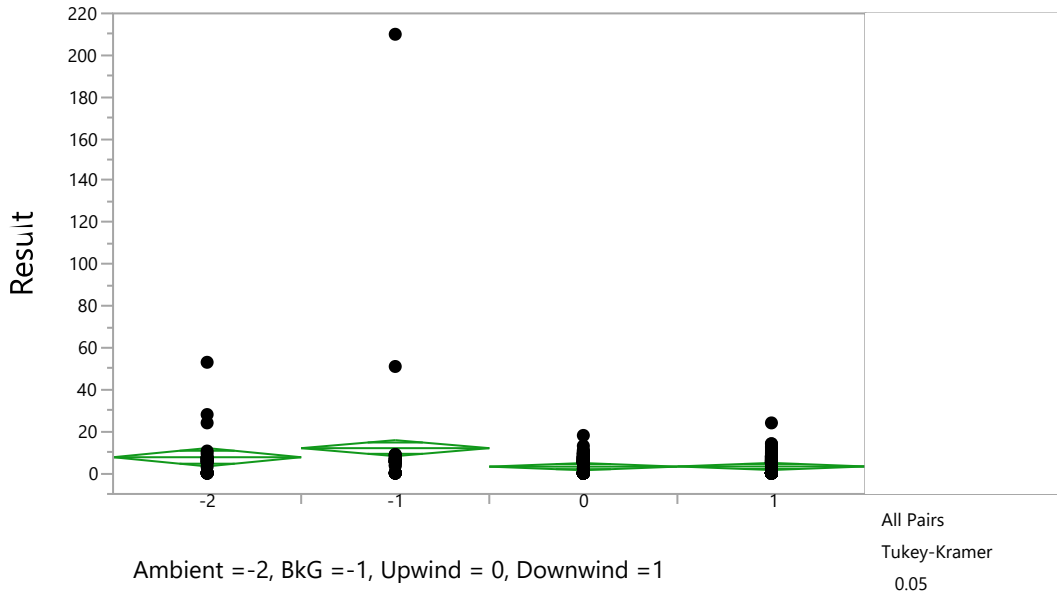


APPENDIX I

Tier 3 (30% - 49% detected) only. Analytes that are significantly different concentration between locations or events identified as ambient, background, upwind, and downwind. This appendix contains only analytes in Tier #3, which have a percent detection between 30% - 49%, indicative of a predominantly left-censored data set and statistical analysis should be interpreted with caution. This appendix shows the results of comparisons between ambient, background, upwind, and downwind by Tukey-Kramer HSD test for all pairs and the Wilcoxon paired comparison test.

Oneway Analysis of Result By Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1 Analyte (Units)=Acetone TO-15 (ppb v/v)



Missing Rows 188

Oneway Anova

Summary of Fit

Rsquare 0.050541
 Adj Rsquare 0.043366
 Root Mean Square Error 11.35011
 Mean of Response 4.152388
 Observations (or Sum Wgts) 401

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1	3	2722.413	907.471	7.0442	0.0001*
Error	397	51143.480	128.825		
C. Total	400	53865.893			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
-2	26	7.5789	2.2259	3.2028	11.955
-1	34	11.9189	1.9465	8.0922	15.746
0	169	3.0764	0.8731	1.3599	4.793
1	172	3.1564	0.8654	1.4550	4.858

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
-1	-2	0.2376	4.48692	0.05294	0.9578	0.00000	-1.68388	2.000000
1	0	0.1056	9.80263	0.01077	0.9914	0.00000	0.00000	0.000000
0	-2	-24.4527	11.03163	-2.21660	0.0267*	-0.70320	-5.00000	0.000000
1	-2	-24.5286	11.22799	-2.18460	0.0289*	-0.84194	-5.00000	0.000000
0	-1	-27.6802	10.33881	-2.67731	0.0074*	-1.23796	-5.20000	0.000000
1	-1	-29.5896	10.50750	-2.81605	0.0049*	-1.30000	-5.20000	0.000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
-2	26	6328.00	5226.00	243.385	2.064
-1	34	8462.50	6834.00	248.897	2.696
0	169	32624.0	33969.0	193.041	-1.256
1	172	33186.5	34572.0	192.945	-1.291

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
12.5110	3	0.0058*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57998	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	-1	-2	1	0
-1	-7.1022	-3.2889	3.2665	3.3385
-2	-3.2889	-8.1217	-1.7392	-1.6663
1	3.2665	-1.7392	-3.1577	-3.0916
0	3.3385	-1.6663	-3.0916	-3.1856

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
-1 A	11.918944
-2 A B	7.578918

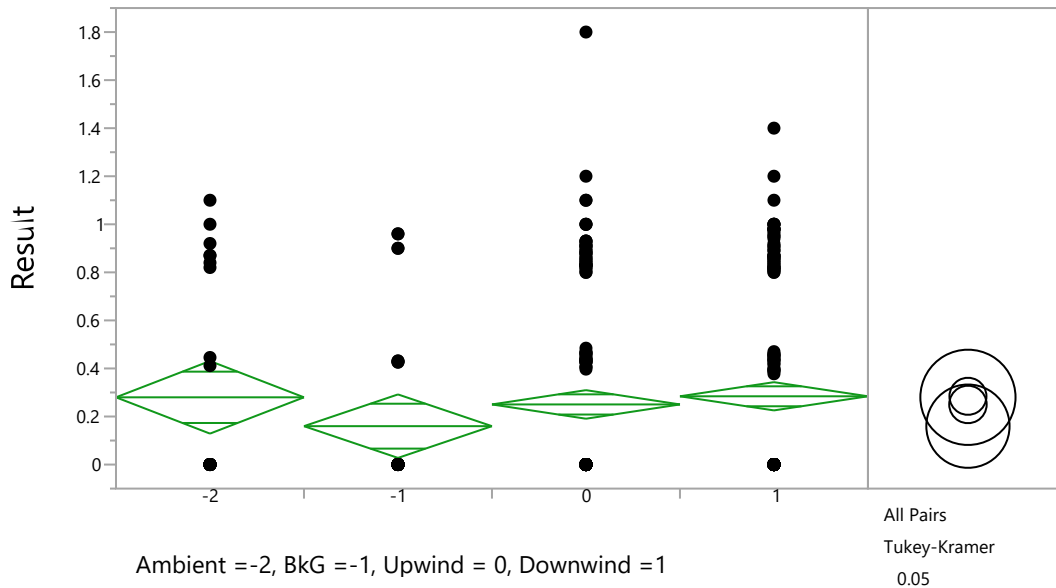
Level		Mean
1	B	3.156405
0	B	3.076390

Levels not connected by same letter are significantly different.

Ordered Differences Report

-1	0	8.842554	2.133365	3.33852	14.34659	0.0002*
-1	1	8.762539	2.130246	3.26655	14.25853	0.0003*
-2	0	4.502528	2.391042	-1.66631	10.67137	0.2370
-2	1	4.422512	2.388260	-1.73915	10.58418	0.2508
-1	-2	4.340027	2.956987	-3.28894	11.96899	0.4581
1	0	0.080015	1.229333	-3.09164	3.25167	0.9999

Oneway Analysis of Result By Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1 Analyte (Units)=Chloromethane (ppb v/v)



Missing Rows 189

Oneway Anova

Summary of Fit

Rsquare	0.007628
Adj Rsquare	0.00011
Root Mean Square Error	0.391877
Mean of Response	0.259074
Observations (or Sum Wgts)	400

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1	3	0.467441	0.155814	1.0146	0.3861
Error	396	60.812684	0.153567		
C. Total	399	61.280125			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
-2	26	0.279890	0.07685	0.12880	0.43098
-1	34	0.159831	0.06721	0.02771	0.29196
0	168	0.250254	0.03023	0.19082	0.30969
1	172	0.284159	0.02988	0.22542	0.34290

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
1	-1	14.7067	9.48359	1.55076	0.1210	0	0	0
0	-1	10.0257	9.02577	1.11079	0.2667	0	0	0
1	0	7.4304	9.05711	0.82040	0.4120	0	0	0
1	-2	0.6641	10.38761	0.06394	0.9490	0	0	0
0	-2	-3.2644	9.89328	-0.32996	0.7414	0	0	0
-1	-2	-3.6991	3.61671	-1.02278	0.3064	0	0	0

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
-2	26	5326.50	5213.00	204.865	0.235
-1	34	6060.00	6817.00	178.235	-1.393
0	168	33262.0	33684.0	197.988	-0.439
1	172	35551.5	34486.0	206.695	1.105

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
2.6384	3	0.4508

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.58001	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	1	-2	0	-1
1		-0.10902	-0.20847	-0.07577
-2	-0.10902		-0.28041	-0.14334
0	-0.20847	-0.28041		-0.09971
-1	-0.07577	-0.14334	-0.09971	

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
1 A	0.28415948
-2 A	0.27988962

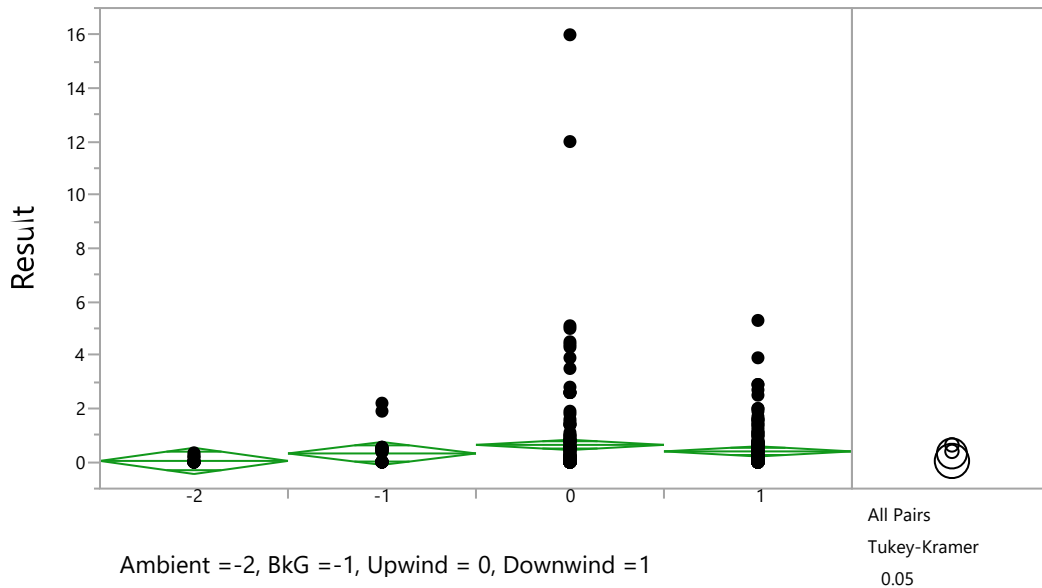
Level		Mean
0	A	0.25025426
-1	A	0.15983118

Levels not connected by same letter are significantly different.

Ordered Differences Report

1	-1	0.1243283	0.0735494	-0.065430	0.3140864	0.3301
-2	-1	0.1200584	0.1020937	-0.143344	0.3834610	0.6424
0	-1	0.0904231	0.0736938	-0.099708	0.2805537	0.6100
1	0	0.0339052	0.0425079	-0.075766	0.1435760	0.8555
-2	0	0.0296354	0.0825865	-0.183438	0.2427092	0.9842
1	-2	0.0042699	0.0824577	-0.208472	0.2170114	1.0000

Oneway Analysis of Result By Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1 Analyte (Units)=Cyclohexane (ppb v/v)



Missing Rows 188

Oneway Anova

Summary of Fit

Rsquare	0.017471
Adj Rsquare	0.010047
Root Mean Square Error	1.272021
Mean of Response	0.466626
Observations (or Sum Wgts)	401

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1	3	11.42252	3.80751	2.3532	0.0717
Error	397	642.36125	1.61804		
C. Total	400	653.78377			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
-2	26	0.036821	0.24946	-0.4536	0.52726
-1	34	0.316562	0.21815	-0.1123	0.74544
0	169	0.637455	0.09785	0.4451	0.82982
1	172	0.393412	0.09699	0.2027	0.58409

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
1	-2	30.2180	10.51316	2.87431	0.0040*	0	0	0.1481642
0	-2	30.0666	10.41178	2.88775	0.0039*	0	0	0.1423539
-1	-2	11.6403	3.81417	3.05185	0.0023*	0	0	0.4000000
0	-1	-0.0353	9.95825	-0.00355	0.9972	0	0	0.0000000
1	-1	-1.7261	10.05185	-0.17172	0.8637	0	0	0.0000000
1	0	-2.0764	9.55766	-0.21725	0.8280	0	0	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
-2	26	3693.00	5226.00	142.038	-3.020
-1	34	7057.00	6834.00	207.559	0.388
0	169	34823.0	33969.0	206.053	0.839
1	172	35028.0	34572.0	203.651	0.447

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
9.1957	3	0.0268*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57998	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	0	1	-1	-2
0		-0.35701	-0.11141	-0.29595
1	-0.11141		-0.53909	-0.33395
-1	-0.29595	-0.53909		-0.57525
-2	-0.09072	-0.33395	-0.57525	

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
0 A	0.63745476
1 A	0.39341153

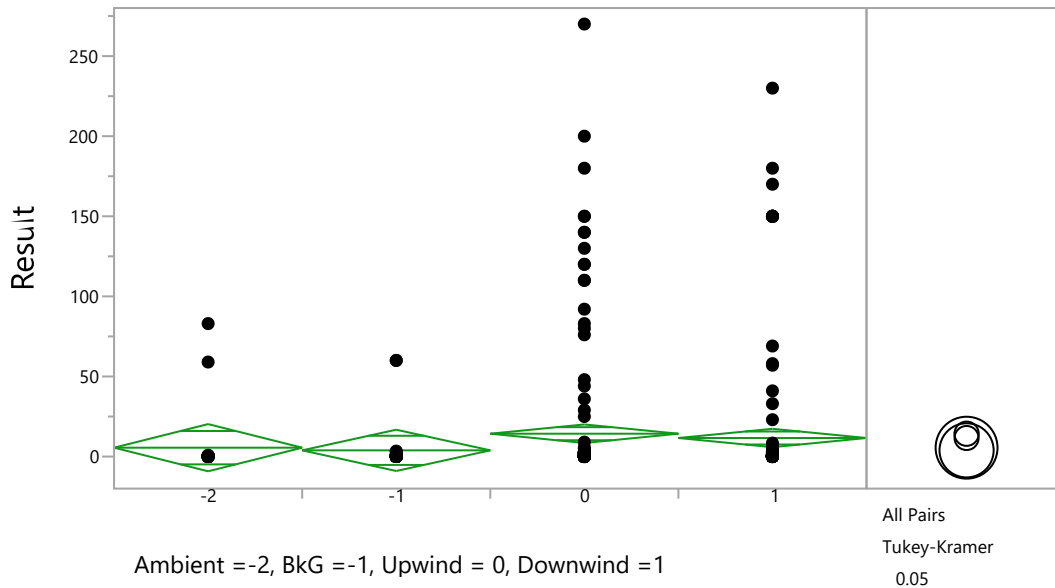
Level		Mean
-1	A	0.31656229
-2	A	0.03682066

Levels not connected by same letter are significantly different.

Ordered Differences Report

0	-2	0.6006341	0.2679672	-0.090716	1.291984	0.1140
1	-2	0.3565909	0.2676555	-0.333955	1.047137	0.5429
0	-1	0.3208925	0.2390890	-0.295952	0.937737	0.5366
-1	-2	0.2797416	0.3313934	-0.575247	1.134730	0.8333
0	1	0.2440432	0.1377730	-0.111408	0.599495	0.2887
1	-1	0.0768492	0.2387395	-0.539094	0.692793	0.9885

Oneway Analysis of Result By Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1 Analyte (Units)=Hexane+ (ppb v/v)



Missing Rows 188

Oneway Anova

Summary of Fit

Rsquare	0.007159
Adj Rsquare	-0.00034
Root Mean Square Error	38.2106
Mean of Response	11.66834
Observations (or Sum Wgts)	401

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1	3	4179.54	1393.18	0.9542	0.4144
Error	397	579639.74	1460.05		
C. Total	400	583819.27			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
-2	26	5.5392	7.4937	-9.193	20.272
-1	34	3.8767	6.5531	-9.006	16.760
0	169	14.2627	2.9393	8.484	20.041
1	172	11.5859	2.9135	5.858	17.314

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
0	-2	20.9246	10.48918	1.99487	0.0461*	0	0	0.1418543
1	-2	17.9980	10.43026	1.72556	0.0844	0	0	0.0000000
0	-1	13.8136	9.76998	1.41388	0.1574	0	0	0.0000000
1	-1	10.1098	9.71749	1.04037	0.2982	0	0	0.0000000
-1	-2	2.4774	3.54084	0.69966	0.4841	0	0	0.0000000
1	0	-6.3700	9.48432	-0.67163	0.5018	0	0	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
-2	26	4310.00	5226.00	165.769	-1.830
-1	34	6192.00	6834.00	182.118	-1.133
0	169	35376.0	33969.0	209.325	1.402
1	172	34723.0	34572.0	201.878	0.150

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
5.4635	3	0.1408

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57998	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	0	1	-2	-1
0	-10.724	-8.001	-12.044	-8.144
1	-8.001	-10.630	-14.697	-10.793
-2	-12.044	-14.697	-27.342	-24.021
-1	-8.144	-10.793	-24.021	-23.910

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
0 A	14.262739
1 A	11.585885

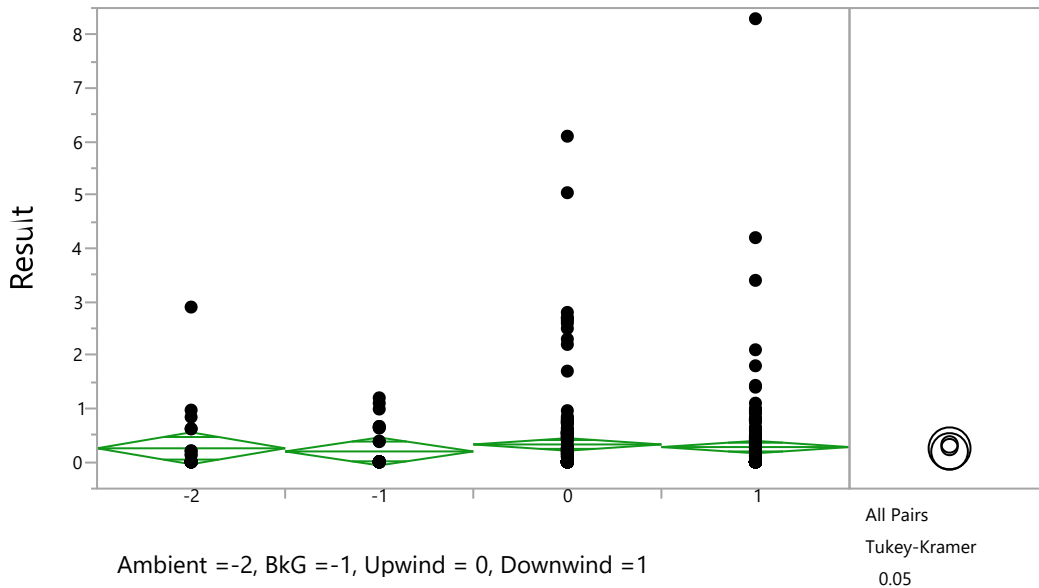
Level		Mean
-2	A	5.539203
-1	A	3.876712

Levels not connected by same letter are significantly different.

Ordered Differences Report

0	-1	10.38603	7.182060	-8.1435	28.91560	0.4714
0	-2	8.72354	8.049541	-12.0441	29.49119	0.6997
1	-1	7.70917	7.171562	-10.7933	26.21166	0.7050
1	-2	6.04668	8.040175	-14.6968	26.79018	0.8758
0	1	2.67685	4.138600	-8.0007	13.35436	0.9166
-2	-1	1.66249	9.954818	-24.0207	27.34572	0.9983

Oneway Analysis of Result By Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1 Analyte (Units)=Toluene (ppb v/v)



Missing Rows 188

Oneway Anova

Summary of Fit

Rsquare	0.002461
Adj Rsquare	-0.00508
Root Mean Square Error	0.775417
Mean of Response	0.290013
Observations (or Sum Wgts)	401

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Ambient = -2, BkG = -1, Upwind = 0, Downwind = 1	3	0.58896	0.196321	0.3265	0.8062
Error	397	238.70496	0.601272		
C. Total	400	239.29392			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
-2	26	0.254719	0.15207	-0.0442	0.55369
-1	34	0.195897	0.13298	-0.0655	0.45734
0	169	0.326865	0.05965	0.2096	0.44413
1	172	0.277744	0.05913	0.1615	0.39398

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
0	-1	6.64184	9.31949	0.712683	0.4760	0	0	0
1	-1	4.80831	9.31229	0.516340	0.6056	0	0	0
0	-2	1.30917	10.15942	0.128863	0.8975	0	0	0
1	-2	-0.06641	10.16244	-0.006535	0.9948	0	0	0
-1	-2	-1.35747	3.68797	-0.368080	0.7128	0	0	0
1	0	-3.41375	9.06218	-0.376703	0.7064	0	0	0

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
-2	26	5218.50	5226.00	200.712	-0.015
-1	34	6488.00	6834.00	190.824	-0.634
0	169	34479.0	33969.0	204.018	0.527
1	172	34415.5	34572.0	200.090	-0.161

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
0.5446	3	0.9090

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57998	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	0	1	-2	-1
0	-0.21763	-0.16756	-0.34930	-0.24506
1	-0.16756	-0.21573	-0.39793	-0.29363
-2	-0.34930	-0.39793	-0.55486	-0.46237
-1	-0.24506	-0.29363	-0.46237	-0.48521

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean	
0	A	0.32686547
1	A	0.27774382

Level		Mean
-2	A	0.25471937
-1	A	0.19589704

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
0	-1	0.1309684	0.1457474	-0.245057	0.5069937	0.8056
1	-1	0.0818468	0.1455343	-0.293629	0.4573224	0.9431
0	-2	0.0721461	0.1633514	-0.349297	0.4935894	0.9712
-2	-1	0.0588223	0.2020156	-0.462374	0.5800186	0.9914
0	1	0.0491216	0.0839856	-0.167560	0.2658030	0.9366
1	-2	0.0230245	0.1631613	-0.397928	0.4439774	0.9990