

Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/15/2011
Filter ID	m-15
V_d	1.0159
Pitot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12071
Train Type	Impinger
Train ID	IB-A
P_1 (Inches Hg)	29.56
P_2 (Inches H ₂ O)	-16.5
Start Time	8:08
Stop Time	9:39

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final wt (g)	Tare wt (g)	Net wt (g)
Impinger 1	630.0	530.0	100.0
Impinger 2	721.0	724.0	-3.0
Impinger 3	619.0	600.0	19.0
Rinse		50.0	-50.0
Silica Gel	960.0	950.0	10.0
Weight of Water Collected, $V_{w,0}$ (g)			66.0
Silica Gel Net Weight, $V_{w,sg}$ (g)			10.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.3	NA	7.00

Run 1

Traverse Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V_s (ft/sec)	Volume Metered V_{msd} (ft ³)	Isokinetics (%)
	Elapsed Time										
4-1	3.25	0.41	1.10	52.54	293	90	90	0.640	43.6	1719	95.0
1-2	6.50	0.42	1.10	54.47	296	91	91	0.648	44.2	1861	101.8
4-3	9.75	0.45	1.20	56.33	309	92	92	0.671	46.2	1790	95.5
4-4	13.00	0.47	1.20	58.26	326	94	92	0.686	47.7	1954	97.5
4-5	16.25	0.53	1.40	60.31	326	96	93	0.728	50.7	1985	97.6
4-6	19.50	0.51	1.40	62.35	327	98	93	0.714	49.7	1962	96.9
4-7	22.75	0.44	1.20	64.10	325	99	93	0.663	46.1	1872	91.1
3-1	26.00	0.49	1.30	66.06	326	100	94	0.700	48.7	1870	96.6
3-2	29.25	0.53	1.40	68.11	326	102	94	0.728	50.7	1960	97.0
3-3	32.50	0.57	1.50	70.22	326	104	96	0.765	52.0	2002	96.0
3-4	35.75	0.60	1.60	72.43	327	105	97	0.775	54.0	2095	97.9
3-5	39.00	0.59	1.60	74.66	328	105	98	0.769	53.5	2112	98.0
3-6	42.25	0.59	1.60	76.87	326	106	99	0.768	53.5	2090	98.4
3-7	45.50	0.55	1.50	79.04	326	107	99	0.742	51.6	2049	95.0
2-1	48.75	0.53	1.40	81.31	327	107	100	0.725	50.7	2141	106.3
2-2	52.00	0.59	1.60	83.48	326	108	100	0.768	53.5	2046	90.3
2-3	55.25	0.68	1.80	86.00	326	109	102	0.825	57.4	2371	104.0
2-4	58.50	0.68	1.80	88.46	327	109	102	0.825	57.4	2315	101.6
2-5	61.75	0.64	1.70	90.75	327	111	103	0.800	55.7	2149	97.2
2-6	65.00	0.59	1.60	92.87	327	113	104	0.765	52.5	1983	92.2
2-7	68.25	0.51	1.40	94.99	326	113	104	0.714	49.7	1982	100.4
1-1	71.50	0.47	1.20	97.01	325	113	104	0.680	47.7	1985	98.5
1-2	74.75	0.5	1.30	98.89	325	113	105	0.707	49.2	1756	85.7
1-3	78.00	0.64	1.70	101.42	324	114	105	0.800	55.6	2360	106.7
1-4	81.25	0.64	1.70	107.41	324	114	106	0.800	55.6	5590	252.4
1-5	84.50	0.60	1.60	105.56	325	114	106	0.775	53.0	-1726	-90.5
1-6	87.75	0.51	1.40	107.61	325	114	106	0.714	49.7	1912	95.7
1-7	91.00	0.47	1.20	109.70	324	113	106	0.686	47.7	1950	102.7

Totals and Averages

91	1.45	58.94	323	102	0.735	51.1	55.73	97.7
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/15/2011
Meter ID	m-15
Y ₃	1.0159
Pitot C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12124
Train Type	Impinger
Train ID	IB 18
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-16.5
Start Time	11:15
Stop Time	12:46

Place an "x" in the appropriate Box

Circular	
Rectangular	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	700.0	569.0	132.0
Impinger 2	715.7	722.0	-6.3
Impinger 3	643.5	643.0	0.5
Rinse		50.0	-50.0
Silica Gel	954.0	944.8	9.2
Weight of Water Collected			76.2
Silica Gel Net Weight			9.2

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4	N/A	6.87

Run 2

Traverse Point	Min/Ft	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp. (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Measured (ft ³)	Isotermics (%)
	Elapsed Time										
1-1	3.25	0.45	1.20	114.98	325	97	90	0.571	46.7	1901	103.0
1-2	6.50	0.49	1.30	116.96	326	98	91	0.700	48.8	1898	98.6
1-3	9.75	0.66	1.70	118.07	325	98	94	0.812	56.6	1882	47.5
1-4	13.00	0.64	1.70	121.51	326	98	93	0.800	55.8	2294	149.8
1-5	16.25	0.61	1.60	123.73	325	98	92	0.781	54.4	2127	98.0
1-6	19.50	0.52	1.40	125.96	324	100	94	0.721	50.2	2033	102.4
1-7	22.75	0.48	1.30	127.88	325	100	96	0.695	48.3	1924	101.0
2-1	26.00	0.52	1.40	129.86	326	100	97	0.721	50.3	1885	95.1
2-2	29.25	0.57	1.50	131.94	324	100	97	0.765	52.6	1986	95.3
2-3	32.50	0.68	1.80	134.30	326	101	97	0.825	57.5	2246	99.1
2-4	35.75	0.66	1.70	136.56	327	103	98	0.812	56.7	2115	96.1
2-5	39.00	0.66	1.70	138.73	326	102	98	0.812	56.6	2061	92.3
2-6	42.25	0.59	1.60	141.08	326	101	97	0.768	53.5	2276	105.9
2-7	45.50	0.52	1.40	142.95	326	102	97	0.721	50.3	1777	99.6
3-1	48.75	0.50	1.30	144.91	325	103	98	0.707	49.3	1896	95.6
3-2	52.00	0.56	1.50	147.10	326	104	99	0.749	52.2	2074	100.6
3-3	55.25	0.59	1.60	149.28	327	104	98	0.768	53.6	2087	98.0
3-4	58.50	0.62	1.60	151.34	326	104	98	0.757	54.9	1953	90.2
3-5	61.75	0.61	1.60	153.10	327	105	98	0.781	54.5	1667	77.7
3-6	65.00	0.58	1.50	155.17	326	105	99	0.762	53.1	1958	93.6
3-7	68.25	0.52	1.40	157.15	325	105	99	0.721	50.2	1873	94.4
4-1	71.50	0.46	1.20	159.75	326	106	99	0.678	47.9	2456	121.7
4-2	74.75	0.46	1.20	161.70	325	105	99	0.678	47.2	1844	98.8
4-3	78.00	0.54	1.40	163.79	326	104	99	0.735	51.2	1979	98.0
4-4	81.25	0.50	1.30	165.76	326	104	98	0.707	49.2	1885	97.0
4-5	84.50	0.58	1.50	167.81	327	104	98	0.762	53.1	1924	92.0
4-6	87.75	0.51	1.40	169.87	326	105	99	0.714	49.8	1948	99.3
4-7	91.00	0.43	1.10	171.70	326	105	99	0.666	45.7	1730	96.0

Totals and Averages

91	1.46	58.70	326	99.5	0.743	51.8	55.78	97.6
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/15/2011
Meier ID	m-15
Y ₁	1.0159
Pitot C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12140
Train Type	Impinger
Train ID	IB-A
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-16.5
Start Time	14:04
Stop Time	16:12

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	814.4	533.0	281.4
Impinger 2	715.0	723.0	-8.0
Impinger 3	607.1	603.0	4.1
Rinse		50.0	-50.0
Silica Gel	992.1	979.0	13.1
Weight of Water Collected, W _w (g)			27.5
Silica Gel Net Weight, W _{sg} (g)			13.1

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.2	NA	6.89

Run 3

Train/Se Point	MIn/PL	Velocity Pressure Δ P (in H ₂ O)	Orifice Setting Δ H (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Isokinesics (%)
	Elapsed Time										
1-1	3.25	0.44	1.20	176.08	324	88	96	0.663	45.9	1.851	95.4
1-2	6.50	0.50	1.30	177.85	325	99	97	0.707	48.9	1.886	94.2
1-3	9.75	0.67	1.80	179.99	326	99	98	0.818	56.7	2.039	98.0
1-4	13.00	0.64	1.70	182.47	326	101	98	0.800	55.4	2.355	104.1
1-5	16.25	0.80	1.60	184.59	326	104	97	0.775	53.6	2.012	91.8
1-6	19.50	0.50	1.30	186.60	326	105	98	0.707	49.0	1.902	85.1
1-7	22.75	0.48	1.30	188.58	327	107	98	0.685	48.0	1.871	95.5
2-1	26.00	0.52	1.40	190.87	327	108	98	0.721	50.0	2.152	106.0
2-2	29.25	0.55	1.50	192.99	326	109	99	0.742	51.4	1.999	95.2
2-3	32.50	0.58	1.80	195.11	325	110	99	0.762	52.7	1.996	92.7
2-4	35.75	0.71	1.90	197.45	326	111	100	0.843	55.3	2.202	92.4
2-5	39.00	0.67	1.80	199.79	325	112	101	0.819	56.6	2.198	94.8
2-6	42.25	0.60	1.60	201.94	326	111	102	0.775	53.6	2.010	92.1
2-7	45.50	0.50	1.30	204.01	326	111	102	0.707	49.0	1.942	97.0
3-1	48.75	0.5	1.30	206.20	325	111	102	0.707	48.9	2.054	102.8
3-2	52.00	0.55	1.50	208.29	326	111	102	0.742	51.4	1.960	85.5
3-3	55.25	0.57	1.50	210.28	325	112	103	0.755	52.2	1.864	87.2
3-4	58.50	0.6	1.60	212.41	324	112	103	0.775	53.6	1.895	90.9
3-5	61.75	0.58	1.50	214.62	325	112	103	0.762	52.7	2.071	95.0
3-6	65.00	0.57	1.50	216.84	325	113	104	0.755	52.2	2.076	87.1
3-7	68.25	0.55	1.50	219.00	325	114	104	0.742	51.3	2.016	96.1
4-1	71.50	0.44	1.20	222.02	325	114	104	0.663	45.9	2.825	150.1
4-2	74.75	0.45	1.20	223.34	324	114	104	0.671	46.4	1.232	64.8
4-3	78.00	0.56	1.50	225.07	325	114	105	0.742	51.8	1.815	76.2
4-4	81.25	0.50	1.30	227.10	325	114	105	0.707	48.9	1.894	94.6
4-5	84.50	0.55	1.50	229.19	325	114	105	0.742	51.3	1.951	92.9
4-6	87.75	0.52	1.40	231.21	325	115	105	0.721	49.9	1.884	92.2
4-7	91.00	0.43	1.10	233.27	325	114	105	0.656	45.4	1.921	103.5

Totals and Averages

91	1.47	59.13	325	105	0.738	51.1	55.80	95.0
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/14/2011
Method ID	M-20
T_d	0.9952
Proportion C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-9
P_s (Inches Hg)	29.51
P_c (Inches H ₂ O)	-16.5
Start Time	16:31
Stop Time	18:31

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	845.0	725.0	120.0
Impinger 2	728.0	702.0	26.0
Impinger 3	630.0	622.0	8.0
Rinse		50.0	-50.0
Silica Gel	945.0	922.0	23.0
Weight of Water Collected W_{col} (g)			104.0
Silica Gel Net Weight W_{net} (g)			23.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.6	NA	6.51

Run 3

Traveler Point	Min/Ft	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Measured (ft ³)
	10									
Single	10	0.45	1.16	544.89	321	99	97	0.671	46.8	5.517
	20	0.45	1.16	550.96	321	101	96	0.671	46.8	5.647
	30	0.45	1.16	557.07	321	102	96	0.671	46.7	5.679
	40	0.45	1.16	563.25	318	101	96	0.671	46.7	5.742
	50	0.45	1.16	569.41	318	101	96	0.671	46.7	5.730
	60	0.45	1.16	575.66	318	99	94	0.671	46.7	5.935
	70	0.45	1.16	581.23	317	98	93	0.671	46.7	5.210
	80	0.45	1.16	587.18	318	97	93	0.671	46.7	5.570
	90	0.45	1.16	593.13	318	96	92	0.671	46.7	5.580
	100	0.45	1.16	599.05	319	96	90	0.671	46.7	5.562
	110	0.45	1.16	604.93	320	96	90	0.671	46.7	5.524
	120	0.45	1.16	610.79	320	96	89	0.671	46.7	5.511

Totals and Averages

120			1.16	71.89	319	96.0	0.671	46.7	67.18
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/14/2011
Meier ID	M-20
V ₁	0.9952
Pitot C _p	0.84

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-9
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-16.5
Start Time	10:09
Stop Time	12:09

Moisture	Final Wt (g)	Take Wt (g)	Net Wt (g)
Impinger 1	834.0	718.0	116.0
Impinger 2	724.0	697.0	27.0
Impinger 3	631.0	617.0	14.0
Rinse		50.0	-50.0
Silica Gel	995.0	971.0	24.0
Weight of Water Collected, V _w (g)			107.0
Silica Gel Net Weight, V _{sg} (g)			24.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.3	NA	5.80

Run 1

Traverse Point	Min/Ft	Velocity Pressure ΔP (in H ₂ O)	Orifice Sealing ΔH (in H ₂ O)	Gas Sample Volume Inlet (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity ft/sec	Volume Metered (ft ³)
	10 Elapsed Time									
Single	10	0.45	1.16	392.31	323	94	93	0.671	46.9	5735
	20	0.45	1.16	398.33	326	96	93	0.671	47.0	5641
	30	0.45	1.16	404.38	326	97	93	0.671	47.0	5664
	40	0.45	1.16	410.42	326	100	94	0.671	47.0	5634
	50	0.45	1.16	416.59	326	101	95	0.671	47.0	5745
	60	0.45	1.16	422.55	326	101	95	0.671	47.0	5649
	70	0.45	1.16	428.61	327	102	96	0.671	47.0	5632
	80	0.45	1.16	434.69	326	104	97	0.671	47.0	5636
	90	0.45	1.16	440.64	327	105	98	0.671	47.0	5606
	100	0.45	1.16	446.93	326	105	99	0.671	47.0	5815
	110	0.45	1.16	453.04	326	106	99	0.671	47.0	5644
	120	0.45	1.16	459.19	326	105	99	0.671	47.0	5686

Totals and Averages

120	1.16	72.99	326	98.6	0.671	47.0	67.89
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/14/2011
Meter ID	M-20
V _d	0.9952
Pilot C ₂	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-9
F _b (Inches Hg)	29.51
F _s (Inches H ₂ O)	-16.5
Start Time	12:43
Stop Time	15:43

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	771.0	663.0	108.0
Impinger 2	691.0	644.0	47.0
Impinger 3	573.0	567.0	6.0
Rinse		50.0	-50.0
Silica Gel	950.0	934.0	16.0
Weight of Water Collected, V _w (g)			111.0
Silica Gel Net Weight, V _{sw} (g)			16.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4	NA	6.87

Run 2

Traverse Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Foot ΔP	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)
	10 Elapsed Time									
Single	10	0.45	1.16	465.54	324	98	98	0.671	46.8	5251
	20	0.45	1.16	471.71	325	102	98	0.671	46.8	5724
	30	0.45	1.16	477.69	325	103	99	0.671	46.9	5536
	40	0.45	1.16	483.78	323	102	99	0.671	46.9	5646
	50	0.45	1.16	489.82	323	103	99	0.671	46.9	5594
	60	0.45	1.16	496.01	323	102	98	0.671	46.8	5742
	70	0.45	1.16	501.89	322	102	98	0.671	46.8	5458
	80	0.45	1.16	507.90	320	102	98	0.671	46.8	5576
	90	0.45	1.16	513.89	321	101	97	0.671	46.8	5567
	100	0.45	1.16	519.92	321	102	97	0.671	46.8	5599
	110	0.45	1.16	525.95	321	102	97	0.671	46.8	5699
	120	0.45	1.16	532.04	321	103	97	0.671	46.8	5850

Totals and Averages

120	1.16	72.14	322	99.9	0.671	46.8	66.94
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/14/2011
Meter ID	M-15
Y _d	1.0159
Prot. C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	18
P ₀ (Inches Hg)	29.51
P _s (Inches H ₂ O)	-16.5
Start Time	10:09
Stop Time	12:24

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	783.5	629.5	154.0
Impinger 2	758.5	732.5	26.0
Impinger 3	773.7	761.7	12.0
Impinger 4	655.2	650.5	4.7
Silica Gel	907.0	895.1	11.9
Weight of Water Collected, W _w (g)			196.7
Silica Gel Net Weight, W _{net} (g)			11.9

GEMS	%CO ₂	%CO ₂ +%C ₂	%O ₂
Average	12.5		0.80

Run 1

Traverse Point	Mtu/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured (ft ³)	Isokinetics (%)
	4.5 Elapsed Time										
1-1	4.5	0.45	1.20	797.85	323	93	89	0.671	47.1	2.715	110.4
1-2	9.0	0.50	1.33	803.49	323	95	89	0.707	49.7	2.711	104.6
1-3	13.5	0.67	1.78	806.84	326	97	89	0.819	57.6	2.216	107.4
1-4	18.0	0.65	1.74	810.05	326	99	90	0.906	56.9	2.075	104.2
1-5	22.5	0.61	1.62	813.15	326	99	90	0.781	55.0	2.969	105.9
1-6	27.0	0.50	1.33	815.94	326	99	91	0.707	48.8	2.667	103.1
1-7	31.5	0.45	1.20	818.65	326	100	91	0.671	47.2	2.588	105.1
2-1	36.0	0.52	1.38	821.45	327	101	91	0.721	50.9	2.672	101.0
2-2	40.5	0.60	1.60	824.61	326	102	92	0.775	54.5	2.512	106.3
2-3	45.0	0.72	1.92	828.03	328	104	93	0.848	59.9	3.254	104.9
2-4	49.5	0.71	1.90	831.44	327	104	93	0.843	58.4	3.244	105.0
2-5	54.0	0.68	1.82	834.77	327	105	94	0.925	58.1	3.162	104.8
2-6	58.5	0.60	1.60	837.85	327	107	96	0.775	54.6	2.912	102.8
2-7	63.0	0.50	1.33	840.84	327	107	96	0.707	49.2	2.636	101.8
3-1	67.5	0.49	1.28	843.43	327	107	96	0.700	49.3	2.636	103.0
3-2	72.0	0.55	1.44	846.38	326	107	96	0.745	52.2	2.788	102.7
3-3	76.5	0.57	1.49	849.43	327	108	96	0.755	53.2	2.881	104.3
3-4	81.0	0.61	1.60	852.55	328	108	97	0.781	55.1	2.945	103.2
3-5	85.5	0.60	1.57	855.65	328	108	97	0.775	54.5	2.926	103.0
3-6	90.0	0.58	1.52	858.73	326	108	97	0.762	53.6	2.307	104.3
3-7	94.5	0.53	1.39	861.84	327	108	97	0.728	51.3	2.745	103.1
4-1	99.0	0.44	1.15	864.26	326	108	98	0.663	46.7	2.468	101.7
4-2	103.5	0.45	1.18	866.89	327	108	98	0.671	47.3	2.476	101.0
4-3	108.0	0.55	1.44	869.73	327	108	98	0.742	52.3	2.677	98.7
4-4	112.5	0.49	1.28	872.51	327	106	97	0.700	49.3	2.627	102.6
4-5	117.0	0.56	1.47	875.52	327	105	96	0.748	52.7	2.850	104.1
4-6	121.5	0.50	1.31	878.32	326	105	96	0.707	49.5	2.650	102.4
4-7	126.0	0.42	1.10	881.06	327	105	96	0.648	45.7	2.592	109.4

Totals and Averages

126	1.43	83.21	326	99.1	0.742	52.3	78.99	103.9
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/14/2011
Meier ID	M-15
Y _d	1.0159
Procl. C _p	0.84

Nozzle Diameter (in.)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	A
P _b (Inches Hg)	29.51
P _s (Inches H ₂ O)	-16.5
Start Time	13:43
Stop Time	15:58

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	782.7	636.1	146.6
Impinger 2	778.1	752.5	25.6
Impinger 3	616.2	600.2	16.0
Impinger 4	643.3	639.3	4.0
Silica Gel	961.8	945.3	16.5
Weight of Water Collected, V _w (g)			180.2
Silica Gel Net Weight, V _{sil} (g)			16.5

CEMS	%CO ₂	%CO ₂ +%O ₂	%C ₂
Average	12.4		6.67

Run 2

Traverse Point	Min/Pl	Velocity Pressure ΔP (in. H ₂ O)	Orifice Setting ΔH (in. H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Measured (ft ³)	Isokinatics (%)
	4.5 Elapsed Time										
1-1	4.5	0.45	1.18	884.32	324	98	96	0.671	47.3	2.542	103.5
1-2	9.0	0.47	1.24	886.95	323	98	95	0.686	48.2	2.507	99.8
1-3	13.5	0.62	1.63	890.07	323	98	95	0.787	55.3	2.977	103.2
1-4	18.0	0.66	1.74	893.73	321	99	95	0.812	57.0	3.190	117.1
1-5	22.5	0.63	1.66	896.82	321	100	94	0.796	55.7	2.948	101.2
1-6	27.0	0.52	1.37	899.47	321	100	94	0.721	50.6	2.525	95.4
1-7	31.5	0.42	1.11	902.01	322	100	94	0.648	45.5	2.416	101.6
2-1	36.0	0.50	1.32	904.81	322	100	94	0.717	48.7	2.667	102.9
2-2	40.5	0.65	1.72	908.07	321	100	94	0.806	56.6	3.108	105.1
2-3	45.0	0.72	1.90	911.49	320	103	94	0.849	58.5	3.254	105.5
2-4	49.5	0.70	1.85	914.88	320	103	95	0.837	58.7	3.222	104.9
2-5	54.0	0.66	1.74	918.14	320	103	95	0.812	57.0	3.197	103.9
2-6	58.5	0.56	1.48	921.19	319	104	95	0.738	52.5	2.893	105.5
2-7	63.0	0.50	1.32	924.03	320	105	95	0.707	49.6	2.691	102.7
3-1	67.5	0.45	1.19	926.72	320	105	96	0.671	47.1	2.546	103.4
3-2	72.0	0.52	1.37	929.53	320	104	95	0.721	50.6	2.665	100.7
3-3	76.5	0.55	1.45	932.52	323	105	96	0.742	52.1	2.821	104.2
3-4	81.0	0.63	1.66	935.65	323	105	96	0.794	55.8	2.965	102.0
3-5	85.5	0.63	1.66	939.00	322	104	95	0.794	55.8	3.177	109.2
3-6	90.0	0.57	1.50	942.17	321	105	96	0.755	53.0	3.092	108.4
3-7	94.5	0.54	1.43	945.15	321	105	96	0.735	51.6	2.822	101.7
4-1	99.0	0.45	1.19	947.94	321	106	96	0.671	47.1	2.636	107.2
4-2	103.5	0.45	1.19	950.51	320	106	96	0.671	47.1	2.436	98.7
4-3	108.0	0.50	1.32	953.36	320	106	96	0.707	49.5	2.895	103.9
4-4	112.5	0.50	1.32	956.22	321	106	97	0.707	49.6	2.702	104.2
4-5	117.0	0.52	1.37	959.21	320	107	97	0.721	50.6	2.823	106.7
4-6	121.5	0.50	1.32	961.94	320	106	98	0.707	49.6	2.577	99.3
4-7	126.0	0.42	1.11	964.64	321	106	97	0.646	45.5	2.550	107.3

Totals and Averages

126	1.44	82.99	321	99.3	0.737	51.7	78.75	104.1
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/14/2011
Filter ID	M-15
Year	1.0159
Pilot C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	1B-18
P ₁ (Inches H ₂ O)	29.51
P ₂ (Inches H ₂ O)	-16.5
Start Time	16:43
Stop Time	18:58

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	783.6	634.1	149.5
Impinger 2	747.2	728.3	18.9
Impinger 3	779.6	767.0	12.6
Impinger 4	660.4	653.0	7.4
Silica Gel	915.0	906.8	8.2
Weight of Water Collected, W _w (g)			188.2
Silica Gel Net Weight, W _{sg} (g)			8.2

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.8		6.51

Run 3

Traverse Point	Min:Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity 1/5 (ft/sec)	Volume Measured (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.47	1.23	968.95	321	97	96	0.686	48.0	2.574	101.8
1-2	9.0	0.52	1.38	971.82	320	98	96	0.721	50.3	2.732	102.7
1-3	13.5	0.60	1.57	975.05	320	100	96	0.775	54.2	3.073	107.6
1-4	18.0	0.63	1.65	978.12	319	103	96	0.794	55.5	3.214	99.4
1-5	22.5	0.60	1.57	981.32	320	103	96	0.775	54.2	3.035	106.2
1-6	27.0	0.55	1.44	984.30	318	102	95	0.742	51.9	2.832	103.3
1-7	31.5	0.42	1.10	987.35	319	102	95	0.648	45.4	2.896	121.0
2-1	36.0	0.55	1.44	989.62	318	99	93	0.742	51.9	2.887	79.0
2-2	40.5	0.60	1.57	992.76	318	99	93	0.775	54.2	2.996	104.7
2-3	45.0	0.72	1.89	996.24	317	99	93	0.849	58.3	3.326	106.0
2-4	49.5	0.68	1.78	999.55	317	98	93	0.825	57.6	3.175	104.1
2-5	54.0	0.67	1.76	1002.25	318	97	92	0.819	57.2	2.577	85.2
2-6	58.5	0.60	1.57	1006.32	318	96	91	0.775	54.2	3.304	134.3
2-7	63.0	0.56	1.47	1008.90	319	96	90	0.748	52.4	2.876	89.6
3-1	67.5	0.5	1.31	1011.69	318	96	90	0.707	49.3	2.677	102.4
3-2	72.0	0.55	1.44	1014.80	318	98	90	0.742	51.9	2.979	108.7
3-3	76.5	0.57	1.50	1017.69	318	99	90	0.755	52.8	2.767	39.1
3-4	81.0	0.60	1.57	1020.97	319	99	90	0.775	54.2	3.140	106.7
3-5	85.5	0.60	1.57	1024.02	319	99	90	0.775	54.2	2.920	102.1
3-6	90.0	0.59	1.55	1027.05	318	98	90	0.768	53.7	2.904	102.3
3-7	94.5	0.52	1.36	1029.92	317	97	89	0.721	50.4	2.754	101.2
4-1	99.0	0.45	1.18	1032.61	317	97	89	0.671	45.9	2.560	104.0
4-2	103.5	0.45	1.13	1035.30	318	97	89	0.671	46.0	2.580	104.0
4-3	108.0	0.55	1.44	1037.89	318	97	89	0.742	51.9	2.886	100.7
4-4	112.5	0.55	1.44	1040.88	318	99	90	0.742	51.9	2.862	100.4
4-5	117.0	0.55	1.44	1043.87	318	101	90	0.742	51.9	2.857	100.2
4-6	121.5	0.50	1.31	1046.68	318	101	90	0.707	49.5	2.684	102.7
4-7	126.0	0.42	1.10	1049.18	318	101	90	0.648	45.3	2.387	69.6

Totals and Averages

126	1.46	82.93	318	95.3	0.744	52.0	79.26	102.9
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	207191-A
Y ₂	1.0145

Start Time	8:08
Stop Time	9:38

Meter ID	207191-B
Y ₃	0.99167

Run 1

Min/Pt	Gas Sample	DGM	Volume
Elapsed	Volume		
Time	Initial (L)	Temp	Metered
	0.00	(°F)	Vmstd
			(L)
3.75	1.72	92	1.648
7.50	3.42	93	1.626
11.25	5.04	94	1.547
15.00	6.66	96	1.541
18.75	8.18	97	1.444
22.50	9.68	99	1.419
26.25	11.20	100	1.436
30.00	12.70	101	1.414
33.75	14.23	102	1.440
37.50	15.85	103	1.522
41.25	17.41	105	1.461
45.00	18.97	105	1.461
48.75	20.55	105	1.479
52.50	22.07	107	1.418
56.25	23.63	109	1.450
60.00	25.15	110	1.411
63.75	26.73	111	1.464
67.50	28.31	112	1.461
71.25	29.87	113	1.440
75.00	32.43	114	2.359
78.75	33.95	114	1.401
82.50	35.45	114	1.382
86.25	36.91	115	1.343
90.00	38.41	115	1.390

Totals and Averages

90	38.41	105	35.95
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Run 1 Spiked

Min/Pt	Gas Sample	DGM	Volume
Elapsed	Volume		
Time	Initial (L)	Temp	Metered
	0.00	(°F)	Vmstd
			(L)
3.8	1.42	96	1.321
7.5	2.88	97	1.355
11.3	4.44	98	1.446
15.0	5.96	99	1.406
18.8	7.61	101	1.521
22.5	9.23	103	1.488
26.3	10.79	103	1.433
30.0	12.31	104	1.394
33.8	13.77	105	1.336
37.5	15.29	106	1.389
41.3	16.81	108	1.384
45.0	18.31	108	1.366
48.8	19.79	108	1.347
52.5	21.31	109	1.381
56.3	22.81	111	1.358
60.0	24.52	112	1.546
63.8	25.96	113	1.300
67.5	27.54	113	1.426
71.3	29.06	115	1.367
75.0	30.62	115	1.403
78.8	32.18	115	1.403
82.5	33.80	116	1.454
86.3	36.39	116	2.325
90.0	38.01	116	1.454

Totals and Averages

90	38.01	108	34.62
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	207191-A
Y _d	1.01450

Start Time	11:15
Stop Time	12:45

Meter ID	207191-B
Y _d	0.99167

Run 2

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.8	1.46	101	1 377
7.5	2.95	102	1 403
11.3	4.53	102	1 487
15.0	6.03	103	1 409
18.8	7.55	104	1 426
22.5	9.08	105	1 433
26.3	10.60	105	1 423
30.0	12.22	105	1 517
33.8	13.85	106	1 523
37.5	15.43	106	1 477
41.3	17.01	107	1 474
45.0	18.55	107	1 437
48.8	20.08	109	1 422
52.5	21.60	110	1 411
56.3	23.22	110	1 503
60.0	24.84	110	1 503
63.8	26.42	111	1 464
67.5	27.92	112	1 387
71.3	29.44	112	1 406
75.0	31.00	112	1 443
78.8	32.42	112	1 313
82.5	34.07	112	1 526
86.3	35.63	112	1 443
90.0	37.21	112	1 461

Run 2 Spiked

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.8	1.56	100	1 440
7.5	3.12	101	1 438
11.3	4.64	103	1 396
15.0	6.14	103	1 378
18.8	7.64	104	1 375
22.5	9.16	104	1 394
26.3	10.68	104	1 394
30.0	12.17	105	1 364
33.8	13.67	106	1 370
37.5	15.18	106	1 380
41.3	16.68	108	1 366
45.0	18.24	108	1 420
48.8	19.73	110	1 352
52.5	21.29	110	1 415
56.3	22.81	111	1 377
60.0	24.33	111	1 377
63.8	25.85	111	1 377
67.5	27.39	111	1 395
71.3	28.93	112	1 392
75.0	30.55	112	1 464
78.8	32.11	112	1 410
82.5	33.63	111	1 377
86.3	35.25	111	1 467
90.0	36.93	111	1 521

Totals and Averages

90	37.21	108	34.67
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Totals and Averages

90	36.93	108	33.64
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 1
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	207191-A
Y _d	1.01450

Start Time	14:04
Stop Time	16:12

Meter ID	207191-B
Y _d	0.99167

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume Initial (L)		
Elapsed Time	0.00		
3.8	1.56	98	1 479
7.5	3.08	99	1 438
11.3	4.60	101	1 433
15.0	6.17	102	1 478
18.8	7.70	103	1 438
22.5	9.26	105	1 461
26.3	10.78	105	1 423
30.0	12.31	107	1 427
33.8	13.76	109	1 348
37.5	15.34	110	1 466
41.3	16.98	110	1 522
45.0	18.56	111	1 464
48.8	20.09	111	1 417
52.5	21.61	112	1 406
56.3	23.19	112	1 461
60.0	24.75	112	1 443
63.8	26.27	112	1 406
67.5	27.75	113	1 366
71.3	29.27	113	1 403
75.0	30.94	114	1 539
78.8	32.61	115	1 536
82.5	34.19	115	1 454
86.3	35.77	115	1 454
90.0	37.35	115	1 454

Totals and Averages

90	37.35	109	34.72
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Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume Initial (L)		
Elapsed Time	0.00		
3.8	1.42	99	1 314
7.5	2.87	101	1 337
11.3	4.32	102	1 334
15.0	5.84	104	1 394
18.8	7.36	105	1 391
22.5	8.91	106	1 416
26.3	10.53	106	1 480
30.0	12.01	108	1 347
33.8	13.48	110	1 334
37.5	14.85	111	1 241
41.3	16.28	111	1 295
45.0	17.78	112	1 356
48.8	19.30	113	1 372
52.5	20.82	113	1 372
56.3	22.34	113	1 372
60.0	23.90	113	1 408
63.8	25.52	113	1 462
67.5	27.14	114	1 459
71.3	28.66	115	1 367
75.0	30.24	115	1 421
78.8	31.82	115	1 421
82.5	33.82	116	1 795
86.3	34.86	116	0 934
90.0	36.61	116	1 571

Totals and Averages

90	36.61	110	33.20
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/15/2011
Meter ID	M9
Y ₂	0.9891
Pitot C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12148
Train Type	Impinger
Train ID	IB-12
F ₁ (Inches Hg)	29.56
F ₂ (Inches H ₂ O)	-15.2
Start Time	8:08
Stop Time	9:39

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final wt (g)	Tare wt (g)	Net wt (g)
Impinger 1	581.0	488.0	93.0
Impinger 2	576.0	588.0	-12.0
Impinger 3	627.0	600.0	27.0
Furnace		50.0	-50.0
Silica Gel	935.0	907.0	28.0
Weight of Water Collected, V _w (g)			59.0
Silica Gel Net Weight, V _{dry} (g)			26.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.3		7.00

Run 1

Traverse Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Sealing ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Metered V _{mstd} (ft ³)	Isokinetic (%)
	Elapsed Time										
1-1	3.25	0.28	0.70	636.01	325	88	87	0.529	36.8	1.142	79.5
1-2	6.50	0.28	0.70	638.58	327	89	80	0.528	37.0	2.421	168.7
1-3	9.75	0.29	0.70	640.15	326	90	88	0.535	37.6	1.477	101.1
1-4	13.00	0.30	0.80	641.93	326	91	89	0.546	38.3	1.672	112.5
1-5	16.25	0.30	0.80	643.62	328	94	91	0.546	38.3	1.581	108.6
1-6	19.50	0.31	0.80	645.49	327	93	91	0.557	38.9	1.751	116.0
1-7	22.75	0.32	0.80	647.24	328	96	92	0.566	39.6	1.632	106.6
2-1	26.00	0.32	0.80	649.51	328	97	94	0.566	39.8	2.112	137.8
2-2	29.25	0.32	0.80	650.84	328	98	94	0.566	39.6	1.236	80.6
2-3	32.50	0.32	0.80	652.62	328	99	95	0.566	39.5	1.651	107.7
2-4	35.75	0.30	0.80	654.71	327	100	96	0.548	38.3	1.996	130.3
2-5	39.00	0.29	0.70	655.21	327	100	96	0.539	37.6	0.863	31.7
2-6	42.25	0.30	0.80	657.32	328	103	99	0.549	38.3	1.944	131.0
2-7	45.50	0.31	0.80	659.78	328	102	99	0.557	38.9	2.266	150.3
3-1	48.75	0.33	0.90	661.34	329	103	100	0.573	40.2	1.436	92.3
3-2	52.00	0.33	0.90	663.15	328	105	100	0.573	40.2	1.663	108.9
3-3	55.25	0.34	0.90	664.88	328	105	101	0.583	40.8	1.586	100.5
3-4	58.50	0.34	0.90	665.12	326	104	100	0.583	40.7	0.221	14.0
3-5	61.75	0.32	0.90	666.73	327	104	101	0.586	39.5	1.480	96.5
3-6	65.00	0.32	0.90	668.25	327	104	101	0.566	38.3	1.397	91.1
3-7	68.25	0.30	0.80	669.35	327	104	101	0.549	38.3	1.011	68.1
4-1	71.50	0.28	0.80	671.84	325	105	101	0.521	36.9	2.286	159.1
4-2	74.75	0.28	0.80	673.72	320	106	103	0.529	36.6	1.721	119.3
4-3	78.00	0.28	0.80	675.58	318	108	105	0.529	36.6	1.697	117.6
4-4	81.25	0.31	0.80	677.23	317	110	107	0.557	36.7	1.590	96.7
4-5	84.50	0.34	0.90	679.21	315	111	107	0.563	40.4	1.798	112.9
4-6	87.75	0.35	0.90	680.64	312	111	107	0.582	40.9	1.239	80.2
4-7	91.00	0.35	0.90	682.47	311	112	107	0.592	40.9	1.661	102.5

Totals and Averages

91	0.818	47.67	325	99.5	0.557	38.9	44.03	103.9
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/15/2011
Meier ID	M-9
V_d	0.9891
Pitot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12127
Train Type	Impinger
Train ID	IB 7
P_1 (Inches Hg)	29.56
P_2 (Inches H ₂ O)	-15.2
Start Time	11:15
Stop Time	12:46

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	608.2	472.0	136.2
Impinger 2	782.0	742.0	20.0
Impinger 3	629.0	620.0	9.0
Rinse		50.0	-50.0
Silica Gel	951.8	940.0	11.8
Weight of Water Collected, V_w (L)			115.2
Silica Gel Net Weight, W_{SG} (g)			11.8

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.87

Run 2

Traverse Point	mmPI	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V_s (ft/sec)	Volume Measured (ft ³)	Isokinetics (%)
	3.25										
1-1	3.25	0.29	0.80	692.21	311	108	108	0.539	37.5	1.347	93.6
1-2	6.50	0.28	0.80	695.01	312	108	109	0.528	38.8	2.546	180.2
1-3	9.75	0.28	0.80	697.42	312	110	108	0.528	36.2	2.189	155.0
1-4	13.00	0.30	0.80	699.64	310	109	108	0.548	39.1	2.018	137.9
1-5	16.25	0.37	1.00	701.47	307	109	108	0.808	42.2	1.664	102.2
1-6	19.50	0.35	0.90	703.25	303	109	108	0.682	40.9	1.618	101.9
1-7	22.75	0.35	0.90	705.15	302	110	108	0.692	40.9	1.726	105.3
2-1	26.00	0.33	0.90	706.97	303	111	108	0.574	39.8	1.552	107.1
2-2	29.25	0.33	0.90	708.78	303	111	108	0.574	39.8	1.643	106.5
2-3	32.50	0.31	0.80	710.47	303	112	109	0.557	38.5	1.531	102.4
2-4	35.75	0.32	0.90	712.27	303	113	109	0.566	39.2	1.629	107.6
2-5	39.00	0.30	0.80	714.08	303	113	109	0.548	37.9	1.636	111.4
2-6	42.25	0.31	0.80	715.87	303	114	110	0.557	36.5	1.617	105.2
2-7	45.50	0.30	0.80	717.67	303	114	110	0.546	37.9	1.626	110.6
3-1	48.75	0.30	0.80	719.32	303	113	110	0.546	37.9	1.492	101.5
3-2	52.00	0.31	0.80	721.28	302	115	111	0.557	38.5	1.798	118.2
3-3	55.25	0.30	0.80	723.64	303	115	111	0.548	37.9	2.128	144.7
3-4	58.50	0.30	0.80	724.89	303	115	112	0.548	37.9	1.126	76.6
3-5	61.75	0.28	0.80	726.71	304	115	113	0.529	36.6	1.125	74.2
3-6	65.00	0.29	0.80	728.10	304	115	113	0.539	37.3	1.636	113.3
3-7	68.25	0.29	0.90	730.31	304	114	112	0.539	37.3	1.294	96.8
4-1	71.50	0.30	0.80	732.12	303	114	112	0.546	37.9	1.993	135.5
4-2	74.75	0.31	0.80	733.92	303	114	112	0.557	38.5	1.532	109.2
4-3	78.00	0.31	0.80	735.72	303	115	112	0.557	38.5	1.622	108.5
4-4	81.25	0.33	0.90	737.52	303	115	112	0.574	39.8	1.622	106.2
4-5	84.50	0.34	0.90	739.43	304	116	113	0.563	40.4	3.338	213.4
4-6	87.75	0.34	0.90	741.84	305	116	113	0.585	40.4	2.168	138.7
4-7	91.00	0.35	1.00	743.08	305	116	113	0.582	41.0	1.115	70.3

Totals and Averages

91	0.843	52.35	305	112	0.559	38.7	47.34	112.7
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/15/2011
Meter ID	M9
Y _s	0.9891
Procl C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12141
Train Type	Impinger
Train ID	IB
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-15.2
Start Time	14:04
Stop Time	16:12

Place an "X" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Flowrate	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	545.6	453.0	92.6
Impinger 2	589.2	591.0	-21.8
Impinger 3	614.4	603.0	11.4
Rinse		50.0	-50.0
Silica Gel	948.3	935.0	13.3
Weight of Water Collected, W _{ex} (g)			32.2
Silica Gel Net Weight, W _{net} (g)			15.2

CEMS	%CO ₂	%CO ₂ -%O ₂	%O ₂
Average	12.2		6.99

Run 3

Train/Se Point	Min/Plt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Measured (ft ³)	Isokinetics (%)
	Elapsed Time										
1-1	3.25	0.37	1.00	750.23	313	105	105	0.608	41.8	1.931	112.1
1-2	6.50	0.37	1.00	751.35	313	105	105	0.608	41.8	1.925	59.5
1-3	9.75	0.37	1.00	753.98	313	105	105	0.606	41.8	2.407	139.7
1-4	13.00	0.38	1.00	754.89	313	106	106	0.616	42.4	2.384	136.6
1-5	16.25	0.37	1.00	756.59	312	107	105	0.608	41.8	1.844	95.4
1-6	19.50	0.39	1.00	758.39	312	109	106	0.624	42.9	1.867	94.2
1-7	22.75	0.39	1.00	760.22	312	111	107	0.624	42.9	1.699	96.0
2-1	26.00	0.39	1.00	762.09	312	112	109	0.624	42.9	2.046	115.7
2-2	29.25	0.37	1.00	764.35	312	112	108	0.608	41.8	1.152	66.8
2-3	32.50	0.38	1.00	765.62	313	112	108	0.616	42.4	1.680	95.1
2-4	35.75	0.42	1.10	767.45	313	113	108	0.646	43.6	1.641	89.2
2-5	39.00	0.39	1.00	769.26	313	113	109	0.624	42.9	1.748	98.8
2-6	42.25	0.39	1.00	771.19	313	116	110	0.624	42.9	1.850	106.6
2-7	45.50	0.39	1.00	773.24	313	115	110	0.624	42.9	1.972	83.2
3-1	48.75	0.35	0.90	774.87	312	115	110	0.592	40.6	1.672	87.9
3-2	52.00	0.41	1.10	776.62	312	115	110	0.640	44.0	1.581	87.1
3-3	55.25	0.43	1.20	778.92	312	114	111	0.696	45.0	2.078	111.8
3-4	58.50	0.35	0.90	780.22	312	115	111	0.592	40.6	1.173	70.0
3-5	61.75	0.45	1.20	782.61	313	116	111	0.671	46.1	2.166	113.5
3-6	65.00	0.43	1.20	784.38	310	116	112	0.652	45.0	1.595	85.7
3-7	68.25	0.43	1.20	785.77	308	115	112	0.656	44.9	1.254	87.2
4-1	71.50	0.44	1.20	787.21	307	115	112	0.663	45.4	1.299	86.8
4-2	74.75	0.42	1.10	789.52	307	115	112	0.646	44.4	2.082	113.1
4-3	78.00	0.42	1.10	791.02	307	114	113	0.645	44.4	1.355	72.4
4-4	81.25	0.41	1.10	793.41	307	117	113	0.640	43.8	2.150	118.1
4-5	84.50	0.42	1.10	794.88	307	117	113	0.645	44.4	1.142	87.0
4-6	87.75	0.42	1.10	796.59	306	117	114	0.646	44.3	1.716	93.1
4-7	91.00	0.42	1.10	798.92	306	118	114	0.648	44.3	2.092	115.6

Totals and Averages

91	1.06	50.80	311	111	0.631	43.3	45.99	91.7
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/14/2011
Meter ID	M-3
Y _d	0.9953
Pitot C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-10
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-15.2
Start Time	10:09
Stop Time	12:09

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	874.0	738.0	136.0
Impinger 2	781.0	741.0	20.0
Impinger 3	640.0	637.0	2.0
Rinses		50.0	-50.0
Silica Gel	992.0	978.0	16.0
Weight of Water Collected, W _w (g)			111.0
Silica Gel Net Weight, W _{sg} (g)			16.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5		6.80

Run 1

Traverse Point	Height	Velocity Pressure ΔP (in. H ₂ O)	Orifice Setting ΔH (in. H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Metered (ft ³)
	10 Elapsed Time									
Single	10	0.36	1.00	179.80	186.63	310	102	0.600	41.5	6.324
	20	0.36	1.00	192.15	310	106	100	0.600	41.5	5.993
	30	0.36	1.00	197.65	310	106	102	0.600	41.5	5.965
	40	0.36	1.00	203.14	309	105	100	0.600	41.5	5.069
	50	0.36	1.00	208.64	311	106	100	0.600	41.6	5.074
	60	0.36	1.00	214.14	312	106	100	0.600	41.6	5.074
	70	0.36	1.00	219.50	312	106	100	0.600	41.6	4.945
	80	0.36	1.00	225.00	312	105	100	0.600	41.6	5.079
	90	0.36	1.00	230.53	311	105	99	0.600	41.6	5.111
	100	0.36	1.00	236.22	313	104	97	0.600	41.6	5.273
	110	0.36	1.00	241.55	312	102	95	0.600	41.6	4.857
	120	0.36	1.00	247.07	312	101	94	0.600	41.6	5.142

Totals and Averages

120	1.00	67.27	311	102	0.600	41.6	62.20
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/14/2011
Meter ID	M-5
Yr	0.9953
Pilot Cp	0.84

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	842.0	701.0	141.0
Impinger 2	645.0	627.0	18.0
Impinger 3	580.0	576.0	4.0
Runse		50.0	-50.0
Silica Gel	865.0	846.0	19.0
Weight of Water Collected (g)			113.0
Silica Gel Net Weight (g)			19.0

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB
P _h (Inches Hg)	29.51
P _w (Inches H ₂ O)	-15.2
Start Time	13:43
Stop Time	15:43

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.1		6.67

Run 2

Traverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _g (ft/sec)	Volume Metered (ft ³)
	10 Elapsed Time									
Single	10	0.38	1.10	252.40	309	102	98	0.616	42.7	5.270
	20	0.38	1.10	263.76	311	103	99	0.616	42.7	5.260
	30	0.38	1.10	269.41	312	103	99	0.616	42.9	5.232
	40	0.38	1.10	275.11	312	104	100	0.616	42.5	5.266
	50	0.38	1.10	280.77	312	104	100	0.616	42.5	5.232
	60	0.38	1.10	286.13	312	104	100	0.616	42.6	4.955
	70	0.38	1.10	291.48	311	105	100	0.616	42.7	4.941
	80	0.38	1.10	297.20	311	105	100	0.616	42.7	5.295
	90	0.38	1.10	299.44	311	105	100	0.616	42.7	2.089
	100	0.38	1.10	308.71	312	106	100	0.616	42.9	8.554
	110	0.38	1.10	314.75	312	106	100	0.616	42.5	5.566
	120	0.38	1.10	320.17	312	107	100	0.616	42.5	5.012

Totals and Averages

120	1.10	67.77	311	102	0.616	42.7	62.64
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/14/2011
Header ID	M-5
Y _c	0.9953
P _{in} C ₂	0.94

Place an "x" in the appropriate Box

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-10
P ₁ (Inches Hg)	29.61
P ₂ (Inches H ₂ O)	-15.2
Start Time	18:31
Stop Time	18:31

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impingement	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	882.0	739.0	143.0
Impinger 2	786.0	751.0	35.0
Impinger 3	648.0	613.0	35.0
Rinse		50.0	-50.0
Silica Gel	1005.0	991.0	14.0
Weight of Water Collected V _{wt} (g)			143.0
Silica Gel Net Weight V _{wt} (g)			14.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.6		8.51

Run 3

Traverse Point	ManPt	Velocity Pressure Δ P (in H ₂ O)	Orifice Setting Δ H (in H ₂ O)	Gas Sample Volume Inlet (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity V _g (ft/sec)	Volume Measured V _{std} (ft ³)
	10									
Single	10	0.37	1.00	329.75	310	96	92	0.608	42.3	5.912
	20	0.37	1.00	334.75	311	96	92	0.608	42.3	5.916
	30	0.37	1.00	339.90	311	97	92	0.608	42.3	5.917
	40	0.37	1.00	345.42	312	98	92	0.608	42.3	5.935
	50	0.37	1.00	350.80	312	98	91	0.608	42.3	5.939
	60	0.37	1.00	356.35	312	99	91	0.608	42.3	5.944
	70	0.37	1.00	361.90	311	99	91	0.608	42.3	5.944
	80	0.37	1.00	367.25	311	99	92	0.608	42.3	5.942
	90	0.37	1.00	372.60	310	100	93	0.608	42.3	5.941
	100	0.37	1.00	378.29	309	101	94	0.608	42.2	5.941
	110	0.37	1.00	384.28	309	100	95	0.608	42.2	5.941
	120	0.37	1.00	389.80	309	103	96	0.608	42.2	5.944

Totals and Averages

120			1.00	66.35	311		95.7	0.608	42.3	62.02
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/14/2011
Meter ID	M-9
V_d	0.9891
Pilot C_p	0.84

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-15
P_0 (Inches Hg)	29.51
P_1 (Inches H ₂ O)	-15.2
Start Time	10:09
Stop Time	12:24

Moisture	Final Wt (g)	Tare w/t (g)	Net Wt (g)
Impinger 1	785.2	642.7	142.5
Impinger 2	752.5	738.8	13.7
Impinger 3	715.6	697.3	18.3
Impinger 4	647.1	639.4	7.7
Silica Gel	978.9	956.0	22.9
Weight of Water Collected, V_{15} (g)			182.2
Silica Gel Net Weight, V_{15} (g)			22.9

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5		6.80

Run 1

Traverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DSM Inlet (°F)	DSM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.38	1.00	404.97	312	97	97	0.616	43.1	2.289	102.2
1-2	9.0	0.38	1.00	407.34	312	97	97	0.616	43.1	2.196	98.1
1-3	13.5	0.40	1.10	409.92	312	98	97	0.632	44.2	2.358	104.0
1-4	18.0	0.41	1.10	412.39	312	98	97	0.640	44.8	2.287	98.3
1-5	22.5	0.40	1.10	414.84	312	100	97	0.632	44.2	2.357	102.6
1-6	27.0	0.40	1.10	417.49	312	101	97	0.632	44.2	2.355	102.5
1-7	31.5	0.41	1.10	419.87	313	101	98	0.640	44.8	2.186	94.5
2-1	36.0	0.41	1.10	422.35	314	101	97	0.640	44.9	2.291	95.6
2-2	40.5	0.51	1.40	424.85	315	101	98	0.714	50.1	2.309	99.2
2-3	45.0	0.51	1.40	427.48	316	101	97	0.714	50.1	2.431	93.9
2-4	49.5	0.53	1.40	429.84	316	101	97	0.726	51.1	2.181	82.7
2-5	54.0	0.52	1.40	432.34	316	101	98	0.721	50.6	2.309	88.4
2-6	58.5	0.53	1.40	434.86	317	101	97	0.728	51.1	2.329	86.3
2-7	63.0	0.52	1.40	437.33	316	101	97	0.721	50.6	2.283	87.4
3-1	67.5	0.52	1.40	439.83	316	101	97	0.721	50.6	2.311	88.8
3-2	72.0	0.51	1.40	442.34	316	101	97	0.714	50.1	2.320	89.7
3-3	76.5	0.52	1.40	444.85	316	101	97	0.721	50.6	2.320	88.8
3-4	81.0	0.52	1.40	447.36	316	101	97	0.721	50.6	2.320	88.8
3-5	85.5	0.53	1.40	449.87	316	101	97	0.726	51.1	2.320	87.9
3-6	90.0	0.50	1.40	451.23	316	101	96	0.707	49.6	1.258	49.1
3-7	94.5	0.50	1.40	453.98	316	101	96	0.707	49.6	2.544	93.3
4-1	99.0	0.53	1.40	457.38	316	101	96	0.728	51.1	3.145	119.2
4-2	103.5	0.53	1.40	458.42	316	100	96	0.728	51.1	1.998	71.6
4-3	108.0	0.52	1.40	462.36	316	100	96	0.721	50.6	2.722	104.2
4-4	112.5	0.53	1.40	464.82	316	100	95	0.728	51.1	2.280	86.4
4-5	117.0	0.54	1.50	467.18	318	99	95	0.735	51.5	2.171	81.5
4-6	121.5	0.52	1.40	469.61	317	100	95	0.721	50.6	2.298	88.0
4-7	126.0	0.52	1.40	472.35	316	100	95	0.721	50.6	2.512	96.1

Totals and Averages

126	1.31	69.85	315	98.4	0.686	48.8	64.61	91.5
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/14/2011
Meter ID	M-9
Y ₂	0.9891
Picoid C ₂	0.84

Place an "x" in the appropriate Box

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-15
P ₁ (Inches H ₂ O)	29.51
P ₂ (Inches H ₂ O)	-15.2
Start Time	13:43
Stop Time	15:58

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare wt (g)	Net Wt (g)
Impinger 1	754.5	630.6	123.9
Impinger 2	747.2	735.5	11.7
Impinger 3	730.2	716.2	14.0
Impinger 4	636.0	629.9	6.1
Silica Gel	865.2	836.6	28.6
Weight of Water Collected, V _w (g)			155.7
Silica Gel Net Weight, V _{mg} (g)			28.6

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.67

Run 2

Traverse Point	4.5	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Efficiency (%)
	Elapsed Time										
1-1	4.5	0.38	1.00	481.69	311	98	96	0.616	43.0	2.817	124.3
1-2	9.0	0.38	1.00	484.08	311	100	97	0.615	43.0	2.209	97.5
1-3	13.5	0.39	1.10	486.59	311	102	97	0.624	43.5	2.316	100.9
1-4	18.0	0.39	1.10	489.09	311	104	98	0.624	43.5	2.301	100.2
1-5	22.5	0.38	1.00	491.59	311	107	100	0.616	43.0	2.280	101.1
1-6	27.0	0.39	1.10	494.09	311	109	102	0.624	43.5	2.365	100.9
1-7	31.5	0.38	1.00	496.59	310	109	102	0.616	43.0	2.300	101.4
2-1	36.0	0.38	1.00	499.11	311	110	103	0.616	43.0	2.305	101.7
2-2	40.5	0.38	1.00	501.64	311	110	103	0.616	43.0	2.296	101.5
2-3	45.0	0.39	1.10	504.16	311	110	104	0.624	43.5	2.296	98.5
2-4	49.5	0.40	1.10	506.67	311	114	103	0.632	44.1	2.252	96.5
2-5	54.0	0.39	1.10	509.15	311	108	102	0.624	43.5	2.275	98.1
2-6	58.5	0.40	1.10	511.64	312	106	102	0.632	44.1	2.289	98.5
2-7	63.0	0.40	1.10	514.14	312	106	102	0.632	44.1	2.629	121.8
3-1	67.5	0.43	1.20	517.23	313	105	100	0.666	45.6	2.437	117.6
3-2	72.0	0.48	1.30	519.65	313	105	100	0.693	48.4	2.222	87.4
3-3	76.5	0.5	1.40	521.71	315	105	101	0.707	49.4	1.891	72.9
3-4	81.0	0.5	1.40	523.62	316	105	100	0.707	49.5	1.750	67.7
3-5	85.5	0.5	1.40	526.73	316	105	100	0.707	49.5	2.857	110.3
3-6	90.0	0.5	1.40	529.21	316	105	100	0.707	49.5	2.278	87.9
3-7	94.5	0.50	1.40	531.44	316	104	99	0.707	49.5	2.052	79.2
4-1	99.0	0.5	1.40	534.34	316	103	99	0.707	49.5	2.671	103.1
4-2	103.5	0.51	1.40	536.72	316	103	98	0.714	50.0	2.194	85.6
4-3	108.0	0.51	1.40	539.23	316	102	98	0.714	50.0	2.316	88.5
4-4	112.5	0.51	1.40	542.36	317	102	98	0.714	50.0	2.892	110.4
4-5	117.0	0.51	1.40	544.21	317	102	99	0.714	50.0	1.775	68.2
4-6	121.5	0.51	1.40	546.87	317	102	99	0.714	50.0	2.452	93.8
4-7	126.0	0.51	1.40	549.32	317	102	99	0.714	50.0	2.258	86.4

Totals and Averages

126	1.22	70.67	313	103	0.664	46.4	64.88	95.1
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/14/2011
Meier ID	M-9
Y ₂	0.9891
P ₁₀₀ C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-15
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-15.2
Start Time	16:43
Stop Time	18:58

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare wt (g)	Net Wt (g)
Impinger 1	805.4	647.9	157.5
Impinger 2	764.2	743.2	21.0
Impinger 3	713.9	703.1	10.8
Impinger 4	649.0	644.2	4.8
Silica Gel	993.6	978.3	15.3
Weight of Water Collected, V _w (g)			194.1
Silica Gel Net Weight, V _{sg} (g)			15.3

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.6		6.51

Run 3

Transverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Foot ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Metered V _m (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.37	1.00	558.07	309	94	93	0.60E	42.5	2.397	106.5
1-2	8.0	0.38	0.90	558.61	309	94	93	0.609	41.9	2.388	108.8
1-3	13.5	0.37	1.00	561.13	309	95	93	0.60E	42.5	2.34E	106.3
1-4	18.0	0.38	1.00	583.86	308	96	92	0.61E	43.0	2.367	105.2
1-5	22.5	0.38	1.00	566.17	308	96	93	0.61E	43.0	2.33E	104.3
1-6	27.0	0.38	1.00	568.65	308	97	93	0.61E	43.0	2.30E	102.5
1-7	31.5	0.37	1.00	571.14	307	98	93	0.608	42.4	2.314	104.8
2-1	36.0	0.37	1.00	573.63	308	98	93	0.608	42.4	2.31E	104.6
2-2	40.5	0.38	1.00	576.37	308	98	93	0.61E	43.0	2.34E	115.6
2-3	45.0	0.38	1.00	578.54	307	99	93	0.61E	43.0	2.015	99.2
2-4	49.5	0.38	1.00	580.61	308	100	94	0.61E	43.0	1.91E	95.6
2-5	54.0	0.41	1.10	583.58	312	100	94	0.640	44.8	2.753	116.6
2-6	58.5	0.40	1.10	586.15	313	100	94	0.632	44.2	2.382	104.0
2-7	63.0	0.40	1.10	588.57	312	100	94	0.632	44.2	2.243	97.8
3-1	67.5	0.42	1.20	591.07	312	100	94	0.64E	45.3	2.31E	96.6
3-2	72.0	0.42	1.20	593.58	313	101	94	0.64E	45.4	2.32E	98.0
3-3	76.5	0.42	1.20	596.19	313	101	94	0.64E	45.4	2.41E	103.0
3-4	81.0	0.42	1.20	598.03	314	102	95	0.64E	45.4	1.701	72.5
3-5	85.5	0.42	1.20	600.32	313	102	95	0.64E	45.4	2.117	90.2
3-6	90.0	0.43	1.20	603.59	313	102	95	0.65E	45.9	2.024	87.3
3-7	94.5	0.42	1.20	606.09	313	102	96	0.64E	45.4	2.310	98.4
4-1	99.0	0.43	1.20	608.09	313	102	96	0.65E	45.9	1.84E	77.8
4-2	103.5	0.43	1.20	611.08	314	102	96	0.65E	45.9	2.762	116.5
4-3	108.0	0.42	1.20	613.59	314	102	96	0.64E	45.4	2.319	95.8
4-4	112.5	0.40	1.10	616.13	313	101	95	0.63E	44.3	2.350	102.6
4-5	117.0	0.43	1.20	618.64	314	101	95	0.65E	45.9	2.322	97.5
4-6	121.5	0.40	1.10	621.13	314	100	95	0.63E	44.3	2.30E	100.7
4-7	126.0	0.42	1.20	623.68	313	100	94	0.64E	45.4	2.364	100.7

Totals and Averages

126	1.10	70.18	311	96.8	0.632	44.2	65.08	101.3
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	Rental Ashtad
Y _d	1.0072

Start Time	8:08
Stop Time	9:36

Meter ID	Rental Ashtad
Y _d	0.99850

Run 1

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.75	1.72	100	1 613
7.50	3.74	102	1 888
11.25	5.49	104	1 630
15.00	7.16	105	1 552
18.75	8.95	105	1 664
22.50	10.71	106	1 633
26.25	12.49	106	1 652
30.00	14.31	107	1 686
33.75	16.12	107	1 677
37.50	17.75	107	1 510
41.25	19.47	108	1 590
45.00	21.29	108	1 683
48.75	23.09	116	1 641
52.50	24.94	118	1 681
56.25	26.76	119	1 651
60.00	28.61	119	1 678
63.75	30.30	122	1 525
67.50	32.12	125	1 634
71.25	33.86	125	1 562
75.00	35.68	125	1 634
78.75	37.44	125	1 580
82.50	39.13	126	1 515
86.25	40.95	127	1 628
90.00	42.81	128	1 661

Totals and Averages

90	42.81	114	39.16
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Run 1 Spiked

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.8	1.69	100	1 571
7.5	3.36	102	1 547
11.3	5.47	104	1 948
15.0	7.27	105	1 659
18.8	9.02	105	1 613
22.5	10.82	106	1 656
26.3	12.61	107	1 644
30.0	14.39	107	1 635
33.8	16.24	107	1 699
37.5	18.04	107	1 653
41.3	19.79	108	1 604
45.0	21.57	108	1 632
48.8	23.37	116	1 627
52.5	25.19	118	1 639
56.3	27.01	119	1 637
60.0	28.77	119	1 583
63.8	30.01	122	1 109
67.5	32.34	125	2 074
71.3	34.17	125	1 629
75.0	35.95	125	1 584
78.8	37.85	125	1 691
82.5	39.59	126	1 546
86.3	41.34	127	1 552
90.0	43.15	128	1 603

Totals and Averages

90	43.15	114	39.13
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/15/11
P _o (Inches Hg)	29.56

Meter ID	Ashtad
Y _d	1.00720

Start Time	11:15
Stop Time	12:46

Meter ID	Ashtad
Y _d	0.99850

Run 2

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.00		
3.8	1.89	113	1 732
7.5	3.64	112	1 607
11.3	5.45	115	1 653
15.0	7.21	116	1 805
18.8	9.02	116	1 650
22.5	10.86	116	1 678
26.3	12.42	116	1 422
30.0	14.23	117	1 647
33.8	15.96	117	1 575
37.5	17.74	118	1 617
41.3	19.62	118	1 708
45.0	21.37	118	1 590
48.8	23.22	119	1 678
52.5	25.01	119	1 624
56.3	26.74	120	1 567
60.0	28.60	120	1 684
63.8	30.32	120	1 557
67.5	32.88	121	2 314
71.3	33.88	121	0 904
75.0	35.74	121	1 681
78.8	37.56	121	1 645
82.5	39.32	122	1 588
86.3	41.07	122	1 579
90.0	42.96	122	1 706

Totals and Averages

90	42.96	118	39.01
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Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.00		
3.8	1.72	113	1 563
7.5	3.59	114	1 696
11.3	5.28	115	1 530
15.0	7.12	116	1 663
18.8	8.92	116	1 627
22.5	10.46	116	1 392
26.3	12.33	116	1 690
30.0	14.16	116	1 654
33.8	15.81	116	1 491
37.5	17.55	116	1 573
41.3	19.37	118	1 639
45.0	21.16	118	1 612
48.8	22.93	118	1 594
52.5	24.81	118	1 693
56.3	26.60	119	1 610
60.0	28.32	119	1 547
63.8	30.13	121	1 622
67.5	31.83	122	1 521
71.3	33.65	122	1 628
75.0	35.42	123	1 581
78.8	37.28	123	1 661
82.5	39.01	124	1 542
86.3	40.89	124	1 676
90.0	42.78	124	1 685

Totals and Averages

90	42.78	119	38.49
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 2
Date	7/15/11
F _b (Inches Hg)	29.56

Meter ID	Rental
Y _d	1.00750

Start Time	14:04
Stop Time	16:12

Meter ID	Rental
Y _d	0.99850

Run 3

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.8	1.72	111	1 582
7.5	3.47	111	1 610
11.3	5.25	112	1 635
15.0	7.02	113	1 623
18.8	8.81	114	1 638
22.5	10.63	115	1 663
26.3	12.38	115	1 599
30.0	14.13	116	1 596
33.8	15.88	116	1 596
37.5	17.63	116	1 596
41.3	19.65	117	1 839
45.0	21.22	117	1 429
48.8	23.01	117	1 630
52.5	24.81	118	1 636
56.3	26.02	118	1 100
60.0	28.86	119	2 577
63.8	30.68	119	1 651
67.5	32.43	122	1 580
71.3	34.21	124	1 601
75.0	36.00	125	1 807
78.8	37.75	126	1 569
82.5	39.57	127	1 629
86.3	41.39	128	1 626
90.0	43.26	129	1 668

Run 3 Spiked

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.8	1.70	111	1 550
7.5	3.50	111	1 641
11.3	5.31	112	1 648
15.0	7.10	113	1 626
18.8	8.89	114	1 624
22.5	10.08	115	1 078
26.3	10.47	115	0 353
30.0	14.06	116	3 245
33.8	16.05	116	1 799
37.5	17.79	117	1 570
41.3	19.01	117	1 101
45.0	21.43	117	2 184
48.8	23.05	118	1 459
52.5	25.01	118	1 766
56.3	26.87	119	1 673
60.0	28.60	119	1 556
63.8	30.41	122	1 619
67.5	32.19	124	1 587
71.3	34.00	124	1 614
75.0	35.78	125	1 584
78.8	37.56	126	1 582
82.5	39.33	127	1 570
86.3	41.09	128	1 558
90.0	42.83	129	1 538

Totals and Averages

90	43.26	119	39.28
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Totals and Averages

90	42.83	119	38.52
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/15/2011
Meier ID	M-10
Y _d	1.0091
Filter C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12072
Train Type	Impinger
Train ID	IB 4
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-16.5
Start Time	8:08
Stop Time	9:39

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	709.4	573.0	136.4
Impinger 2	697.6	703.0	-5.4
Impinger 3	613.2	608.0	5.2
Rinse		50.0	-50.0
Silica Gel	879.8	864.0	15.8
Weight of Water Collected, V _w (g)			86.2
Silica Gel Net Weight, V _{sil} (g)			15.8

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.3		7.00

Run 1

Traverse Point	Min/PT	Velocity Pressure Δ P (in H ₂ O)	Orifice Setting Δ H (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity ft/s (ft/sec)	Volume Measured V _{mstd} (ft ³)	Isokinetic (%)
	3.25 Elapsed Time										
1-1	3.25	0.38	0.95	221.72	335	92	89	0.616	43.4	1.648	99.7
1-2	6.50	0.39	0.97	223.66	336	92	89	0.624	44.0	1.659	111.0
1-3	9.75	0.41	1.02	225.22	335	92	90	0.640	45.1	1.494	87.0
1-4	13.00	0.42	1.05	227.02	335	93	90	0.648	45.8	1.722	99.1
1-5	16.25	0.42	1.05	228.84	334	93	90	0.648	45.6	1.741	100.1
1-6	19.50	0.40	1.00	230.84	333	94	90	0.632	44.6	1.720	101.2
1-7	22.75	0.39	0.99	232.41	333	94	90	0.624	43.9	1.691	100.8
2-1	26.00	0.39	0.99	234.19	333	94	90	0.624	43.9	1.701	101.2
2-2	29.25	0.41	1.00	236.23	333	94	89	0.640	45.0	1.651	113.5
2-3	32.50	0.42	1.10	237.80	332	95	89	0.648	45.6	1.501	86.2
2-4	35.75	0.43	1.10	239.36	331	95	89	0.656	46.1	1.491	84.5
2-5	39.00	0.43	1.10	241.81	332	95	90	0.666	46.1	2.340	132.6
2-6	42.25	0.40	1.00	243.23	335	97	92	0.632	43.3	1.351	79.6
2-7	45.50	0.39	0.97	245.91	337	98	92	0.624	44.0	2.547	152.2
3-1	48.75	0.38	0.95	248.25	340	98	93	0.616	43.6	2.222	130.8
3-2	52.00	0.39	0.97	249.98	340	99	93	0.624	44.1	1.641	98.3
3-3	55.25	0.41	1.02	251.75	340	101	93	0.640	45.2	1.676	97.9
3-4	58.50	0.42	1.05	253.61	339	102	94	0.648	45.8	1.759	101.4
3-5	61.75	0.43	1.10	255.43	338	102	96	0.656	46.3	1.718	97.9
3-6	65.00	0.41	1.02	257.26	340	103	96	0.640	45.2	1.725	100.8
3-7	68.25	0.39	0.97	259.06	339	103	96	0.624	44.1	1.697	101.6
4-1	71.50	0.39	0.97	260.81	339	104	96	0.624	44.1	1.648	98.6
4-2	74.75	0.40	1.00	262.67	339	104	97	0.632	44.7	1.647	97.3
4-3	78.00	0.40	1.00	264.42	336	105	98	0.632	44.6	1.747	103.1
4-4	81.25	0.44	1.10	266.72	337	106	100	0.662	46.5	1.640	92.3
4-5	84.50	0.46	1.10	268.16	339	107	101	0.678	47.9	2.152	118.6
4-6	87.75	0.47	1.20	270.13	340	107	101	0.686	48.4	1.347	73.5
4-7	91.00	0.46	1.10	271.96	341	108	102	0.678	47.2	1.840	101.5

Totals and Averages

91	1.03	51.96	336	98.1	0.641	45.2	49.29	102.4
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Project Number:	3648
Client:	Big Rivers
Plant:	Wilson
Location:	ESP 3
Date:	7/15/2011
Filter ID:	M-10
Y _d :	1.0091
Print C _p :	0.84

Nozzle Diameter (in):	0.250
Filter ID:	12082
Train Type:	Impinger
Train ID:	IB
P ₁ (Inches Hg):	29.56
P ₂ (Inches H ₂ O):	-16.5
Start Time:	11:15
Stop Time:	12:46

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter:	
Length:	162
Width:	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	641.5	600.4	41.1
Impinger 2	673.4	631.2	42.2
Impinger 3	557.4	541.6	15.8
Rinse		50.0	-50.0
Silica Gel	885.8	864.7	21.1
Weight of Water Collected, V _{w,c} (g)			49.1
Silica Gel Net Weight, V _{w,g} (g)			21.1

CEMS	%CO ₂	%CO ₂ +%CO	%O ₂
Average	12.4		6.97

Run 2

Time/Start Point	3.25		Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Foot ΔF	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Isokinetic (%)
	Min/Pl	Elapsed Time										
1-1	3.25	3.25	0.38	0.99	289.45	340	108	115	0.616	43.2	1.698	100.9
1-2	6.50	6.50	0.40	1.00	291.29	344	108	115	0.632	44.6	1.698	99.6
1-3	9.75	9.75	0.41	1.10	293.41	344	109	115	0.640	45.1	1.456	112.2
1-4	13.00	13.00	0.44	1.10	294.63	343	109	115	0.663	46.7	1.125	62.3
1-5	16.25	16.25	0.44	1.10	296.74	343	110	116	0.663	46.7	1.945	107.5
1-6	19.50	19.50	0.40	1.00	298.39	343	110	116	0.632	44.5	1.515	98.1
1-7	22.75	22.75	0.39	1.00	300.71	343	110	116	0.624	44.0	2.136	125.5
2-1	26.00	26.00	0.37	0.96	302.31	344	110	114	0.608	42.6	1.475	89.1
2-2	29.25	29.25	0.41	1.10	304.26	344	111	113	0.640	45.1	1.799	103.2
2-3	32.50	32.50	0.42	1.10	305.98	343	111	112	0.648	45.6	1.588	89.9
2-4	35.75	35.75	0.45	1.20	307.82	344	111	110	0.671	47.2	1.702	93.2
2-5	39.00	39.00	0.44	1.10	309.65	343	112	109	0.663	46.7	1.692	93.6
2-6	42.25	42.25	0.41	1.10	311.60	342	112	110	0.640	45.1	1.802	103.2
2-7	45.50	45.50	0.38	0.99	313.14	344	112	110	0.616	43.4	1.425	54.8
3-1	48.75	48.75	0.36	0.99	315.26	343	112	110	0.600	42.2	1.856	119.9
3-2	52.00	52.00	0.40	1.00	316.94	341	113	110	0.632	44.5	1.551	89.9
3-3	55.25	55.25	0.43	1.10	318.72	343	113	110	0.666	46.2	1.643	92.0
3-4	58.50	58.50	0.45	1.20	320.51	344	113	111	0.671	47.2	1.662	90.4
3-5	61.75	61.75	0.42	1.10	322.31	344	113	111	0.648	45.7	1.651	93.6
3-6	65.00	65.00	0.40	1.00	324.68	344	113	111	0.632	44.6	1.660	96.4
3-7	68.25	68.25	0.39	1.00	326.41	342	113	111	0.624	43.9	2.791	222.1
4-1	71.50	71.50	0.40	1.00	328.09	340	113	111	0.632	44.5	1.549	99.7
4-2	74.75	74.75	0.41	1.10	329.97	343	114	111	0.640	45.1	1.738	99.3
4-3	78.00	78.00	0.41	1.10	331.64	344	114	112	0.640	45.1	1.325	89.2
4-4	81.25	81.25	0.44	1.10	333.79	344	114	112	0.663	46.7	1.960	109.6
4-5	84.50	84.50	0.45	1.20	335.51	344	114	112	0.671	47.2	3.242	177.5
4-6	87.75	87.75	0.42	1.10	337.31	343	114	112	0.648	45.6	1.785	100.1
4-7	91.00	91.00	0.38	0.99	339.23	342	115	112	0.615	43.4	1.766	105.1

Totals and Averages

91	1.07	51.62	343	112	0.641	45.1	47.61	97.4
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/15/2011
Meter ID	M-10
γ_d	1.0091
Plot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	12143
Train Type	Impinger
Train ID	IB 4
P_b (Inches Hg)	29.56
P_s (Inches H ₂ O)	-16.5
Start Time	14:04
Stop Time	16:12

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Morsure	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	696.0	692.1	103.8
Impinger 2	683.9	691.1	-7.2
Impinger 3	621.3	606.4	14.9
Rinse		50.0	-50.0
Silica Gel	907.3	879.5	27.8
Weight of Water Collected, V_{wc} (g)			61.8
Silica Gel Net Weight, V_{sg} (g)			27.8

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.2		6.99

Run 3

Traverse Point	Min/Plt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V_s (ft/sec)	Volume Measured (ft ³)	Isokinetics (%)
	3.25 Elapsed Time										
1-1	3.25	0.37	0.96	347.08	344	108	107	0.608	45.0	1.701	104.0
1-2	6.50	0.40	1.00	348.91	347	108	107	0.632	44.8	1.771	100.2
1-3	9.75	0.43	1.10	350.99	345	108	107	0.668	46.4	1.934	109.8
1-4	13.00	0.44	1.10	352.78	346	108	107	0.663	47.0	2.747	210.4
1-5	16.25	0.42	1.10	355.02	348	109	107	0.648	46.9	1.900	74.8
1-6	19.50	0.40	1.00	356.42	348	109	107	0.632	44.8	1.679	95.1
1-7	22.75	0.39	1.00	358.12	347	110	108	0.624	44.2	2.077	123.9
2-1	26.00	0.39	1.00	360.36	344	110	108	0.624	44.2	2.253	132.2
2-2	29.25	0.40	1.00	362.79	347	110	108	0.632	44.8	0.927	54.3
2-3	32.50	0.45	1.20	363.79	348	110	108	0.671	47.6	1.926	107.2
2-4	35.75	0.44	1.10	365.87	347	110	109	0.663	47.0	1.805	90.1
2-5	39.00	0.41	1.10	367.60	347	110	109	0.640	46.4	1.658	96.5
2-6	42.25	0.39	1.00	369.39	346	110	109	0.624	44.2	1.880	112.1
2-7	45.50	0.38	0.98	371.42	345	110	109	0.616	45.6	1.794	102.3
3-1	48.75	0.40	1.00	373.26	347	111	109	0.632	44.8	1.703	100.3
3-2	52.00	0.40	1.00	375.11	347	111	109	0.632	44.8	1.712	100.9
3-3	55.25	0.42	1.10	376.89	348	111	109	0.648	46.9	1.648	94.8
3-4	58.50	0.43	1.10	378.64	347	111	109	0.656	46.5	1.620	94.1
3-5	61.75	0.41	1.10	380.45	347	111	110	0.640	46.4	1.674	93.4
3-6	65.00	0.39	1.00	382.63	346	111	110	0.624	44.2	2.016	120.2
3-7	68.25	0.38	0.98	384.47	346	111	110	0.616	45.6	1.701	102.8
4-1	71.50	0.38	0.98	386.21	346	112	110	0.616	45.6	1.607	97.1
4-2	74.75	0.42	1.10	388.01	347	112	110	0.648	46.9	1.663	95.6
4-3	78.00	0.41	1.10	389.84	347	112	110	0.663	47.0	1.691	95.0
4-4	81.25	0.44	1.10	391.63	347	113	110	0.669	47.0	1.653	92.8
4-5	84.50	0.45	1.20	393.90	346	113	110	0.671	47.5	2.096	116.4
4-6	87.75	0.41	1.10	395.52	347	113	111	0.640	46.4	1.494	87.0
4-7	91.00	0.40	1.00	397.39	347	113	111	0.632	44.8	1.724	101.8

Totals and Averages

91	1.05	52.14	347	110	0.640	45.3	48.28	100.4
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/14/2011
Filter ID	M-14
Y ₃	1.0087
Pitot C _p	0.84

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-14
P ₀ (Inches Hg)	29.51
P ₁ (Inches H ₂ O)	-16.5
Start Time	10:09
Stop Time	12:09

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	788.0	716.0	72.0
Impinger 2	743.0	710.0	33.0
Impinger 3	638.0	632.0	6.0
Range		50.0	-50.0
Silica Gel	1036.0	1011.0	25.0
Weight of Water Collected W _w (g)			0.0
Silica Gel Net Weight W _{sg} (g)			25.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.2		6.80

Run 1

Traverse Point	Min/Pl	Velocity Pressure ΔP (in. H ₂ O)	Orifice Setting ΔH (in. H ₂ O)	Gas Sample Volume Inbal (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (fusec)	Volume Metered (ft ³)
	10 Elapsed Time									
Single	10	0.41	1.10	76.64	330	113	105	0.640	44.7	5.756
	20	0.41	1.10	82.53	331	111	106	0.640	44.7	5.455
	30	0.41	1.10	88.79	330	111	105	0.640	44.7	5.302
	40	0.41	1.10	93.90	331	111	105	0.640	44.7	4.737
	50	0.41	1.10	99.72	331	112	106	0.640	44.7	5.386
	60	0.41	1.10	105.54	330	113	107	0.640	44.7	5.378
	70	0.41	1.10	111.39	331	112	107	0.640	44.7	5.409
	80	0.41	1.10	117.23	330	111	107	0.640	44.7	5.404
	90	0.41	1.10	123.17	330	111	107	0.640	44.7	5.487
	100	0.41	1.10	128.96	330	110	107	0.640	44.7	5.362
	110	0.41	1.10	134.79	331	110	106	0.640	44.7	5.404
	120	0.41	1.10	140.68	331	109	106	0.640	44.7	5.465

Totals and Averages

120	1.10	70.26	331	109	0.640	44.7	65.05
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/14/2011
Meter ID	M-14
Y_d	1.0087
Pitot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB
P_b (Inches Hg)	29.51
P_s (Inches H ₂ O)	-16.5
Start Time	13:43
Stop Time	15:43

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	733.0	613.0	120.0
Impinger 2	658.0	631.0	27.0
Impinger 3	552.0	545.0	7.0
Pinse		50.0	-50.0
Silica Gel	908.0	883.0	25.0
Weight of Water Collected, V_w (g)			104.0
Silica Gel Net Weight, V_{s2} (g)			25.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.67

Run 2

Traverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔF	Stack Gas Velocity (ft/sec)	Volume Measured (ft ³)
	10									
Single	10	0.40	1.00	144.78	336	100	95	0.632	44.0	4749
	20	0.40	1.00	155.40	334	105	97	0.632	44.6	5245
	30	0.40	1.00	160.63	334	107	99	0.632	44.6	5890
	40	0.40	1.00	166.63	333	110	101	0.632	44.5	5585
	50	0.40	1.00	171.88	332	111	102	0.632	44.5	4878
	60	0.40	1.00	177.67	335	111	102	0.632	44.6	5360
	70	0.40	1.00	183.29	337	111	103	0.632	44.6	5218
	80	0.40	1.00	188.84	336	110	103	0.632	44.6	5157
	90	0.40	1.00	194.56	335	110	104	0.632	44.6	5310
	100	0.40	1.00	200.12	337	110	104	0.632	44.5	5162
	110	0.40	1.00	206.03	338	110	105	0.632	44.7	5482
	120	0.40	1.00	211.76	338	110	105	0.632	44.7	5315

Totals and Averages

	120		1.00	66.98	335		105	0.632	44.6	62.38
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/14/2011
Meter ID	M-14
V _d	1.0087
Flot C _d	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB 14
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-16.5
Start Time	18:43
Stop Time	18:43

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	860.0	730.0	130.0
Impinger 2	739.0	715.0	24.0
Impinger 3	643.0	637.0	6.0
Runse		50.0	-50.0
Silica Gel	950.0	931.0	19.0
Weight of Water Collected V _w (g)			110.0
Silica Gel Net Weight, V _{wg} (g)			19.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.6		6.51

Run 3

Traverse Point	min/P:	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity vs (ft/sec)	Volume Metered V _{mstr} (ft ³)
	10									
Single	10	0.41	1.00	218.63	334	105	104	0.640	45.1	5.260
	20	0.41	1.00	224.34	334	108	103	0.640	45.1	5.315
	30	0.41	1.00	229.70	333	108	103	0.640	45.1	5.388
	40	0.41	1.00	235.59	332	109	103	0.640	45.0	5.478
	50	0.41	1.00	241.06	333	109	103	0.640	45.1	5.171
	60	0.41	1.00	246.62	334	109	102	0.640	45.1	5.176
	70	0.41	1.00	252.21	335	108	102	0.640	45.1	5.206
	80	0.41	1.00	257.81	333	109	102	0.640	45.1	5.215
	90	0.41	1.00	263.34	334	109	102	0.640	45.1	5.146
	100	0.41	1.00	268.88	333	109	102	0.640	45.1	5.157
	110	0.41	1.00	274.41	333	109	103	0.640	45.1	5.143
	120	0.41	1.00	279.96	333	109	102	0.640	45.1	5.186

Totals and Averages

120	1.00	66.96	333	106	0.640	45.1	62.33
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/14/2011
Meier ID	M-10
Yr	1.0091
Total Cp	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	25
P ₀ (Inches Hg)	29.51
P ₁ (Inches H ₂ O)	-16.5
Start Time	10:09
Stop Time	12:24

Place an "X" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	182
Width	182

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	775.1	634.2	140.9
Impinger 2	731.0	708.4	22.6
Impinger 3	742.6	734.0	8.6
Impinger 4	642.8	636.5	6.3
Rinse		50.0	-50.0
Silica Gel	969.1	951.9	17.2
Weight of Water Collected, V _w (g)			128.4
Silica Gel Net Weight, V _{sil} (g)			17.2

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5		6.80

Run 1

Train Point	MFR/PI	Velocity Pressure P (in H ₂ O)	Orifice Setting H (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root A P	Stack Gas velocity V _s (ft/sec)	Volume Metered V _m (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.41	0.69	2.15	340	96	95	0.640	45.1	2.037	87.3
1-2	9.0	0.41	0.69	4.20	341	96	96	0.640	45.5	1.940	63.2
1-3	13.5	0.44	0.74	6.26	340	97	96	0.663	47.1	1.948	80.6
1-4	18.0	0.44	0.74	8.39	341	97	96	0.663	47.1	2.014	83.4
1-5	22.5	0.47	0.79	10.61	342	98	96	0.686	48.7	2.069	86.1
1-6	27.0	0.47	0.79	12.81	343	98	96	0.686	48.7	2.079	83.8
1-7	31.5	0.47	0.79	15.02	343	98	96	0.686	46.7	2.085	63.8
2-1	36.0	0.47	0.79	17.24	344	99	97	0.686	45.2	2.094	84.1
2-2	40.5	0.42	0.70	19.30	344	99	97	0.648	46.1	1.943	32.5
2-3	45.0	0.44	0.74	23.56	347	99	98	0.663	47.0	1.914	168.9
2-4	49.5	0.44	0.74	25.72	341	99	98	0.663	47.1	2.035	24.3
2-5	54.0	0.44	0.74	25.72	340	99	97	0.663	47.1	0.000	0.0
2-6	58.5	0.39	0.66	27.50	340	99	98	0.621	44.3	1.577	73.7
2-7	63.0	0.41	0.69	29.81	341	99	98	0.640	45.5	2.176	93.6
3-1	67.5	0.39	0.66	34.86	346	99	98	0.621	44.5	4.758	208.9
3-2	72.0	0.39	0.66	37.26	347	99	98	0.621	44.5	2.261	96.3
3-3	76.5	0.45	0.76	39.45	348	99	97	0.671	47.8	2.066	84.9
3-4	81.0	0.45	0.76	41.63	348	99	97	0.671	47.8	2.056	84.6
3-5	85.5	0.45	0.76	43.76	348	99	97	0.671	47.8	2.009	82.6
3-6	90.0	0.45	0.76	45.99	350	99	97	0.671	47.9	2.103	96.8
3-7	94.5	0.45	0.76	48.08	349	98	97	0.671	47.9	1.973	81.2
4-1	99.0	0.47	0.79	50.21	349	98	97	0.686	46.5	2.011	81.0
4-2	103.5	0.47	0.79	52.34	350	98	97	0.686	48.0	2.011	81.0
4-3	108.0	0.47	0.79	54.75	349	99	98	0.686	48.3	2.271	91.4
4-4	112.5	0.47	0.79	56.98	349	97	95	0.686	48.9	2.111	85.0
4-5	117.0	0.51	0.86	59.30	349	97	95	0.714	51.0	2.197	86.9
4-6	121.5	0.51	0.86	61.62	349	97	95	0.714	51.0	2.197	84.3
4-7	126.0	0.51	0.86	63.93	349	98	95	0.714	51.0	2.185	84.5

Port 1 to 2
2.64

Less Volumes for Between port Leak Checks

Totals and Averages												
	126		0.755	61.29	345		97.4		0.669	47.7	57.87	85.0

Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/14/2011
Meter ID	M-10
Yr	1.0091
Filter C ₁	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	4
P ₁ (inches H ₂ O)	29.51
P ₂ (inches H ₂ O)	-16.5
Start Time	13:43
Stop Time	15:58

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	807.3	653.4	153.9
Impinger 2	763.6	743.4	20.2
Impinger 3	668.1	657.2	10.9
Impinger 4	622.5	615.7	6.8
Rinse		50.0	-50.0
Silica Gel	908.6	884.8	23.8
Weight of Water Collected, V ₁ (g)			141.8
Silica Gel Net Weight, V ₂ (g)			23.8

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.67

Run 2

Traverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.43	1.10	70.74	348	100	98	0.656	46.7	2.431	102.0
1-2	9.0	0.43	1.10	73.32	348	100	98	0.656	46.7	2.431	102.0
1-3	13.5	0.44	1.10	75.90	348	100	98	0.663	47.3	2.431	100.8
1-4	18.0	0.43	1.10	78.48	348	101	97	0.668	46.7	2.431	102.0
1-5	22.5	0.42	1.10	81.10	350	107	96	0.648	46.2	2.458	104.5
1-6	27.0	0.41	1.00	83.6	349	108	96	0.640	45.7	2.485	201.4
1-7	31.5	0.39	0.97	86.10	351	107	101	0.624	44.6	2.446	106.0
2-1	36.0	0.43	1.10	88.72	348	106	103	0.654	46.7	2.454	103.0
2-2	40.5	0.43	1.10	91.35	351	106	103	0.656	46.6	2.435	102.4
2-3	45.0	0.44	1.10	93.96	352	100	99	0.665	47.4	2.467	102.2
2-4	49.5	0.44	1.10	96.57	348	100	99	0.663	47.3	2.467	102.3
2-5	54.0	0.41	1.00	99.19	348	101	98	0.640	45.6	2.484	107.2
2-6	58.5	0.46	1.10	101.84	345	100	101	0.678	48.2	2.481	100.6
2-7	63.0	0.45	1.10	104.48	346	100	101	0.671	47.6	2.490	102.0
3-1	67.5	0.45	1.10	107.13	347	100	101	0.671	47.6	2.490	102.1
3-2	72.0	0.45	1.10	109.78	345	100	100	0.671	47.7	2.493	102.0
3-3	76.5	0.49	1.20	112.49	345	101	99	0.700	48.8	2.560	100.0
3-4	81.0	0.49	1.20	115.20	350	101	99	0.700	49.0	2.560	100.3
3-5	85.5	0.39	0.97	117.62	349	101	99	0.624	44.6	2.276	100.3
3-6	90.0	0.40	0.99	120.07	350	99	98	0.632	45.1	2.310	100.6
3-7	94.5	0.40	0.99	122.60	351	98	98	0.632	45.2	2.356	104.1
4-1	99.0	0.43	1.10	125.20	352	98	96	0.656	46.9	2.459	103.4
4-2	103.5	0.42	1.10	127.80	348	98	96	0.648	46.2	2.459	104.4
4-3	108.0	0.49	1.20	130.50	347	99	97	0.700	49.9	2.549	100.1
4-4	112.5	0.40	0.99	133.00	347	98	96	0.632	45.0	2.364	102.8
4-5	117.0	0.40	0.99	135.49	351	98	96	0.632	45.2	2.364	102.6
4-6	121.5	0.40	0.99	138.51	350	98	96	0.632	45.1	2.855	124.4
4-7	126.0	0.40	0.99	140.45	342	98	96	0.632	44.9	1.624	79.5

Totals and Averages

126		1.07	72.29	348		99.6		0.655	46.7	68.04	102.1
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/14/2011
Meter ID	M-10
Y ₀	1.0091
Pitot C _p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	25
P ₀ (Inches Hg)	29.51
P _s (Inches H ₂ O)	-16.5
Start Time	16:43
Stop Time	18:58

Place an "x" in the appropriate Box

Circular ?	
Rectangular ?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	806.2	638.9	167.3
Impinger 2	758.2	736.8	21.4
Impinger 3	723.0	715.8	7.2
Impinger 4	643.0	641.0	2.0
Rinse		50.0	-50.0
Silica Gel	984.7	968.3	16.4
Weight of Water Collected, V _w (g)			147.2
Silica Gel Net Weight, V _{silica} (g)			16.4

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.6		6.51

Run 3

Traverse Point	Min/PT	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Inhaled (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Measured (ft ³)	Isokinetics (%)
	4.5 Elapsed Time										
1-1	4.5	0.45	1.10	146.84	348	95	93	0.671	47.8	2.510	102.3
1-2	9.0	0.45	1.10	149.54	350	96	94	0.671	47.6	2.562	105.2
1-3	13.5	0.43	1.10	152.24	348	96	94	0.656	46.7	2.562	107.4
1-4	18.0	0.45	1.10	154.74	350	96	94	0.671	47.6	2.374	97.4
1-5	22.5	0.40	0.99	157.25	341	96	94	0.632	44.9	2.382	103.1
1-6	27.0	0.42	1.00	159.75	340	95	93	0.645	45.9	2.376	100.3
1-7	31.5	0.40	0.99	162.25	345	95	93	0.632	45.0	2.376	103.1
2-1	36.0	0.41	1.00	164.78	345	94	95	0.640	45.5	2.403	103.0
2-2	40.5	0.41	1.00	167.30	345	94	95	0.640	45.5	2.392	102.6
2-3	45.0	0.41	1.00	169.84	345	94	92	0.640	45.5	2.419	105.7
2-4	49.5	0.41	1.00	172.32	345	94	92	0.640	45.5	2.365	101.2
2-5	54.0	0.40	0.99	174.80	344	94	92	0.632	44.9	2.362	102.4
2-6	58.5	0.39	0.97	177.43	345	94	92	0.624	44.4	2.504	110.1
2-7	63.0	0.39	0.97	179.76	345	94	92	0.624	44.4	2.219	97.6
3-1	67.5	0.43	1.10	182.38	346	95	93	0.658	46.6	2.491	104.2
3-2	72.0	0.43	1.10	185.00	346	95	93	0.658	46.6	2.491	104.3
3-3	76.5	0.43	1.10	187.80	345	95	93	0.658	46.6	2.472	103.6
3-4	81.0	0.45	1.10	190.21	345	95	93	0.671	47.7	2.462	101.6
3-5	85.5	0.40	1.00	192.82	345	95	96	0.632	45.0	2.474	107.4
3-6	90.0	0.39	0.97	195.48	344	95	96	0.624	44.4	2.521	110.8
3-7	94.5	0.39	0.97	197.88	344	95	96	0.624	44.4	2.275	99.9
4-1	99.0	0.45	1.20	200.62	344	96	96	0.671	47.7	2.598	106.2
4-2	103.5	0.43	1.10	203.30	344	96	96	0.656	46.6	2.539	106.2
4-3	108.0	0.42	1.10	205.97	345	95	99	0.648	46.1	2.525	106.9
4-4	112.5	0.41	1.00	208.68	340	94	93	0.640	45.4	2.588	108.4
4-5	117.0	0.40	1.00	211.35	341	94	93	0.632	44.9	2.565	110.8
4-6	121.5	0.40	1.00	214.05	341	94	93	0.632	44.9	2.565	111.2
4-7	126.0	0.39	0.97	215.98	340	94	93	0.624	44.4	1.836	80.5

Totals and Averages

126	1.04	71.78	345	94.3	0.645	45.8	68.19	103.7
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	M-25
Y _e	0.9994

Start Time	8:08
Stop Time	9:39

Meter ID	M-25
Y _d	1.00170

Run 1

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.75	1.30	100	1.210
7.50	2.55	105	1.153
11.25	3.78	107	1.130
15.00	5.13	108	1.239
18.75	6.32	108	1.092
22.50	7.63	108	1.202
26.25	8.98	108	1.239
30.00	10.26	114	1.162
33.75	11.52	117	1.138
37.50	12.51	117	0.894
41.25	13.89	120	1.240
45.00	15.34	121	1.301
48.75	16.47	120	1.015
52.50	17.51	121	0.933
56.25	18.93	119	1.278
60.00	20.34	119	1.269
63.75	21.39	120	0.943
67.50	23.02	120	1.465
71.25	24.05	122	0.922
75.00	25.26	122	1.083
78.75	26.13	123	0.778
82.50	27.60	123	1.314
86.25	29.03	123	1.278
90.00	30.11	123	0.965

Totals and Averages

90	30.11	116	27.23
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Run 1 Spiked

Min/Pt	Gas Sample	DGM	Volume
3.75	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
3.8	1.39	101	1.294
7.5	2.21	106	0.757
11.3	4.82	109	2.396
15.0	5.19	110	0.339
18.8	6.48	110	1.182
22.5	7.80	113	1.205
26.3	9.10	114	1.181
30.0	10.39	115	1.172
33.8	11.74	118	1.220
37.5	13.12	120	1.243
41.3	14.39	121	1.142
45.0	15.74	121	1.214
48.8	17.01	120	1.144
52.5	18.27	120	1.135
56.3	19.82	118	1.401
60.0	20.87	119	0.947
63.8	22.31	120	1.297
67.5	23.42	120	1.000
71.3	24.84	122	1.274
75.0	26.02	122	1.059
78.8	27.38	123	1.218
82.5	28.26	123	0.788
86.3	29.89	123	1.460
90.0	31.39	122	1.346

Totals and Averages

90	31.39	117	28.41
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/15/11
P _a (Inches Hg)	29.56

Meter ID	M-25
Y _d	0.9994

Start Time	11:15
Stop Time	12:46

Meter ID	M-25
Y _d	0.9994

Run 2

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.00		
3.8	1.26	107	1 158
7.5	2.63	107	1 259
11.3	3.91	109	1 172
15.0	5.10	111	1 086
18.8	6.37	115	1 151
22.5	7.78	122	1 263
26.3	8.92	122	1 021
30.0	10.20	124	1 142
33.8	11.59	126	1 236
37.5	12.79	126	1 067
41.3	14.11	128	1 170
45.0	15.39	130	1 131
48.8	16.57	132	1 039
52.5	17.96	133	1 222
56.3	19.19	134	1 079
60.0	20.79	135	1 401
63.8	21.29	133	0 439
67.5	22.54	133	1 098
71.3	23.85	134	1 149
75.0	25.96	135	1 848
78.8	27.53	136	1 373
82.5	28.50	137	0 847
86.3	29.01	138	0 444
90.0	31.06	139	1 783

Totals and Averages

90	31.06	127	27.58
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Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.00		
3.8	1.31	109	1 206
7.5	2.62	109	1 200
11.3	3.98	109	1 246
15.0	5.36	111	1 259
18.8	6.47	115	1 006
22.5	7.91	113	1 310
26.3	9.18	123	1 135
30.0	10.45	134	1 114
33.8	11.85	124	1 249
37.5	13.17	126	1 174
41.3	14.43	128	1 117
45.0	15.74	129	1 159
48.8	17.11	127	1 216
52.5	18.36	128	1 108
56.3	19.69	129	1 177
60.0	20.99	130	1 148
63.8	22.52	131	1 349
67.5	23.71	133	1 046
71.3	24.92	134	1 062
75.0	26.33	135	1 235
78.8	27.77	136	1 259
82.5	28.99	137	1 065
86.3	30.59	138	1 394
90.0	31.73	139	0 992

Totals and Averages

90	31.73	126	28.21
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 3
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	M-25
Y _d	0.9994

Start Time	14:04
Stop Time	16:12

Meter ID	M-25
Y _e	1.0017

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.00		
3.8	1.28	111	1.168
7.5	2.56	114	1.162
11.3	3.92	119	1.224
15.0	5.21	119	1.161
18.8	6.45	120	1.114
22.5	7.69	121	1.112
26.3	9.18	123	1.332
30.0	10.49	124	1.189
33.8	11.67	125	1.051
37.5	12.96	126	1.147
41.3	14.43	128	1.303
45.0	15.39	129	0.849
48.8	17.00	130	1.422
52.5	18.19	131	1.049
56.3	19.56	130	1.210
60.0	20.62	131	0.935
63.8	22.10	132	1.303
67.5	23.22	133	0.984
71.3	24.48	133	1.107
75.0	25.94	133	1.283
78.8	27.30	133	1.195
82.5	28.86	135	1.366
86.3	30.09	137	1.074
90.0	31.11	137	0.890

Totals and Averages

90	31.11	127	27.61
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Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.00		
3.8	1.34	113	1.221
7.5	2.69	115	1.226
11.3	4.03	115	1.217
15.0	5.34	119	1.182
18.8	6.71	120	1.234
22.5	8.02	123	1.174
26.3	9.50	123	1.326
30.0	10.77	124	1.136
33.8	13.15	125	2.125
37.5	14.59	129	1.277
41.3	15.26	131	0.582
45.0	16.64	133	1.216
48.8	17.57	131	0.822
52.5	19.03	130	1.293
56.3	20.39	131	1.202
60.0	21.39	131	0.864
63.8	23.29	132	1.676
67.5	24.67	133	1.216
71.3	25.99	133	1.163
75.0	27.59	133	1.409
78.8	28.96	133	1.207
82.5	30.52	135	1.369
86.3	32.46	136	1.700
90.0	32.90	137	0.385

Totals and Averages

90	32.90	128	29.24
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/15/2011
Meter ID	M-17
Y _d	1.0141
Pilot C _p	0.84

Nozzle Diameter (in)	0.270
Filter ID	12073
Train Type	Impinger
Train ID	IB 3
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-17.0
Start Time	8:08
Stop Time	9:39

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	535.5	504.0	31.5
Impinger 2	784.0	750.0	34.0
Impinger 3	655.2	641.0	24.2
Rinse		50.0	-50.0
Silica Gel	932.8	912.0	20.8
Weight of Water Collected V _w (g)			39.7
Silica Gel Net Weight V _{sil} (g)			20.8

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.3		7.00

Run 1

Transverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ± H (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	Dip Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _g (ft/sec)	Volume Metered Vmstd (ft ³)	Isokinetics (%)
	3.25 Elapsed Time										
1-1	3.25	0.47	1.20	781.83	301	103	93	0.696	46.9	1.549	68.5
1-2	6.50	0.49	1.20	783.70	306	103	93	0.700	46.1	1.777	77.3
1-3	9.75	0.49	1.20	785.59	306	103	93	0.700	46.1	1.796	78.1
1-4	13.00	0.47	1.20	787.23	304	103	94	0.686	47.0	1.557	69.0
1-5	16.25	0.50	1.30	789.23	304	104	95	0.707	46.5	1.893	81.5
1-6	19.50	0.44	1.10	791.03	308	104	95	0.663	45.6	1.706	75.4
1-7	22.75	0.47	1.20	792.94	309	105	95	0.686	47.2	1.809	80.4
2-1	26.00	0.44	1.10	794.71	309	105	97	0.663	45.6	1.673	76.9
2-2	29.25	0.50	1.30	796.63	309	105	97	0.707	46.6	1.916	79.3
2-3	32.50	0.47	1.10	798.64	309	105	97	0.686	47.2	1.901	84.5
2-4	35.75	0.44	1.10	800.54	308	106	97	0.663	45.6	1.794	82.5
2-5	39.00	0.50	1.30	802.49	309	106	98	0.707	46.0	1.841	79.4
2-6	42.25	0.50	1.30	804.33	297	106	98	0.707	46.3	1.737	74.3
2-7	45.50	0.47	1.10	806.51	299	107	98	0.686	46.9	2.056	90.3
3-1	48.75	0.50	1.30	808.54	299	107	98	0.707	46.3	1.915	82.0
3-2	52.00	0.48	1.20	810.57	298	108	99	0.693	47.3	1.911	83.6
3-3	55.25	0.45	1.10	812.56	298	107	98	0.671	45.5	1.976	84.6
3-4	58.50	0.50	1.30	814.60	298	108	98	0.707	46.3	1.922	82.5
3-5	61.75	0.47	1.10	816.55	298	109	99	0.686	46.8	1.835	80.9
3-6	65.00	0.55	1.40	818.61	299	109	100	0.742	50.7	1.836	79.1
3-7	68.25	0.50	1.30	820.77	299	109	100	0.707	46.3	2.030	87.0
4-1	71.50	0.47	1.10	822.56	299	110	101	0.686	46.9	1.678	74.2
4-2	74.75	0.44	1.00	824.39	299	110	101	0.663	45.5	1.678	76.6
4-3	78.00	0.50	1.30	826.39	302	110	101	0.707	46.4	1.717	73.7
4-4	81.25	0.47	1.00	828.41	301	110	101	0.666	46.9	1.875	82.9
4-5	84.50	0.55	1.40	830.33	305	111	102	0.742	50.8	1.892	77.6
4-6	87.75	0.55	1.40	832.35	305	111	102	0.742	50.9	1.795	73.7
4-7	91.00	0.50	1.30	834.36	306	112	103	0.707	46.5	1.986	81.3

Totals and Averages

91	1.21	54.16	303	102	0.696	47.7	51.07	79.6
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/15/2011
Meter ID	M-17
Y ₂	1.0141
Pilot C _p	0.84

Place an "x" in the appropriate Box

Nozzle Diameter (in)	0.270
Filter ID	12126
Train Type	Impinger
Train ID	IB-8
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-17.0
Start Time	11:15
Stop Time	12:46

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Measure	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	739.1	609.6	129.5
Impinger 2	649.3	660.6	-11.3
Impinger 3	503.4	496.9	6.5
Rinse		50.0	-50.0
Silica Gel	948.1	931.9	16.2
Weight of Water Collected, W _{wt} (g)			74.7
Silica Gel Net Weight, W _{log} (g)			16.2

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.3?

Run 2

Traverse Point	Min/Pr	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Isokinetic (%)
	Elapsed Time										
1-1	3.25	0.50	1.30	840.18	307	103	99	0.707	48.6	2.156	92.8
1-2	6.50	0.47	1.20	842.12	307	105	99	0.686	47.1	1.831	81.3
1-3	9.75	0.44	1.10	844.04	307	105	99	0.662	45.6	1.811	83.2
1-4	13.00	0.50	1.30	845.83	311	108	100	0.707	48.7	1.688	72.7
1-5	16.25	0.49	1.20	847.54	310	109	100	0.700	48.2	1.607	70.0
1-6	19.50	0.55	1.40	849.69	310	109	100	0.742	51.1	2.021	93.1
1-7	22.75	0.47	1.20	851.81	310	109	100	0.686	47.2	1.992	98.6
2-1	26.00	0.49	1.20	853.78	310	108	99	0.700	48.2	1.854	90.8
2-2	29.25	0.50	1.30	855.84	310	109	99	0.707	48.7	1.938	95.8
2-3	32.50	0.45	1.10	857.68	310	109	99	0.671	46.5	1.730	78.7
2-4	35.75	0.49	1.20	859.71	311	108	100	0.700	48.2	1.919	83.3
2-5	39.00	0.50	1.30	861.60	311	109	100	0.707	48.7	1.778	78.7
2-6	42.25	0.53	1.40	863.68	310	108	100	0.725	50.1	1.957	92.0
2-7	45.50	0.49	1.20	865.77	311	109	100	0.700	48.2	1.964	85.6
3-1	48.75	0.50	1.30	867.84	311	109	100	0.707	48.7	1.946	94.0
3-2	52.00	0.49	1.20	869.84	311	109	100	0.700	48.2	1.878	82.0
3-3	55.25	0.45	1.10	871.81	311	110	101	0.671	46.5	1.947	84.1
3-4	58.50	0.49	1.20	873.86	311	110	101	0.700	48.2	1.923	83.9
3-5	61.75	0.47	1.20	875.86	310	110	101	0.686	47.2	1.876	83.5
3-6	65.00	0.55	1.40	877.89	311	111	102	0.742	51.1	1.991	78.2
3-7	68.25	0.50	1.30	879.82	311	111	102	0.707	48.7	1.807	78.0
4-1	71.50	0.49	1.20	881.79	311	111	102	0.700	48.2	1.743	90.3
4-2	74.75	0.50	1.30	883.83	311	111	102	0.707	48.7	1.910	82.3
4-3	78.00	0.47	1.20	885.75	311	111	102	0.686	47.2	1.798	90.0
4-4	81.25	0.49	1.20	887.68	311	111	102	0.700	48.2	1.907	78.8
4-5	84.50	0.50	1.30	889.74	311	111	102	0.707	48.7	1.929	83.2
4-6	87.75	0.54	1.40	891.77	311	112	103	0.735	50.3	1.988	78.9
4-7	91.00	0.49	1.20	893.73	311	112	103	0.700	48.2	1.832	79.8

Totals and Averages

91	1.248	55.83	310	105	0.702	48.5	52.42	83.0
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Project Number:	3648
Client:	Big Rivers
Plant:	Wilson
Location:	ESP 4
Date:	7/15/2011
Meter ID:	M-17
Y ₂ :	1.0141
Pitot C _p :	0.84

Nozzle Diameter (in):	0.270
Filter ID:	12144
Train Type:	Impinger
Train ID:	IB 3
P ₀ (Inches Hg):	29.56
P ₁ (Inches H ₂ O):	-17.0
Start Time:	14:04
Stop Time:	16:12

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter:	
Length:	162
Width:	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	591.5	485.8	105.7
Impinger 2	742.2	748.4	-6.2
Impinger 3	646.5	634.5	12.0
Rinse		50.0	-50.0
Silica Gel	1017.7	989.2	28.5
Weight of Water Collected, V _W (g)			61.5
Silica Gel Net Weight, V _{SG} (g)			28.5

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5		6.99

Run 3

Traverse Point	Min/Pl	Velocity Pressure ΔP (in H ₂ O)	Orifice Sealing ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _g (ft/sec)	Volume Metered V _{msd} (ft ³)	Isokinetic (%)
	3.25 Elapsed Time										
1-1	3.25	0.47	1.20	901.78	307	104	99	0.696	47.3	2.437	110.2
1-2	6.50	0.50	1.30	903.82	308	106	100	0.707	48.6	1.922	94.4
1-3	9.75	0.49	1.20	905.83	307	109	100	0.700	48.3	1.886	93.7
1-4	13.00	0.44	1.10	907.82	307	109	100	0.663	46.8	3.736	174.5
1-5	16.25	0.49	1.20	909.81	307	110	101	0.700	46.3	1.826	91.0
1-6	19.50	0.55	1.40	911.76	308	112	102	0.742	51.2	1.844	77.1
1-7	22.75	0.50	1.30	913.73	307	111	102	0.707	46.8	1.917	79.7
2-1	26.00	0.49	1.20	915.67	307	111	103	0.706	46.3	1.843	81.6
2-2	29.25	0.47	1.20	917.64	307	111	103	0.696	47.3	2.488	112.5
2-3	32.50	0.50	1.30	920.30	307	111	103	0.707	46.8	2.002	97.9
2-4	35.75	0.45	1.20	922.44	308	112	103	0.671	46.3	1.366	62.7
2-5	39.00	0.44	1.10	923.89	308	112	103	0.665	45.8	1.878	87.9
2-6	42.25	0.55	1.40	925.90	308	112	103	0.742	51.2	2.057	88.1
2-7	45.50	0.51	1.30	928.10	308	112	103	0.714	49.3	2.121	92.6
3-1	48.75	0.49	1.20	930.38	308	112	103	0.700	48.4	2.131	94.5
3-2	52.00	0.47	1.20	932.28	308	112	103	0.696	47.4	1.776	91.4
3-3	55.25	0.51	1.30	934.28	308	112	103	0.714	49.3	1.870	81.2
3-4	58.50	0.45	1.10	936.35	308	112	103	0.671	46.3	1.934	89.5
3-5	61.75	0.49	1.20	938.18	308	113	104	0.700	46.3	1.707	75.7
3-6	65.00	0.56	1.40	940.01	308	113	104	0.748	51.7	1.706	79.8
3-7	68.25	0.49	1.20	941.92	308	113	104	0.700	49.4	1.762	79.0
4-1	71.50	0.50	1.30	943.79	308	112	105	0.707	48.8	1.745	76.6
4-2	74.75	0.47	1.20	945.82	308	112	105	0.686	47.4	1.893	85.7
4-3	78.00	0.48	1.20	947.74	308	113	105	0.693	47.9	1.790	80.2
4-4	81.25	0.44	1.10	949.59	308	113	106	0.663	46.8	1.722	80.6
4-5	84.50	0.51	1.30	951.61	308	113	106	0.714	49.3	1.882	91.8
4-6	87.75	0.55	1.40	953.54	308	113	105	0.742	51.2	1.800	75.3
4-7	91.00	0.50	1.30	955.68	308	113	106	0.707	48.8	1.993	87.5

Totals and Averages

91	1.24	56.48	308	107	0.701	48.4	52.82	83.5
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/14/2011
Meter ID	M-17
Year	1.0141
Ptnt C _p	0.84

Nozzle Diameter (in)	0.270
Filter ID	NA
Train Type	Impinger
Train ID	IB-16
P _s (Inches Hg)	29.51
P _t (Inches H ₂ O)	-17.0
Start Time	10:09
Stop Time	12:09

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	152
Width	162

Moisture	Final wt (g)	Tare wt (g)	Net Wt (g)
Impinger 1	789.0	690.0	99.0
Impinger 2	620.0	605.0	15.0
Impinger 3	520.0	506.0	14.0
Rinse		50.0	-50.0
Silica Gel	924.0	884.0	40.0
Weight of Water Collected, W _{wt} (g)			78.0
Silica Gel Net Weight, W _{wt} (g)			10.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.2		6.80

Run 1

Traverse Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Reading ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGT Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured V _{msd} (ft ³)
	10 Elapsed Time									
Single	10	0.48	1.20	532.89	295	105	97	0.693	47.4	5.560
	20	0.55	1.40	539.48	295	107	97	0.742	50.8	6.212
	30	0.55	1.40	545.97	295	108	97	0.742	50.8	6.112
	40	0.56	1.40	552.46	295	104	95	0.748	51.2	6.145
	50	0.55	1.40	559.16	295	105	95	0.742	50.8	6.339
	60	0.54	1.40	565.69	295	105	95	0.735	50.2	6.083
	70	0.56	1.40	572.20	297	106	96	0.748	51.2	6.242
	80	0.55	1.40	578.82	297	105	95	0.742	50.8	6.262
	90	0.56	1.40	585.40	298	105	95	0.748	51.3	6.223
	100	0.54	1.40	592.02	298	105	95	0.735	50.4	6.262
	110	0.56	1.40	598.61	298	105	95	0.748	51.3	6.230
	120	0.55	1.40	605.19	298	105	95	0.742	50.9	6.224

Totals and Averages

120	1.38	78.18	296	101	0.739	50.6	73.89
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/14/2011
Filter ID	M-17
Y _d	1.0141
Pitot C _p	0.84

Nozzle Diameter (in)	0.270
Filter ID	NA
Trem Type	Impinger
Trem ID	IB-16
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-17.0
Start Time	13:43
Stop Time	15:43

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	799.0	665.0	134.0
Impinger 2	662.0	650.0	12.0
Impinger 3	553.0	545.0	8.0
Rinse		50.0	-50.0
Silica Gel	920.0	895.0	25.0
Weight of Water Collected, W _w (g)			104.0
Silica Gel Net Weight, W _{sil} (g)			25.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.87

Run 2

Traverse Point	Man/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting H (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Metered V _m (ft ³)
	10									
Single	10	0.60	1.50	615.11	300	96	89	0.775	53.2	6.052
	20	0.59	1.50	621.26	300	99	90	0.765	52.5	5.817
	30	0.59	1.50	626.08	300	102	92	0.768	52.5	6.188
	40	0.58	1.50	634.80	300	103	92	0.762	52.3	6.387
	50	0.60	1.50	641.51	300	103	93	0.775	53.2	6.072
	60	0.60	1.50	648.40	300	101	93	0.775	53.2	6.554
	70	0.59	1.50	655.28	300	100	92	0.768	52.8	6.557
	80	0.60	1.50	662.17	301	100	92	0.775	53.3	6.596
	90	0.58	1.50	669.05	302	100	91	0.762	52.4	6.563
	100	0.59	1.50	675.93	302	100	91	0.768	52.9	6.563
	110	0.58	1.50	682.80	302	99	91	0.762	52.4	5.559
	120	0.60	1.50	689.65	301	99	91	0.775	53.3	6.540

Totals and Averages

120	1.50	60.85	301	95.8	0.769	52.9	77.08
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/14/2011
Meter ID	M-17
Y _d	1.0141
Pitot C _p	0.84

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Impinger	Final Wt (g)	Tare w/t (g)	Net Wt (g)
Impinger 1	826.0	705.0	121.0
Impinger 2	835.0	610.0	225.0
Impinger 3	522.0	512.0	10.0
Rinse		50.0	-30.0
Silica Gel	941.0	924.0	17.0
Weight of Water Collected V _w (g)			106.0
Silica Gel Net Weight V _{sig} (g)			17.0

Nozzle Diameter (in)	0.270
Filter ID	NA
Train Type	Impinger
Train IC	IB 16
P _s (Inches H ₂ O)	29.51
P _a (Inches H ₂ O)	-17.0
Start Time	16:43
Stop Time	18:43

CEMS	%CO2	%CO2+%O2	%O2
Average	12.6		6.51

Run 3

Traverse Point	ManPt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity ft/sec	Volume Metered (ft ³)
	Elapsed Time									
Single	10	0.59	1.50	698.80	298	94	89	0.765	52.7	6.535
	20	0.59	1.50	705.55	300	101	91	0.765	52.7	12.837
	30	0.60	1.50	712.27	300	101	91	0.775	53.1	6.490
	40	0.59	1.50	719.08	300	102	92	0.768	52.7	6.459
	50	0.61	1.50	725.87	299	101	92	0.781	53.6	6.465
	60	0.60	1.50	732.66	298	101	92	0.775	53.1	3.446
	70	0.59	1.50	739.43	298	103	92	0.768	52.7	6.436
	80	0.61	1.50	746.27	298	103	92	0.781	53.6	6.501
	90	0.60	1.50	753.16	298	102	93	0.775	53.1	6.549
	100	0.59	1.50	759.82	299	102	92	0.768	52.7	6.396
	110	0.61	1.50	766.82	298	102	92	0.781	53.6	6.658
	120	0.60	1.50	773.29	299	102	92	0.775	53.1	6.155

Totals and Averages

120	1.50	81.29	299	96.4	0.774	53.1	77.41
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/14/2011
Meter ID	M-6
Y _c	1.0076
P _{total} C _p	0.84

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-8
P ₀ (Inches Hg)	29.51
P ₁ (Inches H ₂ O)	-17.0
Start Time	10:09
Stop Time	12:24

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	633.6	558.1	75.5
Impinger 2	748.2	735.5	12.7
Impinger 3	675.1	661.0	14.1
Impinger 4	577.9	566.0	11.9
Silica Gel	919.3	884.9	34.4
Weight of Water Collected, V _w (g)			114.2
Silica Gel Net Weight, V _{sil} (g)			34.4

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.3		6.80

Run 1

Traverse Point	Man/Ft	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity vs (ft/sec)	Volume Measured (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.17	0.44	310.24	315	96	97	0.412	26.7	1.695	103.2
1-2	9.0	0.25	0.65	312.15	314	96	97	0.500	34.8	1.802	98.1
1-3	13.5	0.36	0.93	314.39	315	96	97	0.600	41.3	2.116	94.1
1-4	18.0	0.38	0.99	316.92	315	96	97	0.616	43.0	2.390	103.4
1-5	22.5	0.40	1.00	319.84	314	96	97	0.632	44.0	2.759	116.3
1-6	27.0	0.42	1.10	322.76	314	96	97	0.645	45.1	2.760	113.5
1-7	31.5	0.42	1.10	325.42	315	97	97	0.648	45.2	2.312	107.4
2-1	36.0	0.20	0.52	328.25	315	97	98	0.447	31.2	2.660	159.0
2-2	40.5	0.24	0.63	330.28	315	98	98	0.490	34.1	1.811	101.1
2-3	45.0	0.34	0.89	332.81	317	98	98	0.583	40.7	2.195	100.5
2-4	49.5	0.36	0.93	335.21	316	98	98	0.600	41.6	2.450	109.0
2-5	54.0	0.38	0.99	337.48	315	99	98	0.616	43.0	2.157	92.3
2-6	58.5	0.41	1.10	340.59	315	99	98	0.640	44.5	2.829	122.0
2-7	63.0	0.43	1.10	343.29	315	99	99	0.656	45.7	2.540	103.3
3-1	67.5	0.40	1.00	345.82	315	96	96	0.632	44.1	2.383	100.9
3-2	72.0	0.43	1.10	348.64	315	97	96	0.656	45.7	2.665	108.4
3-3	76.5	0.46	1.20	351.30	314	97	96	0.676	47.2	2.515	98.9
3-4	81.0	0.50	1.30	354.23	310	97	96	0.707	49.1	2.771	101.2
3-5	85.5	0.50	1.30	357.42	310	97	96	0.707	49.1	3.016	113.4
3-6	90.0	0.47	1.20	360.05	312	97	97	0.686	47.7	2.484	90.5
3-7	94.5	0.48	1.20	363.21	315	97	97	0.693	48.3	2.985	114.9
4-1	99.0	0.40	1.20	365.74	315	98	97	0.632	44.1	2.567	100.7
4-2	103.5	0.45	1.20	368.24	315	98	97	0.671	46.7	2.359	93.8
4-3	108.0	0.45	1.20	370.99	316	98	97	0.671	46.8	2.585	103.3
4-4	112.5	0.50	1.30	374.72	314	98	97	0.707	49.2	3.521	132.7
4-5	117.0	0.51	1.30	376.87	314	98	97	0.714	49.7	2.029	75.9
4-6	121.5	0.50	1.30	379.42	314	98	97	0.707	49.2	2.407	90.7
4-7	126.0	0.48	1.20	382.61	315	98	97	0.693	48.3	2.010	116.9

Totals and Averages

126		1.05	74.06	314	97.2	0.630	43.9	69.90	105.6
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/14/2011
Filter ID	M-6
Yd	1.0076
Pitot Cp	0.84

Place an "X" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-8
P ₀ (inches H ₂ O)	29.51
P _s (inches H ₂ O)	-17.0
Start Time	13:43
Stop Time	15:43

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	618.2	478.2	140.0
Impinger 2	726.2	705.6	20.6
Impinger 3	728.2	716.9	11.3
Impinger 4	624.1	617.7	6.4
Silica Gel	932.1	909.2	22.9
Weight of Water Collected, W _{col} (g)			176.3
Silica Gel Net Weight, W _{net} (g)			22.9

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.67

Run 2

Traverse Point	4.5	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity (ft/sec)	Volume Metered (ft ³)	Isometrics (%)
	Elapsed Time										
1-1	4.5	0.45	1.10	389.42	310	93	92	0.671	46.8	2.648	106.6
1-2	9.0	0.48	1.20	392.87	310	93	92	0.693	46.3	3.295	128.3
1-3	13.5	0.48	1.20	394.24	308	93	92	0.693	46.2	1.304	50.5
1-4	18.0	0.50	1.30	397.82	310	93	92	0.707	49.3	3.410	130.5
1-5	22.5	0.51	1.30	400.76	312	95	93	0.713	49.2	2.794	106.0
1-6	27.0	0.50	1.30	403.46	313	97	93	0.707	49.4	5.528	212.0
1-7	31.5	0.48	1.20	406.59	315	97	94	0.693	46.5	2.622	110.8
2-1	36.0	0.46	1.20	409.57	313	98	94	0.676	47.4	2.479	99.1
2-2	40.5	0.47	1.20	412.19	313	98	95	0.686	47.9	2.383	114.1
2-3	45.0	0.51	1.30	415.24	310	99	95	0.714	49.8	2.655	100.0
2-4	49.5	0.50	1.30	418.05	310	99	96	0.707	49.3	3.181	121.8
2-5	54.0	0.50	1.30	421.42	310	99	96	0.707	49.3	3.068	117.3
2-6	58.5	0.51	1.30	424.67	312	95	94	0.714	49.9	2.183	82.8
2-7	63.0	0.49	1.20	428.97	312	95	94	0.700	48.9	2.182	84.5
3-1	67.5	0.50	1.30	429.64	315	95	94	0.707	49.5	2.534	97.3
3-2	72.0	0.52	1.30	432.39	315	96	94	0.721	50.4	2.817	98.2
3-3	76.5	0.53	1.40	435.71	315	96	94	0.728	50.9	3.149	117.4
3-4	81.0	0.53	1.40	438.64	314	96	95	0.728	50.9	2.776	103.5
3-5	85.5	0.51	1.30	440.89	314	96	95	0.714	49.9	2.131	81.0
3-6	90.0	0.49	1.20	443.30	312	96	95	0.710	49.9	2.282	98.4
3-7	94.5	0.48	1.20	446.48	312	95	94	0.693	46.4	3.017	116.0
4-1	99.0	0.49	1.20	449.82	312	94	93	0.700	46.2	3.175	122.9
4-2	103.5	0.53	1.40	452.61	312	94	93	0.728	50.8	2.853	98.3
4-3	108.0	0.52	1.30	455.58	313	94	93	0.721	50.4	2.824	108.2
4-4	112.5	0.47	1.20	458.42	310	93	91	0.686	47.8	2.707	106.9
4-5	117.0	0.46	1.20	461.38	310	93	91	0.676	47.2	2.821	112.8
4-6	121.5	0.45	1.20	464.07	310	93	91	0.671	46.8	2.564	103.4
4-7	126.0	0.47	1.20	466.92	310	93	91	0.686	47.8	2.716	107.2

Totals and Averages

126		1.26	80.28	312	94.4	0.702	49.0	76.20	105.1
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/14/2011
Meter ID	M-6
f_a	1.0076
Pitot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impinger
Train ID	IB-8
P_b (Inches Hg)	29.51
P_s (Inches H ₂ O)	-17.0
Start Time	16:43
Stop Time	18:43

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	162

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	695.0	561.8	133.2
Impinger 2	753.6	738.2	15.4
Impinger 3	877.0	865.7	11.3
Impinger 4	575.8	569.7	6.1
Silica Gel	940.5	918.6	21.9
Weight of Water Collected V_{wc} (g)			166.0
Silica Gel Net Weight, V_{sc} (g)			21.9

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.8		6.51

Run 3

Traverse Point	Min/Pt	Velocity Pressure ΔP (in. H ₂ O)	Orifice Setting ΔH (in. H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V_s (ft/sec)	Volume Metered (ft ³)	Isokinetic (%)
	4.5 Elapsed Time										
1-1	4.5	0.48	1.20	475.62	310	94	92	0.693	48.2	2.702	104.2
1-2	9.0	0.49	1.30	478.24	310	94	92	0.700	48.7	2.588	98.5
1-3	13.5	0.50	1.30	481.28	312	94	92	0.707	49.2	2.892	110.2
1-4	18.0	0.51	1.30	484.42	312	94	92	0.714	49.8	2.988	112.7
1-5	22.5	0.52	1.40	487.56	312	95	92	0.721	50.3	2.986	111.5
1-6	27.0	0.50	1.30	490.82	310	95	93	0.707	49.2	3.086	117.6
1-7	31.5	0.48	1.20	493.12	310	96	93	0.692	48.2	2.182	84.7
2-1	36.0	0.49	1.30	495.72	310	96	93	0.700	48.7	2.467	94.8
2-2	40.5	0.51	1.30	498.68	310	95	93	0.714	49.7	2.812	105.9
2-3	45.0	0.52	1.40	501.34	312	95	94	0.721	50.3	2.525	94.2
2-4	49.5	0.55	1.40	504.22	315	95	94	0.742	51.8	2.734	99.5
2-5	54.0	0.54	1.40	507.09	314	95	93	0.735	51.2	2.727	100.1
2-6	58.5	0.48	1.20	510.92	310	94	92	0.695	48.2	3.644	141.3
2-7	63.0	0.50	1.30	513.99	310	94	92	0.707	49.2	2.921	111.1
3-1	67.5	0.5	1.30	515.98	310	94	92	0.707	49.2	1.894	72.0
3-2	72.0	0.51	1.30	518.80	309	94	92	0.714	49.7	2.683	101.0
3-3	76.5	0.52	1.40	521.77	309	93	92	0.721	50.2	2.829	105.6
3-4	81.0	0.50	1.30	525.48	310	93	92	0.707	49.2	3.535	134.8
3-5	85.5	0.46	1.20	528.23	310	93	92	0.675	47.2	2.619	103.5
3-6	90.0	0.47	1.20	530.75	312	93	92	0.688	47.8	2.450	94.3
3-7	94.5	0.50	1.30	533.64	310	93	92	0.707	49.2	2.752	104.7
4-1	99.0	0.53	1.40	536.80	310	93	92	0.728	50.7	3.010	111.2
4-2	103.5	0.55	1.40	539.78	310	93	92	0.742	51.6	2.839	103.0
4-3	108.0	0.54	1.40	542.79	309	93	92	0.735	51.1	2.867	104.9
4-4	112.5	0.53	1.40	545.63	310	93	92	0.728	50.7	2.796	100.0
4-5	117.0	0.50	1.30	548.72	310	93	92	0.707	49.2	2.813	111.9
4-6	121.5	0.48	1.20	551.82	309	93	92	0.692	48.2	2.952	114.5
4-7	126.0	0.47	1.20	553.48	310	93	92	0.696	47.7	1.581	62.0

Totals and Averages

126	1.31	80.80	311	93.1	0.710	49.4	76.87	104.0
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	M-26
Y _c	0.9958

Start Time	8:08
Stop Time	9:38

Meter ID	M-26
Y _d	0.9902

Run 1

Min/Pt	Gas Sample	DGM	Volume
Elapsed	Volume		
Time	Initial (L)	Temp	Metered
	0.00	(°F)	Vmstd
			(L)
3.75	1.634	113	1 481
7.50	3.524	113	1 713
11.25	4.998	116	1 329
15.00	6.642	116	1 482
18.75	8.724	117	1 874
22.50	9.987	118	1 135
26.25	11.625	118	1 472
30.00	13.725	119	1 883
33.75	15.214	119	1 335
37.50	16.314	120	0 985
41.25	18.812	121	2 232
45.00	20.624	121	1 619
48.75	22.572	121	1 741
52.50	24.742	121	1 939
56.25	26.452	121	1 528
60.00	28.842	121	2 136
63.75	30.142	121	1 162
67.50	33.142	122	2 677
71.25	35.412	122	2 025
75.00	37.520	122	1 881
78.75	39.124	122	1 431
82.50	41.386	122	2 018
86.25	42.764	123	1 227
90.00	45.124	123	2 102

Run 1 Spiked

Min/Pt	Gas Sample	DGM	Volume
Elapsed	Volume		
Time	Initial (L)	Temp	Metered
	0.000	(°F)	Vmstd
			(L)
3.8	1.986	116	1 780
7.5	3.872	117	1 688
11.3	5.362	118	1 331
15.0	7.214	118	1 654
18.8	9.424	119	1 971
22.5	10.981	121	1 384
26.3	12.842	121	1 654
30.0	14.112	121	1 129
33.8	15.068	122	0 848
37.5	16.128	122	0 940
41.3	18.789	123	2 357
45.0	20.389	124	1 415
48.8	22.312	124	1 700
52.5	34.311	124	10 609
56.3	36.241	124	1 706
60.0	28.284	124	-7 035
63.8	30.910	124	2 322
67.5	32.192	125	1 132
71.3	33.981	125	1 579
75.0	35.879	125	1 675
78.8	37.711	125	1 617
82.5	39.122	125	1 245
86.3	41.048	125	1 700
90.0	43.738	125	2 374

Totals and Averages

90	45.124	120	40.42
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Totals and Averages

90	43.738	122	38.78
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	M-26
Y _d	0.9958

Start Time	11:15
Stop Time	13:00

Meter ID	M-26
Y _d	0.9902

Run 2

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.000		
3.8	1.624	114	1 469
7.5	3.728	115	1 900
11.3	5.124	115	1 261
15.0	7.018	115	1 710
18.8	9.187	115	1 959
22.5	10.010	116	0 742
26.3	11.028	116	0 918
30.0	11.998	116	0 874
33.8	12.249	117	0 226
37.5	13.655	117	1 265
41.3	14.765	117	0 999
45.0	16.804	117	1 835
48.8	18.432	119	1 460
52.5	20.689	120	2 021
56.3	21.742	122	0 939
60.0	23.891	122	1 917
63.8	23.248	122	-0 574
67.5	27.439	123	3 733
71.3	29.241	123	1 605
75.0	30.982	123	1 551
78.8	32.847	124	1 658
82.5	34.125	124	1 136
86.3	36.348	124	1 977
90.0	37.497	125	1 020

Totals and Averages

90 37.497 119 33.62

Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.000		
3.8	1.743	114	1 568
7.5	2.643	114	0 810
11.3	4.801	114	1 941
15.0	6.282	115	1 330
18.8	8.154	115	1 681
22.5	9.937	115	1 601
26.3	11.197	115	1 131
30.0	12.764	115	1 407
33.8	13.628	115	0 776
37.5	14.801	116	1 051
41.3	15.684	116	0 792
45.0	17.124	116	1 291
48.8	19.098	120	1 757
52.5	20.524	120	1 269
56.3	22.715	120	1 950
60.0	24.887	121	1 930
63.8	26.309	123	1 259
67.5	28.224	124	1 693
71.3	29.124	124	0 796
75.0	30.984	124	1 644
78.8	32.189	124	1 065
82.5	34.189	125	1 765
86.3	36.491	125	2 032
90.0	37.592	125	0 972

Totals and Averages

90 37.592 119 33.53

Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	ESP 4
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	M-26
Y _d	0.9958

Start Time	14:04
Stop Time	15:50

Meter ID	M-26
Y _d	0.9902

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.000		
3.8	2.648	125	2.350
7.5	3.924	125	1.133
11.3	4.765	126	0.745
15.0	6.248	126	1.314
18.8	7.970	126	1.526
22.5	9.698	126	1.531
26.3	11.642	126	1.723
30.0	12.748	127	0.978
33.8	14.201	127	1.285
37.5	16.899	127	2.387
41.3	17.761	127	0.763
45.0	19.248	128	1.313
48.8	21.624	125	2.109
52.5	22.198	126	0.509
56.3	24.561	126	2.094
60.0	26.428	127	1.652
63.8	28.349	127	1.699
67.5	29.578	127	1.087
71.3	30.842	127	1.118
75.0	32.987	128	1.894
78.8	34.642	128	1.461
82.5	36.782	129	1.887
86.3	38.720	129	1.708
90.0	39.842	129	0.989

Totals and Averages

90	39.842	127	35.25
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Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
3.75	Volume		
Elapsed Time	Initial (L)		
	0.000		
3.8	2.164	125	1.910
7.5	3.987	126	1.606
11.3	5.248	126	1.111
15.0	7.112	126	1.642
18.8	8.991	126	1.656
22.5	10.124	127	0.997
26.3	12.042	127	1.687
30.0	14.124	127	1.831
33.8	16.383	127	1.987
37.5	17.576	128	1.048
41.3	18.810	128	1.084
45.0	19.114	128	0.267
48.8	21.283	126	1.911
52.5	22.498	126	1.071
56.3	23.987	127	1.310
60.0	24.829	127	0.741
63.8	25.446	127	0.543
67.5	27.498	127	1.805
71.3	29.630	127	1.875
75.0	31.042	128	1.240
78.8	33.928	128	2.534
82.5	35.348	128	1.247
86.3	37.127	129	1.560
90.0	39.197	129	1.815

Totals and Averages

90	39.197	127	34.47
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/15/2011
Method ID	M3
V_c	0.9891
Pilot C_p	0.84

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	681.3	460.3	221.0
Impinger 2	547.9	587.4	-39.5
Impinger 3	650.9	632.0	18.9
Rinse		50.0	-50.0
Silica Gel	989.9	964.3	25.6
Weight of Water Collected, V_{wc} (g)			150.4
Silica Gel Net Weight, V_{wg} (g)			25.6

Place an "X" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Nozzle Diameter (in)	0.312
Filter ID	12074
Train Type	Impinger
Train ID	B23
P_1 (Inches Hg)	29.56
P_2 (Inches H ₂ O)	-0.2
Start Time	8:08
Stop Time	9:39

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.7	NA	6.55

Run 1

Trajectory Point	min/PT	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity ft/s (ft/sec)	Volume Metered (ft ³)	Isokinetic (%)
	7.5										
1-1	7.5	0.20	1.10	768.20	127	94	93	0.447	26.8	4055	83.1
1-2	15.0	0.22	1.20	770.91	128	94	93	0.468	28.1	4402	86.1
1-3	22.5	0.23	1.20	775.59	128	96	94	0.480	28.7	4382	83.6
2-1	30.0	0.22	1.20	780.21	128	98	94	0.469	28.1	4298	84.1
2-2	37.5	0.23	1.20	784.75	129	101	95	0.490	28.5	4209	80.6
2-3	45.0	0.19	1.00	789.06	129	104	96	0.436	26.2	3979	80.3
3-1	52.5	0.22	1.20	793.62	129	104	97	0.469	26.4	4205	82.7
3-2	60.0	0.24	1.30	798.32	129	107	98	0.490	29.4	4323	81.0
3-3	67.5	0.20	1.10	802.88	129	107	99	0.447	26.3	4189	86.0
4-1	75.0	0.22	1.20	807.37	129	108	100	0.489	28.1	4119	80.6
4-2	82.5	0.23	1.20	811.99	129	112	101	0.460	26.6	4216	80.8
4-3	90.0	0.21	1.10	816.57	129	111	103	0.458	27.6	4177	83.7

Totals and Averages

90	1.17	54.71	129	100	0.466	28.0	50.54	82.9
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/15/2011
Meter ID	M3
Yr	0.9891
Patrol C _p	0.84

Nozzle Diameter (in.)	0.312
Filter ID	12125
Train Type	Impinger
Train ID	IB
P ₁ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-0.2
Start Time	11:15
Stop Time	12:46

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	669.4	483.5	205.9
Impinger 2	641.9	644.1	-2.2
Impinger 3	639.2	631.3	7.9
Rinse		50.0	-50.0
Silica Gel	911.2	886.1	25.1
Weight of Water Collected, V _w (g)			161.6
Silica Gel Net Weight, V _{sg} (g)			25.1

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5	NA	8.70

Run 2

Traverse Point	Min/Pl	Velocity Pressure ΔP (in. H ₂ O)	Orifice Setting ΔH (in. H ₂ O)	Gas Sample Volume Inflow (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔF	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vinstg (ft ³)	Isokinetic (%)
	7.5 Elapsed Time										
1-1	7.5	0.21	1.40	821.94	130	100	0.458	27.5	4.696	93.2	
1-2	15.0	0.22	1.40	826.98	129	101	0.469	26.1	4.654	90.5	
1-3	22.5	0.19	1.20	831.78	129	102	0.436	26.1	4.450	92.7	
1-4	30.0	0.22	1.40	836.84	129	105	0.469	26.1	4.656	90.5	
1-5	37.5	0.23	1.50	842.02	129	106	0.480	26.7	4.763	90.6	
1-6	45.0	0.23	1.50	847.21	129	108	0.480	26.7	4.760	90.5	
1-7	52.5	0.24	1.60	852.62	129	108	0.490	26.4	4.866	90.6	
2-1	60.0	0.22	1.40	857.77	129	108	0.469	26.1	4.809	90.5	
2-2	67.5	0.21	1.40	862.79	129	110	0.465	27.5	4.586	91.3	
2-3	75.0	0.24	1.60	868.27	128	111	0.490	29.3	5.065	92.1	
2-4	82.5	0.24	1.60	873.49	129	111	0.490	29.4	4.763	92.7	
2-5	90.0	0.21	1.40	878.62	129	111	0.458	27.5	4.678	93.1	

Totals and Averages

90	1.45	61.75	129	104	0.471	28.2	56.66	91.5
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/15/2011
Meter ID	M3
V _d	0.9691
Pitot C _d	0.84

Nozzle Diameter (in)	0.312
Filter ID	12142
Train Type	Impinger
Train ID	IB23
P ₀ (Inches Hg)	29.56
P ₂ (Inches H ₂ O)	-0.2
Start Time	14:06
Stop Time	16:12

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	688.5	461.5	227.0
Impinger 2	589.0	589.9	-0.9
Impinger 3	632.5	629.9	2.6
Fan		50.0	-50.0
Silica Gel	942.5	932.5	10.0
Weight of Water Collected, W _w (g)			178.7
Silica Gel Net Weight, W _{sg} (g)			10.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.6	N/A	6.5+

Run 3

Traverse Point	Min/Pt	Veloc. Pressure P (in H ₂ O)	Orifice Sealing ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured Vmstd (ft ³)	Isokinetics (%)
	7.5 ElapseC Time										
1-1	7.5	0.23	1.50	884.31	130	100	100	0.480	28.8	4761	30.8
1-2	15.0	0.24	1.60	889.67	130	101	99	0.490	29.4	4956	32.4
1-3	22.5	0.21	1.40	894.78	129	102	100	0.458	27.5	4714	33.8
1-4	30.0	0.23	1.50	899.85	129	104	99	0.461	28.7	4674	34.9
1-5	37.5	0.21	1.40	905.10	129	106	100	0.458	27.5	4328	36.1
1-6	45.0	0.22	1.40	910.20	129	107	101	0.489	28.1	4680	37.0
1-7	52.5	0.23	1.50	915.40	129	106	101	0.480	28.7	4769	37.7
2-1	60.0	0.23	1.50	920.64	129	109	102	0.480	28.7	4797	37.2
2-2	67.5	0.20	1.30	925.73	129	110	102	0.447	26.8	4653	34.9
2-3	75.0	0.23	1.50	930.89	130	111	103	0.480	28.8	4711	39.7
2-4	82.5	0.24	1.60	936.30	129	111	104	0.490	29.4	4936	37.9
2-5	90.0	0.21	1.40	941.52	129	111	104	0.458	27.5	4761	34.8

Totals and Averages

90	1.47	62.36	129	104	0.472	28.3	57.24	92.1
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/14/2011
Meier ID	M3
% _o	0.9891
Pitot C _p	0.84

Nozzle Diameter (in)	0.312
Filter ID	NA
Train Type	Impinger
Train ID	IB
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-0.2
Start Time	10:09
Stop Time	12:24

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	894.0	733.0	161.0
Impinger 2	628.0	582.0	46.0
Impinger 3	527.0	509.0	18.0
Impinger 4			0.0
Rinse		50.0	-50.0
Silica Gel	928.0	886.0	42.0
Weight of Water Collector, V _{wr} (g)			165.0
Silica Gel Net Weight, V _{sg} (g)			42.0

CEMS	%CO ₂	%CO + %O ₂	%O ₂
Average	12.2		6.92

Run 1

Transfer Point	Min/Pl	Velocity Pressure ΔP (in. H ₂ O)	Orifice Sealing ΔH (in. H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _{sg} (ft/sec)	Volume Metered V _{metered} (ft ³)	Isokinetics (%)
	10 Elapsed Time										
1-1	10	0.15	1.10	500.57	127	96	96	0.387	23.7	5.353	92.8
1-2	20	0.18	1.30	506.81	130	99	96	0.424	25.4	5.596	88.9
1-3	30	0.25	1.80	513.78	128	101	98	0.500	28.9	6.640	59.2
2-1	40	0.21	1.50	520.69	128	104	98	0.456	27.4	6.366	93.3
2-2	50	0.23	1.60	527.55	129	106	98	0.480	28.7	6.310	86.5
2-3	60	0.25	1.80	534.89	129	108	100	0.500	28.9	6.731	90.5
3-1	70	0.23	1.60	541.98	129	109	101	0.480	28.7	6.487	91.0
3-2	80	0.23	1.60	548.91	129	110	102	0.480	28.7	6.329	88.2
3-3	90	0.21	1.50	555.66	129	111	103	0.458	27.4	6.152	90.3
4-1	100	0.23	1.60	562.57	123	112	104	0.480	28.7	6.388	88.2
4-2	110	0.21	1.50	569.34	129	111	105	0.458	27.4	6.160	90.1
4-3	120	0.23	1.50	575.84	129	111	105	0.480	28.7	5.912	82.0

Totals and Averages

120	1.53	81.03	129	103	0.485	27.8	74.34	89.5
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/14/2011
Meter ID	M3
Y _a	0.9891
Pitot C _p	0.84

Nozzle Diameter (in)	0.312
Filter ID	NA
Train Type	Impinger
Train ID	IB17
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-0.2
Start Time	13:43
Stop Time	15:58

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Moisture	Final Wt (g)	Take Wt (g)	Net Wt (g)
Impinger 1	808.0	610.0	198.0
Impinger 2	642.0	607.0	35.0
Impinger 3	630.0	611.0	19.0
Impinger 4			0.0
Rinse		50.0	-50.0
Silica Gel	895.0	857.0	38.0
Weight of Water Collected, W _{wt} (g)			202.0
Silica Gel Net Weight, W _{net} (g)			38.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4		6.71

Run 2

Traverse Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Reading ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured V _m (ft ³)	Isokinetic (%)
	10 Elapsed Time										
1-1	10	0.21	1.70	586.22	129	101	100	0.458	27.4	6.513	96.1
1-2	20	0.22	1.80	593.78	128	102	100	0.469	28.0	6.970	100.4
1-3	30	0.24	1.90	601.37	128	106	101	0.490	29.3	6.968	96.1
2-1	40	0.21	1.70	608.65	128	109	102	0.468	27.4	6.856	98.1
2-2	50	0.24	1.90	616.34	128	112	103	0.490	29.3	7.010	98.7
2-3	60	0.20	1.60	623.53	128	113	104	0.447	26.7	6.535	96.6
3-1	70	0.23	1.90	631.11	129	114	105	0.480	28.7	6.885	97.1
3-2	80	0.25	2.00	638.83	129	113	107	0.510	29.9	7.006	94.8
3-3	90	0.23	1.90	646.48	129	116	107	0.490	28.7	6.825	97.6
4-1	100	0.23	1.90	654.08	129	116	108	0.480	28.7	6.873	96.9
4-2	110	0.21	1.70	661.10	129	117	109	0.455	27.4	6.335	93.5
4-3	120	0.23	1.90	669.07	129	117	109	0.480	28.7	7.136	101.4

Totals and Averages

120	1.83	89.91	129	108	0.474	28.4	81.88	97.3
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/14/2011
Filter ID	M3
Yd	0.9891
Pitot Cp	0.84

Nozzle Diameter (in)	0.312
Filter ID	NA
Train Type	Impinger
Train ID	IB24
P ₀ (Inches Hg)	29.51
P _s (Inches H ₂ O)	-0.2
Start Time	18:43
Stop Time	18:43

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	1015.0	746.0	269.0
Impinger 2	558.0	602.0	-44.0
Impinger 3	535.0	515.0	20.0
Impinger 4			0.0
Rinse		50.0	-50.0
Silica Gel	903.0	858.0	45.0
Weight of Water Collected (g)			195.0
Silica Gel Net Weight (g)			45.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5		6.57

Run 3

Traverse Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting H (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	[O ₂] Orifice (°F)	Square Foot ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured V _{msd} (ft ³)	Isokinetics (%)
	10 Elapsed Time										
1-1	10	0.22	1.80	679.15	128	108	107	0.469	28.0	6.880	99.2
1-2	20	0.23	1.90	686.84	128	109	105	0.480	28.7	7.017	98.0
1-3	30	0.22	1.80	694.38	128	113	106	0.469	28.0	6.847	96.8
2-1	40	0.22	1.80	701.91	128	115	106	0.469	28.0	6.826	98.5
2-2	50	0.22	1.80	709.38	128	116	107	0.469	28.0	6.760	97.6
2-3	60	0.21	1.70	716.74	128	117	108	0.458	27.2	6.647	96.2
3-1	70	0.23	1.90	724.35	127	118	109	0.480	28.7	6.865	96.8
3-2	80	0.22	1.80	731.88	127	119	110	0.469	28.0	6.779	97.7
3-3	90	0.20	1.60	739.04	127	119	110	0.447	26.7	6.443	97.4
4-1	100	0.22	1.80	746.34	128	119	111	0.469	28.0	6.586	91.8
4-2	110	0.19	1.50	753.31	128	119	112	0.436	26.1	6.259	87.2
4-3	120	0.21	1.70	760.58	128	119	112	0.458	27.1	6.532	86.6

Totals and Averages

120	1.76	88.98	128	112	0.464	27.8	80.41	97.6
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/14/2011
Filter ID	1116
Y _d	0.9907
P _{tot} C _p	0.84

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	752.4	559.3	193.1
Impinger 2	754.1	731.4	22.7
Impinger 3	685.1	677.7	7.4
Impinger 4	577.4	572.5	4.9
Rinse		50.0	-50.0
Silica Gel	891.0	872.3	18.7
Weight of Water Collected, V _w (g)			178.1
Silica Gel Net Weight, V _{wg} (g)			18.7

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Nozzle Diameter (in)	0.312
Filter ID	NA
Train Type	Impinger
Train ID	1B4
P ₀ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-0.2
Start Time	10:09
Stop Time	12:24

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.2	NA	6.92

Run 1

Train/Case Point	Min/Pt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Metered V _{std} (ft ³)	Isokinetic (%)
	10 Elapsed Time										
1-1	10	0.25	1.30	52.32	128	100	95	0.500	29.9	5.680	77.0
1-1	20	0.24	1.30	58.45	129	103	96	0.490	29.3	5.669	75.5
1-2	30	0.22	1.10	64.61	129	107	98	0.469	28.1	5.683	81.9
2-1	40	0.22	1.10	70.44	129	111	100	0.469	28.1	5.331	77.1
2-2	50	0.25	1.30	76.58	130	111	100	0.500	31.0	5.615	76.3
2-3	60	0.20	1.00	82.25	130	113	102	0.447	26.8	5.185	79.4
3-1	70	0.20	1.00	87.89	130	114	103	0.447	26.8	5.129	77.9
3-2	80	0.22	1.10	93.70	130	117	105	0.469	28.1	5.262	76.2
3-3	90	0.24	1.30	99.70	130	115	105	0.480	29.4	5.446	75.5
4-1	100	0.20	1.00	105.55	130	116	106	0.447	26.5	5.297	80.4
4-2	110	0.23	1.20	110.65	130	116	107	0.480	28.5	4.516	85.4
4-3	120	0.20	1.00	116.99	130	116	107	0.447	26.8	5.735	87.1

Totals and Averages

120	1.14	70.79	130	107	0.471	28.2	64.59	77.5
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/14/2011
Metri ID	M16
γ_1	0.9907
ρ_{air, C_2}	0.84

Nozzle Diameter (in)	0.312
Filter ID	NA
Train Type	Impinger
Train ID	IB22
P_b (Inches Hg)	29.51
P_s (Inches H ₂ O)	-0.2
Start Time	13:43
Stop Time	15:58

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	803.5	593.7	209.8
Impinger 2	655.1	625.6	29.5
Impinger 3	722.2	710.0	12.2
Impinger 4	635.1	626.8	8.3
Rinse		50.0	-50.0
Silica Gel	887.0	858.0	29.0
Weight of Water Collected (g)			209.8
Silica Gel Net Weight (g)			29.0

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.4	N/A	6.71

Run 2

Transverse Point	MiruPt	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Start Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured V _{mstd} (ft ³)	Isokinetics (%)
	10 Elapsed Time										
1-1	10	0.21	1.10	123.00	129	100	100	0.458	27.6	5.356	81.1
1-1	20	0.24	1.20	128.87	129	103	100	0.490	29.5	5.407	76.6
1-2	30	0.25	1.30	134.98	129	107	100	0.500	30.1	5.510	77.9
2-1	40	0.20	1.00	140.58	129	109	102	0.447	26.9	5.120	79.4
2-2	50	0.22	1.10	146.39	128	111	102	0.465	28.2	5.304	78.4
2-3	60	0.22	1.10	152.20	129	113	104	0.465	28.2	5.265	78.2
3-1	70	0.23	1.20	158.20	129	114	105	0.480	28.9	5.450	78.9
3-2	80	0.23	1.20	164.50	130	116	106	0.480	28.9	5.707	82.6
3-3	90	0.23	1.20	170.09	130	116	106	0.480	28.9	5.064	73.5
4-1	100	0.20	1.00	175.81	130	117	107	0.447	26.9	5.170	80.0
4-2	110	0.25	1.30	181.81	130	117	108	0.500	30.1	5.422	76.2
4-3	120	0.24	1.20	187.82	130	117	108	0.490	28.5	5.430	77.0

Totals and Averages

120	1.16	70.62	129	108	0.476	28.6	64.32	78.2
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/14/2011
Meter ID	M16
Y ₄	0.9907
Prot C ₁	0.84

Nozzle Diameter (in)	0.312
Filter ID	NA
Train Type	Impinger
Train ID	IB4
P ₁ (Inches Hg)	29.51
P ₂ (Inches H ₂ O)	-0.2
Start Time	18:43
Stop Time	18:58

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	408
Length	
Width	

Impinger	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	797.7	565.6	232.1
Impinger 2	759.4	736.7	22.7
Impinger 3	697.2	685.8	11.4
Impinger 4	586.8	580.8	6.0
Rinse		50.0	-50.0
Silica Gel	916.0	891.1	24.9
Weight of Water Collected V _w (g)			222.3
Silica Gel Net Weight V _{sil} (g)			24.9

CEMS	%CO ₂	%CO ₂ +%O ₂	%O ₂
Average	12.5	NA	6.67

Run 3

Transverse Point	10	Velocity Pressure ΔP (in H ₂ O)	Orifice Setting ΔH (in H ₂ O)	Gas Sample Volume Initial (ft ³)	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V _s (ft/sec)	Volume Measured (ft ³)	Isokinetics (%)
	Elapsed Time										
1-1	10	0.23	1.20	194.47	128	105	105	0.480	26.8	5.790	83.2
1-1	20	0.24	1.20	200.33	129	107	105	0.499	29.6	5.355	76.2
1-2	30	0.25	1.30	206.39	129	110	104	0.500	30.1	5.530	77.1
2-1	40	0.20	1.00	212.05	129	112	104	0.447	26.9	5.162	69.3
2-2	50	0.21	1.10	217.85	129	113	105	0.458	27.6	5.271	80.2
2-3	60	0.20	1.00	223.64	129	114	105	0.447	26.9	5.165	80.5
3-1	70	0.24	1.20	229.75	129	116	107	0.490	29.6	5.621	90.0
3-2	80	0.27	1.40	236.15	128	117	108	0.520	31.2	5.756	77.6
3-3	90	0.25	1.30	242.30	129	117	108	0.500	30.1	5.558	77.6
4-1	100	0.19	0.97	248.10	129	117	108	0.436	26.2	5.237	92.7
4-2	110	0.21	1.10	253.90	130	117	108	0.462	27.6	5.239	79.7
4-3	120	0.20	1.00	259.50	130	117	108	0.447	26.9	5.057	78.9

Totals and Averages

120	1.15	71.30	129	110	0.473	28.5	64.71	79.2
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/15/11
P _s (Inches Hg)	29.56

Meter ID	R19075A
Y _c	1.0000

Start Time	8:07
Stop Time	9:37

Meter ID	R19075B
Y _c	1.0000

Run 1

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	2.037	88	1.938
10.0	3.617	89	1.501
15.0	5.729	89	2.006
20.0	8.115	89	2.266
25.0	10.222	89	2.001
30.0	12.140	89	1.822
35.0	14.005	89	1.771
40.0	15.895	89	1.795
45.0	17.804	89	1.813
50.0	20.111	90	2.187
55.0	22.010	91	1.797
60.0	24.307	91	2.174
65.0	26.253	91	1.842
70.0	28.033	91	1.685
75.0	29.917	91	1.783
80.0	31.996	91	1.967
85.0	34.049	91	1.943
90.0	35.862	91	1.716

Run 1 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	1.975	89	1.876
10.0	3.689	89	1.628
15.0	5.890	89	2.091
20.0	8.200	89	2.194
25.0	9.770	89	1.491
30.0	11.717	90	1.846
35.0	13.528	90	1.717
40.0	15.535	90	1.903
45.0	17.845	91	2.186
50.0	20.232	91	2.259
55.0	22.070	91	1.739
60.0	26.246	92	3.945
65.0	26.064	92	-0.172
70.0	27.772	92	1.613
75.0	29.578	92	1.706
80.0	31.827	92	2.124
85.0	34.320	92	2.355
90.0	36.173	92	1.750

Totals and Averages

90	35.862	89.9	34.01
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Totals and Averages

90	36.173	90.7	34.25
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	R19075A
Y _d	1.0000

Meter ID	R19075B
Y _d	1.0000

Start Time	11:15
Stop Time	12:46

Run 2

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered V _{mstd} (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	1.840	90	1.744
10.0	3.970	90	2.019
15.0	6.100	90	2.019
20.0	8.250	90	2.038
25.0	10.261	90	1.907
30.0	12.255	91	1.887
35.0	14.099	91	1.745
40.0	15.932	91	1.735
45.0	17.935	92	1.892
50.0	20.115	92	2.059
55.0	22.230	92	1.998
60.0	24.295	92	1.951
65.0	26.242	93	1.836
70.0	28.309	93	1.949
75.0	29.997	93	1.592
80.0	31.782	93	1.683
85.0	33.805	93	1.908
90.0	35.680	93	1.768

Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered V _{mstd} (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	1.990	91	1.883
10.0	3.971	91	1.875
15.0	5.855	91	1.783
20.0	7.939	91	1.972
25.0	9.939	91	1.893
30.0	12.115	92	2.056
35.0	13.856	92	1.645
40.0	15.862	92	1.895
45.0	17.851	93	1.875
50.0	19.833	93	1.869
55.0	21.805	93	1.859
60.0	23.690	93	1.777
65.0	25.762	94	1.950
70.0	27.815	94	1.932
75.0	29.891	94	1.954
80.0	31.997	94	1.982
85.0	34.072	94	1.953
90.0	35.985	94	1.801

Totals and Averages

90	35.680	91.6	33.73
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Totals and Averages

90	35.985	92.6	33.96
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	Stack
Date	7/15/11
P _b (Inches Hg)	29.56

Meter ID	R19075A
Y _d	1.0000

Start Time	14:06
Stop Time	16:12

Meter ID	R19075B
Y _e	1.0000

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	2.175	92	2.055
10.0	4.139	92	1.855
15.0	5.832	92	1.599
20.0	7.844	92	1.901
25.0	9.794	92	1.842
30.0	11.660	92	1.763
35.0	13.928	93	2.139
40.0	16.020	93	1.973
45.0	18.110	93	1.971
50.0	20.997	93	2.722
55.0	22.269	93	1.199
60.0	24.317	93	1.931
65.0	26.333	93	1.901
70.0	28.187	93	1.748
75.0	30.000	93	1.710
80.0	32.008	93	1.993
85.0	34.111	93	1.983
90.0	35.851	93	1.641

Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	2.306	93	2.174
10.0	4.362	93	1.939
15.0	6.002	93	1.546
20.0	7.699	93	1.600
25.0	9.677	93	1.865
30.0	11.692	93	1.900
35.0	13.766	94	1.952
40.0	15.811	94	1.925
45.0	17.852	94	1.921
50.0	19.560	94	1.608
55.0	21.872	94	2.176
60.0	23.870	94	1.881
65.0	25.770	94	1.788
70.0	27.760	94	1.873
75.0	29.822	94	1.941
80.0	31.917	94	1.972
85.0	33.921	94	1.886
90.0	36.045	94	1.999

Totals and Averages

90	35.851	92.7	33.83
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Totals and Averages

90	36.045	93.7	33.95
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 1
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	R20078
Y _d	1.0072

Start Time	7:30
Stop Time	9:00

Meter ID	R20078
Y _d	0.9985

Run 1

Min/Pt	Gas Sample	DGM	Volume
5	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.00	(°F)	Vmstd
			(L)
5.00	2.15	94	2.033
10.00	4.09	94	1.834
15.00	5.82	94	1.636
20.00	7.82	96	1.884
25.00	9.92	98	1.971
30.00	12.19	98	2.131
35.00	14.20	101	1.877
40.00	16.79	102	2.414
45.00	19.63	105	2.633
50.00	22.45	106	2.610
55.00	25.17	107	2.513
60.00	27.61	107	2.254
65.00	30.40	108	2.573
70.00	33.19	108	2.573
75.00	36.00	109	2.587
80.00	39.06	109	2.817
85.00	41.36	109	2.117
90.00	43.77	109	2.218

Run 1 Spiked

Min/Pt	Gas Sample	DGM	Volume
5	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.000	(°F)	Vmstd
			(L)
5.0	2.65	94	2.484
10.0	5.25	94	2.437
15.0	6.16	94	0.853
20.0	7.95	96	1.672
25.0	10.16	98	2.057
30.0	13.10	98	2.736
35.0	15.19	101	1.934
40.0	16.24	102	0.970
45.0	20.14	105	3.584
50.0	23.61	106	3.183
55.0	25.82	107	2.024
60.0	28.36	107	2.326
65.0	30.77	108	2.203
70.0	33.24	108	2.358
75.0	35.66	109	2.208
80.0	38.19	109	2.309
85.0	40.69	109	2.281
90.0	43.17	109	2.263

Totals and Averages

90	43.77	103	40.72
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Totals and Averages

90	43.17	103	39.82
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 1
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	R20078
Y _d	1.0072

Start Time	9:33
Stop Time	11:03

Meter ID	R20078
Y _d	0.9985

Run 2

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered V _{mstd} (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	2.19	102	2.041
10.0	4.77	103	2.400
15.0	6.97	103	2.047
20.0	9.17	104	2.043
25.0	11.42	105	2.086
30.0	13.68	106	2.091
35.0	15.76	107	1.921
40.0	18.06	107	2.125
45.0	20.86	107	2.587
50.0	23.40	109	2.338
55.0	25.92	110	2.316
60.0	28.42	110	2.297
65.0	30.59	110	1.994
70.0	33.29	111	2.477
75.0	35.86	111	2.357
80.0	38.12	111	2.073
85.0	40.36	112	2.051
90.0	42.89	112	2.317

Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered V _{mstd} (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	2.31	102	2.134
10.0	4.86	103	2.352
15.0	6.93	103	1.909
20.0	8.96	104	1.869
25.0	11.02	105	1.893
30.0	13.25	106	2.046
35.0	15.51	107	2.070
40.0	17.89	107	2.180
45.0	20.69	107	2.564
50.0	23.11	109	2.208
55.0	25.39	110	2.077
60.0	27.99	110	2.368
65.0	30.42	110	2.214
70.0	33.06	111	2.401
75.0	35.76	111	2.455
80.0	38.25	111	2.264
85.0	40.74	112	2.260
90.0	43.07	112	2.115

Totals and Averages

90	42.89	108	39.57
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Totals and Averages

90	43.07	108	39.39
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 1
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	R20078
Y _e	1.0072

Meter ID	R20078
Y _s	0.9985

Start Time	11:30
Stop Time	13:00

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.01	108	2 776
10.0	6.12	108	2 868
15.0	8.36	109	2 062
20.0	10.69	110	2 141
25.0	12.86	111	2 991
30.0	15.21	111	2 156
35.0	17.71	112	2 289
40.0	20.07	112	2 161
45.0	22.56	113	2 276
50.0	24.81	113	2 057
55.0	27.22	113	2 203
60.0	29.69	113	2 258
65.0	32.03	114	2 135
70.0	34.53	115	2 277
75.0	36.87	115	2 132
80.0	39.30	115	2 214
85.0	41.71	115	2 195
90.0	43.99	115	2 077

Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.12	108	2 852
10.0	5.38	108	2 066
15.0	8.78	109	3 103
20.0	10.90	110	1 931
25.0	13.07	111	1 973
30.0	15.39	111	2 110
35.0	17.88	112	2 260
40.0	20.22	112	2 124
45.0	22.71	113	2 256
50.0	24.99	113	2 066
55.0	27.41	113	2 193
60.0	29.87	113	2 229
65.0	32.10	114	2 017
70.0	34.50	115	2 167
75.0	36.90	115	2 167
80.0	39.46	115	2 312
85.0	41.92	115	2 221
90.0	44.39	115	2 231

Totals and Averages

90	43.99	112	40.26
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Totals and Averages

90	44.39	112	40.27
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 2
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	25A
Y _d	0.9994

Meter ID	25B
Y _d	1.0017

Start Time	7:30
Stop Time	9:00

Run 1

Min/Pt	Gas Sample	DGM	Volume
5	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.000	(°F)	Vmstd
			(L)
5.0	2.40	87	2 280
10.0	3.96	88	1 479
15.0	6.16	88	2 086
20.0	8.09	89	1 827
25.0	10.24	92	2 024
30.0	12.42	96	2 038
35.0	14.71	97	2 137
40.0	17.59	98	2 682
45.0	19.75	100	2 005
50.0	22.84	102	2 858
55.0	25.27	104	2 239
60.0	26.37	106	1 010
65.0	27.37	107	0 917
70.0	30.61	108	2 965
75.0	34.53	110	3 574
80.0	36.47	111	1 766
85.0	38.89	111	2 203
90.0	41.42	112	2 299

Run 1 Spiked

Min/Pt	Gas Sample	DGM	Volume
5	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.000	(°F)	Vmstd
			(L)
5.0	2.35	87	2 238
10.0	4.86	88	2 386
15.0	6.62	88	1 673
20.0	8.29	89	1 585
25.0	10.64	92	2 218
30.0	12.81	96	2 033
35.0	14.90	97	1 955
40.0	16.88	98	1 848
45.0	20.86	100	3 702
50.0	23.80	102	2 725
55.0	26.01	104	2 041
60.0	28.06	106	1 887
65.0	30.16	107	1 929
70.0	32.01	108	1 697
75.0	33.81	110	1 645
80.0	35.96	111	1 961
85.0	38.57	111	2 381
90.0	41.19	112	2 386

Totals and Averages

90	41.42	100	38.42
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Totals and Averages

90	41.19	100	38.29
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 2
Date	7/25/11
P _L (Inches Hg)	29.48

Meter ID	25A
Y _d	0.9994

Start Time	9:33
Stop Time	11:03

Meter ID	25B
Y _d	1.0017

Run 2

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	2.51	104	2.313
10.0	5.08	105	2.364
15.0	7.07	105	1.831
20.0	9.06	105	1.831
25.0	11.56	106	2.296
30.0	13.76	106	2.020
35.0	15.82	107	1.888
40.0	18.22	107	2.200
45.0	21.06	108	2.599
50.0	23.46	109	2.192
55.0	26.11	110	2.416
60.0	28.76	110	2.416
65.0	31.04	110	2.079
70.0	33.13	110	1.906
75.0	35.27	110	1.951
80.0	37.46	111	1.993
85.0	39.43	111	1.793
90.0	41.59	111	1.966

Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	2.62	104	2.420
10.0	4.82	105	2.028
15.0	7.06	105	2.065
20.0	9.51	105	2.259
25.0	11.86	106	2.163
30.0	13.15	106	1.187
35.0	15.46	107	2.122
40.0	17.87	107	2.214
45.0	20.77	108	2.660
50.0	23.23	109	2.252
55.0	25.79	110	2.340
60.0	28.42	110	2.404
65.0	31.16	110	2.504
70.0	33.24	110	1.901
75.0	35.06	110	1.663
80.0	37.57	110	2.294
85.0	39.42	111	1.688
90.0	41.32	111	1.733

Totals and Averages

90	41.59	108	38.05
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Totals and Averages

90	41.32	108	37.89
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 2
Date	7/25/11
P _o (Inches Hg)	29.48

Meter ID	25A
Y _d	0.9994

Start Time	11:30
Stop Time	13:00

Meter ID	25B
Y _d	1.0017

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	2.80	110	2.553
10.0	4.75	111	1.775
15.0	6.72	112	1.790
20.0	9.16	112	2.217
25.0	11.39	114	2.019
30.0	13.86	114	2.236
35.0	16.12	115	2.043
40.0	18.27	115	1.943
45.0	20.70	116	2.193
50.0	23.01	116	2.084
55.0	25.36	116	2.120
60.0	27.79	117	2.189
65.0	30.17	117	2.144
70.0	32.39	117	2.000
75.0	34.79	117	2.162
80.0	37.07	117	2.054
85.0	39.28	118	1.987
90.0	41.78	118	2.248

Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	2.74	110	2.504
10.0	4.14	111	1.277
15.0	6.36	112	2.022
20.0	8.87	112	2.286
25.0	11.10	114	2.024
30.0	13.37	114	2.060
35.0	15.89	115	2.283
40.0	18.17	115	2.066
45.0	20.52	116	2.125
50.0	22.96	116	2.207
55.0	25.42	116	2.225
60.0	28.02	117	2.347
65.0	30.46	117	2.203
70.0	32.90	117	2.203
75.0	35.27	117	2.140
80.0	37.57	117	2.076
85.0	40.09	118	2.271
90.0	42.49	118	2.163

Totals and Averages

90	41.78	115	37.76
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Totals and Averages

90	42.49	115	38.49
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 3
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	M26
Y _d	0.9958

Start Time	7:30
Stop Time	9:00

Meter ID	M26
Y _d	0.9902

Run 1

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered Vrnstd (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.00	3.098	86	2 938
10.00	5.454	89	2 222
15.00	7.542	91	1 962
20.00	9.485	92	1 823
25.00	11.131	94	1 539
30.00	12.983	96	1 725
35.00	14.422	97	1 338
40.00	15.888	98	1 360
45.00	17.558	99	1 547
50.00	19.079	100	1 406
55.00	20.739	102	1 530
60.00	22.101	101	1 257
65.00	24.573	102	2 278
70.00	25.647	103	0 988
75.00	26.190	103	0 499
80.00	28.235	104	1 878
85.00	29.745	104	1 386
90.00	31.219	104	1 353

Totals and Averages

90	31.219	98.1	28.97
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Run 1 Spiked

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered Vrnstd (L)
5	Volume Initial (L)		
Elapsed Time	0.000		
5.0	3.513	88	3 301
10.0	4.827	91	1 228
15.0	6.247	93	1 322
20.0	8.253	94	1 865
25.0	10.984	95	2 534
30.0	13.047	97	1 907
35.0	15.647	98	2 399
40.0	17.512	99	1 718
45.0	18.502	101	0 909
50.0	19.153	102	0 596
55.0	20.053	102	0 825
60.0	22.454	102	2 200
65.0	24.471	103	1 845
70.0	26.384	104	1 747
75.0	30.984	104	4 200
80.0	33.051	105	1 884
85.0	34.059	105	0 919
90.0	35.135	105	0 981

Totals and Averages

90	35.135	99.3	32.35
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 3
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	M26
Y _e	0.9958

Start Time	9:33
Stop Time	11:03

Meter ID	M26
Y _e	0.9902

Run 2

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered Vrnstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.741	97	3.478
10.0	6.212	96	2.301
15.0	8.632	96	2.254
20.0	10.977	96	2.184
25.0	13.384	97	2.238
30.0	15.521	99	1.980
35.0	17.699	100	2.014
40.0	19.801	101	1.940
45.0	21.802	102	1.844
50.0	25.471	102	3.381
55.0	28.838	104	3.091
60.0	31.949	104	2.856
65.0	35.027	106	2.816
70.0	37.684	106	2.431
75.0	39.839	107	1.968
80.0	40.850	108	0.922
85.0	41.584	109	0.668
90.0	42.026	109	0.402

Run 2 Spiked

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered Vrnstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.102	96	2.873
10.0	4.073	95	0.901
15.0	6.124	96	1.900
20.0	8.545	97	2.238
25.0	10.979	98	2.246
30.0	13.399	99	2.229
35.0	16.255	100	2.626
40.0	19.182	101	2.687
45.0	21.806	102	2.404
50.0	24.377	102	2.356
55.0	26.576	105	2.004
60.0	28.527	105	1.778
65.0	30.426	107	1.725
70.0	31.958	108	1.389
75.0	33.986	109	1.835
80.0	35.774	110	1.615
85.0	37.305	110	1.383
90.0	38.800	110	1.351

Totals and Averages

90	42.026	102	38.71
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Totals and Averages

90	38.800	103	35.50
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 3
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	M26
Y _d	0.9958

Start Time	11:30
Stop Time	13:00

Meter ID	M26
Y _d	0.9902

Run 3

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.457	101	3 191
10.0	5.572	102	1 949
15.0	7.909	102	2 153
20.0	9.924	103	1 853
25.0	11.855	103	1 776
30.0	13.257	104	1 287
35.0	14.883	105	1 490
40.0	15.892	107	0 922
45.0	18.070	108	1 986
50.0	20.011	109	1 766
55.0	21.743	109	1 576
60.0	23.415	110	1 519
65.0	24.897	110	1 346
70.0	27.187	110	2 080
75.0	29.683	110	2 268
80.0	31.624	111	1 760
85.0	33.518	111	1 718
90.0	35.320	111	1 634

Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	2.986	101	2 741
10.0	5.541	102	2 341
15.0	8.105	102	2 349
20.0	9.622	102	1 390
25.0	10.998	104	1 256
30.0	12.778	106	1 619
35.0	14.995	106	2 017
40.0	17.100	108	1 908
45.0	18.081	109	0 888
50.0	19.854	110	1 602
55.0	21.733	110	1 697
60.0	23.601	110	1 688
65.0	25.310	111	1 541
70.0	27.328	111	1 820
75.0	29.521	111	1 978
80.0	31.856	111	2 106
85.0	34.096	112	2 017
90.0	36.070	112	1 777

Totals and Averages

90	35.320	107	32.26
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Totals and Averages

90	36.070	108	32.72
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 4
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	R19075
Y _c	1.0000

Meter ID	R19075
Y _c	1.0000

Start Time	7:30
Stop Time	9:00

Run 1

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered V _{mstd} (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.00	3.147	76	3.053
10.00	5.362	77	2.145
15.00	7.426	77	1.999
20.00	9.216	77	1.733
25.00	10.904	77	1.635
30.00	12.763	77	1.800
35.00	14.426	78	1.607
40.00	16.124	78	1.641
45.00	17.821	78	1.640
50.00	19.426	78	1.551
55.00	20.987	78	1.509
60.00	22.674	79	1.628
65.00	24.521	79	1.782
70.00	26.148	79	1.570
75.00	27.821	79	1.614
80.00	29.422	80	1.542
85.00	33.379	80	3.811
90.00	37.806	80	4.263

Run 1 Spiked

Min/Pt	Gas Sample	DGM Temp. (°F)	Volume Metered V _{mstd} (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.712	77	3.595
10.0	5.305	77	1.543
15.0	7.271	78	1.900
20.0	9.378	78	2.037
25.0	11.433	78	1.986
30.0	12.984	78	1.499
35.0	14.839	78	1.793
40.0	16.489	79	1.592
45.0	18.037	79	1.494
50.0	19.347	79	1.264
55.0	20.911	79	1.509
60.0	22.605	80	1.631
65.0	24.372	80	1.702
70.0	26.015	80	1.582
75.0	27.475	80	1.406
80.0	29.430	81	1.879
85.0	33.894	81	4.291
90.0	37.610	81	3.572

Totals and Averages

90	37.806	78.2	36.53
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Totals and Averages

90	37.610	79.1	36.28
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 4
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	R19075
Y _d	1.0000

Start Time	9:33
Stop Time	11:03

Meter ID	R19075
Y _d	1.0000

Run 2

Min/Pt	Gas Sample	DGM	Volume
5	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.000	(°F)	Vmstd
			(L)
5.0	2.814	80	2.710
10.0	5.156	80	2.255
15.0	7.612	80	2.365
20.0	10.030	80	2.329
25.0	12.351	80	2.235
30.0	14.667	81	2.226
35.0	16.893	81	2.140
40.0	19.084	81	2.106
45.0	21.582	81	2.401
50.0	24.397	82	2.701
55.0	27.005	82	2.502
60.0	29.595	83	2.480
65.0	32.068	83	2.368
70.0	34.384	84	2.214
75.0	35.825	84	1.377
80.0	36.983	84	1.107
85.0	38.311	85	1.267
90.0	39.287	85	0.931

Run 2 Spiked

Min/Pt	Gas Sample	DGM	Volume
5	Volume		
Elapsed	Initial (L)	Temp	Metered
Time	0.000	(°F)	Vmstd
			(L)
5.0	2.946	81	2.832
10.0	4.376	81	1.374
15.0	6.854	81	2.382
20.0	8.954	81	2.019
25.0	11.010	81	1.976
30.0	13.142	82	2.046
35.0	15.867	82	2.615
40.0	20.076	82	4.038
45.0	24.076	83	3.831
50.0	26.419	83	2.244
55.0	28.169	83	1.676
60.0	29.463	84	1.237
65.0	30.377	84	0.874
70.0	32.309	85	1.844
75.0	34.345	86	1.939
80.0	36.355	86	1.914
85.0	38.347	86	1.897
90.0	40.278	86	1.839

Totals and Averages

90	39.287	82.0	37.69
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Totals and Averages

90	40.278	83.2	38.56
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Project Number	3648
Client	Big Rivers
Plant	Wilson
Location	SCR 4
Date	7/25/11
P _b (Inches Hg)	29.48

Meter ID	R19075
Y _d	1.0000

Start Time	11:30
Stop Time	13:00

Meter ID	R19075
Y _d	1.0000

Run 3

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.218	84	3.076
10.0	5.992	85	2.647
15.0	8.011	85	1.926
20.0	9.868	85	1.772
25.0	11.787	85	1.831
30.0	13.556	86	1.685
35.0	15.394	86	1.751
40.0	16.943	86	1.475
45.0	18.595	86	1.573
50.0	20.153	86	1.484
55.0	21.756	87	1.524
60.0	23.272	87	1.441
65.0	24.825	87	1.476
70.0	26.710	87	1.792
75.0	29.867	87	3.001
80.0	33.311	87	3.274
85.0	36.595	87	3.122
90.0	39.846	88	3.085

Totals and Averages

90	39.846	86.2	37.94
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Run 3 Spiked

Min/Pt	Gas Sample	DGM Temp (°F)	Volume Metered Vmstd (L)
5	Volume		
Elapsed Time	Initial (L)		
	0.000		
5.0	3.341	85	3.188
10.0	6.103	86	2.631
15.0	7.789	86	1.606
20.0	9.971	86	2.078
25.0	11.539	86	1.493
30.0	12.988	87	1.378
35.0	14.435	87	1.376
40.0	16.198	87	1.676
45.0	18.504	87	2.192
50.0	20.808	88	2.186
55.0	22.782	88	1.873
60.0	24.679	88	1.800
65.0	26.429	88	1.661
70.0	28.641	88	2.099
75.0	31.289	88	2.513
80.0	33.594	88	2.187
85.0	35.892	88	2.181
90.0	38.612	88	2.581

Totals and Averages

90	38.612	87.2	36.70
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