VELOCITY PROFILE FIELD DATA

Plant Name Yates - Preliminary

Sampling Location Inlet to Scrubber Sample Ident. ESP Outlet

Date 6/14/93 (MMDDYY) Time Start 1600 (HHMM) Time Finish 1630 (HHMM)

Duct Dimensions 11' 4" x 11' 4" ft. or Diameter _____ ft.

PTCF 0.84 % H_2O ≈ 7.0

Bar Press. 29.48 " Hg % CO 7 % N_2 _____

Static Press. -11 " H_2O % CO_2 ≈ 9.0 % H_2 _____

Operator Initials JWM, RVW % O_2 7.4 % CH_4 _____

Point 1 is all the way in

Pt.	Stack Temp. °F			Velocity Pressure " H_2O			Other ( )		
	#1	#2	Ave.	#1	#2	Ave.	#1	#2	Ave.
W1-1	207			0.88					
2	205			~~0.75~~	0.90				
3	207			~~0.58~~	0.66				
4	207			0.36					
5	206			0.35					
6	200			0.57					
7	197			0.69					
8	192			0.68					
W2-1	200			0.85					
2	209			0.46					
3	209			0.74					
4	209			0.92					
5	205			0.62					
6	203			0.56					
7	194			0.7					
8	194			0.47					

Weather _____

Remarks _____

12% CO_2 + 7.4 O_2 + 80.6 N_2 = 30.23

29.36 wet

57.11 ft/s

C-94 $\frac{57.11 \text{ Ft}}{\text{s}} \times 129.96 = \frac{7422 \text{ Ft}^3}{\text{s}} \times 60 = \frac{445,320.9 \text{ Ft}^3}{\text{min}} = 315,910 \frac{\text{dscf}}{\text{min}}$

VELOCITY PROFILE FIELD DATA

Plant Name _____

Sampling Location _____ Sample Ident. _____

Date _____(MMDDYY) Time Start _____(HHMM) Time Finish _____(HHMM)

Duct Dimensions _____ x _____ ft. or Diameter _____ ft.

PTCF _____ % H_2O _____

Bar Press. _____ " Hg % CO _____ % N_2 _____

Static Press. _____ " H_2O % CO_2 _____ % H_2 _____

Operator Initials _____ % O_2 _____ % CH_4 _____

Pt.	Stack Temp. °F			Velocity Pressure " H_2O			Other ( )		
	#1	#2	Ave.	#1	#2	Ave.	#1	#2	Ave.
W3-1	201			0.85					
2	210	~~280~~		0.94					
3	~~218~~ 2 thermocouple			1.1					
4	202			1.15					
5	189			1.1					
6	181			0.93					
7	180			0.73					
8	180			0.43					
W4-1	203			0.88					
2	192			0.99					
3	191			~~1.03~~ 1.3					
4	215			1.25					
5	211			1.3					
6	199			1.1					
7	191			0.80					
8	191			0.47					

Weather _____

Remarks _____

VELOCITY PROFILE FIELD DATA

Plant Name _____

Sampling Location _____ Sample Ident. _____

Date _____(MMDDYY) Time Start _____(HHMM) Time Finish _____(HHMM)

Duct Dimensions _____ x _____ ft. or Diameter _____ ft.

PTCF _____ % H_2O _____

Bar Press. _____ " Hg % CO _____ % N_2 _____

Static Press. _____ " H_2O % CO_2 _____ % H_2 _____

Operator Initials _____ % O_2 _____ % CH_4 _____

Pt.	Stack Temp. °F			Velocity Pressure " H_2O			Other ( )		
	#1	#2	Ave.	#1	#2	Ave.	#1	#2	Ave.
WS-1	219			0.99					
2	221			0.87					
3	202			1.2					
4	221			1.25					
5	216			1.10					
6	207			0.7					
7	191			0.8					
8	191			0.58					
WS-1	216			0.93					
2	225			0.85					
3	227			0.66					
4	226			0.71					
5	219			0.59					
6	204			0.69					
7	194			0.81					
8	191			0.77					
	—			~~0.96~~					
	203.5			0.896					

Weather 203 ✓ TJB √ΔP . 896 ✓ TJB 8/02

Remarks _____

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1
DATE 6-21-93
SAMPLING LOCATION STACK
RUN NO. 1 TEST NO. 1
OPERATOR JEH
AMBIENT TEMPERATURE 77°F
BAROMETRIC PRESSURE 29.35 "Hg
BLANK TUBE NUMBERS T: 44A T/C: 44B

ASSUMED MOISTURE % 12.0
METER BOX NO. V-11 (PPK)
METER FACTOR 1.0113
PROBE HEATER SETTING 130°C
COMMENTS RAIN
RUN #1 - RATE @ 0.8 (TOO FAST)
RUN #3 - TIP OF B TUBE BROKEN OFF POST RUN
ALL TIMES CENTRAL TIME

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time TH	Gas Meter Reading	Meter Pressure	Stack Temp	DGM Temp	Probe Temp	1st Condensor Outlet Temp.	2nd Condensor Outlet Temp.	Pump Vacuum "Hg Bmp
1	0.004 @ 20"	0.010 @ 12"	T	0	1325	0.000	2.2"Hg	128F	19°C	134°C	8°C	9°C	4.0
			38A	20	1345	15.200	2.8"Hg	128F	21°C	134°C	5°C	8°C	6.0
			T/C	30	1355	20.405	2.2"Hg	128F	22°C	134°C	4°C	7°C	4.5
			38B	40	1405	26.485							
2	0.017 @ 21"	0.011 @ 20"	T	0	1415	0.000	2.2"Hg	128F	23°C	133°C	8°C	10°C	5.0
			22A	10	1425	5.007	2.1"Hg	128F	24°C	133°C	7°C	10°C	4.0
			T/C	20	1435	9.502	2.1"Hg	128F	25°C	133°C	8°C	9°C	5.0
			22B	30	1445	15.021	2.1"Hg	128F	26°C	133°C	7°C	9°C	6.0
				40	1455	20.210							
3	0.003 @ 20"	0.008 @ 15"	T	0	1515	0.000	2.4"Hg	128F	26°C	133°C	5°C	7°C	8.0
			29A	10	1525	5.400	2.2"Hg	128F	26°C	133°C	3°C	6°C	4.5
			T/C	20	1535	10.705	2.2"Hg	128F	26°C	133°C	4°C	7°C	4.0
			29B	30	1545	15.420	2.2"Hg	128F	27°C	133°C	4°C	7°C	5.0
				40	1555	20.250	STEM ON TUBE # 29B BROKEN AFTER RUN.						
~~BLANK~~ 4	0.012 @ 20"	0.010 @ 17"	T	0	1615	0.000	2.4"Hg	128F	26°C	133°C	5°C	8°C	4.0
			36A	10	1625	5.530	2.2"Hg	128F	26°C	133°C	6°C	9°C	3.5
			T/C	20	1635	10.650	2.1"Hg	128F	27°C	133°C	6°C	9°C	3.5
			36B	30	1645	15.545	2.1"Hg	128F	27°C	133°C	7°C	9°C	3.5
				40	1655	20.200							

C-98

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1
DATE 6-22-93
SAMPLING LOCATION STACK
RUN NO. 2 TEST NO. 2
OPERATOR JEH
AMBIENT TEMPERATURE 70° F
BAROMETRIC PRESSURE 29.34
BLANK TUBE NUMBERS T: 24A T/C: 24B

ASSUMED MOISTURE % 12.0%
METER BOX NO. V-11 (PPK)
METER FACTOR 1.0113
PROBE HEATER SETTING 130°C
COMMENTS RAIN/HUMID

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time	Gas Meter Reading	Meter Pressure	Stack °F Temp	DGM °C Temp	Probe °C Temp	1st Condensor °C Outlet Temp.	2nd Condensor °C Outlet Temp.	Pump Vacuum PRESSURE Temp %
1	0.008 @18"	0.007 @22"	T	0	0650	0.000	2.4"Hg	130	19	132	5	8	2.0
			18A	10	0700	5.400	2.2	129	20	133	5	7	2.0
			T/C	20	0710	10.605	2.1	131	21	132	5	7	2.0
			18B	30	0720	15.155	2.1	131	23	134	5	8	2.0
				40	0730	20.260							
2	0.002 @20"	0.004 @23"	T	0	0745	0.000	2.3	129	26	133	6	7	3.0
			2A	10	0755	5.250	2.1	130	26	133	5	7	3.0
			T/C	20	0805	10.150	2.1	130	27	133	5	7	3.5
			2B	30	0815	15.250	2.1	130	29	133	4	8	4.0
				40	0825	20.240							
3	0.005 @21"	0.009 @22"	T	0	0840	0.000	2.2	128	29	133	5	7	4.0
			1A	10	0850	5.350	2.2	129	29	133	3	7	4.0
			T/C	20	0900	10.200	2.2	128	29	133	4	7	4.0
			1B	30	0910	15.150	2.2	128	30	133	3	8	4.0
				40	0920	20.640							
			T	0									
			T/C										

44 of 94

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1
DATE 6-23-93
SAMPLING LOCATION STACK
RUN NO. 3 TEST NO. 3
OPERATOR JEH
AMBIENT TEMPERATURE 71°F
BAROMETRIC PRESSURE 29.23
BLANK TUBE NUMBERS T: 08A T/C: 08B

ASSUMED MOISTURE % 12.0
METER BOX NO. V-11 (ppk)
METER FACTOR 1.0113
PROBE HEATER SETTING 130°C
COMMENTS

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time	Gas Meter Reading	Meter "H2O Pressure	Stack °F Temp	DGM °C Temp	Probe °F Temp	1st Condensor °C Outlet Temp.	2nd Condensor °C Outlet Temp.	Pump Vacuum PRESSURE "Hg ~~Temp °F~~
1	0.000 @21"	0.004 @25"	T	0	0655	0.000	2.3	127	23	133	5	10	5.5
			15A	10	0705	5.105	2.2	128	24	134	5	8	4.0
			T/C	20	0715	10.150	2.1	128	25	134	4	9	4.0
			15B	30	0725	15.200	2.1	128	27	135	4	7	5.0
				40	0735	20.200							
2	0.007 @21"	0.000 @10"	T	0	0805	0.000	2.2	128	26	133	4	9	3.0
			09A	10	0815	5.050	2.2	128	26	135	5	9	2.5
			T/C	20	0825	10.050	2.2	128	26	134	5	9	2.5
			09B	30	0835	15.150	2.2	128	27	132	6	9	2.5
				40	0845	20.200	~~2.2~~	~~128~~	~~26~~	~~133~~	~~6~~	~~10~~	JEH
3	0.004 @10"	0.000 @10"	T	0	0910	0.000	2.2	128	26	133	6	10	2.5
			14A	10	0920	5.250	2.2	128	26	134	7	10	3.0
			T/C	20	0930	10.300	2.2	128	26	133	7	9	4.0
			14B	30	0940	15.350	2.2	128	27	132	7	10	5.0
				40	0950	20.200							
			T	0									
			T/C										

C-100

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1
DATE 6-23-93
SAMPLING LOCATION STACK
RUN NO. AUDIT TEST NO. 1
OPERATOR JEH
AMBIENT TEMPERATURE 87°F
BAROMETRIC PRESSURE 29.26
BLANK TUBE NUMBERS T: 08A T/C: 08B

ASSUMED MOISTURE % 12.0
METER BOX NO. V-11
METER FACTOR 1.0113
PROBE HEATER SETTING NA
COMMENTS AUDIT
CAL DATE 3/8/93 FOR METER BOX
Sample # V-194 & V-195

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time	Gas Meter Reading	Meter "Hg Pressure	Stack °F Temp	DGM °C Temp	Probe Temp	1st Condensor °C Outlet Temp.	2nd Condensor °C Outlet Temp.	Pump Vacuum Temp
TIME 1048 1058 V-194													
1	0.004 @11"	0.000 @11"	T	0	0.000	0.000	2.2	128	26	NA	6	10	2.0
			34A	5	05.00	2.480	2.1	128	27	NA	6	9	2.0
			T/C	10	10.00	5.068							
			34B										
V-195													
2	0.000 @10"	0.006 @14"	T	0	1101124	0.000	2.2	128	28	NA	6	7	2.0
			39A	5	1129	2.500	2.2	128	29	NA	5	8	2.0
			T/C	10	1134	5.250	2.2	128	29	NA	6	8	2.0
			39B	15	1139	7.800	2.2	128	30	NA	5	9	2.0
				20	1144	10.045							
			T	0									
			T/C										
			T	0									
			T/C										

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 1

6/21 (EZ)

SAMPLING LOCATION Stack RUN NO. 1

DATE 6/20/93 TIME START 1240 TIME FINISH 1755 TEST DURATION 240 min.

DUCT DIMENSIONS ____ X ____ DIAMETER 13 Ft INITIAL LEAK RATE 0.000 @ cfm 15" Hg

PTCF 0.84 DGMCF 0.994 NOZZLE DIA. 0.196 inches FINAL LEAK RATE 0.000 @ cfm 8" Hg

BAR PRESS 29.31 " Hg

STATIC PRESS -0.5 " H2O OPERATOR EZ

K = 1.245

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
E-1	1240	756.882	0.75	0.934	126	73	72	251	249	59	4.0	38
	1250	762.280	0.74	0.92	127	75	72	251	256	55	4.0	38
E-2	1300	767.400	0.76	0.95	128	79	74	253	257	50	4.0	39
	1310	772.465	0.76	0.95	128	83	75	255	251	47	4.0	41
E-3	1320	777.701	0.60	0.75	128	88	78	252	250	42	4.0	39
	1330	782.425	0.62	0.77	128	90	80	253	264	45	4.0	39
STOP	1340	787.198		PORT	CHANGE		LEAK	CHECK	OK @	6" Hg		
N-1	1345	787.270	0.75	0.934	127	89	82	251	252	52	4.0	38
	1355	792.550	0.74	0.92	128	91	84	253	238	46	4.0	40
N-2	1405	797.795	0.75	0.934	129	95	85	254	256	49	4.5	39
	1415	803.140	0.75	0.934	129	97	87	253	263	50	4.5	39
N-3	1425	808.475	0.60	0.75	129	99	89	255	247	50	4.0	41
	1435	813.200	0.66	0.75	129	100	91	254	241	51	4.0	41
STOP	1445	818.148		PORT	CHANGE		LEAK	CHECK	OK @	6" Hg		
W-1	1450	818.201	0.68	0.85	115	98	92	255	242	56	4.0	40
	1500	823.330	0.68	0.85	124	100	93	254	242	53	4.0	43
W-2	1510	828.470	0.67	0.83	128	100	93	253	248	50	4.0	41
	1520	833.575	0.67	0.83	128	101	94	254	245	49	4.0	40
W-3	1530	838.675	0.56	0.69	129	103	95	255	264	49	4.0	41
	1540	843.775	0.56	0.69	128	102	96	254	240	51	4.0	41
STOP	1550	848.095		PORT	CHANGE		LEAK	CHECK	OK @	6" Hg		
S-1	1655	848.225	0.68	0.85	124	88	88	251	254	55	4.0	36
	1705	853.420	0.68	0.85	128	90	88	254	242	45	4.0	38
S-2	1715	858.980	0.74	0.92	122	94	89	251	240	50	4.0	39
	1725	863.842	0.74	0.92	128	97	90	253	240	48	4.0	39
S-3	1735	869.155	0.61	0.76	129	100	91	254	250	46	4.0	39
	1745	874.035	0.62	0.77	128	101	92	255	256	47	4.0	39
END	1755	878.925										
Avg.	–	TV 122.043	0.823	.85	127	89.64						
Check'd	–	121.788				TV						

CONSOLE # A161361

FILTER # ____

AMBIENT TEMP. 75

PROBE LENGTH 6'

LINER MATERIAL GLASS LINED

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS

PITOT TUBE LEAK CHECK OK.

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 1

SAMPLING LOCATION STACK RUN NO. 2
DATE 6/22/93 TIME START 0655 TIME FINISH 1115 TEST DURATION 240 min
DUCT DIMENSIONS ___ X ___ DIAMETER 13 Ft INITIAL LEAK RATE 0.050 @ cfm 15" Hg
PTCF 0.84 DGMCF 0.994 NOZZLE DIA. 0.196 inches FINAL LEAK RATE 0.000 @ cfm 9" Hg
BAR PRESS 29.34 "Hg
STATIC PRESS -0.50 "H2O OPERATOR EZ

K= 1.245

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
	6											
E-1	0755	888.530	0.74	0.92	127	75	70	253	264	51	6.0	44
	0805	894.425	0.73	0.91	128	80	73	254	243	60	5.5	46
E-2	0815	899.275	0.74	0.92	128	86	76	254	265	50	5.5	44
	0825	904.330	0.74	0.92	129	89	78	254	266	47	5.5	46
E-3	0835	909.060	0.64	0.79	128	95	83	255	254	45	5.0	48
	0845	914.450	0.64	0.79	128	96	85	255	265	42	5.0	43
STOP	0855	919.437	PORT	CHANGE			LEAK	CHECK. OK @ 8" Hg.				
N-1	0800	919.532	0.73	0.91	127	94	86	251	248	47	6.0	41
	0810	924.565	0.73	0.91	128	96	88	256	255	42	6.0	42
N-2	0820	930.160	0.74	0.92	128	99	89	254	265	44	6.0	43
	0830	935.485	0.74	0.92	128	101	91	255	260	47	6.0	44
N-3	0840	940.840	0.64	0.79	129	102	93	254	264	46	5.5	44
	0850	945.899	0.64	0.79	128	102	93	254	258	47	5.5	44
STOP	0900	950.805	PORT	CHANGE			LEAK	CHECK. OK @ 8" Hg				
W-1	0905	950.895	0.68	0.85	128	98	93	254	245	53	5.5	42
	0910	956.145	0.68	0.85	128	100	94	255	261	48	5.5	43
W-2	0925	961.300	0.67	0.83	128	102	95	253	258	50	5.5	43
	0935	966.170	0.67	0.83	128	104	95	254	256	49	5.5	43
W-3	0945	971.282	0.55	0.68	128	106	97	256	264	50	5.0	44
	0955	976.000	0.55	0.68	129	106	98	255	257	51	5.0	45
STOP	1005	980.819	PORT	CHANGE		<0.001	LEAK	CHECK. 9"				
S-1	1015	980.893	0.67	0.83	128	102	98	254	260	46	5.5	43
	1025	987.534	0.67	0.83	128	103	98	255	253	43	5.5	44
S-2	1035	992.670	0.75	0.93	129	106	99	256	252	44	6.0	46
	1045	998.554	0.75	0.93	128	109	100	256	253	44	7.5	45
S-3	1055	005.682	0.64	0.79	129	111	100	254	251	46	5.0	45
END	1105	010.763	0.64	0.79	129	110	101	253	256	47	5.0	45
END	1115	015.838										
				Avg Error - WAW								
Avg.	– TB	127.308	0.426	85	128	94.7						
Check'd	–	127.049		TB								

0.8251

CONSOLE # A161361
FILTER # ___
AMBIENT TEMP. 75°F
PROBE LENGTH 6'
LINER MATERIAL GLASS

Velocity ___
% Moisture ___
Flowrate (DSCFM) ___
Isokinetic (%) ___

REMARKS

* STARTED @ 0655 CORRECTED ERROR IN INITIAL HOUR LOG TIME FOR START

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 1

SAMPLING LOCATION STACK RUN NO. 3

DATE 6/23/93 TIME START 0645 TIME FINISH 1118 TEST DURATION 240 min.

DUCT DIMENSIONS ____ X ____ DIAMETER 13 FT INITIAL LEAK RATE 0.002 @ 15" Hg cfm

PTCF 0.84 DGMCF 0.994 NOZZLE DIA. 0.195 inches FINAL LEAK RATE 0.000 @ 7" Hg cfm

BAR PRESS 29.19 "Hg

STATIC PRESS -0.5 "H2O OPERATOR EZ

Kc = 1.214

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
E-1	0645	030.212	0.66	0.801	126	73	70	254	255	57	3.5	47
	0655	035.110	0.68	0.826	127	80	73	255	267	56	3.5	45
E-2	0705	039.955	0.70	0.849	128	85	76	254	245	47	4.0	46
	0715	044.935	0.70	0.849	128	88	78	255	250	43	4.0	45
E-3	0725	049.995	0.59	0.716	128	93	81	254	255	43	4.0	41
	0735	054.455	0.59	0.716	127	95	83	255	254	43	4.0	42
STOP	0745	059.353	PORT	CHANGE			LEAK	CHECK		< 0.002 @ 7" Hg		
N-1	0754	059.923	0.68	0.826	126	92	86	256	250	54	4.5	47
	0804	065.010	0.66	0.801	128	96	88	254	260	45	4.5	45
N-2	0814	070.065	0.68	0.826	128	100	90	255	260	46	4.5	46
	0824	075.170	0.68	0.826	128	102	92	254	245	46	4.5	45
N-3	0834	080.282	0.58	0.704	128	104	94	255	260	46	4.5	46
	0844	085.045	0.58	0.704	128	104	95	253	248	48	4.5	48
STOP	0854	089.825	PORT	CHANGE			LEAK	CHECK		< 0.005 @ 7" Hg		
W-1	0900	089.958	0.62	0.753	127	101	96	254	248	51	5.5	50
	0910	097.450	0.62	0.753	128	103	96	253	249	51	4.5	48
W-2	0920	102.190	0.62	0.753	128	103	96	254	260	50	4.5	47
	0930	107.000	0.62	0.753	128	104	97	257	265	47	4.5	45
W-3	0940	114.375	0.52	0.631	128	106	97	254	257	54	4.0	47
	0950	118.925	0.52	0.631	128	105	98	254	266	53	4.0	50
STOP	1000	123.517	PORT	CHANGE			LEAK	CHECK		< 0.005 @ 7" Hg		
S-1	1018	123.605	0.67	0.813	128	98	96	254	258	56	4.0	46
	1028	128.925	0.62	0.753	129	100	96	255	267	50	4.0	44
S-2	1038	133.395	0.67	0.813	129	104	98	255	260	51	4.0	46
	1048	138.736	0.67	0.813	129	106	98	256	263	51	4.0	46
S-3	1058	143.640	0.62	0.753	130	109	101	253	264	51	4.0	44
	1108	149.399	0.62	0.753	130	111	101	254	250	50	4.5	46
END	1118	156.627										
Avg.	-TB	126.445	0.7944	0.77	128	98.1	90.1					
Check'd	-	123.624	VTD									

CONSOLE # A16136

FILTER # ____

AMBIENT TEMP. 77°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS

NOZZLE # 3C 0.195" Ø

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 1

SAMPLING LOCATION Stack RUN NO. FB
DATE 06-20-93 TIME START 1015 TIME FINISH 1015 TEST DURATION 0 min.
DUCT DIMENSIONS ____ X ____ DIAMETER 13' INITIAL LEAK RATE 0.001 cfm @ 12 "Hg
PTCF 0.84 DGMCF 0.994 NOZZLE DIA. 0.195 inches FINAL LEAK RATE ____ cfm
BAR PRESS ____ " Hg
STATIC PRESS — " H2O OPERATOR DJV, WAW

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
—	1015	741.332	—	—	—	81	80	250	268	75	—	
Avg.	—											
Check'd	—											

CONSOLE # A16136 1
FILTER # —
AMBIENT TEMP. 80+
PROBE LENGTH 6'
LINER MATERIAL Glass

Velocity
% Moisture
Flowrate (DSCFM)
Isokinetic (%)

REMARKS

ENTERED by IL-WHW

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Aldehydes **Run No.** 1-1

Date 06-21-93 Time Start 1340 Time Finish 1408 Test Duration 28 min.

Duct Dimensions ______ X ______ Diameter 13' ft Initial Leak Rate 0.001 @ 12" cfm

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.1747 inches Final Leak Rate <0.001 @ 6" cfm

Bar Press 29.31 " Hg

Static Press -0.5 " H2O Operator DJV K= 0.7864

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
N-1	1346	571.567	0.59	0.46	128	79	78	257	265	74	2.0	
N-1	1356	577.786	0.59	0.46	128	83	80	256	261	59	2.0	
N-1	1404	580.760	0.59	0.46	126	85	81	261	265	57	2.6	
Stop	1408	582.274										
			√ΔP									
Avg.	—	10.707	0.768		127	82	80					
Check'd	VTB	10.707										

CONSOLE # A161362
FILTER # NA
AMBIENT TEMP. 70+
PROBE LENGTH 6'
LINER MATERIAL Glass

Velocity ~~48.5~~
% Moisture
Flowrate (DSCFM)
Isokinetic (%)

REMARKS Single Pt. Isokinetic All times CDT

ENTERGY

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Aldehydes **Run No.** 2

Date 06-22-93 Time Start 0715 Time Finish 0745 Test Duration 30 min.

Duct Dimensions ___ X ___ Diameter 13 ft Initial Leak Rate 0.000 cfm @ 17"

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.1747 inches Final Leak Rate < 0.00107 "cfm

Bar Press 29.34 " Hg

Static Press -0.5 " H2O Operator DJV K = 0.7753

Trave: Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
W-1	0715	591.804	0.59	0.45	131	78	77	251	263	75	2.0	
	0724	595.160	0.59	0.45	133	83	79	267	263	56	2.0	
	~~0730~~ 0731	597.715	0.59	0.45	133	85	80	257	265	56	2.0	
	0739	600.660	0.59	0.45	133	88	82	264	259	58	2.0	
	0745	602.890										
Avg.	—	11.086	0.7681	0.45	132.5	81.5						
Check'd												

CONSOLE # A161362

FILTER # NA

AMBIENT TEMP. 70+

PROBE LENGTH 6'

LINER MATERIAL Glass

Velocity 46.45

% Moisture

Flowrate (DSCFM) 283.475

Isokinetic (%)

REMARKS Single Pt. All Times CDT

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Aldehydes **Run No.** 3

Date 06-23-93 Time Start 0700 Time Finish 0730 Test Duration 30 min.

Duct Dimensions ___ X ___ Diameter 13' ft Initial Leak Rate 0.007 cfm @ 13"

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.1747 inches Final Leak Rate 0.002 cfm @ 10"

Bar Press 29.19 " Hg

Static Press -0.5 " H2O Operator DJV K = 0.7766

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
W-1	0700	616.602	0.56	0.43	130	79	76	262	258	65	2.0	
	0705	618.425	0.56	0.43	130	79	76	261	255	55	2.0	
	0710	620.255	0.56	0.43	131	80	77	259	258	56	2.0	
	0715	622.070	0.56	0.43	130	83	78	259	260	57	2.0	
	0720	623.895	0.55	0.43	131	83	78	260	257	57	2.0	
	0725	625.710	0.55	0.43	131	86	80	262	258	57	2.0	
Stop	0730	627.531										
Avg.	—	10.929	0.7461	0.43	130.5	79.6						
Check'd		1 TB										

CONSOLE # A161362

FILTER # —

AMBIENT TEMP. 70+

PROBE LENGTH 6'

LINER MATERIAL Glass

Velocity 45.15

% Moisture

Flowrate (DSCFM) 275,558

Isokinetic (%)

REMARKS Single Pt. All Times CDT

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Aldehydes **Run No.** FIELD BLANK

Date 6-20-93 Time Start 1325 Time Finish 1326 Test Duration 1.00 min.

Duct Dimensions ____ X ~~1.0 Meter~~ Diameter 13.0 ~~feet~~ ft Initial Leak Rate 0.004 cfm @ 18"

PTCF .84 DGMCF 1.006 Nozzle Dia. — inches Final Leak Rate 0.004 cfm @ 18"

Bar Press 29. " Hg

Static Press −0.51 " H2O Operator JEH

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
START	1326	563.880									18	
STOP	1326	564.932										
Avg.	—											
Check'd												

CONSOLE # 416362

FILTER # —

AMBIENT TEMP. —

PROBE LENGTH 89°F

LINER MATERIAL ____

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS BLANK -

ENTEC
WAW 6/22

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** M23 - Dioxins/Furans **Run No.** 1-1

Date 06-21-93 Time Start 1400 Time Finish 1933 Test Duration 240 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.008 @ 13" cfm

PTCF 0.84 DGMCF 1.029 Nozzle Dia. 3F = 0.195 inches Final Leak Rate 0.001 @ 10" cfm

Bar Press 29.31 " Hg

Static Press -0.5 " H2O Operator DJV K = 1.2528

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond Out
E-1	1400	678.367	0.67	0.84	122	68	67	254	243	56	5.0	58
	1410	683.005	0.67	0.84	122	71	68	257	247	42	5.0	53
E-2	1420	687.810	0.68	0.85	122	73	69	256	245	43	5.0	48
	1430	692.705	0.67	0.84	123	77	72	257	256	42	5.0	53
E-3	1440	697.585	0.56	0.70	123	79	74	257	256	45	4.5	51
	1450	702.055	0.56	0.70	124	84	78	259	243	48	4.5	52
Stop	1500	706.556		leak ck	0.001	@ 10"						
N-1	1505	706.678	0.70	0.88	123	80	78	256	241	58	5.0	55
	1515	711.665	0.67	0.84	122	83	78	253	241	43	5.0	51
N-2	1525	716.625	0.70	0.88	122	84	79	259	242	44	5.0	48
	1535	721.685	0.70	0.88	123	86	81	262	244	46	5.0	49
N-3	1545	726.650	0.59	0.74	124	90	83	260	247	47	4.5	50
	1555	731.290	0.59	0.74	123	89	83	258	248	46	4.5	50
Stop	1605	735.924		leak	ck	@ 0.001	@ 15"					
W-1	1720	736.028	0.62	0.78	127	80	79	260	245	60	5.0	57
	1730	741.950	0.62	0.78	126	80	78	255	250	40	5.0	50
W-2	1740	745.415	0.62	0.78	124	83	80	257	247	42	5.0	52
	1752	751.100	0.62	0.78	124	86	82	257	248	40	5.0	49
W-3	1800	754.870	0.50	0.62	124	86	82	261	256	42	4.5	50
	1810	759.145	0.51	0.63	124	86	81	245	252	43	4.5	50
Stop	1820	763.481		leak	ck @	0.001	@ 10"					
S-1	1833	763.538	0.68	0.85	122	81	80	251	248	58	5.0	57
	1843	768.505	0.70	0.88	122	83	80	250	257	42	5.5	50
S-2	1853	773.555	0.71	0.88	123	87	82	254	246	47	5.5	52
	1903	778.630	0.71	0.88	123	89	83	254	261	47	5.5	52
S-3	1913	783.720	0.59	0.74	124	90	84	254	264	47	5.5	51
	1923	788.405	0.59	0.74	124	90	84	243	251	48	5.5	52
	1933	793.092										
Avg.	—	114.442	0.7156	0.7946	123.3	80.63						
Check'd		114.7725 (WAW)	1/TB									

CONSOLE # A161394

FILTER # NA

AMBIENT TEMP. 70+

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity 47.91

% Moisture

Flowrate (DSCFM) 297,272

Isokinetic (%)

REMARKS All Times, CDT

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** M23 - Dioxins/Furans **Run No.** 2

Date 06-22-93 Time Start 0812 Time Finish 1236 Test Duration 240 min.

Duct Dimensions ____ X ____ Diameter 13' ft Initial Leak Rate 0.001 @ 12" cfm

PTCF 0.84 DGMCF 1.029 Nozzle Dia. 0.195 inches Final Leak Rate ≤ 0.001 @ 10" cfm

Bar Press 29.34 " Hg

Static Press -0.5 " H2O Operator OJV 1.2352

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond Out
E-1	0812	809.159	0.73	0.90	127	72	71	248	253	65	5.0	61
	0822	814.180	0.73	0.90	128	76	72	251	245	43	5.0	49
E-2	0832	819.185	0.72	0.89	129	80	74	250	256	45	5.0	48
	0842	824.240	0.72	0.89	129	82	76	252	249	41	5.0	49
E-3	0852	829.255	0.64	0.79	129	84	78	251	253	44	5.0	51
	0902	834.030	0.64	0.79	130	87	81	253	244	46	5.0	51
stop	0912	838.804			leak	ck =	<0.001	@ 10	" Hg			
N-1	0917	838.877	0.75	0.93	128	83	81	254	252	55	5.5	59
	0927	844.050	0.75	0.93	129	87	82	252	242	43	5.5	52
N-2	0937	849.240	0.73	0.90	129	88	82	252	248	45	5.5	51
	0947	854.465	0.73	0.90	128	90	84	253	251	46	5.5	51
N-3	0957	859.590	0.57	0.70	130	93	87	253	243	48	6.0	50
	1007	864.165	0.57	0.70	130	94	88	255	243	46	5.0	49
stop	1017	868.758			leak	ck =	<0.001	@ 10	" Hg			
W-1	1026	868.817	0.68	0.84	130	89	87	255	242	56	5.5	54
	1037	874.265	0.68	0.84	128	90	87	252	251	42	5.5	52
W-2	1047	879.200	0.64	0.79	129	92	88	254	250	44	5.0	50
	1057	884.185	0.64	0.79	128	92	88	252	248	45	5.0	49
W-3	1107	888.940	0.54	0.67	128	93	89	252	243	47	5.0	49
	1117	893.445	0.54	0.67	129	94	90	254	265	47	5.0	50
Stop	1127	897.948			leak	ck =	<0.001	@ 12	" Hg			
S-1	1136	898.035	0.70	0.86	127	93	90	252	255	50	5.5	51
	1146	903.140	0.70	0.86	128	94	90	252	248	46	5.5	49
S-2	1156	908.165	0.70	0.86	127	95	91	257	242	46	5.5	49
	1206	913.280	0.71	0.88	126	95	91	252	266	43	5.5	48
S-3	1216	918.405	0.57	0.70	127	98	93	255	257	45	5.0	48
	1226	923.040	0.57	0.70	127	97	93	253	263	48	5.0	50
End	1236	927.672										
Avg.	—	+/TB	0.8141	0.8200	128.3	86.9						
Check'd		118.294			√TB							

CONSOLE # A161394

FILTER # —

AMBIENT TEMP. 70+

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS All Times CDT

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** M23 - Dioxins/Furans **Run No.** 3

Date 06-23-93 Time Start 0810 Time Finish 1249 Test Duration 240 min.

Duct Dimensions ____ X ____ Diameter 13' ft Initial Leak Rate 0.002 @ 15 cfm

PTCF 0.84 DGMCF 1.029 Nozzle Dia. 0.195 inches Final Leak Rate <0.001 @ 10 cfm

Bar Press 29.19 " Hg

Static Press -0.5 " H2O Operator DJV 1,24 27

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond Out
E-1	0810	960.872	0.66	0.82	127	75	74	249	262	70	5.0	68
	0820	965.650	0.66	0.82	127	76	74	248	243	45	5.0	55
E-2	0830	970.425	0.68	0.85	127	80	76	252	244	44	5.0	52
	0840	975.335	0.68	0.85	128	83	78	252	261	46	6.0	52
E-3	0850	980.270	0.54	0.67	128	86	79	254	250	49	5.0	53
	0900	984.665	0.54	0.67	129	86	80	257	245	52	4.5	54
Stop	0910	989.083			leak ck		< 0.001	CFM @ 10 " Hg				
N-1	0916	989.246	0.70	0.87	128	82	81	253	246	59	5.0	58
	0926	994.240	0.69	0.86	128	84	81	251	246	45	5.0	54
N-2	0936	999.205	0.70	0.87	128	87	82	253	247	46	5.0	52
	0946	004.200	0.70	0.87	129	88	83	254	257	48	5.0	53
N-3	0956	009.280	0.58	0.72	129	89	84	253	248	49	5.0	53
	1006	013.905	0.58	0.72	128	89	83	252	253	48	5.0	53
Stop	1016	018.516			leak ck		< 0.001	CFM @ 10 " Hg				
W-1	1032	018.555	0.62	0.77	127	86	84	250	240	67	5.0	61
	1042	023.260	0.64	0.80	129	87	84	254	248	46	5.0	46
W-2	1052	028.080	0.64	0.80	129	92	87	253	245	49	5.0	52
	1102	032.998	0.62	0.77	130	94	88	254	250	49	5.0	53
W-3	1112	037.780	0.54	0.67	130	97	90	253	244	48	5.0	53
	1122	042.410	0.54	0.67	129	98	91	253	254	50	5.0	53
Stop	1132	046.912			leak ck		0.001	CFM @ 8 " Hg				
S-1	1149	046.951	0.68	0.85	129	92	92	253	255	67	5.0	62
	1159	052.020	0.68	0.85	129	95	93	252	242	42	5.0	51
S-2	1209	056.050	0.66	0.82	129	97	93	253	256	48	5.0	54
	1219	062.025	0.66	0.82	130	100	95	255	248	50	5.0	53
S-3	1229	066.995	0.57	0.71	130	101	96	254	251	49	5.0	52
	1239	071.780	0.57	0.71	129	102	96	253	253	51	5.0	51
End	1249	076.376										
Avg.	—	115.263TB	1DF	1DH*								
Check'd	TB	115.604	0.3966	79	129	89.3						

CONSOLE # A161394 0.7932

FILTER # —

AMBIENT TEMP. 80+

PROBE LENGTH 5'

LINER MATERIAL Glass

correct

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS All Times CDT

*Averaging Error

SOURCE SAMPLING FIELD DATA SHEET

Page ____ of ____

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** M23 - Dioxins/Furans **Run No.** FB

Date 06-20-93 Time Start 1037 Time Finish 1037 Test Duration — min.

Duct Dimensions ____ X ____ Diameter 13' ft Initial Leak Rate 0.001 cfm @ 12.5

PTCF 0.84 DGMCF 1.029 Nozzle Dia. 0.195 inches Final Leak Rate ____ cfm

Bar Press 29.36 " Hg

Static Press — " H2O Operator DTV, WAW

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
—	1037	661.294	—	—	—	80	79	254	251	84	—	—
Avg.	—											
Check'd												

CONSOLE # A161394

FILTER # —

AMBIENT TEMP. 80F

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** PSD **Run No.** 1

Date 06-21-93 Time Start 1330 Time Finish 0945 (06-22-93) Test Duration 987 min.

Duct Dimensions ____ X ____ Diameter 13' ft Initial Leak Rate 0.008 @ 15" cfm

PTCF 0.84 DGMCF 0.994 Nozzle Dia. 0.196 inches Final Leak Rate NA cfm

Bar Press 29.31 " Hg

Static Press -0.5 " H2O Operator DJV

K = 1.2985

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
S-1	1330	711.055	0.64	0.80	128	82	78	NA	NA	75	6.0	
	1353	723.540	0.64	0.80	128	95	88	—	—	60	12.0	
	1401	730.900	0.64	0.80	128	94	85	—	—	60	13.0	
	1428	741.321	0.64	0.80	129	104	94	—	—	66	15.0	
1800 2.00	1509	762.330	0.64	0.80	127	103	95	—	—	60	17.0	
	1547	781.770	0.64	0.80	124	101	96	—	—	60	17.0	
	1649	820.825	0.64	0.80	128	108	103	—	—	60	17.0	
STOP	1650	821.572										
Restart	2013	821.911	0.64	0.80	124	99	79	—	—	78	13.0	
	2029	829.170	0.64	0.80	124	81	79	—	—	64	12.0	impinger exit °
	2049	840.700	0.64	0.80	124	88	81	—	—	66	12.0	317
	2127	860.120	0.64	0.80	124	94	85	—	—	66	12.0	315
	2202	877.850	0.64	0.80	124	95	90	—	—	67	12.0	304
	2244	899.440	0.64	0.80	124	103	95	—	—	67	12.0	318
	2310	913.305	0.64	0.80	124	105	97	—	—	67	12.0	318
	2346	931.845	0.64	0.80	124	106	99	—	—	68	12.0	313
	0034	956.945	0.64	0.80	124	106	99	—	—	64	12.0	308
	0120	981.050	0.64	0.80	124	106	99	—	—	64	12.0	304
	0215	1009.895	0.64	0.80	124	102	96	—	—	65	12.0	306
	0253	1029.845	0.64	0.80	124	103	96	—	—	66	12.0	316
	0337	1052.730	0.64	0.80	124	104	97	—	—	67	12.0	311
	0410	1069.620	0.64	0.80	124	102	96	—	—	67	12.0	302
	0442	1086.170	0.64	0.80	124	101	95	—	—	67	12.0	303
	0516	1104.005	0.64	0.80	124	101	95	—	—	65	12.0	314
	0546	1119.400	0.64	0.80	124	101	94	—	—	65	12.0	303
STOP	0700	1157.674	REPLACE SiO2 GEL								12.0	315
START	0725	1157.674	0.64	0.80	126	94	93	—	—	68	12.0	
	0753	1171.250	0.64	0.80	128	101	94	—	—	62	12.5	309
Avg.	—											
Check'd	—	460.195	0.800		125	95.3	—					

SEE NEXT page for SUMMARY

CONSOLE # A161365

FILTER # SET AA

AMBIENT TEMP. ____

PROBE LENGTH ____

LINER MATERIAL ____

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS Added Additional Impinger

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack Train PSD Run No. 1

Date 06-22-93 Time Start 1320 (06-21-93) Time Finish _____ Test Duration _____ min.

Duct Dimensions _____ X _____ Diameter 13' ft Initial Leak Rate 0.00 cfm

PTCF 0.84 DGMCF 0.994 Nozzle Dia. 0.196 inches Final Leak Rate _____ cfm

Bar Press 29.34 " Hg

Static Press -0.5 " H2O Operator _____

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Imp Out
S-1	0838	195.040	0.64	0.80	128	107	99	—	—	58	12.0	310
	0920	217.180	0.64	0.80	128	110	103	—	—	56	12.0	300
Stop	0945	231.343	MM5 TRAIN INTO PORT S-1									
Stop	0945	231.343	END RUN									
Avg.		520.288	0.800	.80	125	96						
Check'd		519.949 TB										

CONSOLE # A161365

FILTER # SET AA

AMBIENT TEMP. 70T

PROBE LENGTH _____

LINER MATERIAL Steel

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS All Times CDT

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** PSD **Run No.** 2

Date 06-22-93 Time Start 1500 Time Finish 0953 (06-23-93) Test Duration 1133 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.002 @20" cfm

PTCF 0.84 DGMCF 0.994 Nozzle Dia. 0.196 inches Final Leak Rate NA cfm

Bar Press 29.34 " Hg

Static Press ≈ 0.5 " H2O Operator DJV 1.2485

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Imp Temp
S-1	1500	235.805	0.70	0.87	128	87	88	—	—	78	11	300
	1513	242.330	0.70	0.87	128	92	89	—	—	56	12	300
	1524	248.240	0.70	0.87	128	97	90	—	—	57	12	303
	1558	267.710	0.70	0.87	128	106	97	—	—	56	12	303
TM(2) →	1626	348.840	0.70	0.87	128	111	105	—	—	67	12	310
	1655	364.285	0.70	0.87	128	108	102	—	—	68	12	306
	1932	384.435	0.70	0.87	128	107	101	—	—	67	12	309
	2031	416.525	0.70	0.87	128	104	98	—	—	68	12	305
	2058	431.145	0.70	0.87	128	104	97	—	—	67	12	311
	2113	439.015	0.70	0.87	128	102	96	—	—	66	12	311
9	2210	470.025	0.70	0.87	128	105	97	—	—	65	12	303
9	2236	483.630	0.70	0.87	128	106	98	—	—	64	12	304
	2313	503.675	0.70	0.87	128	108	100	—	—	64	12	312
	2343	519.795	0.70	0.87	128	103	99	—	—	65	12	302
	0016	537.210	0.70	0.87	128	100	96	—	—	64	12	300
	0047	552.895	0.70	0.87	128	97	93	—	—	63	12.5	304
	0119	570.070	0.70	0.87	128	96	92	—	—	64	12.5	310
	0151	587.700	0.70	0.87	128	96	91	—	—	63	12.5	303
	0226	606.365	0.70	0.87	128	95	90	—	—	60	12.5	301
	0259	623.82	0.70	0.87	128	95	90	—	—	59	12.5	299
	0329	640.08	0.70	0.87	128	93	89	—	—	60	12.5	308
	0359	655.94	0.70	0.87	128	95	89	—	—	60	12.5	300
	0424	669.56	0.70	0.87	128	92	88	—	—	61	12.5	302
	0502	689.67	0.70	0.87	128	89	84	—	—	61	12.5	299
	0533	706.135	0.70	0.87	128	87	82	—	—	61	12.5	302
	0558	719.375	0.70	0.87	128	88	82	—	—	61	12.5	307
	0612	726.880	0.70	0.87	128	91	84	—	—	61	12.5	299
	0648	749.905	0.70	0.87	128	95	88	—	—	59	13.0	303
Avg.	—											
Check'd												

CONSOLE # A161305

FILTER # SET T

AMBIENT TEMP. 70-80+

PROBE LENGTH 8'

LINER MATERIAL Stool

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS All Times CDT, Single Pt. Sampling

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** PSD **Run No.** 2

Date 06-23-93 Time Start 1500 (06-22-93) Time Finish _____ Test Duration _____ min.

Duct Dimensions _____ X _____ Diameter 13 ft Initial Leak Rate 0.002@20" cfm

PTCF 0.84 DGMCF 0.994 Nozzle Dia. 0.196 inches Final Leak Rate _____ cfm

Bar Press 29.34 " Hg

Static Press ~ 0.5 " H2O Operator DJV

1.2485

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	IMP TEMP
S-1	0719	764.235	0.70	0.87	128	100	93	—	—	60	13.0	305
	0921	828.900	0.70	0.87	128	164	100	—	—	65	13.0	300
End	0953	845.175										
Avg.	—											
Check'd		609.37	0.8367	.41	128	95.7						

CONSOLE # AIG1365

FILTER # Set T

AMBIENT TEMP. 70-80

PROBE LENGTH 8'

LINER MATERIAL Steel

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS _____

INTAKE WPN 9/29

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** PSD **Run No.** 3

Date 06-23-93 Time Start 1553 Time Finish 1000 Test Duration 1080 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.004 cfm @ 15"

PTCF 0.84 DGMCF 0.994 Nozzle Dia. 0.196 inches Final Leak Rate 0.005 cfm @ 15"

Bar Press 29.19 " Hg

Static Press -0.5 " H2O Operator OJV

	Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Imp. Temp
	S-1	1553	851.637	0.70	0.87	128	93	93	–	–	78	13	299
		1604	858.250	0.70	0.87	128	99	94	–	–	71	17	299
	Stop	1605	859222										
*	Restart	1610	859.222	0.70	0.87	128	101	95	–	–	73	12	306
		1622	866.520	0.70	0.87	128	106	98	–	–	69	13	305
TMD	→	1825	940.465	0.70	0.87	128	120	112	–	–	67	13.5	305
		1853	958.270	0.70	0.87	128	122	114	–	–	66	14	308
		1920	975.705	0.70	0.87	128	116	111	–	–	66	13.5	306
**	1950	1947	991.405	0.70	0.87	128	108	105	–	–	67	11.5	295
		2005	999.280	0.70	0.87	128	97	95	–	–	67	8.5	302
		2025	1010.430	0.70	0.87	128	96	91	–	–	66	8.5	300
		2046	1020.935	0.70	0.87	128	93	89	–	–	66	8.5	298
		2118	1036.970	0.70	0.87	128	92	87	–	–	66	8.5	304
		2149	1052.300	0.70	0.87	128	95	88	–	–	63	8.5	298
		2227	1070.940	0.70	0.87	128	93	86	–	–	63	8.5	297
		2300	1087.100	0.70	0.87	128	94	88	–	–	64	8.5	306
		2330	1101.765	0.70	0.87	128	92	87	–	–	65	8.5	299
		0015	1123.690	0.70	0.87	128	92	86	–	–	65	8.5	305
		0104	1147.680	0.70	0.87	128	91	85	–	–	63	8.5	307
		0147	1168.900	0.70	0.87	128	92	85	–	–	61	8.5	306
		0241	1195.345	0.70	0.87	128	89	84	–	–	60	8.5	304
		0325	1216.560	0.70	0.87	128	92	85	–	–	60	8.5	296
		0403	1235.055	0.70	0.87	128	90	83	–	–	60	8.5	305
		0443	1254.825	0.70	0.87	128	88	82	–	–	61	8.5	307
		0527	1276.010	0.70	0.87	128	81	76	–	–	62	8.5	296
		0929	1393.270	0.70	0.87	128	105	100	–	–	69	10.0	307
		1000	1408.730	0.70	0.87	128	102	98	–	–	67	10.0	307
	Avg.	–	557.093	0.6361	0.99	128	94.9						
	Check'd												

CONSOLE # ____

FILTER # ____

AMBIENT TEMP. ____

PROBE LENGTH ____

LINER MATERIAL ____

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS * - Removed plug in Silica Gel

** - added pump oil TMD

1600 → 24 = 8 lbs + 10 lbs. = 18 lbs.

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Particulate / Metals **Run No.** 1

Date 06-25-93 Time Start 0641 Time Finish 1152 Test Duration 240 min.

Duct Dimensions _____ X _____ Diameter 13 ft Initial Leak Rate 0.002 cfm @ 15"

PTCF 0.84 DGMCF 1.029 NOZZLE DIA. 0.195 inches Final Leak Rate 0.001 cfm @ 12"

Bar Press 29.41 in Hg 29.33

Static Press -0.5 " H2O Operator DSV K 1.1844

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-1	0641	99.660	0.70	0.83	125	60	59	246	255	58	7.0	
	0651	103.995	0.70	0.83	124	63	61	240	238	48	7.0	
E-2	0701	108.810	0.68	0.81	128	68	62	239	246	44	6.0	
	0711	113.675	0.68	0.81	128	75	68	238	246	47	6.0	
E-3	0721	118.530	0.58	0.69	128	76	68	246	241	46	5.5	
	0731	123.075	0.58	0.69	128	77	70	248	256	46	5.5	
Stop	0741	127.662			leak ck		0.001	CFM @	11	" Hg		
N-1	0746	127.724	0.69	0.82	128	72	70	250	251	54	6.5	
	0756	132.665	0.69	0.82	129	77	71	249	239	47	6.5	
N-2	0806	137.605	0.72	0.85	128	77	71	249	245	47	7.0	
	0816	142.650	0.72	0.85	128	77	72	249	254	46	7.0	
N-3	0826	147.655	0.58	0.69	129	78	73	252	244	41	5.5	
	0836	152.275	0.58	0.69	129	79	74	252	263	43	5.5	
Stop	0846	156.838			LEAK CK		0.002	CFM @	11	" Hg		
W-1	0926 0931 DSV	156.915	0.63	0.75	123	74	73	250	267	55	6.0	
	0941	161.650	0.63	0.75	129	74	72	249	244	39	6.0	
W-2	0951	166.380	0.63	0.75	129	77	74	251	244	43	6.6	
	1001	171.300	0.63	0.75	130	79	77	251	246	45	6.0	
W-3	1011	175.800	0.54	0.64	129	83	80	251	250	46	5.0	
	1021	180.225	0.54	0.64	129	82	78	250	245	48	5.0	
Stop	1037 DSV	184.812			leak ck =		0.002	CFM	@ 10	" Hg		
S-1	1052	184.873	0.72	0.85	130	79	79	251	239	58	6.0	
	1102	189.895	0.72	0.85	129	80	78	249	259	42	6.0	
S-2	1112	195.460	0.68	0.81	129	83	79	253	241	45	6.0	
	1122	200.435	0.68	0.81	129	85	80	253	248	43	6.0	
S-3	1132	204.795	0.58	0.69	130	87	82	255	260	46	6.0	
	1142	209.410	0.58	0.69	130	88	83	255	261	48	6.0	
End	1152	214.050										
Avg.	—	114.190	0.6507	0.765	129.3	75.1						
Check'd												

CONSOLE # A161394

FILTER # 922

AMBIENT TEMP. 60-70

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS All Time CST

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Particulate / Metals **Run No.** 2

Date 06-26-93 Time Start 0921 Time Finish 1356 Test Duration 240 min.

Duct Dimensions — X — Diameter 13' ft Initial Leak Rate 0.001@10" cfm

PTCF 0.84 DGMCF 1.029 NOZZLE DIA. 0.195 inches Final Leak Rate 0.002 12" cfm

Bar Press 29.36 " Hg

Static Press -0.5 " H2O Operator DJV 11891

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-1	0921	828.684	0.68	0.81	128	73	71	250	236	68	7.0	
	0931	833.645	0.68	0.81	131	74	72	251	254	47	7.0	
E-2	0941	838.030	0.70	0.83	130	78	73	252	244	47	7.0	
	0951	842.830	0.70	0.83	131	79	74	255	245	47	7.0	
E-3	1001	847.680	0.56	0.67	131	81	75	254	250	48	7.0	
	1011	852.325	0.56	0.67	131	81	76	253	261	51	6.0	
Stop	1021	856.742		Leak	Check	0.001 CFM @ 11" Hg						
N-1	1029	857.432	0.64	0.76	130	79	76	262	254	58	6.0	
	1039	862.260	0.64	0.76	131	85	79	255	237	47	6.0	
N-2	1049	866.925	0.64	0.76	128	88	81	252	246	48	6.0	
	1059	871.700	0.65	0.77	130	85	80	257	254	48	6.0	
N-3	1109	876.530	0.56	0.67	130	86	82	257	259	49	5.0	
	1119	881.040	0.56	0.67	129	86	82	252	250	51	5.0	
Stop	1129	885.525		Leak Check		0.001 CFM @		10" Hg				
W-1	1136	885.585	0.64	0.76	129	84	83	252	241	62	5.5	
	1146	889.095	0.64	0.76	130	87	83	254	258	44	5.5	
W-2	1156	895.125	0.65	0.77	130	87	84	250	253	42	5.5	
	1206	899.905	0.65	0.77	131	91	85	256	244	43	5.5	
W-3	1216	904.700	0.52	0.62	130	91	86	254	255	43	5.0	
	1226	909.030	0.52	0.62	130	91	86	254	241	48	5.0	
Stop	1236	913.378		LEAK	CHECK	0.001	CFM @	10"	Hg			
S-1	1256 1255	913.433	0.72	0.86	129	85	84	254	254	74	7.0	
	1306	918.495	0.72	0.86	130	87	85	252	242	48	7.0	
S-2	1316	923.575	0.66	0.78	130	89	86	257	244	50	6.0	
	1326	928.435	0.66	0.78	130	90	87	254	256	51	6.0	
S-3	1336	933.300	0.64	0.76	131	91	87	247	255	53	6.0	
	1346	938.160	0.64	0.76	130	91	87	254	254	53	6.0	
	1356	942.895										
Avg.	—	113.401o	0.7956	0.7535	130.0	83.0						
Check'd												

CONSOLE # A161394

FILTER # 977

AMBIENT TEMP. 70 F

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Particulate / Metals **Run No.** 3

Date 06-27-93 Time Start 0653 Time Finish 1106 Test Duration 240 min.

Duct Dimensions ___ X ___ Diameter 13 ft Initial Leak Rate 0.001 @ 13" cfm

PTCF 0.84 DGMCF 1.029 NOZZLE DIA. 0.195 inches Final Leak Rate 0.001 @ 13" cfm

Bar Press 29.21 " Hg

Static Press -0.5 _" H2O Operator OJV

1.1891

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-1	0653	570.775	0.66	0.78	129	76	78	252	245	56	6.0	
	0703	575.480	0.66	0.78	129	78	76	249	241	48	5.5	
E-2	0713	580.150	0.69	0.82	130	80	77	251	253	49	6.0	
	0723	585.000	0.69	0.82	130	82	78	253	244	47	6.0	
E-3	0733	589.850	0.56	0.67	129	86	82	255	259	51	5.0	
	0743	594.305	0.56	0.67	130	89	82	255	257	45	5.0	
Stop	0753	598.773			leak ck	0.001 CFM			@ 12	" Hg		
N-1	0758	598.888	0.68	0.81	130	86	84	257	264	57	6.0	
	0808	603.800	0.68	0.81	130	87	83	251	250	45	6.0	
N-2	0818	608.710	0.70	0.83	131	89	86	252	260	48	6.0	
	0828	613.690	0.70	0.83	130	90	86	252	244	46	6.0	
N-3	0838	618.695	0.58	0.69	130	93	88	251	240	42	5.0	
	0848	623.350	0.58	0.69	130	94	90	252	249	44	5.0	
Stop	0858	627.952	~~0.64~~ OJV	~~0.76~~ OJV	leak ck	0.001 CFM @		11 " Hg				
W-1	0902	628.026	0.64	0.76	130	95	92	256	259	51	5.5	
	0912	632.795	0.64	0.76	130	95	92	253	242	41	5.5	
W-2	0922	637.590	0.64	0.76	130	96	93	252	266	42	5.5	
	0932	642.430	0.64	0.76	130	98	94	253	251	43	5.5	
W-3	0942	647.360	0.52	0.62	131	98	95	253	263	45	5.5	
	0952	651.755	0.52	0.62	131	99	96	254	255	47	5.5	
Stop	1002	656.167			leak ck	0.001	CFM @	12 " Hg				
S-1	1006	656.227	0.70	0.83	131	97	96	243	258	57	6.0	
	1016	661.315	0.70	0.83	131	99	96	253	254	44	6.0	
S-2	1026	666.405	0.72	0.86	131	101	96	252	250	46	6.0	
	1036	671.555	0.72	0.86	132	101	96	251	243	47	6.0	
S-3	1046	676.730	0.56	0.67	131	102	97	253	264	47	5.0	
	1056	681.370	0.56	0.67	130	100	96	250	247	47	5.0	
End	1106	686.026										
Avg.	—	115.063	0.7974	0.7583	130.2	90.4						
Check'd												

CONSOLE # A161394

FILTER # 1055

AMBIENT TEMP. 70-80

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Particulate / Metals **Run No.** FB

Date 06-24-93 Time Start 1157 Time Finish 1158 Test Duration 1 min.

Duct Dimensions ___ X ___ Diameter 13 ft Initial Leak Rate 0.002 cfm @ 12

PTCF 0.84 DGMCF 1.881 NOZZLE DIA. 0.193 inches Final Leak Rate 0.002 cfm @ 12

Bar Press 29.33 " Hg

Static Press -0.5 " H2O Operator OJV

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
—	1158	076.633	—	—	—	81	81	250	253	—	—	—
Avg.	—											
Check'd												

CONSOLE # AIG1394

FILTER # 926

AMBIENT TEMP. 80+

PROBE LENGTH 5'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS Probe Soaked w HNO3 Overnight

Flue-Gas Sampling Log

Sponsor: YATES	Sample Run #: 1
Plant Location: NEWNAN, GA.	Soda-Lime Trap#: S 400
Date: 6-25-93	Iodated Carbon #: C 400
Fuel Type: COAL	Pump#: 3
Pollution Control: ESP-3PB	Probe#: 1
Sampling Point: STACK	Filter ID: 10

start			stop			elapsed	mean	mean
time (hh:mm)	zero (l/min)	flow (l/min)	time (hh:mm)	zero (l/min)	flow (l/min)	time (min)	zero (l/min)	flow (l/min)
0705	-0.026	0.500	1025	-0.024	0.489	200.0	-0.025	0.495
1								
					TOTALS:			

Integrator Volume (l):	0.0
Offset Correction (l):	0.10
Total Integrator Volume:	100.0
CO_2 Mass Flow Correction:	
Actual (dry STP) volume (l):	
% O_2:	8.0
% CO_2:	10.0
% H_2O:	14.0
ppm SO_2:	200.0

COMMENTS:

LEAK CHECK METER = -0.026

" " PROBE = -0.025

PROBE TEMP = 100°C < T < 120°C

Flue-Gas Sampling Log

Sponsor: YATES	Sample Run #: 2
Plant Location: NEWNAN, GA.	Soda-Lime Trap#: S-407
Date: 6-26-93	Iodated Carbon #: C-407
Fuel Type: COAL	Pump#: 3
Pollution Control: ESP-JPB	Probe#: 20
Sampling Point: STACK	Filter ID:

start			stop			elapsed	mean	mean
time (hh:mm)	zero (l/min)	flow (l/min)	time (hh:mm)	zero (l/min)	flow (l/min)	time (min)	zero (l/min)	flow (l/min)
0925	-0.026	0.500	1245	-0.024	0.500	200	-0.025	0.500
				TOTALS:		200	-0.025	0.500

Integrator Volume (l):	0.000
Offset Correction (l):	~~100.0~~ 0.10
Total Integrator Volume:	100.00
CO_2 Mass Flow Correction:	
Actual (dry STP) volume (l):	
% O_2:	8.0
% CO_2:	10.0
% H_2O:	14.0
ppm SO_2:	200.0

COMMENTS:
LEAK CHECK THROUGH METER = -0.026
LEAK CHECK THROUGH PROBE = -0.026
100°C < T < 120°C

Flue-Gas Sampling Log

Sponsor: YATES	Sample Run #: 3
Plant Location: NEWNAN, GA.	Soda-Lime Trap#: S-333
Date: 6-27-93	Iodated Carbon #: C-333
Fuel Type: COAL	Pump#: 3
Pollution Control: ESP-JPB	Probe#: 30
Sampling Point: STACK	Filter ID:

start			stop			elapsed	mean	mean
time (hh:mm)	zero (l/min)	flow (l/min)	time (hh:mm)	zero (l/min)	flow (l/min)	time (min)	zero (l/min)	flow (l/min)
0655	-0.025	0.500	~~0945~~					
			1145	-0024	.080	290	0.025	0.280
					TOTALS:			

Integrator Volume (l):	0.0
Offset Correction (l):	0.10
Total Integrator Volume:	70.0
CO_2 Mass Flow Correction:	
Actual (dry STP) volume (l):	
% O_2:	8.0
% CO_2:	10.0
% H_2O:	15.0
ppm SO_2:	200

COMMENTS:

LEAK CHECK THROUGH METER -0.025
LEAK CHECK THROUGH PROBE - 0.024

100°C < T < 120°C

LOW FLOW DUE TO MOISTURE. TEMP MAINTAINED AS PER METHOD.

Flue-Gas Sampling Log

Sponsor: YATES	Sample Run #: FIELD BLANK
Plant Location: NEWNAN GA.	Soda-Lime Trap#: 5405
Date: 6-24-93	Iodated Carbon #: C405
Fuel Type: COAL	Pump#: BOX #3
Pollution Control: ESP-JBR	Probe#: 1
Sampling Point: STACK	Filter ID: #10

start			stop			elapsed	mean	mean
time (hh:mm)	zero (l/min)	flow (l/min)	time (hh:mm)	zero (l/min)	flow (l/min)	time (min)	zero (l/min)	flow (l/min)
1115	-0.027	0.500	1120	-0.026	0.500			
					TOTALS:			

Integrator Volume (l):
Offset Correction (l):
Total Integrator Volume: 0.000
CO_2 Mass Flow Correction:
Actual (dry STP) volume (l):
% O_2:
% CO_2:
% H_2O:
ppm SO_2:

COMMENTS:
LEAK CHECK THROUGH METER = -0.027

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Anions **Run No.** 1

Date 6/25/93 Time Start 0940 Time Finish 1155 Test Duration 134 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.000 @ 15 "Hg cfm

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.195 inches Final Leak Rate 0.000 @ 18 "Hg cfm

Bar Press ~~29.41~~ 29.33 Hg

Static Press -0.5 " H2O Operator EZ K= 1.1606

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
N-3	0940	739.155	0.62	0.719	131	85	85	254	253	61	1.0	
	0950	743.920	0.62	0.72	132	88	85	255	260	53	1.0	
	1000	748.685	0.62	0.72	133	91	86	254	264	54	1.0	
	1018	756.778	0.62	0.72	133	95	88	251	256	56	1.0	
	1041	767.445	0.62	0.72	133	97	90	252	260	57	1.0	
	1055	774.002	0.62	0.72	132	97	91	253	258	58	1.0	
	1110	780.832	0.62	0.72	132	97	91	253	255	53	1.0	
	1141	795.376	0.62	0.72	132	98	92	251	258	53	1.0	
END	1155	801.650										
Avg.	—	62.495	.78740	.72	132.2		91.066					
Check'd												

CONSOLE # A161362

FILTER # 900

AMBIENT TEMP. 86°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Anions **Run No.** 2

Date 6/26/93 Time Start 1325 Time Finish 1536 Test Duration 131 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate <0.001 @ 15 "Hg

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.195 inches Final Leak Rate <0.001 @ 10 cfm

Bar Press 29.32 " Hg

Static Press −0.5 " H2O Operator EZ K= 1.1586

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-3	1325	881.665	0.60	0.695	133	105	102	262	257	69	1.5	
	1330	884.320	0.58	0.672	133	106	102	260	256	61	1.5	
	1340	888.960	0.58	0.672	133	107	103	260	256	59	1.5	
	1350	893.515	0.58	0.672	133	106	102	258	252	56	1.5	
	1409	902.185	0.58	0.672	134	106	101	258	255	59	1.5	
	1434	913.476	0.58	0.672	133	108	102	258	256	57	1.5	
	1445	918.660	0.58	0.672	133	108	102	257	253	60	1.5	
	1504	927.420	0.58	0.672	133	107	102	257	253	60	1.5	
	1521	934.998	0.58	0.672	134	108	102	256	254	63	1.5	
	1531	940.110	0.58	0.672	134	108	102	256	255	60	1.5	
	1536	942.028										
Avg.	—	60.363	0.58	0.672	133		104.45					
Check'd			7.808									

CONSOLE # QQ A161362

FILTER # 65+ 936

AMBIENT TEMP. 85°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Anions **Run No.** 3

Date 6/27/93 Time Start 0845 Time Finish 1055 Test Duration 130 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate <0.001 @ 15" Hg cfm

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.195 inches Final Leak Rate <0.001 @ 10" Hg cfm

Bar Press 29.21 " Hg

Static Press -0.5 " H2O Operator EZ

K= 1.1606

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-3	0845	995.520	0.640	0.74	132	93	91	264	260	69	1.0	
	0850	997.990	0.640	0.74	132	94	91	259	258	55	1.0	
	6900	003.000	0.640	0.74	132	98	92	259	257	54	1.0	
	0910	007.555	0.640	0.74	133	101	94	259	260	56	1.0	
	0930	016.980	0.640	0.74	133	104	97	260	260	56	1.0	
	1002	032.286	0.640	0.74	133	107	100	260	261	61	1.0	
	1010	035.830	0.645	0.75	133	107	101	260	261	60	1.0	
	1025	043.040	0.645	0.75	133	109	102	260	262	60	1.0	
	1035	047.856	0.645	0.75	133	109	103	260	262	60	1.0	
	1045	052.756	0.640	0.74	133	110	103	260	263	59	1.0	
	1055	057.495										
Avg.	—	61.975	0.64	0.74	133	103.2	99.4	260.2	260.4	58.10	1.0	
Check'd			1.38833				100.3					

CONSOLE # A161362

FILTER # 945

AMBIENT TEMP. 80 °F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS ____

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Anions **Run No.** FB

Date 6/24/93 Time Start 1420 Time Finish 1422 Test Duration 2 min.

Duct Dimensions ___ X ___ Diameter 13 ft Initial Leak Rate 0.000 @ 15 cfm

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.192 inches Final Leak Rate 0.00 @ 15 cfm

Bar Press 29.33 " Hg

Static Press -0.5 " H2O Operator EE

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
	1420	676.022										
	1422	676.395										
Avg.	—											
Check'd												

CONSOLE # A161362

FILTER # ___

AMBIENT TEMP. 88°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity ___

% Moisture ___

Flowrate (DSCFM) ___

Isokinetic (%) ___

REMARKS ___

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Ammonia/Hydrogen Cyanide **Run No.** 1

Date 6/25/93 Time Start 0647 Time Finish 0904 Test Duration 137 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.000@ 15" cfm

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.195 inches Final Leak Rate 0.000@ cfm 7½ Hg

Bar Press 29.41 29.33 Hg

Static Press −0.5 " H2O Operator EZ

K = 1.2056

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
W-3	0647	677.224	0.57	0.69	130	78	74	256	254	60	2.0	
	0700	683.225	0.57	0.69	130	82	76	254	251	59	2.0	
	0713	689.235	0.57	0.69	131	85	78	254	261	58	2.0	
	0733	698.255	0.57	0.69	132	90	82	254	260	56	2.0	
	0747	704.442	0.57	0.69	132	91	83	255	260	56	2.0	
	0800	710.004	0.57	0.69	132	92	85	257	260	56	2.0	
	0813	716.160	0.57	0.69	133	93	86	256	254	56	2.0	
	0825	721.599	0.57	0.69	132	93	87	254	258	55	2.0	
*	0834	726.220	0.57	0.66	132	93	87	254	259	54	2.0	
	0846	731.750	0.57	0.66	133	94	88	257	260	51	2.0	
	0902	738.225	0.57	0.66	133	94	88	256	261	50	2.0	
END	0904	739.005										
Avg.	—	61.781	0.57	0.682	131.82	89.54	83.091					
Check'd	ecc		.754985				86.318					

CONSOLE # AIC1362 √.754983

FILTER # ____

AMBIENT TEMP. 70°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS * CHANGED K= 1.1606 BASED ON 14% MOISTURE

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Ammonia/Hydrogen Cyanide **Run No.** 2

Date 06/26/93 Time Start 1145 Time Finish 1315 Test Duration 90 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.000 @ 15 cfm "Hg

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.195 inches Final Leak Rate 0.001 @ 10 cfm "Hg

Bar Press 29.32 " Hg

Static Press -0.5 " H2O Operator EZ

K= 1.1586

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-3	1145	840.130	0.60	0.695	134	91	90	239	252	70	4.0	
	1150	842.895	0.60	0.695	133	91	90	249	252	58	4.0	
	1155	844.820	0.60	0.695	133	94	91	260	256	56	4.0	
	1200	847.075	0.60	0.695	133	96	91	256	254	57	4.0	
	1205	849.420	0.60	0.695	133	99	93	257	256	58	4.0	
	1215	854.290	0.60	0.695	133	101	95	258	253	57	4.0	
	1230	860.910	0.58	0.672	134	104	97	264	258	54	4.0	
	1243	866.811	0.58	0.672	133	107	99	263	261	54	4.0	
	1255	872.695	0.58	0.672	134	107	101	262	257	55	4.0	
	1309	878.699	0.58	0.672	134	109	102	263	256	54	4.0	
END	1315	881.442										
Avg.	—	41.312	0.5920	0.6881	133.4		97.4					
Check'd			1.76308									

CONSOLE # ~~DGC~~ K161362

FILTER # ~~935~~ 936

AMBIENT TEMP. 80°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack Train Ammonia/Hydrogen Cyanide Run No. 3

Date 6/27/93 Time Start 0635 Time Finish 0809 Test Duration 94 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.004 @ 15 cfm "Hg

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.195 inches Final Leak Rate 0.001 @ 15 cfm "Hg

Bar Press 29.21 " Hg

Static Press -0.5 " H2O Operator EZ K= 1.1606

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
1-3	0635	951.795	0.62	0.72	133	78	75	265	257	62	4.5	
	0640	954.000	0.62	0.72	133	80	76	263	256	59	4.5	
	0649	958.140	0.62	0.72	133	84	78	264	258	58	4.5	
	0700	963.185	0.62	0.72	133	88	80	264	258	60	4.5	
	0712	968.736	0.62	0.72	133	90	82	259	255	59	4.5	
	0721	973.022	0.62	0.72	133	92	84	257	254	57	4.5	
	0738	980.840	0.62	0.72	133	94	86	257	252	52	4.5	
	0748	985.520	0.62	0.72	133	95	88	260	259	53	4.5	
	0801	992.000	0.62	0.72	133	97	90	260	258	54	4.5	
	0809	995.300										
Avg.	—	43.505	0.62	0.72	133	88.67	82.111	261.0	256.33	57.111	4.5	
Check'd			78740				85.39					

CONSOLE # A161362

FILTER # 945

AMBIENT TEMP. 75°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Ammonia/Hydrogen Cyanide **Run No.** FB

Date 06/24/93 Time Start 1412 Time Finish 1415 Test Duration 3 min

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.000e 15 cfm

PTCF 0.84 DGMCF 1.006 Nozzle Dia. 0.192 inches Final Leak Rate 0.00e 15 cfm

Bar Press 29.33 " Hg

Static Press -0.5 " H2O Operator EE/JH

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
	1412	675.990										
	1415	676.000										
Avg.	—											
Check'd												

CONSOLE # A16362

FILTER # 940

AMBIENT TEMP. 88

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS ____

SOURCE SAMPLING FIELD DATA SHEET

STACK

Page 1 of 1

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK Train Bulk Particulate-Radionuclides Run No. 1

Date 6-24-93 Time Start 1223 Time Finish 0153 Test Duration 816 min.

Duct Dimensions — X — Diameter 12 13 ft Initial Leak Rate 0.000 cfm @ 15"

PTCF 0.84 DGMCF 0.994 Nozzle Dia. 0.240 inches OJ ✓ Final Leak Rate 0.000 cfm @ 11"

Bar Press 29.33 " Hg

Static Press −0.51 " H2O Operator JEH

	Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
K-281	S-2	1223	468.418	0.71	1.98	128	94	94	251	251	60	7.0	
		1253	493.740	0.71	1.99	128	102	94	250	250	61	6.0	
		1318	512.945	0.71	1.99	128	105	94	252	250	65	6.0	
[illegible]		13[illegible]	528.560	0.71	1.91	128	108	97	250	251	55	6.0	
		14[illegible]	562.000	0.71	1.92	128	113	102	252	253	60	6.0	
		1468	579.165	0.71	1.92	132	114	103	253	254	60	6.0	
		1515	610.889	0.71	1.92	131	114	104	254	253	63	6.0	
STOP		1521	612.880	EMPTY		H_2O	FROM IMPINGERS.		[illegible]				mps OK.
START		1528	612.985	0.71	1.92	131	104	101	252	250	67	5.0	
		1553	632.090	0.71	1.92	130	106	97	254	252	57	5.0	
		1627	658.250	0.71	1.92	129	100	94	250	251	57	5.0	
TM9	⇒	1904	776.56	0.71	1.92	130	93	85	253	243	68	5.0	
		1934	799.40	0.71	1.92	131	94	85	252	250	57	5.0	
		2026	838.85	0.71	1.92	132	95	85	252	257	55	5.5	
		2126	883.70	0.73	1.97	130	98	88	253	262	58	6.5	
*	STOP	2219	925.610										
	START	2226	925.740	0.73	1.97	130	90	86	252	253	60	6.5	
		2313	963.90	0.73	1.97	130	98	87	254	257	47	6.5	
		0005	1005.59	0.73	1.97	130	99	88	252	254	51	6.5	
		0101	50.41	0.73	1.97	130	96	87	253	246	57	6.5	
**	stop	0153	1069.209										
	Avg.	—	599.556	.84588	1.94	129.8		97.3					
	Check'd												

CONSOLE # A161365

FILTER # 11906

AMBIENT TEMP. 82°C

PROBE LENGTH 6'

LINER MATERIAL PYREX

Velocity 50.98

% Moisture 12.0

Flowrate (DSCFM) 0.80

Isokinetic (%)

REMARKS TM9 * stopped to empty imp., leak check through glassware 0.001@15"

(TM4) ** silica gel imp. blew the bottom out, ice both sucked all the way to the meter

SOURCE SAMPLING FIELD DATA SHEET

STACK

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Bulk Particulate-Radionuclides **Run No.** 2

Date 6-25-93 Time Start 0840 Time Finish 0331 Test Duration 843 min.

Duct Dimensions — X — Diameter 13 ft Initial Leak Rate 0.010 cfm @20"

PTCF .84 DGMCF .988 Nozzle Dia. 0.240 inches Final Leak Rate 0.009 cfm @14"

Bar Press 29.41 " Hg

Static Press -0.51 " H2O Operator JEH

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
S-1	0840	771.158	.72	1.91	130			260	251			
STOP	0841	IMPINGER EXIT BLOCKED / REPLACED										
START	0920	771.200	.73	1.93	128	75	73	251	253	52	3.0	—
	0940	785.200	.72	1.92	129	84	76	252	258	46	3.0	—
	0955	797.580	.73		129	91	80	252	250	47	3.0	—
Stop	1042	831.423	Qt									
start	1324	831.423	0.58	1.53	127	83	83	255	247	81	3.0	
	1333	837.465	0.58	1.53	127	86	83	252	243	47	3.0	
	1405	851.925	0.76	2.006	128	96	87	254	255	52	3.0	
	1435	880.820	0.67	1.77	128	101	90	251	241	54	3.0	
STOP	1520	913.418	Removed		moisture from train.							
START	1525	913.488	0.67	1.77	128	100	89	253	248	53	3.0	
	1605	943.425	0.67	1.77	129	106	96	254	250	52	3.0	
	1659	983.300	0.69	1.82	129	107	98	257	255	52	3.0	
STOP	1726	002.885	Removed		Moisture							
Start	1749	002.885	0.69	1.82	130	96	94	254	246	81	3.0	
TMD →	1855	59.65	0.72	1.93	130	106	96	254	261	53	3.0	
	1935	86.21	0.72	1.93	130	107	97	257	245	46	3.0	
	2014	115.40	0.72	1.93	129	108	98	257	251	48	3.5	
stop	2107	154.179	Removed moisture			leak check		0.001 @ 14"	through glass wool			
start	2112	154.300	0.72	1.93	128	100	95	253	240	52	3.5	
	2211	199.26	0.72	1.93	130	104	95	255	246	57	3.5	
	2304	237.04	0.72	1.93	1.30	102	95	256	243	50	3.5	
	2359	276.93	0.72	1.93	1.30	97	90	252	262	57	3.5	
stop	0018	289.746	Pump main.									
start	0022	289.746	0.72	1.93	129	92	86	253	240	48	3.5	
	0123	333.11	0.72	1.93	129	95	87	254	245	55	3.5	
	0218	373.51	0.72	1.93	128	96	88	255	264	50	3.5	
Avg.	—											
Check'd												

CONSOLE # A161397

FILTER # #988

AMBIENT TEMP. 75°F

PROBE LENGTH 6'

LINER MATERIAL PYREX

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 2 of 2

SAMPLING LOCATION Stack RUN NO. 2
DATE 6-26-13 TIME START _____ TIME FINISH _____ TEST DURATION _____ min.
DUCT DIMENSIONS _____ X _____ DIAMETER 13 INITIAL LEAK RATE _____ cfm
PTCF 0.84 DGMCF 0.988 NOZZLE DIA. 0.240 inches FINAL LEAK RATE _____ cfm
BAR PRESS 29.41 "Hg
STATIC PRESS -0.51 " H2O OPERATOR JEH /TMC

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
	0314	412.78	0.72	1.93	128	54	87	252	262	48	3	
Stop	0331	425.356										
Avg.	–	654.007	1.33762	1.8618	128.95		93.047					
Check'd	–											

CONSOLE # _____
FILTER # _____
AMBIENT TEMP. _____
PROBE LENGTH _____
LINER MATERIAL _____

Velocity _____
% Moisture _____
Flowrate (DSCFM) _____
Isokinetic (%) _____

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

STACK

Page 1 of 1

Plant Name Plant Yates Station Boiler No. 1 RADIONUCLEIDES

Sampling Location STACK **Train** Bulk Particulate-~~E. Morris~~-JEH **Run No.** 3

Date 6-25-93 Time Start ~~1743~~ 1357 Time Finish 0614 Test Duration 908 min.

Duct Dimensions — X — Diameter 13 ft Initial Leak Rate 0.000 cfm @ 20"

PTCF .84 DGMCF .988 Nozzle Dia. 0.240 inches Final Leak Rate <0.001 cfm @ 10

Bar Press 29.33 " Hg

Static Press -0.5i " H2O Operator DJV/EBZ/JEH/

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
2.69 N-1	1357	425.570	.71	1.91	130	89	88	251	249	65	5.0	—
	1412	436.465	.72	1.93	130	93	88	251	259	48	5.0	—
STOP	1530	495.801		REMOVE MOISTURE FROM STACK TRAP								
START	1534	495.801	.72	1.94	130	103	97	251	250	58	5.0	—
	1615	526.800	.73	1.97	130	106	97	250	250	53	5.0	—
	1652	552.780	.73	1.97	131	108	99	256	264	51	5.0	
	1728	580.630	.73	1.97	131	111	101	255	246	48	4.0	
Stop	1742	590.960		Removed Moisture							3.5	
Start	1748	590.960	.73	1.97	130	106	101	255	261	66	3.5	
TRAV ⇒	1821	617.51	0.73	1.97	133	113	102	256	244	50	3.5	
	1915	657.60	0.73	1.97	131	108	101	257	246	54	3.5	
stop	2006	693.860		pump main.								
Start	2009	693.860	0.73	1.97	131	101	96	256	266	55	3.5	
stop	2054	726.450		Removed	moisture			leak check		0.001	@ 10"	
start	2100	726.560	0.73	1.97	130	99	95	255	253	54	3.5	
	2147	761.24	0.73	1.97	131	103	95	257	253	52	3.5	
	2236	797.20	0.73	1.97	131	99	91	255	244	52	3.5	
	2330	837.04	0.73	1.97	132	98	90	254	254	53	3.5	
	0034	881.30	0.73	1.97	132	99	91	255	256	53	3.5	
	0132	923.01	0.73	1.97	130	99	91	256	239	49	3.5	
stop	0232	967.380		Removed moisture								
start	0243	967.513	0.73	1.97	130	89	88	253	255	51	3.5	
	0342	1012.34	0.73	1.97	129	97	89	254	261	54	3.5	
	0440	55.04	0.73	1.97	130	99	90	255	260	47	3.5	
	0535	95.52	0.73	1.97	130	99	91	254	264	47	3.5	
Stop	0614	122.422										
Avg.	—	696.609	~~.5244~~	1.959	131		97.74					
Check'd												

CONSOLE # A161397

FILTER #

AMBIENT TEMP. 70 - 80

PROBE LENGTH 6'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

STACK

Page 1 of 1

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Stack **Train** Bulk Particulate-Ex. Metals **Run No.** 1

Date 6/24/93 Time Start 1150 Time Finish 0725 (6/25/93) Test Duration 1112 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.000@ cfm 15" Hg

PTCF .84 DGMCF 0.994 Nozzle Dia. 0.24 inches Final Leak Rate 0.000@ cfm 8" Hg

Bar Press 29.33 " Hg

Static Press -0.5 " H2O Operator EZ

K = 2.864

	Travers Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
	N-2	11:50	157.048	0.62	1.776	128	89	88	254	259	60	6.0	
		12:08	171.030	0.62	1.776	129	100	90	254	260	57	6.0	
		12 47	200.722	0.62	1.78	129	106	96	254	260	52	6.0	
		13 10	218.635	0.62	1.78	130	110	96	256	260	56	6.0	
		1351	249.835	0.62	1.78	131	121	108	257	255	59	6.0	
		1436	283.944	0.62	1.78	129	116	116	256	248	63	6.0	
		1515	313.926	0.62	1.78	130	123	117	253	245	61	6.0	
*	STOP	1575	321.817										
	START	1532	321.820	0.62	1.78	130	111	112	254	246	59	6.0	
		1625	362.285	0.62	1.78	127	100	95	256	250	56	6.0	
TMD	→	1908	480.62	0.62	1.78	129	94	86	254	239	62	6.0	
		1936	501.92	0.62	1.78	130	96	85	253	253	49	6.0	
		2029	537.65	0.62	1.78	130	96	85	255	253	53	5.5	
		2128	580.24	0.62	1.78	129	105	93	256	242	57	5.5	
	stop	2216	610.853										
**	start	2307	610.950	0.62	1.78	127	83	84	251	239	56	7.5	
		0007	658.05	0.62	1.78	128	98	83	256	241	55	7.0	
		0102	697.92	0.62	1.78	128	94	84	254	249	52	7.5	
		0155	736.76	0.62	1.78	129	99	86	256	239	56	7.5	
		0312	783.93	0.62	1.78	129	96	85	255	247	50	7.5	
		0401	830.01	0.62	1.78	129	96	85	256	248	54	7.5	
		0453	868.46	0.62	1.78	130	101	89	256	239	51	7.5	
	stop	0524	891.485										
***	start	0529	891.598	0.62	1.78	129	97	91	252	260	56	7.5	
		0629	937.854	0.62	1.78	129	103	92	256	250	49	8.0	
		0717	969.526	0.62	1.78	128	104	94	256	251	48	8.0	
		0725	976.252										
	Avg.	—	818.991	.7874	1.78	129.00		97.565					
	Check'd												

CONSOLE # A16361

FILTER # # 908

AMBIENT TEMP. 84°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

*** cleaned imp. exited, leak chec through glassware 0.000@14"

REMARKS * REMOVE MOISTURE FROM IMPINGERS

** " " " " leak check through imp. 0.002@15" silica gel imp. replaced due to blow out of bottom. Liquid level in 3rd imp ~1" low

C-139

SOURCE SAMPLING FIELD DATA SHEET

STACK

Page 1 of 1

Plant Name Plant Yates Station Boiler No. 1

Sampling Location STACK **Train** Bulk Particulate-Ex. Metals **Run No.** 2

Date 6/25/93 Time Start 1246 Time Finish 0331 Test Duration 857 min.

Duct Dimensions ____ X ____ Diameter 13 ft Initial Leak Rate 0.000 @ 15" cfm

PTCF 0.841 DGMCF ~~0.994~~ 0.994 dsv Nozzle Dia. 0.24 inches Final Leak Rate 0.000 @ 14" cfm 2.7286 ~~2.7075~~

Bar Press 29.41 " Hg 1.029

Static Press -0.5 " H2O Operator EZ

H = ~~2.8124~~ (EZ)

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E-1	1246	214.097	0.64	1.75	124	81	81	225	259	74	3.0	
	1305	225.225	0.64	1.75	124	89	82	252	248	50	3.0	
	1322	237.899	0.64	1.75	124	94	85	254	250	52	3.0	
	1400	249.902	0.64	1.75	124	99	89	254	250	53	3.0	
	1430	255.726	0.64	1.75	124	101	92	250	262	52	3.0	
Stop	1528	326.305		Remove moisture from train.								
Start	1531	326.890	0.64	1.75	124	100	91	251	260	53	3.0	
	1612	355.845	0.64	1.75	124	101	92	254	250	53	3.0	
	1658	389.995	0.64	1.75	124	101	92	253	244	49	3.0	
Stop	1729	411.792		Stopped to Remove Moisture								
Start	1750	411.792	0.64	1.75	126	87	88	~~247~~ 248	252	73	2.0	
TMR ⇒	1902	464.37	0.64	1.75	126	96	87	254	253	46	2.0	
	1936	488.135	0.64	1.75	127	95	87	253	242	42	2.0	
	2016	516.39	0.64	1.75	127	96	87	253	248	41	2.0	
stop	2114	556.829	removed moisture			leak check 0.001 @ 13" through glass wool						
start	2118	556.935	0.64	1.75	125	86	83	252	255	53	2.0	
	2212	595.23	0.64	1.75	126	91	82	253	259	47	2.0	
	2305	632.71	0.64	1.75	127	92	84	253	255	46	2.0	
(Time)	~~0001~~	~~760.90~~										
	0001	670.90	0.64	1.75	127	92	84	257	252	48	2.0	
	0030	691.25	0.64	1.75	127	89	88	252	257	47	2.0	
	0125	729.41	0.64	1.75	126	86	79	253	256	50	2.0	
	0219	767.02	0.64	1.75	126	88	79	253	256	47	2.0	
	0312	803.01	0.64	1.75	124	87	79	253	244	45	2.0	
Stop	0331	815.698										
Avg.	—	600.91	1.8000	1.75	125.4		89.05					
Check'd												

CONSOLE # ~~A-16136~~ A16139 U

FILTER # # 981

AMBIENT TEMP. 76°F

PROBE LENGTH 6'

LINER MATERIAL GLASS

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

STACK

Plant Name Plant Yates Station Boiler No. 1 — EXTRACTABLE METALS

Sampling Location STACK — **Train** Bulk Particulate-~~Radionuclides~~ — **Run No.** 3

Date 6/26/93 — Time Start 1442 — Time Finish 0619/(0627) — Test Duration 880 min.

Duct Dimensions ____ X ____ — Diameter 13 ft — Initial Leak Rate <0.0016 cfm @ 15" Hg

PTCF 0.84 — DGMCF 1.029 — Nozzle Dia. 0.24 inches — Final Leak Rate 0.0010 cfm @ 10"

Bar Press 29.32 " Hg

Static Press −0.5 " H2O — Operator EZ & ME — K=2.6901

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
W-3	1442	943.115	0.58	1.560	125	85	84	254	253	65	4.0	
	1517	967.584	0.58	1.560	126	95	87	252	256	49	4.0	
stop	1537	979.676	REMOVE EXCESS MOISTURE FROM IMPINGERS.									
start	1540	979.676	0.58	1.560	126	91	86	257	256	55	3.5	
	1617	005.940	0.58	1.560	128	96	89	251	254	50	3.5	
	1650	027.760	0.58	1.56	126	97	89	250	254	46	3.5	
	1729	54.350	0.58	1.6	126	99	90	253	253	44	3.5	
stop	1743	63.953			Removed		Moisture					
start	1750	63.953	0.58	1.6	126	90	89	253	249	67	3.5	
TMD →	1823	89.31	0.58	1.6	128	100	91	255	239	47	3.5	
	1916	126.52	0.58	1.6	125	94	87	252	241	49	3.5	
	2005	159.89	0.58	1.6	125	91	83	253	256	45	3.5	
stop	2055	194.406			Removed	moisture		leak check		0.003	@12"	
start	2103	194.615	0.58	1.6	125	83	80	253	252	55	3.5	
	2146	224.01	0.58	1.6	126	91	83	252	239	47	3.5	
	2235	257.75	0.58	1.6	126	92	84	254	244	49	3.5	
	2329	293.40	0.58	1.6	127	93	85	254	255	46	3.5	
	0032	334.90	0.58	1.6	128	92	84	253	248	48	3.5	
	0131	374.90	0.58	1.6	125	90	83	253	256	44	3.5	
stop	0232	416.035	Removed	moisture			Leak	check	0.002	@12"		
start	0241	416.215	0.58	1.6	126	82	80	252	240	55	3.5	
	0341	458.11	0.58	1.6	126	88	80	253	255	48	3.5	
	0439	497.84	0.58	1.6	126	90	81	254	250	42	3.5	
	0533	535.24	0.58	1.6	126	89	82	252	241	43	3.5	
	0616	561.891										
Avg.	—	618.386	0.5857	1.583	126.0		90.583					
Check'd												

CONSOLE # A161394

FILTER # #924

AMBIENT TEMP. 89°F

PROBE LENGTH 6'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

~~MODIFIED METHOD~~ 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 1

SAMPLING LOCATION STACK RUN NO. 1 144 OV
DATE 10-25-13 TIME START 1147 TIME FINISH 1434 TEST DURATION 48.0 min.
DUCT DIMENSIONS — X — DIAMETER 13 INITIAL LEAK RATE 0.000 cfm @12"
PTCF — DGMCF 0.994 NOZZLE DIA. 0.195 inches FINAL LEAK RATE 0.000 cfm @11"
BAR PRESS 29.44 "Hg
STATIC PRESS -0.51 "H2O OPERATOR JEH

K

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
E-1	1147	981.490	.60	.70	128	80	79	—	—	68	1.0	—
-2	1159	987.420	.61	.72	128	84	80	—	—	52	1.5	—
1.16 -3	1211	993.200	.55	.64	128	89	83	—	—	55	1.5	—
STOP	1223	998.725										
S-1	1235	998.725	.60	.70	128	86	84	—	—	67	1.0	—
-2	1247	1004.380	.61	.72	128	93	87	—	—	54	1.5	—
-3	1259	1010.125	.58	.68	128	97	90	—	—	54	1.0	—
STOP	1311	1015.654	LEAK ✓	OK								
N-1	1318	1015.710	.60	.71	126	92	90	—	—	62	1.0	—
-2	1330	1021.400	.61	.72	125	97	92	—	—	56	1.5	—
-3	1342	1027.265	.55	.66	126	98	92	—	—	59	1.0	—
STOP	1354	1032.800	LEAK CHECK	OK								
1.20 S-1	1358	1032.920	.56	.67	126	96	93	—	—	61	1.0	—
-2	1410	1038.510	.58	.70	125	100	94	—	—	56	1.0	—
-3	1422	1044.300	.59	.71	126	102	95	—	—	58	1.0	—
STOP	1434	1050.129										
Avg.	—	68.563	0.76581	0.694	126.5	90.54						
Check'd	—											

CONSOLE # A161361
FILTER # —
AMBIENT TEMP. 81°F
PROBE LENGTH 6'
LINER MATERIAL PYREX

Velocity
% Moisture 14.0
Flowrate (DSCFM)
Isokinetic (%)

REMARKS
ALL TIMES CDT

~~MODIFIED METHOD 5~~ FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 1

SAMPLING LOCATION STACK RUN NO. 2
DATE 6-26-93 TIME START 1041 TIME FINISH 1445 TEST DURATION 144 min.
DUCT DIMENSIONS ____ X ____ DIAMETER 13.0 INITIAL LEAK RATE 0.000 cfm @ 11 "
PTCF .84 DGMCF .994 NOZZLE DIA. ~~.332~~ .195 inches FINAL LEAK RATE 0.002 cfm @ 15 "
BAR PRESS 29.32 "Hg
STATIC PRESS -.051 "H2O OPERATOR JEH

K	Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F	
1.16	E-1	1041	087.000	.61	.71	130	78	79	—	—	62	1.0	—	
	-2	1053	092.525	.64	.74	130	83	81	—	—	59	1.0	—	
	-3	1105	098.525	.56	.65	130	88	82	—	—	60	1.0	—	
	STOP	1117	103.792	LEAK ✓ OK										
1.15	H-1	1140	108.826	.62	.72	130	87	85	—	—	65	1.0	—	
	-2	1152	109.805	.64	.74	130	91	86	—	—	58	1.0	—	
	-3	1206	116.550	.57	.66	130	95	88	—	—	59	1.0	—	
	STOP	1218	121.770	LEAK ✓ OK										
1.16	W-1	1300	121.800	.56	.65	130	94	91	—	—	63	1.0	—	
	-2	1312	127.050	.59	.70	130	96	92	—	—	60	1.0	—	
	-3	1324	132.525	.52	.61	130	102	95	—	—	61	1.0	—	
	STOP	1336	137.922	LEAK ✓ OK										
1.17	S-1	1403	137.950	.61	.71	130	96	95	—	—	65	1.0	—	
	-2	1421	143.000	.61	.71	130	98	96	—	—	62	5.0	—	*
	-3	1433	149.250	.57	.67	130	102	97	—	—	65	5.0	—	
	STOP	1445	154.063											
	Avg.	—												
	Check'd	—	66.971	1.76886	.692	1300		10.708						

CONSOLE # A1G3B61
FILTER # —
AMBIENT TEMP. 78 F
PROBE LENGTH 6'
LINER MATERIAL PYREX

Velocity 50.64
% Moisture 11.0
Flowrate (DSCFM) ~~50.64~~ 50.50
Isokinetic (%) 92.91

REMARKS

ALL TIMES CDT * KOH CRYSTALIZING IN PROBE.

~~MODIFIED METHOD 5~~ FIELD DATA SHEET
CHROME VI

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of ___

SAMPLING LOCATION STACK RUN NO. 3
DATE 6-27-93 TIME START 0800 TIME FINISH 1150 TEST DURATION 146 min.
DUCT DIMENSIONS — X — DIAMETER 13.0 INITIAL LEAK RATE 0.007 cfm @12"
PTCF .84 DGMCF .994 NOZZLE DIA. ~~0.240~~ 0.195 inches FINAL LEAK RATE 0.008 cfm @10
BAR PRESS 29.21 " Hg
STATIC PRESS -0.51 " H2O OPERATOR JEH

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
K												
1.14 E-1	0800	154.230	.66	.75	130	73	72	—	—	68	1.0	—
-2	0812	160.180	.68	.77	130	77	73	—	—	65	1.0	—
-3	0824	166.145	.60	.68	130	82	76	—	—	65	1.0	—
STOP	0838	172.622	LEAK ✓		OK							
1.15 N-1	0901	172.655	.65	.74	130	84	82	—	—	68	1.0	—
-2	0913	178.530	.69	.79	130	91	85	—	—	51	1.0	—
-3	0925	184.450	.58	.67	130	96	88	—	—	54	1.0	—
STOP	0937	190.040	LEAK ✓		OK							
W-1	1011	190.066	.62	.71	130	92	89	—	—	68	1.0	—
-2	1023	195.660	.60	.69	130	94	90	—	—	53	1.0	—
-3	1035	201.380	.52	.60	130	98	92	—	—	55	1.0	—
STOP	1047	206.678										
W-1	1114	206.700	.62	.72	130	94	92	—	—	68	1.0	—
-2	1126	212.680	.64	.75	130	96	93	—	—	58	1.0	—
-3	1138	218.500	.58	.67	130	100	94	—	—	59	1.0	—
STOP	1150	223.900										
Avg.	—	69.589	.6284	.7117	130.0		875					
Check'd	—											

CONSOLE # A161361
FILTER # —
AMBIENT TEMP. 78°F
PROBE LENGTH 6'
LINER MATERIAL PYREX

Velocity
% Moisture
Flowrate (DSCFM)
Isokinetic (%)

REMARKS
ALL TIMES CDT

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1

Location ~~ESP~~ TMP ~~IN~~ STACK

Run No. 1

Date 6/21/93

Comments _____

Operator ~~JOHN~~ TMP DJV

Sorbing Reagents: _____(CO2) ✓ _____(O2) ✓ _____(CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	10.1	18.8	8.7			
2	0.0	10.2	19.0	8.8			

Averaged Results: % CO2 10.2 % O2 8.8

% CO _____ % N2 81

Dry Molecular Weight, MW (dry) =

=0.44 _____ +0.32 _____ +0.28 _____
(%CO2) (%O2) (%CO + % N2)

= _____ + _____ + ___

Y-096

Run # 1 Train orsat ESP Inlet / ESP Outlet / (Stack)

Component bag

Date 6-21-93 Time 1900 Smplr DJV

Lab on site Analysis O2 CO2

Tare Wt. na Final Wt. na

C-145

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1 Comments

Location STACK

Run No. 2

Date 6-22-93 Operator JEH

Sorbing Reagents: ✓ (CO2) ✓ (O2) (CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	10.8	10.8	19.4	8.6		
2	0.0	10.7	10.7	19.3	8.6		

Averaged Results: % CO2 10.8 % O2 8.6

% CO % N2 80.6

Dry Molecular Weight, MW (dry) =

=0.44 (%CO2) +0.32 (%O2) +0.28 (%CO + % N2)

= + +

Y-252

Run # 2 Train Orsat ~~Stack~~ ESP Inlet / ESP Outlet (Stack)

Component bag

Date 6-22-93 Time Smplr DJV

Lab on site Analysis CO_2 O_2

Tare Wt. Final Wt.

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1

Location Stack

Run No. 3

Date 6/22/93

Comments _____

Operator TMP

Sorbing Reagents: _____ (CO2) ✓ _____ (O2) ✓ _____ (CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	10.2	10.2	18.6	8.4		
2	0.0	10.2	10.2	18.7	8.5		

Averaged Results: % CO2 10.2 % O2 8.5

% CO _____ % N2 81.3

Dry Molecular Weight, MW (dry) =

=0.44 _____ +0.32 _____ +0.28 _____
(%CO2) (%O2) (%CO + % N2)

= _____ + _____ + __

Y-257

Run # 3 Train Orsat

ESP Inlet
ESP Outlet
(Stack)

Component Bag

Date 6-22-93 Time _____ Smplr DJV

Lab on site Analysis CO_2 O_2

Tare Wt. _____ Final Wt. _____

C-147

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1 Comments

Location LAB - AUDIT SAMPLE

Run No. AUDIT

Date 6/23/93 Operator TMP

Sorbing Reagents: (CO2) ✓ (O2) ✓ (CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	0.0	0.0	9.0	9.0		
2	0.0	0.0	0.0	9.0	9.0		

Averaged Results: % CO2 0.0 % O2 9.0

% CO % N2

Dry Molecular Weight, MW (dry) =

=0.44 (%CO2) +0.32 (%O2) +0.28 (%CO + % N2)

= + +

Y-197

Run #B Train orsat

Component Cyld.

Date 6-23-93 Time 1450 Smplr TMP

Lab on site Analysis $CO_2 O_2$ CC

Tare Wt. Final Wt.

LAB
~~ESP~~ Inlet
ESP Outlet
Stack

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1 Comments

Location STACK

Run No. 2-1

Date 06-25-93 Operator TMP

Sorbing Reagents: (CO2) (O2) (CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	11.0	11.0	18.8	7.8		
2	0.0	10.8	10.8	18.6	7.8		

Averaged Results: % CO2 10.9 % O2 7.8

% CO % N2

Dry Molecular Weight, MW (dry) =

=0.44 (%CO2) +0.32 (%O2) +0.28 (%CO + % N2)

Y-319

= + + Run #2-1 Train orsat ESP Inlet ESP Outlet Stack

Component bag

Date 6-25-93 Time 1400 Smplr DJV

Lab on site Analysis CO_2 O_2

Tare WT(g) Final Wt(g)

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1 Comments

Location STACK

Run No. phase 2 run 2

Date 6/26/93 Operator TMP

Sorbing Reagents: (CO2) ✓ (O2) ✓ (CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	11.4	11.4	18.8	7.4		
2	0.0	11.4	11.4	18.8	7.4		

Averaged Results: % CO2 11.4 % O2 7.4

% CO ____ % N2 ____

Dry Molecular Weight, MW (dry) =

=0.44 ____ +0.32 ____ +0.28 ____
(%CO2) (%O2) (%CO + % N2)

= ____ + ____ + ____

Y-385

Run # 2-2 Train ORSAT ESP Inlet / ESP Outlet / (Stack)

Component ORSAT

Date 6/26/93 Time 1400 Smplr DJV

Lab Mobile Lab Analysis ORSAT

Tare WT(g) — Final Wt(g) —

ORSAT DATA SHEET

Plant Plant Yates Station Boiler No. 1

Location STACK

Run No. 2-3

Date 6/27/93

Comments

Operator TMP

Sorbing Reagents: ✓(CO2) ✓(O2) (CO)

Replicate Number	Original Volume Reading	(CO2) Reading 2 (ml)	(CO2) Volume (2-1) (ml)	(O2) Reading 3 (ml)	(O2) Volume (3-2) (ml)	(CO) Reading 4 (ml)	(CO) Volume (4-3) (ml)
1	0.0	11.6	11.6	19.0	7.4		
2	0.0	11.6	11.6	19.0	7.4		

Averaged Results: % CO2 11.6 % O2 7.4

% CO % N2

Dry Molecular Weight, MW (dry) =

=0.44 (%CO2) +0.32 (%O2) +0.28 (%CO + % N2)

= + + ___

Y-453

Run #2-3 Train ORSAT ESP Inlet / ESP Outlet / (Stack)

Component ORSAT

Date 6/27/93 Time 1300 Smplr DJV

Lab On Site Analysis O2/CO2

Tare WT(g) — Final Wt(g) —

TRAVERSE FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No1

Sampling Location Stack

Date 06-18-93

Operator DJV, JEH

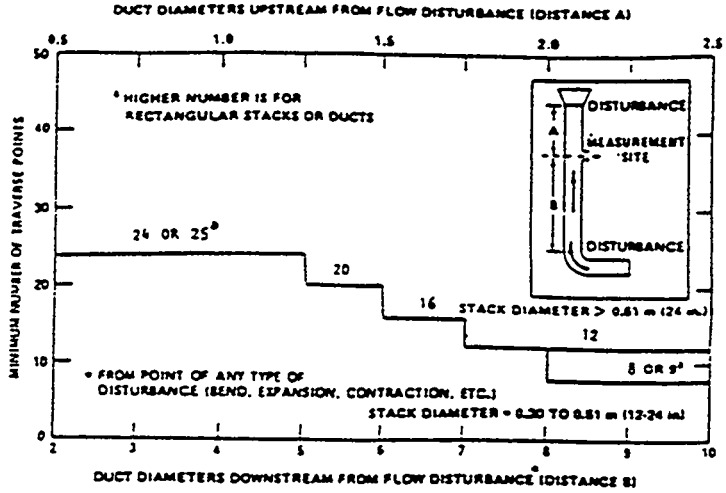
Stack Diameter 13'

Sample Port Diameter 4"

Sample Port Depth 6"

Distance Upstream

Distance downstream



Traverse Point Number	Number Traverse Points On A Diameter											
	2	4	6	8	10	12	14	16	18	20	22	24
1	14.6	6.7	4.4	3.2	2.6	2.1	1.8	1.6	1.4	1.3	1.1	1.1
2	85.4	25.0	14.6	10.5	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2
3		75.0	29.6	19.4	14.6	11.8	9.9	8.5	7.5	6.7	6.0	5.5
4		93.3	70.4	32.3	22.6	17.7	14.6	12.5	10.9	9.7	8.7	7.9
5			85.4	67.7	34.2	25.0	20.1	16.9	14.6	12.9	11.6	10.5
6			95.6	80.6	65.8	35.6	26.9	22.0	18.8	16.5	14.6	13.2
7				89.5	77.4	64.4	36.6	28.3	23.6	20.4	18.0	16.1
8				96.8	85.4	75.0	63.4	37.5	29.6	25.0	21.8	19.4
9					91.8	82.3	73.1	62.5	38.2	30.6	26.2	23.0
10					97.4	88.2	79.9	71.7	61.8	38.8	31.5	27.2
11						93.3	85.4	78.0	70.4	61.2	39.3	32.3
12						97.9	90.1	83.1	76.4	69.4	60.7	39.8
13							94.3	87.5	81.2	75.0	68.5	60.2
14							98.2	91.5	85.4	79.6	73.8	67.7
15								95.1	89.1	83.5	78.2	72.8
16								98.4	92.5	87.1	82.0	77.0
17									95.6	90.3	85.4	80.6
18									98.6	93.3	88.4	83.9
19										96.1	91.3	86.8
20										98.7	94.0	89.5
21											96.5	92.1
22											98.9	94.5
23												96.8
24												98.9

Traverse Points	
No.	Distance From Wall
1	6.86 + 6"
2	22.8 + 6"
3	46.2 + 6"
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

VELOCITY PROFILE FIELD DATA

Plant Name = Yates

Sampling Location Stack Sample Ident. Preliminary Flow

Date 06-18-93 (MMDDYY) Time Start 1500 (HHMM) Time Finish 1506 (HHMM)

Duct Dimensions _____ x _____ ft. or Diameter 13 ft.

PTCF 0.84 % H_2O _____

Bar Press. 29.3 " Hg % CO _____ % N_2 _____

Static Press. -0.5 " H_2O % CO_2 ≈ 9.0 % H_2 _____

Operator Initials DJV, JEH % O_2 ≈ 7.0 % CH_4 _____

Pt.	Stack Temp. °F			Velocity Pressure " H_2O			Other ( )		
	#1	#2	Ave.	#1	#2	Ave.	#1	#2	Ave.
E-1	122			0.70					
E-2	122			0.69					
E-3	121			0.61					
N-1	121			0.66					
N-2	122			0.71					
N-3	121			0.59					
W-1	122			0.68					
W-2	122			0.64					
W-3	122			0.49					
S-1	121			0.64					
S-2	122			0.67					
S-3	121			0.58					

Weather _____

Remarks Point 1 all the way in.

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1

DATE 06-21-93

SAMPLING LOCATION ESP INLET

RUN NO. 1 TEST NO. 1

OPERATOR RJW

AMBIENT TEMPERATURE 80°F

BAROMETRIC PRESSURE 29.51

BLANK TUBE NUMBERS T: 14528A T/C: 14528B

ASSUMED MOISTURE % 7.0

METER BOX NO. A167043

METER FACTOR 0.9910

PROBE HEATER SETTING 250°F

COMMENTS SAMPLED @ 0.5L PER MIN
20L SAMPLES

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time	Gas Meter Reading	Meter Pressure	Stack Temp	DGM Temp	Probe Temp	1st Condensor Outlet Temp.	2nd Condensor Outlet Temp.	Pump Vacuum Pressure Temp
1ST PAIR	0@17"		T	0	1400	07.000	1.4	306	76	250	55	59	5.0
			14540A	10	1410	11.85	1.5	309	78	242	53	59	5.0
			T/C	20	1420	16.90	1.4	307	81	256	53	58	5.0
			14540B	30	1430	22.17	1.4	310	82	256	53	58	5.0
↓		0@16"		STOP	1440	27.235							
2ND PAIR	0@15		T	0	1455	28.000	1.4	310	82	259	55	59	3.0
			14543A	10	1505	33.12	1.4	318	83	261	54	58	3.0
			T/C	20	1515	37.89	1.4	320	83	264	55	59	3.0
			14543B	30	1525	43.14	1.4	319	85	265	56	59	3.0
↓		0@17"	~~14541A~~ RJW	STOP	1535	48.150							
3RD PAIR	0@18"		T	0	1550	50.000	1.5	300	85	265	55	52	4.0
			14541A	10	1600	54.84	1.5	301	85	266	55	51	4.0
			T/C	20	1610	59.92	1.4	305	85	261	55	52	4.0
			14541B	30	1620	65.21	1.4	308	87	257	56	53	4.0
↓		0@15"		STOP	1630	70.115							
			T	0									
			T/C										

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1
DATE 06-22-93
SAMPLING LOCATION ESP INLET
RUN NO. 2 TEST NO. 1
OPERATOR RVW
AMBIENT TEMPERATURE 80 °F
BAROMETRIC PRESSURE 29.4
BLANK TUBE NUMBERS T: 14519A T/C: 14519B

ASSUMED MOISTURE % 7.0
METER BOX NO. A1674043
METER FACTOR 0.9910
PROBE HEATER SETTING 250°F
COMMENTS Sampled @ 0.5L per min
20L Samples

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time	Gas Meter Reading	Meter Pressure	Stack Temp	DGM Temp	Probe Temp	1st Condensor Outlet Temp.	2nd Condensor Outlet Temp.	Pump Vacuum Pressure Temp
1ST PAIR	0@17"		T	0	0742	71.000	1.4	274	73	257	61	59	4.0
			14510A	10	0752	75.93	1.4	269	74	258	60	60	4.0
			T/C	20	0802	80.87	1.4	270	76	259	60	57	4.0
			14510B	30	0812	86.07	1.4	272	78	258	60	56	4.0
↓		0@15"		STOP	0822	91.045							
2ND PAIR	0@16"		T	0	0910	92.000	1.4	275	78	261	63	58	5.0
			14513A	10	0920	96.94	1.4	280	79	260	60	56	5.0
			T/C	20	0930	101.80	1.4	276	80	260	45	58	5.0
			14513B	30	0940	106.89	1.4	293	83	263	57	61	5.0
↓		0@16"		STOP	0950	112.030							
3RD PAIR	0@15"		T	0	1001	113.000	1.4	295	84	262	58	63	4.0
			14512A	10	1011	118.16	1.4	302	84	262	57	61	5.0
			T/C	20	1021	123.14	1.4	300	85	264	57	62	5.0
			14512B	30	1031	128.21	1.4	301	86	263	57	61	5.0
↓		0@16"		STOP	1041	133.050							
			T	0									
			T/C										

VOST FIELD DATA SHEET

PLANT Plant Yates Station Boiler No. 1
DATE 06-23-92
SAMPLING LOCATION ESP INLET
RUN NO. 3 TEST NO. 1
OPERATOR RVW
AMBIENT TEMPERATURE 75 °F
BAROMETRIC PRESSURE 29.39
BLANK TUBE NUMBERS T: 14502A T/C: 14502B

ASSUMED MOISTURE % 7.0
METER BOX NO. A167043
METER FACTOR 0.9910
PROBE HEATER SETTING 250 °F
COMMENTS Sampled @ 0.5 L per min
2.0 L Samples

Test Number	Leak Check ("Hg) Pre	Leak Check ("Hg) Post	Tube N (Lab)	Sampling (min)	Clock Time	Gas Meter Reading	Meter Pressure	Stack Temp	DGM Temp	Probe Temp	1st Condensor Outlet Temp	2nd Condensor Outlet Temp.	Pump Vacuum Pressure Temp
1ST PAIR	0 @ 16"		T	0	0742	156.000	1.5	297	RVW 76	262	60	61	5.0
			14501A	10	0752	161.07	1.5	300	RVW 78	261	60	60	5.0
			T/C	20	0802	166.12	1.4	294	78	263	61	62	5.0
			14501B	30	0812	170.88	1.4	309	80	266	57	60	5.0
↓		0 @ 15"		STOP	0822	176.040							
2ND PAIR	0 @ 15"		T	0	0840	177.000	1.4	305	83	258	60	61	5.0
			14504A	10	0850	182.08	1.4	311	84	262	57	64	5.0
			T/C	20	0900	186.98	1.4	307	86	257	62	64	5.0
			14504B	30	0910	190.96	1.4	314	87	250	62	64	5.0
↓		0 @ 15"		STOP	0920	197.075							
3RD PAIR	0 @ 18"		T	0	0932	197.500	1.4	315	88	251	63	63	4.0
			14537A	10	0942	202.47	1.4	317	88	247	61	62	4.0
			T/C	20	0952	207.38	1.4	320	90	256	60	62	4.0
			14537B	30	1002	212.34	1.4	318	91	259	60	62	4.0
		0 @ 16"		STOP	1012	217.58							
			T	0									
			T/C										

(Entered)

MODIFIED METHOD 5 FIELD DATA SHEET

1 of 3

PLANT NAME Plant Yates Station Boiler No. 1 — Page 1 of ___

SAMPLING LOCATION ESP inlet — RUN NO. Semivolatile Organics Phase I

DATE 6/21/99 — TIME START 1135 — TIME FINISH 1815 — TEST DURATION 240 Rqmt. min.

DUCT DIMENSIONS 8.5 X 57 — DIAMETER ___ — INITIAL LEAK RATE 0.012 @ 15" cfm

PTCF 0.84 — DGMCF 0.929 — NOZZLE DIA. 0.358 inches — FINAL LEAK RATE 0.015 @ 11" cfm

BAR PRESS 29.51 " Hg

STATIC PRESS -6.4 " H2O — OPERATOR JWM

ΔH@ 1.922

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F	
	1255				283						4		KFm
E1-1	~~1259~~	075.475	0.09	1.03	~~283~~	73	72	—	235	54	~~39~~	39	11.47
2	1305	78.3	0.09	1.03	298	74	73	—	237	48	~~39~~	39	11.2
3	1305	80.9	0.06	0.68	297	76	74	—	240	47	4	39	
4	1310	83.1	0.03	0.34	254	79	76	—	245	49	4	39	12.54
5	1315	84.6	0.05	0.56	293	79	76	—	250	52	4	40	
6	1320	86.2	0.03	0.34	~~299~~	80	77	—	247	51	4	40	
Stop	1325	88.020	Good leak check cal 6"Hg										
						X=76							
E3-1	1336	~~X~~88.065	0.02	0.22	295	80	78	—	230	60	2	40	11.3
2	1341	89.7	0.02	0.22	308	80	78	—	236	59	2	40	
3	1346	91.0	0.04	0.45	307	80	78	—	232	56	4	40	
4	1351	92.8	0.08	0.91	308	81	79	—	240	52	4	41	12.48
5	1356	95.3	0.10	1.15	307	83	80	—	248	49	4	41	
6	1401	98.0	0.10	1.15	306	85	81	—	251	50	4	42	
Stop	1406	101.046	Good leak check cal 6"Hg										
						X=80							
E4-1	1415	101.119	0.02	0.23	290	85	82	—	245	60	2	42	
2	1420	102.7	0.04	0.45	308	85	82	—	243	57	2	43	
3	1425	104.3	0.06	0.68	308	85	83	—	251	55	2	43	
4	1430	106.3	0.10	1.11	310	85	82	—	250	52	5	42	11.12
5	1435	109.4	0.18	2.0	308	88	85	—	243	53	7	43	5.924
6	1440	113.8	~~0.23~~ 0.22	2.4	309	90	88	—	244	55	8	44	
Stop	1445	117.043	Good leak check @ 10"Hg										
						X=85							
E6-1			0.02										
2	~~1458~~	~~117.278~~	~~0.03~~	0.23	318	85	~~86~~ 84	—	230	62	3	44	10.8
3	~~1503~~ 1453	118.8	~~0.03~~ 0.02	0.33	~~323~~	~~86~~	84	—	235	60	4	44	
4	1458 1508	120.4	~~0.06~~	0.65		85	84			~~58~~	5	45	
5	1513			Next Data Sheet					JWM				
6	1518												
Avg.	1523				299								
Check'd	—												

CONSOLE # ___

FILTER # Eastec IC

AMBIENT TEMP. 90°F

PROBE LENGTH 8ft

LINER MATERIAL quartz glass

Velocity ___

% Moisture ___

Flowrate (DSCFM) ___

Isokinetic (%) ___

REMARKS

✓

MODIFIED METHOD 5 FIELD DATA SHEET

2 of 3

PLANT NAME Plant Yates Station Boiler No. 1 Page ____ of ____

SAMPLING LOCATION Inlet RUN NO. Semivolatile Organic Phase I Run 1
DATE 6/24/93 TIME START ____ TIME FINISH ____ TEST DURATION ____ min.
DUCT DIMENSIONS ____ X ____ DIAMETER ____ INITIAL LEAK RATE ____ cfm
PTCF ____ DGMCF ____ NOZZLE DIA. ____ inches FINAL LEAK RATE ____ cfm
BAR PRESS ____ " Hg
STATIC PRESS ____ " H2O OPERATOR ____

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
E6-1	1458	117.278	0.02	0.23	318	85	84	—	230	62	3	44
2	1503	118.8	0.03	0.33	323	86	84	—	235	60	4	44
3	1508	120.4	0.06	0.65	320	85	84	—	241	58	5	45
4	1513		0.1	1.1	320	87	84	—	250	56	6	47
5	1518	125.4	0.16	1.7	321	88	84	—	244	57	7	48
6	1523	129.5	0.2	2.2	330	90	86	—	240	59	7	50
Stop	1528	132.626				x̄=86						
W2-1	1541	132.755	0.02	0.2	278	87	86	—	230	59	3	44
2	1546	134.1	0.04	0.44	300	87	85	—	255	56	4	43
3	1551	135.6	0.05	0.56	293	87	85	—	240	53	4	43
4	1556	137.7	0.03	0.33	302	88	86	—	245	54	4	42
5	1601	139.5	0.06	0.67	300	89	86	—	247	54	5	42
6	1606	142.0	0.17	1.9	305	91	87	—	246	57	8	44
Stop	1611	145.331				x̄=89						
W4-1	1618	145.552	0.02	0.2	298	90	89	—	230	59	3	44
2	1623	~~148.5~~	0.04	0.44	299	90	88	—	254	57	5	44
3	1628	148.5	0.07	0.78	291	90	88	—	255	54	5	43
4	1633	150.9	0.12	1.3	298	91	88	—	255	52	7	43
5	1638	154.2	0.15	1.7	286	93	89	—	254	52	8	45
6	1643	157.7	0.16	1.8	282	95	90	—	252	52	5	46
Stop	1648	160.865										
						ȳ=90						
Avg.	—				303	88	87					
Check'd	—											

15:34
12:57
15:313

CONSOLE # ____
FILTER # ____
AMBIENT TEMP. ____
PROBE LENGTH ____
LINER MATERIAL ____

Velocity ____
% Moisture ____
Flowrate (DSCFM) ____
Isokinetic (%) ____

REMARKS

V

MODIFIED METHOD 5 FIELD DATA SHEET

3 of 3

PLANT NAME Plant Yates Station Boiler No. 1 Page ____ of ____

SAMPLING LOCATION INLET RUN NO. Semivolatile Organic Phase I Run 1
DATE 6/21/97 TIME START ____ TIME FINISH ____ TEST DURATION ____ min.
DUCT DIMENSIONS ____ X ____ DIAMETER ____ INITIAL LEAK RATE ____ cfm
PTCF ____ DGMCF ____ NOZZLE DIA. ____ inches FINAL LEAK RATE ____ cfm
BAR PRESS ____ " Hg
STATIC PRESS ____ " H2O OPERATOR ____

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
W6 1	1658	161.014	0.01	0.11	265	90	89	—	225	61	2	46
2	1703	162.0	0.02	0.22	281	90	90	—	253	61	4	47
3	1708	—	0.02	0.22	280	90	89	—	242	60	4	48
4	1713	165.0	0.03	0.35	291	90	89	—	225	60	4	51
5	1718	—	0.05	0.57	271	91	89	—	238	60	5	51
6	1723	168.3	0.05	0.57	273	91	90	—	249	60	5	52
Stop	1728	170.421										
W8 1	1745	171.000	0.06	0.69	273	89	89	—	227	64	5	56
2	1750	173.0	0.03	0.34	277	89	89	—	237	60	4	52
3	1755	174.7	0.02	0.23	279	90	89	—	249	58	4	47
4	1800	176.1	0.02	0.23	279	90	89	—	253	58	4	46
5	1805	177.4	0.02	0.23	273	90	89	—	244	59	4	45
6	1810	—	0.04	0.46	282	91	90	—	244	58	5	45
Stop	1815	180.685										
Avg.	—	103.779	ΔP=0.023485	0.2719375	275.29	45.354						
Check'd	—	✓			✓							

9.407
9.685

CONSOLE # ____
FILTER # ____
AMBIENT TEMP. ____
PROBE LENGTH ____
LINER MATERIAL ____

Velocity ____
% Moisture ____
Flowrate (DSCFM) ____
Isokinetic (%) ____

W1 - VOST collection
W8 - Aldehyde collection
E7 - PSD collection

Single pt sampling for Aldehyde < 150

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 3

SAMPLING LOCATION ESP INLET RUN NO. 2 Semi Volatile Phase I Run 2
DATE 6/22/98 TIME START 0729 TIME FINISH 1341 TEST DURATION 240 min.
DUCT DIMENSIONS 8'6" X 45'57" DIAMETER NA INITIAL LEAK RATE 0.010@ cfm 15"Hg
PTCF 0.84 DGMCF 0.999 NOZZLE DIA. 0.358 inches FINAL LEAK RATE 0.018@ cfm 12"Hg
BAR PRESS 29.40 "Hg
STATIC PRESS -6.2 "H2O OPERATOR SWM

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
WB-1	729	187.155	0.07	0.77	270	72	71	—	233	56	3	56
2	734	189.3	0.06	0.66	272	73	72	—	253	54	6	53
3	739	191.3	0.03	0.33	274	75	72	—	251	57	4	56
4	744	193.0	0.02	0.22	271	75	73	—	247	56	3	53
10.295 5	749	194.30	0.03	0.33	269	76	73	—	250	58	5	56
6	754	195.9	0.04	0.44	269	77	74	—	250	57	6	54
Stop	757	197.450	Good Final leak check									
									224			
WB-1	825	198.107	0.03	0.34	~~279~~ 279 SWM ~~274~~	77	75	—	~~279~~ 232	58	2	48
2	830	199.9	0.04	0.45	~~282~~ 282	77	75	—	~~254~~	53	3	46
3	835	201.6	0.06	0.68	279	78	76	—	248	51	4	46
13.275 4	840	203.8	0.09	0.79	280	81	77	—	243	49	4	46
5	845	206.3	0.06	0.68	279	82	78	—	243	49	4	47
6	850	208.6	0.10	1.1		85	80			49	5	47
Stop	855	211.382	Good Final leak check									
			Good Initial Leak check									
WB-1	930	211.568	0.03	0.34	276	80	80	—	222	58	3	46
2	935	213.3	0.05	0.55	~~292~~ 300	81	80	—	252	55	3	47
16.310 3	940	215.3	0.07	0.77	294	82	80	—	245	53	5	45
4	945	217.7	0.12	1.3	291	83	80	—	250	54	5	48
5	950	220.7	0.15	1.7	293	85	81	—	249	51	6	48
6	955	224.3	0.17	1.9	293	88	82	—	253	53	7	50
Stop	1000	227.878	Good leak check									
Avg.	—											
Check'd	—											

CONSOLE # A161363
FILTER #
AMBIENT TEMP. 80@start
PROBE LENGTH 6ft
LINER MATERIAL quartz

Velocity
% Moisture
Flowrate (DSCFM)
Isokinetic (%)

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 — Page 2 of 3

SAMPLING LOCATION Inlet — RUN NO. Semivolatile Organics Phase 1 Run 2

DATE ____ TIME START ____ TIME FINISH ____ TEST DURATION ____ min.

DUCT DIMENSIONS ____ X ____ DIAMETER ____ INITIAL LEAK RATE ____ cfm

PTCF ____ DGMCF ____ NOZZLE DIA. ____ inches FINAL LEAK RATE ____ cfm

BAR PRESS ____ " Hg

STATIC PRESS ____ " H2O OPERATOR JWM

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
5.180												
42-1	1003	227.968	0.03	0.33	292	87	84	—	247	60	3	50
2	1008	229.7	0.04	0.44	298	88	84	—	247	60	3	57
3	1013	231.6	0.05	0.55	302	87	84	—	250	54	4	47
4	1018	233.6	0.09	0.99	303	88	84	—	252	52	5	47
5	1023	236.4	0.12	1.3	319	90	85	—	253	50	6	46
6	1028	239.6	0.16	1.8	319	91	86	—	245	50	7	46
Stop	1033	243.148	Good Final leak check									
			Good Initial leak check									
~~E7-1~~	Swm											
E-12	1049	243.311	0.04	0.44	325	87	86	—	229	58	4	45
2	1054	245.6	0.05	0.55	328	87	86	—	249	58	5	44
17.848 3	1059	247.5	0.08	0.87	330	87	86	—	248	55	5	45
4	1104	250.2	0.12	1.3	337	89	86	—	254	52	7	44
5	1109	253.2	0.18	2.0	341	91	87	—	251	52	8	43
~~6 Stop~~	1114	257.3	0.21	2.2	336	93	88	—		53	10	45
Stop	1119	261.159	Good Final leak check									
ES-1	1126	261.347	0.02	0.21	313	91	89	—	228	61	3	50
2	1131	262.8	0.03	0.32	324	91	89	—	256	60	4	49
6.058 3	1136	264.3	0.07	0.75	323	92	89	—	250	58	5	49
4	1141	266.7	0.13	1.4	327	93	90	—	250	55	8	49
5	1146	269.8	0.19	2.0	330	94	90	—	250	55	10	49
6	1151	273.8	0.20	2.1	324	96	91	—	242	58	11	50
STOP	1156	277.405										
Avg.	—											
Check'd	—											

CONSOLE # ____

FILTER # ____

AMBIENT TEMP. ____

PROBE LENGTH ____

LINER MATERIAL ____

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 3 of 3

SAMPLING LOCATION Inlet RUN NO. Semi volatile Phase I Run 2
DATE _____ TIME START _____ TIME FINISH _____ TEST DURATION _____ min.
DUCT DIMENSIONS _____ X _____ DIAMETER _____ INITIAL LEAK RATE _____ cfm
PTCF _____ DGMCF _____ NOZZLE DIA. _____ inches FINAL LEAK RATE _____ cfm
BAR PRESS _____ " Hg
STATIC PRESS _____ " H2O OPERATOR JWM

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
W3-1	1227	278.979	0.03	0.32	306	88	88	~~223~~	223	64	3	~~53~~ 53
2	1232	280.4	0.02	0.21	313	87	87	—	239	64	2	56
3	1237	281.7	0.05	0.54	314	87	87	—	250	60	5	53
4	1242	283.8	0.07	0.75	316	90	88	—	250	58	6	49
5	1247	286.3	0.10	1.1	316	91	88	—	239	56	7	46
6	1252	289.0	0.14	1.5	315	93	89	—	243	56	9	47
Stop	1257	292.345	Good Final leak check					Good initial.				
W1-1	1311	292.700	~~0.09~~ 0.10	0.96	311	91	89	—	225	57	7	49
2	1316	—	0.08	0.86	312	91	89	—	242	57	7	49
3	1321	298.0	0.04	0.43	311	91	89	—	248	59	5	50
4	1326	299.8	0.04	0.43	309	91	89	—	249	61	5	51
5	1331	301.7	0.04	0.43	309	91	89	—	252	62	5	49
6	1336	303.5	0.04	0.43	305	91	89	—	249	64	5	52
Stop	1341	305.411	Final leak check 0.014 @ 12" Hg									
		— zero pitot leak check - JWM										
Avg.	—	115.043	JDP 0.26513	0.45125	303.52	84.74						
Check'd	—	V TB		V TB								

13.366
13.72
12.711

CONSOLE # _____
FILTER # _____
AMBIENT TEMP. _____
PROBE LENGTH _____
LINER MATERIAL _____

Velocity
% Moisture
Flowrate (DSCFM)
Isokinetic (%)

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of 3

SAMPLING LOCATION INLET RUN NO. 3 Phase 1 Run 3
DATE 6/23/93 TIME START 0707 TIME FINISH 1250 TEST DURATION 240 min.
DUCT DIMENSIONS ____ X ____ DIAMETER ____ INITIAL LEAK RATE 0.0058 cfm 13:44
PTCF 0.84 DGMCF 0.999 NOZZLE DIA. 0.359 / 0.358 inches FINAL LEAK RATE 0.0146 cfm 11:47
BAR PRESS 29.39 " Hg
STATIC PRESS -6.0 " H2O OPERATOR JWM

Traverse Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
E1-1	0707	314.121	0.1	1.1	290	69	68	—	230	51	3.5	40
2	0712	317.0	0.08	0.87	290	71	69	—	256	51	4	42
3	0717	319.5	0.07	0.76	293	74	70	—	250	52	4	43
4	0722	321.8	0.05	0.54	293	75	71	—	250	53	3	44
5	0727	323.8	0.06	0.65	292	76	72	—	242	453		44
6	0732	326.0	0.06	0.65	287	78	73	—	244	52	4.0	42
STOP	0737	328.105	Good leak check									
E3-1	0740	328.358	0.07	0.22	293	78	74	—	240	62	2.0	56
-2	0745	329.9	0.03	0.33	298	79	75	—	241	65	3.0	58
-3	0750	331.4	0.05	0.55	297	80	76	—	247	70	4.0	55
-4	0755	333.4	0.08	0.87	297	82	77	—	252	68	4.5	51
5	0800	336.0	0.11	1.2	296	83	70	—	255	68	5	49
6	0805	339.2	0.16	1.75	292	86	79	—	254	69	7	50
Stop	0810	342.495										
E5-1	817	342.769	0.03	0.33	300	84	80	—	226	69	3	58
2	822	44.3	0.05	0.55	309	84	80	—	258	69	3.5	54
3	827	346.1	0.06	0.66	309	85	81	—	249	69	4	51
4	832	348.5	0.12	1.32	313	88	83	—	248	70	6	50
5	837	351.7	0.17	1.9	311	89	84	—	250	71	7	49
6	842	355.4	0.22	2.4	311	93	86	—	246	72	9	57
Stop	847	360.062										
Avg.	—	45.667										
Check'd	—											

CONSOLE # ____
FILTER # ____
AMBIENT TEMP. ____
PROBE LENGTH ____
LINER MATERIAL ____

Velocity ____
% Moisture ____
Flowrate (DSCFM) ____
Isokinetic (%) ____

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 2 of 3

SAMPLING LOCATION Inlet RUN NO. Semi Vol Phase 2 - Run 3
DATE _____ TIME START _____ TIME FINISH _____ TEST DURATION _____ min.
DUCT DIMENSIONS _____ X _____ DIAMETER _____ INITIAL LEAK RATE _____ cfm
PTCF _____ DGMCF _____ NOZZLE DIA. _____ inches FINAL LEAK RATE _____ cfm
BAR PRESS _____ " Hg
STATIC PRESS _____ " H2O OPERATOR JW

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
E-1	851	360.172	0.03	0.33	316	91	87	—	227	58	3	54
2	856	361.8	0.03	0.33	320	92	88	—	257	57	3	57
3	901	363.7	0.05	0.55	326	92	88	—	243	56	4	53
4	906	365.8	0.09	1.0	327	92	89	—	252	53	5	57
5	911	368.5	0.15	1.7	332	94	89	—	254	52	7	48
6	916	372.1	0.21	2.3	330	96	91	—	246	52	9.5	50
Stop	921	376.091	Good leak Check Final									
			Good leak Check Initial									
W-2-1	946	376.420	0.03	0.33	278	90	89	—	219	65	3	52
2	951	378.2	0.03	0.33	300	91	89	—	258	60	3.5	52
3	956	379.9	0.04	0.44	304	91	89	—	250	59	4	53
4	1001	381.8	0.07	0.78	307	91	89	—	248	58	5	53
5	1006	384.2	0.12	1.3	297	93	90	—	248	56	7	54
6	1011	387.4	0.15	1.7	307	96	91	—	250	57	8	55
Stop	1016	390.767	Good Final leak check									
W-4-1	1022	390.980	0.02	0.22	290	94	92	—	216	67	3	59
2	1027	392.5	0.02	0.22	298	95	93	—	242	64	3	55
3	1032	393.8	0.05	0.55	297	95	93	—	245	58	5	53
4	1037	396.0	0.1	1.1	307	96	93	—	242	54	7	49
5	1042	398.8	0.13	1.45	307	97	93	—	244	52	8	49
6	1047	402.0	0.14	1.6	299	99	94	—	245	52	8.5	49
Stop	1052	405.540	Good Final leak check									
Avg.	—	44.826										
Check'd	—											

CONSOLE # _____
FILTER # _____
AMBIENT TEMP. _____
PROBE LENGTH _____
LINER MATERIAL _____

Velocity _____
% Moisture _____
Flowrate (DSCFM) _____
Isokinetic (%) _____

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 3 of 3

SAMPLING LOCATION Inlet - Semivolatile RUN NO. Phase 1 Run 3

DATE _____ TIME START _____ TIME FINISH _____ TEST DURATION _____ min.

DUCT DIMENSIONS _____ X _____ DIAMETER _____ INITIAL LEAK RATE _____ cfm

PTCF _____ DGMCF _____ NOZZLE DIA. _____ inches FINAL LEAK RATE _____ cfm

BAR PRESS _____ " Hg

STATIC PRESS _____ " H2O OPERATOR JWM

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
1361	1111	405.659	0.01	0.11	299	94	93	–	215	69	3	56
2	1116	406.8	0.02	0.22	302	93	93	–	234	65	3	55
3	1121	408.2	0.03	0.34	299	94	93	–	247	62	4	53
4	1126	409.4	0.03	0.34	289	94	93	–	248	60	4	53
5	1131	411.6	0.04	0.45	291	95	94	–	248	60	5	54
6	1136	–	0.07	0.78	281	97	95	–	246	60	6	55
Stop	1141	416.100	Good Final									
1581	1220	416.178	0.04	0.45	289	91	90	–	226	63	4	55
2	1225	418.7	0.03	0.34	290	91	91	–	249	61	4	53
3	1230	420.4	0.02	0.23	281	92	91	–	242	62	4	54
4	1235	421.8	0.01	0.11	294	93	91	–	245	65	2.5	57
5	1240	423.0	0.04	0.44	293	94	91	–	247	65	4	52
6	1245	424.7	0.03	0.33	291	95	93	–	245	62	4	54
Stop	1250	426.397										
		Final leak check			0.014@	11" Hg						
		TB	√ΔP		TB	√						
Avg.	–	112.246	0.2470	.135	305	89.1						
Check'd	–	111.153	TB✓		300.25	√TB						

CONSOLE # _____

FILTER # _____

AMBIENT TEMP. _____

PROBE LENGTH _____

LINER MATERIAL _____

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS

MODIFIED METHOD 5 FIELD DATA SHEET

PLANT NAME Plant Yates Station Boiler No. 1 Page 1 of ____

SAMPLING LOCATION ESP INLET RUN NO. Field Blank (Semi Vol)
DATE 6/20/93 TIME START ____ TIME FINISH ____ TEST DURATION ____ min.
DUCT DIMENSIONS 8.5 X 43? DIAMETER ____ INITIAL LEAK RATE ____ cfm
PTCF 0.84 DGMCF ____ NOZZLE DIA. ____ inches FINAL LEAK RATE ____ cfm
BAR PRESS 29.56 " Hg
STATIC PRESS ____ " H2O OPERATOR JWM

Traverse Point	Clock Time	Dry gas meter reading ft3	ΔP in H2O	ΔH in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	Cond. Exit Temp. F
		061.325										
		064.965										
Avg.	–											
Check'd	–											

CONSOLE # A161393
FILTER # ____
AMBIENT TEMP. 90
PROBE LENGTH ____
LINER MATERIAL ____

Velocity ____
% Moisture ____
Flowrate (DSCFM) ____
Isokinetic (%) ____

REMARKS

Entered

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location INLET **Train** Aldehydes **Run No.** 1

Date 6-11-93 Time Start 1310 Time Finish 1345 Test Duration 35 min.

Duct Dimensions 8'6" X 45' Diameter ____ ft Initial Leak Rate 0.005 @ 15" cfm

PTCF .84 DGMCF 1.009 Nozzle Dia. .275 inches Final Leak Rate 0.009 @ 10" cfm

Bar Press 29.51 " Hg

Static Press -6.4 " H2O Operator MKO

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	3.86
N/A	1310	582.234	~~.10~~									
	1315	584.03	.11	.42	314	77	77	N/A	251	63	4.0	3.86
	1320	585.94	.11	.47	313	78	77		248	63	4.0	3.86
	1325	587.60	.10	.38	315	79	78		258	64	4.0	3.76 Chan.
	1330	589.32	.10	.38	320	81	79		251	63	4.0	3.76 K
	1335	591.04	.10	.38	314	82	80		250	63	3.5	3.76
	1340	592.81	.10	.38	314	84	81		251	61	4.0	3.76
	1345	594.515	.10	.38	314	85	81		252	61	4.0	3.76
		12.281										
			√ΔP									
Avg.	—	12.281	0.323	0.39	315	81	79		252			
Check'd		✓	✓	✓			✓					

CONSOLE # A161402

FILTER # Na

AMBIENT TEMP. 80 °F

PROBE LENGTH ____

LINER MATERIAL glass

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS

Single port collection from Port E-8

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location ESP INLET **Train** Aldehydes **Run No.** 2

Date 6-22-93 Time Start 0735 Time Finish 0805 Test Duration 30 min.

Duct Dimensions 8' 6" X 45' 57" Diameter .275 ft Initial Leak Rate 0.008 at 5" cfm

PTCF .84 DGMCF 6.009 Nozzle Dia. .275 inches Final Leak Rate 0.006 cfm at 10"

Bar Press 29.40 " Hg

Static Press -6.4 " H2O Operator MKO

Part E-8

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	K=3.90
N/A	0735	603.980						N/A				
	0746	604.95	.14	.53	310	78	76		266	67	4.0	
	0745	606.90	.13	.49	311	77	75		250	55	4.0	
	0750	608.72	.13	.49	311	78	76		250	56	4.0	
	0755	610.66	.13	.49	311	78	76		252	57	4.0	
	0800	612.30	.13	.49	311	78	76		253	58	4.0	
	0805	614.375	.11	.41	311	79	76		241	58	4.0	
Avg.	—	10.395	0.358	0.483	311	76.9						
Check'd		✓	✓	✓	✓							

CONSOLE # A16402

FILTER #

AMBIENT TEMP. 74

PROBE LENGTH 10'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

C-172 Single point sample collection from part E-8

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location ESP INLET **Train** Aldehydes **Run No.** 3

Date 5-23-93 Time Start 0720 Time Finish 0750 Test Duration 30 min.

Duct Dimensions 6' 6" X 45 57' Diameter ft Initial Leak Rate 0.009 at 12" cfm

PTCF .84 DGMCF 1.009 @ std Nozzle Dia. .275 inches Final Leak Rate 0.007 at 16" cfm

Bar Press 29.39 " Hg

Static Press -6.4 " H2O Operator MKO

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	K=.38
N/A	0720	622.625	.09					N/A				
	0725	624.42	.11	.41	311	76	75		262	62	3.5	
	0730	626.16	.10	.38	310	76	75		256	55	3.5	
	0735	627.90	.10	.38	316	76	75		258	56	3.5	
	0740	629.51	.08	.30	317	77	76		260	57	3.5	
	0745	631.16	.10	.38	318	83	79		261	63	3.5	
	0750	632.90	0.10	.38	313	84	80		263	60	3.5	
Avg.	—	10275	0.3132	0.37	314	79.7						
Check'd		✓ DRV		✓								

CONSOLE # A 161402

FILTER #

AMBIENT TEMP. 72°F

PROBE LENGTH 6'

LINER MATERIAL Glass

Velocity

% Moisture

Flowrate (DSCFM)

Isokinetic (%)

REMARKS

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location ESP INLET **Train** Aldehydes **Run No.** FB

Date 6/21/93 Time Start 1306 Time Finish _____ Test Duration _____ min.

Duct Dimensions _____ X _____ Diameter _____ ft Initial Leak Rate _____ cfm

PTCF _____ DGMCF _____ Nozzle Dia. _____ inches Final Leak Rate _____ cfm

Bar Press 29.58 " Hg

Static Press -6.4 " H2O Operator JWM

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
	1306	319.212										
		319.440										
Avg.	—											
Check'd												

CONSOLE # _____

FILTER # _____

AMBIENT TEMP. _____

PROBE LENGTH _____

LINER MATERIAL _____

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS _____

ENTERED

SOURCE SAMPLING FIELD DATA SHEET

Page ____ of ____

Plant Name Plant Yates Station Boiler No. 1

Sampling Location inlet **Train** PSD **Run No.** 1

Date 6-7-21 Time Start 1555 Time Finish 1740 Test Duration 105 min.

Duct Dimensions 8'6 X 45'57 arv Diameter ____ ft Initial Leak Rate 0.015@11"Hg cfm

PTCF .84 DGMCF .9880 Nozzle Dia. ~~.355~~ .275 inches Final Leak Rate ____ cfm

Bar Press 29.51 " Hg

Static Press -6.4 " H2O Operator MKO

Port E-7

16 15.82

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	K= 3.95
N/A	1555	608.920	~~.07~~									
	1600	610.43	.07	.27	315	80	79	N/A	262	67	3.0	
	1605	611.87	.07	.27	314	80	77		253	66	3.0	
	1610	613.29	.07	.27	315	80	78		251	57	3.0	
	1615	614.72	.07	.27	319	81	79		247	58	3.0	
	1620	616.16	.07	.27	317	81	80		251	58	2.5	
	1625	617.57	.07	.27	316	82	80		248	60	2.5	
	1630	619.04	.07	.27	318	82	80		245	57	3.0	
	1635	620.62	.07	.27	318	83	80		255	57	3.0	
	1640	621.81	.07	.27	320	87	83		251	57	3.0	
	1645	623.33	.07	.27	322	88	84		255	58	3.0	
	1650	624.75	.07	.27	321	88	84		254	58	3.0	
	1655	626.25	.07	.27	319	89	85		248	59	3.0	
	1700	627.75	.07	.27	320	89	86		250	59	3.0	
	1705	629.14	.07	.27	318	89	86		247	61	3.0	
	1710	630.57	.07	.27	318	90	86		245	59	3.0	
	1715	632.04	.07	.27	319	90	86		245	60	3.0	
	1720	633.15	.07	.27	319	90	86		254	61	3.5	
	1725	634.93	.07	.27	319	90	86		251	62	3.5	
	1730	636.37	.07	.27	318	91	87		251	61	3.0	
	1735	638.00	.07	.27	319	91	87		250	61	3.0	
	1740	639.650	.07	.27	320	91	87		251	62	3.0	
Avg.	—	30.730	.065		318	84.8						
Check'd		√			√							

CONSOLE # A161397

FILTER # Thimble #1314

AMBIENT TEMP. 77

PROBE LENGTH 10

LINER MATERIAL GLASS

Velocity ____

% Moisture 10.8

Flowrate (DSCFM) 246,521

Isokinetic (%) 104

REMARKS ____

C-175

Single point sample collection from port ~~E-8~~ E7 JWM

SOURCE SAMPLING FIELD DATA SHEET

Page 1 of ____

Plant Name Plant Yates Station Boiler No. 1

Sampling Location INLET **Train** PSD **Run No.** 2

Date 6-22-93 Time Start 0925 Time Finish 1105 Test Duration 640 min.

Duct Dimensions 9.6" X 57' Diameter — ft Initial Leak Rate 0.018 cfm @ 11

PTCF ~~0.840~~ 0.840 DGMCF .9880 Nozzle Dia. .275 inches Final Leak Rate NA cfm

Bar Press 29.40 " Hg

Static Press -6.4 " H2O Operator MKO

E-8 Port

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	K=.93
N/A	0925	652.063										
	0945	658.40	.08	.31	319	82	80	N/A	253	63	3.5	
	1005	664.40	.08	.31	319	82	80		243	63	3.5	
	1025	670.53	.08	.31	321	82	80		253	63	3.5	
	1045	676.60	.08	.31	320	86	83		242	60	3.5	
	1105	682.84	.08	.31	324	90	85		246	60	3.5	
	1125	688.23	.08	.31	319	96	86		248	61	3.5	
	1145	695.525	.08	.31	321	91	88		250	62	3.5	
Avg.	—	43.462	0.2828		320	85						
Check'd		✓			✓	✓						

CONSOLE # A161397

FILTER # _____

AMBIENT TEMP. 76°F

PROBE LENGTH 10

LINER MATERIAL GLASS

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS _____

C-176 Single point sample collection from port E-8

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location inlet **Train** PSD **Run No.** 3

Date 6-23-93 Time Start 0935 Time Finish 1130 Test Duration 115 min.

Duct Dimensions 8.6' X 45'57" DIA Diameter ____ ft Initial Leak Rate 0.016 cfm at 15#

PTCF .84 DGMCF .9880 Nozzle Dia. .275 inches Final Leak Rate ____ cfm

Bar Press 29.36 " Hg

Static Press ~~-.6~~ " H2O Operator MKO

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
N/A	0935	702.172	—									K= 3.93
	0955	708.40	.08	.31	316	90	87	N/A	295	68	3.0	
	1015	714.51	.08	.31	317	93	89		256	57	3.0	
	1035	720.71	.09	.31	317	94	90		250	57	3.0	
	1055	726.93	.09	.31	319	99	94		243	60	3.0	
	1100	733.22	.08	.31	318	99	95		241	61	3.0	
	1120	739.50	.09	.31	320	99	95		242	61	3.0	
	1130	742.825	.08	.31	319	100	95		245	61	3.0	
Avg.	—	40.653	0.085	.31	319	94						
Check'd		✓	✓			✓						

CONSOLE # 4161397

FILTER # ____

AMBIENT TEMP. 78'

PROBE LENGTH 10'

LINER MATERIAL ~~GLASS~~ SS

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS ____

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location ESP Inlet **Train** Particulate / Metals **Run No.** 1 / Phase 2

Date 6/25/93 Time Start 0800 Time Finish 1405 Test Duration 240 min.

Duct Dimensions 8'6" X ~~45 57~~ Diameter ft Initial Leak Rate 0.014 cfm @ 18" Hg

PTCF 0.84 DGMCF ~~1.00~~ NOZZLE DIA. 0.358 inches Final Leak Rate 0.014 cfm @ 24" Hg

Bar Press 29.55 " Hg 0.999

Static Press -5.8 " H2O Operator JWM

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
W8-1	0800	446.205	0.06	0.66	277	74	73	~~238~~	226	49	7	
2	805	448.6	0.04	0.44	283	72	72	—	248	43	5	
3	810	450.7	0.03	0.33	284	74	73	—	247	43	4.5	
4	815	~~452~~ 452.0	0.02	0.22	276	74	73	—	246	45	3	
5	820	453.0	0.02	0.22	284	75	73	—	227	48	3	
6	825	454.6	0.06	0.66	275	76	73	—	252	46	7	
Stop	830	456.576	Good leak check									
W6-1	836	456.677	0.03	0.33	286	77	75	—	~~225~~	49	4	
2	841	458.6	0.03	0.33	298	79	76	—	253	50	4	
3	846	460.2	0.04	0.44	288	79	77	—	246	51	5	
4	~~851~~ 855	462.1	0.07	0.77	284	82	79	—	232	47	7.5	
5	856	464.5	0.06	0.66	286	84	79	—	244	48	7	
6	901	466.6	0.09	0.98	293	86	81	—	249	48	9	
Stop	906	469.185	Good leak check									
W4-1	~~902~~ 922	469.800	0.03	0.33	290	83	82	—	221	54	5	
2	927	471.6	0.04	0.44	289	83	81	—	259	53	5	
3	932	473.4	0.07	0.77	306	83	82	—	244	49	7.5	
4	937	476.0	0.01	1.1	292	85	82	—	248	49	11	
5	942	478.7	0.15	~~1.5~~	292	88	83	—	243	49	18	
6	947	482.2	0.15	1.7	285	90	84	—	242	53	19	
stop	952	485.872										
W2-1	1020	486.100	0.03	0.33	291	83	82	—	232	54	5	
2	1025	488.3	0.04	0.44	290	83	82	—	256	52	5	
3	1030	489.8	0.05	0.55	293	84	83	—	243	50	6	
4	1035	492.0	0.08	0.88	296	86	84	—	247	49	9	
5	1040	494.2	0.14	1.55	299	88	84	—	246	48	17	
6	1045	497.6	0.14	1.55	300	90	85	—	243	51	17	
Stop	1050	501.030										
Avg.	—	111.213	.2403	.7685	301		84					
Check'd		111.										

10.37 12.308 16.074 14.930

CONSOLE # 161363

FILTER # 1252

AMBIENT TEMP.

PROBE LENGTH

LINER MATERIAL

Velocity	
% Moisture	
Flowrate (DSCFM)	
Isokinetic (%)	

REMARKS Good pitot leak check

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Inlet Train Particulate / Metals Run No. 1 / Phase 2

Date 6/25/93 Time Start _____ Time Finish _____ Test Duration _____ min.

Duct Dimensions _____ X _____ Diameter _____ ft Initial Leak Rate _____ cfm

PTCF _____ DGMCF _____ NOZZLE DIA. 0.358 inches Final Leak Rate _____ cfm

Bar Press _____ " Hg

Static Press _____ " H2O Operator JCW m

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
E2-1	1058	501.500	0.03	0.33	316	88	86	—	223	57	5	
2	1103	503.2	0.04	0.44	324	87	86	—	253	55	6	
3	1108	505.0	0.06	0.66	327	88	85	—	250	53	8	
4	1113	507.3	~~0.1~~ 0.09	1.1	332	88	86	—	249	52	13	
15.42 5	1118	510.2	0.15	1.6	336	91	87	—	247	53	22	
6	1123	—	0.18	1.6	336	93	88	—	247	56	22	
Stop	1128	516.925	Leak Check 0.011 @ 23" Hg - Changed Silica Gel Impinger									
			Leak Check on Silica Gel recharge - 0.013 @ 24" Hg									
E5-1	1211	518.040	0.02	0.22	309	82	82	—	233	65	5	
2	1216	—	0.04	0.44	313	82	82	—	249	54	6.5	
3	1221	521.6	0.07	0.77	315	83	82	—	248	52	9.0	
16.04 4	1226	524.0	0.11	1.2	315	85	83	—	245	51	14.0	
5	1231	527.0	0.16	1.75	316	88	84	—	253	53	22	
6	1236	530.4	0.22	1.75	315	90	85	—	246	62	22	
Stop	1241	534.089	Good leak check @ 23" Hg									
E3-1	1255	534.268	0.02	0.22	298	87	85	—	236	62	5	
2	~~1300~~ 1300	—	0.02	0.22	305	86	85	—	224	58	5	
13.50 3	1305	537.3	0.04	0.44	311	86	85	—	241	54	7	
4	1310	539.2	0.07	0.77	312	87	85	—	253	49	10	
5	1315	541.6	0.1	1.1	311	89	86	—	243	48	15	
6	1320	544.4	~~0.14~~ 0.13	~~1.7~~ 1.65	308	92	87	—	249	49	22	
Stop	1325	547.772	Sucn	Sucn								
E1-1	1335	548.300	0.09	1.0	308	90	87	—	209	49	17	
2	1340	—	0.07	0.76	307	90	87	—	243	49	12	
12.35 3	1345	553.2	0.05	0.54	307	90	87	—	242	52	9	
4	1350	555.3	0.03	0.33	305	90	88	—	252	53	7	
5	1355	557.0	0.03	0.33	304	91	88	—	253	54	7	
6	~~1400~~ 1400	558.7	0.04	0.44	284	91	88	—	246	53	9	
Avg. Stop	1405	560.159										
Check'd		111.215										

CONSOLE # _____

FILTER # _____

AMBIENT TEMP. _____

PROBE LENGTH _____

LINER MATERIAL _____

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS Could not pull the proper rate through the Silica gel impinger. The impinger mass ~~was~~ was determined, and then the silica gel impinger was re-charged with fresh silica gel.

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Inlet **Train** Particulate / Metals **Run No.** 2 / Phase 2

Date 6/26/03 Time Start 0935 Time Finish 1611 Test Duration 240 min.

Duct Dimensions ____ X ____ Diameter ____ ft Initial Leak Rate 0.006 cfm @ 23" Hg

PTCF 0.84 DGMCF 0.999 NOZZLE DIA. 0.358 inches Final Leak Rate 0.012 cfm @ 24" Hg

Bar Press 29.56 " Hg

Static Press -0.58 " H2O Operator JWN

DH@ = 1.822

Travers Point	Clock Time	Dry gas meter reading ft3	^P in H2O	^H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	K Factor
E1-1	935	579.944	0.1	1.1	289	72	72	-	222	52	10	10.8
2	940	582.9	0.08	0.87	294	73	72	-	262	45	8	
3	945	585.5	0.05	0.55	293	75	72	-	244	49	6	
4	950	587.5	0.03	0.33	295	76	73	-	246	53	5	
5	955	589.2	0.03	0.33	296	77	74	-	251	54	5	10.9
6	1000	590.9	0.03	0.33	287	78	75	-	244	55	5	
Stop	1005	592.536	Good leak		Check	@ 23" Hg						
E3-1	1011	592.798	0.03	0.33	290	78	76	-	219	54	5	
2	1016	594.7	0.02	0.22	305	79	76	-	244	52	4	
3	1021	596.0	0.05	0.55	306	80	77	-	251	48	6	
4	1026	598.1	0.08	0.88	304	82	78	-	249	46	9	
5	1031	600.4	0.11	1.2	302	84	79	-	257	47	125	
6	1036	603.9	0.15	1.6	300	87	80	-	243	47	18	
Stop	1041	607.235	Good leak		Check	@ 24" Hg						
E5-1	1113	607.821	0.03	0.33	298	82	80	-	212	36	5	
2	1118	609.6	0.02	0.22	309	82	81	-	227	54	4	
3	1123	611.0	0.07	0.77	312	83	81	-	254	52	8	
4	1128	613.57	0.14	1.5	313	87	83	-	249	49	18	
5	1133	616.7	0.14	1.6	313	89	83	-	247	53	19	
6	1138	619.9	0.19	1.7	311	90	83	-	243	55	22	
Stop	1143	623.582		Good	Leak	@ 28" Hg						
Avg.		110.002	1.2490	.7392	299		87					
Check'd												

CONSOLE # 161363

FILTER # 1250

AMBIENT TEMP. ____

PROBE LENGTH ____

LINER MATERIAL ____

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS ____

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Inlet **Train** Particulate / Metals **Run No.** ____

Date 6/26/97 Time Start ____ Time Finish ____ Test Duration ____ min.

Duct Dimensions ____ X ____ Diameter ____ ft Initial Leak Rate ____ cfm

PTCF ____ DGMCF ____ NOZZLE DIA. ____ inches Final Leak Rate ____ cfm

Bar Press ____ " Hg

Static Press ____ " H2O Operator ____

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	
1-1	~~1148~~ 1148	623.800	0.03	0.33	322	86	84	-	248	55	6.0	
2	1153	625.9	0.04	0.44	321	88	85	—	250	56	6.0	
3	1158	627.6	0.07	0.77	323	90	86	-	251	55	9.0	
4	1203	629.9	0.1	1.1	328	91	86	-	249	54	12.0	
5	1208	632.6	0.14	1.5	332	93	87	-	247	53	20.0	
6	1213	635.9	0.15	1.5	335	94	87	-	245	53	22.0	
Stop	1218	639.164	Good leak check @ 23 "Hg									
2-1	1336	639.840	0.03	0.33	274	84	83	-	232	60	6	
2	1341	—	0.04	0.44	299	84	83	-	246	49	7	
3	1346	643.3	0.04	0.44	293	85	84	-	241	47	7	
4	1351	—	0.08	0.88	295	87	84	-	253	47	12	
5	1356	647.7	0.12	1.3	296	88	84	-	249	47	18	
6	1401	651.0	0.15	1.5	295	91	85	-	244	57	22	
Stop	1406	654.580	Good Leak @ 26 "Hg									
3-1	1422	654.791	0.03	0.33	288	87	85	-	217	63	6	
2	1427	656.6	0.05	0.05	298	87	85	-	253	49	8	
3	1432	658.6	0.06	0.66	296	88	85	-	244	45	10	
4	1437	661.0	0.11	1.2	300	91	86	-	245	48	18	
5	1442	664.1	0.15	1.65	293	93	87	-	244	51	22	
6	1447	667.3	0.11	1.2	280	95	91	-	243	52	18	
Stop	1452	670.100	Good Leak @ 25 "Hg									
Avg.	—											
Check'd												

CONSOLE # ____

FILTER # ____

AMBIENT TEMP. ____

PROBE LENGTH ____

LINER MATERIAL ____

Velocity ____

% Moisture ____

Flowrate (DSCFM) ____

Isokinetic (%) ____

REMARKS ____

SOURCE SAMPLING FIELD DATA SHEET

Plant Name Plant Yates Station Boiler No. 1

Sampling Location Inlet **Train** Particulate / Metals **Run No.** 2 / Phase 2

Date 6/26/07 Time Start _____ Time Finish _____ Test Duration _____ min.

Duct Dimensions _____ X _____ Diameter _____ ft Initial Leak Rate _____ cfm

PTCF _____ DGMCF _____ NOZZLE DIA. _____ inches Final Leak Rate _____ cfm

Bar Press _____ " Hg

Static Press _____ " H2O Operator JW

Travers Point	Clock Time	Dry gas meter reading ft3	^ P in H2O	^ H in H2O	Stack Temp. F	Dry gas meter temp. Inlet	Dry gas meter temp. Outlet	Hot box Temp.	Probe Temp	Last Impinger	Vacuum in. Hg	@ Each
1&1	1457	670.485	0.03	0.33	285	93	89	—	217	56	6	11
2	1502	672.1	0.03	0.33	298	92	89	—	238	56	7	
3	1507	673.8	0.03	0.33	298	92	89	—	243	56	7	
4	1512	675.3	0.04	0.44	299	93	90	—	244	56	8	
5	1517	677.3	0.06	0.66	295	95	91	—	253	54	10	
6	1522	679.6	0.08	0.88	283	96	93	—	251	57	11	
Stop	1527	682.283	Good leak check @ 22" Hg									
4&8-1	1541	682.477	0.03	0.33	279	92	91	—	217	62	7	
2	1546	684.2	0.05	0.55	292	92	91	—	239	56	9	
3	1551	686.2	0.02	0.22	291	93	91	—	257	57	6	
4	1556	687.6	~~0.03~~ 0.03	0.33	286	93	92	—	235	58	7	
5	1601	689.4	0.02	0.22	281	94	92	—	245	59	6	
6	1606	691.0	0.03	0.33	282	94	92	—	242	60	7	
Stop	1611	692.478										
			Jor									
Avg.	—	105.994	0.24									
Check'd												

14.79

10.001

CONSOLE # _____

FILTER # _____

AMBIENT TEMP. _____

PROBE LENGTH _____

LINER MATERIAL _____

Velocity _____

% Moisture _____

Flowrate (DSCFM) _____

Isokinetic (%) _____

REMARKS _____