

Appendix 6c.
Performance statistics:
CASTNET monitors

REMSAD stats: SEN.021 / ALH157

	SO2	SO4	TES
Average Obs [ug/m3]:	6.778	5.479	5.215
Average Preds (paired) [ug/m3]:	18.956	6.438	11.624
Average Preds (all) [ug/m3]:	18.956	6.438	11.624
Ratio of Means (paired):	2.797	1.175	2.229
Std. Dev. Obs [ug/m3]:	2.095	3.533	1.872
Std. Dev. Preds (paired) [ug/m3]:	3.608	3.707	2.486
Std. Dev. Preds (all) [ug/m3]:	3.608	3.707	2.486
Coef of Variation Obs:	0.309	0.645	0.359
Coef of Variation Preds (paired):	0.190	0.576	0.214
Coef of Variation Preds (all):	0.190	0.576	0.214
R:	0.406	0.944	0.766
R^2:	0.165	0.891	0.587
Slope:	0.699	0.990	1.017
Intercept [ug/m3]:	14.217	1.011	6.321
RMS Error [ug/m3]:	12.632	1.553	6.605
RMSE / Avrg. Ob:	1.864	0.283	1.266
Normalized Gross Error [%]:	2.003	0.348	1.413
Fractional Gross Error:	0.953	0.287	0.785
Normalized Bias [%]:	2.003	0.287	1.413
Fractional Bias:	0.953	0.219	0.785
Model Index:	0.237	0.954	0.400
Obs Data Complete [%]:	100.0%	100.0%	100.0%

ANA115

REMSAD stats: SEN.021 / ANA115

	SO2	SO4	TES
Average Obs [ug/m3]:	3.669	3.979	3.161
Average Preds (paired) [ug/m3]:	10.419	5.201	6.943
Average Preds (all) [ug/m3]:	10.419	5.201	6.943
Ratio of Means (paired):	2.840	1.307	2.197
Std. Dev. Obs [ug/m3]:	1.734	2.726	1.568
Std. Dev. Preds (paired) [ug/m3]:	5.810	2.585	3.576
Std. Dev. Preds (all) [ug/m3]:	5.810	2.585	3.576
Coef of Variation Obs:	0.473	0.685	0.496
Coef of Variation Preds (paired):	0.558	0.497	0.515
Coef of Variation Preds (all):	0.558	0.497	0.515
R:	0.841	0.951	0.896
R^2:	0.707	0.905	0.803
Slope:	2.817	0.902	2.044
Intercept [ug/m3]:	0.083	1.613	0.482
RMS Error [ug/m3]:	8.086	1.484	4.416
RMSE / Avrg. Ob:	2.204	0.373	1.397
Normalized Gross Error [%]:	2.003	0.464	1.295
Fractional Gross Error:	0.951	0.355	0.760
Normalized Bias [%]:	2.003	0.450	1.295
Fractional Bias:	0.951	0.340	0.760
Model Index:	0.400	0.927	0.552
Obs Data Complete [%]:	100.0%	100.0%	100.0%

ARE128

REMSAD stats: SEN.021 / ARE128

	SO2	SO4	TES
Average Obs [ug/m3]:	8.349	6.680	6.401
Average Preds (paired) [ug/m3]:	16.034	7.672	10.574
Average Preds (all) [ug/m3]:	16.034	7.672	10.574
Ratio of Means (paired):	1.921	1.149	1.652
Std. Dev. Obs [ug/m3]:	1.965	3.150	1.611
Std. Dev. Preds (paired) [ug/m3]:	3.547	2.923	2.207
Std. Dev. Preds (all) [ug/m3]:	3.547	2.923	2.207
Coef of Variation Obs:	0.235	0.472	0.252
Coef of Variation Preds (paired):	0.221	0.381	0.209
Coef of Variation Preds (all):	0.221	0.381	0.209
R:	0.547	0.898	0.663
R^2:	0.300	0.806	0.440
Slope:	0.988	0.833	0.909
Intercept [ug/m3]:	7.785	2.106	4.758
RMS Error [ug/m3]:	8.238	1.708	4.491
RMSE / Avrg. Ob:	0.987	0.256	0.702
Normalized Gross Error [%]:	0.978	0.305	0.714
Fractional Gross Error:	0.630	0.244	0.500
Normalized Bias [%]:	0.978	0.246	0.714
Fractional Bias:	0.630	0.181	0.500
Model Index:	0.326	0.920	0.425
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / BBE401

	SO2	SO4	TES
Average Obs [ug/m3]:	0.918	3.110	1.496
Average Preds (paired) [ug/m3]:	1.717	1.965	1.513
Average Preds (all) [ug/m3]:	1.717	1.965	1.513
Ratio of Means (paired):	1.870	0.632	1.012
Std. Dev. Obs [ug/m3]:	0.618	1.298	0.639
Std. Dev. Preds (paired) [ug/m3]:	0.551	1.370	0.632
Std. Dev. Preds (all) [ug/m3]:	0.551	1.370	0.632
Coef of Variation Obs:	0.673	0.417	0.427
Coef of Variation Preds (paired):	0.321	0.698	0.417
Coef of Variation Preds (all):	0.321	0.698	0.417
R:	0.550	0.576	0.681
R^2:	0.302	0.332	0.463
Slope:	0.491	0.608	0.673
Intercept [ug/m3]:	1.266	0.073	0.507
RMS Error [ug/m3]:	0.974	1.681	0.508
RMSE / Avrg. Ob:	1.061	0.540	0.340
Normalized Gross Error [%]:	0.506	0.477	0.288
Fractional Gross Error:	0.678	0.643	0.251
Normalized Bias [%]:	0.500	-0.369	0.010
Fractional Bias:	0.678	-0.559	0.005
Model Index:	0.583	0.653	0.813
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / BEL116

	SO2	SO4	TES
Average Obs [ug/m3]:	6.536	5.505	5.237
Average Preds (paired) [ug/m3]:	20.648	7.162	12.559
Average Preds (all) [ug/m3]:	20.889	8.047	13.127
Ratio of Means (paired):	3.159	1.301	2.398
Std. Dev. Obs [ug/m3]:	1.725	3.262	1.707
Std. Dev. Preds (paired) [ug/m3]:	2.469	2.879	1.563
Std. Dev. Preds (all) [ug/m3]:	2.833	3.116	1.963
Coef of Variation Obs:	0.264	0.593	0.326
Coef of Variation Preds (paired):	0.120	0.402	0.124
Coef of Variation Preds (all):	0.136	0.387	0.150
R:	0.228	0.506	0.559
R^2:	0.052	0.256	0.313
Slope:	0.327	0.446	0.512
Intercept [ug/m3]:	18.513	4.705	9.875
RMS Error [ug/m3]:	14.363	3.489	7.482
RMSE / Avrg. Ob:	2.198	0.634	1.429
Normalized Gross Error [%]:	2.389	1.159	1.620
Fractional Gross Error:	1.045	0.360	0.847
Normalized Bias [%]:	2.389	1.119	1.620
Fractional Bias:	1.045	0.318	0.847
Model Index:	0.176	0.705	0.281
Obs Data Complete [%]:	68.8%	75.0%	68.8%

REMSAD stats: SEN.021 / BFT142

	SO2	SO4	TES
Average Obs [ug/m3]:	2.144	5.539	2.919
Average Preds (paired) [ug/m3]:	4.310	4.607	3.691
Average Preds (all) [ug/m3]:	4.290	4.243	3.560
Ratio of Means (paired):	2.010	0.832	1.264
Std. Dev. Obs [ug/m3]:	1.163	3.749	1.610
Std. Dev. Preds (paired) [ug/m3]:	2.722	2.954	2.165
Std. Dev. Preds (all) [ug/m3]:	2.466	2.769	1.974
Coef of Variation Obs:	0.542	0.677	0.552
Coef of Variation Preds (paired):	0.632	0.641	0.587
Coef of Variation Preds (all):	0.575	0.653	0.555
R:	0.892	0.925	0.859
R^2:	0.796	0.855	0.737
Slope:	2.088	0.729	1.155
Intercept [ug/m3]:	-0.169	0.570	0.321
RMS Error [ug/m3]:	2.793	1.779	1.375
RMSE / Avrg. Ob:	1.302	0.321	0.471
Normalized Gross Error [%]:	0.925	0.300	0.420
Fractional Gross Error:	0.590	0.326	0.322
Normalized Bias [%]:	0.891	-0.109	0.295
Fractional Bias:	0.590	-0.172	0.187
Model Index:	0.610	0.930	0.870
Obs Data Complete [%]:	81.3%	81.3%	81.3%

REMSAD stats: SEN.021 / BVL130

	SO2	SO4	TES
Average Obs [ug/m3]:	5.014	4.974	4.165
Average Preds (paired) [ug/m3]:	12.571	5.768	8.208
Average Preds (all) [ug/m3]:	12.571	5.768	8.208
Ratio of Means (paired):	2.507	1.160	1.971
Std. Dev. Obs [ug/m3]:	2.845	3.239	2.269
Std. Dev. Preds (paired) [ug/m3]:	4.965	3.984	3.700
Std. Dev. Preds (all) [ug/m3]:	4.965	3.984	3.700
Coef of Variation Obs:	0.567	0.651	0.545
Coef of Variation Preds (paired):	0.395	0.691	0.451
Coef of Variation Preds (all):	0.395	0.691	0.451
R:	0.934	0.944	0.976
R^2:	0.872	0.890	0.952
Slope:	1.630	1.161	1.591
Intercept [ug/m3]:	4.397	-0.005	1.580
RMS Error [ug/m3]:	7.967	1.626	4.336
RMSE / Avrg. Ob:	1.589	0.327	1.041
Normalized Gross Error [%]:	1.686	0.291	1.047
Fractional Gross Error:	0.890	0.257	0.676
Normalized Bias [%]:	1.686	0.214	1.047
Fractional Bias:	0.890	0.170	0.676
Model Index:	0.530	0.949	0.672
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / BWR139

	SO2	SO4	TES
Average Obs [ug/m3]:	7.432	7.630	6.221
Average Preds (paired) [ug/m3]:	16.267	8.088	10.823
Average Preds (all) [ug/m3]:	15.398	7.283	10.127
Ratio of Means (paired):	2.189	1.060	1.740
Std. Dev. Obs [ug/m3]:	2.407	2.893	2.034
Std. Dev. Preds (paired) [ug/m3]:	4.231	2.895	2.313
Std. Dev. Preds (all) [ug/m3]:	4.376	2.975	2.609
Coef of Variation Obs:	0.324	0.379	0.327
Coef of Variation Preds (paired):	0.260	0.358	0.214
Coef of Variation Preds (all):	0.284	0.408	0.258
R:	0.595	0.892	0.656
R^2:	0.354	0.796	0.431
Slope:	1.046	0.893	0.746
Intercept [ug/m3]:	8.496	1.276	6.179
RMS Error [ug/m3]:	9.468	1.419	4.949
RMSE / Avrg. Ob:	1.274	0.186	0.795
Normalized Gross Error [%]:	1.325	0.165	0.866
Fractional Gross Error:	0.754	0.150	0.564
Normalized Bias [%]:	1.325	0.097	0.866
Fractional Bias:	0.754	0.073	0.564
Model Index:	0.338	0.939	0.483
Obs Data Complete [%]:	68.8%	75.0%	68.8%

CAD150

REMSAD stats: SEN.021 / CAD150

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.333	4.330	2.110
Average Preds (paired) [ug/m3]:	9.833	5.262	6.670
Average Preds (all) [ug/m3]:	10.450	5.688	7.121
Ratio of Means (paired):	7.376	1.215	3.161
Std. Dev. Obs [ug/m3]:	0.740	2.900	1.255
Std. Dev. Preds (paired) [ug/m3]:	2.429	2.291	1.934
Std. Dev. Preds (all) [ug/m3]:	2.438	2.518	1.792
Coef of Variation Obs:	0.555	0.670	0.595
Coef of Variation Preds (paired):	0.247	0.435	0.290
Coef of Variation Preds (all):	0.233	0.443	0.252
R:	-0.275	0.472	0.240
R^2:	0.076	0.223	0.058
Slope:	-0.903	0.373	0.370
Intercept [ug/m3]:	11.037	3.648	5.890
RMS Error [ug/m3]:	8.926	2.874	4.994
RMSE / Avrg. Ob:	6.696	0.664	2.367
Normalized Gross Error [%]:	6.000	1.199	2.499
Fractional Gross Error:	1.503	0.667	1.059
Normalized Bias [%]:	6.000	0.924	2.499
Fractional Bias:	1.503	0.331	1.059
Model Index:	0.113	0.692	0.333
Obs Data Complete [%]:	31.3%	31.3%	31.3%

CAN407

REMSAD stats: SEN.021 / CAN407

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.634	1.060	0.670
Average Preds (paired) [ug/m3]:	1.392	1.106	1.064
Average Preds (all) [ug/m3]:	1.392	1.106	1.064
Ratio of Means (paired):	2.196	1.043	1.588
Std. Dev. Obs [ug/m3]:	0.188	0.250	0.122
Std. Dev. Preds (paired) [ug/m3]:	0.520	0.392	0.367
Std. Dev. Preds (all) [ug/m3]:	0.520	0.392	0.367
Coef of Variation Obs:	0.297	0.235	0.181
Coef of Variation Preds (paired):	0.373	0.355	0.345
Coef of Variation Preds (all):	0.373	0.355	0.345
R:	0.069	0.624	0.304
R^2:	0.005	0.389	0.093
Slope:	0.189	0.981	0.919
Intercept [ug/m3]:	1.272	0.065	0.449
RMS Error [ug/m3]:	0.931	0.310	0.527
RMSE / Avrg. Ob:	1.469	0.292	0.786
Normalized Gross Error [%]:	0.452	0.236	0.251
Fractional Gross Error:	0.702	0.214	0.433
Normalized Bias [%]:	0.392	-0.041	0.064
Fractional Bias:	0.702	0.011	0.411
Model Index:	0.236	0.754	0.295
Obs Data Complete [%]:	100.0%	100.0%	100.0%

CAT175

REMSAD stats: SEN.021 / CAT175

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.240	4.659	3.173
Average Preds (paired) [ug/m3]:	7.937	5.053	5.653
Average Preds (all) [ug/m3]:	7.937	5.053	5.653
Ratio of Means (paired):	2.450	1.084	1.781
Std. Dev. Obs [ug/m3]:	1.470	3.417	1.557
Std. Dev. Preds (paired) [ug/m3]:	2.154	1.573	1.406
Std. Dev. Preds (all) [ug/m3]:	2.154	1.573	1.406
Coef of Variation Obs:	0.454	0.733	0.491
Coef of Variation Preds (paired):	0.271	0.311	0.249
Coef of Variation Preds (all):	0.271	0.311	0.249
R:	0.605	0.851	0.784
R^2:	0.367	0.724	0.615
Slope:	0.887	0.392	0.708
Intercept [ug/m3]:	5.063	3.227	3.407
RMS Error [ug/m3]:	5.003	2.271	2.668
RMSE / Avrg. Ob:	1.544	0.487	0.841
Normalized Gross Error [%]:	1.797	0.465	1.042
Fractional Gross Error:	0.871	0.361	0.628
Normalized Bias [%]:	1.797	0.353	1.033
Fractional Bias:	0.871	0.223	0.619
Model Index:	0.391	0.783	0.602
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CDR119

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.285	6.488	4.805
Average Preds (paired) [ug/m3]:	19.996	8.116	12.703
Average Preds (all) [ug/m3]:	19.996	8.116	12.703
Ratio of Means (paired):	3.783	1.251	2.644
Std. Dev. Obs [ug/m3]:	2.343	3.120	1.731
Std. Dev. Preds (paired) [ug/m3]:	3.532	3.182	2.418
Std. Dev. Preds (all) [ug/m3]:	3.532	3.182	2.418
Coef of Variation Obs:	0.443	0.481	0.360
Coef of Variation Preds (paired):	0.177	0.392	0.190
Coef of Variation Preds (all):	0.177	0.392	0.190
R:	0.418	0.859	0.676
R^2:	0.175	0.738	0.456
Slope:	0.630	0.876	0.943
Intercept [ug/m3]:	16.666	2.430	8.171
RMS Error [ug/m3]:	15.082	2.334	8.097
RMSE / Avrg. Ob:	2.854	0.360	1.685
Normalized Gross Error [%]:	3.880	0.498	2.191
Fractional Gross Error:	1.191	0.284	0.931
Normalized Bias [%]:	3.880	0.482	2.191
Fractional Bias:	1.191	0.267	0.931
Model Index:	0.203	0.865	0.295
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CDZ171

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	8.418	7.173	6.600
Average Preds (paired) [ug/m3]:	21.986	7.931	13.637
Average Preds (all) [ug/m3]:	21.986	7.931	13.637
Ratio of Means (paired):	2.612	1.106	2.066
Std. Dev. Obs [ug/m3]:	3.021	3.351	1.964
Std. Dev. Preds (paired) [ug/m3]:	3.816	3.101	2.685
Std. Dev. Preds (all) [ug/m3]:	3.816	3.101	2.685
Coef of Variation Obs:	0.359	0.467	0.298
Coef of Variation Preds (paired):	0.174	0.391	0.197
Coef of Variation Preds (all):	0.174	0.391	0.197
R:	0.654	0.883	0.816
R^2:	0.428	0.780	0.666
Slope:	0.826	0.817	1.116
Intercept [ug/m3]:	15.034	2.071	6.273
RMS Error [ug/m3]:	13.882	1.752	7.209
RMSE / Avrg. Ob:	1.649	0.244	1.092
Normalized Gross Error [%]:	2.063	0.263	1.150
Fractional Gross Error:	0.919	0.223	0.710
Normalized Bias [%]:	2.063	0.185	1.150
Fractional Bias:	0.919	0.136	0.710
Model Index:	0.307	0.925	0.388
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CHA467

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.627	1.589	0.843
Average Preds (paired) [ug/m3]:	2.481	1.496	1.739
Average Preds (all) [ug/m3]:	2.481	1.496	1.739
Ratio of Means (paired):	3.955	0.941	2.062
Std. Dev. Obs [ug/m3]:	0.315	1.006	0.440
Std. Dev. Preds (paired) [ug/m3]:	0.321	0.465	0.249
Std. Dev. Preds (all) [ug/m3]:	0.321	0.465	0.249
Coef of Variation Obs:	0.502	0.633	0.521
Coef of Variation Preds (paired):	0.129	0.311	0.143
Coef of Variation Preds (all):	0.129	0.311	0.143
R:	0.147	0.240	-0.014
R^2:	0.022	0.058	0.000
Slope:	0.150	0.111	-0.008
Intercept [ug/m3]:	2.387	1.320	1.746
RMS Error [ug/m3]:	1.900	1.006	1.030
RMSE / Avrg. Ob:	3.028	0.633	1.221
Normalized Gross Error [%]:	1.407	0.280	0.695
Fractional Gross Error:	1.217	0.477	0.788
Normalized Bias [%]:	1.407	-0.010	0.666
Fractional Bias:	1.217	0.101	0.754
Model Index:	0.214	0.370	0.314
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CKT136

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	7.839	6.331	6.030
Average Preds (paired) [ug/m3]:	17.099	7.675	11.108
Average Preds (all) [ug/m3]:	17.099	7.675	11.108
Ratio of Means (paired):	2.181	1.212	1.842
Std. Dev. Obs [ug/m3]:	4.048	2.338	2.277
Std. Dev. Preds (paired) [ug/m3]:	3.077	2.352	1.796
Std. Dev. Preds (all) [ug/m3]:	3.077	2.352	1.796
Coef of Variation Obs:	0.516	0.369	0.378
Coef of Variation Preds (paired):	0.180	0.306	0.162
Coef of Variation Preds (all):	0.180	0.306	0.162
R:	0.515	0.855	0.548
R^2:	0.265	0.730	0.300
Slope:	0.391	0.860	0.432
Intercept [ug/m3]:	14.031	2.232	8.500
RMS Error [ug/m3]:	9.938	1.845	5.451
RMSE / Avrg. Ob:	1.268	0.291	0.904
Normalized Gross Error [%]:	1.679	0.369	1.078
Fractional Gross Error:	0.797	0.244	0.626
Normalized Bias [%]:	1.679	0.355	1.078
Fractional Bias:	0.797	0.230	0.626
Model Index:	0.404	0.850	0.423
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CND125

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.545	7.082	4.133
Average Preds (paired) [ug/m3]:	11.777	7.190	8.285
Average Preds (all) [ug/m3]:	11.777	7.190	8.285
Ratio of Means (paired):	3.322	1.015	2.004
Std. Dev. Obs [ug/m3]:	1.153	3.769	1.647
Std. Dev. Preds (paired) [ug/m3]:	3.703	2.674	2.361
Std. Dev. Preds (all) [ug/m3]:	3.703	2.674	2.361
Coef of Variation Obs:	0.325	0.532	0.398
Coef of Variation Preds (paired):	0.314	0.372	0.285
Coef of Variation Preds (all):	0.314	0.372	0.285
R:	0.681	0.909	0.754
R^2:	0.464	0.826	0.569
Slope:	2.189	0.645	1.082
Intercept [ug/m3]:	4.017	2.624	3.815
RMS Error [ug/m3]:	8.774	1.746	4.434
RMSE / Avrg. Ob:	2.475	0.247	1.073
Normalized Gross Error [%]:	2.491	0.287	1.175
Fractional Gross Error:	1.069	0.236	0.695
Normalized Bias [%]:	2.491	0.156	1.175
Fractional Bias:	1.069	0.092	0.695
Model Index:	0.230	0.923	0.497
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CNT169

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.547	0.865	0.562
Average Preds (paired) [ug/m3]:	1.271	0.918	0.941
Average Preds (all) [ug/m3]:	1.271	0.918	0.941
Ratio of Means (paired):	2.322	1.062	1.675
Std. Dev. Obs [ug/m3]:	0.238	0.232	0.088
Std. Dev. Preds (paired) [ug/m3]:	0.170	0.308	0.157
Std. Dev. Preds (all) [ug/m3]:	0.170	0.308	0.157
Coef of Variation Obs:	0.435	0.269	0.156
Coef of Variation Preds (paired):	0.134	0.335	0.166
Coef of Variation Preds (all):	0.134	0.335	0.166
R:	-0.028	0.674	-0.185
R^2:	0.001	0.455	0.034
Slope:	-0.020	0.892	-0.330
Intercept [ug/m3]:	1.282	0.146	1.127
RMS Error [ug/m3]:	0.782	0.235	0.426
RMSE / Avrg. Ob:	1.429	0.271	0.758
Normalized Gross Error [%]:	0.267	0.261	0.152
Fractional Gross Error:	0.833	0.188	0.496
Normalized Bias [%]:	0.267	-0.124	-0.059
Fractional Bias:	0.833	0.036	0.496
Model Index:	0.327	0.793	0.192
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / COW137

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.217	6.952	2.926
Average Preds (paired) [ug/m3]:	10.885	7.033	7.787
Average Preds (all) [ug/m3]:	10.885	7.033	7.787
Ratio of Means (paired):	8.945	1.012	2.661
Std. Dev. Obs [ug/m3]:	0.567	2.922	1.026
Std. Dev. Preds (paired) [ug/m3]:	2.418	2.181	1.697
Std. Dev. Preds (all) [ug/m3]:	2.418	2.181	1.697
Coef of Variation Obs:	0.466	0.420	0.351
Coef of Variation Preds (paired):	0.222	0.310	0.218
Coef of Variation Preds (all):	0.222	0.310	0.218
R:	0.207	0.718	0.727
R^2:	0.043	0.515	0.529
Slope:	0.883	0.536	1.204
Intercept [ug/m3]:	9.811	3.307	4.265
RMS Error [ug/m3]:	9.954	2.037	5.003
RMSE / Avrg. Ob:	8.179	0.293	1.710
Normalized Gross Error [%]:	7.947	0.276	1.845
Fractional Gross Error:	1.599	0.250	0.929
Normalized Bias [%]:	7.947	0.113	1.845
Fractional Bias:	1.599	0.062	0.929
Model Index:	0.079	0.820	0.308
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CTH110

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.350	4.760	4.262
Average Preds (paired) [ug/m3]:	18.118	5.523	10.900
Average Preds (all) [ug/m3]:	18.118	5.523	10.900
Ratio of Means (paired):	3.386	1.160	2.558
Std. Dev. Obs [ug/m3]:	2.049	2.932	1.499
Std. Dev. Preds (paired) [ug/m3]:	2.428	1.922	1.695
Std. Dev. Preds (all) [ug/m3]:	2.428	1.922	1.695
Coef of Variation Obs:	0.383	0.616	0.352
Coef of Variation Preds (paired):	0.134	0.348	0.156
Coef of Variation Preds (all):	0.134	0.348	0.156
R:	0.665	0.850	0.777
R^2:	0.442	0.722	0.604
Slope:	0.787	0.557	0.879
Intercept [ug/m3]:	13.906	2.872	7.155
RMS Error [ug/m3]:	12.903	1.816	6.726
RMSE / Avrg. Ob:	2.412	0.382	1.578
Normalized Gross Error [%]:	2.760	0.415	1.775
Fractional Gross Error:	1.115	0.325	0.904
Normalized Bias [%]:	2.760	0.334	1.775
Fractional Bias:	1.115	0.236	0.904
Model Index:	0.225	0.856	0.309
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / CVL151

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	2.925	5.957	3.448
Average Preds (paired) [ug/m3]:	10.846	7.095	7.788
Average Preds (all) [ug/m3]:	10.846	7.095	7.788
Ratio of Means (paired):	3.707	1.191	2.258
Std. Dev. Obs [ug/m3]:	1.158	2.764	1.110
Std. Dev. Preds (paired) [ug/m3]:	2.967	3.096	2.356
Std. Dev. Preds (all) [ug/m3]:	2.967	3.096	2.356
Coef of Variation Obs:	0.396	0.464	0.322
Coef of Variation Preds (paired):	0.274	0.436	0.302
Coef of Variation Preds (all):	0.274	0.436	0.302
R:	0.625	0.825	0.848
R^2:	0.391	0.681	0.718
Slope:	1.602	0.924	1.799
Intercept [ug/m3]:	6.159	1.590	1.583
RMS Error [ug/m3]:	8.281	2.097	4.602
RMSE / Avrg. Ob:	2.831	0.352	1.335
Normalized Gross Error [%]:	3.191	0.366	1.316
Fractional Gross Error:	1.172	0.301	0.770
Normalized Bias [%]:	3.191	0.260	1.316
Fractional Bias:	1.172	0.181	0.770
Model Index:	0.195	0.875	0.384
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / DCP114

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	7.103	5.886	5.513
Average Preds (paired) [ug/m3]:	19.197	7.862	12.219
Average Preds (all) [ug/m3]:	19.197	7.862	12.219
Ratio of Means (paired):	2.703	1.336	2.216
Std. Dev. Obs [ug/m3]:	2.719	2.607	1.646
Std. Dev. Preds (paired) [ug/m3]:	6.827	3.271	4.060
Std. Dev. Preds (all) [ug/m3]:	6.827	3.271	4.060
Coef of Variation Obs:	0.383	0.443	0.299
Coef of Variation Preds (paired):	0.356	0.416	0.332
Coef of Variation Preds (all):	0.356	0.416	0.332
R:	0.762	0.930	0.860
R^2:	0.580	0.865	0.739
Slope:	1.913	1.166	2.121
Intercept [ug/m3]:	5.609	0.995	0.524
RMS Error [ug/m3]:	13.114	2.353	7.257
RMSE / Avrg. Ob:	1.846	0.400	1.316
Normalized Gross Error [%]:	1.956	0.356	1.247
Fractional Gross Error:	0.926	0.288	0.752
Normalized Bias [%]:	1.956	0.356	1.247
Fractional Bias:	0.926	0.288	0.752
Model Index:	0.352	0.854	0.405
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / DEV412

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.460	1.148	0.612
Average Preds (paired) [ug/m3]:	0.536	0.802	0.536
Average Preds (all) [ug/m3]:	0.524	0.785	0.524
Ratio of Means (paired):	1.167	0.699	0.875
Std. Dev. Obs [ug/m3]:	0.098	0.367	0.156
Std. Dev. Preds (paired) [ug/m3]:	0.232	0.258	0.190
Std. Dev. Preds (all) [ug/m3]:	0.230	0.258	0.190
Coef of Variation Obs:	0.213	0.320	0.255
Coef of Variation Preds (paired):	0.432	0.322	0.354
Coef of Variation Preds (all):	0.439	0.329	0.362
R:	-0.218	0.464	0.174
R^2:	0.048	0.215	0.030
Slope:	-0.516	0.326	0.212
Intercept [ug/m3]:	0.774	0.428	0.406
RMS Error [ug/m3]:	0.281	0.483	0.237
RMSE / Avrg. Ob:	0.612	0.421	0.386
Normalized Gross Error [%]:	0.466	0.354	0.465
Fractional Gross Error:	0.419	0.432	0.370
Normalized Bias [%]:	-0.464	-0.339	-0.465
Fractional Bias:	0.084	-0.334	-0.154
Model Index:	0.215	0.537	0.463
Obs Data Complete [%]:	93.8%	93.8%	93.8%

REMSAD stats: SEN.021 / EGB181

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.233	3.339	2.730
Average Preds (paired) [ug/m3]:	5.398	4.075	4.057
Average Preds (all) [ug/m3]:	5.398	4.075	4.057
Ratio of Means (paired):	1.670	1.220	1.486
Std. Dev. Obs [ug/m3]:	1.455	2.474	1.337
Std. Dev. Preds (paired) [ug/m3]:	2.802	1.739	1.822
Std. Dev. Preds (all) [ug/m3]:	2.802	1.739	1.822
Coef of Variation Obs:	0.450	0.741	0.490
Coef of Variation Preds (paired):	0.519	0.427	0.449
Coef of Variation Preds (all):	0.519	0.427	0.449
R:	0.917	0.882	0.910
R^2:	0.841	0.779	0.827
Slope:	1.766	0.620	1.239
Intercept [ug/m3]:	-0.311	2.003	0.675
RMS Error [ug/m3]:	2.680	1.447	1.561
RMSE / Avrg. Ob:	0.829	0.433	0.572
Normalized Gross Error [%]:	0.684	0.603	0.542
Fractional Gross Error:	0.488	0.423	0.415
Normalized Bias [%]:	0.660	0.522	0.535
Fractional Bias:	0.461	0.333	0.408
Model Index:	0.689	0.884	0.792
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / ESP127

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.231	7.072	3.973
Average Preds (paired) [ug/m3]:	15.872	7.767	10.525
Average Preds (all) [ug/m3]:	15.872	7.767	10.525
Ratio of Means (paired):	4.913	1.098	2.649
Std. Dev. Obs [ug/m3]:	1.060	3.194	1.196
Std. Dev. Preds (paired) [ug/m3]:	2.609	2.487	1.784
Std. Dev. Preds (all) [ug/m3]:	2.609	2.487	1.784
Coef of Variation Obs:	0.328	0.452	0.301
Coef of Variation Preds (paired):	0.164	0.320	0.169
Coef of Variation Preds (all):	0.164	0.320	0.169
R:	0.192	0.673	0.509
R^2:	0.037	0.452	0.259
Slope:	0.472	0.524	0.760
Intercept [ug/m3]:	14.347	4.063	7.507
RMS Error [ug/m3]:	12.910	2.487	6.736
RMSE / Avrg. Ob:	3.996	0.352	1.695
Normalized Gross Error [%]:	4.537	0.346	1.873
Fractional Gross Error:	1.327	0.281	0.917
Normalized Bias [%]:	4.537	0.229	1.873
Fractional Bias:	1.327	0.149	0.917
Model Index:	0.118	0.784	0.263
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / EVE419

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.322	2.455	1.479
Average Preds (paired) [ug/m3]:	3.355	0.965	1.999
Average Preds (all) [ug/m3]:	3.355	0.965	1.999
Ratio of Means (paired):	2.537	0.393	1.351
Std. Dev. Obs [ug/m3]:	0.421	1.153	0.500
Std. Dev. Preds (paired) [ug/m3]:	1.498	0.937	1.022
Std. Dev. Preds (all) [ug/m3]:	1.498	0.937	1.022
Coef of Variation Obs:	0.318	0.470	0.338
Coef of Variation Preds (paired):	0.447	0.971	0.511
Coef of Variation Preds (all):	0.447	0.971	0.511
R:	0.507	0.805	0.658
R^2:	0.257	0.649	0.433
Slope:	1.805	0.654	1.344
Intercept [ug/m3]:	0.967	-0.641	0.010
RMS Error [ug/m3]:	2.431	1.639	0.944
RMSE / Avrg. Ob:	1.839	0.668	0.638
Normalized Gross Error [%]:	1.447	0.653	0.456
Fractional Gross Error:	0.813	1.031	0.370
Normalized Bias [%]:	1.447	-0.653	0.335
Fractional Bias:	0.813	-1.031	0.230
Model Index:	0.267	0.615	0.640
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / GAS153

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.101	8.082	5.245
Average Preds (paired) [ug/m3]:	13.875	7.588	9.467
Average Preds (all) [ug/m3]:	13.875	7.588	9.467
Ratio of Means (paired):	2.720	0.939	1.805
Std. Dev. Obs [ug/m3]:	1.751	3.301	1.476
Std. Dev. Preds (paired) [ug/m3]:	3.847	2.541	2.428
Std. Dev. Preds (all) [ug/m3]:	3.847	2.541	2.428
Coef of Variation Obs:	0.343	0.409	0.281
Coef of Variation Preds (paired):	0.277	0.335	0.256
Coef of Variation Preds (all):	0.277	0.335	0.256
R:	0.435	0.646	0.754
R^2:	0.189	0.417	0.568
Slope:	0.955	0.497	1.240
Intercept [ug/m3]:	9.002	3.572	2.964
RMS Error [ug/m3]:	9.433	2.602	4.527
RMSE / Avrg. Ob:	1.849	0.322	0.863
Normalized Gross Error [%]:	1.978	0.316	0.854
Fractional Gross Error:	0.929	0.294	0.575
Normalized Bias [%]:	1.978	0.040	0.854
Fractional Bias:	0.929	-0.025	0.575
Model Index:	0.227	0.768	0.426
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / GLR468

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.475	0.719	0.477
Average Preds (paired) [ug/m3]:	0.402	0.285	0.296
Average Preds (all) [ug/m3]:	0.402	0.285	0.296
Ratio of Means (paired):	0.848	0.396	0.621
Std. Dev. Obs [ug/m3]:	0.097	0.176	0.070
Std. Dev. Preds (paired) [ug/m3]:	0.008	0.005	0.006
Std. Dev. Preds (all) [ug/m3]:	0.008	0.005	0.006
Coef of Variation Obs:	0.205	0.244	0.146
Coef of Variation Preds (paired):	0.019	0.019	0.019
Coef of Variation Preds (all):	0.019	0.019	0.019
R:	0.382	-0.415	-0.082
R^2:	0.146	0.172	0.007
Slope:	0.030	-0.013	-0.007
Intercept [ug/m3]:	0.388	0.294	0.299
RMS Error [ug/m3]:	0.119	0.469	0.194
RMSE / Avrg. Ob:	0.251	0.652	0.407
Normalized Gross Error [%]:	0.598	0.718	0.704
Fractional Gross Error:	0.224	0.832	0.455
Normalized Bias [%]:	-0.598	-0.718	-0.704
Fractional Bias:	-0.140	-0.832	-0.455
Model Index:	0.479	0.353	0.356
Obs Data Complete [%]:	100.0%	100.0%	100.0%

GRB411

REMSAD stats: SEN.021 / GRB411

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.312	0.814	0.427
Average Preds (paired) [ug/m3]:	0.480	0.673	0.465
Average Preds (all) [ug/m3]:	0.480	0.673	0.465
Ratio of Means (paired):	1.540	0.827	1.087
Std. Dev. Obs [ug/m3]:	0.078	0.237	0.098
Std. Dev. Preds (paired) [ug/m3]:	0.145	0.216	0.120
Std. Dev. Preds (all) [ug/m3]:	0.145	0.216	0.120
Coef of Variation Obs:	0.249	0.291	0.230
Coef of Variation Preds (paired):	0.303	0.320	0.258
Coef of Variation Preds (all):	0.303	0.320	0.258
R:	-0.282	0.678	0.238
R^2:	0.079	0.460	0.056
Slope:	-0.527	0.617	0.290
Intercept [ug/m3]:	0.645	0.171	0.341
RMS Error [ug/m3]:	0.249	0.230	0.141
RMSE / Avrg. Ob:	0.797	0.283	0.330
Normalized Gross Error [%]:	0.520	0.361	0.535
Fractional Gross Error:	0.438	0.259	0.249
Normalized Bias [%]:	-0.520	-0.355	-0.535
Fractional Bias:	0.385	-0.186	0.075
Model Index:	0.206	0.762	0.516
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / GRC474

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.388	1.072	0.551
Average Preds (paired) [ug/m3]:	0.752	1.014	0.714
Average Preds (all) [ug/m3]:	0.752	1.014	0.714
Ratio of Means (paired):	1.938	0.946	1.295
Std. Dev. Obs [ug/m3]:	0.174	0.270	0.096
Std. Dev. Preds (paired) [ug/m3]:	0.358	0.379	0.267
Std. Dev. Preds (all) [ug/m3]:	0.358	0.379	0.267
Coef of Variation Obs:	0.447	0.252	0.174
Coef of Variation Preds (paired):	0.476	0.374	0.374
Coef of Variation Preds (all):	0.476	0.374	0.374
R:	0.482	0.201	0.181
R^2:	0.233	0.040	0.033
Slope:	0.995	0.282	0.502
Intercept [ug/m3]:	0.366	0.711	0.437
RMS Error [ug/m3]:	0.481	0.423	0.312
RMSE / Avrg. Ob:	1.239	0.394	0.566
Normalized Gross Error [%]:	0.396	0.270	0.335
Fractional Gross Error:	0.591	0.305	0.374
Normalized Bias [%]:	-0.248	-0.108	-0.286
Fractional Bias:	0.591	-0.075	0.201
Model Index:	0.460	0.521	0.312
Obs Data Complete [%]:	100.0%	100.0%	100.0%

GRS420

REMSAD stats: SEN.021 / GRS420

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	6.576	8.591	6.152
Average Preds (paired) [ug/m3]:	11.968	7.250	8.401
Average Preds (all) [ug/m3]:	11.968	7.250	8.401
Ratio of Means (paired):	1.820	0.844	1.366
Std. Dev. Obs [ug/m3]:	3.519	3.555	2.519
Std. Dev. Preds (paired) [ug/m3]:	2.937	2.222	1.965
Std. Dev. Preds (all) [ug/m3]:	2.937	2.222	1.965
Coef of Variation Obs:	0.535	0.414	0.409
Coef of Variation Preds (paired):	0.245	0.306	0.234
Coef of Variation Preds (all):	0.245	0.306	0.234
R:	0.691	0.859	0.786
R^2:	0.478	0.738	0.617
Slope:	0.577	0.537	0.613
Intercept [ug/m3]:	8.173	2.637	4.631
RMS Error [ug/m3]:	5.983	2.409	2.736
RMSE / Avrg. Ob:	0.910	0.280	0.445
Normalized Gross Error [%]:	1.349	0.250	0.527
Fractional Gross Error:	0.672	0.251	0.384
Normalized Bias [%]:	1.349	-0.061	0.506
Fractional Bias:	0.672	-0.110	0.362
Model Index:	0.549	0.826	0.714
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / GTH161

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.232	0.690	0.346
Average Preds (paired) [ug/m3]:	0.677	0.679	0.565
Average Preds (all) [ug/m3]:	0.677	0.679	0.565
Ratio of Means (paired):	2.918	0.984	1.633
Std. Dev. Obs [ug/m3]:	0.121	0.182	0.049
Std. Dev. Preds (paired) [ug/m3]:	0.174	0.252	0.151
Std. Dev. Preds (all) [ug/m3]:	0.174	0.252	0.151
Coef of Variation Obs:	0.522	0.264	0.141
Coef of Variation Preds (paired):	0.257	0.371	0.268
Coef of Variation Preds (all):	0.257	0.371	0.268
R:	-0.409	0.412	0.235
R^2:	0.167	0.170	0.055
Slope:	-0.587	0.570	0.728
Intercept [ug/m3]:	0.814	0.286	0.313
RMS Error [ug/m3]:	0.511	0.243	0.264
RMSE / Avrg. Ob:	2.199	0.352	0.763
Normalized Gross Error [%]:	0.323	0.351	0.435
Fractional Gross Error:	0.967	0.270	0.456
Normalized Bias [%]:	-0.323	-0.321	-0.435
Fractional Bias:	0.967	-0.053	0.445
Model Index:	0.222	0.655	0.232
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / JOT403

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.913	1.799	1.056
Average Preds (paired) [ug/m3]:	1.927	1.027	1.306
Average Preds (all) [ug/m3]:	1.927	1.027	1.306
Ratio of Means (paired):	2.110	0.571	1.236
Std. Dev. Obs [ug/m3]:	0.292	0.663	0.318
Std. Dev. Preds (paired) [ug/m3]:	0.304	0.137	0.163
Std. Dev. Preds (all) [ug/m3]:	0.304	0.137	0.163
Coef of Variation Obs:	0.320	0.369	0.301
Coef of Variation Preds (paired):	0.158	0.134	0.125
Coef of Variation Preds (all):	0.158	0.134	0.125
R:	0.498	0.447	0.462
R^2:	0.248	0.200	0.214
Slope:	0.518	0.093	0.237
Intercept [ug/m3]:	1.454	0.861	1.055
RMS Error [ug/m3]:	1.057	0.986	0.377
RMSE / Avrg. Ob:	1.157	0.548	0.357
Normalized Gross Error [%]:	0.781	0.380	0.173
Fractional Gross Error:	0.734	0.517	0.287
Normalized Bias [%]:	0.781	-0.362	0.135
Fractional Bias:	0.734	-0.471	0.245
Model Index:	0.364	0.489	0.592
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / KEF112

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	6.812	5.154	5.124
Average Preds (paired) [ug/m3]:	15.394	6.464	9.852
Average Preds (all) [ug/m3]:	15.394	6.464	9.852
Ratio of Means (paired):	2.260	1.254	1.923
Std. Dev. Obs [ug/m3]:	3.167	3.323	1.878
Std. Dev. Preds (paired) [ug/m3]:	4.242	2.652	2.508
Std. Dev. Preds (all) [ug/m3]:	4.242	2.652	2.508
Coef of Variation Obs:	0.465	0.645	0.367
Coef of Variation Preds (paired):	0.276	0.410	0.255
Coef of Variation Preds (all):	0.276	0.410	0.255
R:	0.825	0.903	0.853
R^2:	0.681	0.815	0.727
Slope:	1.105	0.720	1.139
Intercept [ug/m3]:	7.866	2.751	4.018
RMS Error [ug/m3]:	8.917	1.971	4.913
RMSE / Avrg. Ob:	1.309	0.382	0.959
Normalized Gross Error [%]:	1.549	0.438	1.074
Fractional Gross Error:	0.819	0.343	0.662
Normalized Bias [%]:	1.549	0.400	1.074
Fractional Bias:	0.819	0.302	0.662
Model Index:	0.473	0.895	0.509
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / LRL117

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	9.467	6.872	7.160
Average Preds (paired) [ug/m3]:	22.550	8.283	14.120
Average Preds (all) [ug/m3]:	21.759	8.283	13.641
Ratio of Means (paired):	2.382	1.205	1.972
Std. Dev. Obs [ug/m3]:	2.480	3.998	1.997
Std. Dev. Preds (paired) [ug/m3]:	4.999	4.036	3.309
Std. Dev. Preds (all) [ug/m3]:	5.728	4.036	3.702
Coef of Variation Obs:	0.262	0.582	0.279
Coef of Variation Preds (paired):	0.222	0.487	0.234
Coef of Variation Preds (all):	0.263	0.487	0.271
R:	0.339	0.922	0.590
R^2:	0.115	0.850	0.348
Slope:	0.683	0.931	0.978
Intercept [ug/m3]:	16.086	1.885	7.119
RMS Error [ug/m3]:	13.925	2.123	7.455
RMSE / Avrg. Ob:	1.471	0.309	1.041
Normalized Gross Error [%]:	1.506	0.450	1.049
Fractional Gross Error:	0.815	0.282	0.657
Normalized Bias [%]:	1.506	0.429	1.049
Fractional Bias:	0.815	0.259	0.657
Model Index:	0.251	0.930	0.379
Obs Data Complete [%]:	93.8%	100.0%	93.8%

REMSAD stats: SEN.021 / LYK123

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.501	4.881	4.607
Average Preds (paired) [ug/m3]:	17.292	6.678	11.151
Average Preds (all) [ug/m3]:	17.148	6.626	10.783
Ratio of Means (paired):	3.144	1.368	2.420
Std. Dev. Obs [ug/m3]:	3.735	2.877	2.310
Std. Dev. Preds (paired) [ug/m3]:	5.743	2.713	3.376
Std. Dev. Preds (all) [ug/m3]:	5.589	2.634	3.307
Coef of Variation Obs:	0.679	0.589	0.501
Coef of Variation Preds (paired):	0.332	0.406	0.303
Coef of Variation Preds (all):	0.326	0.398	0.307
R:	0.959	0.944	0.974
R^2:	0.920	0.891	0.949
Slope:	1.475	0.890	1.424
Intercept [ug/m3]:	9.180	2.333	4.591
RMS Error [ug/m3]:	12.034	2.032	6.660
RMSE / Avrg. Ob:	2.188	0.416	1.445
Normalized Gross Error [%]:	2.727	0.535	1.599
Fractional Gross Error:	1.097	0.422	0.869
Normalized Bias [%]:	2.727	0.533	1.599
Fractional Bias:	1.097	0.420	0.869
Model Index:	0.462	0.882	0.499
Obs Data Complete [%]:	93.8%	93.8%	87.5%

REMSAD stats: SEN.021 / MCK131

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	7.007	6.781	5.764
Average Preds (paired) [ug/m3]:	19.646	7.984	12.484
Average Preds (all) [ug/m3]:	19.646	7.984	12.484
Ratio of Means (paired):	2.804	1.177	2.166
Std. Dev. Obs [ug/m3]:	1.774	2.645	1.077
Std. Dev. Preds (paired) [ug/m3]:	3.945	2.519	2.327
Std. Dev. Preds (all) [ug/m3]:	3.945	2.519	2.327
Coef of Variation Obs:	0.253	0.390	0.187
Coef of Variation Preds (paired):	0.201	0.315	0.186
Coef of Variation Preds (all):	0.201	0.315	0.186
R:	0.450	0.744	0.722
R^2:	0.203	0.554	0.521
Slope:	1.001	0.709	1.560
Intercept [ug/m3]:	12.632	3.175	3.493
RMS Error [ug/m3]:	13.121	2.206	6.937
RMSE / Avrg. Ob:	1.872	0.325	1.203
Normalized Gross Error [%]:	1.897	0.306	1.179
Fractional Gross Error:	0.947	0.248	0.733
Normalized Bias [%]:	1.897	0.254	1.179
Fractional Bias:	0.947	0.192	0.733
Model Index:	0.182	0.812	0.235
Obs Data Complete [%]:	100.0%	100.0%	100.0%

MEV405

REMSAD stats: SEN.021 / MEV405

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.100	1.089	0.913
Average Preds (paired) [ug/m3]:	4.063	1.398	2.498
Average Preds (all) [ug/m3]:	4.063	1.398	2.498
Ratio of Means (paired):	3.693	1.285	2.736
Std. Dev. Obs [ug/m3]:	0.566	0.286	0.314
Std. Dev. Preds (paired) [ug/m3]:	1.491	0.445	0.852
Std. Dev. Preds (all) [ug/m3]:	1.491	0.445	0.852
Coef of Variation Obs:	0.514	0.263	0.344
Coef of Variation Preds (paired):	0.367	0.318	0.341
Coef of Variation Preds (all):	0.367	0.318	0.341
R:	-0.100	0.559	0.020
R^2:	0.010	0.313	0.000
Slope:	-0.265	0.871	0.054
Intercept [ug/m3]:	4.354	0.451	2.448
RMS Error [ug/m3]:	3.390	0.483	1.824
RMSE / Avrg. Ob:	3.081	0.444	1.998
Normalized Gross Error [%]:	2.503	0.313	1.350
Fractional Gross Error:	1.117	0.289	0.892
Normalized Bias [%]:	2.503	0.212	1.350
Fractional Bias:	1.117	0.220	0.892
Model Index:	0.175	0.604	0.182
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / MKG113

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	8.840	5.517	6.259
Average Preds (paired) [ug/m3]:	19.098	7.001	11.883
Average Preds (all) [ug/m3]:	19.098	7.001	11.883
Ratio of Means (paired):	2.160	1.269	1.898
Std. Dev. Obs [ug/m3]:	3.213	3.091	1.826
Std. Dev. Preds (paired) [ug/m3]:	5.741	3.582	3.497
Std. Dev. Preds (all) [ug/m3]:	5.741	3.582	3.497
Coef of Variation Obs:	0.364	0.560	0.292
Coef of Variation Preds (paired):	0.301	0.512	0.294
Coef of Variation Preds (all):	0.301	0.512	0.294
R:	0.546	0.959	0.721
R^2:	0.298	0.919	0.520
Slope:	0.976	1.111	1.381
Intercept [ug/m3]:	10.472	0.871	3.242
RMS Error [ug/m3]:	11.330	1.831	6.163
RMSE / Avrg. Ob:	1.282	0.332	0.985
Normalized Gross Error [%]:	1.298	0.328	0.951
Fractional Gross Error:	0.738	0.261	0.619
Normalized Bias [%]:	1.298	0.325	0.951
Fractional Bias:	0.738	0.258	0.619
Model Index:	0.382	0.928	0.436
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / OXF122

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	8.100	5.752	5.967
Average Preds (paired) [ug/m3]:	23.862	7.543	14.445
Average Preds (all) [ug/m3]:	23.862	7.543	14.445
Ratio of Means (paired):	2.946	1.311	2.421
Std. Dev. Obs [ug/m3]:	3.588	2.731	1.878
Std. Dev. Preds (paired) [ug/m3]:	8.479	3.321	4.983
Std. Dev. Preds (all) [ug/m3]:	8.479	3.321	4.983
Coef of Variation Obs:	0.443	0.475	0.315
Coef of Variation Preds (paired):	0.355	0.440	0.345
Coef of Variation Preds (all):	0.355	0.440	0.345
R:	0.689	0.800	0.789
R^2:	0.475	0.640	0.623
Slope:	1.628	0.973	2.095
Intercept [ug/m3]:	10.674	1.949	1.944
RMS Error [ug/m3]:	17.067	2.680	9.244
RMSE / Avrg. Ob:	2.107	0.466	1.549
Normalized Gross Error [%]:	2.263	0.400	1.468
Fractional Gross Error:	1.007	0.322	0.826
Normalized Bias [%]:	2.263	0.366	1.468
Fractional Bias:	1.007	0.282	0.826
Model Index:	0.342	0.808	0.353
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / PAR107

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.318	7.102	5.026
Average Preds (paired) [ug/m3]:	18.121	7.640	11.607
Average Preds (all) [ug/m3]:	18.121	7.640	11.607
Ratio of Means (paired):	3.407	1.076	2.309
Std. Dev. Obs [ug/m3]:	0.977	3.324	1.230
Std. Dev. Preds (paired) [ug/m3]:	3.369	3.039	2.339
Std. Dev. Preds (all) [ug/m3]:	3.369	3.039	2.339
Coef of Variation Obs:	0.184	0.468	0.245
Coef of Variation Preds (paired):	0.186	0.398	0.202
Coef of Variation Preds (all):	0.186	0.398	0.202
R:	0.224	0.923	0.788
R^2:	0.050	0.851	0.620
Slope:	0.773	0.843	1.498
Intercept [ug/m3]:	14.011	1.651	4.077
RMS Error [ug/m3]:	13.219	1.391	6.765
RMSE / Avrg. Ob:	2.486	0.196	1.346
Normalized Gross Error [%]:	2.498	0.208	1.364
Fractional Gross Error:	1.078	0.178	0.792
Normalized Bias [%]:	2.498	0.144	1.364
Fractional Bias:	1.078	0.110	0.792
Model Index:	0.113	0.951	0.291
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / PED108

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.341	6.973	3.995
Average Preds (paired) [ug/m3]:	14.933	7.900	10.100
Average Preds (all) [ug/m3]:	14.933	7.900	10.100
Ratio of Means (paired):	4.470	1.133	2.528
Std. Dev. Obs [ug/m3]:	0.825	3.593	1.358
Std. Dev. Preds (paired) [ug/m3]:	2.888	3.349	2.105
Std. Dev. Preds (all) [ug/m3]:	2.888	3.349	2.105
Coef of Variation Obs:	0.247	0.515	0.340
Coef of Variation Preds (paired):	0.193	0.424	0.208
Coef of Variation Preds (all):	0.193	0.424	0.208
R:	0.427	0.908	0.753
R^2:	0.182	0.824	0.567
Slope:	1.495	0.846	1.167
Intercept [ug/m3]:	9.938	2.000	5.440
RMS Error [ug/m3]:	11.890	1.772	6.264
RMSE / Avrg. Ob:	3.559	0.254	1.568
Normalized Gross Error [%]:	3.670	0.263	1.676
Fractional Gross Error:	1.267	0.221	0.886
Normalized Bias [%]:	3.670	0.210	1.676
Fractional Bias:	1.267	0.164	0.886
Model Index:	0.106	0.934	0.322
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / PND165

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.519	0.737	0.505
Average Preds (paired) [ug/m3]:	1.246	0.719	0.863
Average Preds (all) [ug/m3]:	1.246	0.719	0.863
Ratio of Means (paired):	2.403	0.975	1.709
Std. Dev. Obs [ug/m3]:	0.177	0.232	0.124
Std. Dev. Preds (paired) [ug/m3]:	0.414	0.291	0.295
Std. Dev. Preds (all) [ug/m3]:	0.414	0.291	0.295
Coef of Variation Obs:	0.341	0.315	0.246
Coef of Variation Preds (paired):	0.332	0.405	0.342
Coef of Variation Preds (all):	0.332	0.405	0.342
R:	0.165	0.711	0.579
R^2:	0.027	0.505	0.335
Slope:	0.387	0.893	1.374
Intercept [ug/m3]:	1.046	0.061	0.169
RMS Error [ug/m3]:	0.841	0.207	0.434
RMSE / Avrg. Ob:	1.623	0.281	0.859
Normalized Gross Error [%]:	0.398	0.324	0.268
Fractional Gross Error:	0.794	0.192	0.496
Normalized Bias [%]:	0.246	-0.299	-0.137
Fractional Bias:	0.794	-0.061	0.486
Model Index:	0.221	0.835	0.397
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / PNF126

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.089	8.016	4.217
Average Preds (paired) [ug/m3]:	14.379	7.529	9.699
Average Preds (all) [ug/m3]:	14.379	7.529	9.699
Ratio of Means (paired):	4.654	0.939	2.300
Std. Dev. Obs [ug/m3]:	1.152	3.915	1.448
Std. Dev. Preds (paired) [ug/m3]:	3.349	2.538	2.148
Std. Dev. Preds (all) [ug/m3]:	3.349	2.538	2.148
Coef of Variation Obs:	0.373	0.488	0.343
Coef of Variation Preds (paired):	0.233	0.337	0.221
Coef of Variation Preds (all):	0.233	0.337	0.221
R:	0.698	0.798	0.883
R^2:	0.487	0.637	0.780
Slope:	2.028	0.518	1.310
Intercept [ug/m3]:	8.112	3.380	4.175
RMS Error [ug/m3]:	11.602	2.478	5.592
RMSE / Avrg. Ob:	3.755	0.309	1.326
Normalized Gross Error [%]:	4.235	0.294	1.447
Fractional Gross Error:	1.306	0.271	0.815
Normalized Bias [%]:	4.235	0.082	1.447
Fractional Bias:	1.306	0.024	0.815
Model Index:	0.172	0.841	0.374
Obs Data Complete [%]:	100.0%	100.0%	100.0%

PRK134

REMSAD stats: SEN.021 / PRK134

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.993	2.288	1.260
Average Preds (paired) [ug/m3]:	2.988	3.065	2.516
Average Preds (all) [ug/m3]:	2.988	3.065	2.516
Ratio of Means (paired):	3.008	1.339	1.997
Std. Dev. Obs [ug/m3]:	0.637	2.350	1.034
Std. Dev. Preds (paired) [ug/m3]:	1.967	1.944	1.595
Std. Dev. Preds (all) [ug/m3]:	1.967	1.944	1.595
Coef of Variation Obs:	0.641	1.027	0.821
Coef of Variation Preds (paired):	0.658	0.634	0.634
Coef of Variation Preds (all):	0.658	0.634	0.634
R:	0.916	0.979	0.974
R^2:	0.839	0.958	0.949
Slope:	2.830	0.810	1.502
Intercept [ug/m3]:	0.177	1.212	0.624
RMS Error [ug/m3]:	2.441	0.981	1.407
RMSE / Avrg. Ob:	2.457	0.429	1.117
Normalized Gross Error [%]:	1.333	0.605	0.773
Fractional Gross Error:	0.970	0.487	0.717
Normalized Bias [%]:	1.333	0.593	0.773
Fractional Bias:	0.970	0.474	0.717
Model Index:	0.479	0.950	0.777
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / PSU106

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	6.897	6.203	5.516
Average Preds (paired) [ug/m3]:	16.653	7.363	10.781
Average Preds (all) [ug/m3]:	16.653	7.363	10.781
Ratio of Means (paired):	2.415	1.187	1.954
Std. Dev. Obs [ug/m3]:	2.098	3.637	1.888
Std. Dev. Preds (paired) [ug/m3]:	4.794	3.181	2.946
Std. Dev. Preds (all) [ug/m3]:	4.794	3.181	2.946
Coef of Variation Obs:	0.304	0.586	0.342
Coef of Variation Preds (paired):	0.288	0.432	0.273
Coef of Variation Preds (all):	0.288	0.432	0.273
R:	0.826	0.898	0.825
R^2:	0.683	0.806	0.680
Slope:	1.888	0.785	1.287
Intercept [ug/m3]:	3.632	2.493	3.682
RMS Error [ug/m3]:	10.293	1.981	5.548
RMSE / Avrg. Ob:	1.492	0.319	1.006
Normalized Gross Error [%]:	1.465	0.308	1.021
Fractional Gross Error:	0.824	0.241	0.652
Normalized Bias [%]:	1.465	0.280	1.021
Fractional Bias:	0.824	0.213	0.652
Model Index:	0.347	0.917	0.481
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / QAK172

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	16.981	7.149	10.874
Average Preds (paired) [ug/m3]:	24.282	8.080	14.834
Average Preds (all) [ug/m3]:	24.282	8.080	14.834
Ratio of Means (paired):	1.430	1.130	1.364
Std. Dev. Obs [ug/m3]:	5.182	3.516	3.192
Std. Dev. Preds (paired) [ug/m3]:	6.160	3.224	3.398
Std. Dev. Preds (all) [ug/m3]:	6.160	3.224	3.398
Coef of Variation Obs:	0.305	0.492	0.294
Coef of Variation Preds (paired):	0.254	0.399	0.229
Coef of Variation Preds (all):	0.254	0.399	0.229
R:	0.803	0.919	0.811
R^2:	0.645	0.844	0.658
Slope:	0.955	0.843	0.863
Intercept [ug/m3]:	8.071	2.057	5.447
RMS Error [ug/m3]:	8.175	1.671	4.452
RMSE / Avrg. Ob:	0.481	0.234	0.409
Normalized Gross Error [%]:	0.489	0.235	0.415
Fractional Gross Error:	0.369	0.203	0.324
Normalized Bias [%]:	0.489	0.180	0.415
Fractional Bias:	0.369	0.145	0.324
Model Index:	0.651	0.937	0.698
Obs Data Complete [%]:	100.0%	100.0%	100.0%

ROM406

REMSAD stats: SEN.021 / ROM406

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.565	0.970	0.606
Average Preds (paired) [ug/m3]:	1.622	0.932	1.121
Average Preds (all) [ug/m3]:	1.622	0.932	1.121
Ratio of Means (paired):	2.872	0.961	1.852
Std. Dev. Obs [ug/m3]:	0.208	0.266	0.117
Std. Dev. Preds (paired) [ug/m3]:	0.320	0.353	0.264
Std. Dev. Preds (all) [ug/m3]:	0.320	0.353	0.264
Coef of Variation Obs:	0.369	0.274	0.193
Coef of Variation Preds (paired):	0.197	0.379	0.236
Coef of Variation Preds (all):	0.197	0.379	0.236
R:	-0.047	0.472	0.276
R^2:	0.002	0.223	0.076
Slope:	-0.072	0.627	0.623
Intercept [ug/m3]:	1.662	0.324	0.744
RMS Error [ug/m3]:	1.127	0.329	0.577
RMSE / Avrg. Ob:	1.995	0.339	0.952
Normalized Gross Error [%]:	0.632	0.325	0.248
Fractional Gross Error:	0.966	0.282	0.575
Normalized Bias [%]:	0.622	-0.144	0.121
Fractional Bias:	0.966	-0.075	0.575
Model Index:	0.226	0.679	0.245
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / SAL133

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.498	4.861	4.369
Average Preds (paired) [ug/m3]:	13.295	6.326	8.756
Average Preds (all) [ug/m3]:	13.295	6.326	8.756
Ratio of Means (paired):	2.418	1.301	2.004
Std. Dev. Obs [ug/m3]:	1.442	3.232	1.278
Std. Dev. Preds (paired) [ug/m3]:	3.777	3.444	2.823
Std. Dev. Preds (all) [ug/m3]:	3.777	3.444	2.823
Coef of Variation Obs:	0.262	0.665	0.293
Coef of Variation Preds (paired):	0.284	0.544	0.322
Coef of Variation Preds (all):	0.284	0.544	0.322
R:	0.419	0.817	0.785
R^2:	0.175	0.667	0.616
Slope:	1.096	0.870	1.733
Intercept [ug/m3]:	7.267	2.097	1.184
RMS Error [ug/m3]:	8.519	2.505	4.815
RMSE / Avrg. Ob:	1.550	0.515	1.102
Normalized Gross Error [%]:	1.524	0.608	1.037
Fractional Gross Error:	0.816	0.333	0.657
Normalized Bias [%]:	1.524	0.588	1.037
Fractional Bias:	0.816	0.311	0.657
Model Index:	0.253	0.859	0.434
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / SEK402

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.456	1.945	1.376
Average Preds (paired) [ug/m3]:	0.587	0.544	0.475
Average Preds (all) [ug/m3]:	0.587	0.544	0.475
Ratio of Means (paired):	0.403	0.280	0.345
Std. Dev. Obs [ug/m3]:	0.447	0.430	0.343
Std. Dev. Preds (paired) [ug/m3]:	0.072	0.104	0.058
Std. Dev. Preds (all) [ug/m3]:	0.072	0.104	0.058
Coef of Variation Obs:	0.307	0.221	0.249
Coef of Variation Preds (paired):	0.122	0.192	0.123
Coef of Variation Preds (all):	0.122	0.192	0.123
R:	0.125	-0.093	-0.083
R^2:	0.016	0.009	0.007
Slope:	0.020	-0.023	-0.014
Intercept [ug/m3]:	0.557	0.588	0.494
RMS Error [ug/m3]:	0.976	1.472	0.968
RMSE / Avrg. Ob:	0.670	0.757	0.703
Normalized Gross Error [%]:	0.574	0.702	0.645
Fractional Gross Error:	0.805	1.097	0.939
Normalized Bias [%]:	-0.574	-0.702	-0.645
Fractional Bias:	-0.805	-1.097	-0.939
Model Index:	0.370	0.315	0.323
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / SHN418

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	6.550	6.692	5.506
Average Preds (paired) [ug/m3]:	16.181	8.020	10.764
Average Preds (all) [ug/m3]:	16.181	8.020	10.764
Ratio of Means (paired):	2.470	1.198	1.955
Std. Dev. Obs [ug/m3]:	2.665	3.920	2.287
Std. Dev. Preds (paired) [ug/m3]:	3.806	3.042	2.565
Std. Dev. Preds (all) [ug/m3]:	3.806	3.042	2.565
Coef of Variation Obs:	0.407	0.586	0.415
Coef of Variation Preds (paired):	0.235	0.379	0.238
Coef of Variation Preds (all):	0.235	0.379	0.238
R:	0.545	0.860	0.665
R^2:	0.297	0.740	0.443
Slope:	0.778	0.667	0.746
Intercept [ug/m3]:	11.085	3.553	6.656
RMS Error [ug/m3]:	10.163	2.422	5.626
RMSE / Avrg. Ob:	1.552	0.362	1.022
Normalized Gross Error [%]:	1.783	0.775	1.322
Fractional Gross Error:	0.869	0.369	0.692
Normalized Bias [%]:	1.783	0.738	1.322
Fractional Bias:	0.869	0.331	0.692
Model Index:	0.364	0.877	0.472
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / SND152

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.736	8.699	5.768
Average Preds (paired) [ug/m3]:	17.097	8.124	11.256
Average Preds (all) [ug/m3]:	17.097	8.124	11.256
Ratio of Means (paired):	2.981	0.934	1.952
Std. Dev. Obs [ug/m3]:	2.021	3.270	1.500
Std. Dev. Preds (paired) [ug/m3]:	2.958	2.492	1.946
Std. Dev. Preds (all) [ug/m3]:	2.958	2.492	1.946
Coef of Variation Obs:	0.352	0.376	0.260
Coef of Variation Preds (paired):	0.173	0.307	0.173
Coef of Variation Preds (all):	0.173	0.307	0.173
R:	0.165	0.783	0.563
R^2:	0.027	0.612	0.317
Slope:	0.242	0.596	0.730
Intercept [ug/m3]:	15.709	2.937	7.045
RMS Error [ug/m3]:	11.829	2.116	5.734
RMSE / Avrg. Ob:	2.062	0.243	0.994
Normalized Gross Error [%]:	2.494	0.209	1.042
Fractional Gross Error:	1.004	0.204	0.654
Normalized Bias [%]:	2.494	0.009	1.042
Fractional Bias:	1.004	-0.028	0.654
Model Index:	0.214	0.862	0.353
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / SPD111

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.680	7.147	4.222
Average Preds (paired) [ug/m3]:	14.794	7.748	9.979
Average Preds (all) [ug/m3]:	14.794	7.748	9.979
Ratio of Means (paired):	4.020	1.084	2.363
Std. Dev. Obs [ug/m3]:	1.673	2.341	0.872
Std. Dev. Preds (paired) [ug/m3]:	2.070	2.453	1.564
Std. Dev. Preds (all) [ug/m3]:	2.070	2.453	1.564
Coef of Variation Obs:	0.454	0.328	0.207
Coef of Variation Preds (paired):	0.140	0.317	0.157
Coef of Variation Preds (all):	0.140	0.317	0.157
R:	-0.065	0.827	0.431
R^2:	0.004	0.684	0.186
Slope:	-0.080	0.866	0.772
Intercept [ug/m3]:	15.090	1.558	6.718
RMS Error [ug/m3]:	11.448	1.537	5.931
RMSE / Avrg. Ob:	3.111	0.215	1.405
Normalized Gross Error [%]:	3.930	0.216	1.432
Fractional Gross Error:	1.215	0.186	0.812
Normalized Bias [%]:	3.930	0.131	1.432
Fractional Bias:	1.215	0.093	0.812
Model Index:	0.166	0.893	0.219
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / STK138

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.124	3.753	2.813
Average Preds (paired) [ug/m3]:	7.470	4.595	5.267
Average Preds (all) [ug/m3]:	7.470	4.595	5.267
Ratio of Means (paired):	2.391	1.224	1.872
Std. Dev. Obs [ug/m3]:	1.883	3.142	1.858
Std. Dev. Preds (paired) [ug/m3]:	3.530	3.401	2.850
Std. Dev. Preds (all) [ug/m3]:	3.530	3.401	2.850
Coef of Variation Obs:	0.603	0.837	0.661
Coef of Variation Preds (paired):	0.473	0.740	0.541
Coef of Variation Preds (all):	0.473	0.740	0.541
R:	0.896	0.943	0.940
R^2:	0.802	0.890	0.884
Slope:	1.679	1.021	1.441
Intercept [ug/m3]:	2.224	0.763	1.212
RMS Error [ug/m3]:	4.794	1.409	2.764
RMSE / Avrg. Ob:	1.535	0.375	0.983
Normalized Gross Error [%]:	1.603	0.385	0.991
Fractional Gross Error:	0.841	0.319	0.636
Normalized Bias [%]:	1.603	0.334	0.991
Fractional Bias:	0.841	0.261	0.636
Model Index:	0.565	0.953	0.744
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / SUM156

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.409	4.678	2.264
Average Preds (paired) [ug/m3]:	7.348	4.819	5.280
Average Preds (all) [ug/m3]:	7.348	4.819	5.280
Ratio of Means (paired):	5.216	1.030	2.332
Std. Dev. Obs [ug/m3]:	0.637	1.770	0.802
Std. Dev. Preds (paired) [ug/m3]:	2.569	1.742	1.746
Std. Dev. Preds (all) [ug/m3]:	2.569	1.742	1.746
Coef of Variation Obs:	0.452	0.378	0.354
Coef of Variation Preds (paired):	0.350	0.361	0.331
Coef of Variation Preds (all):	0.350	0.361	0.331
R:	0.725	0.563	0.814
R^2:	0.525	0.317	0.663
Slope:	2.924	0.554	1.772
Intercept [ug/m3]:	3.228	2.228	1.268
RMS Error [ug/m3]:	6.317	1.648	3.242
RMSE / Avrg. Ob:	4.484	0.352	1.432
Normalized Gross Error [%]:	4.142	0.308	1.404
Fractional Gross Error:	1.358	0.277	0.803
Normalized Bias [%]:	4.142	0.111	1.404
Fractional Bias:	1.358	0.044	0.803
Model Index:	0.184	0.741	0.367
Obs Data Complete [%]:	100.0%	100.0%	100.0%

THR422

REMSAD stats: SEN.021 / THR422

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	1.239	1.389	1.082
Average Preds (paired) [ug/m3]:	1.035	1.173	0.909
Average Preds (all) [ug/m3]:	1.076	1.191	0.935
Ratio of Means (paired):	0.836	0.845	0.840
Std. Dev. Obs [ug/m3]:	0.636	0.956	0.619
Std. Dev. Preds (paired) [ug/m3]:	0.383	0.541	0.341
Std. Dev. Preds (all) [ug/m3]:	0.377	0.553	0.330
Coef of Variation Obs:	0.513	0.688	0.572
Coef of Variation Preds (paired):	0.370	0.461	0.375
Coef of Variation Preds (all):	0.350	0.464	0.353
R:	0.119	0.397	0.228
R^2:	0.014	0.158	0.052
Slope:	0.072	0.225	0.125
Intercept [ug/m3]:	0.946	0.861	0.773
RMS Error [ug/m3]:	0.731	0.918	0.658
RMSE / Avrg. Ob:	0.590	0.661	0.608
Normalized Gross Error [%]:	0.323	0.279	0.312
Fractional Gross Error:	0.404	0.280	0.347
Normalized Bias [%]:	-0.130	-0.118	-0.195
Fractional Bias:	-0.146	-0.109	-0.134
Model Index:	0.383	0.499	0.417
Obs Data Complete [%]:	75.0%	75.0%	75.0%

REMSAD stats: SEN.021 / UVL124

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	3.744	3.645	3.087
Average Preds (paired) [ug/m3]:	8.004	4.723	5.576
Average Preds (all) [ug/m3]:	8.004	4.723	5.576
Ratio of Means (paired):	2.138	1.296	1.807
Std. Dev. Obs [ug/m3]:	2.332	2.865	1.893
Std. Dev. Preds (paired) [ug/m3]:	3.795	2.294	2.474
Std. Dev. Preds (all) [ug/m3]:	3.795	2.294	2.474
Coef of Variation Obs:	0.623	0.786	0.613
Coef of Variation Preds (paired):	0.474	0.486	0.444
Coef of Variation Preds (all):	0.474	0.486	0.444
R:	0.904	0.932	0.940
R^2:	0.817	0.868	0.884
Slope:	1.471	0.746	1.229
Intercept [ug/m3]:	2.498	2.004	1.784
RMS Error [ug/m3]:	4.690	1.544	2.663
RMSE / Avrg. Ob:	1.253	0.424	0.863
Normalized Gross Error [%]:	1.299	0.568	0.958
Fractional Gross Error:	0.752	0.410	0.619
Normalized Bias [%]:	1.299	0.536	0.958
Fractional Bias:	0.752	0.376	0.619
Model Index:	0.634	0.916	0.740
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / VIN140

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	9.485	6.151	6.793
Average Preds (paired) [ug/m3]:	21.323	7.331	13.105
Average Preds (all) [ug/m3]:	21.067	7.269	12.956
Ratio of Means (paired):	2.248	1.192	1.929
Std. Dev. Obs [ug/m3]:	2.568	3.145	1.889
Std. Dev. Preds (paired) [ug/m3]:	4.415	3.597	3.054
Std. Dev. Preds (all) [ug/m3]:	4.389	3.491	3.012
Coef of Variation Obs:	0.271	0.511	0.278
Coef of Variation Preds (paired):	0.207	0.491	0.233
Coef of Variation Preds (all):	0.208	0.480	0.233
R:	0.665	0.946	0.828
R^2:	0.443	0.894	0.686
Slope:	1.144	1.082	1.339
Intercept [ug/m3]:	10.472	0.677	4.012
RMS Error [ug/m3]:	12.294	1.681	6.571
RMSE / Avrg. Ob:	1.296	0.273	0.967
Normalized Gross Error [%]:	1.304	0.285	0.958
Fractional Gross Error:	0.772	0.247	0.637
Normalized Bias [%]:	1.304	0.241	0.958
Fractional Bias:	0.772	0.197	0.637
Model Index:	0.277	0.939	0.410
Obs Data Complete [%]:	93.8%	93.8%	93.8%

REMSAD stats: SEN.021 / VOY413

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.377	0.999	0.521
Average Preds (paired) [ug/m3]:	0.556	0.631	0.488
Average Preds (all) [ug/m3]:	0.556	0.631	0.488
Ratio of Means (paired):	1.475	0.631	0.936
Std. Dev. Obs [ug/m3]:	0.157	0.700	0.288
Std. Dev. Preds (paired) [ug/m3]:	0.012	0.014	0.011
Std. Dev. Preds (all) [ug/m3]:	0.012	0.014	0.011
Coef of Variation Obs:	0.418	0.700	0.552
Coef of Variation Preds (paired):	0.022	0.022	0.022
Coef of Variation Preds (all):	0.022	0.022	0.022
R:	-0.018	-0.379	-0.313
R^2:	0.000	0.144	0.098
Slope:	-0.001	-0.008	-0.012
Intercept [ug/m3]:	0.556	0.638	0.494
RMS Error [ug/m3]:	0.239	0.796	0.293
RMSE / Avrg. Ob:	0.634	0.796	0.562
Normalized Gross Error [%]:	0.444	0.446	0.520
Fractional Gross Error:	0.497	0.429	0.395
Normalized Bias [%]:	-0.444	-0.446	-0.520
Fractional Bias:	0.449	-0.236	0.062
Model Index:	0.460	0.390	0.144
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / VPI120

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	7.296	7.587	6.336
Average Preds (paired) [ug/m3]:	15.273	7.578	10.243
Average Preds (all) [ug/m3]:	15.586	7.578	10.319
Ratio of Means (paired):	2.093	0.999	1.617
Std. Dev. Obs [ug/m3]:	1.610	3.658	1.651
Std. Dev. Preds (paired) [ug/m3]:	3.144	2.759	2.160
Std. Dev. Preds (all) [ug/m3]:	3.278	2.759	2.112
Coef of Variation Obs:	0.221	0.482	0.261
Coef of Variation Preds (paired):	0.206	0.364	0.211
Coef of Variation Preds (all):	0.210	0.364	0.205
R:	0.474	0.845	0.769
R^2:	0.225	0.715	0.591
Slope:	0.926	0.638	1.006
Intercept [ug/m3]:	8.515	2.739	3.872
RMS Error [ug/m3]:	8.444	1.982	4.144
RMSE / Avrg. Ob:	1.157	0.261	0.654
Normalized Gross Error [%]:	1.160	0.424	0.671
Fractional Gross Error:	0.695	0.325	0.475
Normalized Bias [%]:	1.160	0.242	0.671
Fractional Bias:	0.695	0.118	0.475
Model Index:	0.278	0.900	0.493
Obs Data Complete [%]:	93.8%	100.0%	93.8%

REMSAD stats: SEN.021 / WSP144

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	5.706	4.612	4.485
Average Preds (paired) [ug/m3]:	16.377	6.375	10.278
Average Preds (all) [ug/m3]:	16.293	6.375	10.271
Ratio of Means (paired):	2.870	1.382	2.292
Std. Dev. Obs [ug/m3]:	2.476	2.654	1.824
Std. Dev. Preds (paired) [ug/m3]:	3.809	1.945	2.284
Std. Dev. Preds (all) [ug/m3]:	3.703	1.945	2.212
Coef of Variation Obs:	0.434	0.575	0.407
Coef of Variation Preds (paired):	0.233	0.305	0.222
Coef of Variation Preds (all):	0.227	0.305	0.215
R:	0.842	0.642	0.810
R^2:	0.709	0.412	0.656
Slope:	1.296	0.470	1.014
Intercept [ug/m3]:	8.981	4.205	5.729
RMS Error [ug/m3]:	10.891	2.703	5.946
RMSE / Avrg. Ob:	1.909	0.586	1.326
Normalized Gross Error [%]:	2.149	0.930	1.521
Fractional Gross Error:	1.002	0.438	0.821
Normalized Bias [%]:	2.149	0.903	1.521
Fractional Bias:	1.002	0.410	0.821
Model Index:	0.335	0.720	0.414
Obs Data Complete [%]:	93.8%	100.0%	93.8%

REMSAD stats: SEN.021 / YEL408

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.835	0.632	0.628
Average Preds (paired) [ug/m3]:	0.556	0.505	0.447
Average Preds (all) [ug/m3]:	0.556	0.505	0.447
Ratio of Means (paired):	0.667	0.799	0.711
Std. Dev. Obs [ug/m3]:	0.235	0.180	0.137
Std. Dev. Preds (paired) [ug/m3]:	0.222	0.162	0.157
Std. Dev. Preds (all) [ug/m3]:	0.222	0.162	0.157
Coef of Variation Obs:	0.281	0.285	0.217
Coef of Variation Preds (paired):	0.399	0.321	0.351
Coef of Variation Preds (all):	0.399	0.321	0.351
R:	-0.075	0.460	0.017
R^2:	0.006	0.211	0.000
Slope:	-0.071	0.415	0.020
Intercept [ug/m3]:	0.615	0.243	0.434
RMS Error [ug/m3]:	0.435	0.219	0.275
RMSE / Avrg. Ob:	0.522	0.346	0.437
Normalized Gross Error [%]:	0.476	0.500	0.553
Fractional Gross Error:	0.519	0.324	0.439
Normalized Bias [%]:	-0.459	-0.500	-0.553
Fractional Bias:	-0.416	-0.235	-0.359
Model Index:	0.365	0.614	0.404
Obs Data Complete [%]:	100.0%	100.0%	100.0%

REMSAD stats: SEN.021 / YOS404

	<u>SO2</u>	<u>SO4</u>	<u>TES</u>
Average Obs [ug/m3]:	0.941	1.442	0.951
Average Preds (paired) [ug/m3]:	0.529	0.491	0.428
Average Preds (all) [ug/m3]:	0.529	0.491	0.428
Ratio of Means (paired):	0.562	0.341	0.450
Std. Dev. Obs [ug/m3]:	0.300	0.312	0.227
Std. Dev. Preds (paired) [ug/m3]:	0.046	0.029	0.027
Std. Dev. Preds (all) [ug/m3]:	0.046	0.029	0.027
Coef of Variation Obs:	0.319	0.217	0.239
Coef of Variation Preds (paired):	0.086	0.059	0.063
Coef of Variation Preds (all):	0.086	0.059	0.063
R:	0.345	0.308	0.288
R^2:	0.119	0.095	0.083
Slope:	0.053	0.028	0.034
Intercept [ug/m3]:	0.480	0.450	0.396
RMS Error [ug/m3]:	0.502	0.998	0.568
RMSE / Avrg. Ob:	0.534	0.692	0.597
Normalized Gross Error [%]:	0.517	0.655	0.596
Fractional Gross Error:	0.507	0.952	0.723
Normalized Bias [%]:	-0.517	-0.655	-0.596
Fractional Bias:	-0.505	-0.952	-0.723
Model Index:	0.475	0.319	0.381
Obs Data Complete [%]:	100.0%	100.0%	100.0%