

Parameters

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	8/4/2011	8/4/2011	8/4/2011
Start Time	7:19	10:09	13:11
Stop Time	9:15	12:00	15:02
Dimensions of Sample Location, D_s (in)	186 X 139	186 X 139	186 X 139
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.965	0.968	0.977
Barometric Pressure, P_b (Inches Hg)	29.41	29.41	29.41
Static Pressure, P_s (Inches H_2O)	-6.0	-6.0	-5.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	316	318	320
Volume Metered, V_m (ft^3)	56.63	55.71	53.00
Meter Temperature, T_m ($^{\circ}F$)	89.7	103	99.8
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.12	1.13	1.14
Gas Meter Correction Factor, Y_d	0.9953	0.9953	0.9953
Carbon Dioxide (% dry)	13.3	13.2	13.3
Oxygen (% dry)	5.63	5.60	5.44
Weight of Water Collected, V_{wc} (g)	126.9	114.0	121.6
Silica Gel Net Weight, V_{wsg} (g)	15.6	11.3	12.2
Diameter of Nozzle, D_n (in)	0.200	0.200	0.200
Run Time, θ (minutes)	100	100	100

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	180	180	180
Stack Pressure Absolute (inches Hg)	28.97	28.97	29.01
Volume Metered Standard, $V_{m(std)}$ (ft^3)	53.34	51.22	49.02
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	6.72	5.91	6.31
Percent Moisture, B_{ws} (%)	11.2	10.3	11.4
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.35	30.34	30.35
Wet Molecular Weight, M_s (lbs/lb mole)	28.97	29.06	28.94
Gas Velocity, V_s (ft/sec)	66.6	66.8	67.7
Average Flowrate, Q_a (acfm)	717,920	719,919	728,842
Standard Flowrate, Q_{std} (scfm)	472,959	472,861	478,100
Dry Standard Flowrate, Q_{dstd} (dscfm)	420,218	424,130	423,759
Area of Nozzle, A_n (ft^2)	0.000218	0.000218	0.000218
Isokinetics (%)	104.5	99.4	95.3
Front-Half Particulate (g)	1.8937	2.2847	2.2718
Concentration (grains/dscf)	0.548	0.688	0.715
Emission Rate, F_d (lb/mmBtu)	1.03	1.35	1.38
Emission Rate (lb/hr)	1,973	2,503	2,598
Condensable Particulate (g)	0.0288	0.0217	0.0192
Concentration (grains/dscf)	0.00835	0.00654	0.00603
Emission Rate, F_d (lb/mmBtu)	0.0157	0.0128	0.0117
Emission Rate (lb/hr)	30.1	23.8	21.9

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	8/4/2011	8/4/2011	8/4/2011
Start Time	7:19	10:09	13:11
Stop Time	9:23	12:12	15:15
Dimensions of Sample Location, D_s (in)	186 X 139	186 X 139	186 X 139
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.945	0.949	0.950
Barometric Pressure, P_b (Inches Hg)	29.41	29.41	29.41
Static Pressure, P_s (Inches H_2O)	-5.5	-5.5	-5.5
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	317	317	318
Volume Metered, V_m (ft^3)	68.08	68.45	72.92
Meter Temperature, T_m ($^{\circ}F$)	98.0	97.3	116.0
Average Sample Pressure, ΔH_{avg} (in. H_2O)	0.993	0.995	0.997
Gas Meter Correction Factor, Y_d	0.9952	0.9952	0.9952
Carbon Dioxide (% dry)	13.3	13.2	13.3
Oxygen (% dry)	5.63	5.60	5.44
Weight of Water Collected, V_{wc} (g)	145.2	148.4	146.5
Silica Gel Net Weight, V_{wsg} (g)	16.0	14.9	12.5
Diameter of Nozzle, D_n (in)	0.200	0.200	0.200
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	180	180	180
Stack Pressure Absolute (inches Hg)	29.01	29.01	29.01
Volume Metered Standard, $V_{m(std)}$ (ft^3)	63.14	63.57	65.52
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	7.60	7.70	7.50
Percent Moisture, B_{ws} (%)	10.7	10.8	10.3
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.35	30.34	30.35
Wet Molecular Weight, M_s (lbs/lb mole)	29.03	29.00	29.08
Gas Velocity, V_s (ft/sec)	65.2	65.5	65.5
Average Flowrate, Q_a (acfm)	702,143	705,797	705,927
Standard Flowrate, Q_{std} (scfm)	462,662	464,522	464,110
Dry Standard Flowrate, Q_{dstd} (dscfm)	413,121	414,502	416,625
Area of Nozzle, A_n (ft^2)	0.000218	0.000218	0.000218
Hydrogen Chloride (mg)	296	295	315
Concentration (lb/dscf)	1.03E-05	1.02E-05	1.06E-05
Concentration (ppmdv)	109	108	112
Emission Rate (lb/mmBtu)	0.136	0.140	0.143
Emission Rate (lb/hr)	256	254	265
Hydrogen Fluoride (mg)	18.1	17.9	19.0
Concentration (lb/dscf)	6.32E-07	6.21E-07	6.39E-07
Concentration (ppmdv)	12.2	12.0	12.3
Emission Rate (lb/mmBtu)	0.00833	0.00849	0.00865
Emission Rate (lb/hr)	15.7	15.4	16.0

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	8/4/2011	8/4/2011	8/4/2011
Start Time	7:19	10:09	13:11
Stop Time	9:35	12:38	15:40
Dimensions of Sample Location, D_s (in)	186 X 139	186 X 139	186 X 139
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.977	0.978	0.980
Barometric Pressure, P_b (Inches Hg)	29.41	29.41	29.41
Static Pressure, P_s (Inches H_2O)	-6.0	-6.0	-6.0
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	320	317	316
Volume Metered, V_m (ft^3)	68.10	68.86	68.57
Meter Temperature, T_m ($^{\circ}F$)	97.0	100	105
Average Sample Pressure, ΔH_{avg} (in. H_2O)	0.98	0.97	0.98
Gas Meter Correction Factor, Y_d	1.0087	1.0087	1.0087
Carbon Dioxide (% dry)	13.3	13.2	13.3
Oxygen (% dry)	5.63	5.60	5.44
Weight of Water Collected, V_{wc} (g)	154.9	261.1	155.1
Silica Gel Net Weight, V_{wsg} (g)	18.9	11.9	20.5
Diameter of Nozzle, D_n (in)	0.195	0.195	0.195
Run Time, θ (minutes)	125	125	125

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	180	180	180
Stack Pressure Absolute (inches Hg)	28.97	28.97	28.97
Volume Metered Standard, $V_{m(std)}$ (ft^3)	64.14	64.49	63.63
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	8.19	12.87	8.28
Percent Moisture, B_{ws} (%)	11.3	16.6	11.5
Moisture Saturation Point, B_{wsat} (%)	100	100	100
Dry Molecular Weight, M_d (lbs/lb mole)	30.35	30.34	30.35
Wet Molecular Weight, M_s (lbs/lb mole)	28.95	28.28	28.92
Gas Velocity, V_s (ft/sec)	67.7	68.4	67.7
Average Flowrate, Q_a (acfm)	728,867	736,617	729,760
Standard Flowrate, Q_{std} (scfm)	477,707	484,526	480,659
Dry Standard Flowrate, Q_{dstd} (dscfm)	423,755	404,070	425,486
Area of Nozzle, A_n (ft^2)	0.000207	0.000207	0.000207
Isokinetics (%)	104.9	110.6	103.6

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	<0.1	5.54	7.48	7.57
Back Half (ug)	<0.1	<0.1	<0.1	<0.1
Antimony - Sb		5.64	7.58	7.67
Concentration (ug/dscm)		3.11	4.15	4.26
Emission Rate (lb/mmBtu)		2.55E-06	3.54E-06	3.60E-06
Emission Rate (lb/hr)		0.00493	0.00628	0.00678
Front Half (ug)	<0.1	7.04	8.2	7.8
Back Half (ug)	<0.1	16.8	15.5	8.48
Arsenic - As		23.8	23.6	16.3
Concentration (ug/dscm)		13.1	12.9	9.03
Emission Rate (lb/mmBtu)		1.08E-05	1.10E-05	7.63E-06
Emission Rate (lb/hr)		0.0208	0.0196	0.0144
Front Half (ug)	<0.025	5.89	8.27	9.93
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		5.92	8.30	9.96
Concentration (ug/dscm)		3.26	4.54	5.52
Emission Rate (lb/mmBtu)		2.68E-06	3.88E-06	4.67E-06
Emission Rate (lb/hr)		0.00517	0.00687	0.00881
Front Half (ug)	<0.1	14.7	20.7	23.0
Back Half (ug)	<0.1	0.302	0.984	0.344
Cadmium - Cd		15.0	21.6	23.3
Concentration (ug/dscm)		8.26	11.8	13.0
Emission Rate (lb/mmBtu)		6.79E-06	1.01E-05	1.09E-05
Emission Rate (lb/hr)		0.0131	0.0179	0.0206
Front Half (ug)	1.88	222	264	302
Back Half (ug)	0.424	3.81	3.81	3.42
Chromium - Cr		226	267	305
Concentration (ug/dscm)		124	146	169
Emission Rate (lb/mmBtu)		1.02E-04	1.25E-04	1.43E-04
Emission Rate (lb/hr)		0.197	0.222	0.270
Front Half (ug)	<0.1	16.4	21.0	25.3
Back Half (ug)	0.141	<0.1	0.101	0.289
Cobalt - Co		16.5	21.1	25.6
Concentration (ug/dscm)		9.08	11.5	14.2
Emission Rate (lb/mmBtu)		7.47E-06	9.84E-06	1.20E-05
Emission Rate (lb/hr)		0.0144	0.0174	0.0226

Metals Lab Data Entry (μg)	Blank			
Front Half (μg)	0.200	40.1	57.0	65.3
Back Half (μg)	0.416	1.11	0.844	0.954
Lead - Pb		41.2	57.8	66.3
Concentration ($\mu\text{g}/\text{dscm}$)		22.7	31.7	36.8
Emission Rate (lb/mmBtu)		1.87E-05	2.71E-05	3.11E-05
Emission Rate (lb/hr)		0.0360	0.0479	0.0586
Front Half (μg)	4.27	167	220	250
Back Half (μg)	1.12	2.42	3.22	4.94
Manganese - Mn		169	223	255
Concentration ($\mu\text{g}/\text{dscm}$)		93.3	122	141
Emission Rate (lb/mmBtu)		7.67E-05	1.04E-04	1.20E-04
Emission Rate (lb/hr)		0.148	0.185	0.226
Front Half (μg)	1.06	139	128	143
Back Half (μg)	0.401	2.45	5.13	2.68
Nickel - Ni		141	133	146
Concentration ($\mu\text{g}/\text{dscm}$)		77.9	72.9	80.8
Emission Rate (lb/mmBtu)		6.41E-05	6.23E-05	6.83E-05
Emission Rate (lb/hr)		0.124	0.110	0.129
Front Half (μg)	<0.1	85.4	100	76.6
Back Half (μg)	<0.1	65.7	44.8	47.4
Selenium - Se		151	145	124
Concentration ($\mu\text{g}/\text{dscm}$)		83.2	79.4	68.8
Emission Rate (lb/mmBtu)		6.84E-05	6.78E-05	5.81E-05
Emission Rate (lb/hr)		0.132	0.120	0.110

Parameters	Run 1	Run 2	Run 3
Date	8/4/11	8/4/11	8/4/11
Start Time	7:19	10:09	13:11
Stop Time	9:58	11:54	15:54
Barometric Pressure, P _b (Inches Hg)	29.41	29.41	29.41
Un-Spiked			
Volume Metered, V _m (L)	43.55	42.28	40.82
Meter Temperature, T _m (°F)	95.8	104	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)	43.30	42.05	41.01
Meter Temperature, T _m (°F)	97.4	104	109
Gas Meter Correction Factor, Y _d	0.9902	0.9902	0.9902
Run Time, θ (minutes)	90	90	90
Ash Bonded Mercury Collected Un-Spiked, m (ng)	0.858	1.32	0.499
Oxidized Mercury Collected Un-Spiked, m (ng)	304	266	253
Elemental Mercury Collected Un-Spiked, m (ng)	20.4	43.5	40.4
Total Mercury Collected Un-Spiked, m (ng)	326	311	294
Total Mercury Collected Spiked/Paired, m (ng)	466	461	480
Mass of Mercury Spiked, S (ng)	175	175	175
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	40.47	38.72	37.17
Ash Bound Mercury Concentration Un-spiked Train, (µg/dscm)	0.0212	0.0341	0.0134
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	7.51	6.87	6.81
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	0.50	1.12	1.09
Total Mercury Concentration Un-spiked Train, (µg/dscm)	8.05	8.03	7.91
Volume Metered Spiked/Paired, V _{m(std)} (L)	39.90	38.29	37.03
Concentration Spiked/Paired Train, (µg/dscm)	11.7	12.0	13.0
Concentration Spiked Train Less Spike, (µg/dscm)	7.29	7.46	8.23
Concentration Recovered Spike, (µg/dscm)	3.62	4.00	5.04
Recovery, R (%)	82.5	87.5	106.7
Relative Deviation, RD (%)	5.00	3.70	1.96
Difference (µg/dscm)	0.767	0.574	0.317
Average Result (ug/dscm)	7.67	7.75	8.07
Average Recovery (%)	92.2		

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	8/4/2011	8/4/2011	8/4/2011
Start Time	7:19	10:08	13:11
Stop Time	9:03	11:57	15:06
Dimensions of Sample Location, D_s (in)	192	192	192
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.707	0.707	0.706
Barometric Pressure, P_b (Inches Hg)	29.41	29.41	29.41
Static Pressure, P_s (Inches H_2O)	-0.4	-0.4	-0.4
Pitot Coefficient, C_p	0.84	0.84	0.84
Sample Location Temperature, T_s ($^{\circ}F$)	130	130	130
Volume Metered, V_m (ft^3)	52.01	52.99	50.93
Meter Temperature, T_m ($^{\circ}F$)	105	114	114
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.12	1.14	1.15
Gas Meter Correction Factor, Y_d	1.0141	1.0141	1.0141
Carbon Dioxide (% dry)	12.8	12.8	13.1
Oxygen (% dry)	6.20	6.00	5.67
Weight of Water Collected, V_{wc} (g)	143.9	171.0	191.4
Silica Gel Net Weight, V_{wsg} (g)	34.7	21.7	11.0
Diameter of Nozzle, D_n (in)	0.230	0.230	0.230
Run Time, θ (minutes)	90	90	90

EPA METHODS 1-5B/202 RESULTS

Area of Sample Location, A_s (ft^2)	201	201	201
Stack Pressure Absolute (inches Hg)	29.38	29.38	29.38
Volume Metered Standard, $V_{m(std)}$ (ft^3)	48.61	48.68	46.83
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	8.42	9.09	9.54
Percent Moisture, B_{ws} (%)	14.8	15.7	16.9
Moisture Saturation Point, B_{wsat} (%)	15.3	15.3	15.4
Dry Molecular Weight, M_d (lbs/lb mole)	30.30	30.29	30.32
Wet Molecular Weight, M_s (lbs/lb mole)	28.48	28.40	28.42
Gas Velocity, V_s (ft/sec)	42.6	42.7	42.6
Average Flowrate, Q_a (acfm)	513,880	514,734	514,082
Standard Flowrate, Q_{std} (scfm)	451,663	452,285	451,585
Dry Standard Flowrate, Q_{dstd} (dscfm)	385,124	383,090	382,187
Area of Nozzle, A_n (ft^2)	0.000289	0.000289	0.000289
Isokinetics (%)	97.8	98.5	94.9
Front-Half Particulate (g)	0.0250	0.0224	0.00965
Concentration (grains/dscf)	0.00795	0.00708	0.00318
Emission Rate, F_d (lb/mmBtu)	0.0156	0.0142	0.00624
Emission Rate (lb/hr)	26.3	23.3	10.4
Condensible Particulate (g)	0.0293	0.0219	0.0450
Concentration (grains/dscf)	0.00928	0.00694	0.0148
Emission Rate, F_d (lb/mmBtu)	0.0182	0.0139	0.0291
Emission Rate (lb/hr)	30.7	22.8	48.6

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	8/4/2011	8/4/2011	8/4/2011
Start Time	7:19	10:08	13:11
Stop Time	9:23	12:31	15:36
Dimensions of Sample Location, D_s (in)	192	192	192
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.667	0.679	0.670
Barometric Pressure, P_b (Inches Hg)	29.41	29.41	29.41
Static Pressure, P_s (Inches H_2O)	-0.4	-0.4	-0.4
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)	90.96	95.19	96.57
Meter Temperature, T_m ($^{\circ}F$)	109	108	111
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.95	2.04	2.03
Gas Meter Correction Factor, Y_d	1.0159	1.0159	1.0159
Carbon Dioxide (% dry)	12.8	12.8	13.1
Oxygen (% dry)	6.20	6.00	5.67
Weight of Water Collected, V_{wc} (g)	272.3	178.3	229.9
Silica Gel Net Weight, V_{wsg} (g)	15.8	9.0	15.0
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)	201	201	201
Stack Pressure Absolute (inches Hg)	29.38	29.38	29.38
Volume Metered Standard, $V_{m(std)}$ (ft^3)	84.70	88.73	89.63
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	13.58	8.83	11.55
Percent Moisture, B_{ws} (%)	13.8	9.05	11.4
Moisture Saturation Point, B_{wsat} (%)	15.4	15.1	15.1
Dry Molecular Weight, M_d (lbs/lb mole)	30.30	30.29	30.32
Wet Molecular Weight, M_s (lbs/lb mole)	28.60	29.18	28.92
Gas Velocity, V_s (ft/sec)	40.1	40.4	40.0
Average Flowrate, Q_a (acfm)	484,021	487,969	483,147
Standard Flowrate, Q_{std} (scfm)	425,238	429,192	424,891
Dry Standard Flowrate, Q_{dstd} (dscfm)	366,612	390,498	376,549
Area of Nozzle, A_n (ft^2)	0.000398	0.000398	0.000398
Hydrogen Chloride (mg)	4.97	2.65	4.15
Concentration (lb/dscf)	1.29E-07	6.58E-08	1.02E-07
Concentration (ppmdv)	1.37	0.696	1.08
Emission Rate (lb/mmBtu)	0.00177	0.000925	0.00140
Emission Rate (lb/hr)	2.85	1.54	2.31
Hydrogen Fluoride (mg)	0.295	0.216	0.172
Concentration (lb/dscf)	7.68E-09	5.37E-09	4.23E-09
Concentration (ppmdv)	0.148	0.103	0.0815
Emission Rate (lb/mmBtu)	0.000105	0.0000754	0.0000581
Emission Rate (lb/hr)	0.169	0.126	0.0956

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	8/4/2011	8/4/2011	8/4/2011
Start Time	7:19	10:08	13:11
Stop Time	9:23	12:31	15:00
Dimensions of Sample Location, D_s (in)	192	192	192
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$)	0.702	0.701	0.716
Barometric Pressure, P_b (Inches Hg)	29.41	29.41	29.41
Static Pressure, P_s (Inches H_2O)	-0.4	-0.4	-0.4
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)	71.71	73.57	73.06
Meter Temperature, T_m ($^{\circ}F$)	104	106	107
Average Sample Pressure, ΔH_{avg} (in. H_2O)	1.17	1.15	1.19
Gas Meter Correction Factor, Y_d	0.9907	0.9907	0.9907
Carbon Dioxide (% dry)	12.8	12.8	13.1
Oxygen (% dry)	6.20	6.00	5.67
Weight of Water Collected, V_{wc} (g)	262.1	253.0	265.1
Silica Gel Net Weight, V_{wsg} (g)	25.1	14.3	17.7
Diameter of Nozzle, D_n (in)	0.230	0.230	0.230
Run Time, θ (minutes)	120	120	120

EPA METHODS 1-4 RESULTS

Area of Sample Location, A_s (ft^2)	201	201	201
Stack Pressure Absolute (inches Hg)	29.38	29.38	29.38
Volume Metered Standard, $V_{m(std)}$ (ft^3)	65.56	66.98	66.38
Volume of Water Vapor, $V_{w(std)}$ (ft^3)	13.54	12.60	13.33
Percent Moisture, B_{ws} (%)	17.1	15.8	16.7
Moisture Saturation Point, B_{wsat} (%)	15.1	15.1	15.1
Dry Molecular Weight, M_d (lbs/lb mole)	30.30	30.29	30.32
Wet Molecular Weight, M_s (lbs/lb mole)	28.44	28.43	28.47
Gas Velocity, V_s (ft/sec)	42.3	42.3	43.1
Average Flowrate, Q_a (acfm)	510,562	509,951	520,296
Standard Flowrate, Q_{std} (scfm)	449,127	448,463	457,690
Dry Standard Flowrate, Q_{dstd} (dscfm)	381,636	380,769	388,912
Area of Nozzle, A_n (ft^2)	0.000289	0.000289	0.000289
Isokinetics (%)	99.8	102.2	99.2

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	<0.1	1.54	2.48	1.48
Back Half (ug)	<0.1	<0.1	<0.1	<0.1
Antimony - Sb		1.64	2.58	1.58
Concentration (ug/dscm)		0.883	1.36	0.84
Emission Rate (lb/mmBtu)		7.55E-07	1.19E-06	7.21E-07
Emission Rate (lb/hr)		0.00126	0.00194	0.00122
Front Half (ug)	<0.1	12.6	13.5	12.8
Back Half (ug)	<0.1	0.985	0.735	0.416
Arsenic - As		13.6	14.2	13.2
Concentration (ug/dscm)		7.32	7.48	7.03
Emission Rate (lb/mmBtu)		6.25E-06	6.56E-06	6.03E-06
Emission Rate (lb/hr)		0.0105	0.0107	0.0102
Front Half (ug)	<0.025	0.765	0.696	0.706
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		0.790	0.721	0.731
Concentration (ug/dscm)		0.425	0.380	0.389
Emission Rate (lb/mmBtu)		3.64E-07	3.33E-07	3.34E-07
Emission Rate (lb/hr)		0.000608	0.000542	0.000567
Front Half (ug)	<0.1	3.93	3.79	3.93
Back Half (ug)	<0.1	0.646	0.140	0.292
Cadmium - Cd		4.58	3.92	4.22
Concentration (ug/dscm)		2.46	2.07	2.25
Emission Rate (lb/mmBtu)		2.11E-06	1.81E-06	1.93E-06
Emission Rate (lb/hr)		0.00352	0.00295	0.00327
Front Half (ug)	1.88	55.8	50.5	85.7
Back Half (ug)	0.424	1.75	3.85	1.21
Chromium - Cr		57.6	54.3	86.9
Concentration (ug/dscm)		31.0	28.6	46.2
Emission Rate (lb/mmBtu)		2.65E-05	2.51E-05	3.97E-05
Emission Rate (lb/hr)		0.0443	0.0409	0.0674
Front Half (ug)	<0.1	2.63	2.25	3.17
Back Half (ug)	0.141	<0.1	0.101	0.231
Cobalt - Co		2.73	2.35	3.40
Concentration (ug/dscm)		1.47	1.24	1.81
Emission Rate (lb/mmBtu)		1.26E-06	1.09E-06	1.55E-06
Emission Rate (lb/hr)		0.00210	0.00177	0.00264

Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	0.200	10.3	7.63	7.45
Back Half (ug)	0.416	0.957	0.891	0.557
Lead - Pb		11.3	8.52	8.01
Concentration (ug/dscm)		6.06	4.49	4.26
Emission Rate (lb/mmBtu)		5.18E-06	3.94E-06	3.65E-06
Emission Rate (lb/hr)		0.00867	0.00640	0.00621
Front Half (ug)	4.27	21.8	21.2	31
Back Half (ug)	1.12	2.50	3.02	2.10
Manganese - Mn		24.3	24.2	33.1
Concentration (ug/dscm)		13.1	12.8	17.6
Emission Rate (lb/mmBtu)		1.12E-05	1.12E-05	1.51E-05
Emission Rate (lb/hr)		0.0187	0.0182	0.0257
Front Half (ug)	1.06	51.7	54.7	62.2
Back Half (ug)	0.401	2.41	14.1	1.69
Nickel - Ni		54.1	68.7	63.9
Concentration (ug/dscm)		29.1	36.2	34.0
Emission Rate (lb/mmBtu)		2.49E-05	3.18E-05	2.91E-05
Emission Rate (lb/hr)		0.0417	0.0517	0.0495
Front Half (ug)	<0.1	58.2	67.2	60.9
Back Half (ug)	<0.1	15.4	11.8	7.28
Selenium - Se		73.6	78.9	68.2
Concentration (ug/dscm)		39.6	41.6	36.3
Emission Rate (lb/mmBtu)		3.39E-05	3.65E-05	3.11E-05
Emission Rate (lb/hr)		0.0567	0.0593	0.0528

Parameters	Run 1	Run 2	Run 3
Date	8/4/11	8/4/11	8/4/11
Start Time	7:19	10:08	13:11
Stop Time	9:04	11:56	15:00
Barometric Pressure, P _b (Inches Hg)	29.41	29.41	29.41
Un-Spiked			
Volume Metered, V _m (L)	36.07	36.04	36.07
Meter Temperature, T _m (°F)	110	111	114
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)	36.09	36.07	36.08
Meter Temperature, T _m (°F)	112	112	115
Gas Meter Correction Factor, Y _d	0.9985	0.9985	0.9985
Run Time, θ (minutes)	90	90	90
Ash Bonded Mercury Collected Un-Spiked, m (ng)	6.93	7.84	10.5
Oxidized Mercury Collected Un-Spiked, m (ng)	9.93	8.71	9.27
Elemental Mercury Collected Un-Spiked, m (ng)	7.84	9.75	7.97
Total Mercury Collected Un-Spiked, m (ng)	24.70	26.30	27.70
Total Mercury Collected Spiked/Paired, m (ng)	48.9	45.0	44.8
Mass of Mercury Spiked, S (ng)	20.0	20.0	20.0
RESULTS			
Volume Metered Un-Spiked, V _{m(std)} (L)	33.05	32.99	32.84
Ash Bound Mercury Concentration Un-spiked Train, (µg/dscm)	0.210	0.238	0.320
Oxidized Mercury Concentration Un-spiked Train, (µg/dscm)	0.300	0.264	0.282
Elemental Mercury Concentration Un-spiked Train, (µg/dscm)	0.237	0.296	0.243
Total Mercury Concentration Un-spiked Train, (µg/dscm)	0.747	0.797	0.843
Volume Metered Spiked/Paired, V _{m(std)} (L)	32.70	32.66	32.49
Concentration Spiked/Paired Train, (µg/dscm)	1.50	1.38	1.38
Concentration Spiked Train Less Spike, (µg/dscm)	0.884	0.765	0.763
Concentration Recovered Spike, (µg/dscm)	0.748	0.580	0.535
Recovery, R (%)	122	94.8	87.0
Relative Deviation, RD (%)	8.36	2.04	4.99
Difference (µg/dscm)	0.136	0.0319	0.0801
Average Result (µg/dscm)	0.816	0.781	0.803
Average Recovery (%)	101		

Fd Parameters	Sample 1	Sample 2	Sample 3
Hydrogen (%)	5.12	5.27	5.18
Carbon (%)	73.85	75.10	74.03
Sulfur (%)	3.07	3.66	3.49
Nitrogen (%)	1.59	1.45	1.48
Oxygen (%)	6.96	4.94	5.03
Heating Value (Btu/lb)	13,544	13,388	13,185

Result	Sample 1	Sample 2	Sample 3
Fd (dscf/mmBtu)	9,628	10,017	10,012
Fc (dscf/mmBtu)	1,750	1,801	1,802
Fo	1.150	1.163	1.161