Field Data Printouts

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet A
Date	7/29/2011
Meter ID	M-17
Y_d	1.0141
Pitot C_p	0.84

Nozzle Diameter (in)	0.275
Filter ID	NA
Train Type	Impingers
Train ID	IB
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-12.0
Start Time	7:15
Stop Time	9:24

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	198

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	840.1	709.5	130.6
Impinger 2	708.6	737.8	-29.2
Impinger 3	634.7	640.5	-5.8
Impinger 4		50.0	-50.0
Silica Gel	946.3	894.5	51.8
Weight of Water Collected, V_{wc} (g)			45.6
Silica Gel Net Weight, V_{sg} (g)			51.8

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.6	NA	7.72

Run 1

Traverse Point	Mm/Pt 5 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Inital (ft^3) 672.55	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	5	0.49	1.90	676.49	320	92	89	0.700	48.3	3.803	104.3
1-2	10	0.41	1.60	680.01	322	93	89	0.640	44.3	3.392	101.8
1-3	15	0.39	1.50	683.39	323	96	89	0.624	43.2	3.247	100.6
1-4	20	0.33	1.30	686.72	332	99	90	0.574	40.0	3.186	107.2
1-5	25	0.28	1.10	689.40	328	99	90	0.529	36.7	2.583	93.5
1-6	30	0.30	1.20	692.33	332	101	91	0.548	38.1	2.795	98.7
1-7	35	0.25	0.97	694.99	331	101	92	0.500	34.8	2.634	96.0
1-8	40	0.23	0.89	697.64	330	102	92	0.480	33.3	2.521	101.6
1-9	45	0.19	0.74	699.97	329	102	92	0.436	30.3	2.216	98.2
1-10	50	0.26	1.00	702.62	331	104	93	0.510	35.4	2.515	95.4
1-11	55	0.30	1.20	705.51	332	104	93	0.548	38.1	2.744	96.9
1-12	60	0.24	0.93	708.19	330	104	93	0.490	34.0	2.543	100.3
1-13	65	0.20	0.78	711.04	329	105	93	0.447	31.0	2.701	116.6
2-1	70	0.48	1.90	714.06	330	105	93	0.693	48.1	2.870	80.0
2-2	75	0.42	1.60	716.83	332	105	94	0.648	45.1	2.628	76.5
2-3	80	0.39	1.50	719.95	328	106	94	0.624	43.3	2.957	91.4
2-4	85	0.34	1.30	722.79	330	106	94	0.583	40.5	2.690	89.3
2-5	90	0.27	1.10	725.80	330	106	94	0.520	36.1	2.960	106.0
2-6	95	0.31	1.20	728.83	330	106	94	0.557	38.7	2.970	99.8
2-7	100	0.26	1.00	731.42	332	106	94	0.510	35.5	2.452	93.0
2-8	105	0.26	1.00	734.51	331	106	94	0.510	35.4	2.925	110.9
2-9	110	0.19	0.74	737.40	329	107	94	0.436	30.3	2.788	123.5
2-10	115	0.25	0.97	740.12	330	107	94	0.500	34.7	2.516	97.2
2-11	120	0.30	1.20	743.41	324	107	95	0.548	37.9	3.110	109.3
2-12	125	0.24	0.93	746.78	320	107	95	0.490	33.8	3.181	124.5
2-13	130	0.21	0.82	748.86	320	107	95	0.458	31.6	1.965	82.3

Totals and Averages

130	1.17	76.31	328	97.9	0.542	37.6	72.53	99.3

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet A
Date	7/29/2011
Meter ID	M-17
Y	1.0141
Pitot C_p	0.84

Nozzle Diameter (in)	0.275
Filter ID	NA
Train Type	Impingers
Train ID	IB-24
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-12.0
Start Time	9:48
Stop Time	12:01

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	198

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	729.2	639.2	90.0
Impinger 2	743.4	722.5	20.9
Impinger 3	533.1	518.3	14.8
Impinger 4		50.0	-50.0
Silica Gel	953.7	937.6	16.1
Weight of Water Collected, V_{wc} (g)			75.7
Silica Gel Net Weight, V_{wg} (g)			16.1

CEMS	$\%CO_2$	$\%CO_2$-$\%O_2$	$\%O_2$
Average	11.6	NA	7.61

Run 2

Traverse Point	Min/Pt: 5 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3): 751.11	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	5	0.48	1.80	755.18	334	104	98	0.693	46.2	3.854	107.5
1-2	10	0.43	1.60	758.70	336	106	98	0.656	45.7	3.325	98.1
1-3	15	0.38	1.40	762.41	338	107	98	0.616	43.0	3.500	110.0
1-4	20	0.35	1.30	765.33	337	108	98	0.592	41.9	2.751	90.0
1-5	25	0.27	1.00	768.21	332	108	99	0.520	36.1	2.709	100.6
1-6	30	0.30	1.10	771.89	331	108	99	0.548	38.1	3.465	121.9
1-7	35	0.25	0.93	775.19	336	109	99	0.500	34.8	3.101	120.0
1-8	40	0.26	0.97	777.72	335	108	99	0.510	35.5	2.380	90.2
1-9	45	0.18	0.67	780.04	334	108	99	0.424	29.5	2.181	89.3
1-10	50	0.25	0.93	782.70	331	109	100	0.500	34.7	2.497	96.3
1-11	55	0.30	1.10	785.51	330	109	100	0.548	38.0	2.639	92.9
1-12	60	0.25	0.93	788.12	330	109	100	0.500	34.7	2.451	94.5
1-13	65	0.22	0.82	790.63	336	110	101	0.469	32.7	2.352	97.0
2-1	70	0.47	1.80	794.31	331	110	101	0.686	47.6	3.457	97.2
2-2	75	0.43	1.60	798.20	332	109	101	0.656	46.6	3.655	107.3
2-3	80	0.40	1.50	801.33	337	108	101	0.632	44.1	2.983	90.1
2-4	85	0.32	1.20	804.23	330	109	101	0.566	39.3	2.722	92.7
2-5	90	0.28	1.00	807.15	334	109	101	0.529	36.8	2.740	100.0
2-6	95	0.29	1.10	810.00	332	110	101	0.539	37.4	2.672	95.8
2-7	100	0.24	0.90	812.58	335	110	102	0.490	34.1	2.416	95.3
2-8	105	0.24	0.90	815.15	336	110	102	0.490	34.1	2.408	95.0
2-9	110	0.19	0.71	817.48	333	110	102	0.436	30.3	2.181	96.6
2-10	115	0.26	0.97	820.14	332	110	102	0.510	35.4	2.491	94.3
2-11	120	0.30	1.10	822.96	329	110	102	0.548	38.0	2.632	92.9
2-12	125	0.23	0.86	825.54	325	110	102	0.480	33.2	2.416	96.8
2-13	130	0.21	0.78	827.97	324	110	102	0.458	31.7	2.275	95.3

Totals and Averages

130	1.11	76.86	333	105	0.542	37.7	72.19	98.9

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet A
Date	7/29/2011
Meter ID	M-17
Y_d	1.0141
Pitot C_p	0.84

Nozzle Diameter (in)	0.275
Filter ID	NA
Train Type	Impingers
Train ID	IB
P_b (Inches Hg)	29.56
P_s (Inches H_2O)	-12.0
Start Time	12:21
Stop Time	14:38

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	198

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	833.7	729.1	104.6
Impinger 2	765.5	734.0	31.5
Impinger 3	652.5	637.9	15.6
Impinger 4		50.0	-50.0
Silica Gel	876.0	859.9	16.1
Weight of Water Collected, V_{wc} (g)			101.7
Silica Gel Net Weight, V_{sg} (g)			16.1

CEMS	$\%CO_2$	$\%CO_2$-$\%O_2$	$\%O_2$
Average	11.9	NA	7.27

Run 3

Traverse Point	Min/Pt: 5 Elapsed Time	Velocity Pressure Δ P (in H_2O)	Orifice Setting Δ H (in H_2O)	Gas Sample Volume Initial (ft^3) 831.90	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	5	0.49	1.80	835.51	336	111	103	0.700	48.9	3.382	95.0
1-2	10	0.42	1.60	838.89	334	113	103	0.648	45.3	3.159	95.7
1-3	15	0.38	1.40	842.13	331	113	103	0.616	43.0	3.027	98.2
1-4	20	0.31	1.20	845.16	333	114	103	0.557	38.9	2.827	98.6
1-5	25	0.29	1.10	848.05	332	114	104	0.539	37.6	2.693	98.1
1-6	30	0.29	1.10	850.89	331	114	104	0.539	37.6	2.647	96.3
1-7	35	0.25	0.94	853.50	334	114	104	0.500	34.9	2.431	95.5
1-8	40	0.23	0.87	856.04	335	114	104	0.480	33.5	2.366	96.9
1-9	45	0.19	0.71	858.29	331	114	105	0.436	30.4	2.093	94.1
1-10	50	0.24	0.90	860.80	329	115	105	0.490	34.1	2.334	95.2
1-11	55	0.29	1.10	863.63	326	115	106	0.539	37.4	2.630	95.4
1-12	60	0.25	0.94	866.26	328	115	106	0.500	34.8	2.443	96.3
1-13	65	0.20	0.75	868.64	329	115	106	0.447	31.1	2.210	96.7
2-1	70	0.47	1.80	872.32	330	115	106	0.686	47.8	3.426	97.9
2-2	75	0.43	1.60	875.81	327	115	106	0.656	45.6	3.248	96.8
2-3	80	0.36	1.40	879.06	329	115	106	0.600	41.8	3.023	98.6
2-4	85	0.35	1.30	882.18	330	115	106	0.592	41.2	2.901	96.1
2-5	90	0.27	1.00	884.94	327	115	106	0.520	36.1	2.565	96.5
2-6	95	0.30	1.10	887.77	324	115	106	0.548	38.0	2.630	93.7
2-7	100	0.26	0.98	890.48	321	115	106	0.510	35.3	2.518	96.3
2-8	105	0.26	0.98	893.13	324	115	106	0.510	35.4	2.482	94.2
2-9	110	0.19	0.71	895.38	323	115	106	0.436	30.2	2.099	93.5
2-10	115	0.23	0.87	897.62	321	115	106	0.480	33.2	2.091	84.5
2-11	120	0.29	1.10	900.70	321	115	106	0.539	37.3	2.862	103.5
2-12	125	0.24	0.90	903.19	319	115	106	0.490	33.9	2.313	91.8
2-13	130	0.21	0.79	905.80	314	115	106	0.458	31.6	2.424	102.5

Totals and Averages

130		1.11	73.90	328	110	0.539	37.5	68.77	96.0

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Inlet A
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	M-26
Y_d	0.9958

Start Time	7:15
Stop Time	8:52

Meter ID	M-26
Y_d	0.9902

Run 1

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5.00	2.132	97	1.988
10.00	3.994	97	1.736
15.00	5.991	98	1.858
20.00	7.919	100	1.788
25.00	10.074	103	1.988
30.00	11.997	105	1.767
35.00	14.041	108	1.869
40.00	16.112	111	1.883
45.00	18.043	111	1.756
50.00	19.989	113	1.763
55.00	22.029	114	1.845
60.00	24.039	116	1.812
65.00	26.037	116	1.801
70.00	28.063	116	1.826
75.00	30.058	118	1.792
80.00	32.040	118	1.781
85.00	34.019	119	1.775
90.00	36.155	120	1.912

Totals and Averages

90	36.155	110	32.94

Run 1 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	1.981	98	1.833
10	3.998	97	1.870
15	6.004	99	1.853
20	7.934	102	1.773
25	9.997	106	1.882
30	12.004	108	1.824
35	13.988	111	1.794
40	16.086	112	1.894
45	18.008	114	1.729
50	20.087	115	1.867
55	22.094	117	1.796
60	24.096	117	1.791
65	26.153	118	1.838
70	27.997	118	1.647
75	30.133	120	1.902
80	32.031	121	1.687
85	33.998	121	1.748
90	36.182	122	1.938

Totals and Averages

90	36.182	112	32.66

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Inlet A
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	M-26
Y_d	0.9958

Meter ID	M-26
Y_d	0.9902

Start Time	9:48
Stop Time	11:26

Run 2

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.075	106	1.904
10	3.933	107	1.702
15	6.128	106	2.014
20	8.096	107	1.802
25	10.047	109	1.780
30	12.031	110	1.807
35	14.027	112	1.812
40	16.071	114	1.849
45	18.022	116	1.759
50	19.929	117	1.716
55	22.039	118	1.896
60	24.034	118	1.792
65	25.989	120	1.750
70	28.015	121	1.811
75	30.098	122	1.858
80	32.109	122	1.794
85	34.008	123	1.691
90	36.003	123	1.777

Totals and Averages

90	36.003	115	32.51

Run 2 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.048	106	1.868
10	3.931	106	1.718
15	6.012	107	1.895
20	8.183	108	1.974
25	10.014	111	1.656
30	12.012	112	1.804
35	14.065	115	1.844
40	16.127	116	1.848
45	18.211	118	1.862
50	19.974	119	1.572
55	22.104	120	1.896
60	21.028	121	-0.956
65	26.011	122	4.421
70	28.116	123	1.864
75	30.102	123	1.759
80	32.113	123	1.781
85	34.002	124	1.670
90	35.988	124	1.756

Totals and Averages

90	35.988	117	32.23

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Inlet A
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	M-26
Y_d	0.9958

Meter ID	M-26
Y_d	0.9902

Start Time	12:21
Stop Time	13:59

Run 3

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.029	111	1.845
10	4.078	111	1.863
15	5.984	111	1.733
20	8.097	111	1.921
25	9.996	113	1.721
30	11.993	114	1.807
35	13.996	116	1.806
40	15.980	118	1.782
45	18.018	120	1.825
50	20.040	121	1.807
55	22.072	122	1.813
60	24.008	123	1.724
65	26.003	124	1.774
70	28.051	125	1.818
75	30.033	126	1.756
80	31.998	126	1.741
85	33.989	127	1.761
90	35.997	127	1.776

Totals and Averages

90	35.997	119	32.27

Run 3 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.123	110	1.923
10	4.133	111	1.818
15	5.979	112	1.666
20	8.111	112	1.924
25	10.033	115	1.726
30	12.111	116	1.863
35	14.052	118	1.734
40	15.991	120	1.726
45	18.022	121	1.805
50	20.053	124	1.796
55	22.011	124	1.731
60	23.984	126	1.738
65	26.011	126	1.786
70	28.038	127	1.783
75	30.021	128	1.741
80	32.039	128	1.772
85	34.053	129	1.766
90	36.025	129	1.729

Totals and Averages

90	36.025	121	32.02

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet B
Date	7/29/2011
Meter ID	M-16
Y_d	0.9907
Pitot C_p	0.84

Nozzle Diameter (in)	0.275
Filter ID	NA
Train Type	Impingers
Train ID	IB-10
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-10.5
Start Time	7:15
Stop Time	8:30

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	198

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	790.3	722.0	68.3
Impinger 2	754.0	719.1	34.9
Impinger 3	654.5	620.0	34.5
Impinger 4		50.0	-50.0
Silica Gel	922.8	925.8	-3.0
Weight of Water Collected, V_{wc} (g)			87.7
Silica Gel Net Weight, V_{wsg} (g)			-3.0

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.6	NA	7.72

Run 1

Traverse Point	Min/Pt 5 Elapsed Time	Velocity Pressure Δ P (in H_2O)	Orifice Setting Δ H (in H_2O)	Gas Sample Volume Initial (ft^3) 949.10	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	5	0.51	2.10	953.08	261	97	95	0.714	47.3	3.717	95.9
1-2	10	0.60	2.50	957.45	263	102	98	0.775	51.4	4.064	96.7
1-3	15	0.57	2.30	961.70	264	106	97	0.755	50.1	3.932	96.1
1-4	20	0.51	2.10	965.89	265	108	98	0.714	47.4	3.865	99.5
1-5	25	0.50	1.40	968.98	264	109	99	0.707	46.9	2.640	74.1
1-6	30	0.43	1.20	972.00	265	110	100	0.656	43.5	2.769	76.0
1-7	35	0.22	0.62	974.18	264	111	101	0.469	31.1	1.995	78.4
1-8	40	0.25	0.71	976.50	263	111	102	0.500	33.2	2.119	78.2
1-9	45	0.28	0.79	978.96	262	112	103	0.529	35.1	2.264	78.1
1-10	50	0.24	0.68	981.22	265	113	104	0.490	32.5	2.057	77.5
1-11	55	0.23	0.65	983.47	263	114	105	0.480	31.5	2.034	78.5
1-12	60	0.25	0.71	985.82	264	114	105	0.500	33.2	2.135	78.8
1-13	65	0.30	0.85	987.97	264	116	107	0.548	36.4	1.948	65.6
2-1	70	0.27	0.76	990.86	272	117	107	0.520	34.7	2.615	93.4
2-2	75	0.4	1.10	993.76	274	118	108	0.632	42.3	2.622	77.0
2-3	80	0.24	0.68	996.07	274	118	109	0.490	32.7	2.084	79.1
2-4	85	0.23	0.65	998.99	273	118	109	0.480	32.0	2.636	100.0
2-5	90	0.18	0.51	1000.32	272	117	109	0.424	28.5	1.201	52.5
2-6	95	0.24	0.68	1002.61	269	117	109	0.490	32.6	2.065	78.2
2-7	100	0.21	0.59	1004.38	268	117	109	0.458	30.5	1.598	64.5
2-8	105	0.22	0.62	1006.98	264	117	110	0.469	31.1	2.346	92.3
2-9	110	0.25	0.71	1009.35	262	117	109	0.500	33.1	2.140	79.9
2-10	115	0.28	0.79	1011.90	260	116	109	0.529	35.0	2.305	80.2
2-11	120	0.24	0.68	1014.20	260	116	109	0.490	32.4	2.079	79.1
2-12	125	0.26	0.74	1016.00	261	115	108	0.510	33.5	1.630	58.8
2-13	130	0.23	0.65	1018.94	260	115	108	0.480	31.7	2.662	102.1

Totals and Averages

130		0.991	69.84	265	109	0.550	36.6	63.57	82.1

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet B
Date	7/29/2011
Meter ID	M-16
Y_d	0.9907
Pitot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impingers
Train ID	IB9
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-10.5
Start Time	9:48
Stop Time	11:07

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	198

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	804.2	662.7	141.5
Impinger 2	716.5	695.6	20.9
Impinger 3	616.4	608.2	8.2
Impinger 4		50.0	-50.0
Silica Gel	913.4	899.4	14.0
Weight of Water Collected, V_{wc} (g)			120.6
Silica Gel Net Weight, V_{wg} (g)			14.0

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.6	NA	7.61

Run 2

Traverse Point	Min/Pt: 5 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3) 21.44	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	5	0.65	1.80	25.20	265	106	104	0.806	53.9	3.452	98.3
1-2	10	0.59	1.70	28.80	267	109	103	0.768	51.4	3.300	98.7
1-3	15	0.57	1.60	32.30	268	112	104	0.755	50.6	3.196	97.4
1-4	20	0.56	1.60	35.80	268	114	104	0.748	50.1	3.190	98.1
1-5	25	0.52	1.50	39.23	270	114	104	0.721	48.4	3.126	99.2
1-6	30	0.45	1.30	42.40	267	115	105	0.671	44.9	2.882	96.8
1-7	35	0.26	0.74	44.82	263	114	105	0.510	34.0	2.199	96.9
1-8	40	0.24	0.68	47.10	263	113	105	0.490	32.7	2.075	97.0
1-9	45	0.27	0.72	49.53	267	113	105	0.520	34.8	2.210	97.8
1-10	50	0.24	0.68	51.81	269	112	104	0.490	32.8	2.077	97.6
1-11	55	0.23	0.65	54.07	267	111	104	0.480	32.1	2.061	98.8
1-12	60	0.25	0.71	56.41	268	111	104	0.500	33.4	2.134	98.0
1-13	65	0.29	0.82	58.95	267	110	103	0.539	36.0	2.321	96.1
2-1	70	0.45	1.30	62.07	267	111	104	0.671	44.9	2.849	97.6
2-2	75	0.42	1.20	65.10	270	113	104	0.648	43.5	2.762	98.1
2-3	80	0.3	0.85	67.67	272	113	104	0.548	36.8	2.340	98.5
2-4	85	0.26	0.74	70.08	271	113	105	0.510	34.2	2.192	98.1
2-5	90	0.23	0.65	72.32	269	113	105	0.480	32.1	2.037	97.8
2-6	95	0.25	0.71	74.68	264	112	105	0.500	33.4	2.148	98.6
2-7	100	0.27	0.76	77.10	262	111	104	0.520	34.7	2.207	97.3
2-8	105	0.29	0.82	79.65	263	111	104	0.539	35.9	2.326	99.0
2-9	110	0.30	0.85	82.23	264	111	104	0.548	36.6	2.354	98.8
2-10	115	0.25	0.71	84.58	263	111	104	0.500	33.4	2.143	98.3
2-11	120	0.27	0.76	87.04	262	111	104	0.520	34.7	2.244	98.9
2-12	125	0.29	0.82	89.58	265	111	104	0.539	36.0	2.317	98.8
2-13	130	0.24	0.68	91.90	263	111	104	0.490	32.7	2.115	99.0

Totals and Averages

130		0.975	70.46	266	108	0.577	38.6	64.24	98.3

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet B
Date	7/29/2011
Meter ID	M-16
Y_d	0.9907
Pitot C_p	0.84

Nozzle Diameter (in)	0.250
Filter ID	NA
Train Type	Impingers
Train ID	IB-10
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-10.5
Start Time	12:25
Stop Time	14:36

Place an "x" in the appropriate Box

Circular?	
Rectangular?	x
Diameter	
Length	162
Width	198

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	795.2	711.5	83.7
Impinger 2	743.1	736.7	6.4
Impinger 3	645.2	640.8	4.4
Impinger 4		50.0	-50.0
Silica Gel	940.0	922.8	17.2
Weight of Water Collected, V_{lc} (g)			84.5
Silica Gel Net Weight, V_{sg} (g)			17.2

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.9	NA	7.27

Run 3

Traverse Point	Min/Pt 5 Elapsed Time	Velocity Pressure Δ P (in H_2O)	Orifice Setting Δ H (in H_2O)	Gas Sample Volume Initial (ft^3) 94.58	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	5	0.63	1.80	98.19	260	102	99	0.794	52.3	3.342	92.5
1-2	10	0.61	1.70	101.80	264	106	100	0.781	51.5	3.326	93.8
1-3	15	0.56	1.60	105.31	263	109	100	0.748	49.4	3.225	94.6
1-4	20	0.50	1.40	108.64	265	111	101	0.707	46.8	3.050	95.1
1-5	25	0.52	1.50	112.01	265	112	101	0.721	47.7	3.085	94.5
1-6	30	0.45	1.30	115.20	262	112	102	0.671	44.3	2.916	95.6
1-7	35	0.35	0.99	118.01	260	111	102	0.592	39.0	2.569	95.4
1-8	40	0.33	0.93	120.70	258	109	101	0.574	37.8	2.465	94.2
1-9	45	0.30	0.85	123.23	257	108	100	0.548	36.0	2.322	93.0
1-10	50	0.26	0.74	125.59	259	107	100	0.510	33.6	2.166	93.3
1-11	55	0.25	0.71	127.90	260	107	100	0.500	33.0	2.121	93.2
1-12	60	0.28	0.79	130.33	261	107	100	0.529	34.9	2.232	92.9
1-13	65	0.33	0.93	133.04	260	108	100	0.574	37.9	2.488	95.2
2-1	70	0.41	1.20	135.96	261	109	101	0.640	42.2	2.678	92.0
2-2	75	0.51	1.40	139.17	267	111	102	0.714	47.3	2.937	90.8
2-3	80	0.40	1.10	142.04	270	112	103	0.632	42.0	2.620	91.6
2-4	85	0.30	0.85	144.57	272	112	103	0.548	36.4	2.308	90.4
2-5	90	0.26	0.74	146.92	272	112	104	0.510	33.9	2.141	93.0
2-6	95	0.28	0.79	149.37	269	112	104	0.529	35.1	2.233	95.0
2-7	100	0.23	0.65	151.60	266	110	103	0.480	31.7	2.037	95.7
2-8	105	0.26	0.74	153.96	265	109	103	0.510	33.7	2.158	93.3
2-9	110	0.29	0.82	156.46	265	110	103	0.539	35.6	2.284	95.0
2-10	115	0.24	0.68	158.72	264	110	104	0.490	32.4	2.069	92.8
2-11	120	0.26	0.74	161.09	263	109	103	0.510	33.7	2.167	95.8
2-12	125	0.25	0.71	163.41	263	109	103	0.500	33.0	2.121	95.4
2-13	130	0.23	0.65	165.65	262	109	103	0.480	31.7	2.048	94.0

Totals and Averages

130	1.01	71.07	264	106	0.590	39.0	65.08	93.5

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet B
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	R20078
Y_d	1.0072

Meter ID	R20078
Y_d	0.9985

Start Time	7:15
Stop Time	8:48

Run 1

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5.00	2.16	100	2.026
10.00	4.21	103	1.912
15.00	6.30	104	1.946
20.00	8.42	106	1.967
25.00	10.46	112	1.873
30.00	12.49	114	1.857
35.00	14.51	117	1.839
40.00	16.50	119	1.805
45.00	18.42	123	1.730
50.00	20.32	125	1.706
55.00	22.29	127	1.763
60.00	24.12	128	1.635
65.00	25.82	130	1.513
70.00	27.89	131	1.840
75.00	29.99	132	1.863
80.00	32.19	134	1.945
85.00	34.26	135	1.827
90.00	36.33	136	1.824

Totals and Averages

90	36.33	121	32.85

Run 1 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.39	100	2.222
10	4.29	103	1.757
15	6.32	104	1.874
20	8.26	106	1.785
25	10.28	112	1.839
30	12.08	114	1.633
35	14.21	117	1.922
40	16.30	119	1.879
45	18.31	123	1.795
50	20.33	125	1.798
55	22.26	127	1.712
60	24.01	128	1.550
65	26.17	130	1.906
70	28.19	131	1.780
75	30.22	132	1.785
80	32.40	134	1.911
85	34.44	135	1.785
90	36.51	136	1.808

Totals and Averages

90	36.51	121	32.72

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet B
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	R20078
Y_d	1.0072

Start Time	9:48
Stop Time	11:20

Meter ID	R20078
Y_d	0.9985

Run 2

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.39	106	2.218
10	4.15	107	1.630
15	6.08	109	1.781
20	8.13	112	1.882
25	10.08	113	1.787
30	12.10	115	1.845
35	14.11	117	1.830
40	16.19	120	1.883
45	18.22	121	1.835
50	20.22	121	1.808
55	22.25	122	1.832
60	24.32	123	1.865
65	26.42	124	1.889
70	28.45	125	1.822
75	30.49	126	1.828
80	32.51	126	1.810
85	34.52	127	1.796
90	36.49	127	1.763

Totals and Averages

90	36.49	119	33.10

Run 2 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	1.89	106	1.739
10	3.96	107	1.901
15	6.01	109	1.876
20	8.12	112	1.921
25	10.20	113	1.890
30	12.42	115	2.010
35	14.50	117	1.877
40	16.49	120	1.786
45	18.45	121	1.756
50	20.42	121	1.765
55	22.48	122	1.843
60	24.59	123	1.884
65	26.64	124	1.828
70	28.72	125	1.851
75	30.84	126	1.884
80	32.89	126	1.821
85	35.00	127	1.872
90	36.98	127	1.756

Totals and Averages

90	36.98	119	33.26

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Inlet B
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	R20078
Y_d	1.0072

Start Time	12:25
Stop Time	13:57

Meter ID	R20078
Y_d	0.9985

Run 3

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.01	102	1.878
10	4.06	103	1.912
15	6.11	105	1.906
20	8.12	106	1.865
25	10.32	108	2.034
30	12.43	110	1.944
35	14.46	112	1.864
40	16.50	114	1.867
45	18.42	115	1.754
50	20.39	110	1.815
55	22.44	118	1.863
60	24.50	119	1.869
65	26.54	119	1.850
70	28.62	120	1.883
75	30.70	122	1.877
80	32.71	123	1.811
85	34.74	123	1.829
90	36.70	124	1.763

Totals and Averages

90	36.70	114	33.58

Run 3 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	1.86	102	1.723
10	4.02	103	1.998
15	5.98	105	1.806
20	7.94	106	1.803
25	10.00	108	1.888
30	10.02	110	0.018
35	14.10	112	3.714
40	16.19	114	1.896
45	18.17	115	1.793
50	20.22	116	1.853
55	22.17	118	1.757
60	24.12	119	1.754
65	26.10	119	1.780
70	28.19	120	1.876
75	30.23	122	1.825
80	32.24	123	1.795
85	34.21	123	1.759
90	36.17	124	1.747

Totals and Averages

90	36.17	114	32.79

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Stack
Date	7/29/2011
Meter ID	M-27
Y_d	1.0034
Pitot C_p	0.84

Nozzle Diameter (in)	0.184
Filter ID	12171
Train Type	Impinger
Train ID	IB-4
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	7:15
Stop Time	9:25

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	816.1	615.1	201.0
Impinger 2	704.1	734.5	-30.4
Impinger 3	633.2	628.0	5.2
Silica Gel	948.0	937.0	11.0
Weight of Water Collected, V_{wc} (g)			175.5
Silica Gel Net Weight V_{wsg} (g)			11.0

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.6	NA	7.7

Run 1

Traverse Point	Min/Pt 7.5 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3) 307.90	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Ve (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	7.5	2.00	1.80	313.27	127	88	88	1.414	84.7	5.150	94.5
1-2	15.0	2.00	1.80	318.59	127	90	86	1.414	84.7	5.102	93.6
1-3	22.5	1.80	1.60	323.68	128	92	88	1.342	80.5	4.861	94.1
2-1	30.0	2.00	1.80	329.02	127	94	88	1.414	84.7	5.093	93.5
2-2	37.5	2.10	1.90	334.86	128	95	90	1.449	86.9	5.557	99.5
2-3	45.0	2.00	1.80	340.12	128	96	91	1.414	85.9	4.896	91.7
3-1	52.5	2.00	1.80	345.72	128	93	92	1.414	84.8	5.312	97.5
3-2	60.0	1.90	1.70	350.87	127	96	92	1.378	82.6	4.864	92.0
3-3	67.5	1.70	1.50	355.70	127	95	93	1.304	78.1	4.579	91.1
4-1	75.0	2.00	1.80	361.09	128	94	92	1.414	84.8	5.122	94.1
4-2	82.5	1.90	1.70	366.05	128	93	92	1.378	82.6	4.717	88.9
4-3	90.0	1.80	1.60	370.93	128	93	92	1.342	80.4	4.640	89.9

Totals and Averages

90	1.73	63.03	128	91.9	1.39	83.3	60.01	93.4

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Stack
Date	7/29/2011
Meter ID	M-27
Y_d	1.0034
Pitot C_p	0.84

Nozzle Diameter (in)	0.184
Filter ID	12170
Train Type	Impinger
Train ID	IB-23
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	9:48
Stop Time	11:58

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	742.2	551.9	190.3
Impinger 2	731.5	736.2	-4.7
Impinger 3	568.6	568.5	0.1
Silica Gel	894.4	877.8	16.6
Weight of Water Collected V_{wc} (g)			185.7
Silica Gel Net Weight, V_{wsg} (g)			16.6

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.8	NA	7.81

Run 2

Traverse Point	Min/Pt 7.5 Elapsed Time	Velocity Pressure Δ P (in H_2O)	Orifice Setting Δ H (in H_2O)	Gas Sample Volume Initial (ft^3) 371.20	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root Δ P	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	7.5	2.10	1.90	376.73	128	88	88	1.449	87.1	5.305	96.1
1-2	15.0	2.00	1.80	382.10	129	88	88	1.414	85.0	5.150	95.7
1-3	22.5	1.70	1.50	387.05	129	90	87	1.304	78.4	4.709	95.5
2-1	30.0	2.00	1.80	392.85	129	91	88	1.414	85.0	5.537	103.0
2-2	37.5	2.00	1.80	397.45	128	92	88	1.414	85.0	4.398	81.6
2-3	45.0	1.80	1.60	402.32	129	92	89	1.342	80.7	4.647	91.0
3-1	52.5	2.00	1.80	407.54	128	92	90	1.414	85.0	4.979	92.4
3-2	60.0	2.00	1.80	413.12	129	93	91	1.414	85.0	5.313	98.7
3-3	67.5	1.80	1.60	418.30	129	94	90	1.342	80.7	4.828	96.5
4-1	75.0	2.10	1.90	423.52	129	95	91	1.449	87.1	4.965	99.9
4-2	82.5	1.80	1.60	428.38	128	93	90	1.342	80.6	4.628	80.6
4-3	90.0	1.80	1.60	433.13	128	93	90	1.342	80.6	4.524	88.5

Totals and Averages

90		1.73	61.93	129	90.5	1.39	83.3	59.12	93.3

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Stack
Date	7/29/2011
Meter ID	M-27
Y_d	1.0034
Pitot C_p	0.84

Nozzle Diameter (in)	0.184
Filter ID	12172
Train Type	Impinger
Train ID	IB-4
P_r (Inches Hg)	29.56
P_s (Inches H_2O)	-0.1
Start Time	12:25
Stop Time	14:35

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	708.7	615.6	93.1
Impinger 2	889.2	735.4	153.8
Impinger 3	629.1	627.9	1.2
Silica Gel	955.7	947.8	7.9
Weight of Water Collected, V_{wc} (g)			248.1
Silica Gel Net Weight, V_{sg} (g)			7.9

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.9	NA	7.27

Run 3

Traverse Point	Min/Pt 7.5 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3) 433.70	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	7.5	2.00	1.80	439.09	129	92	92	1.414	85.2	5.132	98.4
1-2	15.0	2.10	1.90	444.56	130	94	92	1.449	87.3	5.200	97.4
1-3	22.5	1.90	1.70	449.85	128	94	92	1.378	82.9	5.026	98.8
2-1	30.0	2.10	1.90	455.39	129	96	93	1.449	87.3	5.252	96.3
2-2	37.5	2.00	1.80	460.81	128	96	92	1.414	85.1	5.142	96.5
2-3	45.0	2.00	1.80	466.21	129	96	93	1.414	85.2	5.118	96.2
3-1	52.5	2.00	1.80	471.69	128	97	93	1.414	85.1	5.199	99.4
3-2	60.0	2.00	1.80	476.95	128	97	93	1.414	85.1	4.951	95.4
3-3	67.5	1.80	1.60	482.20	128	97	94	1.342	80.7	4.965	100.3
4-1	75.0	2.00	1.80	487.27	128	96	94	1.414	85.1	4.801	92.0
4-2	82.5	1.90	1.70	492.30	128	97	94	1.378	82.9	4.758	85.5
4-3	90.0	1.80	1.60	497.00	128	97	94	1.342	80.7	4.444	99.8

Totals and Averages

90		1.77	63.30	128	94.4	1.40	84.4	60.00	94.3

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Unit 2 Stack
Date	7/29/2011
Meter ID	M-28
Y_d	0.9976
Pitot C_p	0.84

Nozzle Diameter (in)	0.194
Filter ID	NA
Train Type	Impinger
Train ID	IB-25
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	7:15
Stop Time	9:35

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	808.8	687.2	121.6
Impinger 2	731.8	695.4	36.4
Impinger 3	636.3	464.8	171.5
Impinger 4			0.0
Silica Gel	915.2	901.2	14.0
Weight of Water Collected, V_{wc} (g)			329.5
Silica Gel Net Weight, V_{wsg} (g)			14.0

CEMS	%CO_2	%CO_2+%O_2	%O_2
Average	11.8	NA	7.72

Run 1

Traverse Point	Min/Pt: 10 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3) 953.31	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	10	2.20	2.60	962.38	130	90	88	1.483	89.3	8.650	104.2
1-2	20	2.00	2.40	971.21	130	95	89	1.414	85.2	8.371	105.9
1-3	30	1.30	1.60	978.41	129	100	92	1.140	68.6	6.763	105.9
2-1	40	2.20	2.60	987.54	129	103	92	1.483	89.2	8.574	103.2
2-2	50	2.00	2.40	997.36	130	106	95	1.414	85.2	8.168	115.3
2-3	60	1.40	1.70	1004.43	130	106	96	1.183	71.3	5.563	98.4
3-1	70	2.20	2.60	1012.84	129	107	96	1.483	89.2	7.942	91.2
3-2	80	2.00	2.40	1021.65	130	108	97	1.414	85.2	8.198	102.6
3-3	90	1.40	1.70	1029.14	130	108	98	1.183	71.3	6.950	105.0
4-1	100	2.10	2.50	1038.14	129	108	98	1.449	87.2	8.387	103.1
4-2	110	2.00	2.40	1046.94	130	109	99	1.414	85.2	8.165	103.2
4-3	120	1.50	1.80	1054.62	129	109	100	1.225	73.7	7.109	103.6

Totals and Averages

120		2.23	101.31	130	99.5	1.36	81.7	94.71	103.9

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Unit 2 Stack
Date	7/29/2011
Meter ID	M-28
Y_d	0.9976
Pitot C_p	0.84

Nozzle Diameter (in)	0.194
Filter ID	NA
Train Type	Impinger
Train ID	IB
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	9:48
Stop Time	12:08

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	887.1	663.8	223.3
Impinger 2	776.8	635.5	141.3
Impinger 3	489.1	602.7	-113.6
Impinger 4			0.0
Silica Gel	941.0	885.0	56.0
Weight of Water Collected, V_{wc} (g)			251.0
Silica Gel Net Weight, V_{wsg} (g)			56.0

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.6	NA	7.61

Run 2

Traverse Point	Min/Pt 10 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3) 58.82	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	10	2.10	2.50	62.73	129	97	97	1.449	87.1	4.814	96.4
1-2	20	2.00	2.40	72.47	129	101	97	1.414	85.0	9.182	102.5
1-3	30	1.50	1.80	80.28	130	105	97	1.225	73.6	7.274	106.4
2-1	40	2.00	2.40	89.96	130	106	98	1.414	85.0	9.013	113.0
2-2	50	2.00	2.40	97.66	130	107	98	1.414	85.0	7.162	89.8
2-3	60	1.60	1.90	104.21	130	108	99	1.265	76.1	6.075	95.2
3-1	70	2.00	2.40	113.75	130	109	99	1.414	85.0	9.651	111.0
3-2	80	2.00	2.40	123.24	130	109	99	1.414	85.0	9.805	110.4
3-3	90	1.30	1.60	130.47	130	108	100	1.140	68.6	6.695	104.2
4-1	100	2.20	2.60	139.58	129	109	100	1.483	89.1	8.449	101.0
4-2	110	2.00	2.40	148.36	130	109	101	1.414	85.0	8.132	102.0
4-3	120	1.50	1.80	155.91	130	109	101	1.225	73.6	6.962	101.1

Totals and Averages

120		2.22	97.09	130	103	1.36	81.5	90.26	98.4

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Unit 2 Stack
Date	7/29/2011
Meter ID	M-28
Y_d	0.9976
Pitot C_p	0.84

Nozzle Diameter (in)	0.194
Filter ID	NA
Train Type	Impinger
Train ID	IB-25
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	12:25
Stop Time	14:45

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	843.0	663.9	179.1
Impinger 2	713.0	637.0	76.0
Impinger 3	628.8	603.5	25.3
Impinger 4			0.0
Silica Gel	936.3	914.7	21.6
Weight of Water Collected, V_{wc} (g)			280.4
Silica Gel Net Weight, V_{wg} (g)			21.6

CEMS	$\%CO_2$	$\%CO_2$-$\%O_2$	$\%O_2$
Average	11.9	NA	7.27

Run 3

Traverse Point	Min/Pt 10 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft³) 156.19	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas velocity Vs (ft/sec)	Volume Metered Vmstd (ft³)	Isokinetics (%)
1-1	10	2.30	2.80	165.60	130	99	98	1.517	91.0	9.826	102.6
1-2	20	2.00	2.40	174.45	130	105	99	1.414	84.9	8.240	102.7
1-3	30	1.60	1.90	181.69	130	106	99	1.265	75.9	6.727	99.7
2-1	40	2.10	2.50	190.81	130	106	99	1.449	86.9	8.486	103.2
2-2	50	2.00	2.40	199.31	129	109	100	1.414	84.8	7.950	95.1
2-3	60	1.50	1.80	207.08	130	109	101	1.225	73.5	7.186	103.4
3-1	70	2.10	2.50	216.02	129	110	101	1.449	86.9	8.275	100.6
3-2	80	2.00	2.40	224.74	130	111	102	1.414	84.9	8.055	100.4
3-3	90	1.60	1.90	233.53	130	112	102	1.265	75.9	8.102	112.9
4-1	100	2.20	2.60	241.71	130	112	102	1.483	89.0	7.553	99.7
4-2	110	2.00	2.40	250.54	130	113	103	1.414	84.9	8.136	101.4
4-3	120	1.50	1.80	258.30	130	113	103	1.225	73.5	7.136	103.7

Totals and Averages

120		2.28	102.11	130	105	1.38	82.7	94.59	100.8

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Stack
Date	7/29/2011
Meter ID	M-20
Y_d	0.9952
Pitot C_p	0.84

Nozzle Diameter (in)	0.160
Filter ID	NA
Train Type	Impinger
Train ID	IB-14
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	7:15
Stop Time	9:35

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	775.6	637.4	138.2
Impinger 2	762.0	694.1	67.9
Impinger 3	675.5	664.1	11.4
Impinger 4	637.6	635.7	1.9
			0.0
Silica Gel	930.5	919.4	11.1
Weight of Water Collected V_{wc} (g)			219.4
Silica Gel Net Weight V_{wsg} (g)			11.1

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.5	NA	7.72

Run 1

Traverse Point	Min/Pt 10 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Inital (ft^3) 114.50	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity Vs (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetics (%)
1-1	10	2.10	1.10	120.43	127	89	87	1.449	87.0	5.631	101.4
1-2	20	2.00	1.10	126.31	128	97	89	1.414	84.9	5.533	102.2
1-3	30	1.70	0.91	131.80	129	99	90	1.304	78.4	5.150	103.2
2-1	40	2.20	1.10	137.84	128	101	91	1.483	89.1	5.653	99.5
2-2	50	2.20	1.10	143.90	128	103	93	1.483	89.1	5.651	99.5
2-3	60	1.80	0.97	149.94	128	103	93	1.342	80.6	5.631	105.6
3-1	70	2.10	1.10	155.96	129	104	94	1.449	87.1	5.604	101.1
3-2	80	2.10	1.10	161.94	129	105	95	1.449	87.1	5.557	100.2
3-3	90	1.80	0.97	167.60	128	104	95	1.342	80.6	5.282	102.4
4-1	100	2.30	1.20	173.99	128	105	96	1.517	91.1	5.934	102.2
4-2	110	2.00	1.10	179.65	128	105	96	1.414	84.9	5.255	97.0
4-3	120	1.70	0.91	185.20	128	105	96	1.304	78.3	5.150	103.1

Totals and Averages

120		1.06	70.70	128	97.3	1.41	84.8	66.01	101.7

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Stack
Date	7/29/2011
Meter ID	M-20
Y_d	0.9952
Pitot C_p	0.84

Nozzle Diameter (in)	0.160
Filter ID	NA
Train Type	Impinger
Train ID	IB-New
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	9:48
Stop Time	12:00

Place an "x" in the appropriate Box

Circular?	x
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	789.1	624.0	165.1
Impinger 2	784.0	736.8	47.2
Impinger 3	758.5	749.7	8.8
Impinger 4	597.9	593.5	4.4
Silica Gel	960.5	946.2	14.3
Weight of Water Collected, V_{wc} (g)			225.5
Silica Gel Net Weight, V_{sg} (g)			14.3

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.6	NA	7.61

Run 2

Traverse Point	Min/Pt 10 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	Gas Sample Volume Initial (ft^3) 185.50	Stack Temp (°F)	DGM Inlet (°F)	DGM Outlet (°F)	Square Root ΔP	Stack Gas Velocity V_s (ft/sec)	Volume Metered Vmstd (ft^3)	Isokinetic (%)
1-1	10	2.00	1.10	191.46	128	96	95	1.414	85.1	5.585	103.9
1-2	20	1.90	1.00	197.20	128	98	95	1.378	82.9	5.366	102.4
1-3	30	1.70	0.91	202.71	129	101	95	1.304	78.5	5.136	103.7
2-1	40	2.10	1.10	208.60	129	103	95	1.449	87.2	5.483	99.6
2-2	50	2.10	1.10	214.44	129	104	96	1.449	87.2	5.427	98.6
2-3	60	1.60	0.86	219.85	129	105	97	1.265	76.2	5.015	104.4
3-1	70	2.00	1.10	226.75	129	106	97	1.414	85.1	5.394	119.1
3-2	80	2.00	1.10	232.19	129	107	98	1.414	85.1	5.032	93.7
3-3	90	1.70	0.91	237.55	129	107	98	1.304	78.5	4.956	100.1
4-1	100	2.10	1.10	243.53	129	107	98	1.449	87.2	5.552	100.5
4-2	110	2.00	1.10	249.46	129	108	99	1.414	85.1	5.476	102.0
4-3	120	1.70	0.91	254.95	129	108	99	1.304	78.5	5.067	102.3

Totals and Averages

120		1.02	69.45	129	101	1.38	83.1	84.46	102.4

Project Number	3648
Client	Big Rivers
Plant	Green 2
Location	Stack
Date	7/29/2011
Meter ID	M-20
Y_d	0.9952
Pitot C_p	0.84

Nozzle Diameter (in)	0.160
Filter ID	NA
Train Type	Impinger
Train ID	IB-14
P_b (Inches Hg)	29.56
P_g (Inches H_2O)	-0.1
Start Time	12:25
Stop Time	14:45

Place an "x" in the appropriate Box

Circular?	X
Rectangular?	
Diameter	180
Length	
Width	

Moisture	Final Wt (g)	Tare Wt (g)	Net Wt (g)
Impinger 1	773.4	623.5	149.9
Impinger 2	790.1	735.1	55.0
Impinger 3	765.0	753.3	11.7
Impinger 4	599.1	594.6	4.5
Silica Gel	973.2	960.6	12.6
Weight of Water Collected, V_{wc} (g)			221.1
Silica Gel Net Weight, V_{wsg} (g)			12.6

CEMS	$\%CO_2$	$\%CO_2+\%O_2$	$\%O_2$
Average	11.9	NA	7.27

Run 3

Traverse Point	Min/Pt 10 Elapsed Time	Velocity Pressure ΔP (in H_2O)	Orifice Setting ΔH (in H_2O)	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 Vmstd (ft^3)	Isokinetics (%)
1-1	10	2.10	1.10	261.22	128	99	99	1.449	87.0	5.609	101.3
1-2	20	2.10	1.10	267.25	129	102	98	1.449	87.1	5.603	101.2
1-3	30	1.60	0.86	272.63	129	105	98	1.265	76.0	4.983	103.2
2-1	40	2.20	1.20	278.80	129	106	99	1.483	89.2	5.705	100.9
2-2	50	2.00	1.10	286.84	129	106	99	1.414	85.0	7.438	137.8
2-3	60	1.90	1.00	290.64	129	108	100	1.378	82.9	3.505	66.6
3-1	70	2.30	1.20	295.90	129	109	101	1.517	91.2	4.846	83.7
3-2	80	2.00	1.10	302.79	129	110	102	1.414	85.0	6.836	117.8
3-3	90	1.70	0.91	308.25	129	109	101	1.304	78.4	5.026	101.0
4-1	100	2.20	1.20	314.56	129	110	102	1.483	89.2	5.803	102.5
4-2	110	2.00	1.10	320.58	129	111	102	1.414	85.0	5.530	103.5
4-3	120	1.80	0.97	326.31	129	111	102	1.342	80.7	5.262	102.6

Totals and Averages

120		1.07	71.11	129	104	1.41	84.7	65.64	101.7

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Stack
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	M-25
Y_d	0.9994

Start Time	7:15
Stop Time	9:25

Meter ID	M-25
Y_d	1.0017

Run 1

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5.00	2.869	86	2.738
10.00	5.108	86	2.137
15.00	7.701	88	2.466
20.00	10.332	91	2.488
25.00	12.931	94	2.445
30.00	16.328	97	3.178
35.00	19.334	99	2.802
40.00	21.370	102	1.888
45.00	23.389	104	1.866
50.00	25.671	106	2.101
55.00	28.639	108	2.723
60.00	31.359	109	2.491
65.00	33.079	110	1.573
70.00	33.821	112	0.676
75.00	34.778	113	0.870
80.00	36.032	113	1.140
85.00	38.152	114	1.925
90.00	42.156	114	3.635

Totals and Averages

90	42.156	103	39.05

Run 1 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.501	86	2.393
10	4.516	86	1.928
15	7.337	90	2.679
20	9.931	92	2.455
25	12.967	95	2.857
30	15.612	98	2.476
35	18.401	102	2.592
40	21.463	104	2.836
45	23.556	105	1.935
50	25.847	109	2.103
55	27.809	110	1.798
60	29.914	110	1.929
65	31.983	113	1.886
70	32.465	114	0.439
75	34.058	115	1.447
80	35.973	115	1.740
85	37.678	116	1.546
90	42.242	116	4.139

Totals and Averages

90	42.242	104	39.11

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Stack
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	M-25
Y_d	0.9994

Start Time	9:48
Stop Time	11:26

Meter ID	M-25
Y_d	1.0017

Run 2

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.345	98	2.190
10	4.136	96	1.679
15	5.873	97	1.625
20	7.636	99	1.644
25	9.256	101	1.505
30	10.742	104	1.373
35	12.739	104	1.845
40	14.813	108	1.903
45	17.481	110	2.439
50	19.723	111	2.046
55	22.464	113	2.493
60	24.499	114	1.848
65	27.469	115	2.692
70	29.981	115	2.277
75	32.973	116	2.707
80	35.785	117	2.540
85	38.667	118	2.598
90	42.702	118	3.638

Totals and Averages

90	42.702	109	39.14

Run 2 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.354	98	2.203
10	3.976	97	1.521
15	5.614	98	1.533
20	7.067	100	1.355
25	8.961	103	1.757
30	11.147	105	2.021
35	12.896	107	1.611
40	14.625	109	1.587
45	17.360	113	2.493
50	19.921	113	2.335
55	22.631	114	2.466
60	24.736	115	1.912
65	27.691	116	2.680
70	29.894	117	1.994
75	32.861	118	2.661
80	35.953	118	2.794
85	38.904	119	2.662
90	43.359	119	4.019

Totals and Averages

90	43.359	110	39.74

Project Number	3648
Client	Big Rivers
Plant	Green
Location	Stack
Date	7/29/11
P_b (Inches Hg)	29.56

Meter ID	M-25
Y_d	0.9994

Start Time	12:25
Stop Time	13:57

Meter ID	M-25
Y_d	1.0017

Run 3

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.378	99	2.217
10	4.098	99	1.603
15	5.897	99	1.677
20	8.733	101	2.634
25	11.454	103	2.519
30	14.263	106	2.586
35	17.075	108	2.580
40	19.665	110	2.366
45	22.670	112	2.738
50	25.463	113	2.540
55	28.309	115	2.579
60	31.165	116	2.584
65	33.997	117	2.558
70	36.763	118	2.494
75	39.212	119	2.204
80	40.998	119	1.607
85	41.881	120	0.793
90	42.698	120	0.734

Totals and Averages

90	42.698	111	38.98

Run 3 Spiked

Min/Pt 5 Elapsed Time	Gas Sample Volume Initial (L) 0.00	DGM Temp (°F)	Volume Metered Vmstd (L)
5	2.411	100	2.249
10	3.875	100	1.366
15	6.388	100	2.344
20	8.697	102	2.146
25	11.180	104	2.300
30	13.568	107	2.200
35	16.818	109	2.983
40	19.667	112	2.602
45	22.481	114	2.561
50	25.196	115	2.466
55	28.002	117	2.540
60	30.745	117	2.483
65	33.478	119	2.465
70	36.216	119	2.470
75	38.443	120	2.006
80	40.249	121	1.624
85	41.507	121	1.131
90	42.762	121	1.128

Totals and Averages

90	42.762	112	39.04