0.68	Minimum Detected					-0.386
1672	Maximum Detected					15.8	Maximum Detected					2.76
1673	Mean of Detected					8.774	Mean of Detected					2.051
1674	SD of Detected					3.242	SD of Detected					0.629
1675	Minimum Non-Detect					N/A	Minimum Non-Detect					N/A
1676	Maximum Non-Detect					N/A	Maximum Non-Detect					N/A
1677												
1678												
1679	UCL Statistics											
1680	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1681	Shapiro Wilk Test Statistic					0.919	Shapiro Wilk Test Statistic					0.664
1682	5% Shapiro Wilk Critical Value					0.916	5% Shapiro Wilk Critical Value					0.916
1683	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1684												
1685	Assuming Normal Distribution						Assuming Lognormal Distribution					
1686	DL/2 Substitution Method						DL/2 Substitution Method					
1687	Mean					8.774	Mean					2.051
1688	SD					3.242	SD					0.629
1689	95% DL/2 (t) UCL					9.908	95% H-Stat (DL/2) UCL					12.47
1690												
1691	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1692	MLE method failed to converge properly						Mean in Log Scale					N/A
1693							SD in Log Scale					N/A
1694							Mean in Original Scale					N/A
1695							SD in Original Scale					N/A
1696							95% Percentile Bootstrap UCL					N/A
1697							95% BCA Bootstrap UCL					N/A
1698												
1699	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1700	k star (bias corrected)					3.799	Data appear Normal at 5% Significance Level					
1701	Theta Star					2.309						
1702	nu star					182.4						
1703												
1704	A-D Test Statistic					1.91	Nonparametric Statistics					
1705	5% A-D Critical Value					0.748	Kaplan-Meier (KM) Method					
1706	K-S Test Statistic					0.748	Mean					8.774
1707	5% K-S Critical Value					0.179	SD					3.174
1708	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.662
1709							95% KM (t) UCL					9.908
1710	Assuming Gamma Distribution						95% KM (z) UCL					9.863
1711	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9.908
1712	Minimum					0.68	95% KM (bootstrap t) UCL					9.909
1713	Maximum					15.8	95% KM (BCA) UCL					9.821
1714	Mean					8.774	95% KM (Percentile Bootstrap) UCL					9.812
1715	Median					8.65	95% KM (Chebyshev) UCL					11.66
1716	SD					3.242	97.5% KM (Chebyshev) UCL					12.91

	A	B	C	D	E	F	G	H	I	J	K	L	
1717					k star	3.799				99% KM (Chebyshev) UCL		15.36	
1718					Theta star	2.309							
1719					Nu star	182.4				Potential UCLs to Use			
1720					AppChi2	152.1				95% KM (t) UCL		9.908	
1721					95% Gamma Approximate UCL	10.52				95% KM (Percentile Bootstrap) UCL		9.812	
1722					95% Adjusted Gamma UCL	10.65							
1723	Note: DL/2 is not a recommended method.												
1724													
1725													
1726	Phenanthrene												
1727													
1728	General Statistics												
1729					Number of Valid Data	24				Number of Detected Data		4	
1730					Number of Distinct Detected Data	3				Number of Non-Detect Data		20	
1731					Number of Missing Values	29				Percent Non-Detects		83.33%	
1732													
1733	Raw Statistics						Log-transformed Statistics						
1734					Minimum Detected	0.2				Minimum Detected		-1.609	
1735					Maximum Detected	0.9				Maximum Detected		-0.105	
1736					Mean of Detected	0.5				Mean of Detected		-0.92	
1737					SD of Detected	0.356				SD of Detected		0.802	
1738					Minimum Non-Detect	4				Minimum Non-Detect		1.386	
1739					Maximum Non-Detect	6				Maximum Non-Detect		1.792	
1740													
1741	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		24
1742	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		0
1743	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		100.00%
1744													
1745	Warning: There are only 3 Distinct Detected Values in this data set												
1746	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
1747	Those methods will return a 'N/A' value on your output display!												
1748													
1749	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
1750	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
1751													
1752													
1753	UCL Statistics												
1754	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1755					Shapiro Wilk Test Statistic	0.84				Shapiro Wilk Test Statistic		0.801	
1756					5% Shapiro Wilk Critical Value	0.748				5% Shapiro Wilk Critical Value		0.748	
1757	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1758													
1759	Assuming Normal Distribution						Assuming Lognormal Distribution						
1760					DL/2 Substitution Method					DL/2 Substitution Method			
1761					Mean	1.875				Mean		0.478	
1762					SD	0.692				SD		0.71	
1763					95% DL/2 (t) UCL	2.117				95% H-Stat (DL/2) UCL		4.844	
1764													
1765	Maximum Likelihood Estimate(MLE) Method						N/A				Log ROS Method		
1766	MLE method failed to converge properly										Mean in Log Scale		-0.92
1767											SD in Log Scale		0.798
1768											Mean in Original Scale		0.535

	A	B	C	D	E	F	G	H	I	J	K	L
1769											SD in Original Scale	0.436
1770											95% Percentile Bootstrap UCL	0.692
1771											95% BCA Bootstrap UCL	0.704
1772												
1773	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1774				k star (bias corrected)		0.755	Data appear Normal at 5% Significance Level					
1775				Theta Star		0.662						
1776				nu star		6.043						
1777												
1778				A-D Test Statistic		0.547	Nonparametric Statistics					
1779				5% A-D Critical Value		0.66	Kaplan-Meier (KM) Method					
1780				K-S Test Statistic		0.66	Mean					0.5
1781				5% K-S Critical Value		0.397	SD					0.308
1782	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.178	
1783							95% KM (t) UCL					0.805
1784	Assuming Gamma Distribution					95% KM (z) UCL					0.793	
1785	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.845	
1786				Minimum		0.00924	95% KM (bootstrap t) UCL					0.963
1787				Maximum		1.131	95% KM (BCA) UCL					0.8
1788				Mean		0.506	95% KM (Percentile Bootstrap) UCL					0.82
1789				Median		0.477	95% KM (Chebyshev) UCL					1.276
1790				SD		0.335	97.5% KM (Chebyshev) UCL					1.611
1791				k star		1.339	99% KM (Chebyshev) UCL					2.271
1792				Theta star		0.378						
1793				Nu star		64.26	Potential UCLs to Use					
1794				AppChi2		46.82	95% KM (t) UCL					0.805
1795				95% Gamma Approximate UCL		0.695	95% KM (Percentile Bootstrap) UCL					0.82
1796				95% Adjusted Gamma UCL		N/A						
1797	Note: DL/2 is not a recommended method.											
1798												
1799												
1800	Potassium											
1801												
1802	General Statistics											
1803				Number of Valid Data		24					Number of Detected Data	24
1804				Number of Distinct Detected Data		23					Number of Non-Detect Data	0
1805				Number of Missing Values		30					Percent Non-Detects	0.00%
1806												
1807	Raw Statistics					Log-transformed Statistics						
1808				Minimum Detected		747					Minimum Detected	6.616
1809				Maximum Detected		2430					Maximum Detected	7.796
1810				Mean of Detected		1444					Mean of Detected	7.234
1811				SD of Detected		430.3					SD of Detected	0.29
1812				Minimum Non-Detect		N/A					Minimum Non-Detect	N/A
1813				Maximum Non-Detect		N/A					Maximum Non-Detect	N/A
1814												
1815												
1816	UCL Statistics											
1817	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1818				Shapiro Wilk Test Statistic		0.937					Shapiro Wilk Test Statistic	0.976
1819				5% Shapiro Wilk Critical Value		0.916					5% Shapiro Wilk Critical Value	0.916
1820	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L		
1821														
1822	Assuming Normal Distribution						Assuming Lognormal Distribution							
1823	DL/2 Substitution Method						DL/2 Substitution Method							
1824	Mean						Mean						7.234	
1825	SD						SD						0.29	
1826	95% DL/2 (t) UCL						95% H-Stat (DL/2) UCL						1613	
1827														
1828	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
1829	MLE method failed to converge properly						Mean in Log Scale						N/A	
1830							SD in Log Scale						N/A	
1831							Mean in Original Scale						N/A	
1832							SD in Original Scale						N/A	
1833							95% Percentile Bootstrap UCL						N/A	
1834							95% BCA Bootstrap UCL						N/A	
1835														
1836	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1837	k star (bias corrected)						10.91						Data appear Normal at 5% Significance Level	
1838	Theta Star						132.3							
1839	nu star						523.9							
1840														
1841	A-D Test Statistic						0.361						Nonparametric Statistics	
1842	5% A-D Critical Value						0.744						Kaplan-Meier (KM) Method	
1843	K-S Test Statistic						0.744						Mean	1444
1844	5% K-S Critical Value						0.178						SD	421.3
1845	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						87.84	
1846							95% KM (t) UCL						1595	
1847	Assuming Gamma Distribution						95% KM (z) UCL						1588	
1848	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						1595	
1849	Minimum						747						95% KM (bootstrap t) UCL	1613
1850	Maximum						2430						95% KM (BCA) UCL	1597
1851	Mean						1444						95% KM (Percentile Bootstrap) UCL	1591
1852	Median						1405						95% KM (Chebyshev) UCL	1827
1853	SD						430.3						97.5% KM (Chebyshev) UCL	1993
1854	k star						10.91						99% KM (Chebyshev) UCL	2318
1855	Theta star						132.3							
1856	Nu star						523.9						Potential UCLs to Use	
1857	AppChi2						471.8						95% KM (t) UCL	1595
1858	95% Gamma Approximate UCL						1603						95% KM (Percentile Bootstrap) UCL	1591
1859	95% Adjusted Gamma UCL						1615							
1860	Note: DL/2 is not a recommended method.													
1861														
1862														
1863	Pyrene													
1864														
1865	General Statistics													
1866	Number of Valid Data						24						Number of Detected Data	2
1867	Number of Distinct Detected Data						1						Number of Non-Detect Data	22
1868	Number of Missing Values						29						Percent Non-Detects	91.67%
1869														
1870	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
1871	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
1872														

	A	B	C	D	E	F	G	H	I	J	K	L	
1873	The data set for variable Pyrene was not processed!												
1874													
1875													
1876													
1877	Selenium												
1878													
1879	General Statistics												
1880	Number of Valid Data					21		Number of Detected Data					13
1881	Number of Distinct Detected Data					10		Number of Non-Detect Data					8
1882	Number of Missing Values					33		Percent Non-Detects					38.10%
1883													
1884	Raw Statistics						Log-transformed Statistics						
1885	Minimum Detected					1.8		Minimum Detected					0.588
1886	Maximum Detected					5.7		Maximum Detected					1.74
1887	Mean of Detected					3		Mean of Detected					1.048
1888	SD of Detected					1.051		SD of Detected					0.323
1889	Minimum Non-Detect					0.76		Minimum Non-Detect					-0.274
1890	Maximum Non-Detect					3.6		Maximum Non-Detect					1.281
1891													
1892	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					19	
1893	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					2	
1894	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					90.48%	
1895													
1896	UCL Statistics												
1897	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1898	Shapiro Wilk Test Statistic					0.885		Shapiro Wilk Test Statistic					0.96
1899	5% Shapiro Wilk Critical Value					0.866		5% Shapiro Wilk Critical Value					0.866
1900	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1901													
1902	Assuming Normal Distribution						Assuming Lognormal Distribution						
1903	DL/2 Substitution Method							DL/2 Substitution Method					
1904	Mean					2.399		Mean					0.75
1905	SD					1.166		SD					0.557
1906	95% DL/2 (t) UCL					2.838		95% H-Stat (DL/2) UCL					3.52
1907													
1908	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1909	MLE method failed to converge properly						Mean in Log Scale					0.925	
1910							SD in Log Scale					0.327	
1911							Mean in Original Scale					2.66	
1912							SD in Original Scale					0.968	
1913							95% Percentile Bootstrap UCL					3.042	
1914							95% BCA Bootstrap UCL					3.069	
1915													
1916	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1917	k star (bias corrected)					7.852		Data appear Normal at 5% Significance Level					
1918	Theta Star					0.382							
1919	nu star					204.2							
1920													
1921	A-D Test Statistic					0.28		Nonparametric Statistics					
1922	5% A-D Critical Value					0.734		Kaplan-Meier (KM) Method					
1923	K-S Test Statistic					0.734		Mean					2.704
1924	5% K-S Critical Value					0.237		SD					0.931

	A	B	C	D	E	F	G	H	I	J	K	L		
1925	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	0.223	
1926												95% KM (t) UCL	3.089	
1927	Assuming Gamma Distribution											95% KM (z) UCL	3.071	
1928	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	3.088	
1929	Minimum						1.647					95% KM (bootstrap t) UCL	3.205	
1930	Maximum						5.7					95% KM (BCA) UCL	3.127	
1931	Mean						2.956					95% KM (Percentile Bootstrap) UCL	3.092	
1932	Median						3					95% KM (Chebyshev) UCL	3.678	
1933	SD						0.894					97.5% KM (Chebyshev) UCL	4.099	
1934	k star						10.8					99% KM (Chebyshev) UCL	4.927	
1935	Theta star						0.274							
1936	Nu star						453.5				Potential UCLs to Use			
1937	AppChi2						405.2					95% KM (t) UCL	3.089	
1938	95% Gamma Approximate UCL						3.309					95% KM (Percentile Bootstrap) UCL	3.092	
1939	95% Adjusted Gamma UCL						3.338							
1940	Note: DL/2 is not a recommended method.													
1941														
1942														
1943	Sodium													
1944														
1945	General Statistics													
1946	Number of Valid Data						24	Number of Detected Data						20
1947	Number of Distinct Detected Data						20	Number of Non-Detect Data						4
1948	Number of Missing Values						30	Percent Non-Detects						16.67%
1949														
1950	Raw Statistics						Log-transformed Statistics							
1951	Minimum Detected						49.3	Minimum Detected						3.898
1952	Maximum Detected						320	Maximum Detected						5.768
1953	Mean of Detected						109.4	Mean of Detected						4.586
1954	SD of Detected						61.14	SD of Detected						0.454
1955	Minimum Non-Detect						88	Minimum Non-Detect						4.477
1956	Maximum Non-Detect						112	Maximum Non-Detect						4.718
1957														
1958	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect						17
1959	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected						7
1960	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage						70.83%
1961														
1962	UCL Statistics													
1963	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1964	Shapiro Wilk Test Statistic						0.773	Shapiro Wilk Test Statistic						0.956
1965	5% Shapiro Wilk Critical Value						0.905	5% Shapiro Wilk Critical Value						0.905
1966	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1967														
1968	Assuming Normal Distribution						Assuming Lognormal Distribution							
1969	DL/2 Substitution Method							DL/2 Substitution Method						
1970	Mean						99.25	Mean						4.468
1971	SD						60.25	SD						0.495
1972	95% DL/2 (t) UCL						120.3	95% H-Stat (DL/2) UCL						120.1
1973														
1974	Maximum Likelihood Estimate(MLE) Method							Log ROS Method						
1975	Mean						50.28	Mean in Log Scale						4.531
1976	SD						104.3	SD in Log Scale						0.432

	A	B	C	D	E	F	G	H	I	J	K	L
1977	95% MLE (t) UCL					86.76	Mean in Original Scale					103
1978	95% MLE (Tiku) UCL					116	SD in Original Scale					57.52
1979							95% Percentile Bootstrap UCL					123.3
1980							95% BCA Bootstrap UCL					131
1981												
1982	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1983	k star (bias corrected)					4.067	Data appear Gamma Distributed at 5% Significance Level					
1984	Theta Star					26.9						
1985	nu star					162.7						
1986												
1987	A-D Test Statistic					0.504	Nonparametric Statistics					
1988	5% A-D Critical Value					0.745	Kaplan-Meier (KM) Method					
1989	K-S Test Statistic					0.745	Mean					102.9
1990	5% K-S Critical Value					0.195	SD					56.62
1991	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					11.93
1992							95% KM (t) UCL					123.4
1993	Assuming Gamma Distribution						95% KM (z) UCL					122.6
1994	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					123.3
1995	Minimum					49.3	95% KM (bootstrap t) UCL					133.5
1996	Maximum					320	95% KM (BCA) UCL					125.9
1997	Mean					106.6	95% KM (Percentile Bootstrap) UCL					124.3
1998	Median					96.75	95% KM (Chebyshev) UCL					154.9
1999	SD					56.12	97.5% KM (Chebyshev) UCL					177.4
2000	k star					4.829	99% KM (Chebyshev) UCL					221.7
2001	Theta star					22.09						
2002	Nu star					231.8	Potential UCLs to Use					
2003	AppChi2					197.5	95% KM (BCA) UCL					125.9
2004	95% Gamma Approximate UCL					125.1						
2005	95% Adjusted Gamma UCL					126.5						
2006	Note: DL/2 is not a recommended method.											
2007												
2008												
2009	Uranium											
2010												
2011	General Statistics											
2012	Number of Valid Data					24	Number of Detected Data					3
2013	Number of Distinct Detected Data					3	Number of Non-Detect Data					21
2014	Number of Missing Values					30	Percent Non-Detects					87.50%
2015												
2016	Raw Statistics						Log-transformed Statistics					
2017	Minimum Detected					4.6	Minimum Detected					1.526
2018	Maximum Detected					5.4	Maximum Detected					1.686
2019	Mean of Detected					5.067	Mean of Detected					1.62
2020	SD of Detected					0.416	SD of Detected					0.0838
2021	Minimum Non-Detect					14.5	Minimum Non-Detect					2.674
2022	Maximum Non-Detect					26.8	Maximum Non-Detect					3.288
2023												
2024	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					24
2025	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
2026	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
2027												
2028	Warning: There are only 3 Distinct Detected Values in this data set											

	A	B	C	D	E	F	G	H	I	J	K	L
2029	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
2030	Those methods will return a 'N/A' value on your output display!											
2031												
2032	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
2033	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
2034												
2035												
2036	UCL Statistics											
2037	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2038	Shapiro Wilk Test Statistic			0.923			Shapiro Wilk Test Statistic			0.915		
2039	5% Shapiro Wilk Critical Value			0.767			5% Shapiro Wilk Critical Value			0.767		
2040	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2041												
2042	Assuming Normal Distribution						Assuming Lognormal Distribution					
2043	DL/2 Substitution Method						DL/2 Substitution Method					
2044	Mean			9.469			Mean			2.216		
2045	SD			2.229			SD			0.27		
2046	95% DL/2 (t) UCL			10.25			95% H-Stat (DL/2) UCL			12.96		
2047												
2048	Maximum Likelihood Estimate(MLE) Method						N/A					
2049	MLE method failed to converge properly						Log ROS Method					
2050							Mean in Log Scale			1.62		
2051							SD in Log Scale			0.0327		
2052							Mean in Original Scale			5.058		
2053							SD in Original Scale			0.164		
2054							95% Percentile Bootstrap UCL			5.109		
2055							95% BCA Bootstrap UCL			5.11		
2056	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2057	k star (bias corrected)			N/A			Data appear Normal at 5% Significance Level					
2058	Theta Star			N/A								
2059	nu star			N/A								
2060												
2061	A-D Test Statistic			0.363			Nonparametric Statistics					
2062	5% A-D Critical Value			N/A			Kaplan-Meier (KM) Method					
2063	K-S Test Statistic			N/A			Mean			5.067		
2064	5% K-S Critical Value			N/A			SD			0.34		
2065	Data not Gamma Distributed at 5% Significance Level						SE of Mean			0.24		
2066							95% KM (t) UCL			5.479		
2067	Assuming Gamma Distribution						95% KM (z) UCL			5.462		
2068	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			5.561		
2069	Minimum			N/A			95% KM (bootstrap t) UCL			5.527		
2070	Maximum			N/A			95% KM (BCA) UCL			5.4		
2071	Mean			N/A			95% KM (Percentile Bootstrap) UCL			5.4		
2072	Median			N/A			95% KM (Chebyshev) UCL			6.114		
2073	SD			N/A			97.5% KM (Chebyshev) UCL			6.568		
2074	k star			N/A			99% KM (Chebyshev) UCL			7.458		
2075	Theta star			N/A								
2076	Nu star			N/A			Potential UCLs to Use					
2077	AppChi2			N/A			95% KM (t) UCL			5.479		
2078	95% Gamma Approximate UCL			N/A			95% KM (Percentile Bootstrap) UCL			5.4		
2079	95% Adjusted Gamma UCL			N/A								
2080	Warning: Recommended UCL exceeds the maximum observation											

	A	B	C	D	E	F	G	H	I	J	K	L		
2081	Note: DL/2 is not a recommended method.													
2082														
2083														
2084	Vanadium													
2085														
2086	General Statistics													
2087	Number of Valid Data					24		Number of Detected Data					24	
2088	Number of Distinct Detected Data					19		Number of Non-Detect Data					0	
2089	Number of Missing Values					30		Percent Non-Detects					0.00%	
2090														
2091	Raw Statistics						Log-transformed Statistics							
2092	Minimum Detected					8.9		Minimum Detected					2.186	
2093	Maximum Detected					33.4		Maximum Detected					3.509	
2094	Mean of Detected					17.42		Mean of Detected					2.816	
2095	SD of Detected					5.426		SD of Detected					0.287	
2096	Minimum Non-Detect					N/A		Minimum Non-Detect					N/A	
2097	Maximum Non-Detect					N/A		Maximum Non-Detect					N/A	
2098														
2099														
2100	UCL Statistics													
2101	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
2102	Shapiro Wilk Test Statistic					0.87		Shapiro Wilk Test Statistic					0.936	
2103	5% Shapiro Wilk Critical Value					0.916		5% Shapiro Wilk Critical Value					0.916	
2104	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
2105														
2106	Assuming Normal Distribution						Assuming Lognormal Distribution							
2107	DL/2 Substitution Method							DL/2 Substitution Method						
2108	Mean					17.42		Mean					2.816	
2109	SD					5.426		SD					0.287	
2110	95% DL/2 (t) UCL					19.32		95% H-Stat (DL/2) UCL					19.41	
2111														
2112	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
2113	MLE method failed to converge properly						Mean in Log Scale					N/A		
2114							SD in Log Scale					N/A		
2115							Mean in Original Scale					N/A		
2116							SD in Original Scale					N/A		
2117							95% Percentile Bootstrap UCL					N/A		
2118							95% BCA Bootstrap UCL					N/A		
2119														
2120	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2121	k star (bias corrected)					10.8		Data appear Lognormal at 5% Significance Level						
2122	Theta Star					1.614								
2123	nu star					518.2								
2124														
2125	A-D Test Statistic					0.907		Nonparametric Statistics						
2126	5% A-D Critical Value					0.744		Kaplan-Meier (KM) Method						
2127	K-S Test Statistic					0.744		Mean					17.42	
2128	5% K-S Critical Value					0.178		SD					5.312	
2129	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.108		
2130							95% KM (t) UCL					19.32		
2131	Assuming Gamma Distribution						95% KM (z) UCL					19.24		
2132	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					19.32	

	A	B	C	D	E	F	G	H	I	J	K	L
2133					Minimum	8.9				95% KM (bootstrap t) UCL		19.91
2134					Maximum	33.4				95% KM (BCA) UCL		19.2
2135					Mean	17.42				95% KM (Percentile Bootstrap) UCL		19.18
2136					Median	15				95% KM (Chebyshev) UCL		22.25
2137					SD	5.426				97.5% KM (Chebyshev) UCL		24.34
2138					k star	10.8				99% KM (Chebyshev) UCL		28.44
2139					Theta star	1.614						
2140					Nu star	518.2				Potential UCLs to Use		
2141					AppChi2	466.4				95% KM (Chebyshev) UCL		22.25
2142					95% Gamma Approximate UCL	19.36						
2143					95% Adjusted Gamma UCL	19.5						
2144	Note: DL/2 is not a recommended method.											
2145												
2146												
2147	Zinc											
2148												
2149	General Statistics											
2150					Number of Valid Data	24				Number of Detected Data		24
2151					Number of Distinct Detected Data	23				Number of Non-Detect Data		0
2152					Number of Missing Values	30				Percent Non-Detects		0.00%
2153												
2154	Raw Statistics						Log-transformed Statistics					
2155					Minimum Detected	27.9				Minimum Detected		3.329
2156					Maximum Detected	104				Maximum Detected		4.644
2157					Mean of Detected	56.6				Mean of Detected		3.951
2158					SD of Detected	25.22				SD of Detected		0.409
2159					Minimum Non-Detect	N/A				Minimum Non-Detect		N/A
2160					Maximum Non-Detect	N/A				Maximum Non-Detect		N/A
2161												
2162												
2163	UCL Statistics											
2164	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2165					Shapiro Wilk Test Statistic	0.82				Shapiro Wilk Test Statistic		0.904
2166					5% Shapiro Wilk Critical Value	0.916				5% Shapiro Wilk Critical Value		0.916
2167	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
2168												
2169	Assuming Normal Distribution						Assuming Lognormal Distribution					
2170					DL/2 Substitution Method					DL/2 Substitution Method		
2171					Mean	56.6				Mean		3.951
2172					SD	25.22				SD		0.409
2173					95% DL/2 (t) UCL	65.43				95% H-Stat (DL/2) UCL		66.46
2174												
2175					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
2176	MLE method failed to converge properly						Mean in Log Scale					
2177							SD in Log Scale					
2178							Mean in Original Scale					
2179							SD in Original Scale					
2180							95% Percentile Bootstrap UCL					
2181							95% BCA Bootstrap UCL					
2182												
2183	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2184					k star (bias corrected)	5.338				Data do not follow a Discernable Distribution (0.05)		

	A	B	C	D	E	F	G	H	I	J	K	L				
1	General UCL Statistics for Data Sets with Non-Detects															
2	User Selected Options															
3	From File		I:\Upper Columbia River\HHRA Workplan\Risk Calcs\EPCs\Surface Water_ProUCL\unfiltered only\SW_Reach1													
4	Full Precision		OFF													
5	Confidence Coefficient		95%													
6	Number of Bootstrap Operations		2000													
7																
8																
9	Arsenic															
10																
11	General Statistics															
12	Number of Valid Data				65				Number of Detected Data				58			
13	Number of Distinct Detected Data				37				Number of Non-Detect Data				7			
14	Number of Missing Values				8				Percent Non-Detects				10.77%			
15																
16	Raw Statistics						Log-transformed Statistics									
17	Minimum Detected			0.00019			Minimum Detected			-8.568						
18	Maximum Detected			0.00101			Maximum Detected			-6.898						
19	Mean of Detected			0.000441			Mean of Detected			-7.772						
20	SD of Detected			0.0001425			SD of Detected			0.3						
21	Minimum Non-Detect			0.001			Minimum Non-Detect			-6.908						
22	Maximum Non-Detect			0.03			Maximum Non-Detect			-3.507						
23																
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						65			
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0			
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%			
27																
28	UCL Statistics															
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only									
30	Lilliefors Test Statistic			0.121			Lilliefors Test Statistic			0.071						
31	5% Lilliefors Critical Value			0.116			5% Lilliefors Critical Value			0.116						
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level									
33																
34	Assuming Normal Distribution						Assuming Lognormal Distribution									
35	DL/2 Substitution Method						DL/2 Substitution Method									
36	Mean			0.00112			Mean			-7.597						
37	SD			0.00308			SD			0.806						
38	95% DL/2 (t) UCL			0.00175			95% H-Stat (DL/2) UCL			0.00186						
39																
40	Maximum Likelihood Estimate(MLE) Method						Log ROS Method									
41	MLE method failed to converge properly						Mean in Log Scale						-7.773			
42							SD in Log Scale						0.289			
43							Mean in Original Scale						0.0004394			
44							SD in Original Scale						0.0001369			
45							95% Percentile Bootstrap UCL						0.0004678			
46							95% BCA Bootstrap UCL						0.0004699			
47																
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only									
49	k star (bias corrected)			10.59			Data appear Gamma Distributed at 5% Significance Level									
50	Theta Star			4.163E-05												
51	nu star			1229												
52																

	A	B	C	D	E	F	G	H	I	J	K	L
53	A-D Test Statistic					0.414	Nonparametric Statistics					
54	5% A-D Critical Value					0.751	Kaplan-Meier (KM) Method					
55	K-S Test Statistic					0.751	Mean					0.0004404
56	5% K-S Critical Value					0.117	SD					0.0001401
57	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1.84E-05
58							95% KM (t) UCL					0.0004711
59	Assuming Gamma Distribution						95% KM (z) UCL					0.0004706
60	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0004711
61	Minimum					0.00019	95% KM (bootstrap t) UCL					0.0004743
62	Maximum					0.00101	95% KM (BCA) UCL					0.0004715
63	Mean					0.0004428	95% KM (Percentile Bootstrap) UCL					0.0004704
64	Median					0.00041	95% KM (Chebyshev) UCL					0.0005206
65	SD					0.0001361	97.5% KM (Chebyshev) UCL					0.0005553
66	k star					11.63	99% KM (Chebyshev) UCL					0.0006234
67	Theta star					3.808E-05						
68	Nu star					1512	Potential UCLs to Use					
69	AppChi2					1422	95% KM (BCA) UCL					0.0004715
70	95% Gamma Approximate UCL					0.0004705						
71	95% Adjusted Gamma UCL					0.0004712						
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Cadmium											
76												
77	General Statistics											
78	Number of Valid Data					55	Number of Detected Data					7
79	Number of Distinct Detected Data					7	Number of Non-Detect Data					48
80	Number of Missing Values					18	Percent Non-Detects					87.27%
81												
82	Raw Statistics						Log-transformed Statistics					
83	Minimum Detected					0.00007	Minimum Detected					-9.567
84	Maximum Detected					0.00053	Maximum Detected					-7.543
85	Mean of Detected					0.00019	Mean of Detected					-8.798
86	SD of Detected					0.0001602	SD of Detected					0.687
87	Minimum Non-Detect					0.0001	Minimum Non-Detect					-9.21
88	Maximum Non-Detect					0.003	Maximum Non-Detect					-5.809
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					55
91	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
92	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
93												
94	Warning: There are only 7 Detected Values in this data											
95	Note: It should be noted that even though bootstrap may be performed on this data set											
96	the resulting calculations may not be reliable enough to draw conclusions											
97												
98	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
99												
100												
101	UCL Statistics											
102	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
103	Lilliefors Test Statistic					0.753	Lilliefors Test Statistic					0.933
104	5% Lilliefors Critical Value					0.803	5% Lilliefors Critical Value					0.803

	A	B	C	D	E	F	G	H	I	J	K	L		
105	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
106														
107	Assuming Normal Distribution						Assuming Lognormal Distribution							
108	DL/2 Substitution Method						DL/2 Substitution Method							
109	Mean						9.418E-05	Mean						-9.701
110	SD						0.0002058	SD						0.619
111	95% DL/2 (t) UCL						0.0001406	95% H-Stat (DL/2) UCL						8.831E-05
112														
113	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
114	MLE method failed to converge properly						Mean in Log Scale						-9.489	
115							SD in Log Scale						0.558	
116							Mean in Original Scale						9.014E-05	
117							SD in Original Scale						7.265E-05	
118							95% Percentile Bootstrap UCL						0.0001078	
119							95% BCA Bootstrap UCL						0.0001139	
120														
121	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
122	k star (bias corrected)						1.429	Data appear Gamma Distributed at 5% Significance Level						
123	Theta Star						0.000133							
124	nu star						20							
125														
126	A-D Test Statistic						0.439	Nonparametric Statistics						
127	5% A-D Critical Value						0.714	Kaplan-Meier (KM) Method						
128	K-S Test Statistic						0.714	Mean						9.426E-05
129	5% K-S Critical Value						0.315	SD						6.561E-05
130	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						1.179E-05	
131							95% KM (t) UCL						0.000114	
132	Assuming Gamma Distribution						95% KM (z) UCL						0.0001137	
133	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0001202	
134	Minimum						5.61E-05	95% KM (bootstrap t) UCL						0.0001392
135	Maximum						0.00053	95% KM (BCA) UCL						0.0001498
136	Mean						0.0001383	95% KM (Percentile Bootstrap) UCL						0.0001293
137	Median						0.0001265	95% KM (Chebyshev) UCL						0.0001457
138	SD						7.283E-05	97.5% KM (Chebyshev) UCL						0.0001679
139	k star						4.851	99% KM (Chebyshev) UCL						0.0002116
140	Theta star						2.85E-05							
141	Nu star						533.6	Potential UCLs to Use						
142	AppChi2						481	95% KM (t) UCL						0.000114
143	95% Gamma Approximate UCL						0.0001534							
144	95% Adjusted Gamma UCL						0.0001538							
145	Note: DL/2 is not a recommended method.													
146														
147														
148	Chromium													
149														
150	General Statistics													
151	Number of Valid Data						54	Number of Detected Data						8
152	Number of Distinct Detected Data						8	Number of Non-Detect Data						46
153	Number of Missing Values						19	Percent Non-Detects						85.19%
154														
155	Raw Statistics						Log-transformed Statistics							
156	Minimum Detected						0.00017	Minimum Detected						-8.68

	A	B	C	D	E	F	G	H	I	J	K	L	
157				Maximum Detected		0.0011				Maximum Detected		-6.812	
158				Mean of Detected		0.0004738				Mean of Detected		-7.844	
159				SD of Detected		0.0003291				SD of Detected		0.64	
160				Minimum Non-Detect		0.0002				Minimum Non-Detect		-8.517	
161				Maximum Non-Detect		0.005				Maximum Non-Detect		-5.298	
162													
163	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				54	
164	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				0	
165	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				100.00%	
166													
167	Warning: There are only 8 Detected Values in this data												
168	Note: It should be noted that even though bootstrap may be performed on this data set												
169	the resulting calculations may not be reliable enough to draw conclusions												
170													
171	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
172													
173													
174	UCL Statistics												
175	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
176				Lilliefors Test Statistic		0.834				Lilliefors Test Statistic		0.932	
177				5% Lilliefors Critical Value		0.818				5% Lilliefors Critical Value		0.818	
178	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
179													
180	Assuming Normal Distribution						Assuming Lognormal Distribution						
181				DL/2 Substitution Method						DL/2 Substitution Method			
182				Mean		0.0004582				Mean		-8.055	
183				SD		0.0006044				SD		0.698	
184				95% DL/2 (t) UCL		0.0005958				95% H-Stat (DL/2) UCL		0.0005057	
185													
186				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
187	MLE method failed to converge properly										Mean in Log Scale		-8.261
188										SD in Log Scale		0.489	
189										Mean in Original Scale		0.0002932	
190										SD in Original Scale		0.0001733	
191										95% Percentile Bootstrap UCL		0.000333	
192										95% BCA Bootstrap UCL		0.0003405	
193													
194	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
195				k star (bias corrected)		1.835				Data appear Normal at 5% Significance Level			
196				Theta Star		0.0002581							
197				nu star		29.36							
198													
199				A-D Test Statistic		0.46				Nonparametric Statistics			
200				5% A-D Critical Value		0.722				Kaplan-Meier (KM) Method			
201				K-S Test Statistic		0.722				Mean		0.0002844	
202				5% K-S Critical Value		0.297				SD		0.0001609	
203	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		3.384E-05
204										95% KM (t) UCL		0.000341	
205	Assuming Gamma Distribution										95% KM (z) UCL		0.0003401
206				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		0.0003427	
207				Minimum		0.00017				95% KM (bootstrap t) UCL		0.0003453	
208				Maximum		0.0011				95% KM (BCA) UCL		0.0003547	

	A	B	C	D	E	F	G	H	I	J	K	L	
209					Mean	0.0004539					95% KM (Percentile Bootstrap) UCL	0.0003517	
210					Median	0.0004357					95% KM (Chebyshev) UCL	0.0004319	
211					SD	0.0001394					97.5% KM (Chebyshev) UCL	0.0004957	
212					k star	11.91					99% KM (Chebyshev) UCL	0.0006211	
213					Theta star	3.811E-05							
214					Nu star	1286					Potential UCLs to Use		
215					AppChi2	1204					95% KM (t) UCL	0.000341	
216					95% Gamma Approximate UCL	0.0004849					95% KM (Percentile Bootstrap) UCL	0.0003517	
217					95% Adjusted Gamma UCL	0.0004857							
218	Note: DL/2 is not a recommended method.												
219													
220													
221	Copper												
222													
223	General Statistics												
224					Number of Valid Data	54					Number of Detected Data	54	
225					Number of Distinct Detected Data	41					Number of Non-Detect Data	0	
226					Number of Missing Values	19					Percent Non-Detects	0.00%	
227													
228	Raw Statistics						Log-transformed Statistics						
229					Minimum Detected	0.00049					Minimum Detected	-7.621	
230					Maximum Detected	0.014					Maximum Detected	-4.269	
231					Mean of Detected	0.00172					Mean of Detected	-6.69	
232					SD of Detected	0.00214					SD of Detected	0.707	
233					Minimum Non-Detect	N/A					Minimum Non-Detect	N/A	
234					Maximum Non-Detect	N/A					Maximum Non-Detect	N/A	
235													
236													
237	UCL Statistics												
238	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
239					Lilliefors Test Statistic	0.283					Lilliefors Test Statistic	0.106	
240					5% Lilliefors Critical Value	0.121					5% Lilliefors Critical Value	0.121	
241	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
242													
243	Assuming Normal Distribution						Assuming Lognormal Distribution						
244					DL/2 Substitution Method						DL/2 Substitution Method		
245					Mean	0.00172					Mean	-6.69	
246					SD	0.00214					SD	0.707	
247					95% DL/2 (t) UCL	0.00221					95% H-Stat (DL/2) UCL	0.00194	
248													
249					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
250	MLE method failed to converge properly											Mean in Log Scale	N/A
251											SD in Log Scale	N/A	
252											Mean in Original Scale	N/A	
253											SD in Original Scale	N/A	
254											95% Percentile Bootstrap UCL	N/A	
255											95% BCA Bootstrap UCL	N/A	
256													
257	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
258					k star (bias corrected)	1.602					Data appear Lognormal at 5% Significance Level		
259					Theta Star	0.00108							
260					nu star	173							

	A	B	C	D	E	F	G	H	I	J	K	L	
261													
262				A-D Test Statistic		2.686	Nonparametric Statistics						
263				5% A-D Critical Value		0.766	Kaplan-Meier (KM) Method						
264				K-S Test Statistic		0.766					Mean	0.00172	
265				5% K-S Critical Value		0.123					SD	0.00212	
266	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.0002916	
267											95% KM (t) UCL	0.00221	
268	Assuming Gamma Distribution											95% KM (z) UCL	0.0022
269	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.00221
270				Minimum		0.00049					95% KM (bootstrap t) UCL	0.00281	
271				Maximum		0.014					95% KM (BCA) UCL	0.00228	
272				Mean		0.00172					95% KM (Percentile Bootstrap) UCL	0.00222	
273				Median		0.0011					95% KM (Chebyshev) UCL	0.00299	
274				SD		0.00214					97.5% KM (Chebyshev) UCL	0.00354	
275				k star		1.602					99% KM (Chebyshev) UCL	0.00462	
276				Theta star		0.00108							
277				Nu star		173	Potential UCLs to Use						
278				AppChi2		143.6					95% KM (Chebyshev) UCL	0.00299	
279				95% Gamma Approximate UCL		0.00208							
280				95% Adjusted Gamma UCL		0.00209							
281	Note: DL/2 is not a recommended method.												
282													
283													
284	Lead												
285													
286	General Statistics												
287				Number of Valid Data		54					Number of Detected Data	53	
288				Number of Distinct Detected Data		35					Number of Non-Detect Data	1	
289				Number of Missing Values		19					Percent Non-Detects	1.85%	
290													
291	Raw Statistics						Log-transformed Statistics						
292				Minimum Detected		0.00012					Minimum Detected	-9.028	
293				Maximum Detected		0.0121					Maximum Detected	-4.415	
294				Mean of Detected		0.0008345					Mean of Detected	-7.61	
295				SD of Detected		0.00166					SD of Detected	0.867	
296				Minimum Non-Detect		0.02					Minimum Non-Detect	-3.912	
297				Maximum Non-Detect		0.02					Maximum Non-Detect	-3.912	
298													
299													
300	UCL Statistics												
301	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
302				Lilliefors Test Statistic		0.333					Lilliefors Test Statistic	0.088	
303				5% Lilliefors Critical Value		0.122					5% Lilliefors Critical Value	0.122	
304	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
305													
306	Assuming Normal Distribution						Assuming Lognormal Distribution						
307				DL/2 Substitution Method							DL/2 Substitution Method		
308				Mean		0.001					Mean	-7.555	
309				SD		0.00206					SD	0.951	
310				95% DL/2 (t) UCL		0.00147					95% H-Stat (DL/2) UCL	0.00167	
311													
312				Maximum Likelihood Estimate(MLE) Method		N/A					Log ROS Method		

	A	B	C	D	E	F	G	H	I	J	K	L
313	MLE method failed to converge properly						Mean in Log Scale				-7.61	
314							SD in Log Scale				0.858	
315							Mean in Original Scale				0.0008283	
316							SD in Original Scale				0.00164	
317							95% Percentile Bootstrap UCL				0.00124	
318							95% BCA Bootstrap UCL				0.00151	
319												
320	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
321	k star (bias corrected)				1.046		Data appear Lognormal at 5% Significance Level					
322	Theta Star				0.000798							
323	nu star				110.8							
324												
325	A-D Test Statistic				2.554		Nonparametric Statistics					
326	5% A-D Critical Value				0.777		Kaplan-Meier (KM) Method					
327	K-S Test Statistic				0.777		Mean				0.0008345	
328	5% K-S Critical Value				0.125		SD				0.00164	
329	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.0002274	
330							95% KM (t) UCL				0.00122	
331	Assuming Gamma Distribution						95% KM (z) UCL				0.00121	
332	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.00122	
333	Minimum				0.00012		95% KM (bootstrap t) UCL				0.00193	
334	Maximum				0.0121		95% KM (BCA) UCL				0.00131	
335	Mean				0.0008347		95% KM (Percentile Bootstrap) UCL				0.00127	
336	Median				0.00048		95% KM (Chebyshev) UCL				0.00183	
337	SD				0.00164		97.5% KM (Chebyshev) UCL				0.00225	
338	k star				1.064		99% KM (Chebyshev) UCL				0.0031	
339	Theta star				0.0007843							
340	Nu star				114.9		Potential UCLs to Use					
341	AppChi2				91.18		95% KM (Chebyshev) UCL				0.00183	
342	95% Gamma Approximate UCL				0.00105							
343	95% Adjusted Gamma UCL				0.00106							
344	Note: DL/2 is not a recommended method.											
345												
346												
347	Mercury											
348												
349	General Statistics											
350	Number of Valid Data				55		Number of Detected Data				13	
351	Number of Distinct Detected Data				7		Number of Non-Detect Data				42	
352	Number of Missing Values				18		Percent Non-Detects				76.36%	
353												
354	Raw Statistics						Log-transformed Statistics					
355	Minimum Detected				0.000001		Minimum Detected				-13.82	
356	Maximum Detected				0.000007		Maximum Detected				-11.87	
357	Mean of Detected				2.808E-06		Mean of Detected				-12.92	
358	SD of Detected				1.623E-06		SD of Detected				0.541	
359	Minimum Non-Detect				0.000001		Minimum Non-Detect				-13.82	
360	Maximum Non-Detect				0.000004		Maximum Non-Detect				-12.43	
361												
362	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				53	
363	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				2	
364	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				96.36%	

	A	B	C	D	E	F	G	H	I	J	K	L	
365													
366	UCL Statistics												
367	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
368	Lilliefors Test Statistic					0.823	Lilliefors Test Statistic					0.924	
369	5% Lilliefors Critical Value					0.866	5% Lilliefors Critical Value					0.866	
370	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
371													
372	Assuming Normal Distribution						Assuming Lognormal Distribution						
373	DL/2 Substitution Method						DL/2 Substitution Method						
374	Mean					1.318E-06	Mean					-13.77	
375	SD					1.163E-06	SD					0.624	
376	95% DL/2 (t) UCL					1.581E-06	95% H-Stat (DL/2) UCL					1.389E-06	
377													
378	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
379	MLE method failed to converge properly						Mean in Log Scale					-14.28	
380	SD in Log Scale												1.025
381	Mean in Original Scale												1.059E-06
382	SD in Original Scale												1.278E-06
383	95% Percentile Bootstrap UCL												1.353E-06
384	95% BCA Bootstrap UCL												1.408E-06
385													
386	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
387	k star (bias corrected)					3.005	Data appear Gamma Distributed at 5% Significance Level						
388	Theta Star					9.343E-07							
389	nu star					78.13							
390													
391	A-D Test Statistic					0.565	Nonparametric Statistics						
392	5% A-D Critical Value					0.738	Kaplan-Meier (KM) Method						
393	K-S Test Statistic					0.738	Mean					1.432E-06	
394	5% K-S Critical Value					0.238	SD					1.081E-06	
395	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					1.521E-07	
396	95% KM (t) UCL												1.687E-06
397	Assuming Gamma Distribution						95% KM (z) UCL					1.682E-06	
398	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.679E-06	
399	Minimum					1E-09	95% KM (bootstrap t) UCL					1.796E-06	
400	Maximum					0.000007	95% KM (BCA) UCL					2.384E-06	
401	Mean					3.053E-06	95% KM (Percentile Bootstrap) UCL					2.269E-06	
402	Median					0.000003	95% KM (Chebyshev) UCL					2.095E-06	
403	SD					1.453E-06	97.5% KM (Chebyshev) UCL					2.382E-06	
404	k star					1.893	99% KM (Chebyshev) UCL					2.946E-06	
405	Theta star					1.612E-06							
406	Nu star					208.3	Potential UCLs to Use						
407	AppChi2					175.9	95% KM (t) UCL					1.687E-06	
408	95% Gamma Approximate UCL					3.615E-06							
409	95% Adjusted Gamma UCL					3.631E-06							
410	Note: DL/2 is not a recommended method.												
411													
412													
413	Nickel												
414													
415	General Statistics												
416	Number of Valid Data					31	Number of Detected Data					29	

	A	B	C	D	E	F	G	H	I	J	K	L
417	Number of Distinct Detected Data					24	Number of Non-Detect Data					2
418	Number of Missing Values					42	Percent Non-Detects					6.45%
419												
420	Raw Statistics						Log-transformed Statistics					
421	Minimum Detected					0.00046	Minimum Detected					-7.684
422	Maximum Detected					0.00095	Maximum Detected					-6.959
423	Mean of Detected					0.0006841	Mean of Detected					-7.307
424	SD of Detected					0.0001388	SD of Detected					0.199
425	Minimum Non-Detect					0.001	Minimum Non-Detect					-6.908
426	Maximum Non-Detect					0.001	Maximum Non-Detect					-6.908
427												
428												
429	UCL Statistics											
430	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
431	Shapiro Wilk Test Statistic					0.938	Shapiro Wilk Test Statistic					0.963
432	5% Shapiro Wilk Critical Value					0.926	5% Shapiro Wilk Critical Value					0.926
433	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
434												
435	Assuming Normal Distribution						Assuming Lognormal Distribution					
436	DL/2 Substitution Method						DL/2 Substitution Method					
437	Mean					0.0006723	Mean					-7.326
438	SD					0.0001418	SD					0.206
439	95% DL/2 (t) UCL					0.0007155	95% H-Stat (DL/2) UCL					0.0007364
440												
441	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
442	MLE method failed to converge properly						Mean in Log Scale					-7.307
443							SD in Log Scale					0.194
444							Mean in Original Scale					0.0006835
445							SD in Original Scale					0.0001351
446							95% Percentile Bootstrap UCL					0.0007209
447							95% BCA Bootstrap UCL					0.0007227
448												
449	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
450	k star (bias corrected)					23.31	Data appear Normal at 5% Significance Level					
451	Theta Star					2.934E-05						
452	nu star					1352						
453												
454	A-D Test Statistic					0.407	Nonparametric Statistics					
455	5% A-D Critical Value					0.744	Kaplan-Meier (KM) Method					
456	K-S Test Statistic					0.744	Mean					0.0006841
457	5% K-S Critical Value					0.162	SD					0.0001364
458	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2.578E-05
459							95% KM (t) UCL					0.0007279
460	Assuming Gamma Distribution						95% KM (z) UCL					0.0007265
461	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0007279
462	Minimum					0.00046	95% KM (bootstrap t) UCL					0.0007301
463	Maximum					0.00095	95% KM (BCA) UCL					0.000726
464	Mean					0.0006856	95% KM (Percentile Bootstrap) UCL					0.0007267
465	Median					0.00066	95% KM (Chebyshev) UCL					0.0007965
466	SD					0.000135	97.5% KM (Chebyshev) UCL					0.0008451
467	k star					24.76	99% KM (Chebyshev) UCL					0.0009406
468	Theta star					2.769E-05						

	A	B	C	D	E	F	G	H	I	J	K	L
469					Nu star	1535	Potential UCLs to Use					
470					AppChi2	1445				95% KM (t) UCL		0.0007279
471					95% Gamma Approximate UCL	0.0007283				95% KM (Percentile Bootstrap) UCL		0.0007267
472					95% Adjusted Gamma UCL	0.0007308						
473	Note: DL/2 is not a recommended method.											
474												
475												
476	Silver											
477												
478	General Statistics											
479					Number of Valid Data	29				Number of Detected Data		0
480					Number of Distinct Detected Data	0				Number of Non-Detect Data		29
481					Number of Missing Values	44				Percent Non-Detects		100.00%
482												
483	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
484	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
485	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
486												
487	The data set for variable Silver was not processed!											
488												
489												
490												
491	Zinc											
492												
493	General Statistics											
494					Number of Valid Data	55				Number of Detected Data		31
495					Number of Distinct Detected Data	27				Number of Non-Detect Data		24
496					Number of Missing Values	18				Percent Non-Detects		43.64%
497												
498	Raw Statistics						Log-transformed Statistics					
499					Minimum Detected	0.0059				Minimum Detected		-5.133
500					Maximum Detected	0.077				Maximum Detected		-2.564
501					Mean of Detected	0.0156				Mean of Detected		-4.463
502					SD of Detected	0.0159				SD of Detected		0.711
503					Minimum Non-Detect	0.005				Minimum Non-Detect		-5.298
504					Maximum Non-Detect	0.005				Maximum Non-Detect		-5.298
505												
506												
507	UCL Statistics											
508	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
509					Lilliefors Test Statistic	0.646				Lilliefors Test Statistic		0.835
510					5% Lilliefors Critical Value	0.929				5% Lilliefors Critical Value		0.929
511	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
512												
513	Assuming Normal Distribution						Assuming Lognormal Distribution					
514					DL/2 Substitution Method					DL/2 Substitution Method		
515					Mean	0.00989				Mean		-5.13
516					SD	0.0135				SD		0.931
517					95% DL/2 (t) UCL	0.0129				95% H-Stat (DL/2) UCL		0.00873
518												
519					Maximum Likelihood Estimate(MLE) Method					Log ROS Method		
520					Mean	0.0042				Mean in Log Scale		-5.27

Appendix F2

Exposure Point Concentration Uncertainty Assessment

APPENDIX F2. Evaluation of Uncertainty in 95UCL Calculations

OUTDOOR AIR [Post-1999]

Exposure Area	Preferred Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 1	Arsenic	7440382	ug/m3	244	359	68%	5.00E-04	2.73E-03	4.20E-02	3.27E-03	1.20	yes
Reach 1	Cadmium	7440439	ug/m3	107	359	30%	5.00E-04	1.04E-03	1.90E-02	1.50E-03	1.44	yes
Reach 1	Zinc	7440666	ug/m3	303	359	84%	5.00E-03	4.91E-02	2.37E+00	6.64E-02	1.35	yes
Reach 3	Antimony	7440360	ug/m3	127	127	100%	1.00E-05	5.75E-04	1.45E-02	1.11E-03	1.93	yes
Reach 3	Arsenic	7440382	ug/m3	110	119	92%	4.10E-05	6.46E-04	5.47E-03	7.87E-04	1.22	yes
Reach 3	Barium	7440393	ug/m3	79	79	100%	8.53E-04	1.03E-01	3.99E+00	3.60E-01	3.50	NO
Reach 3	Beryllium	7440417	ug/m3	101	103	98%	2.00E-06	2.11E-05	4.10E-04	4.27E-05	2.02	NO
Reach 3	Cadmium	7440439	ug/m3	126	134	94%	1.94E-05	2.73E-04	1.75E-03	3.28E-04	1.20	yes
Reach 3	Chromium	7440473	ug/m3	108	108	100%	6.00E-05	3.30E-03	1.07E-01	8.34E-03	2.52	NO
Reach 3	Cobalt	7440484	ug/m3	127	129	98%	1.00E-05	1.51E-04	1.25E-03	2.18E-04	1.44	yes
Reach 3	Copper	7440508	ug/m3	130	135	96%	2.93E-03	2.32E-02	4.49E-01	2.25E-02	0.97	yes
Reach 3	Iron	7439896	ug/m3	129	129	100%	1.34E-02	2.56E-01	1.56E+00	3.60E-01	1.41	yes
Reach 3	Manganese	7439965	ug/m3	128	131	98%	6.11E-04	7.46E-03	5.14E-02	1.05E-02	1.41	yes
Reach 3	Mercury	7439976	ug/m3	15	23	65%	1.10E-09	4.19E-06	1.52E-05	3.62E-06	1.49	yes
Reach 3	Molybdenum	7439987	ug/m3	62	74	84%	3.05E-06	1.02E-02	3.57E-01	3.44E-02	3.39	NO
Reach 3	Nickel	7440020	ug/m3	114	114	100%	3.00E-05	1.02E-03	2.77E-02	2.28E-03	2.24	NO
Reach 3	Silver	7440224	ug/m3	104	109	95%	6.11E-06	7.84E-05	9.58E-04	1.19E-04	1.52	yes
Reach 3	Thallium	7440280	ug/m3	106	107	99%	4.58E-06	2.74E-05	2.40E-04	3.32E-05	1.21	yes
Reach 3	Uranium	7440611	ug/m3	70	75	93%	4.06E-06	2.09E-04	7.83E-03	7.36E-04	3.53	NO
Reach 3	Vanadium	7440622	ug/m3	122	130	94%	3.30E-05	8.47E-04	3.62E-03	1.12E-03	1.32	yes
Reach 3	Zinc	7440666	ug/m3	131	131	100%	2.14E-03	2.46E-02	2.15E-01	2.89E-02	1.17	yes
Reach 3	Bismuth	7440699	ug/m3	106	112	95%	4.00E-06	2.17E-04	6.38E-03	5.92E-04	2.73	NO
Reach 3	Cerium	7440451	ug/m3	115	115	100%	4.00E-05	6.46E-04	1.58E-02	9.44E-04	1.46	yes
Reach 3	Cesium	7440462	ug/m3	117	117	100%	1.00E-06	3.24E-05	1.50E-04	3.73E-05	1.15	yes
Reach 3	Gallium	7440553	ug/m3	105	105	100%	2.00E-05	2.89E-04	7.12E-03	6.60E-04	2.28	NO
Reach 3	Lanthanum	7439910	ug/m3	109	122	89%	1.52E-05	3.65E-04	8.65E-03	7.26E-04	1.99	yes
Reach 3	Lithium	7439932	ug/m3	113	113	100%	3.70E-05	2.54E-04	1.95E-03	2.92E-04	1.15	yes
Reach 3	Niobium	7440031	ug/m3	103	103	100%	8.12E-06	3.92E-04	5.66E-03	7.59E-04	1.94	yes
Reach 3	Rubidium	7440177	ug/m3	116	123	94%	5.00E-05	8.36E-04	1.68E-02	1.14E-03	1.36	yes
Reach 3	Scandium	7440202	ug/m3	103	104	99%	4.00E-06	1.21E-04	7.10E-04	1.42E-04	1.17	yes
Reach 3	Strontium, stable	7440246	ug/m3	124	127	98%	8.00E-05	2.99E-03	5.49E-02	5.23E-03	1.75	yes
Reach 3	Thorium	7440291	ug/m3	76	86	88%	4.57E-06	1.41E-04	3.71E-03	2.35E-04	1.67	yes
Reach 3	Titanium	7440326	ug/m3	100	105	95%	2.84E-03	2.55E-02	1.50E-01	3.71E-02	1.46	yes
Reach 3	Ytterbium	7440644	ug/m3	103	104	99%	2.00E-05	1.07E-03	3.26E-02	2.69E-03	2.51	NO
Reach 4b	Antimony	7440360	ug/m3	123	124	99%	1.00E-05	2.28E-04	2.53E-03	3.50E-04	1.54	yes
Reach 4b	Arsenic	7440382	ug/m3	108	119	91%	6.00E-05	4.35E-04	4.01E-03	5.17E-04	1.19	yes
Reach 4b	Barium	7440393	ug/m3	85	88	97%	3.10E-04	7.02E-02	1.51E+00	1.34E-01	1.91	yes
Reach 4b	Beryllium	7440417	ug/m3	112	117	96%	1.54E-06	2.26E-05	1.90E-04	3.19E-05	1.41	yes
Reach 4b	Cadmium	7440439	ug/m3	119	127	94%	6.00E-06	9.94E-05	9.60E-04	1.19E-04	1.20	yes
Reach 4b	Chromium	7440473	ug/m3	105	105	100%	7.00E-05	2.42E-03	4.09E-02	4.42E-03	1.83	yes
Reach 4b	Cobalt	7440484	ug/m3	124	131	95%	1.00E-05	1.99E-04	6.99E-04	2.58E-04	1.29	yes
Reach 4b	Copper	7440508	ug/m3	130	136	96%	2.77E-04	5.44E-02	1.90E+00	4.15E-02	0.76	yes
Reach 4b	Iron	7439896	ug/m3	125	126	99%	1.70E-02	4.26E-01	1.77E+00	5.63E-01	1.32	yes
Reach 4b	Manganese	7439965	ug/m3	121	128	95%	4.16E-04	9.86E-03	3.97E-02	1.30E-02	1.32	yes
Reach 4b	Mercury	7439976	ug/m3	11	22	50%	1.10E-09	2.86E-06	9.68E-06	5.32E-06	1.86	yes
Reach 4b	Molybdenum	7439987	ug/m3	63	71	89%	7.68E-06	5.34E-03	1.32E-01	1.45E-02	2.71	NO
Reach 4b	Nickel	7440020	ug/m3	114	114	100%	3.00E-05	8.19E-04	1.07E-02	1.02E-03	1.25	yes
Reach 4b	Silver	7440224	ug/m3	98	108	91%	4.00E-06	1.02E-04	2.26E-03	7.17E-05	0.70	yes
Reach 4b	Thallium	7440280	ug/m3	105	106	99%	5.00E-06	2.25E-05	1.20E-04	2.67E-05	1.19	yes
Reach 4b	Uranium	7440611	ug/m3	75	79	95%	4.00E-06	1.02E-04	2.98E-03	2.86E-04	2.81	NO
Reach 4b	Vanadium	7440622	ug/m3	125	132	95%	3.00E-05	1.39E-03	6.22E-03	1.81E-03	1.31	yes
Reach 4b	Zinc	7440666	ug/m3	131	131	100%	7.35E-04	1.33E-02	8.85E-02	1.54E-02	1.16	yes
Reach 4b	Bismuth	7440699	ug/m3	104	110	95%	2.56E-06	8.29E-05	6.80E-04	1.41E-04	1.69	yes
Reach 4b	Cerium	7440451	ug/m3	122	123	99%	2.00E-05	7.00E-04	6.11E-03	1.00E-03	1.43	yes
Reach 4b	Cesium	7440462	ug/m3	119	120	99%	1.00E-06	5.27E-05	2.16E-04	6.95E-05	1.32	yes
Reach 4b	Gallium	7440553	ug/m3	110	110	100%	2.00E-05	2.51E-04	2.78E-03	4.07E-04	1.62	yes
Reach 4b	Lanthanum	7439910	ug/m3	118	127	93%	2.00E-05	3.94E-04	3.33E-03	5.57E-04	1.41	yes
Reach 4b	Lithium	7439932	ug/m3	117	117	100%	3.70E-05	4.05E-04	2.21E-03	5.39E-04	1.33	yes
Reach 4b	Niobium	7440031	ug/m3	109	109	100%	1.00E-05	4.83E-04	5.04E-03	8.06E-04	1.67	yes
Reach 4b	Rubidium	7440177	ug/m3	120	126	95%	3.07E-05	1.16E-03	7.44E-03	1.61E-03	1.39	yes
Reach 4b	Scandium	7440202	ug/m3	111	116	96%	4.00E-06	1.72E-04	6.73E-04	4.27E-04	1.32	yes
Reach 4b	Strontium, stable	7440246	ug/m3	124	125	99%	8.00E-05	3.05E-03	2.06E-02	2.28E-03	1.41	yes
Reach 4b	Thorium	7440291	ug/m3	92	101	91%	6.00E-06	1.45E-04	1.48E-03	2.22E-04	1.53	yes
Reach 4b	Titanium	7440326	ug/m3	112	115	97%	3.31E-03	4.42E-02	1.62E-01	5.92E-02	1.34	yes
Reach 4b	Ytterbium	7440644	ug/m3	103	105	98%	4.00E-05	7.44E-04	1.20E-02	1.40E-03	1.88	yes
Reach 5	Antimony	7440360	ug/m3	119	120	99%	1.00E-05	1.38E-04	6.40E-04	1.57E-04	1.14	yes
Reach 5	Arsenic	7440382	ug/m3	101	109	93%	3.06E-05	2.86E-04	1.55E-03	3.21E-04	1.12	yes
Reach 5	Barium	7440393	ug/m3	68	72	94%	3.10E-04	8.31E-02	1.17E+00	1.22E-01	1.47	yes
Reach 5	Beryllium	7440417	ug/m3	97	100	97%	2.00E-06	1.98E-05	1.63E-04	2.50E-05	1.26	yes
Reach 5	Cadmium	7440439	ug/m3	112	124	90%	3.04E-06	6.26E-05	6.40E-04	7.44E-05	1.19	yes
Reach 5	Chromium	7440473	ug/m3	100	100	100%	4.00E-05	1.84E-03	3.05E-02	3.31E-03	1.80	yes
Reach 5	Cobalt	7440484	ug/m3	121	128	95%	1.00E-05	1.74E-04	1.91E-03	2.64E-04	1.52	yes
Reach 5	Copper	7440508	ug/m3	126	132	95%	2.20E-03	2.81E-02	7.35E-01	2.95E-02	1.05	yes

APPENDIX F2. Evaluation of Uncertainty in 95UCL Calculations

OUTDOOR AIR [Post-1999]

Exposure Area	Preferred Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 5	Iron	7439896	ug/m3	122	122	100%	5.00E-03	4.00E-01	4.99E+00	6.37E-01	1.59	yes
Reach 5	Manganese	7439965	ug/m3	121	124	98%	4.40E-04	9.73E-03	1.14E-01	1.52E-02	1.56	yes
Reach 5	Mercury	7439976	ug/m3	10	21	48%	1.10E-09	2.42E-06	9.16E-06	4.79E-06	1.98	yes
Reach 5	Molybdenum	7439987	ug/m3	61	69	88%	1.53E-06	4.72E-03	9.90E-02	1.15E-02	2.44	NO
Reach 5	Nickel	7440020	ug/m3	105	105	100%	2.00E-05	7.72E-04	8.73E-03	1.36E-03	1.76	yes
Reach 5	Silver	7440224	ug/m3	97	105	92%	6.11E-06	5.78E-05	4.60E-04	6.04E-05	1.05	yes
Reach 5	Thallium	7440280	ug/m3	91	94	97%	4.59E-06	2.13E-05	1.30E-04	2.59E-05	1.22	yes
Reach 5	Uranium	7440611	ug/m3	65	72	90%	2.00E-06	9.56E-05	2.27E-03	2.39E-04	2.50	NO
Reach 5	Vanadium	7440622	ug/m3	119	125	95%	4.00E-05	1.09E-03	1.18E-02	1.63E-03	1.50	yes
Reach 5	Zinc	7440666	ug/m3	124	124	100%	3.50E-04	1.10E-02	1.06E-01	1.37E-02	1.24	yes
Reach 5	Bismuth	7440699	ug/m3	93	98	95%	3.05E-06	1.01E-04	2.57E-03	2.42E-04	2.41	NO
Reach 5	Cerium	7440451	ug/m3	113	114	99%	1.02E-05	6.12E-04	6.66E-03	9.96E-04	1.63	yes
Reach 5	Cesium	7440462	ug/m3	111	113	98%	1.00E-06	5.59E-05	5.08E-04	8.84E-05	1.58	yes
Reach 5	Gallium	7440553	ug/m3	99	99	100%	2.00E-05	2.18E-04	2.18E-03	3.66E-04	1.68	yes
Reach 5	Lanthanum	7439910	ug/m3	108	117	92%	2.00E-05	3.69E-04	3.57E-03	5.88E-04	1.59	yes
Reach 5	Lithium	7439932	ug/m3	108	108	100%	2.00E-05	3.47E-04	3.15E-03	4.24E-04	1.22	yes
Reach 5	Niobium	7440031	ug/m3	97	98	99%	1.80E-05	4.64E-04	3.58E-03	7.73E-04	1.66	yes
Reach 5	Rubidium	7440177	ug/m3	109	117	93%	5.00E-05	1.08E-03	9.62E-03	1.67E-03	1.54	yes
Reach 5	Scandium	7440202	ug/m3	103	110	94%	4.00E-06	1.55E-04	1.88E-03	2.49E-04	1.60	yes
Reach 5	Strontium, stable	7440246	ug/m3	120	122	98%	1.00E-04	2.45E-03	2.63E-02	3.76E-03	1.54	yes
Reach 5	Thorium	7440291	ug/m3	86	95	91%	6.00E-06	1.32E-04	1.15E-03	1.61E-04	1.22	yes
Reach 5	Titanium	7440326	ug/m3	101	103	98%	2.73E-03	5.18E-02	6.18E-01	8.43E-02	1.63	yes
Reach 5	Ytterbium	7440644	ug/m3	97	100	97%	2.00E-05	6.77E-04	9.15E-03	1.18E-03	1.74	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

FISH TISSUE (BASED ON FILLET SAMPLES)

Exposure Area	Preferred Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 1	Aluminum	7429905	ug/kg ww	1	10	10%	1.21E+03	2.95E+04	2.80E+05	NC		
Reach 1	Arsenic	7440382	ug/kg ww	10	12	83%	4.39E+00	7.32E+01	1.11E+02	9.71E+01	1.33	yes
Reach 1	Calcium	7440702	ug/kg ww	10	10	100%	2.72E+05	4.43E+05	8.47E+05	5.40E+05	1.22	yes
Reach 1	Chromium	7440473	ug/kg ww	10	10	100%	2.56E+02	5.13E+02	7.24E+02	5.80E+02	1.13	yes
Reach 1	Cobalt	7440484	ug/kg ww	5	10	50%	3.38E+00	4.69E+00	6.03E+00	5.87E+00	1.25	yes
Reach 1	Copper	7440508	ug/kg ww	10	10	100%	2.04E+02	2.83E+02	3.60E+02	3.19E+02	1.13	yes
Reach 1	Iron	7439896	ug/kg ww	10	10	100%	2.34E+03	4.36E+03	6.32E+03	5.06E+03	1.16	yes
Reach 1	Magnesium	7439954	ug/kg ww	10	10	100%	2.62E+05	2.73E+05	2.82E+05	2.77E+05	1.02	yes
Reach 1	Manganese	7439965	ug/kg ww	10	10	100%	1.23E+02	1.59E+02	2.01E+02	1.75E+02	1.10	yes
Reach 1	Mercury	7439976	ug/kg ww	10	10	100%	6.54E+01	1.57E+02	2.73E+02	2.03E+02	1.30	yes
Reach 1	Nickel	7440020	ug/kg ww	6	10	60%	1.97E+01	8.11E+01	1.69E+02	1.32E+02	1.62	yes
Reach 1	Potassium	7440097	ug/kg ww	10	10	100%	4.10E+06	4.29E+06	4.47E+06	4.37E+06	1.02	yes
Reach 1	Selenium	7782492	ug/kg ww	10	10	100%	3.20E+02	4.28E+02	6.09E+02	4.76E+02	1.11	yes
Reach 1	Sodium	7440235	ug/kg ww	10	10	100%	3.77E+05	3.99E+05	4.34E+05	4.10E+05	1.03	yes
Reach 1	Zinc	7440666	ug/kg ww	10	10	100%	6.71E+03	7.81E+03	8.98E+03	8.21E+03	1.05	yes
Reach 1	Total PCB, as Aroclor	1336363_as	ug/kg ww	10	10	100%	1.90E+00	1.41E+01	3.66E+01	3.76E+01	2.68	NO
Reach 1	Total PCB, as Congener Sum	1336363_as	ug/kg ww	3	3	100%	8.37E+00	1.38E+01	2.32E+01	NC		
Reach 1	Non-Dioxin PCB, as Congener Sum	1336363_as	ug/kg ww	3	3	100%	7.78E+00	1.27E+01	2.11E+01	NC		
Reach 1	2006 TEQ_D/F	TEQ_DF	ug/kg ww	10	10	100%	1.60E-04	3.36E-04	5.55E-04	4.28E-04	1.28	yes
Reach 1	2006 TEQ_PCB	TEQ_PCB	ug/kg ww	10	10	100%	6.80E-05	6.64E-04	1.72E-03	1.00E-03	1.51	yes
Reach 1	2006 TEQ_D/F+PCB	TEQ_Total	ug/kg ww	10	10	100%	2.28E-04	1.00E-03	2.18E-03	1.42E-03	1.42	yes
Reach 3	Arsenic	7440382	ug/kg ww	7	12	58%	4.33E+00	6.73E+01	1.26E+02	1.08E+02	1.60	yes
Reach 3	Calcium	7440702	ug/kg ww	10	10	100%	1.96E+05	3.88E+05	5.59E+05	4.64E+05	1.19	yes
Reach 3	Chromium	7440473	ug/kg ww	10	10	100%	2.67E+02	4.53E+02	9.00E+02	5.47E+02	1.21	yes
Reach 3	Cobalt	7440484	ug/kg ww	8	10	80%	1.82E+00	5.00E+00	8.78E+00	6.44E+00	1.29	yes
Reach 3	Copper	7440508	ug/kg ww	10	10	100%	1.76E+02	2.70E+02	4.02E+02	3.16E+02	1.17	yes
Reach 3	Iron	7439896	ug/kg ww	10	10	100%	2.53E+03	3.69E+03	5.58E+03	4.28E+03	1.16	yes
Reach 3	Magnesium	7439954	ug/kg ww	10	10	100%	2.64E+05	2.78E+05	3.06E+05	2.85E+05	1.03	yes
Reach 3	Manganese	7439965	ug/kg ww	10	10	100%	1.12E+02	1.75E+02	4.74E+02	3.23E+02	1.84	yes
Reach 3	Mercury	7439976	ug/kg ww	18	18	100%	6.31E+01	1.36E+02	2.81E+02	2.09E+02	1.53	yes
Reach 3	Nickel	7440020	ug/kg ww	8	10	80%	1.83E+01	8.12E+01	1.61E+02	1.12E+02	1.38	yes
Reach 3	Potassium	7440097	ug/kg ww	10	10	100%	4.22E+06	4.45E+06	4.87E+06	4.55E+06	1.02	yes
Reach 3	Selenium	7782492	ug/kg ww	10	10	100%	3.17E+02	4.00E+02	4.60E+02	4.27E+02	1.07	yes
Reach 3	Sodium	7440235	ug/kg ww	10	10	100%	3.50E+05	4.18E+05	4.85E+05	4.43E+05	1.06	yes
Reach 3	Zinc	7440666	ug/kg ww	10	10	100%	5.19E+03	6.53E+03	8.00E+03	7.02E+03	1.07	yes
Reach 3	Total PCB, as Aroclor	1336363_as	ug/kg ww	18	18	100%	2.00E+00	2.49E+01	8.20E+01	4.05E+01	1.62	yes
Reach 3	Total PCB, as Congener Sum	1336363_as	ug/kg ww	3	3	100%	5.38E+00	6.55E+00	8.39E+00	NC		
Reach 3	Non-Dioxin PCB, as Congener Sum	1336363_as	ug/kg ww	3	3	100%	4.97E+00	6.03E+00	7.67E+00	NC		
Reach 3	2006 TEQ_D/F	TEQ_DF	ug/kg ww	23	23	100%	1.13E-04	4.29E-04	9.67E-04	5.36E-04	1.25	yes
Reach 3	2006 TEQ_PCB	TEQ_PCB	ug/kg ww	18	18	100%	9.41E-05	1.00E-03	3.90E-03	1.62E-03	1.62	yes
Reach 3	2006 TEQ_D/F+PCB	TEQ_Total	ug/kg ww	18	18	100%	3.22E-04	1.36E-03	4.29E-03	1.88E-03	1.38	yes
Reach 3	PBDE-153	68631492	ug/kg ww	2	4	50%	1.20E-01	2.78E-01	5.60E-01	NC		
Reach 3	PBDE-47	5436431	ug/kg ww	4	4	100%	9.20E-01	4.98E+00	1.00E+01	NC		
Reach 3	PBDE-99	60348609	ug/kg ww	2	4	50%	1.05E-01	1.45E+00	5.40E+00	NC		
Reach 6	Arsenic	7440382	ug/kg ww	7	11	64%	4.43E+00	8.34E+01	1.79E+02	1.29E+02	1.55	yes
Reach 6	Calcium	7440702	ug/kg ww	10	10	100%	2.17E+05	4.00E+05	8.74E+05	5.03E+05	1.26	yes
Reach 6	Chromium	7440473	ug/kg ww	10	10	100%	2.96E+02	4.08E+02	5.37E+02	4.49E+02	1.10	yes
Reach 6	Cobalt	7440484	ug/kg ww	10	10	100%	4.01E+00	5.53E+00	8.40E+00	6.23E+00	1.13	yes
Reach 6	Copper	7440508	ug/kg ww	10	10	100%	2.04E+02	2.39E+02	2.72E+02	2.53E+02	1.06	yes
Reach 6	Iron	7439896	ug/kg ww	10	10	100%	2.11E+03	3.37E+03	5.22E+03	3.91E+03	1.16	yes
Reach 6	Magnesium	7439954	ug/kg ww	10	10	100%	2.50E+05	2.64E+05	2.73E+05	2.68E+05	1.02	yes
Reach 6	Manganese	7439965	ug/kg ww	10	10	100%	1.19E+02	1.48E+02	1.85E+02	1.60E+02	1.08	yes
Reach 6	Mercury	7439976	ug/kg ww	18	18	100%	7.97E+01	1.90E+02	4.17E+02	2.32E+02	1.22	yes
Reach 6	Nickel	7440020	ug/kg ww	6	10	60%	1.82E+01	5.84E+01	1.32E+02	9.23E+01	1.58	yes
Reach 6	Potassium	7440097	ug/kg ww	10	10	100%	4.24E+06	4.32E+06	4.53E+06	4.44E+06	1.03	yes
Reach 6	Selenium	7782492	ug/kg ww	10	10	100%	2.11E+02	3.31E+02	5.70E+02	3.94E+02	1.19	yes
Reach 6	Sodium	7440235	ug/kg ww	10	10	100%	4.09E+05	4.65E+05	5.29E+05	4.87E+05	1.05	yes
Reach 6	Thallium	7440280	ug/kg ww	5	10	50%	2.66E+01	4.74E+01	7.39E+01	6.62E+01	1.40	yes
Reach 6	Zinc	7440666	ug/kg ww	10	10	100%	6.22E+03	6.60E+03	7.65E+03	7.20E+03	1.09	yes
Reach 6	Total PCB, as Aroclor	1336363_as	ug/kg ww	26	26	100%	1.70E+00	1.60E+01	7.56E+01	2.20E+01	1.37	yes
Reach 6	Total PCB, as Congener Sum	1336363_as	ug/kg ww	2	2	100%	6.06E+00	7.36E+00	8.67E+00	NC		
Reach 6	Non-Dioxin PCB, as Congener Sum	1336363_as	ug/kg ww	2	2	100%	5.53E+00	6.78E+00	8.04E+00	NC		
Reach 6	2006 TEQ_D/F	TEQ_DF	ug/kg ww	26	26	100%	8.50E-05	2.87E-04	9.39E-04	3.75E-04	1.31	yes
Reach 6	2006 TEQ_PCB	TEQ_PCB	ug/kg ww	26	26	100%	8.00E-05	6.16E-04	3.56E-03	8.18E-04	1.33	yes
Reach 6	2006 TEQ_D/F+PCB	TEQ_Total	ug/kg ww	26	26	100%	3.22E-04	9.03E-04	3.88E-03	1.11E-03	1.23	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

FISH TISSUE (BASED ON WHOLE BODY SAMPLES)

Exposure Area	Preferred Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 1	Aluminum	7429905	ug/kg ww	30	38	79%	1.44E+03	4.85E+04	4.01E+05	1.31E+05	2.69	NO
Reach 1	Antimony	7440360	ug/kg ww	10	38	26%	3.55E+01	9.72E+01	5.84E+02	1.57E+02	1.61	yes
Reach 1	Arsenic	7440382	ug/kg ww	43	50	86%	5.41E+00	1.54E+02	4.38E+02	1.98E+02	1.28	yes
Reach 1	Barium	7440393	ug/kg ww	38	38	100%	4.58E+02	4.14E+03	3.88E+04	1.12E+04	2.71	NO
Reach 1	Beryllium	7440417	ug/kg ww	10	38	26%	1.73E+00	4.52E+00	2.22E+01	6.80E+00	1.50	yes
Reach 1	Cadmium	7440439	ug/kg ww	38	38	100%	1.86E+01	2.36E+02	5.44E+02	4.05E+02	1.71	yes
Reach 1	Calcium	7440702	ug/kg ww	38	38	100%	4.12E+06	8.92E+06	1.40E+07	9.65E+06	1.08	yes
Reach 1	Chromium	7440473	ug/kg ww	38	38	100%	3.26E+02	1.41E+03	8.22E+03	2.61E+03	1.85	yes
Reach 1	Cobalt	7440484	ug/kg ww	38	38	100%	1.80E+01	1.20E+02	1.18E+03	3.44E+02	2.87	NO
Reach 1	Copper	7440508	ug/kg ww	38	38	100%	3.01E+02	4.03E+03	4.85E+04	1.29E+04	3.20	NO
Reach 1	Iron	7439896	ug/kg ww	38	38	100%	9.39E+03	3.03E+05	4.10E+06	1.51E+06	4.97	NO
Reach 1	Magnesium	7439954	ug/kg ww	38	38	100%	2.74E+05	3.46E+05	4.30E+05	3.57E+05	1.03	yes
Reach 1	Manganese	7439965	ug/kg ww	38	38	100%	9.47E+02	1.16E+04	8.52E+04	2.27E+04	1.97	yes
Reach 1	Mercury	7439976	ug/kg ww	18	18	100%	5.69E+01	1.05E+02	1.94E+02	1.53E+02	1.45	yes
Reach 1	Nickel	7440020	ug/kg ww	38	38	100%	1.69E+02	6.51E+02	5.20E+03	1.30E+03	2.00	yes
Reach 1	Potassium	7440097	ug/kg ww	38	38	100%	2.70E+06	3.28E+06	3.77E+06	3.35E+06	1.02	yes
Reach 1	Selenium	7782492	ug/kg ww	38	38	100%	3.61E+02	6.48E+02	1.22E+03	7.01E+02	1.08	yes
Reach 1	Silver	7440224	ug/kg ww	6	38	16%	1.81E+01	4.09E+01	1.66E+02	8.99E+01	2.20	NO
Reach 1	Sodium	7440235	ug/kg ww	38	38	100%	6.48E+05	1.05E+06	1.40E+06	1.11E+06	1.06	yes
Reach 1	Uranium	7440611	ug/kg ww	38	38	100%	7.91E-01	1.87E+01	9.76E+01	3.28E+01	1.75	yes
Reach 1	Vanadium	7440622	ug/kg ww	15	38	39%	4.82E+01	1.52E+02	8.02E+02	2.24E+02	1.47	yes
Reach 1	Zinc	7440666	ug/kg ww	38	38	100%	1.26E+04	4.97E+04	3.59E+05	9.37E+04	1.89	yes
Reach 1	Total PCB, as Aroclor	1336363_d	ug/kg ww	18	18	100%	1.40E+01	4.08E+01	8.90E+01	4.97E+01	1.22	yes
Reach 1	Total PCB, as Congener Sum	1336363_d	ug/kg ww	4	4	100%	3.95E+01	1.23E+02	2.48E+02	NC		
Reach 1	Non-Dioxin PCB, as Congener Sum	1336363_d	ug/kg ww	4	4	100%	3.54E+01	1.12E+02	2.28E+02	NC		
Reach 1	2006 TEQ D/F	TEQ_DF	ug/kg ww	18	18	100%	3.64E-04	6.74E-04	1.13E-03	7.73E-04	1.15	yes
Reach 1	2006 TEQ PCB	TEQ_PCB	ug/kg ww	18	18	100%	9.47E-04	3.34E-03	7.50E-03	4.15E-03	1.24	yes
Reach 1	2006 TEQ D/F+PCB	TEQ_Total	ug/kg ww	18	18	100%	1.76E-03	4.01E-03	8.07E-03	5.03E-03	1.25	yes
Reach 2	Aluminum	7429905	ug/kg ww	12	22	55%	1.55E+03	7.15E+03	4.19E+04	1.17E+04	1.63	yes
Reach 2	Arsenic	7440382	ug/kg ww	23	26	88%	5.31E+00	2.02E+02	7.80E+02	4.28E+02	2.12	NO
Reach 2	Barium	7440393	ug/kg ww	22	22	100%	4.11E+02	1.67E+03	5.56E+03	3.14E+03	1.88	yes
Reach 2	Cadmium	7440439	ug/kg ww	19	22	86%	7.90E+00	8.75E+01	4.75E+02	2.73E+02	3.12	NO
Reach 2	Calcium	7440702	ug/kg ww	22	22	100%	3.81E+06	8.10E+06	1.32E+07	9.22E+06	1.14	yes
Reach 2	Chromium	7440473	ug/kg ww	22	22	100%	3.63E+02	6.75E+02	1.41E+03	7.74E+02	1.15	yes
Reach 2	Cobalt	7440484	ug/kg ww	18	22	82%	6.22E+00	2.66E+01	6.42E+01	4.02E+01	1.51	yes
Reach 2	Copper	7440508	ug/kg ww	22	22	100%	2.85E+02	9.70E+02	1.93E+03	1.16E+03	1.19	yes
Reach 2	Iron	7439896	ug/kg ww	22	22	100%	8.81E+03	2.49E+04	9.18E+04	4.50E+04	1.81	yes
Reach 2	Magnesium	7439954	ug/kg ww	22	22	100%	2.69E+05	3.26E+05	3.94E+05	3.40E+05	1.04	yes
Reach 2	Manganese	7439965	ug/kg ww	22	22	100%	6.32E+02	2.36E+03	7.48E+03	4.38E+03	1.86	yes
Reach 2	Mercury	7439976	ug/kg ww	22	22	100%	3.60E+01	1.07E+02	2.22E+02	1.28E+02	1.20	yes
Reach 2	Nickel	7440020	ug/kg ww	22	22	100%	1.56E+02	3.20E+02	6.84E+02	3.72E+02	1.16	yes
Reach 2	Potassium	7440097	ug/kg ww	22	22	100%	2.98E+06	3.25E+06	3.69E+06	3.32E+06	1.02	yes
Reach 2	Selenium	7782492	ug/kg ww	22	22	100%	4.40E+02	6.22E+02	8.55E+02	6.61E+02	1.06	yes
Reach 2	Sodium	7440235	ug/kg ww	22	22	100%	6.57E+05	9.90E+05	1.54E+06	1.09E+06	1.10	yes
Reach 2	Uranium	7440611	ug/kg ww	19	22	86%	3.25E-01	4.71E+00	1.79E+01	9.92E+00	2.11	NO
Reach 2	Vanadium	7440622	ug/kg ww	5	22	23%	4.19E+01	7.52E+01	1.84E+02	1.31E+02	1.74	yes
Reach 2	Zinc	7440666	ug/kg ww	22	22	100%	1.15E+04	1.69E+04	2.72E+04	2.21E+04	1.30	yes
Reach 2	Total PCB, as Aroclor	1336363_d	ug/kg ww	22	22	100%	5.50E+00	4.97E+01	4.19E+02	1.29E+02	2.59	NO
Reach 2	Total PCB, as Congener Sum	1336363_d	ug/kg ww	5	5	100%	2.61E+01	5.67E+01	1.27E+02	9.68E+01	1.71	yes
Reach 2	Non-Dioxin PCB, as Congener Sum	1336363_d	ug/kg ww	5	5	100%	2.42E+01	5.29E+01	1.17E+02	8.97E+01	1.70	yes
Reach 2	2006 TEQ D/F	TEQ_DF	ug/kg ww	22	22	100%	3.33E-04	9.06E-04	1.90E-03	1.04E-03	1.15	yes
Reach 2	2006 TEQ PCB	TEQ_PCB	ug/kg ww	22	22	100%	3.38E-04	3.86E-03	3.44E-02	1.04E-02	2.70	NO
Reach 2	2006 TEQ D/F+PCB	TEQ_Total	ug/kg ww	22	22	100%	1.27E-03	4.76E-03	3.62E-02	1.15E-02	2.42	NO
Reach 3	Aluminum	7429905	ug/kg ww	29	34	85%	1.47E+03	1.32E+04	5.10E+04	2.36E+04	1.79	yes
Reach 3	Antimony	7440360	ug/kg ww	1	34	3%	3.95E+01	5.24E+01	1.12E+02	NC		
Reach 3	Arsenic	7440382	ug/kg ww	37	40	93%	4.26E+00	2.21E+02	7.17E+02	3.78E+02	1.71	yes
Reach 3	Barium	7440393	ug/kg ww	34	34	100%	4.72E+02	2.03E+03	6.12E+03	3.23E+03	1.59	yes
Reach 3	Beryllium	7440417	ug/kg ww	4	34	12%	1.98E+00	2.89E+00	5.80E+00	5.79E+00	2.00	NO
Reach 3	Cadmium	7440439	ug/kg ww	34	34	100%	1.59E+01	1.05E+02	3.91E+02	2.26E+02	2.15	NO
Reach 3	Calcium	7440702	ug/kg ww	34	34	100%	4.60E+06	8.59E+06	1.28E+07	1.05E+07	1.23	yes
Reach 3	Chromium	7440473	ug/kg ww	34	34	100%	2.97E+02	6.95E+02	3.02E+03	1.10E+03	1.58	yes
Reach 3	Cobalt	7440484	ug/kg ww	34	34	100%	1.63E+01	3.38E+01	8.99E+01	3.88E+01	1.15	yes
Reach 3	Copper	7440508	ug/kg ww	34	34	100%	2.62E+02	8.93E+02	2.57E+03	1.07E+03	1.20	yes
Reach 3	Iron	7439896	ug/kg ww	34	34	100%	7.10E+03	2.90E+04	9.31E+04	4.59E+04	1.58	yes
Reach 3	Magnesium	7439954	ug/kg ww	34	34	100%	2.71E+05	3.39E+05	3.98E+05	3.49E+05	1.03	yes
Reach 3	Manganese	7439965	ug/kg ww	34	34	100%	6.66E+02	3.22E+03	8.29E+03	5.07E+03	1.57	yes
Reach 3	Mercury	7439976	ug/kg ww	24	24	100%	4.95E+01	1.38E+02	2.93E+02	2.11E+02	1.53	yes
Reach 3	Nickel	7440020	ug/kg ww	34	34	100%	1.60E+02	4.20E+02	2.04E+03	7.06E+02	1.68	yes
Reach 3	Potassium	7440097	ug/kg ww	34	34	100%	2.90E+06	3.33E+06	3.83E+06	3.41E+06	1.02	yes
Reach 3	Selenium	7782492	ug/kg ww	34	34	100%	4.07E+02	6.17E+02	8.75E+02	6.53E+02	1.06	yes
Reach 3	Sodium	7440235	ug/kg ww	34	34	100%	6.74E+05	1.06E+06	1.55E+06	1.26E+06	1.18	yes
Reach 3	Uranium	7440611	ug/kg ww	33	34	97%	7.15E-01	9.70E+00	2.58E+01	1.65E+01	1.70	yes
Reach 3	Vanadium	7440622	ug/kg ww	19	34	56%	4.52E+01	1.04E+02	2.29E+02	1.35E+02	1.30	yes
Reach 3	Zinc	7440666	ug/kg ww	34	34	100%	1.10E+04	1.75E+04	2.45E+04	2.14E+04	1.22	yes
Reach 3	Total PCB, as Aroclor	1336363_d	ug/kg ww	24	24	100%	6.46E+00	2.20E+01	6.80E+01	2.84E+01	1.29	yes
Reach 3	Total PCB, as Congener Sum	1336363_d	ug/kg ww	6	6	100%	9.04E+00	3.72E+01	1.09E+02	8.68E+01	2.33	NO
Reach 3	Non-Dioxin PCB, as Congener Sum	1336363_d	ug/kg ww	6	6	100%	8.34E+00	3.44E+01	1.02E+02	8.13E+01	2.36	NO
Reach 3	2006 TEQ D/F	TEQ_DF	ug/kg ww	24	24	100%	3.40E-04	8.45E-04	2.40E-03	1.01E-03	1.20	yes
Reach 3	2006 TEQ PCB	TEQ_PCB	ug/kg ww	24	24	100%	3.04E-04	1.73E-03	5.57E-03	2.21E-03	1.28	yes
Reach 3	2006 TEQ D/F+PCB	TEQ_Total	ug/kg ww	24	24	100%	8.95E-04	2.57E-03	6.40E-03	3.09E-03	1.20	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

FISH TISSUE (BASED ON WHOLE BODY SAMPLES)

Exposure Area	Preferred Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 4a	Aluminum	7429905	ug/kg ww	21	22	95%	1.66E+03	1.56E+04	8.89E+04	3.89E+04	2.49	NO
Reach 4a	Arsenic	7440382	ug/kg ww	23	26	88%	3.98E+00	2.61E+02	9.41E+02	5.42E+02	2.07	NO
Reach 4a	Barium	7440393	ug/kg ww	22	22	100%	2.83E+02	2.04E+03	6.59E+03	4.93E+03	2.42	NO
Reach 4a	Cadmium	7440439	ug/kg ww	22	22	100%	2.00E+01	7.58E+01	3.74E+02	1.72E+02	2.27	NO
Reach 4a	Calcium	7440702	ug/kg ww	22	22	100%	3.43E+06	7.96E+06	1.57E+07	9.31E+06	1.17	yes
Reach 4a	Chromium	7440473	ug/kg ww	22	22	100%	2.61E+02	6.71E+02	2.11E+03	8.16E+02	1.21	yes
Reach 4a	Cobalt	7440484	ug/kg ww	22	22	100%	1.41E+01	3.54E+01	1.08E+02	5.66E+01	1.60	yes
Reach 4a	Copper	7440508	ug/kg ww	22	22	100%	3.60E+02	7.26E+02	1.40E+03	8.18E+02	1.13	yes
Reach 4a	Iron	7439896	ug/kg ww	22	22	100%	9.35E+03	2.91E+04	1.31E+05	6.03E+04	2.07	NO
Reach 4a	Magnesium	7439954	ug/kg ww	22	22	100%	2.67E+05	3.29E+05	3.98E+05	3.44E+05	1.05	yes
Reach 4a	Manganese	7439965	ug/kg ww	22	22	100%	8.68E+02	2.74E+03	9.05E+03	4.93E+03	1.80	yes
Reach 4a	Mercury	7439976	ug/kg ww	22	22	100%	4.47E+01	1.37E+02	3.00E+02	2.12E+02	1.55	yes
Reach 4a	Nickel	7440020	ug/kg ww	22	22	100%	1.22E+02	3.16E+02	8.92E+02	3.84E+02	1.22	yes
Reach 4a	Potassium	7440097	ug/kg ww	22	22	100%	2.90E+06	3.23E+06	3.82E+06	3.33E+06	1.03	yes
Reach 4a	Selenium	7782492	ug/kg ww	22	22	100%	4.08E+02	6.30E+02	8.69E+02	6.86E+02	1.09	yes
Reach 4a	Sodium	7440235	ug/kg ww	22	22	100%	6.42E+05	9.85E+05	1.47E+06	1.08E+06	1.10	yes
Reach 4a	Uranium	7440611	ug/kg ww	15	22	68%	6.80E-01	3.90E+00	1.95E+01	6.01E+00	1.54	yes
Reach 4a	Vanadium	7440622	ug/kg ww	5	22	23%	3.82E+01	8.57E+01	2.98E+02	1.91E+02	2.23	NO
Reach 4a	Zinc	7440666	ug/kg ww	22	22	100%	1.07E+04	1.63E+04	2.45E+04	2.11E+04	1.29	yes
Reach 4a	Total PCB, as Aroclor	1336363	ug/kg ww	22	22	100%	6.70E+00	3.32E+01	1.54E+02	7.45E+01	2.24	NO
Reach 4a	Total PCB, as Congener Sum	1336363	ug/kg ww	5	5	100%	1.13E+01	4.76E+01	1.52E+02	1.75E+02	3.67	NO
Reach 4a	Non-Dioxin PCB, as Congener Sum	1336363	ug/kg ww	5	5	100%	1.05E+01	4.45E+01	1.44E+02	1.67E+02	3.75	NO
Reach 4a	2006 TEQ D/F	TEQ_DF	ug/kg ww	22	22	100%	3.32E-04	8.92E-04	2.12E-03	1.07E-03	1.20	yes
Reach 4a	2006 TEQ PCB	TEQ_PCB	ug/kg ww	22	22	100%	2.36E-04	2.39E-03	1.16E-02	3.69E-03	1.55	yes
Reach 4a	2006 TEQ D/F+PCB	TEQ_Total	ug/kg ww	22	22	100%	6.88E-04	3.28E-03	1.24E-02	6.14E-03	1.87	yes
Reach 5	Aluminum	7429905	ug/kg ww	21	25	84%	1.51E+03	1.82E+04	8.61E+04	4.02E+04	2.21	NO
Reach 5	Arsenic	7440382	ug/kg ww	25	29	86%	5.17E+00	2.78E+02	9.56E+02	5.56E+02	2.00	yes
Reach 5	Barium	7440393	ug/kg ww	25	25	100%	3.55E+02	2.56E+03	8.46E+03	5.73E+03	2.24	NO
Reach 5	Cadmium	7440439	ug/kg ww	21	25	84%	7.68E+00	9.20E+01	2.98E+02	2.31E+02	2.51	NO
Reach 5	Calcium	7440702	ug/kg ww	25	25	100%	3.78E+06	8.57E+06	1.41E+07	9.27E+06	1.13	yes
Reach 5	Chromium	7440473	ug/kg ww	25	25	100%	2.74E+02	7.45E+02	1.58E+03	8.69E+02	1.17	yes
Reach 5	Cobalt	7440484	ug/kg ww	25	25	100%	1.76E+01	3.95E+01	1.14E+02	6.15E+01	1.56	yes
Reach 5	Copper	7440508	ug/kg ww	25	25	100%	3.02E+02	7.00E+02	1.28E+03	7.48E+02	1.11	yes
Reach 5	Iron	7439896	ug/kg ww	25	25	100%	7.06E+03	3.25E+04	1.30E+05	6.11E+04	1.88	yes
Reach 5	Magnesium	7439954	ug/kg ww	25	25	100%	2.65E+05	3.29E+05	3.97E+05	3.42E+05	1.04	yes
Reach 5	Manganese	7439965	ug/kg ww	25	25	100%	1.25E+03	3.23E+03	9.27E+03	5.55E+03	1.72	yes
Reach 5	Mercury	7439976	ug/kg ww	25	25	100%	5.85E+01	1.48E+02	2.58E+02	2.17E+02	1.46	yes
Reach 5	Nickel	7440020	ug/kg ww	25	25	100%	1.36E+02	3.31E+02	7.30E+02	3.84E+02	1.16	yes
Reach 5	Potassium	7440097	ug/kg ww	25	25	100%	2.67E+06	3.11E+06	3.78E+06	3.23E+06	1.04	yes
Reach 5	Selenium	7782492	ug/kg ww	25	25	100%	3.08E+02	5.07E+02	8.38E+02	5.49E+02	1.08	yes
Reach 5	Sodium	7440235	ug/kg ww	25	25	100%	6.98E+05	1.09E+06	1.64E+06	1.19E+06	1.09	yes
Reach 5	Uranium	7440611	ug/kg ww	20	25	80%	6.80E-01	5.52E+00	2.06E+01	7.47E+00	1.35	yes
Reach 5	Vanadium	7440622	ug/kg ww	11	25	44%	3.95E+01	9.81E+01	2.77E+02	1.39E+02	1.42	yes
Reach 5	Zinc	7440666	ug/kg ww	25	25	100%	1.12E+04	1.72E+04	2.62E+04	2.15E+04	1.25	yes
Reach 5	Total PCB, as Aroclor	1336363	ug/kg ww	25	25	100%	6.30E+00	4.29E+01	1.54E+02	5.83E+01	1.36	yes
Reach 5	Total PCB, as Congener Sum	1336363	ug/kg ww	6	6	100%	9.33E+00	4.21E+01	1.34E+02	1.09E+02	2.58	NO
Reach 5	Non-Dioxin PCB, as Congener Sum	1336363	ug/kg ww	6	6	100%	8.69E+00	3.89E+01	1.24E+02	1.01E+02	2.59	NO
Reach 5	2006 TEQ D/F	TEQ_DF	ug/kg ww	25	25	100%	4.08E-04	8.61E-04	1.63E-03	9.92E-04	1.15	yes
Reach 5	2006 TEQ PCB	TEQ_PCB	ug/kg ww	25	25	100%	1.53E-04	3.28E-03	1.26E-02	4.70E-03	1.43	yes
Reach 5	2006 TEQ D/F+PCB	TEQ_Total	ug/kg ww	25	25	100%	7.23E-04	4.14E-03	1.33E-02	5.36E-03	1.30	yes
Reach 6	Aluminum	7429905	ug/kg ww	27	34	79%	1.60E+03	1.50E+04	1.13E+05	2.30E+04	1.53	yes
Reach 6	Iron	7439896	ug/kg ww	34	34	100%	8.40E+03	3.28E+04	1.92E+05	6.38E+04	1.95	yes
Reach 6	Magnesium	7439954	ug/kg ww	34	34	100%	2.58E+05	3.24E+05	3.90E+05	3.33E+05	1.03	yes
Reach 6	Manganese	7439965	ug/kg ww	34	34	100%	9.85E+02	3.04E+03	9.46E+03	4.75E+03	1.56	yes
Reach 6	Mercury	7439976	ug/kg ww	24	24	100%	6.83E+01	1.82E+02	2.92E+02	2.43E+02	1.34	yes
Reach 6	Nickel	7440020	ug/kg ww	34	34	100%	1.59E+02	3.73E+02	1.28E+03	4.40E+02	1.18	yes
Reach 6	Potassium	7440097	ug/kg ww	34	34	100%	2.60E+06	3.08E+06	3.57E+06	3.17E+06	1.03	yes
Reach 6	Sodium	7440235	ug/kg ww	34	34	100%	6.90E+05	1.14E+06	1.50E+06	1.20E+06	1.06	yes
Reach 6	Thallium	7440280	ug/kg ww	5	34	15%	2.46E+01	3.87E+01	7.84E+01	7.02E+01	1.81	yes
Reach 6	Antimony	7440360	ug/kg ww	1	34	3%	4.00E+01	5.49E+01	1.27E+02	NC		
Reach 6	Arsenic	7440382	ug/kg ww	35	38	92%	4.24E+00	2.46E+02	9.58E+02	4.53E+02	1.84	yes
Reach 6	Barium	7440393	ug/kg ww	34	34	100%	3.18E+02	2.47E+03	7.30E+03	4.01E+03	1.63	yes
Reach 6	Beryllium	7440417	ug/kg ww	2	34	6%	1.95E+00	2.90E+00	9.31E+00	5.68E+00	1.96	yes
Reach 6	Cadmium	7440439	ug/kg ww	34	34	100%	1.66E+01	1.28E+02	4.05E+02	2.54E+02	1.98	yes
Reach 6	Chromium	7440473	ug/kg ww	34	34	100%	2.63E+02	7.72E+02	2.29E+03	1.16E+03	1.50	yes
Reach 6	Cobalt	7440484	ug/kg ww	34	34	100%	1.83E+01	3.60E+01	1.05E+02	5.11E+01	1.42	yes
Reach 6	Copper	7440508	ug/kg ww	34	34	100%	3.11E+02	6.46E+02	1.51E+03	8.74E+02	1.35	yes
Reach 6	Uranium	7440611	ug/kg ww	30	34	88%	6.62E-01	6.75E+00	2.11E+01	8.46E+00	1.25	yes
Reach 6	Vanadium	7440622	ug/kg ww	12	34	35%	4.00E+01	9.36E+01	3.55E+02	1.43E+02	1.52	yes
Reach 6	Zinc	7440666	ug/kg ww	34	34	100%	1.14E+04	1.68E+04	2.83E+04	2.03E+04	1.21	yes
Reach 6	Calcium	7440702	ug/kg ww	34	34	100%	4.41E+06	9.22E+06	1.41E+07	9.98E+06	1.08	yes
Reach 6	Selenium	7782492	ug/kg ww	34	34	100%	2.66E+02	4.59E+02	6.28E+02	4.89E+02	1.06	yes
Reach 6	Total PCB, as Aroclor	1336363	ug/kg ww	24	24	100%	8.78E+00	4.37E+01	1.64E+02	6.31E+01	1.44	yes
Reach 6	Total PCB, as Congener Sum	1336363	ug/kg ww	5	5	100%	1.74E+01	6.00E+01	1.72E+02	1.82E+02	3.03	NO
Reach 6	Non-Dioxin PCB, as Congener Sum	1336363	ug/kg ww	5	5	100%	1.63E+01	5.55E+01	1.70E+02	1.69E+02	3.05	NO
Reach 6	2006 TEQ D/F	TEQ_DF	ug/kg ww	24	24	100%	3.61E-04	8.57E-04	1.58E-03	9.62E-04	1.12	yes
Reach 6	2006 TEQ PCB	TEQ_PCB	ug/kg ww	24	24	100%	5.60E-04	3.47E-03	1.34E-02	4.79E-03	1.38	yes
Reach 6	2006 TEQ D/F+PCB	TEQ_Total	ug/kg ww	24	24	100%	1.36E-03	4.33E-03	1.43E-02	5.80E-03	1.34	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

SEDIMENT

Exposure Area	Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 1	2006 TEQ_D/F	TEQ_DF	ng/kg	7	7	100%	8.3E-02	1.8E-01	3.5E-01	2.5E-01	1.41	yes
Reach 1	Aluminum	7429905	mg/kg	68	68	100%	4.7E+03	1.1E+04	3.2E+04	1.5E+04	1.29	yes
Reach 1	Antimony	7440360	mg/kg	67	67	100%	1.8E+00	3.1E+01	3.2E+02	5.3E+01	1.68	yes
Reach 1	Arsenic	7440382	mg/kg	69	71	97%	6.5E-01	1.6E+01	7.4E+01	1.9E+01	1.17	yes
Reach 1	Barium	7440393	mg/kg	68	68	100%	9.5E+01	9.4E+02	3.1E+03	1.3E+03	1.38	yes
Reach 1	Beryllium	7440417	mg/kg	68	68	100%	2.3E-01	1.9E+00	7.7E+01	6.8E+00	3.60	NO
Reach 1	Bismuth	7440699	mg/kg	1	1	100%	3.0E-01	3.0E-01	3.0E-01	NC		
Reach 1	Cadmium	7440439	mg/kg	63	71	89%	1.5E-03	2.1E+00	7.5E+00	2.4E+00	1.17	yes
Reach 1	Calcium	7440702	mg/kg	68	68	100%	5.3E+03	4.0E+04	9.5E+04	4.4E+04	1.10	yes
Reach 1	Cerium	7440451	mg/kg	1	1	100%	5.5E+01	5.5E+01	5.5E+01	NC		
Reach 1	Cesium	7440462	mg/kg	1	1	100%	8.0E-01	8.0E-01	8.0E-01	NC		
Reach 1	Chromium	7440473	mg/kg	68	68	100%	1.3E+01	6.5E+01	3.0E+02	9.2E+01	1.42	yes
Reach 1	Cobalt	7440484	mg/kg	68	68	100%	4.7E+00	2.7E+01	8.7E+01	3.8E+01	1.42	yes
Reach 1	Copper	7440508	mg/kg	71	71	100%	2.6E+01	1.1E+03	3.8E+03	1.6E+03	1.46	yes
Reach 1	Gallium	7440553	mg/kg	1	1	100%	3.4E+01	3.4E+01	3.4E+01	NC		
Reach 1	Iron	7439896	mg/kg	68	68	100%	1.2E+04	9.7E+04	2.5E+05	1.4E+05	1.39	yes
Reach 1	Lanthanum	7439910	mg/kg	1	1	100%	3.2E+01	3.2E+01	3.2E+01	NC		
Reach 1	Lithium	7439932	mg/kg	1	1	100%	1.8E+01	1.8E+01	1.8E+01	NC		
Reach 1	Magnesium	7439954	mg/kg	68	68	100%	4.0E+03	9.2E+03	2.7E+04	1.2E+04	1.28	yes
Reach 1	Manganese	7439965	mg/kg	68	68	100%	2.1E+02	1.9E+03	5.9E+03	2.6E+03	1.40	yes
Reach 1	Mercury	7439976	mg/kg	54	66	82%	5.0E-03	1.3E-01	6.8E-01	1.6E-01	1.22	yes
Reach 1	Molybdenum	7439987	mg/kg	1	1	100%	6.2E+01	6.2E+01	6.2E+01	NC		
Reach 1	Nickel	7440020	mg/kg	68	68	100%	6.6E+00	1.2E+01	2.6E+01	1.3E+01	1.05	yes
Reach 1	Potassium	7440097	mg/kg	68	68	100%	7.8E+02	2.3E+03	6.9E+03	3.0E+03	1.30	yes
Reach 1	Rubidium	7440177	mg/kg	1	1	100%	2.3E+01	2.3E+01	2.3E+01	NC		
Reach 1	Scandium	7440202	mg/kg	1	1	100%	7.0E+00	7.0E+00	7.0E+00	NC		
Reach 1	Selenium	7782492	mg/kg	21	48	44%	3.4E-01	3.2E+00	2.0E+01	4.1E+00	1.31	yes
Reach 1	Silver	7440224	mg/kg	26	67	39%	4.7E-01	2.5E+00	1.3E+01	3.6E+00	1.47	yes
Reach 1	Sodium	7440235	mg/kg	67	68	99%	9.9E+01	1.0E+03	5.1E+03	1.5E+03	1.46	yes
Reach 1	Strontium, stable	7440246	mg/kg	1	1	100%	4.4E+02	4.4E+02	4.4E+02	NC		
Reach 1	Thallium	7440280	mg/kg	7	68	10%	1.0E-01	1.2E+00	4.6E+00	1.4E+00	1.13	yes
Reach 1	Thorium	7440291	mg/kg	1	1	100%	9.2E+00	9.2E+00	9.2E+00	NC		
Reach 1	Titanium	7440326	mg/kg	1	1	100%	2.5E+03	2.5E+03	2.5E+03	NC		
Reach 1	Uranium	7440611	mg/kg	19	46	41%	4.1E+00	2.1E+01	8.4E+01	2.6E+01	1.24	yes
Reach 1	Vanadium	7440622	mg/kg	68	68	100%	2.0E+01	3.1E+01	7.7E+01	3.6E+01	1.18	yes
Reach 1	Zinc	7440666	mg/kg	71	71	100%	2.5E+02	8.5E+03	2.7E+04	1.2E+04	1.42	yes
Reach 1	2-Methylnaphthalene	91576	ug/kg	36	45	80%	2.0E-01	1.0E+00	3.0E+00	8.2E-01	0.82	yes
Reach 1	Acenaphthene	83329	ug/kg	5	45	11%	2.0E-01	2.4E+00	3.5E+00	1.4E+00	0.57	yes
Reach 1	Acenaphthylene	208968	ug/kg	3	45	7%	2.0E+00	2.6E+00	3.5E+00	3.2E+00	1.25	yes
Reach 1	Anthracene	120127	ug/kg	11	45	24%	2.0E-01	2.3E+00	6.0E+00	1.7E+00	0.76	yes
Reach 1	Benzo(a)anthracene	56553	ug/kg	35	45	78%	2.0E-01	2.1E+00	1.2E+01	3.7E+00	1.74	yes
Reach 1	Benzo(a)pyrene	50328	ug/kg	22	45	49%	4.0E-01	2.9E+00	1.3E+01	3.0E+00	1.04	yes
Reach 1	Benzo(b)fluoranthene	205992	ug/kg	20	45	44%	2.0E-01	2.2E+00	9.0E+00	1.8E+00	0.80	yes
Reach 1	Benzo(ghi)perylene	191242	ug/kg	29	45	64%	2.0E-01	2.1E+00	9.0E+00	3.0E+00	1.41	yes
Reach 1	Benzo(k)fluoranthene	207089	ug/kg	20	45	44%	2.0E-01	2.0E+00	7.0E+00	1.4E+00	0.69	yes
Reach 1	Chrysene	218019	ug/kg	37	45	82%	4.0E-01	2.9E+00	1.4E+01	5.3E+00	1.80	yes
Reach 1	Dibenz(a,h)anthracene	53703	ug/kg	13	45	29%	2.0E-01	2.2E+00	3.5E+00	1.7E+00	0.79	yes
Reach 1	Fluoranthene	206440	ug/kg	38	45	84%	2.0E-01	4.9E+00	3.6E+01	1.0E+01	2.09	NO
Reach 1	Fluorene	86737	ug/kg	7	45	16%	2.0E-01	2.4E+00	3.0E+00	2.0E+00	0.85	yes
Reach 1	Indeno(1,2,3-cd)pyrene	193395	ug/kg	27	45	60%	2.0E-01	2.2E+00	1.1E+01	3.1E+00	1.41	yes
Reach 1	Naphthalene	91203	ug/kg	16	45	36%	2.0E-01	1.9E+00	3.0E+00	1.9E+00	1.00	yes
Reach 1	Phenanthrene	85018	ug/kg	41	45	91%	2.0E-01	4.3E+00	3.6E+01	9.5E+00	2.22	NO
Reach 1	Pyrene	129000	ug/kg	38	45	84%	2.0E-01	4.4E+00	3.6E+01	9.3E+00	2.12	NO
Reach 1	2,4'-DDE	3424826	ug/kg	1	45	2%	3.4E-01	4.2E-01	5.5E-01	NC		
Reach 1	2,4'-DDT	789026	ug/kg	2	45	4%	2.6E-01	4.1E-01	5.5E-01	2.7E-01	0.67	yes
Reach 1	4,4'-DDE	72559	ug/kg	4	58	7%	1.2E-01	7.0E-01	2.0E+00	5.8E-01	0.83	yes
Reach 1	4,4'-DDT	50293	ug/kg	12	58	21%	2.0E-01	7.2E-01	2.0E+00	4.5E-01	0.63	yes
Reach 1	alpha-BHC	319846	ug/kg	1	58	2%	1.7E-01	3.5E-01	1.0E+00	NC		
Reach 1	Hexachlorobenzene	118741	ug/kg	1	45	2%	1.1E-01	2.0E-01	2.6E-01	NC		
Reach 1	Methoxychlor	72435	ug/kg	1	58	2%	7.5E-01	3.5E+00	1.0E+01	NC		
Reach 1	Acetophenone	98862	ug/kg	1	45	2%	2.6E+01	5.2E+01	1.2E+02	NC		
Reach 1	Bis(2-ethylhexyl)phthalate	117817	ug/kg	1	45	2%	2.5E+01	5.2E+01	1.2E+02	NC		
Reach 1	Dibenzofuran	132649	ug/kg	18	45	40%	2.0E-01	1.8E+00	3.0E+00	9.3E-01	0.52	yes
Reach 2	2006 TEQ_D/F	TEQ_DF	ng/kg	6	6	100%	1.3E-01	9.0E-01	2.3E+00	2.7E+00	2.96	NO
Reach 2	Aluminum	7429905	mg/kg	39	39	100%	3.1E+03	8.4E+03	1.9E+04	9.2E+03	1.10	yes
Reach 2	Antimony	7440360	mg/kg	29	35	83%	2.4E-01	9.9E+00	5.4E+01	1.3E+01	1.33	yes
Reach 2	Arsenic	7440382	mg/kg	39	41	95%	1.1E+00	9.4E+00	2.7E+01	1.1E+01	1.16	yes
Reach 2	Barium	7440393	mg/kg	39	39	100%	8.1E+01	4.5E+02	1.2E+03	5.3E+02	1.17	yes
Reach 2	Beryllium	7440417	mg/kg	39	39	100%	2.8E-01	6.4E-01	1.2E+00	7.0E-01	1.10	yes
Reach 2	Cadmium	7440439	mg/kg	41	41	100%	1.4E-01	3.0E+00	8.4E+00	3.4E+00	1.13	yes
Reach 2	Calcium	7440702	mg/kg	39	39	100%	4.7E+03	2.2E+04	5.0E+04	2.5E+04	1.16	yes
Reach 2	Chromium	7440473	mg/kg	39	39	100%	9.8E+00	2.9E+01	8.5E+01	4.2E+01	1.42	yes
Reach 2	Cobalt	7440484	mg/kg	39	39	100%	4.1E+00	1.2E+01	4.7E+01	1.9E+01	1.56	yes
Reach 2	Copper	7440508	mg/kg	41	41	100%	1.4E+01	3.4E+02	1.5E+03	7.7E+02	2.24	NO
Reach 2	Iron	7439896	mg/kg	39	39	100%	9.9E+03	4.1E+04	1.8E+05	6.8E+04	1.65	yes
Reach 2	Magnesium	7439954	mg/kg	39	39	100%	4.1E+03	9.6E+03	2.5E+04	1.1E+04	1.13	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

SEDIMENT

Exposure Area	Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 2	Manganese	7439965	mg/kg	39	39	100%	1.5E+02	7.6E+02	3.4E+03	1.3E+03	1.71	yes
Reach 2	Mercury	7439976	mg/kg	39	39	100%	1.7E-02	2.8E-01	1.1E+00	4.8E-01	1.68	yes
Reach 2	Nickel	7440020	mg/kg	39	39	100%	6.3E+00	1.5E+01	2.3E+01	1.6E+01	1.09	yes
Reach 2	Potassium	7440097	mg/kg	39	39	100%	6.1E+02	1.5E+03	3.6E+03	1.7E+03	1.11	yes
Reach 2	Selenium	7782492	mg/kg	14	22	64%	3.4E-01	3.8E+00	2.3E+01	6.0E+00	1.56	yes
Reach 2	Silver	7440224	mg/kg	9	39	23%	4.6E-01	1.0E+00	4.0E+00	1.8E+00	1.80	yes
Reach 2	Sodium	7440235	mg/kg	33	39	85%	4.8E+01	3.5E+02	1.3E+03	6.2E+02	1.74	yes
Reach 2	Thallium	7440280	mg/kg	8	39	21%	3.9E-01	1.5E+00	4.0E+00	1.3E+00	0.89	yes
Reach 2	Uranium	7440611	mg/kg	10	30	33%	4.3E+00	1.4E+01	5.8E+01	1.7E+01	1.24	yes
Reach 2	Vanadium	7440622	mg/kg	39	39	100%	1.1E+01	2.7E+01	3.9E+01	2.8E+01	1.06	yes
Reach 2	Zinc	7440666	mg/kg	41	41	100%	9.3E+01	3.2E+03	2.5E+04	7.9E+03	2.49	NO
Reach 2	2-Methylnaphthalene	91576	ug/kg	30	30	100%	2.0E-01	1.1E+00	4.0E+00	2.0E+00	1.74	yes
Reach 2	Acenaphthene	83329	ug/kg	3	30	10%	4.0E-01	2.9E+00	5.5E+00	1.0E+00	0.35	yes
Reach 2	Acenaphthylene	208968	ug/kg	3	30	10%	3.0E-01	3.1E+00	9.0E+00	3.0E+00	0.95	yes
Reach 2	Anthracene	120127	ug/kg	8	30	27%	4.0E-01	2.7E+00	7.0E+00	2.0E+00	0.73	yes
Reach 2	Benzo(a)anthracene	56553	ug/kg	27	30	90%	2.0E-01	1.7E+00	5.0E+00	2.7E+00	1.58	yes
Reach 2	Benzo(a)pyrene	50328	ug/kg	23	30	77%	4.0E-01	2.1E+00	5.0E+00	2.3E+00	1.12	yes
Reach 2	Benzo(b)fluoranthene	205992	ug/kg	18	30	60%	4.0E-01	2.7E+00	6.0E+00	3.0E+00	1.11	yes
Reach 2	Benzo(ghi)perylene	191242	ug/kg	19	30	63%	2.0E-01	2.1E+00	5.5E+00	1.9E+00	0.91	yes
Reach 2	Benzo(k)fluoranthene	207089	ug/kg	15	30	50%	2.0E-01	2.5E+00	6.5E+00	2.2E+00	0.89	yes
Reach 2	Chrysene	218019	ug/kg	29	30	97%	4.0E-01	2.7E+00	1.0E+01	4.6E+00	1.66	yes
Reach 2	Dibenz(a,h)anthracene	53703	ug/kg	15	30	50%	2.0E-01	1.8E+00	3.5E+00	9.6E-01	0.55	yes
Reach 2	Fluoranthene	206440	ug/kg	28	30	93%	4.0E-01	3.8E+00	1.4E+01	6.6E+00	1.74	yes
Reach 2	Fluorene	86737	ug/kg	6	30	20%	2.0E-01	2.6E+00	5.5E+00	9.4E-01	0.36	yes
Reach 2	Indeno(1,2,3-cd)pyrene	193395	ug/kg	21	30	70%	4.0E-01	2.1E+00	5.0E+00	2.2E+00	1.06	yes
Reach 2	Naphthalene	91203	ug/kg	12	30	40%	1.0E+00	2.0E+00	8.0E+00	2.2E+00	1.11	yes
Reach 2	Phenanthrene	85018	ug/kg	40	30	100%	4.0E-01	2.6E+00	1.0E+01	4.5E+00	1.72	yes
Reach 2	Pyrene	129000	ug/kg	29	30	97%	4.0E-01	3.0E+00	1.0E+01	5.0E+00	1.69	yes
Reach 2	2,4'-DDE	3424826	ug/kg	1	30	3%	1.7E-01	4.5E-01	7.5E-01	NC		
Reach 2	4,4'-DDE	72559	ug/kg	5	39	13%	1.2E-01	7.3E-01	2.0E+00	3.9E-01	0.53	yes
Reach 2	4,4'-DDT	50293	ug/kg	7	39	18%	2.3E-01	7.4E-01	2.0E+00	4.9E-01	0.65	yes
Reach 2	Aldrin	309002	ug/kg	1	39	3%	1.7E-01	3.8E-01	1.1E+00	NC		
Reach 2	Hexachlorobenzene	118741	ug/kg	1	30	3%	1.8E-01	2.3E-01	3.7E-01	NC		
Reach 2	Bis(2-ethylhexyl)phthalate	117817	ug/kg	1	30	3%	4.0E+01	6.0E+01	1.6E+02	NC		
Reach 2	Dibenzofuran	132649	ug/kg	12	30	40%	2.0E-01	2.3E+00	5.5E+00	1.2E+00	0.53	yes
Reach 3	2006 TEQ_D/F	TEQ_DF	ng/kg	7	7	100%	7.2E-02	9.4E-01	3.4E+00	6.3E+00	6.69	NO
Reach 3	Aluminum	7429905	mg/kg	28	28	100%	2.5E+03	8.4E+03	2.4E+04	9.9E+03	1.17	yes
Reach 3	Antimony	7440360	mg/kg	5	21	24%	1.5E-01	1.8E+00	7.0E+00	1.9E+00	1.09	yes
Reach 3	Arsenic	7440382	mg/kg	31	33	94%	9.5E-01	4.9E+00	2.6E+01	8.7E+00	1.79	yes
Reach 3	Barium	7440393	mg/kg	28	28	100%	3.0E+01	1.7E+02	8.5E+02	3.2E+02	1.90	yes
Reach 3	Beryllium	7440417	mg/kg	28	28	100%	2.2E-01	6.6E-01	2.4E+00	8.1E-01	1.22	yes
Reach 3	Cadmium	7440439	mg/kg	32	33	97%	1.1E-01	1.8E+00	7.4E+00	4.1E+00	2.29	NO
Reach 3	Calcium	7440702	mg/kg	28	28	100%	1.9E+03	1.1E+04	7.7E+04	2.4E+04	2.20	NO
Reach 3	Chromium	7440473	mg/kg	28	28	100%	5.2E+00	2.0E+01	6.9E+01	2.5E+01	1.24	yes
Reach 3	Cobalt	7440484	mg/kg	28	28	100%	2.8E+00	6.7E+00	2.1E+01	1.0E+01	1.50	yes
Reach 3	Copper	7440508	mg/kg	33	33	100%	5.8E+00	3.2E+01	1.1E+02	5.2E+01	1.62	yes
Reach 3	Iron	7439896	mg/kg	28	28	100%	5.1E+03	1.7E+04	3.9E+04	1.9E+04	1.15	yes
Reach 3	Magnesium	7439954	mg/kg	28	28	100%	1.8E+03	6.6E+03	2.2E+04	8.3E+03	1.25	yes
Reach 3	Manganese	7439965	mg/kg	28	28	100%	9.2E+01	2.9E+02	1.1E+03	3.6E+02	1.23	yes
Reach 3	Mercury	7439976	mg/kg	20	28	71%	4.0E-03	1.8E-01	8.1E-01	3.7E-01	2.01	NO
Reach 3	Nickel	7440020	mg/kg	28	28	100%	4.9E+00	1.6E+01	5.3E+01	2.1E+01	1.25	yes
Reach 3	Potassium	7440097	mg/kg	28	28	100%	5.0E+02	1.3E+03	5.3E+03	1.6E+03	1.28	yes
Reach 3	Selenium	7782492	mg/kg	5	10	50%	3.4E-01	3.6E+00	9.6E+00	5.6E+00	1.57	yes
Reach 3	Silver	7440224	mg/kg	1	28	4%	4.0E-01	6.1E-01	1.2E+00	NC		
Reach 3	Sodium	7440235	mg/kg	20	28	71%	2.0E+01	1.4E+02	4.7E+02	1.8E+02	1.28	yes
Reach 3	Thallium	7440280	mg/kg	1	28	4%	3.9E-01	1.4E+00	2.9E+00	NC		
Reach 3	Uranium	7440611	mg/kg	7	27	26%	5.6E+00	1.1E+01	2.4E+01	1.0E+01	0.93	yes
Reach 3	Vanadium	7440622	mg/kg	28	28	100%	7.7E+00	2.7E+01	7.1E+01	3.2E+01	1.15	yes
Reach 3	Zinc	7440666	mg/kg	33	33	100%	2.7E+01	3.0E+02	1.3E+03	5.7E+02	1.90	yes
Reach 3	2-Methylnaphthalene	91576	ug/kg	12	27	44%	2.0E-01	3.1E+00	3.0E+01	4.1E+00	1.33	yes
Reach 3	Acenaphthene	83329	ug/kg	3	27	11%	3.0E-01	2.8E+00	5.0E+00	3.0E+00	1.09	yes
Reach 3	Acenaphthylene	208968	ug/kg	2	27	7%	2.0E-01	2.9E+00	6.5E+00	1.0E+00	0.35	yes
Reach 3	Anthracene	120127	ug/kg	4	27	15%	4.0E-01	2.8E+00	6.5E+00	2.4E+00	0.87	yes
Reach 3	Benzo(a)anthracene	56553	ug/kg	12	27	44%	4.0E-01	2.3E+00	7.0E+00	2.2E+00	0.93	yes
Reach 3	Benzo(a)pyrene	50328	ug/kg	8	27	30%	5.0E-01	2.4E+00	5.0E+00	2.0E+00	0.85	yes
Reach 3	Benzo(b)fluoranthene	205992	ug/kg	9	27	33%	7.0E-01	2.7E+00	9.0E+00	2.6E+00	0.97	yes
Reach 3	Benzo(ghi)perylene	191242	ug/kg	11	27	41%	2.0E-01	2.0E+00	5.0E+00	1.4E+00	0.67	yes
Reach 3	Benzo(k)fluoranthene	207089	ug/kg	7	27	26%	2.0E-01	2.6E+00	6.5E+00	1.6E+00	0.62	yes
Reach 3	Chrysene	218019	ug/kg	21	27	78%	2.0E-01	2.2E+00	1.7E+01	5.9E+00	2.72	NO
Reach 3	Dibenz(a,h)anthracene	53703	ug/kg	7	27	26%	4.0E-01	2.3E+00	5.0E+00	1.6E+00	0.69	yes
Reach 3	Fluoranthene	206440	ug/kg	14	27	52%	2.0E-01	2.8E+00	9.0E+00	3.2E+00	1.13	yes
Reach 3	Fluorene	86737	ug/kg	5	27	19%	2.0E-01	2.4E+00	5.0E+00	2.0E+00	0.82	yes
Reach 3	Indeno(1,2,3-cd)pyrene	193395	ug/kg	10	27	37%	2.0E-01	2.2E+00	5.0E+00	1.9E+00	0.89	yes
Reach 3	Naphthalene	91203	ug/kg	8	27	30%	1.0E+00	4.6E+00	4.3E+01	7.3E+00	1.60	yes
Reach 3	Phenanthrene	85018	ug/kg	15	27	56%	2.0E-01	3.7E+00	4.1E+01	1.3E+01	3.48	NO
Reach 3	Pyrene	129000	ug/kg	19	27	70%	2.0E-01	2.2E+00	1.2E+01	4.1E+00	1.89	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

SEDIMENT

Exposure Area	Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 3	4,4'-DDE	72559	ug/kg	1	28	4%	3.5E-01	4.7E-01	1.7E+00	NC		
Reach 3	4,4'-DDT	50293	ug/kg	3	28	11%	1.5E-01	4.6E-01	1.7E+00	4.2E-01	0.92	yes
Reach 3	Methoxychlor	72435	ug/kg	3	28	11%	7.5E-01	2.4E+00	8.5E+00	2.1E+00	0.87	yes
Reach 3	Bis(2-chloroethyl)ether	111444	ug/kg	1	27	4%	4.3E+01	5.4E+01	8.5E+01	NC		
Reach 3	Dibenzofuran	132649	ug/kg	10	27	37%	2.0E-01	2.3E+00	1.0E+01	1.8E+00	0.76	yes
Reach 4a	2006 TEQ_D/F	TEQ_DF	ng/kg	6	6	100%	1.1E-01	7.8E-01	2.6E+00	2.5E+00	3.25	NO
Reach 4a	Aluminum	7429905	mg/kg	36	36	100%	3.0E+03	8.1E+03	2.1E+04	9.2E+03	1.15	yes
Reach 4a	Antimony	7440360	mg/kg	10	28	36%	1.5E-01	1.7E+00	4.3E+00	1.8E+00	1.08	yes
Reach 4a	Arsenic	7440382	mg/kg	35	36	97%	6.5E-01	4.3E+00	1.9E+01	7.0E+00	1.64	yes
Reach 4a	Barium	7440393	mg/kg	36	36	100%	2.9E+01	1.6E+02	1.0E+03	3.1E+02	1.99	yes
Reach 4a	Beryllium	7440417	mg/kg	36	36	100%	2.5E-01	6.1E-01	1.5E+00	7.0E-01	1.14	yes
Reach 4a	Cadmium	7440439	mg/kg	35	36	97%	5.7E-02	1.7E+00	1.1E+01	6.4E+00	3.71	NO
Reach 4a	Calcium	7440702	mg/kg	36	36	100%	8.8E+02	8.5E+03	3.5E+04	1.4E+04	1.62	yes
Reach 4a	Chromium	7440473	mg/kg	36	36	100%	5.5E+00	1.7E+01	3.5E+01	1.9E+01	1.12	yes
Reach 4a	Cobalt	7440484	mg/kg	36	36	100%	2.3E+00	6.3E+00	1.2E+01	7.0E+00	1.11	yes
Reach 4a	Copper	7440508	mg/kg	36	36	100%	4.2E+00	2.6E+01	1.6E+02	4.7E+01	1.84	yes
Reach 4a	Iron	7439896	mg/kg	36	36	100%	5.2E+03	1.5E+04	3.0E+04	1.7E+04	1.11	yes
Reach 4a	Magnesium	7439954	mg/kg	36	36	100%	1.4E+03	5.7E+03	2.1E+04	6.9E+03	1.22	yes
Reach 4a	Manganese	7439965	mg/kg	36	36	100%	1.0E+02	2.9E+02	5.7E+02	3.2E+02	1.13	yes
Reach 4a	Mercury	7439976	mg/kg	21	36	58%	6.3E-03	2.0E-01	1.6E+00	7.8E-01	3.86	NO
Reach 4a	Nickel	7440020	mg/kg	36	36	100%	4.1E+00	1.6E+01	2.5E+01	1.8E+01	1.11	yes
Reach 4a	Potassium	7440097	mg/kg	36	36	100%	3.7E+02	1.2E+03	2.4E+03	1.4E+03	1.13	yes
Reach 4a	Selenium	7782492	mg/kg	6	22	27%	3.6E-01	1.8E+00	5.0E+00	2.9E+00	1.58	yes
Reach 4a	Silver	7440224	mg/kg	7	36	19%	4.3E-01	7.1E-01	1.9E+00	1.0E+00	1.47	yes
Reach 4a	Sodium	7440235	mg/kg	36	36	100%	4.2E+01	1.7E+02	3.0E+02	1.9E+02	1.12	yes
Reach 4a	Uranium	7440611	mg/kg	3	29	10%	3.2E+00	1.0E+01	1.5E+01	1.2E+01	1.11	yes
Reach 4a	Vanadium	7440622	mg/kg	36	36	100%	9.1E+00	2.5E+01	4.0E+01	2.7E+01	1.09	yes
Reach 4a	Zinc	7440666	mg/kg	36	36	100%	1.6E+01	2.2E+02	1.5E+03	5.9E+02	2.62	NO
Reach 4a	2-Methylnaphthalene	91576	ug/kg	9	29	31%	2.0E-01	1.9E+00	4.0E+00	1.2E+00	0.62	yes
Reach 4a	Benzo(a)anthracene	56553	ug/kg	11	29	38%	2.0E-01	1.8E+00	3.0E+00	1.0E+00	0.57	yes
Reach 4a	Benzo(a)pyrene	50328	ug/kg	4	29	14%	4.0E-01	2.3E+00	3.0E+00	2.0E+00	0.88	yes
Reach 4a	Benzo(b)fluoranthene	205992	ug/kg	6	29	21%	4.0E-01	2.3E+00	5.0E+00	2.0E+00	0.90	yes
Reach 4a	Benzo(ghi)perylene	191242	ug/kg	3	29	10%	2.0E-01	2.4E+00	3.5E+00	NC		
Reach 4a	Benzo(k)fluoranthene	207089	ug/kg	5	29	17%	4.0E-01	2.2E+00	3.0E+00	1.7E+00	0.79	yes
Reach 4a	Chrysenes	218019	ug/kg	18	29	62%	2.0E-01	1.5E+00	5.0E+00	1.2E+00	0.81	yes
Reach 4a	Dibenz(a,h)anthracene	53703	ug/kg	2	29	7%	7.0E-01	2.4E+00	3.5E+00	1.1E+00	0.46	yes
Reach 4a	Fluoranthene	206440	ug/kg	16	29	55%	2.0E-01	1.5E+00	5.0E+00	9.3E-01	0.62	yes
Reach 4a	Indeno(1,2,3-cd)pyrene	193395	ug/kg	2	29	7%	2.0E+00	2.5E+00	3.5E+00	3.4E+00	1.34	yes
Reach 4a	Naphthalene	91203	ug/kg	2	29	7%	2.0E-01	1.7E+00	4.0E+00	1.6E+00	0.96	yes
Reach 4a	Phenanthrene	85018	ug/kg	8	29	28%	2.0E-01	2.1E+00	6.0E+00	1.3E+00	0.63	yes
Reach 4a	Pyrene	129000	ug/kg	12	29	41%	2.0E-01	1.7E+00	4.0E+00	1.1E+00	0.62	yes
Reach 4a	Aroclor-1260	11096825	ug/kg	1	37	3%	4.3E-01	4.3E+00	2.1E+01	NC		
Reach 4a	2,4'-DDE	3424826	ug/kg	1	29	3%	3.5E-01	4.2E-01	6.5E-01	NC		
Reach 4a	4,4'-DDE	72559	ug/kg	4	36	11%	1.9E-01	8.4E-01	5.2E+00	8.7E-01	1.03	yes
Reach 4a	4,4'-DDT	50293	ug/kg	3	36	8%	3.5E-01	1.3E+00	1.0E+01	2.5E+00	2.02	NO
Reach 4a	Hexachlorobenzene	118741	ug/kg	1	29	3%	9.2E-02	2.0E-01	3.3E-01	NC		
Reach 4a	trans-Nonachlor	39765805	ug/kg	1	29	3%	1.7E-01	2.3E-01	1.0E+00	NC		
Reach 4a	Caprolactam	105602	ug/kg	1	29	3%	4.3E-01	5.5E+01	1.5E+02	NC		
Reach 4a	Dibenzofuran	132649	ug/kg	2	29	7%	5.0E-01	2.4E+00	3.5E+00	2.5E+00	1.05	yes
Reach 4b	2006 TEQ_D/F	TEQ_DF	ng/kg	13	13	100%	6.9E-02	2.6E-01	6.0E-01	3.5E-01	1.34	yes
Reach 4b	Aluminum	7429905	mg/kg	49	49	100%	2.8E+03	8.9E+03	1.4E+04	9.6E+03	1.08	yes
Reach 4b	Antimony	7440360	mg/kg	14	28	50%	1.4E-01	9.4E-01	3.2E+00	1.0E+00	1.10	yes
Reach 4b	Arsenic	7440382	mg/kg	46	49	94%	3.8E-01	5.2E+00	1.6E+01	6.2E+00	1.18	yes
Reach 4b	Barium	7440393	mg/kg	49	49	100%	2.1E+01	8.2E+01	1.6E+02	9.0E+01	1.09	yes
Reach 4b	Beryllium	7440417	mg/kg	49	49	100%	2.1E-01	7.2E-01	1.5E+00	7.8E-01	1.09	yes
Reach 4b	Cadmium	7440439	mg/kg	39	49	80%	3.8E-02	5.9E-01	3.1E+00	1.0E+00	1.78	yes
Reach 4b	Calcium	7440702	mg/kg	49	49	100%	1.3E+03	5.0E+03	1.7E+04	7.5E+03	1.50	yes
Reach 4b	Chromium	7440473	mg/kg	49	49	100%	4.6E+00	1.8E+01	4.0E+01	2.0E+01	1.10	yes
Reach 4b	Cobalt	7440484	mg/kg	49	49	100%	2.1E+00	7.4E+00	1.5E+01	8.0E+00	1.09	yes
Reach 4b	Copper	7440508	mg/kg	48	49	98%	3.0E+00	1.4E+01	2.9E+01	1.6E+01	1.11	yes
Reach 4b	Iron	7439896	mg/kg	49	49	100%	4.9E+03	1.7E+04	2.8E+04	1.8E+04	1.07	yes
Reach 4b	Magnesium	7439954	mg/kg	49	49	100%	1.5E+03	4.6E+03	8.6E+03	5.1E+03	1.09	yes
Reach 4b	Manganese	7439965	mg/kg	49	49	100%	9.5E+01	2.8E+02	6.4E+02	3.1E+02	1.13	yes
Reach 4b	Mercury	7439976	mg/kg	35	46	76%	5.0E-03	5.0E-02	3.4E-01	9.1E-02	1.83	yes
Reach 4b	Nickel	7440020	mg/kg	49	49	100%	2.8E+00	1.6E+01	4.0E+01	1.8E+01	1.13	yes
Reach 4b	Potassium	7440097	mg/kg	49	49	100%	3.2E+02	1.4E+03	3.1E+03	1.5E+03	1.10	yes
Reach 4b	Selenium	7782492	mg/kg	6	21	29%	5.0E-01	2.0E+00	4.8E+00	3.0E+00	1.49	yes
Reach 4b	Sodium	7440235	mg/kg	41	49	84%	2.3E+01	1.1E+02	2.9E+02	1.3E+02	1.16	yes
Reach 4b	Uranium	7440611	mg/kg	12	49	24%	4.7E+00	1.1E+01	1.9E+01	1.1E+01	1.04	yes
Reach 4b	Vanadium	7440622	mg/kg	49	49	100%	8.7E+00	2.4E+01	4.3E+01	2.6E+01	1.07	yes
Reach 4b	Zinc	7440666	mg/kg	49	49	100%	2.1E+01	1.0E+02	3.7E+02	1.6E+02	1.50	yes
Reach 4b	2-Methylnaphthalene	91576	ug/kg	19	49	39%	2.0E-01	1.6E+00	4.0E+00	4.9E-01	0.30	yes
Reach 4b	Acenaphthene	83329	ug/kg	2	49	4%	4.0E-01	2.4E+00	4.5E+00	1.1E+00	0.45	yes
Reach 4b	Anthracene	120127	ug/kg	1	49	2%	1.0E+00	2.4E+00	4.5E+00	NC		
Reach 4b	Benzo(a)anthracene	56553	ug/kg	8	49	16%	2.0E-01	2.3E+00	1.2E+01	1.2E+00	0.51	yes

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

SEDIMENT

Exposure Area	Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?	
Reach 4b	Benzo(a)pyrene	50328	ug/kg	4	49	8%	4.0E-01	2.5E+00	1.1E+01	1.3E+00	0.53	yes	
Reach 4b	Benzo(b)fluoranthene	205992	ug/kg	6	49	12%	2.0E-01	2.5E+00	1.2E+01	1.8E+00	0.73	yes	
Reach 4b	Benzo(ghi)perylene	191242	ug/kg	5	49	10%	3.0E-01	2.3E+00	5.0E+00	9.4E-01	0.41	yes	
Reach 4b	Benzo(k)fluoranthene	207089	ug/kg	5	49	10%	4.0E-01	2.4E+00	1.0E+01	1.3E+00	0.52	yes	
Reach 4b	Chrysene	218019	ug/kg	14	49	29%	2.0E-01	2.1E+00	1.2E+01	1.6E+00	0.75	yes	
Reach 4b	Dibenz(a,h)anthracene	53703	ug/kg	1	49	2%	2.0E+00	2.4E+00	4.5E+00	NC			
Reach 4b	Fluoranthene	206440	ug/kg	15	49	31%	2.0E-01	2.3E+00	2.7E+01	2.3E+00	0.99	yes	
Reach 4b	Fluorene	86737	ug/kg	1	49	2%	4.0E-01	2.4E+00	4.5E+00	NC			
Reach 4b	Indeno(1,2,3-cd)pyrene	193395	ug/kg	6	49	12%	2.0E-01	2.2E+00	7.0E+00	9.3E-01	0.41	yes	
Reach 4b	Naphthalene	91203	ug/kg	10	49	20%	5.0E-01	1.8E+00	3.3E+00	1.7E+00	0.92	yes	
Reach 4b	Phenanthrene	85018	ug/kg	12	49	24%	2.0E-01	2.0E+00	6.0E+00	8.5E-01	0.42	yes	
Reach 4b	Pyrene	129000	ug/kg	14	49	29%	2.0E-01	2.3E+00	2.2E+01	1.9E+00	0.85	yes	
Reach 4b	2,4'-DDE	3424826	ug/kg	5	49	10%	9.0E-02	7.3E-01	1.7E+01	1.3E+00	1.82	yes	
Reach 4b	2,4'-DDT	789026	ug/kg	10	49	20%	1.9E-01	1.6E+00	5.7E+01	6.9E+00	4.21	NO	
Reach 4b	4,4'-DDD	72548	ug/kg	1	49	2%	3.4E-01	4.3E-01	2.1E+00	NC			
Reach 4b	4,4'-DDE	72559	ug/kg	11	49	22%	7.2E-02	1.8E+00	6.3E+01	7.4E+00	4.23	NO	
Reach 4b	4,4'-DDT	50293	ug/kg	25	49	51%	1.0E-01	4.9E+00	2.0E+02	3.1E+01	6.20	NO	
Reach 4b	alpha-Chlordane	5103719	ug/kg	1	49	2%	1.7E-01	2.3E-01	1.3E+00	NC			
Reach 4b	gamma-Chlordane	5566347	ug/kg	2	49	4%	7.5E-02	2.3E-01	1.3E+00	1.9E-01	0.83	yes	
Reach 4b	Hexachlorobenzene	118741	ug/kg	3	49	6%	1.7E-01	4.3E-01	8.5E+00	1.6E+00	3.62	NO	
Reach 4b	Methoxychlor	72435	ug/kg	1	49	2%	1.7E+00	2.2E+00	1.3E+01	NC			
Reach 4b	Bis(2-ethylhexyl)phthalate	117817	ug/kg	1	49	2%	3.4E-01	4.9E+01	9.0E+01	NC			
Reach 4b	Caprolactam	105602	ug/kg	2	49	4%	4.2E+01	4.9E+01	9.0E+01	5.9E+01	1.21	yes	
Reach 4b	Dibenzofuran	132649	ug/kg	1	49	2%	5.0E-01	2.4E+00	4.5E+00	NC			
Reach 5	2006 TEQ_D/F	TEQ_DF	ng/kg	3	3	100%	8.2E-02	1.8E-01	3.6E-01	NC			
Reach 5	Aluminum	7429905	mg/kg	17	17	100%	5.1E+03	7.6E+03	1.1E+04	8.4E+03	1.10	yes	
Reach 5	Arsenic	7440382	mg/kg	17	17	100%	1.2E+00	1.2E+00	7.3E+00	1.4E+01	8.8E+00	1.20	yes
Reach 5	Barium	7440393	mg/kg	17	17	100%	3.4E+01	7.2E+01	1.5E+02	8.6E+01	1.20	yes	
Reach 5	Beryllium	7440417	mg/kg	17	17	100%	3.2E-01	6.1E-01	1.1E+00	7.0E-01	1.14	yes	
Reach 5	Cadmium	7440439	mg/kg	8	17	47%	2.9E-02	4.0E-01	4.4E+00	8.6E-01	2.18	NO	
Reach 5	Calcium	7440702	mg/kg	17	17	100%	2.2E+03	1.1E+04	4.1E+04	2.1E+04	1.87	yes	
Reach 5	Chromium	7440473	mg/kg	17	17	100%	6.2E+00	1.1E+01	1.9E+01	1.3E+01	1.13	yes	
Reach 5	Cobalt	7440484	mg/kg	17	17	100%	3.0E+00	5.7E+00	1.4E+01	7.0E+00	1.21	yes	
Reach 5	Copper	7440508	mg/kg	16	17	94%	3.5E+00	1.1E+01	2.8E+01	1.3E+01	1.21	yes	
Reach 5	Iron	7439896	mg/kg	17	17	100%	1.0E+04	1.5E+04	2.5E+04	1.6E+04	1.08	yes	
Reach 5	Magnesium	7439954	mg/kg	17	17	100%	3.6E+03	6.0E+03	9.1E+03	6.6E+03	1.10	yes	
Reach 5	Manganese	7439965	mg/kg	17	17	100%	1.8E+02	2.8E+02	4.6E+02	3.1E+02	1.12	yes	
Reach 5	Mercury	7439976	mg/kg	9	17	53%	4.0E-03	3.1E-02	1.5E-01	7.1E-02	2.27	NO	
Reach 5	Nickel	7440020	mg/kg	17	17	100%	6.1E+00	9.3E+00	1.7E+01	1.0E+01	1.11	yes	
Reach 5	Potassium	7440097	mg/kg	17	17	100%	8.8E+02	1.4E+03	1.9E+03	1.6E+03	1.09	yes	
Reach 5	Selenium	7782492	mg/kg	11	14	79%	1.3E+00	2.6E+00	3.8E+00	3.2E+00	1.20	yes	
Reach 5	Sodium	7440235	mg/kg	14	17	82%	4.6E+01	9.7E+01	2.0E+02	1.2E+02	1.21	yes	
Reach 5	Uranium	7440611	mg/kg	3	17	18%	6.3E+00	9.6E+00	1.3E+01	6.9E+00	0.72	yes	
Reach 5	Vanadium	7440622	mg/kg	17	17	100%	8.4E+00	1.6E+01	2.9E+01	1.9E+01	1.15	yes	
Reach 5	Zinc	7440666	mg/kg	17	17	100%	2.7E+01	5.8E+01	2.9E+02	1.2E+02	2.11	NO	
Reach 5	2-Methylnaphthalene	91576	ug/kg	15	17	88%	2.0E-01	5.6E-01	2.0E+00	5.1E-01	0.90	yes	
Reach 5	Acenaphthylene	208968	ug/kg	1	17	6%	9.0E-01	2.2E+00	3.0E+00	NC			
Reach 5	Anthracene	120127	ug/kg	1	17	6%	2.0E+00	2.2E+00	3.0E+00	NC			
Reach 5	Benzo(a)anthracene	56553	ug/kg	1	17	6%	2.0E+00	2.6E+00	9.0E+00	NC			
Reach 5	Benzo(a)pyrene	50328	ug/kg	1	17	6%	2.0E+00	2.6E+00	9.0E+00	NC			
Reach 5	Benzo(b)fluoranthene	205992	ug/kg	2	17	12%	3.0E-01	2.8E+00	1.4E+01	1.2E+01	4.31	NO	
Reach 5	Benzo(ghi)perylene	191242	ug/kg	2	17	12%	9.0E-01	2.4E+00	6.0E+00	6.0E+00	2.52	NO	
Reach 5	Benzo(k)fluoranthene	207089	ug/kg	2	17	12%	3.0E-01	2.6E+00	1.0E+01	8.7E+00	3.36	NO	
Reach 5	Chrysene	218019	ug/kg	3	17	18%	2.0E-01	3.1E+00	2.0E+01	4.0E+00	1.30	yes	
Reach 5	Dibenz(a,h)anthracene	53703	ug/kg	1	17	6%	2.0E+00	2.2E+00	3.0E+00	NC			
Reach 5	Fluoranthene	206440	ug/kg	3	17	18%	4.0E-01	2.6E+00	9.0E+00	9.0E+00	3.45	NO	
Reach 5	Indeno(1,2,3-cd)pyrene	193395	ug/kg	2	17	12%	3.0E-01	2.6E+00	1.0E+01	8.7E+00	3.36	NO	
Reach 5	Naphthalene	91203	ug/kg	11	17	65%	1.0E+00	1.6E+00	4.3E+00	1.4E+00	0.88	yes	
Reach 5	Phenanthrene	85018	ug/kg	5	17	29%	2.0E-01	1.9E+00	3.0E+00	1.6E+00	0.88	yes	
Reach 5	Pyrene	129000	ug/kg	3	17	18%	4.0E-01	2.6E+00	7.0E+00	7.0E+00	2.74	NO	
Reach 5	4,4'-DDT	50293	ug/kg	4	17	24%	9.4E-02	3.6E-01	8.0E-01	2.4E-01	0.66	yes	
Reach 5	alpha-BHC	319846	ug/kg	1	17	6%	1.7E-01	2.0E-01	3.8E-01	NC			
Reach 6	2006 TEQ_D/F	TEQ_DF	ng/kg	6	6	100%	8.9E-02	1.1E-01	1.3E-01	1.2E-01	1.10	yes	
Reach 6	Aluminum	7429905	mg/kg	24	24	100%	4.1E+03	7.8E+03	1.5E+04	8.6E+03	1.10	yes	
Reach 6	Arsenic	7440382	mg/kg	20	24	83%	3.7E-01	5.6E+00	1.5E+01	7.0E+00	1.26	yes	
Reach 6	Barium	7440393	mg/kg	24	24	100%	3.6E+01	6.0E+01	1.3E+02	8.3E+01	1.38	yes	
Reach 6	Beryllium	7440417	mg/kg	24	24	100%	3.5E-01	6.9E-01	1.4E+00	7.9E-01	1.14	yes	
Reach 6	Cadmium	7440439	mg/kg	9	24	38%	2.4E-02	2.3E-01	6.4E-01	2.5E-01	1.11	yes	
Reach 6	Calcium	7440702	mg/kg	24	24	100%	1.4E+03	5.8E+03	1.3E+04	9.6E+03	1.64	yes	
Reach 6	Chromium	7440473	mg/kg	24	24	100%	1.2E+00	1.0E+01	1.7E+01	1.1E+01	1.12	yes	
Reach 6	Cobalt	7440484	mg/kg	24	24	100%	2.7E+00	5.2E+00	1.1E+01	7.0E+00	1.33	yes	
Reach 6	Copper	7440508	mg/kg	21	24	88%	3.0E+00	8.3E+00	2.0E+01	1.0E+01	1.21	yes	
Reach 6	Iron	7439896	mg/kg	24	24	100%	9.8E+03	1.5E+04	2.5E+04	1.6E+04	1.07	yes	
Reach 6	Magnesium	7439954	mg/kg	24	24	100%	1.8E+03	5.5E+03	8.1E+03	6.0E+03	1.10	yes	
Reach 6	Manganese	7439965	mg/kg	24	24	100%	1.0E+02	2.6E+02	4.6E+02	2.9E+02	1.13	yes	

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

SEDIMENT

Exposure Area	Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 6	Mercury	7439976	mg/kg	9	24	38%	3.5E-03	2.8E-02	5.5E-02	9.0E-03	0.32	yes
Reach 6	Nickel	7440020	mg/kg	24	24	100%	6.8E-01	8.8E+00	1.6E+01	9.9E+00	1.13	yes
Reach 6	Potassium	7440097	mg/kg	24	24	100%	7.5E+02	1.4E+03	2.4E+03	1.6E+03	1.10	yes
Reach 6	Selenium	7782492	mg/kg	13	21	62%	3.8E-01	2.4E+00	5.7E+00	3.1E+00	1.29	yes
Reach 6	Sodium	7440235	mg/kg	20	24	83%	4.4E+01	9.9E+01	3.2E+02	1.3E+02	1.27	yes
Reach 6	Uranium	7440611	mg/kg	3	24	13%	4.6E+00	9.5E+00	1.3E+01	5.5E+00	0.58	yes
Reach 6	Vanadium	7440622	mg/kg	24	24	100%	8.9E+00	1.7E+01	3.3E+01	2.2E+01	1.28	yes
Reach 6	Zinc	7440666	mg/kg	24	24	100%	2.8E+01	5.7E+01	1.0E+02	7.9E+01	1.40	yes
Reach 6	2-Methylnaphthalene	91576	ug/kg	16	24	67%	2.0E-01	9.4E-01	2.5E+00	4.4E-01	0.47	yes
Reach 6	Benzo(a)anthracene	56553	ug/kg	2	24	8%	1.0E+00	2.1E+00	3.0E+00	NC		
Reach 6	Benzo(a)pyrene	50328	ug/kg	2	24	8%	1.0E+00	2.1E+00	3.0E+00	2.4E+00	1.11	yes
Reach 6	Benzo(b)fluoranthene	205992	ug/kg	2	24	8%	2.0E+00	2.3E+00	3.0E+00	NC		
Reach 6	Benzo(k)fluoranthene	207089	ug/kg	2	24	8%	1.0E+00	2.1E+00	3.0E+00	2.4E+00	1.11	yes
Reach 6	Chrysene	218019	ug/kg	3	24	13%	2.0E-01	2.1E+00	3.0E+00	2.0E+00	0.96	yes
Reach 6	Fluoranthene	206440	ug/kg	2	24	8%	2.0E+00	2.2E+00	3.0E+00	3.4E+00	1.52	yes
Reach 6	Indeno(1,2,3-cd)pyrene	193395	ug/kg	2	24	8%	2.0E+00	2.2E+00	3.0E+00	NC		
Reach 6	Naphthalene	91203	ug/kg	13	24	54%	5.0E-01	1.4E+00	2.0E+00	1.4E+00	0.96	yes
Reach 6	Phenanthrene	85018	ug/kg	4	24	17%	2.0E-01	1.9E+00	3.0E+00	8.2E-01	0.44	yes
Reach 6	Pyrene	129000	ug/kg	2	24	8%	2.0E+00	2.2E+00	3.0E+00	NC		
Reach 6	2,4'-DDT	789026	ug/kg	3	24	13%	9.0E-02	3.6E-01	4.7E-01	4.7E-01	1.31	yes
Reach 6	4,4'-DDE	72559	ug/kg	1	24	4%	3.4E-01	3.7E-01	5.0E-01	NC		
Reach 6	4,4'-DDT	50293	ug/kg	6	24	25%	8.0E-02	4.3E-01	1.5E+00	4.7E-01	1.09	yes
Reach 6	Bis(2-ethylhexyl)phthalate	117817	ug/kg	1	24	4%	3.7E+01	4.5E+01	6.0E+01	NC		

NC = not calculated; minimum data requirements not met for ProUCL

APPENDIX F. Evaluation of Uncertainty in 95UCL Calculations

SURFACE WATER (UNFILTERED)

Exposure Area	Analyte	CASRN	Units	N Detects	N Total	DF (%)	Min	Avg	Max	95UCL	95UCL/ Mean	Is ratio < 2?
Reach 1	Arsenic	7440382	mg/L	58	65	89%	1.90E-04	1.12E-03	1.50E-02	4.72E-04	0.03	yes
Reach 1	Cadmium	7440439	mg/L	7	55	13%	5.00E-05	9.42E-05	1.50E-03	1.14E-04	0.08	yes
Reach 1	Chromium	7440473	mg/L	8	54	15%	1.00E-04	4.58E-04	2.50E-03	3.52E-04	0.14	yes
Reach 1	Copper	7440508	mg/L	54	54	100%	4.90E-04	1.72E-03	1.40E-02	2.99E-03	0.21	yes
Reach 1	Mercury	7439976	mg/L	13	55	24%	5.00E-07	1.32E-06	7.00E-06	1.69E-06	0.24	yes
Reach 1	Nickel	7440020	mg/L	29	31	94%	4.60E-04	6.72E-04	9.50E-04	7.28E-04	0.77	yes
Reach 1	Zinc	7440666	mg/L	31	55	56%	2.50E-03	9.89E-03	7.70E-02	1.45E-02	0.19	yes

Appendix G

Estimation of Tissue Concentrations in Crops Irrigated with UCR Water and Livestock Fed Irrigated Crops and Watered with UCR Water

APPENDIX G

ESTIMATION OF TISSUE CONCENTRATIONS IN CROPS IRRIGATED WITH UCR WATER AND LIVESTOCK FED IRRIGATED CROPS AND WATERED WITH UCR WATER

Basic Approach for Estimating Irrigated Soil Concentrations

The screening level approach used to evaluate exposures to crops irrigated with UCR water is to estimate the increase in concentration of chemicals in garden soil that results from irrigation for a period of 70 years and sum this increment with the starting (background) level in soil. The estimated garden soil concentration is then used in uptake equations for terrestrial plants and beef (see Appendix B) to estimate tissue concentrations of crops and livestock.

Estimation of Increment in Chemicals in Garden Soil Following Irrigation

The rate of increase in the concentration of a chemical in garden soil due to irrigation with river water is given by:

$$\Delta C_{soil}(ug / g / yr) = \frac{C_{water}(ug / cm^3) \cdot Irrigation\ rate(cm / yr)}{Mixing\ depth(cm) \cdot Soil\ density(g / cm^3)}$$

The parameters and input values used in the above equation are as follows:

Parameter	Value	Units	Parameter Description
C _{water}	chemical and location specific	ug/cm ³	Measured concentration in UCR surface water [Note: ug/L was converted to ug/cm ³ by applying a conversion factor of 1E-03 L/cm ³]
Irrigation rate	85.75	cm/year	Amount of river water applied to garden soil per year (see Table G-1 for details).
Soil density	2.65	g/cm ³	Default soil particle density USEPA (1991, 1996a, 1996b)
Mixing depth	15.24	cm	Assumes added metals become mixed within the top 6 inches of garden soil

Based on these inputs above, the equation above reduces to:

$$\Delta C_{soil}(ug / g / yr) = \frac{C_{water}(ug / cm^3) \cdot 85.75 (cm / yr)}{15.24(cm) \cdot 2.65(g / cm^3)} = 2.1 \cdot C_{water}(ug / cm^3)$$

The total increment after 70 years of irrigation is given by:

$$\text{Total soil increment (ug/g)} = 70 \text{ years} \cdot \Delta C_{\text{soil}} \text{ (mg/kg/year)} = 148.6 \cdot C_{\text{water}} \text{ (ug/cm}^3\text{)}$$

[Note: ug/g is equivalent to mg/kg]

Concentration in Irrigation Water

Chemical concentrations in irrigation water were assumed to be equal to measured concentrations in river water (based on the total recoverable concentration) for each exposure reach. Maximum surface water concentrations were used, rather than calculated exposure point concentrations (EPCs) to account for the fact that historical surface water concentrations (over the past 70 years of irrigation) were likely higher than current conditions due to the cessation/reduction of releases from main point sources of potential contamination. Irrigation water concentrations and estimated incremental and total garden soil concentrations are presented in Table G-2.

Background Soil Concentrations

The total increment due to irrigation with river water was added to the assumed “background” soil level (un-impacted by irrigation). Background soil levels were derived by calculating the mean concentration from data collected by the U.S. Geological Service (USGS) to represent native metal soil concentrations in Washington State (Shacklette and Boerngen 1984). The mean background soil concentrations are shown in Table G-2.

Tissue Concentrations in Irrigated Crops and Livestock

Table G-3 presents the estimated crop tissue concentrations based on total garden soil concentrations. Table G-4 presents the estimated tissue concentrations for livestock watered with UCR water and fed plants that have been irrigated with UCR water. A discussion of the uptake factors and models that were used to estimate terrestrial plant and livestock tissue concentrations is presented in Appendix B.

References

Shacklette and Boerngen. 1984. Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States. U.S. Geological Survey Professional Paper 1270.

USEPA. 1991. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). Interim. Publication 9285.0-30. Office of Emergency and Remedial Response, Washington, DC.

USEPA. 1996a. Soil Screening Guidance: Technical Background Document. Second Edition. EPA/540/R95/128. Office of Solid Waste and Emergency Response, Washington, DC. May.

USEPA. 1996b. Soil Screening Guidance: User's Guide. Second Edition. Publication 93655.4-23. Office of Solid Waste and Emergency Response, Washington, DC. July.

**TABLE G-1
METHOD FOR ESTIMATION OF GARDEN SOIL CONCENTRATIONS DUE TO IRRIGATION WITH UCR RIVER WATER**

Basic Equation:

$$\Delta C_{\text{soil}} \text{ (ug/g/year)} = \frac{C_{\text{water}} \text{ (ug/cm}^3\text{)} * \text{irrigation rate (cm/year)}}{\text{soil density (g/cm}^3\text{)} * \text{soil mixing depth (cm)}}$$

$$\Delta C_{\text{soil}} \text{ (ug/g/year)} = 2.12 * C_{\text{water}} \text{ (ug/cm}^3\text{)}$$

$$\text{Total increment: (ug/g)} = 148.6 * C_{\text{water}} \text{ (ug/cm}^3\text{)} \quad [\text{after 70 years of irrigation}]$$

<u>Inputs:</u>			<u>Assumptions and conversions:</u>		
irrigation rate	85.75	cm/year	33.8	in/year	85.75 cm/year
soil density	2.65	g/cm ³			
soil mixing depth	6	in	6	inches =	15.24 cm
years of irrigation	70	yrs			
			<i>note:</i>		
			1 inch = 2.54 cm		
			1 L = 1000 cm ³		

Crop Irrigation Needs:

Month	Water required/wk (in) [1]	Weeks in growing season [2]	Monthly water needs (in)	Average monthly rainfall (in) [3]	Needed from irrigation (in)
Apr	1.8	2	3.5	1.2	2.3
May	1.8	4	7.0	1.5	5.5
Jun	1.8	4	7.0	1.6	5.4
Jul	1.8	4	7.0	0.7	6.3
Aug	1.8	4	7.0	0.8	6.3
Sep	1.8	4	7.0	1.0	6.0
Oct	1.8	2	3.5	1.5	2.0
Yrly Total:	12.3	24	42.0	8.2	33.8

[1] Assumes garden vegetables use 0.25 inches of water/day

(Colorado State University Cooperative Extension Publication no.7.843).

[2] Assumes approximately 24 frost free weeks/year based on minimum monthly temperatures for Colville, WA.

[3] Average monthly precipitation for Colville, WA (1961-1990).

Temperature and precipitation information from:

Western Regional Climate Center. Colville, Washington. <http://www.wrcc.dri.edu/climsum.html> Accessed: 1/16/08

**TABLE G-2
ESTIMATED CROP AND LIVESTOCK CONCENTRATIONS IMPACTED BY UCR WATER**

Analyte	CASRN	Cwater (ug/L) [1]	Csoil, bkg (mg/kg) [2]	Increment from irrigation w/UCR water (mg/kg) [3]	Csoil, garden (mg/kg) [4]	% of total from irrigation	Ccrops (mg/kg ww) [5]	Clivestock (mg/kg ww) [6]
Arsenic	7440382	15	4.5	2.23	6.7	33.1%	0.052	0.051
Cadmium	7440439	1.5	--	0.22	0.22	100%	0.057	0.0016
Chromium	7440473	2.5	66.6	0.37	67	0.6%	0.57	250
Copper	7440508	14	35.9	2.08	38	5.5%	1.7	2
Lead	7439921	12	13.6	1.80	15	11.7%	0.25	0.026
Mercury	7439976	0.007	0.157	0.0010	0.158	0.7%	0.019	0.016
Nickel	7440020	0.95	24.1	0.14	24	0.6%	0.25	0.47
Zinc	7440666	77	67.4	11.44	79	14.5%	12	91

-- no data available

[1] Reach 1 maximum; restricted to detected analytes.

[2] Average native soil concentration for soils collected in Washington state (Shacklette and Boerngen, 1984).

[3] Assumes 70 years of irrigation

[4] Cgarden = Csoil, bkg + increment from irrigation

[5] See Table G-3 for details on plant uptake equations.

[5] See Table G-4 for details on beef uptake equations.

Table G-3. Estimated Tissue Concentrations for Crops Irrigated with UCR Water

Analyte	CASRN	Log K _{ow} (RAIS, 2007)	Plant Model Inputs				Soil EPC (mg/kg dw)	Estimated Plant Tissue EPCs		
			Median UF	Regression Parameters [5]				Source	mg/kg dw	mg/kg ww [3]
				B0	B1	B2				
Arsenic	7440382	--	0.0375				BJC, 1998	6.73	0.25	0.052
Cadmium	7440439	--	regression	-0.476	0.546		BJC, 1998	0.22	0.27	0.057
Chromium	7440473	--	0.041				BJC, 1998	66.96	2.7	0.57
Copper	7440508	--	regression	0.669	0.394		BJC, 1998	37.99	8.2	1.7
Lead	7439921	--	regression	-1.328	0.561		BJC, 1998	15.4347737	1.2	0.25
Mercury	7439976	--	regression	-4.186	0.641	0.423	BJC, 1998 [7]	0.16	0.09	0.019
Nickel	7440020	--	regression	-2.224	0.748		BJC, 1998	24.23	1.2	0.25
Zinc	7440666	--	regression	1.575	0.555		BJC, 1998	78.87	55	12

EPC = Exposure point concentration (represents the 95UCL on the mean)

dw = Dry weight

ww = wet weight

[1] Calculated from log K_{ow} values using log Kow values presented in RAIS (2007) and equations from USEPA (2007).

[2] Uptake factor not available. Calculations assume a tissue concentration equal to the chemical concentration in the abiotic media (100%
[3] Plant tissue concentrations converted from dry weight to wet weight using 79% moisture, the average of the range presented for monocot young grasses (USEPA 1993, Table 4-2).

[4] Uptake factor for TEQ_{D/F} set equal to maximum dioxin/furan congener uptake factor (2,3,7,8-TCDF = 0.0062).

[5] $\ln(C_{plant}) = B0 + \ln(C_{soil}) * B1 + pH * B2$

[6] Slope for chemical-specific equation presented in USEPA (2007) is negative; model inputs shown are for the PAH-specific rinsed foliage model

[7] Assumes a pH of 7.0

[8] Maximum UF for plant shoots (derived as maximum C_{shoot} [presented in Table 2] / mean C_{soil} [presented in Table 1])

References:

Baes, C.F., R.D. Sharp, A.L. Sjoreen, and R.W. Shor. 1984. A review and analysis of parameters for assessing transport of environmentally released radionuclides through agriculture. Prepared for the US Department of Energy by Oak Ridge National Laboratory. Report ORNL-5786. September 1984.

BJC. 1998. Empirical models for the uptake of inorganic chemicals from soil by plants. Prepared for the US Department of Energy by Oak Ridge National Laboratory/Bechtel Jacobs Company, LLC (BJC). Report BJC/OR-133. September 1998.

IAEA. 1994. Handbook of parameter values for the prediction of radionuclide transfer in temperate environment. International Atomic Energy Agency. Tech. Rep. Ser. No. 364, Vienna, Austria.

NCRPM. 1989. Screening Techniques for Determining Compliance with Environmental Standards. Releases of Radionuclides to the Atmosphere. National Council on Radiation Protection Measurement. Bethesda, Maryland. January 1989.

RAIS. 2007. Risk Assessment Information System (RAIS) Toxicity and Chemical-Specific Factors Database. Available online at http://rais.ornl.gov/cgi-bin/tox/TOX_select?select=csf. Accessed October-November, 2007.

Tyler & Olsson (T&O). 2001. Plant uptake of major and minor mineral elements as influenced by soil acidity and liming. Plant and Soil 230:307-321.

USEPA. 2007. Guidance for developing ecological soil screening levels (Eco-SSLs), Attachment 4-1 (Exposure factors and bioaccumulation models for derivation of wildlife Eco-SSLs). OSWER Directive 9285.7-55. U.S. Environmental Protection Agency. Issued November 2003; revised April 2007.

Table G-4. Estimated Tissue Concentrations for Livestock Fed Irrigated Crops and Watered with UCR Water

Analyte	CASRN	Log K _{ow} (RAIS, 2007)	BTF, Beef Transfer Coefficient		Medium EPCs			Estimated Beef Tissue EPCs	
			Value (day/kg tissue)	Source	C _s , Soil (mg/kg dw)	C _p , [1] Plant (mg/kg dw)	C _w , Water (mg/L)	Based on uptake from sediment and water [2] (mg/kg ww)	Based on uptake from water only (mg/kg ww)
Arsenic	7440382	--	0.002	Baes et al., 1984	6.73	0.25	0.00047	0.051	0.00005
Cadmium	7440439	--	0.0004	IAEA, 1994	0.22	0.27	0.00011	0.0016	0.0000024
Chromium	7440473	--	1	NA [4]	66.96	2.7	0.00035	250	0.019
Copper	7440508	--	0.009	IAEA, 1994	37.99	8.2	0.0030	2	0.0014
Lead	7439921	--	0.0004	IAEA, 1994	15.43477	1.2	0.00183	0.026	0.000039
Mercury	7439976	0.62	0.01	NCRPM, 1989	0.16	0.09	0.000002	0.016	0.00000089
Nickel	7440020	--	0.005	IAEA, 1994	24.23	1.2	0.00073	0.47	0.00019
Zinc	7440666	--	0.1	IAEA, 1994	78.87	55	0.015	91	0.077

EPC = Exposure point concentration (represents the 95UCL on the mean)

dw = dry weight

ww = wet weight

[1] Plant uptake models and sources are presented in Table B-1.

[2] If water concentration is not available, estimate is based on uptake from sediment only.

[3] Calculated from log K_{ow} values using log Kow values presented in RAIS (2007) and equations from McKone (1994).

[4] Transfer coefficient not available. Calculations assume 100% transfer from soil to animal.

[5] Uptake factor for TEQ_D/F set equal to maximum dioxin/furan congener uptake factor (OCDD = 79.1).

References:

Baes, C.F., R.D. Sharp, A.L. Sjoreen, and R.W. Shor. 1984. A review and analysis of parameters for assessing transport of environmentally released radionuclides through agriculture. Prepared for the US Department of Energy by Oak Ridge National Laboratory. Report ORNL-5786. September 1984.

IAEA. 1994. Handbook of parameter values for the prediction of radionuclide transfer in temperate environment. International Atomic Energy Agency. Tech. Rep. Ser. No. 364, Vienna, Austria.

NCRPM. 1989. Screening Techniques for Determining Compliance with Environmental Standards. Releases of Radionuclides to the Atmosphere. National Council on Radiation Protection Measurement. Bethesda, Maryland. January 1989.

RAIS. 2007. Risk Assessment Information System (RAIS) Toxicity and Chemical-Specific Factors Database. Available online at http://rais.ornl.gov/cgi-bin/tox/TOX_select?select=csf. Accessed October-November, 2007.

USEPA. 2007. Guidance for developing ecological soil screening levels (Eco-SSLs), Attachment 4-1 (Exposure factors and bioaccumulation models for derivation of wildlife Eco-SSLs). OSWER Directive 9285.7-55. U.S. Environmental Protection Agency. Issued November 2003; revised April 2007.