

## ***Parameters***

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/29/2011	7/29/2011	7/29/2011
Start Time	7:15	9:48	12:21
Stop Time	9:24	12:01	14:38
Dimensions of Sample Location, $D_s$ (in)	162 X 198	162 X 198	162 X 198
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$ )	0.542	0.542	0.539
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
Static Pressure, $P_s$ (Inches $H_2O$ )	-12.0	-12.0	-12.0
Pitot Coefficient, $C_p$	0.84	0.84	0.84
Sample Location Temperature, $T_s$ ( $^{\circ}F$ )	328	333	328
Volume Metered, $V_m$ ( $ft^3$ )	76.31	76.86	73.90
Meter Temperature, $T_m$ ( $^{\circ}F$ )	97.9	104.5	109.8
Average Sample Pressure, $\Delta H_{avg}$ (in. $H_2O$ )	1.17	1.11	1.11
Gas Meter Correction Factor, $Y_d$	1.0141	1.0141	1.0141
Carbon Dioxide (% dry)	11.6	11.6	11.9
Oxygen (% dry)	7.72	7.61	7.27
Weight of Water Collected, $V_{wc}$ (g)	45.6	75.7	101.7
Silica Gel Net Weight, $V_{wsg}$ (g)	51.8	16.1	16.1
Diameter of Nozzle, $D_n$ (in)	0.275	0.275	0.275
Run Time, $\theta$ (minutes)	130	130	130

**EPA METHODS 1-4 RESULTS**

Area of Sample Location, $A_s$ ( $ft^2$ )	223	223	223
Stack Pressure Absolute (inches Hg)	28.68	28.68	28.68
Volume Metered Standard, $V_{m(std)}$ ( $ft^3$ )	72.53	72.19	68.77
Volume of Water Vapor, $V_{w(std)}$ ( $ft^3$ )	4.59	4.33	5.55
Percent Moisture, $B_{ws}$ (%)	5.95	5.66	7.47
Moisture Saturation Point, $B_{wsat}$ (%)	100	100	100
Dry Molecular Weight, $M_d$ (lbs/lb mole)	30.16	30.16	30.19
Wet Molecular Weight, $M_s$ (lbs/lb mole)	29.44	29.47	29.28
Gas Velocity, $V_s$ (ft/sec)	37.6	37.7	37.5
Average Flowrate, $Q_a$ (acfm)	503,024	503,814	500,914
Standard Flowrate, $Q_{std}$ (scfm)	322,817	321,520	321,714
Dry Standard Flowrate, $Q_{dstd}$ (dscfm)	303,717	303,454	297,792
Area of Nozzle, $A_n$ ( $ft^2$ )	0.000412	0.000412	0.000412
Hydrogen Chloride (mg)	399	442	610
Concentration (lb/dscf)	1.21E-05	1.35E-05	1.96E-05
Concentration (ppmdv)	128	143	207
Emission Rate (lb/mmBtu)	0.190	0.211	0.296
Emission Rate (lb/hr)	221	246	349
Hydrogen Fluoride (mg)	73.2	94.8	130
Concentration (lb/dscf)	2.22E-06	2.90E-06	4.17E-06
Concentration (ppmdv)	42.8	55.8	80.3
Emission Rate (lb/mmBtu)	0.0348	0.0453	0.0631
Emission Rate (lb/hr)	40.5	52.7	74.5

Parameters	Run 1	Run 2	Run 3
Date	7/29/11	7/29/11	7/29/11
Start Time	7:15	9:48	12:21
Stop Time	8:52	11:26	13:59
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
<b>Un-Spiked</b>			
Volume Metered, $V_m$ (L)	36.16	36.00	36.00
Meter Temperature, $T_m$ (°F)	110	115	119
Gas Meter Correction Factor, $Y_d$	0.9958	0.9958	0.9958
Run Time, $\theta$ (minutes)	90	90	90
<b>Spiked/Paired</b>			
Volume Metered, $V_m$ (L)	36.18	35.99	36.03
Meter Temperature, $T_m$ (°F)	112	117	121
Gas Meter Correction Factor, $Y_d$	0.9902	0.9902	0.9902
Run Time, $\theta$ (minutes)	90	90	90
Total Mercury Collected Un-Spiked, m (ng)	259	240	331
Total Mercury Collected Spiked/Paired, m (ng)	484	445	379
Mass of Mercury Spiked, S (ng)	175	175	175
<b>RESULTS</b>			
Volume Metered Un-Spiked, $V_{m(std)}$ (L)	32.94	32.51	32.27
Concentration Un-spiked Train, ( $\mu\text{g/dscm}$ )	7.86	7.38	10.3
Volume Metered Spiked/Paired, $V_{m(std)}$ (L)	32.66	32.23	32.02
Concentration Spiked/Paired Train, ( $\mu\text{g/dscm}$ )	14.8	13.8	11.8
Concentration Spiked Train Less Spike, ( $\mu\text{g/dscm}$ )	9.46	8.38	6.37
Concentration Recovered Spike, ( $\mu\text{g/dscm}$ )	6.96	6.43	1.58
Recovery, R (%)	130	118	28.9
Relative Deviation, RD (%)	9.22	6.31	23.4
Difference ( $\mu\text{g/dscm}$ )	1.60	0.995	3.89
Average Result ( $\mu\text{g/dscm}$ )	8.66	7.88	8.31
Average Recovery (%)	92.3		

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/29/2011	7/29/2011	7/29/2011
Start Time	7:15	9:48	12:25
Stop Time	8:30	11:07	14:36
Dimensions of Sample Location, $D_s$ (in)	162 X 198	162 X 198	162 X 198
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$ )	0.550	0.577	0.590
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
Static Pressure, $P_s$ (Inches $H_2O$ )	-10.5	-10.5	-10.5
Pitot Coefficient, $C_p$	0.84	0.84	0.84
Sample Location Temperature, $T_s$ ( $^{\circ}F$ )	265	266	264
Volume Metered, $V_m$ ( $ft^3$ )	69.84	70.46	71.07
Meter Temperature, $T_m$ ( $^{\circ}F$ )	109	108	106
Average Sample Pressure, $\Delta H_{avg}$ (in. $H_2O$ )	0.991	0.975	1.01
Gas Meter Correction Factor, $Y_d$	0.9907	0.9907	0.9907
Carbon Dioxide (% dry)	11.6	11.6	11.9
Oxygen (% dry)	7.72	7.61	7.27
Weight of Water Collected, $V_{wc}$ (g)	87.7	120.6	44.5
Silica Gel Net Weight, $V_{wsg}$ (g)	-3.0	14.0	17.2
Diameter of Nozzle, $D_n$ (in)	0.275	0.250	0.250
Run Time, $\theta$ (minutes)	130	130	130

**EPA METHODS 1-4 RESULTS**

Area of Sample Location, $A_s$ ( $ft^2$ )	223	223	223
Stack Pressure Absolute (inches Hg)	28.79	28.79	28.79
Volume Metered Standard, $V_{m(std)}$ ( $ft^3$ )	63.57	64.24	65.08
Volume of Water Vapor, $V_{w(std)}$ ( $ft^3$ )	3.99	6.35	2.91
Percent Moisture, $B_{ws}$ (%)	5.91	8.99	4.28
Moisture Saturation Point, $B_{wsat}$ (%)	100	100	100
Dry Molecular Weight, $M_d$ (lbs/lb mole)	30.16	30.16	30.19
Wet Molecular Weight, $M_s$ (lbs/lb mole)	29.45	29.07	29.67
Gas Velocity, $V_s$ (ft/sec)	36.6	38.6	39.0
Average Flowrate, $Q_a$ (acfm)	488,518	516,078	520,838
Standard Flowrate, $Q_{std}$ (scfm)	342,069	360,869	365,533
Dry Standard Flowrate, $Q_{dstd}$ (dscfm)	321,978	328,555	350,033
Area of Nozzle, $A_n$ ( $ft^2$ )	0.000412	0.000341	0.000341
Hydrogen Chloride (mg)	462	516	528
Concentration (lb/dscf)	1.60E-05	1.77E-05	1.79E-05
Concentration (ppmdv)	169	187	189
Emission Rate (lb/mmBtu)	0.251	0.277	0.271
Emission Rate (lb/hr)	310	349	376
Hydrogen Fluoride (mg)	85.3	75.2	69.6
Concentration (lb/dscf)	2.96E-06	2.58E-06	2.36E-06
Concentration (ppmdv)	57.0	49.7	45.4
Emission Rate (lb/mmBtu)	0.0463	0.0403	0.0357
Emission Rate (lb/hr)	57.2	50.9	49.5

<b>Parameters</b>	<b>Run 1</b>	<b>Run 2</b>	<b>Run 3</b>
Date	7/29/11	7/29/11	7/29/11
Start Time	7:15	9:48	12:25
Stop Time	8:48	11:20	13:57
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
<b>Un-Spiked</b>			
Volume Metered, $V_m$ (L)	36.33	36.49	36.70
Meter Temperature, $T_m$ (°F)	121	119	114
Gas Meter Correction Factor, $Y_d$	1.0072	1.0072	1.0072
Run Time, $\theta$ (minutes)	90	90	90
<b>Spiked/Paired</b>			
Volume Metered, $V_m$ (L)	36.51	36.98	36.17
Meter Temperature, $T_m$ (°F)	121	119	114
Gas Meter Correction Factor, $Y_d$	0.9985	0.9985	0.9985
Run Time, $\theta$ (minutes)	90	90	90
Total Mercury Collected Un-Spiked, m (ng)	274	267	273
Total Mercury Collected Spiked/Paired, m (ng)	436	449	458
Mass of Mercury Spiked, S (ng)	175	175	175
<b>RESULTS</b>			
Volume Metered Un-Spiked, $V_{m(std)}$ (L)	32.85	33.10	33.58
Concentration Un-spiked Train, ( $\mu\text{g/dscm}$ )	8.34	8.07	8.13
Volume Metered Spiked/Paired, $V_{m(std)}$ (L)	32.72	33.26	32.79
Concentration Spiked/Paired Train, ( $\mu\text{g/dscm}$ )	13.3	13.5	14.0
Concentration Spiked Train Less Spike, ( $\mu\text{g/dscm}$ )	7.98	8.24	8.63
Concentration Recovered Spike, ( $\mu\text{g/dscm}$ )	4.98	5.44	5.84
Recovery, R (%)	93.2	103	109
Relative Deviation, RD (%)	2.24	1.06	2.99
Difference ( $\mu\text{g/dscm}$ )	0.366	0.173	0.501
Average Result ( $\mu\text{g/dscm}$ )	8.16	8.15	8.38
Average Recovery (%)	102		

EPA Methods 1-5B/202 Parameters	Run 1	Run 2	Run 3
Date	7/29/2011	7/29/2011	7/29/2011
Start Time	7:15	9:48	12:25
Stop Time	9:25	11:58	14:35
Dimensions of Sample Location, $D_s$ (in)	180	180	180
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$ )	1.39	1.39	1.40
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
Static Pressure, $P_s$ (Inches $H_2O$ )	-0.1	-0.1	-0.1
Pitot Coefficient, $C_p$	0.84	0.84	0.84
Sample Location Temperature, $T_s$ ( $^{\circ}F$ )	128	129	128
Volume Metered, $V_m$ ( $ft^3$ )	63.03	61.93	63.30
Meter Temperature, $T_m$ ( $^{\circ}F$ )	91.9	90.5	94.4
Average Sample Pressure, $\Delta H_{avg}$ (in. $H_2O$ )	1.73	1.73	1.77
Gas Meter Correction Factor, $Y_d$	1.0034	1.0034	1.0034
Carbon Dioxide (% dry)	11.5	11.5	11.5
Oxygen (% dry)	6.8	6.8	6.8
Weight of Water Collected, $V_{wc}$ (g)	175.8	185.7	248.1
Silica Gel Net Weight, $V_{wsg}$ (g)	11.0	16.6	7.9
Diameter of Nozzle, $D_n$ (in)	0.184	0.184	0.184
Run Time, $\theta$ (minutes)	90	90	90

**EPA METHODS 1-5B/202 RESULTS**

Area of Sample Location, $A_s$ ( $ft^2$ )	177	177	177
Stack Pressure Absolute (inches Hg)	29.55	29.55	29.55
Volume Metered Standard, $V_{m(std)}$ ( $ft^3$ )	60.01	59.12	60.00
Volume of Water Vapor, $V_{w(std)}$ ( $ft^3$ )	8.81	9.54	12.07
Percent Moisture, $B_{ws}$ (%)	12.8	13.9	16.7
Moisture Saturation Point, $B_{wsat}$ (%)	14.3	14.7	14.7
Dry Molecular Weight, $M_d$ (lbs/lb mole)	30.11	30.11	30.11
Wet Molecular Weight, $M_s$ (lbs/lb mole)	28.56	28.43	28.33
Gas Velocity, $V_s$ (ft/sec)	83.3	83.3	84.4
Average Flowrate, $Q_a$ (acfm)	882,945	883,704	894,835
Standard Flowrate, $Q_{std}$ (scfm)	783,356	782,697	792,780
Dry Standard Flowrate, $Q_{dstd}$ (dscfm)	683,371	674,225	676,714
Area of Nozzle, $A_n$ ( $ft^2$ )	0.000185	0.000185	0.000185
Isokinetics (%)	93.4	93.3	94.3
Front-Half Particulate (g)	0.0083	0.0079	0.0077
Concentration (grains/dscf)	0.00215	0.00206	0.00197
Emission Rate, $F_d$ (lb/mmBtu)	0.00448	0.00434	0.00412
Emission Rate (lb/hr)	12.6	11.9	11.4
Condensible Particulate (g)	0.0137	0.0291	0.0219
Concentration (grains/dscf)	0.00351	0.00758	0.00563
Emission Rate, $F_d$ (lb/mmBtu)	0.00733	0.0160	0.0118
Emission Rate (lb/hr)	20.6	43.8	32.7

EPA Methods 1-4 Parameters	Run 1	Run 2	Run 3
Date	7/29/2011	7/29/2011	7/29/2011
Start Time	7:15	9:48	12:25
Stop Time	9:35	12:08	14:45
Dimensions of Sample Location, $D_s$ (in)	180	180	180
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$ )	1.36	1.36	1.38
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
Static Pressure, $P_s$ (Inches $H_2O$ )	-0.1	-0.1	-0.1
Pitot Coefficient, $C_p$	0.84	0.84	0.84
Sample Location Temperature, $T_s$ ( $^{\circ}F$ )	130	130	130
Volume Metered, $V_m$ ( $ft^3$ )	101.31	97.09	102.11
Meter Temperature, $T_m$ ( $^{\circ}F$ )	99.5	103	105
Average Sample Pressure, $\Delta H_{avg}$ (in. $H_2O$ )	2.23	2.22	2.28
Gas Meter Correction Factor, $Y_d$	0.9976	0.9976	0.9976
Carbon Dioxide (% dry)	11.6	11.6	11.9
Oxygen (% dry)	7.72	7.61	7.27
Weight of Water Collected, $V_{wc}$ (g)	329.5	251.0	280.4
Silica Gel Net Weight, $V_{wsg}$ (g)	14.0	56.0	21.6
Diameter of Nozzle, $D_n$ (in)	0.194	0.194	0.194
Run Time, $\theta$ (minutes)	120	120	120

**EPA METHODS 1-4 RESULTS**

Area of Sample Location, $A_s$ ( $ft^2$ )	177	177	177
Stack Pressure Absolute (inches Hg)	29.55	29.55	29.55
Volume Metered Standard, $V_{m(std)}$ ( $ft^3$ )	94.71	90.26	94.59
Volume of Water Vapor, $V_{w(std)}$ ( $ft^3$ )	16.20	14.48	14.24
Percent Moisture, $B_{ws}$ (%)	14.6	13.8	13.1
Moisture Saturation Point, $B_{wsat}$ (%)	15.1	15.2	15.2
Dry Molecular Weight, $M_d$ (lbs/lb mole)	30.16	30.16	30.19
Wet Molecular Weight, $M_s$ (lbs/lb mole)	28.39	28.48	28.60
Gas Velocity, $V_s$ (ft/séc)	81.7	81.5	82.7
Average Flowrate, $Q_a$ (acfm)	866,333	864,274	876,418
Standard Flowrate, $Q_{std}$ (scfm)	766,010	763,974	774,599
Dry Standard Flowrate, $Q_{dstd}$ (dscfm)	654,404	658,653	673,517
Area of Nozzle, $A_n$ ( $ft^2$ )	0.000205	0.000205	0.000205
Hydrogen Chloride (mg)	1.15	0.948	0.625
Concentration (lb/dscf)	2.68E-08	2.32E-08	1.46E-08
Concentration (ppmdv)	0.283	0.245	0.154
Emission Rate (lb/mmBtu)	0.000419	0.000362	0.000221
Emission Rate (lb/hr)	1.05	0.915	0.589
Hydrogen Fluoride (mg)	0.0785	0.0310	0.0365
Concentration (lb/dscf)	1.83E-09	7.57E-10	8.51E-10
Concentration (ppmdv)	0.0352	0.0146	0.0164
Emission Rate (lb/mmBtu)	0.0000286	0.0000118	0.0000129
Emission Rate (lb/hr)	0.0718	0.0299	0.0344

<b>EPA Methods 1-4 Parameters</b>	<b>Run 1</b>	<b>Run 2</b>	<b>Run 3</b>
Date	7/29/2011	7/29/2011	7/29/2011
Start Time	7:15	9:48	12:25
Stop Time	9:35	12:08	14:45
Dimensions of Sample Location, $D_s$ (in)	180	180	180
Velocity Pressure, $\Delta P^{1/2}$ avg (in. $H_2O^{1/2}$ )	1.41	1.38	1.41
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
Static Pressure, $P_s$ (Inches $H_2O$ )	-0.1	-0.1	-0.1
Pitot Coefficient, $C_p$	0.84	0.84	0.84
Sample Location Temperature, $T_s$ ( $^{\circ}F$ )	128	129	129
Volume Metered, $V_m$ ( $ft^3$ )	70.70	69.45	71.11
Meter Temperature, $T_m$ ( $^{\circ}F$ )	97.3	101	104
Average Sample Pressure, $\Delta H_{avg}$ (in. $H_2O$ )	1.06	1.02	1.07
Gas Meter Correction Factor, $Y_d$	0.9952	0.9952	0.9952
Carbon Dioxide (% dry)	11.6	11.6	11.9
Oxygen (% dry)	7.72	7.61	7.27
Weight of Water Collected, $V_{wc}$ (g)	219.4	225.5	221.1
Silica Gel Net Weight, $V_{wsg}$ (g)	11.1	14.3	12.6
Diameter of Nozzle, $D_n$ (in)	0.160	0.160	0.160
Run Time, $\theta$ (minutes)	120	120	120

**EPA METHODS 1-4 RESULTS**

Area of Sample Location, $A_s$ ( $ft^2$ )	177	177	177
Stack Pressure Absolute (inches Hg)	29.55	29.55	29.55
Volume Metered Standard, $V_{m(std)}$ ( $ft^3$ )	66.01	64.46	65.64
Volume of Water Vapor, $V_{w(std)}$ ( $ft^3$ )	10.87	11.31	11.02
Percent Moisture, $B_{ws}$ (%)	14.1	14.9	14.4
Moisture Saturation Point, $B_{wsat}$ (%)	14.6	14.8	14.9
Dry Molecular Weight, $M_d$ (lbs/lb mole)	30.16	30.16	30.19
Wet Molecular Weight, $M_s$ (lbs/lb mole)	28.45	28.36	28.44
Gas Velocity, $V_s$ (ft/sec)	84.8	83.1	84.7
Average Flowrate, $Q_a$ (acfm)	899,605	880,747	898,257
Standard Flowrate, $Q_{std}$ (scfm)	797,345	779,747	795,137
Dry Standard Flowrate, $Q_{dstd}$ (dscfm)	684,896	664,298	681,118
Area of Nozzle, $A_n$ ( $ft^2$ )	0.000140	0.000140	0.000140
Isokinetics (%)	101.7	102.4	101.7



Metals Lab Data Entry (µg)	Blank	Run 1	Run 2	Run 3
Front Half (ug)	<0.1	0.316	0.285	1.32
Back Half (ug)	<0.1	<0.1	<0.1	<0.1
Antimony - Sb		0.416	0.385	1.42
Concentration (ug/dscm)		0.223	0.211	0.764
Emission Rate (lb/mmBtu)		2.17E-07	2.06E-07	7.23E-07
Emission Rate (lb/hr)		0.000571	0.000525	0.00195
Front Half (ug)	<0.1	6.67	4.38	3.10
Back Half (ug)	<0.1	0.587	0.866	0.960
Arsenic - As		7.26	5.24	4.06
Concentration (ug/dscm)		3.88	2.87	2.18
Emission Rate (lb/mmBtu)		3.79E-06	2.80E-06	2.07E-06
Emission Rate (lb/hr)		0.0100	0.00714	0.00557
Front Half (ug)	<0.025	0.085	0.0525	0.044
Back Half (ug)	<0.025	<0.025	<0.025	<0.025
Beryllium - Be		0.110	0.0775	0.0690
Concentration (ug/dscm)		0.0588	0.0425	0.0371
Emission Rate (lb/mmBtu)		5.75E-08	4.14E-08	3.51E-08
Emission Rate (lb/hr)		0.000151	0.000106	0.0000947
Front Half (ug)	<0.1	0.256	0.140	0.141
Back Half (ug)	<0.1	<0.1	1.13	<0.1
Cadmium - Cd		0.356	1.27	0.241
Concentration (ug/dscm)		0.190	0.696	0.130
Emission Rate (lb/mmBtu)		1.86E-07	6.79E-07	1.23E-07
Emission Rate (lb/hr)		0.000489	0.00173	0.000331
Front Half (ug)	2.17	3.68	2.53	5.73
Back Half (ug)	0.559	0.810	2.03	1.33
Chromium - Cr		4.49	4.55	7.06
Concentration (ug/dscm)		2.40	2.49	3.80
Emission Rate (lb/mmBtu)		2.35E-06	2.43E-06	3.59E-06
Emission Rate (lb/hr)		0.00616	0.00620	0.00969
Front Half (ug)	<0.1	0.293	0.168	0.169
Back Half (ug)	0.18	<0.1	<0.1	<0.1
Cobalt - Co		0.393	0.268	0.269
Concentration (ug/dscm)		0.210	0.147	0.145
Emission Rate (lb/mmBtu)		2.05E-07	1.43E-07	1.37E-07
Emission Rate (lb/hr)		0.000539	0.000365	0.000369

<b>Metals Lab Data Entry (µg)</b>	<b>Blank</b>	<b>Run 1</b>	<b>Run 2</b>	<b>Run 3</b>
Front Half (ug)	0.197	4.33	2.38	1.81
Back Half (ug)	0.372	0.459	0.980	0.818
Lead - Pb		4.79	3.36	2.63
Concentration (ug/dscm)		2.56	1.84	1.41
Emission Rate (lb/mmBtu)		2.50E-06	1.80E-06	1.34E-06
Emission Rate (lb/hr)		0.00657	0.00458	0.00361
Front Half (ug)	4.97	12.1	4.20	4.56
Back Half (ug)	1.41	1.95	3.46	2.75
Manganese - Mn		14.1	7.66	7.31
Concentration (ug/dscm)		7.52	4.20	3.93
Emission Rate (lb/mmBtu)		7.34E-06	4.09E-06	3.72E-06
Emission Rate (lb/hr)		0.0193	0.0104	0.0100
Front Half (ug)	1.17	4.39	3.36	5.90
Back Half (ug)	0.313	0.887	1.72	1.95
Nickel - Ni		5.28	5.07	7.85
Concentration (ug/dscm)		2.82	2.78	4.22
Emission Rate (lb/mmBtu)		2.76E-06	2.71E-06	3.99E-06
Emission Rate (lb/hr)		0.00724	0.00691	0.0108
Front Half (ug)	<0.1	91.2	77.0	53.3
Back Half (ug)	<0.1	19.5	26.3	26.2
Selenium - Se		111	103	79.5
Concentration (ug/dscm)		59.2	56.5	42.8
Emission Rate (lb/mmBtu)		5.78E-05	5.52E-05	4.05E-05
Emission Rate (lb/hr)		0.152	0.141	0.109

Parameters	Run 1	Run 2	Run 3
Date	7/29/11	7/29/11	7/29/11
Start Time	7:15	9:48	12:25
Stop Time	9:25	11:26	13:57
Barometric Pressure, $P_b$ (Inches Hg)	29.56	29.56	29.56
<b>Un-Spiked</b>			
Volume Metered, $V_m$ (L)	42.16	42.70	42.70
Meter Temperature, $T_m$ ( $^{\circ}$ F)	103	109	111
Gas Meter Correction Factor, $Y_d$	0.9994	0.9994	0.9994
Run Time, $\theta$ (minutes)	90	90	90
<b>Spiked/Paired</b>			
Volume Metered, $V_m$ (L)	42.24	43.36	42.76
Meter Temperature, $T_m$ ( $^{\circ}$ F)	104	110	112
Gas Meter Correction Factor, $Y_d$	1.0017	1.0017	1.0017
Run Time, $\theta$ (minutes)	90	90	90
Ash Bonded Mercury Collected Un-Spiked, m (ng)	0	0	0
Oxidized Mercury Collected Un-Spiked, m (ng)	4.09	4.23	5.76
Elemental Mercury Collected Un-Spiked, m (ng)	111	93.5	93.4
Total Mercury Collected Un-Spiked, m (ng)	115	97.8	99.1
Total Mercury Collected Spiked/Paired, m (ng)	212	203	199
Mass of Mercury Spiked, S (ng)	100	100	100
<b>RESULTS</b>			
Volume Metered Un-Spiked, $V_{m(std)}$ (L)	39.05	39.14	38.98
Ash Bound Mercury Concentration Un-spiked Train, ( $\mu$ g/dscm)	0	0	0
Oxidized Mercury Concentration Un-spiked Train, ( $\mu$ g/dscm)	0.105	0.108	0.148
Elemental Mercury Concentration Un-spiked Train, ( $\mu$ g/dscm)	2.84	2.39	2.40
Total Mercury Concentration Un-spiked Train, ( $\mu$ g/dscm)	2.94	2.50	2.54
Volume Metered Spiked/Paired, $V_{m(std)}$ (L)	39.1	39.7	39.0
Concentration Spiked/Paired Train, ( $\mu$ g/dscm)	5.42	5.11	5.10
Concentration Spiked Train Less Spike, ( $\mu$ g/dscm)	2.86	2.59	2.54
Concentration Recovered Spike, ( $\mu$ g/dscm)	2.48	2.61	2.56
Recovery, R (%)	96.8	104	99.8
Relative Deviation, RD (%)	1.39	1.83	0.124
Difference ( $\mu$ g/dscm)	0.0808	0.0933	0.00628
Average Result ( $\mu$ g/dscm)	2.90	2.55	2.54
Average Recovery (%)	100		

<b>Fd Parameters</b>	<b>Sample 1</b>	<b>Sample 2</b>	<b>Sample 3</b>
Hydrogen (%)	4.83	5.03	4.67
Carbon (%)	73.83	72.77	65.92
Sulfur (%)	3.59	3.33	3.24
Nitrogen (%)	1.51	1.48	1.42
Oxygen (%)	8.24	8.39	8.46
Heating Value (Btu/lb)	13,080	12,867	11,740

  

<b>Result</b>	<b>Sample 1</b>	<b>Sample 2</b>	<b>Sample 3</b>
Fd (dscf/mmBtu)	9,863	9,940	9,882