

Baseline 24hr TSP vs Impact 24hr TSP at KTD1a

Date	Baseline 24 hr TSP (ug/m3)
20-Jan-16	42
22-Jan-16	25
23-Jan-16	95
24-Jan-16	19
25-Jan-16	144
26-Jan-16	184
27-Jan-16	68
28-Jan-16	12
29-Jan-16	61
30-Jan-16	53
31-Jan-16	35
1-Feb-16	60
2-Feb-16	103
3-Feb-16	124

Date	Impact 24 hr TSP (ug/m3)
1-Mar-16	208
7-Mar-16	65
12-Mar-16	79
18-Mar-16	98
24-Mar-16	44
30-Mar-16	168
5-Apr-16	87
11-Apr-16	61
16-Apr-16	105
22-Apr-16	62
28-Apr-16	81
4-May-16	61
10-May-16	47
16-May-16	106
21-May-16	59
27-May-16	48

Baseline 24hr TSP vs Impact 24hr TSP at KTD1a

Baseline 24 hour TSP (ug/m3)		Quarterly 24 hour TSP (ug/m3)	
Raw Statistics		Raw Statistics	
Number of Valid Observations	14	Number of Valid Observations	16
Number of Distinct Observations	14	Number of Distinct Observations	16
Minimum	12	Minimum	44.07
Maximum	184	Maximum	208.4
Mean of Raw Data	73.21	Mean of Raw Data	86.14
Standard Deviation of Raw Data	50.71	Standard Deviation of Raw Data	45.01
Kstar	1.704	Kstar	4.217
Mean of Log Transformed Data	4.038	Mean of Log Transformed Data	4.356
Standard Deviation of Log Transformed Data	0.791	Standard Deviation of Log Transformed Data	0.44
Normal Distribution Test Results		Normal Distribution Test Results	
Correlation Coefficient R	0.966	Correlation Coefficient R	0.889
Shapiro Wilk Test Statistic	0.927	Shapiro Wilk Test Statistic	0.798
Shapiro Wilk Critical (0.95) Value	0.874	Shapiro Wilk Critical (0.95) Value	0.887
Approximate Shapiro Wilk P Value	0.301	Approximate Shapiro Wilk P Value	0.00196
Lilliefors Test Statistic	0.184	Lilliefors Test Statistic	0.204
Lilliefors Critical (0.95) Value	0.237	Lilliefors Critical (0.95) Value	0.222
Data appear Normal at (0.05) Significance Level		Data not Normal at (0.05) Significance Level	

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Full Data Sets without NDs			
User Selected Options			
From File			
Full Precision	OFF		
Confidence Coefficient	95%		
Substantial Difference	0		
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)		
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median		
Area of Concern Data: Quarterly 24 hour TSP (ug/m3)			
Background Data: Baseline 24 hour TSP (ug/m3)			
Raw Statistics			
	Site	Background	
Number of Valid Observations	16	14	
Number of Distinct Observations	16	14	
Minimum	44.07	12	
Maximum	208.4	184	
Mean	86.14	73.21	
Median	71.8	60.5	
SD	45.01	50.71	
SE of Mean	11.25	13.55	
Wilcoxon-Mann-Whitney (WMW) Test			
H0: Mean/Median of Site or AOC <= Mean/Median of Background			
Site Rank Sum W-Stat	275		
WMW Test U-Stat	139		
WMW Critical Value (0.050)	152		
Approximate P-Value	1.35E-01		
Conclusion with Alpha = 0.05			
Do Not Reject H0, Conclude Site <= Background			

Baseline 24hr TSP vs Impact 24hr TSP at KTD2a

Date	Baseline 24 hr TSP (ug/m3)
20-Jan-16	39
22-Jan-16	27
23-Jan-16	25
24-Jan-16	75
25-Jan-16	52
26-Jan-16	75
27-Jan-16	62
28-Jan-16	36
29-Jan-16	17
30-Jan-16	24
31-Jan-16	66
1-Feb-16	40
2-Feb-16	17
3-Feb-16	39

Date	Impact 24 hr TSP (ug/m3)
1-Mar-16	198
7-Mar-16	67
12-Mar-16	93
18-Mar-16	100
24-Mar-16	51
30-Mar-16	205
5-Apr-16	138
6-Apr-16	119
11-Apr-16	81
16-Apr-16	39
22-Apr-16	47
28-Apr-16	90
4-May-16	53
10-May-16	32
16-May-16	79
21-May-16	23
27-May-16	36

Baseline 24hr TSP vs Impact 24hr TSP at KTD2a

Baseline 24 hour TSP (ug/m3)		Quarterly 24 hour TSP (ug/m3)	
Raw Statistics		Raw Statistics	
Number of Valid Observations	14	Number of Valid Observations	17
Number of Distinct Observations	11	Number of Distinct Observations	17
Minimum	17	Minimum	23.27
Maximum	75	Maximum	205.3
Mean of Raw Data	42.43	Mean of Raw Data	85.42
Standard Deviation of Raw Data	20.38	Standard Deviation of Raw Data	53.96
Kstar	3.594	Kstar	2.456
Mean of Log Transformed Data	3.633	Mean of Log Transformed Data	4.268
Standard Deviation of Log Transformed Data	0.509	Standard Deviation of Log Transformed Data	0.624
Normal Distribution Test Results		Normal Distribution Test Results	
Correlation Coefficient R	0.965	Correlation Coefficient R	0.941
Shapiro Wilk Test Statistic	0.91	Shapiro Wilk Test Statistic	0.879
Shapiro Wilk Critical (0.95) Value	0.874	Shapiro Wilk Critical (0.95) Value	0.892
Approximate Shapiro Wilk P Value	0.222	Approximate Shapiro Wilk P Value	0.033
Lilliefors Test Statistic	0.19	Lilliefors Test Statistic	0.161
Lilliefors Critical (0.95) Value	0.237	Lilliefors Critical (0.95) Value	0.215
Data appear Normal at (0.05) Significance Level		Data not Normal at (0.05) Significance Level	

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Full Data Sets without NDs			
User Selected Options			
From File			
Full Precision	OFF		
Confidence Coefficient	95%		
Substantial Difference	0		
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)		
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median		
Area of Concern Data: Quarterly 24 hour TSP (ug/m3)			
Background Data: Baseline 24 hour TSP (ug/m3)			
Raw Statistics			
	Site	Background	
Number of Valid Observations	17	14	
Number of Distinct Observations	17	11	
Minimum	23.27	17	
Maximum	205.3	75	
Mean	85.42	42.43	
Median	79.02	39	
SD	53.96	20.38	
SE of Mean	13.09	5.446	
Wilcoxon-Mann-Whitney (WMW) Test			
H0: Mean/Median of Site or AOC <= Mean/Median of Background			
Site Rank Sum W-Stat	340		
WMW Test U-Stat	187		
WMW Critical Value (0.050)	160		
Approximate P-Value	3.69E-03		
Conclusion with Alpha = 0.05			
Reject H0, Conclude Site > Background			

Baseline 24hr TSP vs Impact 24hr TSP at KER1a

Date	Baseline 24 hr TSP (ug/m3)
20-Jan-16	71
22-Jan-16	49
23-Jan-16	34
24-Jan-16	94
25-Jan-16	17
26-Jan-16	129
27-Jan-16	113
28-Jan-16	64
29-Jan-16	27
30-Jan-16	59
31-Jan-16	99
1-Feb-16	38
2-Feb-16	40
3-Feb-16	80

Date	Impact 24 hr TSP (ug/m3)
1-Mar-16	147
7-Mar-16	59
12-Mar-16	53
18-Mar-16	64
24-Mar-16	56
30-Mar-16	150
5-Apr-16	38
11-Apr-16	54
16-Apr-16	74
22-Apr-16	63
28-Apr-16	83
4-May-16	47
10-May-16	76
16-May-16	110
21-May-16	97
27-May-16	93

Baseline 24hr TSP vs Impact 24hr TSP at KER1a

Baseline 24 hour TSP (ug/m3)		Quarterly 24 hour TSP (ug/m3)	
Raw Statistics		Raw Statistics	
Number of Valid Observations	14	Number of Valid Observations	16
Number of Distinct Observations	14	Number of Distinct Observations	16
Minimum	17	Minimum	38.37
Maximum	129	Maximum	149.8
Mean of Raw Data	65.29	Mean of Raw Data	79.01
Standard Deviation of Raw Data	33.98	Standard Deviation of Raw Data	33.23
Kstar	2.891	Kstar	5.63
Mean of Log Transformed Data	4.034	Mean of Log Transformed Data	4.295
Standard Deviation of Log Transformed Data	0.586	Standard Deviation of Log Transformed Data	0.391
Normal Distribution Test Results		Normal Distribution Test Results	
Correlation Coefficient R	0.986	Correlation Coefficient R	0.941
Shapiro Wilk Test Statistic	0.961	Shapiro Wilk Test Statistic	0.88
Shapiro Wilk Critical (0.95) Value	0.874	Shapiro Wilk Critical (0.95) Value	0.887
Approximate Shapiro Wilk P Value	0.786	Approximate Shapiro Wilk P Value	0.0418
Lilliefors Test Statistic	0.129	Lilliefors Test Statistic	0.179
Lilliefors Critical (0.95) Value	0.237	Lilliefors Critical (0.95) Value	0.222
Data appear Normal at (0.05) Significance Level		Data not Normal at (0.05) Significance Level	

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Full Data Sets without NDs			
User Selected Options			
From File			
Full Precision	OFF		
Confidence Coefficient	95%		
Substantial Difference	0		
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)		
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median		
Area of Concern Data: Quarterly 24 hour TSP (ug/m3)			
Background Data: Baseline 24 hour TSP (ug/m3)			
Raw Statistics			
	Site	Background	
Number of Valid Observations	16	14	
Number of Distinct Observations	16	14	
Minimum	38.37	17	
Maximum	149.8	129	
Mean	79.01	65.29	
Median	68.89	61.5	
SD	33.23	33.98	
SE of Mean	8.308	9.082	
Wilcoxon-Mann-Whitney (WMW) Test			
H0: Mean/Median of Site or AOC <= Mean/Median of Background			
Site Rank Sum W-Stat	272		
WMW Test U-Stat	136		
WMW Critical Value (0.050)	152		
Approximate P-Value	1.64E-01		
Conclusion with Alpha = 0.05			
Do Not Reject H0, Conclude Site <= Background			