	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			3/2/2015 8:45:03 PM								
5	From File			EPC_013Sub_EU06.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**Cadmium**											
12												
13	**General Statistics**											
14	Total Number of Observations					10	Number of Distinct Observations					6
15							Number of Missing Observations					0
16	Minimum					0.85	Mean					2.482
17	Maximum					6.78	Median					2.241
18	SD					1.597	Std. Error of Mean					0.505
19	Coefficient of Variation					0.644	Skewness					2.515
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic					0.666	**Shapiro Wilk GOF Test**					
23	5% Shapiro Wilk Critical Value					0.842	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.4	**Lilliefors GOF Test**					
25	5% Lilliefors Critical Value					0.28	Data Not Normal at 5% Significance Level					
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL					3.408	95% Adjusted-CLT UCL (Chen-1995)					3.742
31							95% Modified-t UCL (Johnson-1978)					3.475
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic					0.93	**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value					0.73	Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.333	**Kolmogrov-Smirnoff Gamma GOF Test**					
37	5% K-S Critical Value					0.268	Data Not Gamma Distributed at 5% Significance Level					
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)					3.934	k star (bias corrected MLE)					2.82
42	Theta hat (MLE)					0.631	Theta star (bias corrected MLE)					0.88
43	nu hat (MLE)					78.68	nu star (bias corrected)					56.41
44	MLE Mean (bias corrected)					2.482	MLE Sd (bias corrected)					1.478
45							Approximate Chi Square Value (0.05)					40.15
46	Adjusted Level of Significance					0.0267	Adjusted Chi Square Value					37.77
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))					3.487	95% Adjusted Gamma UCL (use when n<50)					3.706
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic					0.858	**Shapiro Wilk Lognormal GOF Test**					

	A	B	C	D	E	F	G	H	I	J	K	L
53					5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level					
54					Lilliefors Test Statistic	0.299	**Lilliefors Lognormal GOF Test**					
55					5% Lilliefors Critical Value	0.28	Data Not Lognormal at 5% Significance Level					
56	**Data appear Approximate Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	-0.163				Mean of logged Data		0.776
60					Maximum of Logged Data	1.914				SD of logged Data		0.515
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	3.649				90% Chebyshev (MVUE) UCL		3.666
64					95% Chebyshev (MVUE) UCL	4.218				97.5% Chebyshev (MVUE) UCL		4.985
65					99% Chebyshev (MVUE) UCL	6.49						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	3.312				95% Jackknife UCL		3.408
72					95% Standard Bootstrap UCL	3.263				95% Bootstrap-t UCL		4.435
73					95% Hall's Bootstrap UCL	7.068				95% Percentile Bootstrap UCL		3.371
74					95% BCA Bootstrap UCL	3.68						
75					90% Chebyshev(Mean, Sd) UCL	3.997				95% Chebyshev(Mean, Sd) UCL		4.683
76					97.5% Chebyshev(Mean, Sd) UCL	5.636				99% Chebyshev(Mean, Sd) UCL		7.507
77												
78	**Suggested UCL to Use**											
79					95% Chebyshev (Mean, Sd) UCL	4.683						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												
86												
87	**Cesium-137**											
88												
89	**General Statistics**											
90					Total Number of Observations	10				Number of Distinct Observations		8
91										Number of Missing Observations		0
92					Minimum	-0.0116				Mean		0.132
93					Maximum	0.331				Median		0.132
94					SD	0.12				Std. Error of Mean		0.0381
95					Coefficient of Variation	0.912				Skewness		0.675
96												
97	**Normal GOF Test**											
98					Shapiro Wilk Test Statistic	0.886	**Shapiro Wilk GOF Test**					
99					5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level					
100					Lilliefors Test Statistic	0.2	**Lilliefors GOF Test**					
101					5% Lilliefors Critical Value	0.28	Data appear Normal at 5% Significance Level					
102	**Data appear Normal at 5% Significance Level**											
103												
104	**Assuming Normal Distribution**											

	A	B	C	D	E	F	G	H	I	J	K	L
105	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
106					95% Student's-t UCL	0.202				95% Adjusted-CLT UCL (Chen-1995)		0.203
107										95% Modified-t UCL (Johnson-1978)		0.203
108	Gamma Statistics Not Available											
109	Lognormal Statistics Not Available											
110												
111	Nonparametric Distribution Free UCL Statistics											
112	Data appear to follow a Discernible Distribution at 5% Significance Level											
113												
114	Nonparametric Distribution Free UCLs											
115					95% CLT UCL	0.195				95% Jackknife UCL		0.202
116					95% Standard Bootstrap UCL	0.192				95% Bootstrap-t UCL		0.223
117					95% Hall's Bootstrap UCL	0.263				95% Percentile Bootstrap UCL		0.191
118					95% BCA Bootstrap UCL	0.196						
119					90% Chebyshev(Mean, Sd) UCL	0.246				95% Chebyshev(Mean, Sd) UCL		0.298
120					97.5% Chebyshev(Mean, Sd) UCL	0.37				99% Chebyshev(Mean, Sd) UCL		0.511
121												
122	Suggested UCL to Use											
123					95% Student's-t UCL	0.202						
124												
125	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
126	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
127	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
128	For additional insight the user may want to consult a statistician.											
129												
130												
131	Iron											
132												
133	General Statistics											
134					Total Number of Observations	10				Number of Distinct Observations		10
135										Number of Missing Observations		0
136					Minimum	17735				Mean		25568
137					Maximum	43337				Median		22634
138					SD	9171				Std. Error of Mean		2900
139					Coefficient of Variation	0.359				Skewness		1.365
140												
141	Normal GOF Test											
142					Shapiro Wilk Test Statistic	0.788	Shapiro Wilk GOF Test					
143					5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level					
144					Lilliefors Test Statistic	0.272	Lilliefors GOF Test					
145					5% Lilliefors Critical Value	0.28	Data appear Normal at 5% Significance Level					
146	Data appear Approximate Normal at 5% Significance Level											
147												
148	Assuming Normal Distribution											
149	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
150					95% Student's-t UCL	30884				95% Adjusted-CLT UCL (Chen-1995)		31675
151										95% Modified-t UCL (Johnson-1978)		31092
152												
153	Gamma GOF Test											
154					A-D Test Statistic	0.742	Anderson-Darling Gamma GOF Test					
155					5% A-D Critical Value	0.725	Data Not Gamma Distributed at 5% Significance Level					
156					K-S Test Statistic	0.227	Kolmogrov-Smirnoff Gamma GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L
157					5% K-S Critical Value	0.267	Detected data appear Gamma Distributed at 5% Significance Level					
158	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
159												
160	**Gamma Statistics**											
161					k hat (MLE)	10.27				k star (bias corrected MLE)		7.256
162					Theta hat (MLE)	2489				Theta star (bias corrected MLE)		3524
163					nu hat (MLE)	205.4				nu star (bias corrected)		145.1
164					MLE Mean (bias corrected)	25568				MLE Sd (bias corrected)		9492
165										Approximate Chi Square Value (0.05)		118.3
166					Adjusted Level of Significance	0.0267				Adjusted Chi Square Value		114.1
167												
168	**Assuming Gamma Distribution**											
169					95% Approximate Gamma UCL (use when n>=50))	31369				95% Adjusted Gamma UCL (use when n<50)		32527
170												
171	**Lognormal GOF Test**											
172					Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk Lognormal GOF Test**					
173					5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level					
174					Lilliefors Test Statistic	0.208	**Lilliefors Lognormal GOF Test**					
175					5% Lilliefors Critical Value	0.28	Data appear Lognormal at 5% Significance Level					
176	**Data appear Lognormal at 5% Significance Level**											
177												
178	**Lognormal Statistics**											
179					Minimum of Logged Data	9.783				Mean of logged Data		10.1
180					Maximum of Logged Data	10.68				SD of logged Data		0.319
181												
182	**Assuming Lognormal Distribution**											
183					95% H-UCL	31662				90% Chebyshev (MVUE) UCL		33238
184					95% Chebyshev (MVUE) UCL	36757				97.5% Chebyshev (MVUE) UCL		41641
185					99% Chebyshev (MVUE) UCL	51236						
186												
187	**Nonparametric Distribution Free UCL Statistics**											
188	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
189												
190	**Nonparametric Distribution Free UCLs**											
191					95% CLT UCL	30338				95% Jackknife UCL		30884
192					95% Standard Bootstrap UCL	30269				95% Bootstrap-t UCL		37561
193					95% Hall's Bootstrap UCL	62603				95% Percentile Bootstrap UCL		30284
194					95% BCA Bootstrap UCL	31470						
195					90% Chebyshev(Mean, Sd) UCL	34268				95% Chebyshev(Mean, Sd) UCL		38209
196					97.5% Chebyshev(Mean, Sd) UCL	43679				99% Chebyshev(Mean, Sd) UCL		54423
197												
198	**Suggested UCL to Use**											
199					95% Student's-t UCL	30884						
200												
201	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
202	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
203	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
204	For additional insight the user may want to consult a statistician.											
205												
206												
207	**Manganese**											
208												

	A	B	C	D	E	F	G	H	I	J	K	L
209	General Statistics											
210	Total Number of Observations					10	Number of Distinct Observations					10
211							Number of Missing Observations					0
212	Minimum					415	Mean					773.5
213	Maximum					1155	Median					709
214	SD					296.7	Std. Error of Mean					93.82
215	Coefficient of Variation					0.384	Skewness					0.227
216												
217	Normal GOF Test											
218	Shapiro Wilk Test Statistic					0.867	Shapiro Wilk GOF Test					
219	5% Shapiro Wilk Critical Value					0.842	Data appear Normal at 5% Significance Level					
220	Lilliefors Test Statistic					0.182	Lilliefors GOF Test					
221	5% Lilliefors Critical Value					0.28	Data appear Normal at 5% Significance Level					
222	Data appear Normal at 5% Significance Level											
223												
224	Assuming Normal Distribution											
225	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
226	95% Student's-t UCL					945.5	95% Adjusted-CLT UCL (Chen-1995)					935
227							95% Modified-t UCL (Johnson-1978)					946.6
228												
229	Gamma GOF Test											
230	A-D Test Statistic					0.535	Anderson-Darling Gamma GOF Test					
231	5% A-D Critical Value					0.727	Detected data appear Gamma Distributed at 5% Significance Level					
232	K-S Test Statistic					0.193	Kolmogrov-Smirnoff Gamma GOF Test					
233	5% K-S Critical Value					0.267	Detected data appear Gamma Distributed at 5% Significance Level					
234	Detected data appear Gamma Distributed at 5% Significance Level											
235												
236	Gamma Statistics											
237	k hat (MLE)					7.369	k star (bias corrected MLE)					5.225
238	Theta hat (MLE)					105	Theta star (bias corrected MLE)					148
239	nu hat (MLE)					147.4	nu star (bias corrected)					104.5
240	MLE Mean (bias corrected)					773.5	MLE Sd (bias corrected)					338.4
241							Approximate Chi Square Value (0.05)					81.91
242	Adjusted Level of Significance					0.0267	Adjusted Chi Square Value					78.44
243												
244	Assuming Gamma Distribution											
245	95% Approximate Gamma UCL (use when n>=50))					986.8	95% Adjusted Gamma UCL (use when n<50)					1030
246												
247	Lognormal GOF Test											
248	Shapiro Wilk Test Statistic					0.89	Shapiro Wilk Lognormal GOF Test					
249	5% Shapiro Wilk Critical Value					0.842	Data appear Lognormal at 5% Significance Level					
250	Lilliefors Test Statistic					0.186	Lilliefors Lognormal GOF Test					
251	5% Lilliefors Critical Value					0.28	Data appear Lognormal at 5% Significance Level					
252	Data appear Lognormal at 5% Significance Level											
253												
254	Lognormal Statistics											
255	Minimum of Logged Data					6.028	Mean of logged Data					6.582
256	Maximum of Logged Data					7.052	SD of logged Data					0.397
257												
258	Assuming Lognormal Distribution											
259	95% H-UCL					1029	90% Chebyshev (MVUE) UCL					1069
260	95% Chebyshev (MVUE) UCL					1203	97.5% Chebyshev (MVUE) UCL					1388

	A	B	C	D	E	F	G	H	I	J	K	L
261					99% Chebyshev (MVUE) UCL	1753						
262												
263					Nonparametric Distribution Free UCL Statistics							
264					Data appear to follow a Discernible Distribution at 5% Significance Level							
265												
266					Nonparametric Distribution Free UCLs							
267					95% CLT UCL	927.8				95% Jackknife UCL		945.5
268					95% Standard Bootstrap UCL	921.2				95% Bootstrap-t UCL		964.8
269					95% Hall's Bootstrap UCL	900.9				95% Percentile Bootstrap UCL		916.4
270					95% BCA Bootstrap UCL	925.5						
271					90% Chebyshev(Mean, Sd) UCL	1055				95% Chebyshev(Mean, Sd) UCL		1182
272					97.5% Chebyshev(Mean, Sd) UCL	1359				99% Chebyshev(Mean, Sd) UCL		1707
273												
274					Suggested UCL to Use							
275					95% Student's-t UCL	945.5						
276												
277					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
278					These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)							
279					and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.							
280					For additional insight the user may want to consult a statistician.							
281												
282												
283	Neptunium-237											
284												
285					General Statistics							
286					Total Number of Observations	10				Number of Distinct Observations		8
287										Number of Missing Observations		0
288					Minimum	-0.016				Mean		0.169
289					Maximum	1.08				Median		0.0659
290					SD	0.33				Std. Error of Mean		0.104
291					Coefficient of Variation	1.952				Skewness		2.839
292												
293					Normal GOF Test							
294					Shapiro Wilk Test Statistic	0.573				Shapiro Wilk GOF Test		
295					5% Shapiro Wilk Critical Value	0.842				Data Not Normal at 5% Significance Level		
296					Lilliefors Test Statistic	0.4				Lilliefors GOF Test		
297					5% Lilliefors Critical Value	0.28				Data Not Normal at 5% Significance Level		
298					Data Not Normal at 5% Significance Level							
299												
300					Assuming Normal Distribution							
301					95% Normal UCL					95% UCLs (Adjusted for Skewness)		
302					95% Student's-t UCL	0.36				95% Adjusted-CLT UCL (Chen-1995)		0.44
303										95% Modified-t UCL (Johnson-1978)		0.375
304					Gamma Statistics Not Available							
305					Lognormal Statistics Not Available							
306												
307					Nonparametric Distribution Free UCL Statistics							
308					Data do not follow a Discernible Distribution (0.05)							
309												
310					Nonparametric Distribution Free UCLs							
311					95% CLT UCL	0.34				95% Jackknife UCL		0.36
312					95% Standard Bootstrap UCL	0.336				95% Bootstrap-t UCL		0.778

	A	B	C	D	E	F	G	H	I	J	K	L
313					95% Hall's Bootstrap UCL	0.971				95% Percentile Bootstrap UCL		0.369
314					95% BCA Bootstrap UCL	0.44						
315					90% Chebyshev(Mean, Sd) UCL	0.481				95% Chebyshev(Mean, Sd) UCL		0.623
316					97.5% Chebyshev(Mean, Sd) UCL	0.82				99% Chebyshev(Mean, Sd) UCL		1.206
317												
318					**Suggested UCL to Use**							
319					95% Chebyshev (Mean, Sd) UCL	0.623						
320												
321					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
322					These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)							
323					and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.							
324					For additional insight the user may want to consult a statistician.							
325												
326												
327	**PAH, Total**											
328												
329					**General Statistics**							
330					Total Number of Observations	10				Number of Distinct Observations		5
331										Number of Missing Observations		0
332					Minimum	0.46				Mean		0.668
333					Maximum	1.247				Median		0.668
334					SD	0.236				Std. Error of Mean		0.0746
335					Coefficient of Variation	0.353				Skewness		1.821
336												
337					**Normal GOF Test**							
338					Shapiro Wilk Test Statistic	0.779				**Shapiro Wilk GOF Test**		
339					5% Shapiro Wilk Critical Value	0.842				Data Not Normal at 5% Significance Level		
340					Lilliefors Test Statistic	0.3				**Lilliefors GOF Test**		
341					5% Lilliefors Critical Value	0.28				Data Not Normal at 5% Significance Level		
342					**Data Not Normal at 5% Significance Level**							
343												
344					**Assuming Normal Distribution**							
345					**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
346					95% Student's-t UCL	0.805				95% Adjusted-CLT UCL (Chen-1995)		0.837
347										95% Modified-t UCL (Johnson-1978)		0.812
348												
349					**Gamma GOF Test**							
350					A-D Test Statistic	0.726				**Anderson-Darling Gamma GOF Test**		
351					5% A-D Critical Value	0.725				Data Not Gamma Distributed at 5% Significance Level		
352					K-S Test Statistic	0.26				**Kolmogrov-Smirnoff Gamma GOF Test**		
353					5% K-S Critical Value	0.267				Detected data appear Gamma Distributed at 5% Significance Level		
354					**Detected data follow Appr. Gamma Distribution at 5% Significance Level**							
355												
356					**Gamma Statistics**							
357					k hat (MLE)	11.02				k star (bias corrected MLE)		7.782
358					Theta hat (MLE)	0.0606				Theta star (bias corrected MLE)		0.0859
359					nu hat (MLE)	220.4				nu star (bias corrected)		155.6
360					MLE Mean (bias corrected)	0.668				MLE Sd (bias corrected)		0.24
361										Approximate Chi Square Value (0.05)		127.8
362					Adjusted Level of Significance	0.0267				Adjusted Chi Square Value		123.4
363												
364					**Assuming Gamma Distribution**							

	A	B	C	D	E	F	G	H	I	J	K	L
365				95% Approximate Gamma UCL (use when n>=50)		0.814			95% Adjusted Gamma UCL (use when n<50)			0.843
366												
367						Lognormal GOF Test						
368					Shapiro Wilk Test Statistic	0.858			Shapiro Wilk Lognormal GOF Test			
369					5% Shapiro Wilk Critical Value	0.842			Data appear Lognormal at 5% Significance Level			
370					Lilliefors Test Statistic	0.24			Lilliefors Lognormal GOF Test			
371					5% Lilliefors Critical Value	0.28			Data appear Lognormal at 5% Significance Level			
372						Data appear Lognormal at 5% Significance Level						
373												
374						Lognormal Statistics						
375					Minimum of Logged Data	-0.777			Mean of logged Data			-0.449
376					Maximum of Logged Data	0.22			SD of logged Data			0.306
377												
378						Assuming Lognormal Distribution						
379					95% H-UCL	0.819			90% Chebyshev (MVUE) UCL			0.86
380					95% Chebyshev (MVUE) UCL	0.949			97.5% Chebyshev (MVUE) UCL			1.071
381					99% Chebyshev (MVUE) UCL	1.312						
382												
383						Nonparametric Distribution Free UCL Statistics						
384						Data appear to follow a Discernible Distribution at 5% Significance Level						
385												
386						Nonparametric Distribution Free UCLs						
387					95% CLT UCL	0.791			95% Jackknife UCL			0.805
388					95% Standard Bootstrap UCL	0.783			95% Bootstrap-t UCL			0.891
389					95% Hall's Bootstrap UCL	1.415			95% Percentile Bootstrap UCL			0.795
390					95% BCA Bootstrap UCL	0.837						
391					90% Chebyshev(Mean, Sd) UCL	0.892			95% Chebyshev(Mean, Sd) UCL			0.993
392					97.5% Chebyshev(Mean, Sd) UCL	1.134			99% Chebyshev(Mean, Sd) UCL			1.41
393												
394						Suggested UCL to Use						
395					95% Adjusted Gamma UCL	0.843						
396												
397						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
398						These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)						
399						and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.						
400						For additional insight the user may want to consult a statistician.						
401												
402												
403	PCB, Total											
404												
405						General Statistics						
406					Total Number of Observations	10			Number of Distinct Observations			5
407									Number of Missing Observations			0
408					Minimum	0.1			Mean			2.159
409					Maximum	5			Median			0.585
410					SD	2.453			Std. Error of Mean			0.776
411					Coefficient of Variation	1.136			Skewness			0.463
412												
413						Normal GOF Test						
414					Shapiro Wilk Test Statistic	0.683			Shapiro Wilk GOF Test			
415					5% Shapiro Wilk Critical Value	0.842			Data Not Normal at 5% Significance Level			
416					Lilliefors Test Statistic	0.325			Lilliefors GOF Test			

	A	B	C	D	E	F	G	H	I	J	K	L
417					5% Lilliefors Critical Value	0.28	Data Not Normal at 5% Significance Level					
418	**Data Not Normal at 5% Significance Level**											
419												
420	**Assuming Normal Distribution**											
421	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
422					95% Student's-t UCL	3.581				95% Adjusted-CLT UCL (Chen-1995)		3.556
423										95% Modified-t UCL (Johnson-1978)		3.6
424												
425	**Gamma GOF Test**											
426					A-D Test Statistic	1.103	**Anderson-Darling Gamma GOF Test**					
427					5% A-D Critical Value	0.773	Data Not Gamma Distributed at 5% Significance Level					
428					K-S Test Statistic	0.275	**Kolmogrov-Smirnoff Gamma GOF Test**					
429					5% K-S Critical Value	0.28	Detected data appear Gamma Distributed at 5% Significance Level					
430	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
431												
432	**Gamma Statistics**											
433					k hat (MLE)	0.55				k star (bias corrected MLE)		0.451
434					Theta hat (MLE)	3.929				Theta star (bias corrected MLE)		4.783
435					nu hat (MLE)	10.99				nu star (bias corrected)		9.027
436					MLE Mean (bias corrected)	2.159				MLE Sd (bias corrected)		3.214
437										Approximate Chi Square Value (0.05)		3.343
438					Adjusted Level of Significance	0.0267				Adjusted Chi Square Value		2.77
439												
440	**Assuming Gamma Distribution**											
441					95% Approximate Gamma UCL (use when n>=50)	5.829				95% Adjusted Gamma UCL (use when n<50)		7.035
442												
443	**Lognormal GOF Test**											
444					Shapiro Wilk Test Statistic	0.779	**Shapiro Wilk Lognormal GOF Test**					
445					5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level					
446					Lilliefors Test Statistic	0.261	**Lilliefors Lognormal GOF Test**					
447					5% Lilliefors Critical Value	0.28	Data appear Lognormal at 5% Significance Level					
448	**Data appear Approximate Lognormal at 5% Significance Level**											
449												
450	**Lognormal Statistics**											
451					Minimum of Logged Data	-2.303				Mean of logged Data		-0.37
452					Maximum of Logged Data	1.609				SD of logged Data		1.828
453												
454	**Assuming Lognormal Distribution**											
455					95% H-UCL	76.42				90% Chebyshev (MVUE) UCL		7.436
456					95% Chebyshev (MVUE) UCL	9.603				97.5% Chebyshev (MVUE) UCL		12.61
457					99% Chebyshev (MVUE) UCL	18.52						
458												
459	**Nonparametric Distribution Free UCL Statistics**											
460	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
461												
462	**Nonparametric Distribution Free UCLs**											
463					95% CLT UCL	3.435				95% Jackknife UCL		3.581
464					95% Standard Bootstrap UCL	3.357				95% Bootstrap-t UCL		3.436
465					95% Hall's Bootstrap UCL	3.04				95% Percentile Bootstrap UCL		3.532
466					95% BCA Bootstrap UCL	3.57						
467					90% Chebyshev(Mean, Sd) UCL	4.486				95% Chebyshev(Mean, Sd) UCL		5.54
468					97.5% Chebyshev(Mean, Sd) UCL	7.003				99% Chebyshev(Mean, Sd) UCL		9.876

	A	B	C	D	E	F	G	H	I	J	K	L
469												
470						**Suggested UCL to Use**						
471					95% Adjusted Gamma UCL	7.035						
472												
473						**Recommended UCL exceeds the maximum observation**						
474												
475						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
476						These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)						
477						and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.						
478						For additional insight the user may want to consult a statistician.						
479												
480												
481	**Technetium-99**											
482												
483						**General Statistics**						
484					Total Number of Observations	10			Number of Distinct Observations			8
485									Number of Missing Observations			0
486					Minimum	0			Mean			25.17
487					Maximum	142			Median			14.94
488					SD	42.49			Std. Error of Mean			13.44
489					Coefficient of Variation	1.688			Skewness			2.777
490												
491						**Normal GOF Test**						
492					Shapiro Wilk Test Statistic	0.59			**Shapiro Wilk GOF Test**			
493					5% Shapiro Wilk Critical Value	0.842			Data Not Normal at 5% Significance Level			
494					Lilliefors Test Statistic	0.4			**Lilliefors GOF Test**			
495					5% Lilliefors Critical Value	0.28			Data Not Normal at 5% Significance Level			
496						**Data Not Normal at 5% Significance Level**						
497												
498						**Assuming Normal Distribution**						
499					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
500					95% Student's-t UCL	49.81			95% Adjusted-CLT UCL (Chen-1995)			59.88
501									95% Modified-t UCL (Johnson-1978)			51.77
502						**Gamma Statistics Not Available**						
503						**Lognormal Statistics Not Available**						
504												
505						**Nonparametric Distribution Free UCL Statistics**						
506						**Data do not follow a Discernible Distribution (0.05)**						
507												
508						**Nonparametric Distribution Free UCLs**						
509					95% CLT UCL	47.28			95% Jackknife UCL			49.81
510					95% Standard Bootstrap UCL	46.13			95% Bootstrap-t UCL			91.87
511					95% Hall's Bootstrap UCL	130.8			95% Percentile Bootstrap UCL			48.46
512					95% BCA Bootstrap UCL	64.05						
513					90% Chebyshev(Mean, Sd) UCL	65.49			95% Chebyshev(Mean, Sd) UCL			83.75
514					97.5% Chebyshev(Mean, Sd) UCL	109.1			99% Chebyshev(Mean, Sd) UCL			158.9
515												
516						**Suggested UCL to Use**						
517					95% Chebyshev (Mean, Sd) UCL	83.75						
518												
519						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
520						These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)						

	A	B	C	D	E	F	G	H	I	J	K	L
521	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
522	For additional insight the user may want to consult a statistician.											
523												
524												
525	**Uranium**											
526												
527	**General Statistics**											
528					Total Number of Observations	10			Number of Distinct Observations			5
529									Number of Missing Observations			0
530					Minimum	0.872			Mean			13.48
531					Maximum	60			Median			10
532					SD	16.85			Std. Error of Mean			5.328
533					Coefficient of Variation	1.25			Skewness			2.801
534												
535	**Normal GOF Test**											
536					Shapiro Wilk Test Statistic	0.563			**Shapiro Wilk GOF Test**			
537					5% Shapiro Wilk Critical Value	0.842			Data Not Normal at 5% Significance Level			
538					Lilliefors Test Statistic	0.411			**Lilliefors GOF Test**			
539					5% Lilliefors Critical Value	0.28			Data Not Normal at 5% Significance Level			
540	**Data Not Normal at 5% Significance Level**											
541												
542	**Assuming Normal Distribution**											
543			**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**			
544					95% Student's-t UCL	23.24			95% Adjusted-CLT UCL (Chen-1995)			27.28
545									95% Modified-t UCL (Johnson-1978)			24.03
546												
547	**Gamma GOF Test**											
548					A-D Test Statistic	1.241			**Anderson-Darling Gamma GOF Test**			
549					5% A-D Critical Value	0.748			Data Not Gamma Distributed at 5% Significance Level			
550					K-S Test Statistic	0.324			**Kolmogrov-Smirnoff Gamma GOF Test**			
551					5% K-S Critical Value	0.274			Data Not Gamma Distributed at 5% Significance Level			
552	**Data Not Gamma Distributed at 5% Significance Level**											
553												
554	**Gamma Statistics**											
555					k hat (MLE)	0.996			k star (bias corrected MLE)			0.764
556					Theta hat (MLE)	13.53			Theta star (bias corrected MLE)			17.64
557					nu hat (MLE)	19.92			nu star (bias corrected)			15.27
558					MLE Mean (bias corrected)	13.48			MLE Sd (bias corrected)			15.42
559									Approximate Chi Square Value (0.05)			7.453
560					Adjusted Level of Significance	0.0267			Adjusted Chi Square Value			6.526
561												
562	**Assuming Gamma Distribution**											
563					95% Approximate Gamma UCL (use when n>=50))	27.62			95% Adjusted Gamma UCL (use when n<50)			31.54
564												
565	**Lognormal GOF Test**											
566					Shapiro Wilk Test Statistic	0.766			**Shapiro Wilk Lognormal GOF Test**			
567					5% Shapiro Wilk Critical Value	0.842			Data Not Lognormal at 5% Significance Level			
568					Lilliefors Test Statistic	0.388			**Lilliefors Lognormal GOF Test**			
569					5% Lilliefors Critical Value	0.28			Data Not Lognormal at 5% Significance Level			
570	**Data Not Lognormal at 5% Significance Level**											
571												
572	**Lognormal Statistics**											

	A	B	C	D	E	F	G	H	I	J	K	L
573					Minimum of Logged Data	-0.137				Mean of logged Data		2.021
574					Maximum of Logged Data	4.094				SD of logged Data		1.263
575												
576					Assuming Lognormal Distribution							
577					95% H-UCL	78.38				90% Chebyshev (MVUE) UCL		33.63
578					95% Chebyshev (MVUE) UCL	42.14				97.5% Chebyshev (MVUE) UCL		53.95
579					99% Chebyshev (MVUE) UCL	77.15						
580												
581					Nonparametric Distribution Free UCL Statistics							
582					Data do not follow a Discernible Distribution (0.05)							
583												
584					Nonparametric Distribution Free UCLs							
585					95% CLT UCL	22.24				95% Jackknife UCL		23.24
586					95% Standard Bootstrap UCL	21.55				95% Bootstrap-t UCL		38.95
587					95% Hall's Bootstrap UCL	68.28				95% Percentile Bootstrap UCL		23.17
588					95% BCA Bootstrap UCL	28.48						
589					90% Chebyshev(Mean, Sd) UCL	29.46				95% Chebyshev(Mean, Sd) UCL		36.7
590					97.5% Chebyshev(Mean, Sd) UCL	46.75				99% Chebyshev(Mean, Sd) UCL		66.49
591												
592					Suggested UCL to Use							
593					95% Chebyshev (Mean, Sd) UCL	36.7						
594												
595					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
596					These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)							
597					and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.							
598					For additional insight the user may want to consult a statistician.							
599												
600												
601	Uranium-234											
602												
603					General Statistics							
604					Total Number of Observations	10				Number of Distinct Observations		8
605										Number of Missing Observations		0
606					Minimum	0.442				Mean		5.366
607					Maximum	30.7				Median		2.29
608					SD	9.147				Std. Error of Mean		2.893
609					Coefficient of Variation	1.704				Skewness		2.859
610												
611					Normal GOF Test							
612					Shapiro Wilk Test Statistic	0.563				Shapiro Wilk GOF Test		
613					5% Shapiro Wilk Critical Value	0.842				Data Not Normal at 5% Significance Level		
614					Lilliefors Test Statistic	0.4				Lilliefors GOF Test		
615					5% Lilliefors Critical Value	0.28				Data Not Normal at 5% Significance Level		
616					Data Not Normal at 5% Significance Level							
617												
618					Assuming Normal Distribution							
619					95% Normal UCL					95% UCLs (Adjusted for Skewness)		
620					95% Student's-t UCL	10.67				95% Adjusted-CLT UCL (Chen-1995)		12.92
621										95% Modified-t UCL (Johnson-1978)		11.1
622												
623					Gamma GOF Test							
624					A-D Test Statistic	0.647				Anderson-Darling Gamma GOF Test		

	A–E	F	G–L
625	5% A-D Critical Value	0.764	Detected data appear Gamma Distributed at 5% Significance Level
626	K-S Test Statistic	0.24	**Kolmogrov-Smirnoff Gamma GOF Test**
627	5% K-S Critical Value	0.278	Detected data appear Gamma Distributed at 5% Significance Level
628	**Detected data appear Gamma Distributed at 5% Significance Level**		
629			
630	**Gamma Statistics**		
631	k hat (MLE)	0.668	k star (bias corrected MLE) 0.534
632	Theta hat (MLE)	8.037	Theta star (bias corrected MLE) 10.05
633	nu hat (MLE)	13.36	nu star (bias corrected) 10.68
634	MLE Mean (bias corrected)	5.366	MLE Sd (bias corrected) 7.343
635			Approximate Chi Square Value (0.05) 4.372
636	Adjusted Level of Significance	0.0267	Adjusted Chi Square Value 3.697
637			
638	**Assuming Gamma Distribution**		
639	95% Approximate Gamma UCL (use when n>=50)	13.11	95% Adjusted Gamma UCL (use when n<50) 15.51
640			
641	**Lognormal GOF Test**		
642	Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk Lognormal GOF Test**
643	5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level
644	Lilliefors Test Statistic	0.161	**Lilliefors Lognormal GOF Test**
645	5% Lilliefors Critical Value	0.28	Data appear Lognormal at 5% Significance Level
646	**Data appear Lognormal at 5% Significance Level**		
647			
648	**Lognormal Statistics**		
649	Minimum of Logged Data	-0.816	Mean of logged Data 0.769
650	Maximum of Logged Data	3.424	SD of logged Data 1.392
651			
652	**Assuming Lognormal Distribution**		
653	95% H-UCL	35.63	90% Chebyshev (MVUE) UCL 11.65
654	95% Chebyshev (MVUE) UCL	14.73	97.5% Chebyshev (MVUE) UCL 19
655	99% Chebyshev (MVUE) UCL	27.38	
656			
657	**Nonparametric Distribution Free UCL Statistics**		
658	**Data appear to follow a Discernible Distribution at 5% Significance Level**		
659			
660	**Nonparametric Distribution Free UCLs**		
661	95% CLT UCL	10.12	95% Jackknife UCL 10.67
662	95% Standard Bootstrap UCL	9.804	95% Bootstrap-t UCL 22.23
663	95% Hall's Bootstrap UCL	27.32	95% Percentile Bootstrap UCL 10.6
664	95% BCA Bootstrap UCL	13.06	
665	90% Chebyshev(Mean, Sd) UCL	14.04	95% Chebyshev(Mean, Sd) UCL 17.97
666	97.5% Chebyshev(Mean, Sd) UCL	23.43	99% Chebyshev(Mean, Sd) UCL 34.15
667			
668	**Suggested UCL to Use**		
669	95% Adjusted Gamma UCL	15.51	
670			
671	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.		
672	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)		
673	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.		
674	For additional insight the user may want to consult a statistician.		
675			
676			

	A	B	C	D	E	F	G	H	I	J	K	L
677	Uranium-235											
678												
679						General Statistics						
680					Total Number of Observations	10				Number of Distinct Observations		8
681										Number of Missing Observations		0
682					Minimum	0.00884				Mean		0.355
683					Maximum	2.11				Median		0.139
684					SD	0.633				Std. Error of Mean		0.2
685					Coefficient of Variation	1.782				Skewness		2.862
686												
687						Normal GOF Test						
688					Shapiro Wilk Test Statistic	0.564				Shapiro Wilk GOF Test		
689					5% Shapiro Wilk Critical Value	0.842				Data Not Normal at 5% Significance Level		
690					Lilliefors Test Statistic	0.4				Lilliefors GOF Test		
691					5% Lilliefors Critical Value	0.28				Data Not Normal at 5% Significance Level		
692						Data Not Normal at 5% Significance Level						
693												
694						Assuming Normal Distribution						
695					95% Normal UCL					95% UCLs (Adjusted for Skewness)		
696					95% Student's-t UCL	0.723				95% Adjusted-CLT UCL (Chen-1995)		0.879
697										95% Modified-t UCL (Johnson-1978)		0.753
698												
699						Gamma GOF Test						
700					A-D Test Statistic	0.459				Anderson-Darling Gamma GOF Test		
701					5% A-D Critical Value	0.773				Detected data appear Gamma Distributed at 5% Significance Level		
702					K-S Test Statistic	0.225				Kolmogrov-Smirnoff Gamma GOF Test		
703					5% K-S Critical Value	0.28				Detected data appear Gamma Distributed at 5% Significance Level		
704						Detected data appear Gamma Distributed at 5% Significance Level						
705												
706						Gamma Statistics						
707					k hat (MLE)	0.548				k star (bias corrected MLE)		0.45
708					Theta hat (MLE)	0.649				Theta star (bias corrected MLE)		0.79
709					nu hat (MLE)	10.96				nu star (bias corrected)		9.002
710					MLE Mean (bias corrected)	0.355				MLE Sd (bias corrected)		0.53
711										Approximate Chi Square Value (0.05)		3.328
712					Adjusted Level of Significance	0.0267				Adjusted Chi Square Value		2.757
713												
714						Assuming Gamma Distribution						
715					95% Approximate Gamma UCL (use when n>=50)	0.961				95% Adjusted Gamma UCL (use when n<50)		1.161
716												
717						Lognormal GOF Test						
718					Shapiro Wilk Test Statistic	0.96				Shapiro Wilk Lognormal GOF Test		
719					5% Shapiro Wilk Critical Value	0.842				Data appear Lognormal at 5% Significance Level		
720					Lilliefors Test Statistic	0.151				Lilliefors Lognormal GOF Test		
721					5% Lilliefors Critical Value	0.28				Data appear Lognormal at 5% Significance Level		
722						Data appear Lognormal at 5% Significance Level						
723												
724						Lognormal Statistics						
725					Minimum of Logged Data	-4.728				Mean of logged Data		-2.178
726					Maximum of Logged Data	0.747				SD of logged Data		1.684
727												
728						Assuming Lognormal Distribution						

	A	B	C	D	E	F	G	H	I	J	K	L
729					95% H-UCL	6.316				90% Chebyshev (MVUE) UCL		0.965
730					95% Chebyshev (MVUE) UCL	1.238				97.5% Chebyshev (MVUE) UCL		1.618
731					99% Chebyshev (MVUE) UCL	2.365						
732												
733					Nonparametric Distribution Free UCL Statistics							
734					Data appear to follow a Discernible Distribution at 5% Significance Level							
735												
736					Nonparametric Distribution Free UCLs							
737					95% CLT UCL	0.685				95% Jackknife UCL		0.723
738					95% Standard Bootstrap UCL	0.677				95% Bootstrap-t UCL		1.491
739					95% Hall's Bootstrap UCL	1.872				95% Percentile Bootstrap UCL		0.733
740					95% BCA Bootstrap UCL	0.945						
741					90% Chebyshev(Mean, Sd) UCL	0.956				95% Chebyshev(Mean, Sd) UCL		1.229
742					97.5% Chebyshev(Mean, Sd) UCL	1.606				99% Chebyshev(Mean, Sd) UCL		2.348
743												
744					Suggested UCL to Use							
745					95% Adjusted Gamma UCL	1.161						
746												
747					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
748					These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)							
749					and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.							
750					For additional insight the user may want to consult a statistician.							
751												
752												
753	Uranium-238											
754												
755					General Statistics							
756					Total Number of Observations	10				Number of Distinct Observations		8
757										Number of Missing Observations		0
758					Minimum	0.44				Mean		11.4
759					Maximum	62.9				Median		5.8
760					SD	18.63				Std. Error of Mean		5.891
761					Coefficient of Variation	1.634				Skewness		2.838
762												
763					Normal GOF Test							
764					Shapiro Wilk Test Statistic	0.578				Shapiro Wilk GOF Test		
765					5% Shapiro Wilk Critical Value	0.842				Data Not Normal at 5% Significance Level		
766					Lilliefors Test Statistic	0.4				Lilliefors GOF Test		
767					5% Lilliefors Critical Value	0.28				Data Not Normal at 5% Significance Level		
768					Data Not Normal at 5% Significance Level							
769												
770					Assuming Normal Distribution							
771					95% Normal UCL					95% UCLs (Adjusted for Skewness)		
772					95% Student's-t UCL	22.2				95% Adjusted-CLT UCL (Chen-1995)		26.74
773										95% Modified-t UCL (Johnson-1978)		23.08
774												
775					Gamma GOF Test							
776					A-D Test Statistic	0.487				Anderson-Darling Gamma GOF Test		
777					5% A-D Critical Value	0.762				Detected data appear Gamma Distributed at 5% Significance Level		
778					K-S Test Statistic	0.242				Kolmogrov-Smirnoff Gamma GOF Test		
779					5% K-S Critical Value	0.277				Detected data appear Gamma Distributed at 5% Significance Level		
780					Detected data appear Gamma Distributed at 5% Significance Level							

	A	B	C	D	E	F	G	H	I	J	K	L
781												
782						Gamma Statistics						
783					k hat (MLE)	0.684				k star (bias corrected MLE)		0.545
784					Theta hat (MLE)	16.67				Theta star (bias corrected MLE)		20.9
785					nu hat (MLE)	13.68				nu star (bias corrected)		10.91
786					MLE Mean (bias corrected)	11.4				MLE Sd (bias corrected)		15.43
787										Approximate Chi Square Value (0.05)		4.518
788					Adjusted Level of Significance	0.0267				Adjusted Chi Square Value		3.829
789												
790						Assuming Gamma Distribution						
791					95% Approximate Gamma UCL (use when n>=50)	27.53				95% Adjusted Gamma UCL (use when n<50)		32.48
792												
793						Lognormal GOF Test						
794					Shapiro Wilk Test Statistic	0.962				Shapiro Wilk Lognormal GOF Test		
795					5% Shapiro Wilk Critical Value	0.842				Data appear Lognormal at 5% Significance Level		
796					Lilliefors Test Statistic	0.169				Lilliefors Lognormal GOF Test		
797					5% Lilliefors Critical Value	0.28				Data appear Lognormal at 5% Significance Level		
798						Data appear Lognormal at 5% Significance Level						
799												
800						Lognormal Statistics						
801					Minimum of Logged Data	-0.821				Mean of logged Data		1.547
802					Maximum of Logged Data	4.142				SD of logged Data		1.438
803												
804						Assuming Lognormal Distribution						
805					95% H-UCL	92.58				90% Chebyshev (MVUE) UCL		27.21
806					95% Chebyshev (MVUE) UCL	34.49				97.5% Chebyshev (MVUE) UCL		44.59
807					99% Chebyshev (MVUE) UCL	64.44						
808												
809						Nonparametric Distribution Free UCL Statistics						
810						Data appear to follow a Discernible Distribution at 5% Significance Level						
811												
812						Nonparametric Distribution Free UCLs						
813					95% CLT UCL	21.09				95% Jackknife UCL		22.2
814					95% Standard Bootstrap UCL	20.61				95% Bootstrap-t UCL		43.99
815					95% Hall's Bootstrap UCL	57.18				95% Percentile Bootstrap UCL		22.71
816					95% BCA Bootstrap UCL	27.43						
817					90% Chebyshev(Mean, Sd) UCL	29.07				95% Chebyshev(Mean, Sd) UCL		37.08
818					97.5% Chebyshev(Mean, Sd) UCL	48.19				99% Chebyshev(Mean, Sd) UCL		70.02
819												
820						Suggested UCL to Use						
821					95% Adjusted Gamma UCL	32.48						
822												
823						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
824						These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)						
825						and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.						
826						For additional insight the user may want to consult a statistician.						
827												
828												
829	Vanadium											
830												
831						General Statistics						
832					Total Number of Observations	10				Number of Distinct Observations		8

	A	B	C	D	E	F	G	H	I	J	K	L
833											Number of Missing Observations	0
834					Minimum	84					Mean	107.9
835					Maximum	158					Median	102
836					SD	20.73					Std. Error of Mean	6.557
837					Coefficient of Variation	0.192					Skewness	1.76
838												
839					**Normal GOF Test**							
840					Shapiro Wilk Test Statistic	0.827	**Shapiro Wilk GOF Test**					
841					5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level					
842					Lilliefors Test Statistic	0.26	**Lilliefors GOF Test**					
843					5% Lilliefors Critical Value	0.28	Data appear Normal at 5% Significance Level					
844					**Data appear Approximate Normal at 5% Significance Level**							
845												
846					**Assuming Normal Distribution**							
847			**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**					
848					95% Student's-t UCL	119.9					95% Adjusted-CLT UCL (Chen-1995)	122.6
849											95% Modified-t UCL (Johnson-1978)	120.5
850												
851					**Gamma GOF Test**							
852					A-D Test Statistic	0.628	**Anderson-Darling Gamma GOF Test**					
853					5% A-D Critical Value	0.724	Detected data appear Gamma Distributed at 5% Significance Level					
854					K-S Test Statistic	0.232	**Kolmogrov-Smirnoff Gamma GOF Test**					
855					5% K-S Critical Value	0.266	Detected data appear Gamma Distributed at 5% Significance Level					
856					**Detected data appear Gamma Distributed at 5% Significance Level**							
857												
858					**Gamma Statistics**							
859					k hat (MLE)	34.48					k star (bias corrected MLE)	24.2
860					Theta hat (MLE)	3.129					Theta star (bias corrected MLE)	4.458
861					nu hat (MLE)	689.6					nu star (bias corrected)	484.1
862					MLE Mean (bias corrected)	107.9					MLE Sd (bias corrected)	21.93
863											Approximate Chi Square Value (0.05)	434
864					Adjusted Level of Significance	0.0267					Adjusted Chi Square Value	425.8
865												
866					**Assuming Gamma Distribution**							
867					95% Approximate Gamma UCL (use when n>=50))	120.3					95% Adjusted Gamma UCL (use when n<50)	122.7
868												
869					**Lognormal GOF Test**							
870					Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk Lognormal GOF Test**					
871					5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level					
872					Lilliefors Test Statistic	0.223	**Lilliefors Lognormal GOF Test**					
873					5% Lilliefors Critical Value	0.28	Data appear Lognormal at 5% Significance Level					
874					**Data appear Lognormal at 5% Significance Level**							
875												
876					**Lognormal Statistics**							
877					Minimum of Logged Data	4.431					Mean of logged Data	4.667
878					Maximum of Logged Data	5.063					SD of logged Data	0.175
879												
880					**Assuming Lognormal Distribution**							
881					95% H-UCL	120.3					90% Chebyshev (MVUE) UCL	125.7
882					95% Chebyshev (MVUE) UCL	133.8					97.5% Chebyshev (MVUE) UCL	145
883					99% Chebyshev (MVUE) UCL	167.1						
884												

	A	B	C	D	E	F	G	H	I	J	K	L
885	Nonparametric Distribution Free UCL Statistics											
886	Data appear to follow a Discernible Distribution at 5% Significance Level											
887												
888	Nonparametric Distribution Free UCLs											
889					95% CLT UCL	118.7				95% Jackknife UCL		119.9
890					95% Standard Bootstrap UCL	118.3				95% Bootstrap-t UCL		131.5
891					95% Hall's Bootstrap UCL	183.8				95% Percentile Bootstrap UCL		118.7
892					95% BCA Bootstrap UCL	122.7						
893					90% Chebyshev(Mean, Sd) UCL	127.6				95% Chebyshev(Mean, Sd) UCL		136.5
894					97.5% Chebyshev(Mean, Sd) UCL	148.8				99% Chebyshev(Mean, Sd) UCL		173.1
895												
896	Suggested UCL to Use											
897					95% Student's-t UCL	119.9						
898												
899	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
900	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
901	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
902	For additional insight the user may want to consult a statistician.											
903												