

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	7/15/2011	7/15/2011	7/15/2011
Start Time	8:08	11:15	14:04
Stop Time	9:39	12:46	16:12
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.735	0.743	0.738
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Static Pressure, P_s (Inches H_2O)	-16.5	-16.5	-16.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	323	326	325
Volume Metered, V_m (ft^3)	58.94	58.70	59.13
Meter Temperature, T_m ($^{\circ}F$)	102	99.5	105
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.45	1.46	1.47
Gas Meter Correction Factor, Y_d	1.0159	1.0159	1.0159
Carbon Dioxide (% dry)	12.3	12.4	12.2
Oxygen (% dry)	7.00	6.87	6.99
Weight of Water Collected, V_{wc} (g)	66.0	76.2	27.5
Silica Gel Net Weight, V_{wsg} (g)	10.0	9.2	13.1
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	91	91	91

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.35	28.35	28.35
Volume Metered Standard, $V_{m(std)}$ (ft^3)	55.73	55.78	55.60
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	3.58	4.03	1.91
Percent Moisture, B_{ws} (%)	6.04	6.73	3.33
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.25	30.26	30.23
Wet Molecular Weight, M_s (lbs/lb mole)	29.51	29.43	29.82
Gas Velocity, V_s (ft/sec)	51.1	51.8	51.1
Average Flowrate, Q_a (acfm)	558,439	566,026	558,857
Standard Flowrate, Q_{std} (scfm)	356,612	360,208	355,824
Dry Standard Flowrate, Q_{dstd} (dscfm)	335,201	336,090	344,118
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	97.7	97.6	95.0
Front-Half Particulate (g)	0.2054	0.0067	0.0188
Concentration (grains/dscf)	0.0569	0.00185	0.00523
Emission Rate, F_d (lb/mmBtu)	0.121	0.00389	0.0112
Emission Rate (lb/hr)	163	5.34	15.4
Condensible Particulate (g)	0.0399	0.0161	0.0606
Concentration (grains/dscf)	0.0110	0.00444	0.0168
Emission Rate, F_d (lb/mmBtu)	0.0234	0.00931	0.0359
Emission Rate (lb/hr)	31.7	12.8	49.6

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:31
Stop Time	12:09	15:43	18:31
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.671	0.671	0.671
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-16.5	-16.5	-16.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	326	322	319
Volume Metered, V_m (ft^3)	72.99	72.14	71.89
Meter Temperature, T_m ($^{\circ}F$)	98.6	99.9	96.0
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.16	1.16	1.16
Gas Meter Correction Factor, Y_d	0.9952	0.9952	0.9952
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	107.0	111.0	104.0
Silica Gel Net Weight, V_{wsg} (g)	24.0	16.0	23.0
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.30	28.30	28.30
Volume Metered Standard, $V_{m(std)}$ (ft^3)	67.89	66.94	67.18
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	6.18	5.99	5.99
Percent Moisture, B_{ws} (%)	8.34	8.21	8.18
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	29.22	29.24	29.27
Gas Velocity, V_s (ft/sec)	47.0	46.8	46.7
Average Flowrate, Q_a (acfm)	513,577	512,206	510,881
Standard Flowrate, Q_{std} (scfm)	326,185	326,770	327,319
Dry Standard Flowrate, Q_{dstd} (dscfm)	299,101	300,061	300,651
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Hydrogen Chloride (mg)	3.66	3.59	4.54
Concentration (lb/dscf)	1.19E-07	1.18E-07	1.49E-07
Concentration (ppmdv)	1.26	1.25	1.57
Emission Rate (lb/mmBtu)	0.00176	0.00173	0.00214
Emission Rate (lb/hr)	2.13	2.13	2.69
Hydrogen Fluoride (mg)	4.46	4.66	6.60
Concentration (lb/dscf)	1.45E-07	1.53E-07	2.17E-07
Concentration (ppmdv)	2.79	2.96	4.17
Emission Rate (lb/mmBtu)	0.00214	0.00225	0.00312
Emission Rate (lb/hr)	2.60	2.76	3.91

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:24	15:58	18:58
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.742	0.737	0.744
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-16.5	-16.5	-16.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	326	321	318
Volume Metered, V_m (ft^3)	83.21	82.99	82.93
Meter Temperature, T_m ($^{\circ}F$)	99.1	99.3	95.3
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.46	1.44	1.46
Gas Meter Correction Factor, Y_d	1.0159	1.0159	1.0159
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	196.7	190.2	188.4
Silica Gel Net Weight, V_{wsg} (g)	11.9	19.5	8.2
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	126	126	126

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.30	28.30	28.30
Volume Metered Standard, $V_{m(std)}$ (ft^3)	78.99	78.75	79.26
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	9.84	9.89	9.27
Percent Moisture, B_{ws} (%)	11.1	11.2	10.5
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	28.88	28.88	28.99
Gas Velocity, V_s (ft/sec)	52.3	51.7	52.0
Average Flowrate, Q_g (acfm)	571,548	565,546	569,136
Standard Flowrate, Q_{std} (scfm)	362,751	361,420	364,983
Dry Standard Flowrate, Q_{dstd} (dscfm)	322,714	321,234	326,897
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	103.9	104.1	102.9

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	1.13	5.27	0.747	1.22
Back Half (ug)	<0.1	0.242	0.231	0.261
Antimony - Sb		5.51	0.978	1.48
Concentration (ug/dscm)		2.46	0.438	0.660
Emission Rate (lb/mmBtu)		2.27E-06	4.00E-07	5.93E-07
Emission Rate (lb/hr)		0.00298	0.000527	0.000808
Front Half (ug)	<0.1	11.1	11.1	10.2
Back Half (ug)	<0.1	2.37	2.07	2.41
Arsenic - As		13.5	13.1	12.6
Concentration (ug/dscm)		6.02	5.88	5.62
Emission Rate (lb/mmBtu)		5.56E-06	5.37E-06	5.05E-06
Emission Rate (lb/hr)		0.00728	0.00708	0.00688
Front Half (ug)	<0.025	0.124	0.134	0.238
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		0.149	0.159	0.263
Concentration (ug/dscm)		0.0666	0.0713	0.117
Emission Rate (lb/mmBtu)		6.14E-08	6.51E-08	1.05E-07
Emission Rate (lb/hr)		0.0000805	0.0000858	0.000143
Front Half (ug)	<0.1	0.294	0.219	0.677
Back Half (ug)	<0.1	<0.1	<0.1	<0.1
Cadmium - Cd		0.394	0.319	0.777
Concentration (ug/dscm)		0.176	0.143	0.346
Emission Rate (lb/mmBtu)		1.62E-07	1.30E-07	3.11E-07
Emission Rate (lb/hr)		0.000213	0.000172	0.000424
Front Half (ug)	0.341	13.3	4.25	14.3
Back Half (ug)	2.71	3.12	10.4	4.23
Chromium - Cr		16.4	14.6	18.5
Concentration (ug/dscm)		7.34	6.55	8.26
Emission Rate (lb/mmBtu)		6.77E-06	5.98E-06	7.42E-06
Emission Rate (lb/hr)		0.00887	0.00788	0.0101
Front Half (ug)	<0.1	0.738	0.439	1.13
Back Half (ug)	<0.1	0.770	0.419	0.121
Cobalt - Co		1.51	0.858	1.25
Concentration (ug/dscm)		0.674	0.385	0.557
Emission Rate (lb/mmBtu)		6.22E-07	3.51E-07	5.01E-07
Emission Rate (lb/hr)		0.000815	0.000463	0.000683

Metals Lab Data Entry (μg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	0.144	4.25	3.31	4.00
Back Half (ug)	0.287	1.08	0.887	0.450
Lead - Pb		5.33	4.20	4.45
Concentration (ug/dscm)		2.38	1.88	1.98
Emission Rate (lb/mmBtu)		2.20E-06	1.72E-06	1.78E-06
Emission Rate (lb/hr)		0.00288	0.00226	0.00243
Front Half (ug)	0.714	11.4	4.05	200
Back Half (ug)	3.37	4.57	9.56	6.50
Manganese - Mn		16.0	13.6	207
Concentration (ug/dscm)		7.14	6.10	92.0
Emission Rate (lb/mmBtu)		6.59E-06	5.57E-06	8.27E-05
Emission Rate (lb/hr)		0.00863	0.00734	0.113
Front Half (ug)	0.136	41.2	9.91	14.6
Back Half (ug)	1.52	2.59	4.97	2.22
Nickel - Ni		43.8	14.9	16.8
Concentration (ug/dscm)		19.6	6.67	7.49
Emission Rate (lb/mmBtu)		1.81E-05	6.09E-06	6.73E-06
Emission Rate (lb/hr)		0.0237	0.00802	0.00918
Front Half (ug)	<0.1	89.3	104	142
Back Half (ug)	<0.1	31.1	31.0	35.3
Selenium - Se		120	135	177
Concentration (ug/dscm)		53.8	60.5	79.0
Emission Rate (lb/mmBtu)		4.97E-05	5.53E-05	7.10E-05
Emission Rate (lb/hr)		0.0651	0.0728	0.0967

Parameters	Run 1	Run 2	Run 3
Date	7/15/11	7/15/11	7/15/11
Start Time	8:08	11:15	14:04
Stop Time	9:38	12:45	16:12
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Un-Spiked			
Volume Metered, V_m (L)	38.41	37.21	37.35
Meter Temperature, T_m ($^{\circ}$ F)	105	108	109
Gas Meter Correction Factor, Y_d	1.01450	1.01450	1.01450
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V_m (L)	38.01	36.93	36.61
Meter Temperature, T_m ($^{\circ}$ F)	108	108	110
Gas Meter Correction Factor, Y_d	0.99167	0.99167	0.99167
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	1.30	0.137	1.33
Elemental Mercury Collected Un-Spiked, m (ng)	2.30	0.500	6.80
Total Mercury Collected Un-Spiked, m (ng)	3.62	0.635	8.10
Total Mercury Collected Spiked/Paired, m (ng)	197	193	241
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, $V_{m(std)}$ (L)	35.95	34.67	34.72
Oxidized Mercury Concentration Un-spiked Train, (μ g/dscm)	0.0362	0.00395	0.0383
Elemental Mercury Concentration Un-spiked Train, (μ g/dscm)	0.0640	0.0144	0.196
Total Mercury Concentration Un-spiked Train, (μ g/dscm)	0.101	0.0183	0.233
Volume Metered Spiked/Paired, $V_{m(std)}$ (L)	34.62	33.64	33.20
Concentration Spiked/Paired Train, (μ g/dscm)	5.70	5.74	7.27
Concentration Spiked Train Less Spike, (μ g/dscm)	0.644	0.535	2.00
Concentration Recovered Spike, (μ g/dscm)	5.60	5.72	7.04
Recovery, R (%)	111	110	133
Relative Deviation, RD (%)	73.0	93.4	79.1
Difference (μ g/dscm)	0.544	0.517	1.76
Average Result (μ g/dscm)	0.372	0.277	1.12
Average Recovery (%)	118		

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	7/15/2011	7/15/2011	7/15/2011
Start Time	8:08	11:15	14:04
Stop Time	9:39	12:46	16:12
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.557	0.559	0.631
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Static Pressure, P_s (Inches H_2O)	-15.2	-15.2	-15.2
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	325	305	311
Volume Metered, V_m (ft^3)	47.67	52.35	50.80
Meter Temperature, T_m ($^{\circ}F$)	99.5	112	111
Average Sample Pressure, ΔH_{avg} (in. H_2O)	0.818	0.843	1.06
Gas Meter Correction Factor, Y_d	0.9891	0.9891	0.9891
Carbon Dioxide (% dry)	12.3	12.4	12.2
Oxygen (% dry)	7.00	6.87	6.99
Weight of Water Collected, V_{wc} (g)	58.0	115.2	32.2
Silica Gel Net Weight, V_{wsg} (g)	28.0	11.8	13.3
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	91	91	91

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.44	28.44	28.44
Volume Metered Standard, $V_{m(std)}$ (ft^3)	44.03	47.34	45.99
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	4.05	5.99	2.15
Percent Moisture, B_{ws} (%)	8.43	11.2	4.46
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.25	30.26	30.23
Wet Molecular Weight, M_s (lbs/lb mole)	29.22	28.88	29.69
Gas Velocity, V_s (ft/sec)	38.9	38.7	43.3
Average Flowrate, Q_a (acfm)	425,344	423,670	473,618
Standard Flowrate, Q_{std} (scfm)	271,965	278,032	308,275
Dry Standard Flowrate, Q_{dstd} (dscfm)	249,131	246,909	294,653
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	103.9	112.7	91.7
Front-Half Particulate (g)	0.0061	0.0061	0.0057
Concentration (grains/dscf)	0.00214	0.00200	0.00190
Emission Rate, F_d (lb/mmBtu)	0.00453	0.00421	0.00405
Emission Rate (lb/hr)	4.57	4.24	4.79
Condensible Particulate (g)	0.0179	0.0140	0.0224
Concentration (grains/dscf)	0.00627	0.00455	0.00750
Emission Rate, F_d (lb/mmBtu)	0.0133	0.00954	0.0160
Emission Rate (lb/hr)	13.4	9.62	18.9

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:31
Stop Time	12:09	15:43	18:31
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.600	0.616	0.608
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-15.2	-15.2	-15.2
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	311	311	311
Volume Metered, V_m (ft^3)	67.27	67.77	66.35
Meter Temperature, T_m ($^{\circ}F$)	102	102	95.7
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.00	1.10	1.00
Gas Meter Correction Factor, Y_d	0.9953	0.9953	0.9953
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	111.0	113.0	143.0
Silica Gel Net Weight, V_{wsg} (g)	16.0	19.0	14.0
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.39	28.39	28.39
Volume Metered Standard, $V_{m(std)}$ (ft^3)	62.20	62.64	62.02
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	5.99	6.22	7.40
Percent Moisture, B_{ws} (%)	8.78	9.04	10.7
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	29.17	29.14	28.97
Gas Velocity, V_s (ft/sec)	41.6	42.7	42.3
Average Flowrate, Q_a (acfm)	454,680	467,388	462,348
Standard Flowrate, Q_{std} (scfm)	295,296	303,451	300,503
Dry Standard Flowrate, Q_{dstd} (dscfm)	269,473	276,136	268,568
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Hydrogen Chloride (mg)	2.39	2.34	3.51
Concentration (lb/dscf)	8.47E-08	8.24E-08	1.25E-07
Concentration (ppmdv)	0.895	0.870	1.32
Emission Rate (lb/mmBtu)	0.00125	0.00121	0.00180
Emission Rate (lb/hr)	1.37	1.36	2.01
Hydrogen Fluoride (mg)	1.47	1.36	2.48
Concentration (lb/dscf)	5.21E-08	4.79E-08	8.82E-08
Concentration (ppmdv)	1.00	0.922	1.70
Emission Rate (lb/mmBtu)	0.000770	0.000700	0.00127
Emission Rate (lb/hr)	0.842	0.793	1.42

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:24	15:58	18:58
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.696	0.664	0.632
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-15.2	-15.2	-15.2
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	315	313	311
Volume Metered, V_m (ft^3)	69.85	70.67	70.18
Meter Temperature, T_m ($^{\circ}F$)	98.4	103	96.8
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.31	1.22	1.10
Gas Meter Correction Factor, Y_d	0.9891	0.9891	0.9891
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	182.2	155.7	194.1
Silica Gel Net Weight, V_{wsg} (g)	22.9	28.6	15.3
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	126	126	126

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.39	28.39	28.39
Volume Metered Standard, $V_{m(std)}$ (ft^3)	64.61	64.88	65.08
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	9.67	8.69	9.87
Percent Moisture, B_{ws} (%)	13.0	11.8	13.2
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	28.65	28.80	28.66
Gas Velocity, V_s (ft/sec)	48.8	46.4	44.2
Average Flowrate, Q_a (acfm)	533,273	507,139	483,498
Standard Flowrate, Q_{std} (scfm)	344,626	328,403	314,022
Dry Standard Flowrate, Q_{dstd} (dscfm)	299,882	289,727	272,766
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	91.5	95.1	101.3

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	1.13	0.477	1.86	2.09
Back Half (ug)	<0.1	0.151	0.331	0.205
Antimony - Sb		0.628	2.19	2.30
Concentration (ug/dscm)		0.343	1.19	1.25
Emission Rate (lb/mmBtu)		3.17E-07	1.09E-06	1.12E-06
Emission Rate (lb/hr)		0.000386	0.00129	0.00127
Front Half (ug)	<0.1	2.18	2.65	0.870
Back Half (ug)	<0.1	1.16	1.98	2.35
Arsenic - As		3.34	4.63	3.22
Concentration (ug/dscm)		1.83	2.52	1.75
Emission Rate (lb/mmBtu)		1.68E-06	2.30E-06	1.57E-06
Emission Rate (lb/hr)		0.00205	0.00273	0.00179
Front Half (ug)	<0.025	<0.025	0.0280	<0.025
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		<0.0500	0.0530	<0.0500
Concentration (ug/dscm)		<0.0273	0.0288	<0.0271
Emission Rate (lb/mmBtu)		<2.52E-08	2.64E-08	<2.44E-08
Emission Rate (lb/hr)		<0.0000307	0.0000313	<0.0000277
Front Half (ug)	<0.1	0.167	0.454	<0.1
Back Half (ug)	<0.1	<0.1	0.200	<0.1
Cadmium - Cd		0.267	0.654	<0.200
Concentration (ug/dscm)		0.146	0.356	<0.109
Emission Rate (lb/mmBtu)		1.35E-07	3.25E-07	<9.75E-08
Emission Rate (lb/hr)		0.000164	0.000386	<0.000111
Front Half (ug)	0.341	11.4	11.6	2.36
Back Half (ug)	2.71	4.20	2.34	2.56
Chromium - Cr		15.6	13.9	4.92
Concentration (ug/dscm)		8.53	7.56	2.67
Emission Rate (lb/mmBtu)		7.87E-06	6.91E-06	2.40E-06
Emission Rate (lb/hr)		0.00958	0.00821	0.00273
Front Half (ug)	<0.1	0.300	0.775	<0.1
Back Half (ug)	<0.1	0.133	0.127	0.117
Cobalt - Co		0.433	0.902	0.217
Concentration (ug/dscm)		0.237	0.491	0.118
Emission Rate (lb/mmBtu)		2.18E-07	4.48E-07	1.06E-07
Emission Rate (lb/hr)		0.000266	0.000533	0.000120

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	0.144	1.25	2.65	0.513
Back Half (ug)	0.287	0.537	0.723	0.909
Lead - Pb		1.79	3.37	1.42
Concentration (ug/dscm)		0.977	1.83	0.772
Emission Rate (lb/mmBtu)		9.01E-07	1.67E-06	6.93E-07
Emission Rate (lb/hr)		0.00110	0.00199	0.000788
Front Half (ug)	0.714	19.1	222	2.89
Back Half (ug)	3.37	2.46	3.83	2.28
Manganese - Mn		21.6	226	5.17
Concentration (ug/dscm)		11.8	123	2.81
Emission Rate (lb/mmBtu)		1.09E-05	1.12E-04	2.52E-06
Emission Rate (lb/hr)		0.0132	0.133	0.00287
Front Half (ug)	0.136	9.77	16.5	1.50
Back Half (ug)	1.52	2.79	1.64	1.82
Nickel - Ni		12.6	18.1	3.32
Concentration (ug/dscm)		6.86	9.87	1.80
Emission Rate (lb/mmBtu)		6.33E-06	9.02E-06	1.62E-06
Emission Rate (lb/hr)		0.00771	0.0107	0.00184
Front Half (ug)	<0.1	9.02	7.68	3.34
Back Half (ug)	<0.1	14.9	26.4	30.8
Selenium - Se		23.9	34.0	34.1
Concentration (ug/dscm)		13.1	18.5	18.5
Emission Rate (lb/mmBtu)		1.21E-05	1.69E-05	1.66E-05
Emission Rate (lb/hr)		0.0147	0.0201	0.0189

Parameters	Run 1	Run 2	Run 3
Date	7/15/11	7/15/11	7/15/11
Start Time	8:08	11:15	14:04
Stop Time	9:36	12:46	16:12
Barometric Pressure, P _b (Inches Hg)	29.56	29.56	29.56
Un-Spiked			
Volume Metered, V _m (L)	42.81	42.96	43.26
Meter Temperature, T _m (°F)	114	118	119
Gas Meter Correction Factor, Y _d	1.0072	1.0072	1.0075
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V _m (L)	43.15	42.78	42.83
Meter Temperature, T _m (°F)	114	119	119
Gas Meter Correction Factor, Y _d	0.9985	0.9985	0.9985
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	64.6	252	7.98
Elemental Mercury Collected Un-Spiked, m (ng)	214	149	317
Total Mercury Collected Un-Spiked, m (ng)	278	401	325
Total Mercury Collected Spiked/Paired, m (ng)	472	587	516
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	39.16	39.01	39.28
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	1.65	6.46	0.203
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	5.46	3.82	8.07
Total Mercury Concentration Un-spiked Train, (µg/dscm)	7.10	10.3	8.27
Volume Metered Spiked/Paired, V _{m(std)} (L)	39.13	38.49	38.52
Concentration Spiked/Paired Train, (µg/dscm)	12.1	15.2	13.4
Concentration Spiked Train Less Spike, (µg/dscm)	7.59	10.7	8.85
Concentration Recovered Spike, (µg/dscm)	4.96	4.97	5.12
Recovery, R (%)	111	109	113
Relative Deviation, RD (%)	3.35	2.02	3.38
Difference (µg/dscm)	0.492	0.424	0.579
Average Result (ug/dscm)	7.35	10.5	8.56
Average Recovery (%)	111		

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	7/15/2011	7/15/2011	7/15/2011
Start Time	8:08	11:15	14:04
Stop Time	9:39	12:46	16:12
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.641	0.641	0.640
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Static Pressure, P_s (Inches H_2O)	-16.5	-16.5	-16.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	336	343	347
Volume Metered, V_m (ft^3)	51.96	51.62	52.14
Meter Temperature, T_m ($^{\circ}F$)	96.1	112	110
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.03	1.07	1.05
Gas Meter Correction Factor, Y_d	1.0091	1.0091	1.0091
Carbon Dioxide (% dry)	12.3	12.4	12.2
Oxygen (% dry)	7.00	6.87	6.99
Weight of Water Collected, V_{wc} (g)	86.2	49.1	61.6
Silica Gel Net Weight, V_{wsg} (g)	15.8	21.1	27.8
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	91	91	91

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.35	28.35	28.35
Volume Metered Standard, $V_{m(std)}$ (ft^3)	49.29	47.61	48.28
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	4.81	3.31	4.22
Percent Moisture, B_{ws} (%)	8.89	6.50	8.03
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.25	30.26	30.23
Wet Molecular Weight, M_s (lbs/lb mole)	29.16	29.46	29.25
Gas Velocity, V_s (ft/sec)	45.2	45.1	45.3
Average Flowrate, Q_a (acfm)	494,440	493,253	495,736
Standard Flowrate, Q_{std} (scfm)	310,420	307,141	307,333
Dry Standard Flowrate, Q_{dstd} (dscfm)	282,937	287,290	282,770
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	102.4	97.4	100.4
Front-Half Particulate (g)	0.0058	0.0039	0.0193
Concentration (grains/dscf)	0.00183	0.00125	0.00618
Emission Rate, F_d (lb/mmBtu)	0.00388	0.00262	0.0132
Emission Rate (lb/hr)	4.44	3.07	15.0
Condensible Particulate (g)	0.0495	0.0483	0.0222
Concentration (grains/dscf)	0.0155	0.0157	0.00709
Emission Rate, F_d (lb/mmBtu)	0.0328	0.0328	0.0151
Emission Rate (lb/hr)	37.6	38.6	17.2

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:09	15:43	18:43
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.640	0.632	0.640
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-16.5	-16.5	-16.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	331	335	333
Volume Metered, V_m (ft^3)	70.26	66.98	66.96
Meter Temperature, T_m ($^{\circ}F$)	109	105	106
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.10	1.00	1.00
Gas Meter Correction Factor, Y_d	1.0087	1.0087	1.0087
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	61.0	104.0	110.0
Silica Gel Net Weight, V_{wsg} (g)	25.0	25.0	19.0
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.30	28.30	28.30
Volume Metered Standard, $V_{m(std)}$ (ft^3)	65.05	62.38	62.33
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	4.05	6.08	6.08
Percent Moisture, B_{ws} (%)	5.87	8.88	8.89
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	29.52	29.16	29.18
Gas Velocity, V_s (ft/sec)	44.7	44.6	45.1
Average Flowrate, Q_a (acfm)	489,121	487,597	492,843
Standard Flowrate, Q_{std} (scfm)	308,852	305,986	310,058
Dry Standard Flowrate, Q_{dstd} (dscfm)	290,846	278,913	282,604
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Hydrogen Chloride (mg)	5.99	5.48	5.68
Concentration (lb/dscf)	2.03E-07	1.94E-07	2.01E-07
Concentration (ppmdv)	2.15	2.05	2.12
Emission Rate (lb/mmBtu)	0.00300	0.00283	0.00289
Emission Rate (lb/hr)	3.54	3.24	3.41
Hydrogen Fluoride (mg)	16.1	14.1	13.9
Concentration (lb/dscf)	5.46E-07	4.98E-07	4.92E-07
Concentration (ppmdv)	10.5	9.60	9.47
Emission Rate (lb/mmBtu)	0.00806	0.00729	0.00708
Emission Rate (lb/hr)	9.52	8.34	8.34

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:24	15:58	18:58
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.669	0.655	0.645
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-16.5	-16.5	-16.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	345	348	345
Volume Metered, V_m (ft^3)	61.29	72.29	71.78
Meter Temperature, T_m ($^{\circ}F$)	97.4	99.6	94.3
Average Sample Pressure, ΔH_{avg} (in. H_2O)	0.755	1.07	1.04
Gas Meter Correction Factor, Y_d	1.0091	1.0091	1.0091
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	128.4	141.8	147.9
Silica Gel Net Weight, V_{wsg} (g)	17.2	23.8	16.4
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	126	126	126

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.30	28.30	28.30
Volume Metered Standard, $V_{m(std)}$ (ft^3)	57.87	68.04	68.19
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	6.87	7.81	7.75
Percent Moisture, B_{ws} (%)	10.6	10.3	10.2
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	28.94	28.99	29.02
Gas Velocity, V_s (ft/sec)	47.7	46.7	45.8
Average Flowrate, Q_a (acfm)	521,150	510,462	500,950
Standard Flowrate, Q_{std} (scfm)	323,048	315,207	310,816
Dry Standard Flowrate, Q_{dstd} (dscfm)	288,903	282,871	279,221
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	85.0	102.1	103.7

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	0.144	8.46	7.21	3.32
Back Half (ug)	0.287	1.15	0.621	0.156
Lead - Pb		9.61	7.83	3.48
Concentration (ug/dscm)		5.86	4.06	1.80
Emission Rate (lb/mmBtu)		5.41E-06	3.71E-06	1.62E-06
Emission Rate (lb/hr)		0.00635	0.00430	0.00188
Front Half (ug)	0.714	8.15	22.4	33.4
Back Half (ug)	3.37	4.60	4.26	5.48
Manganese - Mn		12.8	26.7	38.9
Concentration (ug/dscm)		7.78	13.8	20.1
Emission Rate (lb/mmBtu)		7.18E-06	1.26E-05	1.81E-05
Emission Rate (lb/hr)		0.00842	0.0147	0.0211
Front Half (ug)	0.136	27.9	22.4	22.1
Back Half (ug)	1.52	2.04	1.70	1.84
Nickel - Ni		29.9	24.1	23.9
Concentration (ug/dscm)		18.3	12.5	12.4
Emission Rate (lb/mmBtu)		1.69E-05	1.14E-05	1.11E-05
Emission Rate (lb/hr)		0.0198	0.0133	0.0130
Front Half (ug)	<0.1	119	71.1	106
Back Half (ug)	<0.1	31.9	103	49.9
Selenium - Se		151	174	156
Concentration (ug/dscm)		92.1	90.3	80.7
Emission Rate (lb/mmBtu)		8.50E-05	8.25E-05	7.25E-05
Emission Rate (lb/hr)		0.0997	0.0957	0.0844

Parameters	Run 1	Run 2	Run 3
Date	7/15/11	7/15/11	7/15/11
Start Time	8:08	11:15	14:04
Stop Time	9:39	12:46	16:12
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Un-Spiked			
Volume Metered, V_m (L)	30.11	31.06	31.11
Meter Temperature, T_m ($^{\circ}$ F)	116	127	127
Gas Meter Correction Factor, Y_d	0.9994	0.9994	0.9994
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V_m (L)	31.39	31.73	32.90
Meter Temperature, T_m ($^{\circ}$ F)	117	126	128
Gas Meter Correction Factor, Y_d	1.0017	0.9994	1.0017
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	12.7	7.19	64.8
Elemental Mercury Collected Un-Spiked, m (ng)	284	308	286
Total Mercury Collected Un-Spiked, m (ng)	296	315	351
Total Mercury Collected Spiked/Paired, m (ng)	463	494	517
Mass of Mercury Spiked, S (ng)	175	175	175

RESULTS

Volume Metered Un-Spiked, $V_{m(std)}$ (L)	27.23	27.58	27.61
Oxidized Mercury Concentration Un-spiked Train, (μ g/dscm)	0.466	0.261	2.35
Elemental Mercury Concentration Un-spiked Train, (μ g/dscm)	10.4	11.2	10.4
Total Mercury Concentration Un-spiked Train, (μ g/dscm)	10.9	11.4	12.7
Volume Metered Spiked/Paired, $V_{m(std)}$ (L)	28.41	28.21	29.24
Concentration Spiked/Paired Train, (μ g/dscm)	16.3	17.5	17.7
Concentration Spiked Train Less Spike, (μ g/dscm)	10.1	11.3	11.7
Concentration Recovered Spike, (μ g/dscm)	5.43	6.09	4.97
Recovery, R (%)	88.1	98.2	83.0
Relative Deviation, RD (%)	3.49	0.504	4.17
Difference (μ g/dscm)	0.732	0.114	1.02
Average Result (μ g/dscm)	10.5	11.4	12.2
Average Recovery (%)	89.8		

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	7/15/2011	7/15/2011	7/15/2011
Start Time	8:08	11:15	14:04
Stop Time	9:39	12:46	16:12
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.696	0.702	0.701
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Static Pressure, P_s (Inches H_2O)	-17.0	-17.0	-17.0
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	303	310	308
Volume Metered, V_m (ft^3)	54.16	55.83	56.48
Meter Temperature, T_m ($^{\circ}F$)	102	105	107
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.21	1.25	1.24
Gas Meter Correction Factor, Y_d	1.0141	1.0141	1.0141
Carbon Dioxide (% dry)	12.3	12.4	12.2
Oxygen (% dry)	7.00	6.87	6.99
Weight of Water Collected, V_{wc} (g)	39.7	74.7	61.5
Silica Gel Net Weight, V_{wsg} (g)	20.8	16.2	28.5
Diameter of Nozzle, D_n (in)	0.270	0.270	0.270
Run Time, θ (minutes)	91	91	91

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.31	28.31	28.31
Volume Metered Standard, $V_{m(std)}$ (ft^3)	51.07	52.42	52.82
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	2.85	4.29	4.24
Percent Moisture, B_{ws} (%)	5.29	7.56	7.44
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.25	30.26	30.23
Wet Molecular Weight, M_s (lbs/lb mole)	29.60	29.33	29.32
Gas Velocity, V_s (ft/sec)	47.7	48.5	48.4
Average Flowrate, Q_a (acfm)	521,591	530,768	529,103
Standard Flowrate, Q_{std} (scfm)	341,368	344,105	344,175
Dry Standard Flowrate, Q_{dstd} (dscfm)	323,439	318,226	318,706
Area of Nozzle, A_n (ft^2)	0.000398	0.000398	0.000398
Isokinetics (%)	79.6	83.0	83.5
Front-Half Particulate (g)	0.0038	0.0304	0.0021
Concentration (grains/dscf)	0.00115	0.00895	0.000628
Emission Rate, F_d (lb/mmBtu)	0.00243	0.0188	0.00134
Emission Rate (lb/hr)	3.18	24.4	1.72
Condensable Particulate (g)	0.0319	0.0128	0.0331
Concentration (grains/dscf)	0.00964	0.00377	0.00967
Emission Rate, F_d (lb/mmBtu)	0.0204	0.00790	0.0206
Emission Rate (lb/hr)	26.7	10.3	26.4

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:09	15:43	18:43
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.739	0.769	0.774
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-17.0	-17.0	-17.0
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	296	301	299
Volume Metered, V_m (ft^3)	78.18	80.85	81.29
Meter Temperature, T_m ($^{\circ}F$)	101	95.8	96.4
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.38	1.50	1.50
Gas Meter Correction Factor, Y_d	1.0141	1.0141	1.0141
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	78.0	104.0	106.0
Silica Gel Net Weight, V_{wsg} (g)	40.0	25.0	17.0
Diameter of Nozzle, D_n (in)	0.270	0.270	0.270
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.26	28.26	28.26
Volume Metered Standard, $V_{m(std)}$ (ft^3)	73.89	77.08	77.41
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	5.56	6.08	5.80
Percent Moisture, B_{ws} (%)	7.00	7.31	6.97
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	29.38	29.35	29.42
Gas Velocity, V_s (ft/sec)	50.6	52.9	53.1
Average Flowrate, Q_a (acfm)	553,583	578,381	580,245
Standard Flowrate, Q_{std} (scfm)	364,871	379,044	381,227
Dry Standard Flowrate, Q_{dstd} (dscfm)	339,456	351,462	354,799
Area of Nozzle, A_n (ft^2)	0.000398	0.000398	0.000398
Hydrogen Chloride (mg)	5.60	5.86	6.18
Concentration (lb/dscf)	1.67E-07	1.68E-07	1.76E-07
Concentration (ppmdv)	1.77	1.77	1.86
Emission Rate (lb/mmBtu)	0.00247	0.00245	0.00253
Emission Rate (lb/hr)	3.40	3.53	3.75
Hydrogen Fluoride (mg)	12.7	13.0	12.8
Concentration (lb/dscf)	3.79E-07	3.72E-07	3.65E-07
Concentration (ppmdv)	7.30	7.16	7.02
Emission Rate (lb/mmBtu)	0.00560	0.00544	0.00525
Emission Rate (lb/hr)	7.72	7.84	7.76

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:24	15:43	18:43
Dimensions of Sample Location, D_s (in)	162 X 162	162 X 162	162 X 162
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.630	0.702	0.710
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-17.0	-17.0	-17.0
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	314	312	311
Volume Metered, V_m (ft^3)	74.06	80.28	80.80
Meter Temperature, T_m ($^{\circ}F$)	97.2	94.4	93.1
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.05	1.26	1.31
Gas Meter Correction Factor, Y_d	1.0076	1.0076	1.0076
Carbon Dioxide (% dry)	12.3	12.4	12.6
Oxygen (% dry)	6.80	6.67	6.51
Weight of Water Collected, V_{wc} (g)	114.2	178.3	166.0
Silica Gel Net Weight, V_{wsg} (g)	34.4	22.9	21.9
Diameter of Nozzle, D_n (in)	0.250	0.250	0.250
Run Time, θ (minutes)	126	126	126

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	182	182	182
Stack Pressure Absolute (inches Hg)	28.26	28.26	28.26
Volume Metered Standard, $V_{m(std)}$ (ft^3)	69.90	76.20	76.87
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	7.01	9.49	8.86
Percent Moisture, B_{ws} (%)	9.11	11.1	10.3
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.24	30.25	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	29.12	28.89	29.01
Gas Velocity, V_s (ft/sec)	43.9	49.0	49.4
Average Flowrate, Q_a (acfm)	479,992	535,637	540,676
Standard Flowrate, Q_{std} (scfm)	308,975	345,943	349,796
Dry Standard Flowrate, Q_{dstd} (dscfm)	280,937	307,764	313,773
Area of Nozzle, A_n (ft^2)	0.000341	0.000341	0.000341
Isokinetics (%)	105.6	105.1	104.0

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	1.13	0.934	1.51	9.64
Back Half (ug)	<0.1	0.493	0.126	0.205
Antimony - Sb		1.43	1.64	9.85
Concentration (ug/dscm)		0.721	0.758	4.52
Emission Rate (lb/mmBtu)		6.65E-07	6.93E-07	4.06E-06
Emission Rate (lb/hr)		0.000759	0.000874	0.00532
Front Half (ug)	<0.1	3.57	2.18	1.99
Back Half (ug)	<0.1	1.43	3.06	4.23
Arsenic - As		5.00	5.24	6.22
Concentration (ug/dscm)		2.53	2.43	2.86
Emission Rate (lb/mmBtu)		2.33E-06	2.22E-06	2.57E-06
Emission Rate (lb/hr)		0.00266	0.00280	0.00336
Front Half (ug)	<0.025	0.078	<0.025	<0.025
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		0.103	<0.0500	<0.0500
Concentration (ug/dscm)		0.0126	<0.0116	<0.0115
Emission Rate (lb/mmBtu)		1.17E-08	<1.06E-08	<1.03E-08
Emission Rate (lb/hr)		0.0000133	<0.0000134	<0.0000135
Front Half (ug)	<0.1	0.383	0.303	0.215
Back Half (ug)	<0.1	0.279	0.562	0.349
Cadmium - Cd		0.662	0.865	0.564
Concentration (ug/dscm)		0.334	0.401	0.259
Emission Rate (lb/mmBtu)		3.09E-07	3.66E-07	2.33E-07
Emission Rate (lb/hr)		0.000352	0.000462	0.000305
Front Half (ug)	0.341	24.3	11.7	15.7
Back Half (ug)	2.71	2.62	1.61	1.92
Chromium - Cr		26.9	13.3	17.6
Concentration (ug/dscm)		13.6	6.14	8.09
Emission Rate (lb/mmBtu)		1.25E-05	5.61E-06	7.27E-06
Emission Rate (lb/hr)		0.0143	0.00708	0.00951
Front Half (ug)	<0.1	0.494	0.215	0.278
Back Half (ug)	<0.1	0.247	<0.1	<0.1
Cobalt - Co		0.741	0.315	0.378
Concentration (ug/dscm)		0.374	0.146	0.174
Emission Rate (lb/mmBtu)		3.45E-07	1.33E-07	1.56E-07
Emission Rate (lb/hr)		0.000394	0.000168	0.000204

Metals Lab Data Entry (μg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	0.144	4.04	53.6	3.09
Back Half (ug)	0.287	0.667	0.628	0.685
Lead - Pb		4.71	54.2	3.78
Concentration (ug/dscm)		2.38	25.1	1.73
Emission Rate (lb/mmBtu)		2.19E-06	2.30E-05	1.56E-06
Emission Rate (lb/hr)		0.00250	0.0290	0.00204
Front Half (ug)	0.714	12.7	5.77	5.70
Back Half (ug)	3.37	2.89	3.12	3.25
Manganese - Mn		15.6	8.89	8.95
Concentration (ug/dscm)		7.88	4.12	4.11
Emission Rate (lb/mmBtu)		7.27E-06	3.76E-06	3.69E-06
Emission Rate (lb/hr)		0.00829	0.00475	0.00483
Front Half (ug)	0.136	13.7	8.45	12.0
Back Half (ug)	1.52	2.23	0.943	1.66
Nickel - Ni		15.9	9.39	13.7
Concentration (ug/dscm)		8.05	4.35	6.27
Emission Rate (lb/mmBtu)		7.42E-06	3.97E-06	5.64E-06
Emission Rate (lb/hr)		0.00847	0.00502	0.00738
Front Half (ug)	<0.1	10.9	11.2	10.4
Back Half (ug)	<0.1	14.2	50.4	64.0
Selenium - Se		25.1	61.5	74.4
Concentration (ug/dscm)		12.7	28.5	34.2
Emission Rate (lb/mmBtu)		1.17E-05	2.60E-05	3.07E-05
Emission Rate (lb/hr)		0.0133	0.0329	0.0402

Parameters	Run 1	Run 2	Run 3
Date	7/15/11	7/15/11	7/15/11
Start Time	8:08	11:15	14:04
Stop Time	9:38	13:00	15:50
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Un-Spiked			
Volume Metered, V_m (L)	45.12	37.50	39.84
Meter Temperature, T_m (°F)	120	119	127
Gas Meter Correction Factor, Y_d	0.9958	0.9958	0.9958
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V_m (L)	43.74	37.59	39.20
Meter Temperature, T_m (°F)	122	119	127
Gas Meter Correction Factor, Y_d	0.9902	0.9902	0.9902
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	147	56.9	62.1
Elemental Mercury Collected Un-Spiked, m (ng)	202	274	228
Total Mercury Collected Un-Spiked, m (ng)	349	331	291
Total Mercury Collected Spiked/Paired, m (ng)	525	497	479
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, $V_{m(std)}$ (L)	40.42	33.62	35.25
Oxidized Mercury Concentration Un-spiked Train, ($\mu\text{g}/\text{dscm}$)	3.64	1.69	1.76
Elemental Mercury Concentration Un-spiked Train, ($\mu\text{g}/\text{dscm}$)	5.00	8.15	6.47
Total Mercury Concentration Un-spiked Train, ($\mu\text{g}/\text{dscm}$)	8.63	9.85	8.25
Volume Metered Spiked/Paired, $V_{m(std)}$ (L)	38.78	33.53	34.47
Concentration Spiked/Paired Train, ($\mu\text{g}/\text{dscm}$)	13.5	14.8	13.9
Concentration Spiked Train Less Spike, ($\mu\text{g}/\text{dscm}$)	9.03	9.60	8.82
Concentration Recovered Spike, ($\mu\text{g}/\text{dscm}$)	4.90	4.98	5.64
Recovery, R (%)	109	95.4	111
Relative Deviation, RD (%)	2.22	1.24	3.30
Difference ($\mu\text{g}/\text{dscm}$)	0.392	0.242	0.564
Average Result ($\mu\text{g}/\text{dscm}$)	8.83	9.73	8.54
Average Recovery (%)	105		

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	7/15/2011	7/15/2011	7/15/2011
Start Time	8:08	11:15	14:06
Stop Time	9:39	12:46	16:12
Dimensions of Sample Location, D_s (in)	408	408	408
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.466	0.471	0.472
Barometric Pressure, P_b (Inches Hg)	29.56	29.56	29.56
Static Pressure, P_s (Inches H_2O)	-0.2	-0.2	-0.2
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	129	129	129
Volume Metered, V_m (ft^3)	54.71	61.75	62.36
Meter Temperature, T_m ($^{\circ}F$)	100	104	104
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.17	1.45	1.47
Gas Meter Correction Factor, Y_d	0.9891	0.9891	0.9891
Carbon Dioxide (% dry)	12.7	12.5	12.6
Oxygen (% dry)	6.53	6.78	6.54
Weight of Water Collected, V_{wc} (g)	150.4	161.6	178.7
Silica Gel Net Weight, V_{wsg} (g)	25.6	25.1	10.0
Diameter of Nozzle, D_n (in)	0.312	0.312	0.312
Run Time, θ (minutes)	90	90	90

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	908	908	908
Stack Pressure Absolute (inches Hg)	29.55	29.55	29.55
Volume Metered Standard, $V_{m(std)}$ (ft^3)	50.54	56.66	57.24
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	8.30	8.80	8.90
Percent Moisture, B_{ws} (%)	14.1	13.4	13.5
Moisture Saturation Point, B_{wsat} (%)	14.7	14.9	15.0
Dry Molecular Weight, M_d (lbs/lb mole)	30.29	30.27	30.28
Wet Molecular Weight, M_s (lbs/lb mole)	28.56	28.62	28.63
Gas Velocity, V_s (ft/sec)	28.0	28.2	28.3
Average Flowrate, Q_a (acfm)	1,522,906	1,536,292	1,542,499
Standard Flowrate, Q_{std} (scfm)	1,348,504	1,359,394	1,364,308
Dry Standard Flowrate, Q_{dstd} (dscfm)	1,158,769	1,177,062	1,181,239
Area of Nozzle, A_n (ft^2)	0.000531	0.000531	0.000531
Isokinetics (%)	82.9	91.5	92.1
Front-Half Particulate (g)	0.0342	0.0130	0.0247
Concentration (grains/dscf)	0.0104	0.00355	0.00666
Emission Rate, F_d (lb/mmBtu)	0.0214	0.00741	0.0138
Emission Rate (lb/hr)	104	35.9	67.4
Condensable Particulate (g)	0.0172	0.0145	0.0186
Concentration (grains/dscf)	0.00524	0.00395	0.00501
Emission Rate, F_d (lb/mmBtu)	0.0107	0.00823	0.0104
Emission Rate (lb/hr)	52.0	39.8	50.8

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:24	15:58	18:43
Dimensions of Sample Location, D_s (in)	408	408	408
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.465	0.474	0.464
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-0.2	-0.2	-0.2
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	129	129	128
Volume Metered, V_m (ft^3)	81.03	89.91	88.98
Meter Temperature, T_m ($^{\circ}F$)	103	108	112
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.53	1.83	1.76
Gas Meter Correction Factor, Y_d	0.9891	0.9891	0.9891
Carbon Dioxide (% dry)	12.2	12.4	12.5
Oxygen (% dry)	6.92	6.71	6.57
Weight of Water Collected, V_{wc} (g)	165.0	202.0	195.0
Silica Gel Net Weight, V_{wsg} (g)	42.0	38.0	45.0
Diameter of Nozzle, D_n (in)	0.312	0.312	0.312
Run Time, θ (minutes)	120	120	120
EPA METHODS 1-4 RESULTS			
Area of Sample Location, A_s (ft^2)	908	908	908
Stack Pressure Absolute (inches Hg)	29.50	29.50	29.50
Volume Metered Standard, $V_{m(std)}$ (ft^3)	74.34	81.88	80.41
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	9.76	11.32	11.32
Percent Moisture, B_{ws} (%)	11.6	12.1	12.3
Moisture Saturation Point, B_{wsat} (%)	14.8	14.8	14.4
Dry Molecular Weight, M_d (lbs/lb mole)	30.23	30.25	30.26
Wet Molecular Weight, M_s (lbs/lb mole)	28.81	28.76	28.75
Gas Velocity, V_s (ft/sec)	27.8	28.4	27.8
Average Flowrate, Q_a (acfm)	1,515,297	1,544,750	1,512,534
Standard Flowrate, Q_{std} (scfm)	1,339,116	1,365,531	1,338,949
Dry Standard Flowrate, Q_{dstd} (dscfm)	1,184,178	1,200,203	1,174,237
Area of Nozzle, A_n (ft^2)	0.000531	0.000531	0.000531
Isokinetics (%)	89.5	97.3	97.6
Hydrogen Chloride (mg)	0.194	0.239	0.394
Concentration (lb/dscf)	5.75E-09	6.44E-09	1.08E-08
Concentration (ppmdv)	0.0608	0.0680	0.114
Emission Rate (lb/mmBtu)	0.0000858	0.0000944	0.000156
Emission Rate (lb/hr)	0.409	0.463	0.761
Hydrogen Fluoride (mg)	0.146	0.159	0.131
Concentration (lb/dscf)	4.33E-09	4.28E-09	3.59E-09
Concentration (ppmdv)	0.0834	0.0825	0.0692
Emission Rate (lb/mmBtu)	0.0000645	0.0000628	0.0000519
Emission Rate (lb/hr)	0.308	0.308	0.253

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/14/2011	7/14/2011	7/14/2011
Start Time	10:09	13:43	16:43
Stop Time	12:24	15:58	18:58
Dimensions of Sample Location, D_s (in)	408	408	408
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.471	0.476	0.473
Barometric Pressure, P_b (Inches Hg)	29.51	29.51	29.51
Static Pressure, P_s (Inches H_2O)	-0.2	-0.2	-0.2
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	130	129	129
Volume Metered, V_m (ft^3)	70.79	70.62	71.30
Meter Temperature, T_m ($^{\circ}F$)	107	108	110
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.14	1.16	1.15
Gas Meter Correction Factor, Y_d	0.9907	0.9907	0.9907
Carbon Dioxide (% dry)	12.2	12.4	12.5
Oxygen (% dry)	6.92	6.71	6.57
Weight of Water Collected, V_{wc} (g)	178.1	209.8	222.2
Silica Gel Net Weight, V_{wsg} (g)	18.7	29.0	24.9
Diameter of Nozzle, D_n (in)	0.312	0.312	0.312
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	908	908	908
Stack Pressure Absolute (inches Hg)	29.50	29.50	29.50
Volume Metered Standard, $V_{m(std)}$ (ft^3)	64.59	64.32	64.71
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	9.28	11.26	11.65
Percent Moisture, B_{ws} (%)	12.6	14.9	15.3
Moisture Saturation Point, B_{wsat} (%)	15.2	15.1	14.9
Dry Molecular Weight, M_d (lbs/lb mole)	30.23	30.25	30.26
Wet Molecular Weight, M_s (lbs/lb mole)	28.69	28.43	28.43
Gas Velocity, V_s (ft/sec)	28.2	28.6	28.5
Average Flowrate, Q_a (acfm)	1,538,801	1,560,391	1,549,927
Standard Flowrate, Q_{std} (scfm)	1,357,965	1,377,602	1,369,138
Dry Standard Flowrate, Q_{dstd} (dscfm)	1,187,868	1,172,852	1,165,115
Area of Nozzle, A_n (ft^2)	0.000531	0.000531	0.000531
Isokinetics (%)	77.5	78.2	79.2

Metals Lab Data Entry (μg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	1.13	1.35	5.03	0.224
Back Half (ug)	<0.1	0.111	0.117	0.107
Antimony - Sb		1.46	5.14	0.331
Concentration (ug/dscm)		0.799	2.82	0.181
Emission Rate (lb/mmBtu)		7.43E-07	2.59E-06	1.63E-07
Emission Rate (lb/hr)		0.00355	0.0124	0.000788
Front Half (ug)	<0.1	4.44	3.13	2.88
Back Half (ug)	<0.1	1.01	0.838	0.741
Arsenic - As		5.45	3.97	3.62
Concentration (ug/dscm)		2.98	2.18	1.98
Emission Rate (lb/mmBtu)		2.77E-06	2.00E-06	1.78E-06
Emission Rate (lb/hr)		0.0133	0.00957	0.00862
Front Half (ug)	<0.025	0.065	0.029	<0.025
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		0.090	0.054	<0.050
Concentration (ug/dscm)		0.0492	0.0296	<0.0273
Emission Rate (lb/mmBtu)		4.58E-08	2.72E-08	<2.46E-08
Emission Rate (lb/hr)		0.000219	0.000130	<0.000119
Front Half (ug)	<0.1	1.00	0.347	0.175
Back Half (ug)	<0.1	0.429	1.66	0.250
Cadmium - Cd		1.43	2.01	0.425
Concentration (ug/dscm)		0.781	1.10	0.232
Emission Rate (lb/mmBtu)		7.27E-07	1.01E-06	2.09E-07
Emission Rate (lb/hr)		0.00348	0.00484	0.00101
Front Half (ug)	0.341	19.3	37.5	6.96
Back Half (ug)	2.71	3.25	2.28	1.54
Chromium - Cr		22.6	39.8	8.50
Concentration (ug/dscm)		12.3	21.8	4.64
Emission Rate (lb/mmBtu)		1.15E-05	2.00E-05	4.19E-06
Emission Rate (lb/hr)		0.0549	0.0959	0.0202
Front Half (ug)	<0.1	1.21	9.01	0.425
Back Half (ug)	<0.1	0.132	<0.1	<0.1
Cobalt - Co		1.34	9.11	0.525
Concentration (ug/dscm)		0.734	5.00	0.286
Emission Rate (lb/mmBtu)		6.83E-07	4.58E-06	2.59E-07
Emission Rate (lb/hr)		0.00326	0.0220	0.00125

Metals Lab Data Entry (μg)	Blank	Run 1	Run 2	Run 3
Front Half (μg)	0.144	4.46	2.68	0.909
Back Half (μg)	0.287	0.895	1.21	0.735
Lead - Pb		5.36	3.88	1.64
Concentration ($\mu\text{g}/\text{dscm}$)		2.93	2.13	0.897
Emission Rate (lb/mmBtu)		2.72E-06	1.95E-06	8.10E-07
Emission Rate (lb/hr)		0.0130	0.00936	0.00392
Front Half (μg)	0.714	47.1	33.1	5.87
Back Half (μg)	3.37	5.23	6.31	2.32
Manganese - Mn		52.3	39.4	8.19
Concentration ($\mu\text{g}/\text{dscm}$)		28.6	21.6	4.47
Emission Rate (lb/mmBtu)		2.66E-05	1.98E-05	4.03E-06
Emission Rate (lb/hr)		0.127	0.0949	0.0195
Front Half (μg)	0.136	90.4	281	14.2
Back Half (μg)	1.52	2.35	1.83	1.77
Nickel - Ni		92.8	283	16.0
Concentration ($\mu\text{g}/\text{dscm}$)		50.7	155	8.71
Emission Rate (lb/mmBtu)		4.72E-05	1.42E-04	7.86E-06
Emission Rate (lb/hr)		0.226	0.682	0.0380
Front Half (μg)	<0.1	47.3	38.9	32.3
Back Half (μg)	<0.1	21.6	17.0	19.3
Selenium - Se		68.9	55.8	51.6
Concentration ($\mu\text{g}/\text{dscm}$)		37.7	30.6	28.2
Emission Rate (lb/mmBtu)		3.50E-05	2.81E-05	2.54E-05
Emission Rate (lb/hr)		0.168	0.135	0.123

Parameters	Run 1	Run 2	Run 3
Date	7/15/11	7/15/11	7/15/11
Start Time	8:07	11:15	14:06
Stop Time	9:37	12:46	16:12
Barometric Pressure, P _b (Inches Hg)	29.56	29.56	29.56
Un-Spiked			
Volume Metered, V _m (L)	35.86	35.68	35.85
Meter Temperature, T _m (°F)	89.9	91.6	92.7
Gas Meter Correction Factor, Y _d	1.00000	1.00000	1.00000
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V _m (L)	36.17	35.99	36.05
Meter Temperature, T _m (°F)	90.7	92.6	93.7
Gas Meter Correction Factor, Y _d	1.00000	1.00000	1.00000
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	14.4	11.3	12.1
Elemental Mercury Collected Un-Spiked, m (ng)	55.0	59.7	62.3
Total Mercury Collected Un-Spiked, m (ng)	69.4	70.9	74.4
Total Mercury Collected Spiked/Paired, m (ng)	87.5	85.2	98.7
Mass of Mercury Spiked, S (ng)	20.0	20.0	20.0
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	34.01	33.73	33.83
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	0.423	0.335	0.358
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	1.62	1.77	1.84
Total Mercury Concentration Un-spiked Train, (µg/dscm)	2.04	2.10	2.20
Volume Metered Spiked/Paired, V _{m(std)} (L)	34.25	33.96	33.95
Concentration Spiked/Paired Train, (µg/dscm)	2.55	2.51	2.91
Concentration Spiked Train Less Spike, (µg/dscm)	1.97	1.92	2.32
Concentration Recovered Spike, (µg/dscm)	0.514	0.407	0.708
Recovery, R (%)	88.0	69.1	120
Relative Deviation, RD (%)	1.75	4.52	2.63
Difference (µg/dscm)	0.0702	0.182	0.119
Average Result (ug/dscm)	2.01	2.01	2.26
Average Recovery (%)	92.4		

Parameters	Run 1	Run 2	Run 3
Date	7/25/11	7/25/11	7/25/11
Start Time	7:30	9:33	11:30
Stop Time	9:00	11:03	13:00
Barometric Pressure, P _b (Inches Hg)	29.48	29.48	29.48
Un-Spiked			
Volume Metered, V _m (L)	43.77	42.89	43.99
Meter Temperature, T _m (°F)	103	108	112
Gas Meter Correction Factor, Y _d	1.0072	1.0072	1.0072
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V _m (L)	43.17	43.07	44.39
Meter Temperature, T _m (°F)	103	108	112
Gas Meter Correction Factor, Y _d	0.9985	0.9985	0.9985
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	25.3	22.0	16.7
Elemental Mercury Collected Un-Spiked, m (ng)	339	318	327
Total Mercury Collected Un-Spiked, m (ng)	364	340	343
Total Mercury Collected Spiked/Paired, m (ng)	534	535	482
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	40.72	39.57	40.26
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	0.621	0.556	0.415
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	8.33	8.04	8.12
Total Mercury Concentration Un-spiked Train, (µg/dscm)	8.94	8.59	8.52
Volume Metered Spiked/Paired, V _{m(std)} (L)	39.82	39.39	40.27
Concentration Spiked/Paired Train, (µg/dscm)	13.4	13.6	12.0
Concentration Spiked Train Less Spike, (µg/dscm)	9.02	9.14	7.62
Concentration Recovered Spike, (µg/dscm)	4.47	4.99	3.45
Recovery, R (%)	102	112	79.4
Relative Deviation, RD (%)	0.432	3.08	5.56
Difference (µg/dscm)	0.0776	0.546	0.897
Average Result (ug/dscm)	8.98	8.87	8.07
Average Recovery (%)	97.8		

Parameters	Run 1	Run 2	Run 3
Date	7/25/11	7/25/11	7/25/11
Start Time	7:30	9:33	11:30
Stop Time	9:00	11:03	13:00
Barometric Pressure, P _b (Inches Hg)	29.48	29.48	29.48
Un-Spiked			
Volume Metered, V _m (L)	41.42	41.59	41.78
Meter Temperature, T _m (°F)	100	108	115
Gas Meter Correction Factor, Y _d	0.9994	0.9994	0.9994
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V _m (L)	41.19	41.32	42.49
Meter Temperature, T _m (°F)	100	108	115
Gas Meter Correction Factor, Y _d	1.0017	1.0017	1.0017
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	26.3	45.9	22.6
Elemental Mercury Collected Un-Spiked, m (ng)	317	285	292
Total Mercury Collected Un-Spiked, m (ng)	344	330	315
Total Mercury Collected Spiked/Paired, m (ng)	506	507	507
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	38.42	38.05	37.76
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	0.685	1.21	0.599
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	8.25	7.49	7.73
Total Mercury Concentration Un-spiked Train, (µg/dscm)	8.95	8.67	8.34
Volume Metered Spiked/Paired, V _{m(std)} (L)	38.29	37.89	38.49
Concentration Spiked/Paired Train, (µg/dscm)	13.2	13.4	13.2
Concentration Spiked Train Less Spike, (µg/dscm)	8.64	8.76	8.63
Concentration Recovered Spike, (µg/dscm)	4.26	4.71	4.83
Recovery, R (%)	93.2	102	106
Relative Deviation, RD (%)	1.76	0.508	1.67
Difference (µg/dscm)	0.3102	0.0886	0.2835
Average Result (ug/dscm)	8.80	8.72	8.48
Average Recovery (%)	100		

Parameters	Run 1	Run 2	Run 3
Date	7/25/11	7/25/11	7/25/11
Start Time	7:30	9:33	11:30
Stop Time	9:00	11:03	13:00
Barometric Pressure, P _b (Inches Hg)	29.48	29.48	29.48
Un-Spiked			
Volume Metered, V _m (L)	31.22	42.03	35.32
Meter Temperature, T _m (°F)	98	102	107
Gas Meter Correction Factor, Y _d	0.9958	0.9958	0.9958
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V _m (L)	35.14	38.80	36.07
Meter Temperature, T _m (°F)	99.3	103	108
Gas Meter Correction Factor, Y _d	0.9902	0.9902	0.9902
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	19.3	32.2	21.1
Elemental Mercury Collected Un-Spiked, m (ng)	242	315	245
Total Mercury Collected Un-Spiked, m (ng)	261	347	267
Total Mercury Collected Spiked/Paired, m (ng)	478	497	445
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	28.97	38.71	32.26
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	0.666	0.832	0.654
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	8.35	8.14	7.60
Total Mercury Concentration Un-spiked Train, (µg/dscm)	9.01	8.96	8.28
Volume Metered Spiked/Paired, V _{m(std)} (L)	32.35	35.50	32.72
Concentration Spiked/Paired Train, (µg/dscm)	14.778	14.000	13.601
Concentration Spiked Train Less Spike, (µg/dscm)	9.37	9.07	8.25
Concentration Recovered Spike, (µg/dscm)	5.77	5.04	5.32
Recovery, R (%)	107	102	99.5
Relative Deviation, RD (%)	1.95	0.591	0.151
Difference (µg/dscm)	0.3580	0.1066	0.0250
Average Result (ug/dscm)	9.19	9.02	8.26
Average Recovery (%)	103		

Parameters	Run 1	Run 2	Run 3
Date	7/25/11	7/25/11	7/25/11
Start Time	7:30	9:33	11:30
Stop Time	9:00	11:03	13:00
Barometric Pressure, P _b (Inches Hg)	29.48	29.48	29.48
Un-Spiked			
Volume Metered, V _m (L)	37.81	39.29	39.85
Meter Temperature, T _m (°F)	78.2	82.0	86.2
Gas Meter Correction Factor, Y _d	1.00000	1.00000	1.00000
Run Time, θ (minutes)	90	90	90
Spiked/Paired			
Volume Metered, V _m (L)	37.61	40.28	38.61
Meter Temperature, T _m (°F)	79.1	83.2	87.2
Gas Meter Correction Factor, Y _d	1.00000	1.00000	1.00000
Run Time, θ (minutes)	90	90	90
Oxidized Mercury Collected Un-Spiked, m (ng)	24.2	26.2	12.0
Elemental Mercury Collected Un-Spiked, m (ng)	306	292	291
Total Mercury Collected Un-Spiked, m (ng)	331	318	303
Total Mercury Collected Spiked/Paired, m (ng)	463	478	460
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	36.53	37.69	37.94
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	0.662	0.695	0.316
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	8.38	7.75	7.67
Total Mercury Concentration Un-spiked Train, (µg/dscm)	9.06	8.44	7.99
Volume Metered Spiked/Paired, V _{m(std)} (L)	36.3	38.6	36.7
Concentration Spiked/Paired Train, (µg/dscm)	12.8	12.4	12.5
Concentration Spiked Train Less Spike, (µg/dscm)	7.94	7.86	7.77
Concentration Recovered Spike, (µg/dscm)	3.70	3.96	4.55
Recovery, R (%)	76.7	87.2	95.4
Relative Deviation, RD (%)	6.61	3.55	1.40
Difference (µg/dscm)	1.12	0.579	0.220
Average Result (ug/dscm)	8.50	8.15	7.88
Average Recovery (%)	86.4		

Fd Parameters	Sample 1	Sample 2	Sample 3
Hydrogen (%)	4.53	4.57	4.73
Carbon (%)	74.48	75.00	75.20
Sulfur (%)	4.20	4.09	4.09
Nitrogen (%)	1.44	1.49	1.52
Oxygen (%)	7.62	7.55	7.04
Heating Value (Btu/lb)	13,129	13,234	13,233

Result	Sample 1	Sample 2	Sample 3
Fd (dscf/mmBtu)	9,866	9,857	9,943
Fc (dscf/mmBtu)	1,821	1,819	1,824
Fo	1.132	1.132	1.139

Fd Parameters	Sample 1	Sample 2	Sample 3
Hydrogen (%)	4.68	4.62	4.76
Carbon (%)	74.17	73.88	74.64
Sulfur (%)	4.05	4.31	3.87
Nitrogen (%)	1.52	1.49	1.56
Oxygen (%)	5.83	5.84	6.41
Heating Value (Btu/lb)	13,074	13,031	13,217

Result	Sample 1	Sample 2	Sample 3
Fd (dscf/mmBtu)	9,971	9,963	9,912
Fc (dscf/mmBtu)	1,821	1,820	1,813
Fo	1.144	1.144	1.143

Fd Parameters	Sample 1	Sample 2	Sample 3
Hydrogen (%)	4.71	4.61	4.65
Carbon (%)	75.09	74.78	73.60
Sulfur (%)	3.66	3.98	3.88
Nitrogen (%)	1.55	1.52	1.51
Oxygen (%)	7.92	7.86	8.04
Heating Value (Btu/lb)	13,271	13,197	13,052

Result	Sample 1	Sample 2	Sample 3
Fd (dscf/mmBtu)	9,848	9,855	9,827