APPENDIX

Appendix A: Process Operating Data
Appendix B: Calculations
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AVERAGE LOAD AND COAL FLOW SUMMARY

BGS UNIT #7 & #8 COMPLIANCE EMISSION TEST
For December 9 & 10, 1999

AVERAGE LOAD		TEST #1	TEST #2	TEST #3	AVERAGE
Unit #7	GROSS (MWg)	165.7	172.5	170.6	169.6
Unit #7	NET (MWn)	151.2	156.2	154.0	153.8
Unit #8	GROSS (MWg)	317.5	322.9	322.8	321.1
Unit #8	NET (MWn)	302.6	307.9	307.6	306.0
Totals	GROSS (MWg)	483.2	495.4	493.4	490.7
Totals	NET (MWn)	453.8	464.1	461.6	459.8
AVERAGE COAL FLOW in lbs/hr					
Unit #7	FEEDER #1	35,787	36,789	35,623	36,066
Unit #7	FEEDER #2	41,042	39,026	38,000	39,356
Unit #7	FEEDER #3	43,669	44,763	43,472	43,968
Unit #7	FEEDER #4	43,669	35,526	34,906	38,034
	TOTALS	164,167	156,104	152,001	157,424
Unit #8	FEEDER #1	29,783	33,640	36,835	33,419
Unit #8	FEEDER #2	37,373	37,400	36,987	37,253
Unit #8	FEEDER #3	37,337	44,200	36,949	39,495
Unit #8	FEEDER #4	33,795	36,920	36,873	35,863
Unit #8	FEEDER #5	44,458	44,520	43,975	44,318
Unit #8	FEEDER #6	37,120	37,480	37,101	37,234
Unit #8	FEEDER #7	35,205	37,480	37,025	36,570
Unit #8	FEEDER #8	37,446	37,520	37,101	37,356
	TOTALS	292,517	309,160	302,846	301,508

TEST 1 – PLANT DATA

COMPLIANCE EMISSIONS MW AND COAL FLOW TEST DATA SHEET
BAILLY GENERATING STATION: UNIT #7

Date of Run: 12/9/99 | Run Number: #1 | Time Started: 1:00 pm | Time Ended: 4:00 pm | Initials: JRH / SLB

Reading Number	Time Hrs/Mins	Coal Scales Numbers			
		7-1	7-2	7-3	7-4
Fifth					
Fourth					
Third					
Second					
First	04:03	865355		156941	222821
Initial	01:14	864347		155711	221591
Difference	02:49	1,008	0	1,230	1,230
Constant		100	100	100	100
Coal Flow-lbs/hr		35,787	41,042	43,669	43,669

Total Coal Flow = 164,166 lbs/hour

Please Note that Intergraters were not working for Feeder #2, so an average Coal Flow was calculated for that Feeder.

Reading Number	Time Hrs/Mins	Generator XFMR Output MW Gross	Main Transformer Output West Reading #	Main Transformer Output East Reading #	Unit Net Load MW Net
Fifth					
Fourth					
Third					
Second					
First	04:01	494473.0	99153.7	52832.3	
Initial	01:12	494005.0	99132.1	52813.0	
Difference	02:49	468.0	21.6	19.3	Generator minus XFER
Constant		1000	1000	1000	West and East
MW/hr		165.7	7.6	6.8	151.2

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COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/9/99 TEST NUMBER 1

TIME		1:00	1:30	2:00
NUMBER OF CYCLONES IN USE		4	4	4
EXCESS OXYGEN (%) (E/W)		3.5/2.9	3.1/2.6	3.4/2.7
TOTAL AIR FLOW (%)		80	80	79
STEAM FLOW (KLB/HR)		960	980	970
FEEDWATER FLOW (KLB/HR)		1083	1091	1089
THROTTLE PRESSURE (PSI)		2350	2350	2380
MAIN STEAM TEMPERATURE (°F)		1004.7	1007.4	1009.8
HOT REHEAT TEMPERATURE (°F)		986.1	981.7	985.5
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H20) (E/W)		-0.2/-0.2	0/-0.2	-0.2/-0.2
F.D. FAN AMPS (E/W)		270/280	270/280	270/290
F.D. FAN PRESSURE ("H20)				
I.D. FAN AMPS (E/W)		280/290	270/290	285/295
I.D. FAN SPEED (RPM) (E/W)		800/820	800/820	800/810
OPACITY (%) (6-MIN AVG)		14	20.8	20.4
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.87	27.90	27.87
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE ~~(LB/HR)~~ %		72	70	72

Data by: SLB

U7EMCR

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/9/99 TEST NUMBER 1

TIME		2:30	3:00	3:30
NUMBER OF CYCLONES IN USE		4	4	4
EXCESS OXYGEN (%) (E/W)		3.5/2.6	3.4/3.0	3.1/3.0
TOTAL AIR FLOW (%)		81	81	82
STEAM FLOW (KLB/HR)		1100	1150	1100
FEEDWATER FLOW (KLB/HR)		1090	1099	1092
THROTTLE PRESSURE (PSI)		2400	2350	2360
MAIN STEAM TEMPERATURE (°F)		1005	1000	1005
HOT REHEAT TEMPERATURE (°F)		995	998	1000
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H20) (E/W)		-0.2/-0.2	-0.2/-0.2	-0.2/-0.2
F.D. FAN AMPS (E/W)		265/290	270/290	280/290
F.D. FAN PRESSURE ("H20)				
I.D. FAN AMPS (E/W)		280/300	290/300	290/295
I.D. FAN SPEED (RPM) (E/W)		800/810	800/810	800/810
OPACITY (%) (6-MIN AVG)		19.0	11.6	18.9
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.79	27.82	27.86
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE (~~LB/HR~~) %		71	72	70

U7EMCR

Data by: SLB

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/9/99 TEST NUMBER 1

TIME		4:00		
NUMBER OF CYCLONES IN USE		4		
EXCESS OXYGEN (%) (E/W)		3.3/3.0		
TOTAL AIR FLOW (%)		70		
STEAM FLOW (KLB/HR)		1100		
FEEDWATER FLOW (KLB/HR)		1089		
THROTTLE PRESSURE (PSI)		2380		
MAIN STEAM TEMPERATURE (°F)		1000		
HOT REHEAT TEMPERATURE (°F)		995		
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H2O) (E/W)		-0.2/-0.2		
F.D. FAN AMPS (E/W)		260/280		
F.D. FAN PRESSURE ("H2O)				
I.D. FAN AMPS (E/W)		285/295		
I.D. FAN SPEED (RPM) (E/W)		800/810		
OPACITY (%) (6-MIN AVG)		14.5		
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.82		
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE (~~LB/HR~~) %		70		

Data by: SLB

U7EMCR

BAILLY GENERATING STATION - UNIT 7
PRECIPITATOR DATA SHEET

DATE 12/9/99 TEST NO. #1 INITIALS CAM

TIME 13:10

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1	100	50	24	150	Readings just bounced up and down
7B-T2	140	70	38	200	
TB-T3	230	50	42	250	
7B-T4	260	130	38	300	
7B-T5	290	130	48	750	
7B-T6	300	190	42	850	Precipt current guage 0→300 (X10)
7A-T1	250	100	40	400	" "
7A-T2	200	130	42	350	
7A-T3	260	130	44	600	
7A-T4	—	—	—	—	off
7A-T5	260	190	40	600	
7A-T6	300	200	48	850	

TIME 13:45

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1	100	50	26	150	
7B-T2	170	70	40	200	
TB-T3	230	50	42	250	
7B-T4	260	130	38	300	
7B-T5	290	140	46	750	
7B-T6	290	190	42	850	
7A-T1	230	120	38	500	
7A-T2	200	130	42	350	
7A-T3	260	150	42	600	
7A-T4	—	—	—	—	off
7A-T5	260	190	40	850	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

BAILLY GENERATING STATION - UNIT 7
PRECIPITATOR DATA SHEET

DATE 12-9-99 TEST NO. #1 INITIALS CAM

TIME 3:00

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1	100	50	26	100	
7B-T2	130	70	38	200	
TB-T3	250	60	44	250	
7B-T4	255	110	38	300	
7B-T5	290	150	46	650	
7B-T6	290	190	40	750	
7A-T1	250	100	38	400	
7A-T2	210	130	40	350	
7A-T3	260	130	42	600	
7A-T4					OOO
7A-T5	260	190	40	850	
7A-T6	280	200	52	700	

TIME 3:30

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1	100	50	26	100	
7B-T2	180	80	40	250	
TB-T3	240	60	40	250	
7B-T4	270	180	38	550	
7B-T5	290	150	46	700	
7B-T6	300	190	40	850	
7A-T1	240	100	40	400	
7A-T2	200	130	42	350	
7A-T3	250	140	42	650	
7A-T4					OOO
7A-T5	260	190	40	850	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

COMPLIANCE EMISSIONS MW AND COAL FLOW TEST DATA SHEET
BAILLY GENERATING STATION: UNIT #8

Date of Run: 12/9/99 Run Number: #1 Time Started: 1:00 PM Time Ended: 4:00 PM Initials: JRH/ SLB

Reading Number	Time Hrs/Mins	Coal Scales Numbers 1	2	3	4	5	6	7	8		
Fifth											
Fourth											
Third											
Second											
First	04:06	452,024	230,208	268,045	518,703	404,733	650,516	798,264	981,104		
Initial	01:20	451,200	229,174	267,012	517,768	403,503	649,489	797,290	980,068		
Difference	02:46	824	1,034	1,033	935	1,230	1,027	974	1,036		
Constant		100	100	100	100	100	100	100	100		
Coal Flow-lbs/hr		29,783	37,373	37,337	33,795	44,458	37,120	35,205	37,446		

Total Coal Flow = 292,518 lbs/hour

Reading Number	Time Hrs/Mins	Generator Transformer Output MW Gross	Main Transformer West Reading	Main Transformer East Reading	Unit Net Load MW Net	
Fifth						
Fourth						
Third						
Second						
First	04:04	55241.1	7603.0	12855.7		
Initial	01:16	55152.2	7582.8	12834.2		
Difference	02:48	88.9	20.2	21.5	Generator minus XFER	
Constant		1000	1000	1000	West and East	
MW/hr		317.5	7.2	7.7	302.6	

Compliance Group 12/99 JRH

12/15/99 + ^

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/9/99

TEST NUMBER SPB

TIME		1:00	1:30	2:00
NUMBER OF CYCLONES IN USE		8	8	8
EXCESS OXYGEN (E/W)		2.73/2.97	2.83/2.70	2.46/2.66
AIR FLOW (KLB/HR)		2870	2893	2849
FEEDWATER FLOW (KLB/HR)		2288	1961	2209
THROTTLE PRESSURE (PSI)		3414	3416	3410
MAIN STEAM TEMPERATURE (°F)		1005	1005	994
HOT REHEAT TEMPERATURE (°F)		995	995	1005
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	165	179	176
	AIR OUT (°F)	573	571	565
	GAS IN (°F)	693	647	676
	GAS OUT (°F)	309	309	311
FURNACE DRAFT ("H_2O) (E/W)		-1.0	-0.0	-0.46
F.D. FAN AMPS (E/W)		569/505	575/506	607/558
I.D. FAN AMPS (E/W)		494/519	496/520	549/561
I.D. FAN SPEED (RPM) (E/W)		760/763	760/762	759/761
I.D. FAN SUCTION PRESS ("H_2O)		-0.6	-0.6	-0.2
OPACITY (%) (6-MIN AVG)		5.5	5.0	5.2
BAROMETRIC PRESSURE ("Hg)		29.33	29.32	29.31
AMBIENT TEMPERATURE (°F)		61.3	62.8	62.7
CONDENSER BACKPRESSURE ("Hg)		28.81	28.81	28.60
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/9/99

TEST NUMBER 1
SLB

TIME		2:30	3:00	3:30
NUMBER OF CYCLONES IN USE		8	8	8
EXCESS OXYGEN (E/W)		2.57/2.73	2.48/2.70	2.60/2.72
AIR FLOW (KLB/HR)		2831	2868	2811
FEEDWATER FLOW (KLB/HR)		2197	2208	2267
THROTTLE PRESSURE (PSI)		3419	3405	3409
MAIN STEAM TEMPERATURE (°F)		1004	1006	1007
HOT REHEAT TEMPERATURE (°F)		1005	1006	1002
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	175	175	177
	AIR OUT (°F)	570	573	581
	GAS IN (°F)	676	689	690
	GAS OUT (°F)	313	314	316
FURNACE DRAFT ("H_2O) (E/W)		-0.6	-0.6	0.0
F.D. FAN AMPS (E/W)		604/565	603/565	614/564
I.D. FAN AMPS (E/W)		549/564	557/568	550/561
I.D. FAN SPEED (RPM) (E/W)		752/761	759/762	759/762
I.D. FAN SUCTION PRESS ("H_2O)		-0.6	-0.8	-0.4
OPACITY (%) (6-MIN AVG)		6.6	5.8	4.7
BAROMETRIC PRESSURE ("Hg)		29.30	29.32	29.31
AMBIENT TEMPERATURE (°F)		62.4	62.1	60.9
CONDENSER BACKPRESSURE ("Hg)		28.6	28.6	28.6
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/9/99 TEST NUMBER 1 SPB

TIME		4:00		
NUMBER OF CYCLONES IN USE		8		
EXCESS OXYGEN (E/W)		2.80/3.08		
AIR FLOW (KLB/HR)		2850		
FEEDWATER FLOW (KLB/HR)		2074		
THROTTLE PRESSURE (PSI)		3392		
MAIN STEAM TEMPERATURE (°F)		1007		
HOT REHEAT TEMPERATURE (°F)		1001		
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	178		
	AIR OUT (°F)	576		
	GAS IN (°F)	670		
	GAS OUT (°F)	313		
FURNACE DRAFT ("H_2O) (E/W)		-0.7		
F.D. FAN AMPS (E/W)		563/512		
I.D. FAN AMPS (E/W)		495/523		
I.D. FAN SPEED (RPM) (E/W)		760/762		
I.D. FAN SUCTION PRESS ("H_2O)		-0.7		
OPACITY (%) (6-MIN AVG)		4.5		
BAROMETRIC PRESSURE ("Hg)		29.30		
AMBIENT TEMPERATURE (°F)		61.1		
CONDENSER BACKPRESSURE ("Hg)		28.70		
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

BAILLY GENERATING STATION - UNIT 8
PRECIPITATOR POWER

Date: 12-9-99 Test No.: #1 Time: 1:30 | 2:00 Initials: CAM

FIELD	VOLTS (AC)		AMPS (AC)		KV (DC)		MA (DC)		COMMENTS	
8E-B1	50	50	50	50	50	50	10	10	SPM - 6	SPM - 6
8E-B2	25	25	150	150	Ø	Ø	600	600	SPM - 1	SPM - 1
8E-B3	275	295	200	180	50	52	950	850	SPM - Ø	Ø
8E-B4	150	150	80	80	46	46	1000	1000	SPM - 10	10
8E-B5	300	295	250	230	50	50	1000	1050	SPM - 4	3
8E-B6	210	210	80	80	45	44	250	250	SPM - 3	3
8E-A1	265	300	150	155	50	50	700	750	SPM - 1	3
8E-A2	50	50	150	150	10	10	Ø	Ø	SPM - Ø	Ø
8E-A3	255	255	130	130	45	45	500	500	SPM - Ø	Ø
8E-A4	330	340	160	150	50	52	850	750	SPM - 9	9
8E-A5	90	90	150	150	8	8	Ø	Ø	SPM - Ø	Ø
8E-A6	250	250	140	140	44	44	500	500	SPM - Ø	Ø
8W-B1	250	250	150	120	42	44	750	600	SPM - 5	5
8W-B2	300	270	200	150	46	46	750	600	SPM - 6	6
8W-B3	280	280	170	170	24	24	600	600	SPM - Ø	Ø
8W-B4	280	255	250	200	60	56	1000	1000	SPM - 4	7
8W-B5	230	230	160	180	44	44	600	750	SPM - 6	6
8W-B6	150	130	80	130	34	32	300	350	SPM - 5	4
8W-A1	260	280	130	130	56	54	450	450	SPM - Ø	Ø
8W-A2	250	290	200	200	50	48	850	500	SPM - 5	5
8W-A3	230	240	150	150	40	42	600	600	SPM - Ø	Ø
8W-A4	290	290	220	230	46	46	1000	1050	SPM - 7	7
8W-A5	50									off
8W-A6	240	240	60	60	40	40	600	600	SPM - Ø	Ø

BAILLY GENERATING STATION - UNIT 8
PRECIPITATOR POWER

Date: 12-9-99 Test No.: #1 Time: 3:10/3:40 Initials: CAM

FIELD	VOLTS (AC)		AMPS (AC)		KV (DC)		MA (DC)		COMMENTS 5PM	3PM
8E-B1	50	50	50	50	50	50	10	10	6	6
8E-B2	Ø	Ø	150	150	Ø	Ø	600	600	1	1
8E-B3	270	260	170	180	52	52	900	850	Ø	Ø
8E-B4	150	150	80	80	46	46	100	100	10	10
8E-B5	280	280	230	230	50	50	110	110	Ø	Ø
8E-B6	240	240	90	110	48	48	300	400	3	3
8E-A1	280	300	140	140	48	50	650	750	Ø	6
8E-A2	50	50	150	150	10	10	Ø	Ø	Ø	Ø
8E-A3	250	260	120	130	46	46	500	500	3	2
8E-A4	310	310	160	180	52	52	800	900	9	9
8E-A5	90	90	150	150	8	8	Ø	Ø	Ø	Ø
8E-A6	250	250	150	150	44	44	550	500	6	7
8W-B1	260	260	100	120	40	42	500	700	5	5
8W-B2	250	270	120	150	44	44	400	700	6	6
8W-B3	280	280	170	170	24	24	650	600	Ø	Ø
8W-B4	290	270	200	200	56	56	750	800	6	7
8W-B5	230	240	150	160	44	44	650	750	6	6
8W-B6	140	130	100	110	32	30	250	260	4	5
8W-A1	270	270	120	120	54	54	500	450	Ø	Ø
8W-A2	300	300	200	190	50	48	600	750	5	6
8W-A3	230	230	140	150	40	40	600	600	Ø	Ø
8W-A4	280	280	200	220	46	46	1050	1010	7	7
8W-A5										Ø/6
8W-A6	240	240	160	160	40	40	600	600	Ø	Ø

Test #1
12/9/99

1:26 1999 All Analog Inputs Page 1

9263	FD FAN 8W AIR DISCHARGE TEMP	73.84	DEG F	0813BT:A9349	PSH OUTLET TUBE TC11 TEMP	778.95	DEG F
9264	FD FAN 8E AIR DISCHARGE TEMP	116.39	DEG F	0813BT:A9350	PSH OUTLET TUBE TC12 TEMP	340.73	DEG F
9276	FD FAN 8W MOTOR OUTBRD BRG TEMP	149.73	DEG F	0813BT:A9351	PSH OUTLET TUBE TC13 TEMP	805.51	DEG F
9277	FD FAN 8W MOTOR INBOARD BRG TEMP	133.67	DEG F	0813BT:A9352	PSH OUTLET TUBE TC14 TEMP	806.08	DEG F
9278	FD FAN 8W FAN OUTBOARD BRG TEMP	148.98	DEG F	0813BT:A9353	PSH OUTLET TUBE TC15 TEMP	795.87	DEG F
9279	FD FAN 8W FAN INBOARD BRG TEMP	164.75	DEG F	0813BT:A9354	PSH OUTLET TUBE TC16 TEMP	798.26	DEG F
9292	GLYCOL TEMP TO EAST PREHEATER	210.11	DEG F	0813BT:A9361	SSH OUTLET TUBE TC30 TEMP	976.03	DEG F
9293	GLYCOL TEMP TO WEST PREHEATER	202.67	DEG F	0813BT:A9362	SSH OUTLET TUBE TC31 TEMP	963.57	DEG F
9318	FD FAN 8E MOTOR OUTBRD BRG TEMP	131.33	DEG F	0813BT:A9363	SSH OUTLET TUBE TC32 TEMP	992.29	DEG F
9319	FD FAN 8E MOTOR INBOARD BRG TEMP	157.53	DEG F	0813BT:A9364	SSH OUTLET TUBE TC33 TEMP	1224.00	DEG F
9320	FD FAN 8E FAN OUTBOARD BRG TEMP	142.72	DEG F	0813BT:A9365	SSH OUTLET TUBE TC34 TEMP	1224.00	DEG F
9321	FD FAN 8E FAN INBOARD BRG TEMP	168.71	DEG F	0813BT:A9366	SSH OUTLET TUBE TC35 TEMP	1224.00	DEG F
9700	WEST FD FAN SYSTEM OIL TEMP	306.00	DEG F	0813BT:A9367	SSH OUTLET TUBE TC36 TEMP	987.84	DEG F
9701	EAST FD FAN SYSTEM OIL TEMP	306.00	DEG F	0813BT:A9368	SSH OUTLET TUBE TC37 TEMP	1000.00	DEG F
9275	FLUE GAS TEMP TO ECONOMIZER	990.46	DEG F	0813BT:A9369	SSH OUTLET TUBE TC38 TEMP	992.72	DEG F
9284	GR FAN 8E FAN OUTBOARD BRG TEMP	126.78	DEG F	0813BT:A9370	SSH OUTLET TUBE TC39 TEMP	984.80	DEG F
9285	GR FAN 8E FAN INBOARD BRG TEMP	114.94	DEG F	0813BT:A9371	SSH OUTLET TUBE TC40 TEMP	1011.51	DEG F
9286	GR FAN 8E MOTOR OUTBRD BRG TEMP	129.16	DEG F	0813BT:A9372	SSH OUTLET TUBE TC41 TEMP	1224.00	DEG F
9287	GR FAN 8E MOTOR INBOARD BRG TEMP	125.20	DEG F	0813BT:A9373	SSH OUTLET TUBE TC42 TEMP	1021.26	DEG F
9288	GR FAN 8W FAN OUTBRD BRG TEMP	99.61	DEG F	0813BT:A9374	SSH OUTLET TUBE TC43 TEMP	1028.01	DEG F
9289	GR FAN 8W FAN INBOARD BRG TEMP	123.83	DEG F	0813BT:A9375	SSH OUTLET TUBE TC44 TEMP	982.18	DEG F
9290	GR FAN 8W MOTOR OUTBRD BRG TEMP	127.03	DEG F	0813BT:A9376	SSH OUTLET TUBE TC45 TEMP	963.51	DEG F
9291	GR FAN 8W MOTOR INBOARD BRG TEMP	122.99	DEG F	0813BT:A9377	REHEAT OUTLET TUBE TC60 TEMP	865.46	DEG F
9395	ID FAN 8E THRUST BEARING A TEMP	149.30	DEG F	0813BT:A9378	REHEAT OUTLET TUBE TC61 TEMP	879.84	DEG F
9396	ID FAN 8E THRUST BEARING B TEMP	162.15	DEG F	0813BT:A9379	REHEAT OUTLET TUBE TC62 TEMP	960.99	DEG F
9466	ID FAN 8E FAN OUTBRD BRG TEMP	154.24	DEG F	0813BT:A9380	REHEAT OUTLET TUBE TC63 TEMP	1002.91	DEG F
9467	ID FAN 8E MOTOR INBOARD BRG TEMP	129.30	DEG F	0813BT:A9381	REHEAT OUTLET TUBE TC64 TEMP	994.14	DEG F
9468	ID FAN 8E MOTOR OUTBRD BRG TEMP	138.77	DEG F	0813BT:A9382	REHEAT OUTLET TUBE TC65 TEMP	1006.57	DEG F
9469	ID FAN 8W THRUST BEARING A TEMP	169.99	DEG F	0813BT:A9383	REHEAT OUTLET TUBE TC66 TEMP	1020.73	DEG F
9556	ID FAN 8W THRUST BEARING B TEMP	156.59	DEG F	0813BT:A9384	REHEAT OUTLET TUBE TC67 TEMP	1011.01	DEG F
9557	ID FAN 8W FAN OUTBOARD BRG TEMP	174.69	DEG F	0813BT:A9385	REHEAT OUTLET TUBE TC68 TEMP	990.49	DEG F
9558	ID FAN 8W MOTOR INBOARD BRG TEMP	120.89	DEG F	0813BT:A9386	REHEAT OUTLET TUBE TC69 TEMP	987.77	DEG F
9565	AIR HEATER GAS INLET TEMPERATURE	675.61	DEG F	0813BT:A9387	REHEAT OUTLET TUBE TC70 TEMP	1032.64	DEG F
9702	W ID FAN SYSTEM OIL TEMPERATURE	72.91	DEG F	0813BT:A9388	REHEAT OUTLET TUBE TC71 TEMP	1032.14	DEG F
9703	E ID FAN SYSTEM OIL TEMPERATURE	73.10	DEG F	0813BT:A9389	REHEAT OUTLET TUBE TC72 TEMP	1010.51	DEG F
9189	STEAM SEAL HEADER TEMPERATURE	733.77	DEG F	0813BT:A9390	REHEAT OUTLET TUBE TC73 TEMP	1034.79	DEG F
9200	CONVECTION PASS OUTLET TEMP	752.34	DEG F	0813BT:A9391	REHEAT OUTLET TUBE TC74 TEMP	1016.02	DEG F
9262	ECONOMIZER OUTLET TEMPERATURE	454.52	DEG F	0813BT:A9392	REHEAT OUTLET TUBE TC75 TEMP	1224.00	DEG F
9393	CNVECTN PASS OUT TO FLSHTNK TC76	733.38	DEG F	0813BT:A9397	3RD PASS FEEDWATER TC90 TEMP	759.30	DEG F
9564	PSH BYPASS LINE TO FLSHTNK TC340	744.68	DEG F	0813BT:A9398	3RD PASS FRONT WALL TC91 TEMP	769.07	DEG F
9R03	PIU3 REF JUNCT CAB 11-B	23.24	DEG C	0813BT:A9399	3RD PASS FEEDWATER TC92 TEMP	756.89	DEG F
9R04	PIU4 REF JUNCT CAB 11-C	23.39	DEG C	0813BT:A9400	3RD PASS FRONT WALL TC93 TEMP	752.42	DEG F
9203	SSH OUTLET HEADER 8W TEMP	995.49	DEG F	0813BT:A9401	3RD PASS FEEDWATER TC94 TEMP	745.38	DEG F
9204	SEC SUPERHEATER OUTLET TEMP 8E	1002.66	DEG F	0813BT:A9402	3RD PASS FRONT WALL TC95 TEMP	752.53	DEG F
9265	REHEATER OUTLET TEMP 8S	1015.54	DEG F	0813BT:A9403	3RD PASS FEEDWATER TC96 TEMP	757.75	DEG F
9266	REHEATER OUTLET TEMP 8N	1007.10	DEG F	0813BT:A9404	3RD PASS FRONT WALL TC97 TEMP	738.07	DEG F

340	PSH OUTLET TUBE TC2 TEMP	806.08	DEG F	0813BT:A9406	3RD PASS FRONT WALL TC99 TEMP	792.80	DEG F
341	PSH OUTLET TUBE TC3 TEMP	804.01	DEG F	0813BT:A9407	3RD PASS SIDE WALL TC101 TEMP	742.86	DEG F
342	PSH OUTLET TUBE TC4 TEMP	808.65	none	0813BT:A9408	3RD PASS FRONT WALL TC102 TEMP	742.57	DEG
343	PSH OUTLET TUBE TC5 TEMP	802.51	DEG F	0813BT:A9409	3RD PASS SCREEN TC103 TEMP	739.81	DEG
344	PSH OUTLET TUBE TC6 TEMP	621.45	DEG F	0813BT:A9410	3RD PASS FRONT WALL TC104 TEMP	742.94	DEG
345	PSH OUTLET TUBE TC7 TEMP	792.07	DEG F	0813BT:A9411	3RD PASS SOUTH WALL TC105 TEMP	742.91	DEG F
346	PSH OUTLET TUBE TC8 TEMP	764.04	DEG F	0813BT:A9412	3RD PASS SIDE WALL TC106 TEMP	740.05	DEG F
347	PSH OUTLET TUBE TC9 TEMP	810.11	DEG F	0813BT:A9413	3RD PASS SOUTH WALL TC107 TEMP	741.63	none
348	PSH OUTLET TUBE TC10 TEMP	807.47	DEG F	0813BT:A9414	3RD PASS SIDE WALL TC108 TEMP	745.62	DEG F

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415	3RD PASS SOUTH WALL TC109 TEMP	745.27	DEG F	0813BT:A9476	SSH INLET PLATEN OUTLET TC207	136.18	DEG F
416	3RD PASS SIDE WALL TC110 TEMP	134.03	DEG F	0813BT:A9477	SSH INLET PLATEN OUTLET TC208	1224.00	DEG F
417	3RD PASS SOUTH WALL TC103 TEMP	753.52	DEG F	0813BT:A9478	SSH INLET PLATEN OUTLET TC209	1224.00	DEG
418	3RD PASS SIDE WALL TC112 TEMP	751.03	DEG F	0813BT:A9479	SSH INLET PLATEN OUTLET TC210	890.96	none
419	3RD PASS SCREEN TC115 TEMP	734.03	DEG F	0813BT:A9480	SSH INLET PLATEN OUTLET TC211	912.01	DEG
420	3RD PASS SCREEN TC116 TEMP	735.07	DEG F	0813BT:A9481	SSH INLET PLATEN OUTLET TC212	889.69	DEG F
421	3RD PASS SCREEN TC117 TEMP	734.72	DEG F	0813BT:A9482	SSH INLET PLATEN OUTLET TC213	873.88	DEG F
422	3RD PASS SCREEN TC118 TEMP	735.02	DEG F	0813BT:A9483	SSH INLET PLATEN OUTLET TC214	1224.00	DEG F
423	3RD PASS SCREEN TC119 TEMP	739.81	DEG F	0813BT:A9484	SSH INLET PLATEN OUTLET TC215	1224.00	DEG
424	3RD PASS SCREEN TC120 TEMP	735.88	DEG F	0813BT:A9485	SSH INLET PLATEN OUTLET TC216	877.14	DEG
425	3RD PASS SCREEN TC121 TEMP	738.15	DEG F	0813BT:A9486	SSH INLET PLATEN OUTLET TC217	1224.00	DEG F
426	3RD PASS SCREEN TC122 TEMP	734.27	DEG F	0813BT:A9487	SSH INLET PLATEN OUTLET TC218	1224.00	DEG F
427	3RD PASS SCREEN TC123 TEMP	736.70	DEG F	0813BT:A9488	SSH INLET PLATEN OUTLET TC219	873.14	DEG F
428	3RD PASS SCREEN TC124 TEMP	735.61	DEG F	0813BT:A9489	SSH INLET PLATEN OUTLET TC220	1224.00	DEG
429	3RD PASS SCREEN TC125 TEMP	738.09	DEG F	0813BT:A9490	SSH INLET PLATEN OUTLET TC221	884.53	DEG
430	3RD PASS SCREEN TC126 TEMP	740.59	DEG F	0813BT:A9491	SSH INLET PLATEN OUTLET TC222	863.96	DEG
431	3RD PASS SCREEN TC127 TEMP	733.76	DEG F	0813BT:A9492	SSH INLET PLATEN OUTLET TC223	866.47	DEG F
432	3RD PASS SCREEN TC128 TEMP	736.57	DEG F	0813BT:A9493	SSH INLET PLATEN OUTLET TC224	872.53	DEG F
433	3RD PASS SCREEN TC129 TEMP	735.31	DEG F	0813BT:A9494	SSH INTRMDT PLATEN OUT LEG TC241	920.32	DEG F
434	3RD PASS SCREEN TC130 TEMP	734.80	DEG F	0813BT:A9495	SSH INTRMDT PLATEN OUT LEG TC242	1224.00	DEG
435	3RD PASS SCREEN TC131 TEMP	732.04	DEG F	0813BT:A9496	SSH INTRMDT PLATEN OUT LEG TC243	908.25	DEG
436	3RD PASS SCREEN TC132 TEMP	734.38	DEG F	0813BT:A9497	SSH INTRMDT PLATEN OUT LEG TC244	1224.00	DEG
437	3RD PASS SCREEN TC133 TEMP	735.42	DEG F	0813BT:A9498	SSH INTRMDT PLATEN OUT LEG TC245	877.01	DEG F
438	3RD PASS SCREEN TC134 TEMP	862.30	DEG F	0813BT:A9499	SSH INTRMDT PLATEN OUT LEG TC246	1224.00	DEG F
439	3RD PASS SCREEN TC135 TEMP	747.36	DEG F	0813BT:A9500	FURNACE FLOOR TEMPERATURE	662.84	DEG F
440	3RD PASS SCREEN TC136 TEMP	739.68	DEG F	0813BT:A9501	SSH INTRMDT PLATEN OUT LEG TC248	1224.00	DEG F
441	3RD PASS SCREEN TC137 TEMP	736.43	DEG F	0813BT:A9502	SSH INTRMDT PLATEN OUT LEG TC249	1075.54	DEG F
442	1ST PASS RISER TC150 TEMP	705.25	DEG F	0813BT:A9504	SSH INTRMDT PLATEN OUT LEG TC251	1224.00	DEG F
443	1ST PASS RISER TC151 TEMP	708.54	DEG F	0813BT:A9505	SSH INTRMDT PLATEN OUT LEG TC252	-24.00	DEG F
444	1ST PASS RISER TC152 TEMP	703.96	DEG F	0813BT:A9506	SSH INTRMDT PLATEN OUT LEG TC253	951.09	DEG F
445	1ST PASS RISER TC153 TEMP	709.13	DEG F	0813BT:A9507	SSH INTRMDT PLATEN OUT LEG TC254	1224.00	DEG F
446	1ST PASS RISER TC154 TEMP	703.69	DEG F	0813BT:A9508	SSH INTRMDT PLATEN OUT LEG TC255	1224.00	DEG F
447	1ST PASS RISER TC155 TEMP	711.80	DEG F	0813BT:A9509	SSH INTRMDT PLATEN OUT LEG TC256	1224.00	DEG F
448	1ST PASS RISER TC156 TEMP	713.12	DEG F	0813BT:A9510	SSH INTRMDT PLATEN OUT LEG TC257	1224.00	DEG F
449	1ST PASS RISER TC157 TEMP	709.82	DEG F	0813BT:A9511	SSH INTRMDT PLATEN OUT LEG TC258	1224.00	DEG F
450	1ST PASS RISER TC158 TEMP	707.44	DEG F	0813BT:A9512	SSH INTRMDT PLATEN OUT LEG TC259	1224.00	DEG F
451	1ST PASS RISER TC159 TEMP	709.02	DEG F	0813BT:A9513	SSH INTRMDT PLATEN OUT LEG TC260	1224.00	DEG F
452	1ST PASS RISER TC160 TEMP	708.41	DEG F	0813BT:A9514	SSH INTRMDT PLATEN OUT LEG TC261	924.14	DEG F
453	1ST PASS RISER TC161 TEMP	708.32	DEG F	0813BT:A9515	SSH INTRMDT PLATEN OUT LEG TC262	927.03	DEG F
454	1ST PASS RISER TC162 TEMP	699.14	DEG F	0813BT:A9516	SSH INTRMDT PLATEN OUT LEG TC263	909.26	DEG F
455	1ST PASS RISER TC163 TEMP	705.54	DEG F	0813BT:A9517	SSH INTRMDT PLATEN OUT LEG TC264	908.76	DEG F
456	1ST PASS RISER TC164 TEMP	693.25	DEG F	0813BT:A9518	SSH INLET PLATEN HEADER TC271	871.60	DEG F
457	1ST PASS RISER TC165 TEMP	706.98	DEG F	0813BT:A9519	SSH INLET PLATEN HEADER TC272	870.47	DEG F
458	CYCLONE 4 REENTRANT THROAT TC180	648.27	DEG F	0813BT:A9520	SSH INTRMDT PLATEN HEADER TC273	887.23	DEG F
459	CYCLONE 2 REENTRANT THROAT TC181	1020.00	DEG F	0813BT:A9521	SSH INLET PLATEN HEADER TC274	1224.00	DEG F
460	CYCLONE 3 REENTRANT THROAT TC182	655.29	DEG F	0813BT:A9522	SSH INTRMDT PLATEN HEADER TC275	999.39	DEG F
461	CYCLONE 1 REENTRANT THROAT TC187	646.58	DEG F	0813BT:A9523	SSH INLET PLATEN HEADER TC276	-24.00	DEG F
462	CYCLONE 6 REENTRANT THROAT TC184	647.15	DEG F	0813BT:A9524	SSH INTRMDT PLATEN HEADER TC277	1224.00	DEG F
463	CYCLONE 5 REENTRANT THROAT TC187	657.67	DEG F	0813BT:A9525	SSH INLET PLATEN HEADER TC278	1224.00	DEG F
464	CYCLONE 8 REENTRANT THROAT TC186	651.27	DEG F	0813BT:A9526	SSH INTRMDT PLATEN HEADER TC281	899.88	DEG F
465	CYCLONE 7 REENTRANT THROAT TC187	120.77	DEG F	0813BT:A9527	SSH INTRMDT PLATEN HEADER TC282	1224.00	DEG F
470	SSH INLET PLATEN OUTLET TC201	862.94	DEG F	0813BT:A9528	SSH INTRMDT PLATEN HEADER TC283	945.85	DEG F
471	SSH INLET PLATEN OUTLET TC202	863.61	DEG F	0813BT:A9529	SSH INTRMDT PLATEN HEADER TC284	1224.00	DEG F
472	SSH INLET PLATEN OUTLET TC203	-24.00	DEG F	0813BT:A9530	SSH INTRMDT PLATEN HEADER TC285	929.43	DEG F
473	SSH INLET PLATEN OUTLET TC204	1224.00	DEG F	0813BT:A9531	SSH INTRMDT PLATEN HEADER TC286	927.61	DEG F
474	SSH INLET PLATEN OUTLET TC205	1224.00	DEG F	0813BT:A9532	SSH INTRMDT PLATEN HEADER TC287	1224.00	DEG F

532	SSH INTRMDT PLATEN HEADER TC288	1224.00	DEG F	0813CW:A9294	CWP 8E MOTOR UPPER BEARING TEMP	156.71	DEG F
535	CONV PASS SIDE WALL RISER TC302	756.39	DEG F	0813CW:A9296	CWP 8E MOTOR THRUST BEARING TEMP	122.99	DEG F
536	CONVECTION PASS SW RISER TC303	756.51	DEG F	0813CW:A9297	CWP 8W MTR UPPER BEARING TEMP	131.92	DEG F
537	CONV PASS SIDE WALL RISER TC304	749.85	DEG F	0813CW:A9298	CWP 8W MOTOR LOWER BEARING TEMP	135.88	DEG F
538	CONVECTION PASS SW RISER TC305	752.82	DEG F	0813CW:A9299	CWP 8W MOTOR THRUST BRG TEMP	148.36	DEG F
539	CONV PASS SIDE WALL RISER TC306	747.92	DEG F	0813ES:A9209	EXTRACT STEAM TO LP HTR 2W	166.33	DEG F
540	CONVECTION PASS SW RISER TC307	745.32	DEG F	0813ES:A9210	EXTRACT STEAM TO LP HEATER 2E	166.50	DEG F
541	CONV PASS SIDE WALL RISER TC308	769.50	none	0813ES:A9211	EXTRACT STEAM TO LP HTR 3	320.90	DEG F
542	CONVECTION PASS SW RISER TC309	765.30	DEG F	0813ES:A9212	EXTRACT STEAM TO LP HEATER 4	137.97	DEG F
543	CONV PASS SIDE WALL RISER TC310	757.72	DEG F	0813ES:A9213	12TH STAGE EXTRACTION STEAM TEMP	560.55	DEG F
544	CONVECTION PASS SW RISER TC311	753.30	DEG F	0813ES:A9214	EXTRACT STEAM TO HP HEATER 6W	800.25	DEG F
545	CONV PASS SIDE WALL RISER TC312	752.96	DEG F	0813ES:A9215	EXTRACT STEAM TO HEATER 6E	801.87	DEG F
546	CONVECTION PASS SW RISER TC313	751.16	DEG F	0813ES:A9216	EXTRACT STEAM TO HP HEATER 7W	398.03	DEG F
547	CONV PASS SIDE WALL RISER TC314	750.33	DEG F	0813ES:A9217	EXTRACT STEAM TO HP HEATER 7E	571.45	DEG F
548	CONVECTION PASS FW RISER TC315	757.26	DEG F	0813ES:A9267	EXTRACT STEAM TO BFP TURBINES	568.89	DEG F
549	CONV PASS FRONT WALL RISER TC316	778.61	DEG F	0813ES:A9268	DEAERATOR STEAM INLET TEMP	491.68	DEG F
550	CONVECTION PASS FW RISER TC317	778.52	DEG F	0813ES:A9272	EXTRACT STEAM TO EVAPORATOR	537.50	DEG F
551	CONV PASS FRONT WALL RISER TC318	769.40	DEG F	0813FW:A9153	SUBFP COUPLING RUNNING OTBRD BRG	255.00	DEG F
93	CONVECTION PASS RW RISER TC320	745.06	DEG F	0813FW:A9154	BFPT8W THRUST BRG BRRS	150.56	DEG F
4	CONVECTION PASS RW RISER TC321	756.41	DEG F	0813FW:A9156	BFPT 8W THRUST BRG METAL ACT TMP	76.03	DEG F
5	CONV PASS REAR WALL RISER TC322	750.71	DEG F	0813FW:A9157	3RD PASS SCREEN TC124 TEMP	143.68	DEG F
0	2-3 PASS TRANSITON HDR LSW TC330	718.66	DEG F	0813FW:A9158	BFPT 8W HP BRG OIL DRAIN TEMP	141.56	DEG F
1	2-3 PASS TRANSITION HDR FW TC331	721.79	DEG F	0813FW:A9159	BFP TURB 8W LP BRG DRAIN TEMP	146.89	DEG F
2	2-3 PASS TRANSITON HDR LSW TC332	727.55	DEG F	0813FW:A9160	BFPT 8W STOP VALVE METAL TEMP	828.06	DEG F
3	2-3 PASS TRANSITION HDR FW TC333	720.94	DEG F	0813FW:A9161	BFP8W OIL LEAVING COOLER TEMP	126.20	DEG F
0	LOW HD PMP 8W MTR UPR BRG TEMP	140.21	DEG F	0813FW:A9162	BFP 8W OUTBOARD BRG METAL TEMP	144.27	DEG F
1	LOW HD PMP 8E MTR LWR BRG TEMP	90.78	DEG F	0813FW:A9163	BFP 8W INBOARD BRG METAL TEMP	141.22	DEG F
4	LOW HD PMP 8W MTR UPR BRG TEMP	81.23	DEG F	0813FW:A9164	BFPT 8E THRUST BRG OIL DRAIN TMP	129.46	DEG F
5	LOW HD PMP 8W MTR LWR BRG TEMP	76.99	DEG F	0813FW:A9165	BFPT8E STOP VALVE METAL TEMP	1224.00	DEG F
0	SPARE	73.97	DEG F	0813FW:A9166	BFPT 8E THRUST BRG METAL ACT TMP	140.35	DEG F
1	SPARE	73.53	DEG F	0813FW:A9167	BFPT 8E THRUST MTL INACT FACE	255.00	none
4	SPARE	73.92	DEG F	0813FW:A9168	BFPT 8E HP BEARING OIL DRAIN TMP	131.75	DEG F
5	SPARE	73.93	DEG F	0813FW:A9169	BFPT8E LP BEARING OIL DRAIN TEMP	144.93	DEG F
NVPASS	CONV PASS ROC	-6.97	DEGF/H	0813FW:A9170	BFP8E OIL LEAVING COOLER TEMP	125.83	DEG F
ONO	ECONOMIZER ROC 0 - 100	-12.03	DEGF/H	0813FW:A9171	BFP8E OUTBRD BEARING METAL TEMP	157.36	DEG F
TPASSA	FIRST PASS ROC 0 - 100	-17.74	DEGF/H	0813FW:A9172	BFP 8E INBRD BRG METAL TEMP	149.69	DEG F
4	CONDENSATE TEMP FROM HEATER 5	314.60	DEG F	0813FW:A9173	SUBFP MOTOR INBOARD BRG MTL TEMP	83.64	DEG F
5	CONDENSATE TEMP FROM HEATER 1W	130.96	DEG F	0813FW:A9174	SUBFP MOTOR OUTBRD MTL TEMP	84.96	DEG F
6	CONDENSATE TEMP FROM HEATER 1E	125.12	DEG F	0813FW:A9175	SUBFP PUMP INBOARD BRG MTL TEMP	255.00	DEG F
7	CONDENSATE TEMP FROM HEATER 2	163.04	DEG F	0813FW:A9176	SUBFP PUMP OUTBOARD BRG MTL TEMP	76.12	DEG F
8	CONDENSATE TEMP FROM HEATER 3	218.65	DEG F	0813FW:A9218	SUBFP DISCHARGE HEADER TEMP	322.08	DEG F
9	CONDENSATE TEMP FROM HEATER 4	219.27	DEG F	0813FW:A9219	FEEDWATER TEMP HEATER 6W OUTLET	392.21	DEG F
0	CONDENSATE TEMP TO HEATER 2	129.42	DEG F	0813FW:A9220	FEEDWATER TEMP HEATER 6E OUTLET	390.42	DEG F
1	CONDENSATE TEMP TO HEATERS 1E-1W	87.27	DEG F	0813FW:A9221	FEEDWATER TEMP /W HEATER OUTLET	392.45	DEG F
2	CONDNSATE TEMP FRM PACKGE EXHSTR	87.76	DEG F	0813FW:A9222	FEEDWATER TEMP HEATER 7E OUTLET	479.33	DEG F
3	CNDS FRM PACKAGE EXHUSTER 8N TMP	86.09	DEG F	0813FW:A9223	FEEDWATER TEMP AT ECON INLET	434.36	DEG F
4	CONDNSATE TEMP TO PACKAGE EXHSTR	82.82	DEG F	0813FW:A9261	REHEAT ATTEMP WATER TEMPERATURE	765.00	DEG F
5	POLISHED CONDENSATE MAKEUP TEMP	53.00	DEG F	0813GN:A9035	GENERATOR STATOR SLOT TEMP	43.35	DEG C
9	COND TEMP FROM BFP TURB CONDENS	101.06	DEG F	0813GN:A9036	GENERATOR STATOR SLOT TEMP	40.15	DEG C
3	EVAPORATOR DRAIN TEMP	228.29	DEG F	0813GN:A9037	GENERATOR STATOR SLOT TEMP	41.09	DEG C
2	CONDENSATE PUMP 8E MTR UPR BRG	98.87	DEG F	0813GN:A9040	GEN COLLECTOR BEARING TEMP	130.84	DEG F
3	CONDENSATE PUMP 8E MTR LWR BRG	104.87	DEG F	0813HD:A9240	LP HEATER 1W DRAIN TEMPERATURE	131.92	DEG F
6	CONDENSATE PUMP 8W MTR UPR BRG	114.98	DEG F	0813HD:A9241	LP HEATER 1E DRAIN TEMPERATURE	114.45	DEG F
7	CONDENSATE PUMP 8W MTR LWR BRG	102.38	DEG F	0813HD:A9242	HEATER 2 DRAIN TEMPERATURE	135.84	DEG F

3	HEATER 3 DRAIN TEMPERATURE	176.93	DEG F	0814BF:A8047	AIR HEATER GAS OUT WE MIDDLE B1	368.45	DEG F
4	HEATER 4 DRAIN TEMPERATURE	84.34	DEG F	0814BF:A8048	AIR HEATER GAS OUT WE BOTTOM C1	332.71	DEG F

6	HP HEATER 6E DRAIN TEMPERATURE	331.35	DEG F	0814BF:A8050	AIR HEATER GAS OUT WW MIDDLE B1	330.37	DEG F
7	HP HEATER 7W DRAIN TEMPERATURE	338.62	DEG F	0814BF:A8051	AIR HEATER GAS OUT WW BOTTOM C1	266.65	DEG F
8	HP HEATER 7E DRAIN TEMPERATURE	407.94	DEG F	0814BF:A9614	FD FAN 8E MOTOR RTD TEMP	48.00	DEG C
9	GLYCOL HEATER 8W DRAIN TEMP	218.94	DEG F	0814BF:A9906	E PRECIP E DUCT EAST SIDE TEMP	328.75	DEG F
0	GLYCOL HEATER 8E DRAIN TEMP	218.77	DEG F	0814BF:A9907	E PRECIP E DUCT TOP SIDE TEMP	340.27	DEG F
1	HRH TO RH-STOP VALVE 8S TEMP	999.62	DEG F	0814BF:A9908	E PRECIP E DUCT WEST SIDE TEMP	347.65	DEG F
2	HRH TO RH-STOP VALVE 8N TEMP	1000.76	DEG F	0814BF:A9909	E PRECIP W DUCT EAST SIDE TEMP	369.79	DEG F
6	COLD RH FROM MAIN TURB 8N	575.23	DEG F	0814BF:A9910	E PRECIP W DUCT TOP SIDE TEMP	370.70	DEG F
7	COLD REHEAT FROM MAIN TURB 8S	569.70	DEG F	0814BF:A9911	E PRECIP W DUCT WEST SIDE TEMP	371.90	DEG F
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	EXHAUST CHEST INNER SURFACE TEMP	887.98	DEG F	0814BT:A8012	FLUE GAS DUMMY CAB 17 BT	21.00	DEG F
2	EXT VLV CHEST OUTER SURFACE TEMP	829.03	DEG F	0814BT:A8013	DUMMY TEST POINT J TC	70.36	DEG F
3	STOP VALVE 2 INNER SURFACE TEMP	990.73	DEG F	0814CW:A9251	CW TO CONDNSER 1EW INLET TEMP	55.18	DEG F
4	STOP VALVE 2 OUTER SURFACE TEMP	977.74	DEG F	0814CW:A9258	CW TO CONDNSER 1EE INLET TEMP	54.87	DEG F
5	EXHAUST HOOD 1 GENERATOR END TMP	79.57	DEG F	0814CW:A9274	OUTSIDE AMBIENT AIR TEMP	62.80	DEG F
6	EXHAUST HOOD 2 GENERATOR END	82.90	DEG F	0814CW:A9622	CW FROM CONDNSER 4WW OUTLET TEMP	83.45	DEG F
7	TURBINE OIL TEMP TO COOLER	152.98	DEG F	0814CW:A9624	CW FROM CONDNSER 4WW OUTLET TEMP	82.28	DEG F
8	TURBINE OIL TEMP FROM COOLER	120.12	DEG F	0814CW:A9626	CW FROM CONDNSER 3WE OUTLET TEMP	83.76	DEG F
0	BEARING 1 OIL DRAIN TEMPERATURE	149.65	DEG F	0814CW:A9628	CW FROM CONDNSER 3WE OUTLET TEMP	83.13	DEG F
1	BEARING 2 OIL DRAIN TEMPERATURE	152.98	DEG F	0814CW:A9630	CW FROM CONDNSER 2EW OUTLET TEMP	80.95	DEG F
2	BEARING 3 OIL DRAIN TEMPERATURE	142.39	DEG F	0814CW:A9632	CW FROM CONDNSER 2EW OUTLET TEMP	73.14	DEG F
3	BEARING 4 OIL DRAIN TEMPERATURE	135.67	DEG F	0814CW:A9634	CW FROM CONDNSER 1EE OUTLET TEMP	79.10	DEG F
4	BEARING 5 OIL DRAIN TEMPERATURE	139.64	DEG F	0814CW:A9636	CW FROM CONDNSER 1EE OUTLET TEMP	73.19	DEG F
5	BEARING 6 OIL DRAIN TEMPERATURE	141.18	DEG F	0814CW:A9638	CW FROM EBFP CONDNSR OUTLET TEMP	68.67	DEG F
6	BEARING 7 OIL DRAIN TEMPERATURE	140.81	DEG F	0814CW:A9640	CW FROM WBFP CONDNSR OUTLET TEMP	68.25	DEG F
7	BEARING 8 OIL DRAIN TEMPERATURE	137.63	DEG F	0814CW:A9642	CW FROM EBFP CONDNSR OUTLET TEMP	68.81	DEG F
8	THRUST BRG FRONT PLATE OIL DRAIN	160.54	DEG F	0814CW:A9644	CW FROM WBFP CONDNSR OUTLET TEMP	-6.00	DEG F
9	THRUST BRG REAR PLATE OIL DRAIN	156.24	DEG F	0814CW:A9930	AMBIENT AIR TEMP BLR RM EL 196	112.70	DEG F
0	THRUST BEARING UPPER FRONT TEMP	174.97	DEG F	0814CW:A9931	AMBIENT AIR TEMP BLR RM EL 61	70.34	DEG F
1	THRUST BEARING UPPER REAR TEMP	149.94	DEG F	0814EL:A9015	UAT & HOTSPOT TEMP	60.32	DEG C
2	THRUST BEARING LOWER FRONT TEMP	166.08	DEG F	0814FW:A9019	SUBFP MOTOR TEMPERATURE	24.39	DEG C
3	THRUST BEARING LOWER REAR TEMP	153.16	DEG F	0814GN:A9021	COLD H2 FROM COOLER 2 TEMP	20.37	DEG C
8	TURBINE BEARING 1 METAL TEMP	180.85	DEG F	0814GN:A9023	COLD H2 FROM COOLER 4 TEMP	23.48	DEG C
9	TURBINE BEARING 2 METAL TEMP	255.00	DEG F	0814GN:A9025	STATOR COOLING WATER TMP OUT	35.54	none
2	TURBINE BEARING 3 METAL TEMP	285.60	DEG F	0814GN:A9027	GENERATOR STATOR SLOT TEMP	36.71	DEG C
3	TURBINE BEARING 4 METAL TEMP	285.60	DEG F	0814GN:A9029	GENERATOR STATOR SLOT TEMP	40.86	DEG C
8	TURBINE BEARING 7 METAL TEMP	180.93	DEG F	0814GN:A9031	GENERATOR STATOR SLOT TEMP	40.47	DEG C
4	TURBINE BEARING 8 METAL TEMP	195.91	DEG F	0814GN:A9039	COLLECTOR HOUSING AIR OUT TEMP	41.38	DEG C
5	CROSSOVER STEAM TEMPERATURE SE	569.05	none	0815BA:A9011	GLYCOL RETURN TEMPERATURE	178.31	DEG F
9	CROSSOVER STEAM TEMPERATURE NW	569.94	DEG F	0815BA:A9017	FD FAN 8E MOTOR TEMPERATURE	50.98	DEG C
8	FD FAN 8W MOTOR TEMPERATURE	53.96	DEG C	0815BA:A9046	TOTAL AIR FLOW	2832.06	KLB/HR
0	AIR HEATER GAS OUT EE TOP A1	381.41	DEG F	0815BA:A9140	EXTRACT STEAM TO GLYCOL HEATERS	9.30	PSIG
1	AIR HEATER GAS OUT EE MIDDLE B1	360.15	DEG F	0815BA:A9144	AIR HEATER AIR INLET PRESSURE	41.21	IN WC
2	AIR HEATER GAS OUT EE BOTTOM C1	300.76	DEG F	0815BA:A9145	WINDBOX PRESSURE 8W	37.00	IN WC
3	AIR HEATER GAS OUT EW TOP A1	414.34	DEG F	0815BA:A9146	WINDBOX PRESSURE 8E	37.22	IN WC
4	AIR HEATER GAS OUT EW MIDDLE B1	396.29	DEG F	0815BA:A9147	WINDBOX TO FURNACE DIFF PRESSURE	37.87	IN WC
5	AIR HEATER GAS OUT EW BOTTOM C1	366.90	DEG F	0815BA:A9148	STM TO GLYCOL HTR DRIVE UNIT POS	0.00	PCT
6	AIR HEATER GAS OUT WE TOP A1	398.57	DEG F	0815BA:A9566	AIR HEATER AIR OUTLET TEMP	568.49	DEG F

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9	GLYCOL TEMP	210.34	DEG F	0815BF:A9781	BYPASS STACK CO2 CONCENTRATION	-0.40	% VOL
8	8-1 CYCLONE TOTAL AIR FLOW	344.62	KPPH	0815BF:A9782	BYPASS STACK TOTAL GAS FLOW	0.00	MACFM
9	8-2 CYCLONE TOTAL AIR FLOW	354.27	KPPH	0815BF:A9783	U7 INSTANTANEOUS OPACITY	10.23	PCT
0	8-3 CYCLONE TOTAL AIR FLOW	342.11	KPPH	0815BF:A9784	U7 SIX MINUTE AVERAGE OPACITY	24.06	PCT
1	8-4 CYCLONE TOTAL AIR FLOW	343.26	KPPH	0815BF:A9785	U8 INSTANTANEOUS OPACITY	4.42	PCT
2	8-5 CYCLONE TOTAL AIR FLOW	341.65	KPPH	0815BF:A9786	U8 SIX MINUTE AVERAGE OPACITY	6.19	PCT
3	8-6 CYCLONE TOTAL AIR FLOW	346.07	KPPH	0815BF:A9787	BYPASS STACK INSTANT OPACITY	0.07	PCT
4	8-7 CYCLONE TOTAL AIR FLOW	360.32	KPPH	0815BF:A9788	BYPASS STACK SIX MIN AVG OPACITY	-2.00	PCT
5	8-8 CYCLONE TOTAL AIR FLOW	343.81	KPPH	0815BF:A9789	AFGD INLET SO2	8.27	#/MBTU
0	[illegible]	2.56	PCT	[illegible]	AIR HEATER GAS OUTLET TEMP	29.00	[illegible]
1	[illegible]	1.56	[illegible]	[illegible]	AFGD BASTMASTER CABVAIRTEMP	28.00	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

10	AIRHEATER AIR INLET TEMPERATURE	249.26	AV.DE	0815BM:A9033	COAL FLOW TO CYCLONE 8-5	38.38	KPPH
11	AIR HEATER AIR INLET TEMPERATURE	14.41	MV				
12	AIR HEATER GAS SIDE DIFF PRES	9.24	IN WC	0815BM:A9039	COAL FLOW TO CYCLONE 8-7	38.84	KPPH
13	FURNACE TO ECON OUTLET DIFF PRES	0.00	IN WC	0815BM:A9040	COAL FLOW TO CYCLONE 8-8	38.54	KPPH
50	AIR HEATER GAS OUTLET PRESSURE	-48.34	IN WC	0815BM:A9141	MAIN FUEL GAS PRESSURE	16.97	PSIG
53	8W FLUE GAS OXYGEN %	2.66	PCT	0815BM:A9142	IGNITION GAS SUPPLY PRESSURE	44.00	PSIG
54	8E FLUE GAS OXYGEN %	2.57	PCT	0815BM:A9270	MAIN FUEL GAS TEMPERATURE	94.59	DEG F
56	ID FAN 8W MOTOR OB BEARING TEMP	147.75	DEG F	0815BM:A9271	IGNITION GAS TEMP	90.77	DEG F
5	ID FAN 8W MOTOR TEMPERATURE	50.72	DEG C	0815BM:A9649	8-1 CYCLONE SECONDARY AIR FLOW	299.28	KLBS
7	FGD MIST ELIMINATOR OUT GAS TEMP	-6.00	DEG F	0815BM:A9650	8-2 CYCLONE SECONDARY AIR FLOW	309.21	KLBS
8	FGD OB DUCT INLET TEMPERATURE	-10.00	DEG F	0815BM:A9651	8-3 CYCLONE SECONDARY AIR FLOW	296.92	KLBS
9	FGD INLET OB DUCT PRESSURE	-0.50	IN WC	0815BM:A9652	8-4 CYCLONE SECONDARY AIR FLOW	298.03	KLBS
0	FGD ABSORBER/STACK DIFF PRESSURE	-0.50	IN WC	0815BM:A9653	8-5 CYCLONE SECONDARY AIR FLOW	296.42	KLBS
1	FURNACE PRESSURE-SELECTED XMTTR	-0.84	IN WC	0815BM:A9654	8-6 CYCLONE SECONDARY AIR FLOW	297.81	KLBS
2	AFGD PRIMARY SO2 ANALIZER OUT	0.29	#/MBTU	0815BM:A9655	8-7 CYCLONE SECONDARY AIR FLOW	314.73	KLBS
3	AFGD PRIMARY OUT BAROMETRIC PRES	29.30	IN/HGA	0815BM:A9656	8-8 CYCLONE SECONDARY AIR FLOW	298.69	KLBS
4	AFGD PRIMARY FLUE GAS TEMP	168.66	DEG F	0815BS:A9062	COLD REHEAT PREWARM PRESSURE	612.00	PSIG
5	AFGD PRIMARY OUT SO2 FLOW	99.95	LB/HR	0815BS:A9086	CONVECTION PASS OUTLET PRESSURE	3593.59	PSIG
6	AFGD PRIMARY OUT NOX LEVEL	1.44	#/MBTU	0815BS:A9137	FLASH TANK PRESSURE	54.72	PSIG
7	AFGD PRIMARY OUT CO2 LEVEL	10.87	% VOL	0815BS:A9138	FLASH TANK LEVEL	-13.76	IN
8	AFGD PRIMARY TOTAL GAS FLOW	1.14	MACFM	0815BS:A9205	PRIMARY SUPHTR OUTLET TEMP 8E	803.30	DEG F
9	AFGD BKUP SO2 ANALIZER OUT	-0.04	#/MBTU	0815BS:A9206	PRIMARY SUPHTR 8W OUTLET TEMP	795.28	DEG F
0	AFGD BKUP OUT BAROMETRIC PRESS	-0.65	IN/HGA	0815BS:A9324	START UP VLV 201 DRIVE POSITION	0.00	PCT
1	AFGD BKUP FLUE GAS TEMP	-10.00	DEG F	0815BS:A9331	ECONOMIZER INLET DISSOLVED O2	-0.22	PPB
2	AFGD BKUP OUT SO2 FLOW	0.59	LB/HR	0815BS:A9337	PH AT ECONOMIZER INLET	8.68	PH
3	AFGD BKUP OUT NOX LEVEL	1.48	#/MBTU	0815BS:A9666	FLASH TANK BAFFLE DIFF PRESSURE	-3.51	PSID
4	AFGD BKUP OUT CO2 LEVEL	10.74	none	0815BS:A9690	CYCLONE FEEDWATER FLOW	2130.33	none
5	AFGD BKUP TOTAL GAS FLOW	-0.05	MACFM	0815BS:CJR01	PIU1 REF JUNCT CAB 10-B	23.00	DEG C
6	BYPASS STACK SO2 CONCENTRATION	-0.18	#/MBTU	0815BS:CJR02	PIU2 REF JUNCT CAB 10-C	23.37	DEG C
7	BYPASS STACK BAROMETRIC PRESS	0.02	IN/HGA	0815BS:HA9322	E-W CONDENSATE PUMPS CONDUCT	27.11	MV
8	BYPASS STACK FLUE GAS TEMP SPARE	0.00	DEG F	0815BS:HA9329	ECONOMIZER INLET CAT COND S11.1	25.02	MV
9	BYPASS STACK SO2 FLOW	-20.00	LB/HR	0815BS:HA9330	ECONOMIZER INLET CAT COND S11.2	24.57	MV
0	BYPASS STACK NOX CONCENTRATION	-0.08	#/MBTU	0815BS:HA9334	SSH OUTLET CATION CONDUCTIVITY	24.93	MV

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35	BFP CONDENSER CATION CONDUCTIVITY	36.48	MV	0815ES:A9064	EXTRACTION STEAM FLOW TO BFP'S	196.66	KPPH
36	GLYCOL HEATER CATION CONDUCT	27.75	MV	0815ES:A9099	EXTRACT STEAM TO LP HEATER 1W	-10.78	PSIG
70	8W SUPERHEATER INLET GAS TEMP	29.82	MV	0815ES:A9100	EXT STEAM TO LP HEATER 1E	-5.49	PSIG
71	8E SUPERHEATER INLET GAS TEMP	0.03	MV	0815ES:A9101	EXTRACT STEAM TO LP HEATER 2	-8.98	PSIG
7	FURNACE FLOOR TEMPERATURE TC194	662.82	DEG F	0815ES:A9102	EXTRACT STEAM TO LP HEATER 3	13.23	PSIG
8	FURNACE FLOOR TEMPERATURE TC195	668.60	DEG F	0815ES:A9103	EXTRACT STEAM TO LP HEATER 4	0.13	PSIG
9	FURNACE FLOOR TEMPERATURE TC196	658.75	DEG F	0815ES:A9104	DEAERATOR PRESSURE	67.22	PSIG
0	FURNACE FLOOR TEMPERATURE TC197	660.46	DEG F	0815ES:A9105	EXTRACT STEAM TO HP HEATER 6W	205.10	PSIG
1	FURNACE FLOOR TEMPERATURE TC198	651.89	DEG F	0815ES:A9106	EXTRACT STEAM TO HP HEATER 6E	206.47	PSIG
2	FURNACE FLOOR TEMPERATURE TC199	668.49	DEG F	0815ES:A9107	COLD REHEAT STEAM TO HEATER 7W	29.60	PSIG
3	FURNACE FLOOR TEMPERATURE TC200	660.62	DEG F	0815ES:A9108	COLD REHEAT STEAM TO HEATER 7E	542.38	PSIG
6	ATMOS WET BULB TEMP	57.80	DEG F	0815ES:A9109	LP TURBINE STEAM INLET PRESSURE	86.03	PSIG
1	HEATER DRAIN PUMP FLOW	308.64	KPPH	0815ES:A9118	EXTRACTION STEAM TO BFP'S PRESS	79.23	PSIG
2	HEATING EVAPORATOR DRAIN FLOW	4.21	KPPH	0815ES:A9121	LP STEAM PRESSURE TO 8W BFPT	77.07	PSIG
3	CONDENSATE MAKE UP FLOW	34.05	GPM	0815ES:A9122	LP STEAM PRESSURE TO 8E BFPT	77.04	PSIG
4	CONDENSATE FLOW	1762.74	KPPH	0815ES:A9595	STEAM SEAL HEADER LOWER TEMP	1224.00	DEG F
5	CONDENSATE FROM GLYCOL HEATER	0.00	KPPH	0815FW:A9045	TOTAL FEEDWATER FLOW FROM DA	2183.23	KLB/HR
9	BFP CONDENSERS CONDENSATE FLOW	123.86	none	0815FW:A9065	BFP 8W DISCHARGE FLOW	941.68	KPPH
0	MAIN CONDENSER OVERFLOW	1.27	GPM	0815FW:A9066	BFP 8E DISCHARGE FLOW	1189.12	KPPH
2	BFP 8E HOTWELL PUMP PRESSURE	16.87	PSIG	0815FW:A9067	SUBFP DISCHARGE FLOW	50.66	KPPH
3	CONDENSATE HEADER PRESSURE	367.27	PSIG	0815FW:A9068	8W SEC SUPHTR ATTEMP WATER FLOW	9.53	KPPH

5	HTR 1E CONDENSER ABSOLUTE PRESS	0.86	IN HG	0815FW:A9070	COLD REHEAT ATTEMP WATER FLOW	39.10	KPPH
6	HEATER DRAIN PUMP PRESSURE	267.90	PSIG	0815FW:A9076	BFP 8W DRUM BALANCE FLOW	60.58	KPPH
7	CONDENSATE FROM HEATER 2 CONDUCT	1.94	MMHO	0815FW:A9077	BFP 8E DRUM BALANCE FLOW	53.00	KPPH
8	HYDRAZINE FROM HEATER 2	0.77	PPB	0815FW:A9078	SUBFP DRUM BALANCE FLOW	0.09	KPPH
2	DEAERATOR HEATER LEVEL	9.62	FT	0815FW:A9081	BFP 8W SPEED	-5.83	RPM
23	HOTWELL DISCHARGE CATION CONDUCT	25.90	MV	0815FW:A9082	BFP 8E SPEED	7491.00	RPM
1	MAIN CONDENSER VACUUM	28.56	IN HG	0815FW:A9095	ATTEM TO COLD REHEAT PRESS	-36.00	PSIG
9	BFP 8W CONDENSER VACUUM	2.25	IN HG	0815FW:A9110	ECONOMIZER INLET FEEDWATER PRES	3936.21	PSIG
0	BFP 8E CONDENSER VACUUM	1.61	IN HG	0815FW:A9111	BFP 8W DISCHARGE PRESSURE	4003.12	PSIG
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	CW FROM CONDNSER 8WE OUTLET TEMP	83.98	DEG F	0815FW:A9118	[illegible]	[illegible]	[illegible]
7	CW FROM CONDNSER 8EE OUTLET TEMP	81.54	DEG F	0815FW:A9122	BFPT 8W BEARING OIL PRESSURE	16.54	PSIG
9	CW FROM CONDNSER 2EW OUTLET TEMP	76.58	DEG F	0815FW:A9123	BFP 8W BEARING OIL PUMP PRESSURE	16.10	PSIG
1	CW FROM CONDNSER 2EW OUTLET TEMP	76.25	DEG F	0815FW:A9125	BFPT 8E LUBE OIL FILTER DIF PRES	3.18	PSIG
3	CW FROM CONDNSER 1EE OUTLET TEMP	72.74	DEG F	0815FW:A9126	BFP 8E TURBINE BEARING OIL PRESS	18.84	PSIG
5	CW FROM CONDNSER 1EE OUTLET TEMP	69.51	DEG F	0815FW:A9127	BFP 8E BEARING OIL PUMP PRESSURE	15.08	PSIG
7	CW FROM EBFP CONDNSER OUTLT TEMP	67.60	DEG F	0815FW:A9128	SUBFP COUPLING IMPELLER OTBRD BRG	255.00	DEG F
9	CW FROM EBFP CONDNSER OUTLT TEMP	68.13	DEG F	0815FW:A9151	SUBFP COUPLING IMPELLER INBRD BRG	255.00	DEG F
1	CW FROM WBFP CONDNSER OUTLT TEMP	68.98	DEG F	0815FW:A9152	BFP 8W HI PRESS BEARNG VIBRATION	2.01	MILS
3	CW FROM WBFP CONDNSER OUTLT TEMP	83.71	DEG F	0815FW:A9572	BFP 8W LOW PRESSURE BEARING VIB	-0.58	MILS
7	ATMOSPHERIC BAROMETRIC PRESSURE	29.32	IN HG	0815FW:A9573	BFP 8E HI PRESS BEARNG VIBRATION	0.23	MILS
7	UAT 8X POWER TO 4KV BUS 8Z	8.04	MW	0815FW:A9574	BFP 8E LOW PRESSURE BEARING VIB	0.76	MILS
8	UAT 8 POWER TO 4KV BUS 8W	7.49	MW	0815FW:A9575	8W BFP THRUST BEARING METAL TEMP	142.66	DEG F
9	RAT 2 POWER TO 4KV BUS 8Z	-0.36	MW	0815FW:A9597	BFP 8E THRUST BEARING METAL TEMP	131.71	DEG F
0	RAT 1 POWER TO 4KV BUS 8W	-0.50	MW	0815FW:A9598	SUBFP THRUST BEARING METAL TEMP	76.07	DEG F
4	MAIN TRANSFORMER HOTSPOT TEMP	50.85	DEG C	0815FW:A9599	BFP SPD CHNGR LO SPD BRG OIL IN	204.00	DEG F
5	UAT 8X POWER TO 4KV BUS 8EX	4.06	MW	0815FW:A9602	SUBFP SPD CHNGR LOSPD BRG OILOUT	255.00	DEG F
6	UAT 8 POWER TO 4KV BUS 8WX	3.84	MW	0815FW:A9603	BFP SPD CHNGR HI SPD BRG OIL IN	204.00	DEG F
7	RAT 2 POWER TO 4KV BUS 8EX	0.01	MW	0815FW:A9604	SUBFP SPD CHNGR HISPD BRG OILOUT	255.00	DEG F
8	RAT 1 POWER TO 4KV BUS 8WX	0.01	MW	0815FW:A9605			

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043	STARTUP BFP SPEED	19.29	MV	0815TS:A9585	CONTROL VALVE POSITION	80.75	PCT
.11	BFP 8W DISCHARGE PRESSURE	73.38	MV	0815TS:A9586	ECCENTRICITY	1.15	MILS
.12	BFP 8E DISCHARGE PRESSURE	72.96	MV	0815TS:A9587	SHELL EXPANSION	737.67	MILS
.13	SUBFP DISCHARGE PRESSURE	20.09	MV	0815TS:A9588	ROTOR-SHELL DIFF EXPANSION	526.46	MILS
01	GENERATOR 8 GROSS MW	323.09	MW	0815TS:A9589	STOP VALVE 2 BYPASS POSITION	95.23	PCT
02	GENERATOR 8 STATOR VOLTAGE	21.82	KV	0815TS:A9590	CROSSOVER STEAM TEMPERATURE SW	571.49	DEG F
03	GENERATOR 8 STATOR CURRENT	8.96	KAMPS	0815TS:A9591	CROSSOVER STEAM TEMPERATURE NE	569.05	DEG F
04	GENERATOR 8 GROSS MEGAVARS	81.25	MVAR	08PLS01:D4001	GENERATOR OUTPUT	0.00	MW
05	GENERATOR 8 FIELD CURRENT	1891.79	AMPS	08PLS01:D4002	COAL FLOW TO CYCLONE 8-1	0.00	KLBH
06	GENERATOR 8 FIELD VOLTAGE	263.23	VOLTS	08PLS01:D4003	COAL FLOW TO CYCLONE 8-2	0.00	KLBH
2	EXITATION TRANSFER VOLTAGE	4.55	VOLTS	08PLS01:D4004	COAL FLOW TO CYCLONE 8-3	0.00	KLBH
3	138 KV BUS VOLTAGE	0.00	KV	08PLS01:P4001	GENERATOR OUTPUT	0.00	COUNTS
10	COLD H2 FROM COOLER 1 TEMP	23.35	DEG C	08PLS01:P4002	COAL FLOW TO CYCLONE 8-1	0.00	COUNTS
2	COLD H2 FROM COOLER 3 TEMP	29.06	DEG C	08PLS01:P4003	COAL FLOW TO CYCLONE 8-2	0.00	COUNTS
14	STATOR COOLING WATER INLET TEMP	28.80	DEG C	08PLS01:P4004	COAL FLOW TO CYCLONE 8-3	0.00	COUNTS
6	GENERATOR STATOR SLOT TEMP	38.14	DEG C	08PLS02:D4005	COAL FLOW TO CYCLONE 8-4	0.00	KLBH
28	GENERATOR STATOR SLOT TEMP	38.53	DEG C	08PLS02:D4006	COAL FLOW TO CYCLONE 8-5	0.00	KLBH
30	GENERATOR STATOR SLOT TEMP	36.27	DEG C	08PLS02:D4007	COAL FLOW TO CYCLONE 8-6	0.00	KLBH
32	GENERATOR STATOR SLOT TEMP	41.36	DEG C	08PLS02:D4008	COAL FLOW TO CYCLONE 8-7	0.00	KLBH
33	GENERATOR STATOR SLOT TEMP	41.51	DEG C	08PLS02:D4009	COAL FLOW TO CYCLONE 8-8	0.00	KLBH
34	GENERATOR STATOR SLOT TEMP	40.94	DEG C	08PLS02:P4005	COAL FLOW TO CYCL 8-4	0.00	COUNTS
38	COLLECTOR HOUSING AIR IN TEMP	30.61	DEG C	08PLS02:P4006	COAL FLOW TO CYCL 8-5	0.00	COUNTS
41	GENERATOR HYDROGEN PURITY	105.21	PCT	08PLS02:P4007	COAL FLOW TO CYCL 8-6	0.00	COUNTS
2	STATOR COOLNG WATER CONDUCTIVY	0.01	MMHO	08PLS02:P4008	COAL FLOW TO CYCL 8-7	0.00	COUNTS
53	GENERATOR WEST BUS DUCT TEMP	52.99	DEG C	08PLS02:P4009	COAL FLOW TO CYCL 8-8	0.00	COUNTS
54	GENERATOR EAST BUS DUCT TEMP	53.00	DEG C	08VAIN:A9043	STARTUP BFP SPEED	0.00	RPM
55	GENERATOR HYDROGEN PRESSURE	30.93	PSIG	08VAIN:A9073HA	CNDS MKUP 60 MIN AVG (TESTPOINT)	58.88	GPM
58	SOOT BLOWER HEADER PRESSURE	256.39	PSI	08VAIN:A9073TA	CNDS MKUP 10 MIN AVG (TESTPOINT)	34.07	GPM
63	MAIN STEAM FLOW TO BFP'S	0.00	KPPH	08VAIN:A9113	SUBFP DISCHARGE PRESS	0.91	PSIG
72	SECONDARY SUPERH OUTLET PRESSURE	3651.52	PSIG	08VAIN:A9322	CONDENSATE CONDUCTIVITY	0.12	MMHO
72	THROTTLE PRESS FOXBORO CONTROL	3599.85	PSIG	08VAIN:A9323	HOTWELL CONDUCTIVITY	0.12	MMHO
73	STEAM CHEST PRESSURE	3338.71	PSIG	08VAIN:A9324	ECON INLET CATION CONDUCTIVITY	0.13	MMHO
74	TURBINE FIRST STAGE PRESSURE	1391.71	PSIG	08VAIN:A9330	ECON INLET CATION CONDUCTIVITY	0.13	MMHO
76	[illegible]	502.00	PSIG	08VAIN:A9336	ELECTROCHEMICAL DEMINERALIZER	0.28	MMHO
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

						58.91	DEGF
	HP/LP/BOSS TURBINE TURBINE EFF	99.03	MW	08VAIN:V0535	AVG FW TEMP DRSN PRESS	694.61	DEGF
	RESERVE AUX POWER	79.00	MW	08VAIN:V0565	AVG HTR 1W&E EXTR STM PRESS	289.78	PSIG
	AUX POWER	10.92	MW	08VAIN:V0570	AVG HTR 1W&E EXTR STM PR	297.00	PSIG
95	AVG BFP SUCTION PRESSURE	124.38	PSIG	08VAIN:V0575	AVG MAIN STEAM TEMP	997.15	DEGF
90	AVG HTR (1W&E) DRAIN PRESS	-0.30	PSIG	08VAIN:V0576	AVG PRI SUPHTR OUT TEMP	795.81	DEG F
85	AVG BFP(N&S) COND PRESS	1.91	IN HG	08VAIN:V0577	AVG SEC SUPHTR OUT TEMP	999.08	DEG F
10	AVG HTR2 EXTR STM TEMP	166.42	DEG F	08VAIN:V0578	AVG MAIN STM AT SV TEMP	997.15	DEG F
	AVG FW TEMP FRM HTR 7E&W	433.85	DEG F	08VAIN:V0579	AVG MAIN STM AT RH/SV TMP	1000.10	DEG F
220	AVG FW TEMP FRM HTR 6E&W	391.31	DEG F	08VAIN:V0580	AVG HTR 6W&E EXTR STM PR	801.06	DEG F
15	AVG HTR 7E&W DRAIN TEMP	373.28	DEG F	08VAIN:V0585	AVG HTR 7W&E EXTR STM PR	454.74	DEG F
	AVG HTR 6E&W DRAIN TEMP	353.46	DEG F	08VAIN:V0590	AVG HTR 1W&E OUT COND PR	128.04	DEG F
	AVG HTR 1E&W DRAIN TEMP	123.18	DEG F	08VAIN:V0595	AVG COLD REHEAT STM TEMP	572.46	DEG F
	AVG MN CND(E&W) CW OUT T	78.38	DEGF	08VAIN:V0600	AVG GLYCO HTR DRAIN TEMP	218.85	DEG F
	AVG MN CND(E&W) CW IN T	55.09	DEG F	08VAIN:V0605	AVG CONDENSER PRESSURE	0.93	IN HG
	AVG AH N&S AIR INLT TEMP	95.12	DEG F	08VAIN:V0610	AVG HTR 1W&E IN COND TMP	86.93	DEG F
	AVG MAIN STEAM TEMP AT STOP VLVS	997.15	DEG F	08VAIN:V0615	AVG CW FR WBBFP CNDSR OUT	72.94	DEG F
	AVG HOT RH STM TEMP	1000.19	DEG F	08VAIN:V0620	AVG CW FR EBFP CNDSR OUT	67.24	DEG F
	1ST STG IN-OUT MTL TEMP DIFF	194.60	none	08VAIN:V0625	EAST PRECIP OUT AVG TEMP	358.13	DEG F
	RH BWL IN-OUT MTL TEMP DIFF	-4.00	DEGF	08VAIN:V0630	WEST PRECIP OUT AVG TEMP	352.71	DEG F
	EXT V IN-OUT SURF MTL TEMP DIFF	138.95	DEGF	08VAIN:V0640	AVG COAL FLOW	36.62	%
	THROTTLE/REHEAT STEAM TEMP DIFF	3.04	DEGF	08VAIN:V5120	HOT REHEAT STEAM FLOW	0.00	KPPH
	ECON INLET COND DIFF	0.44	MMHO	08VAIN:V5140	GROSS TURBINE HEAT RATE	8612.04	BTU/KW
	STOP VALVE TEMP DIFF	12.99	DEGF	08VAIN:V5165	CHG IN HR DUE TO MN STM TMP DEV	12.11	none
	MAX 1ST PASS RISER TEMP	713.12	DEG F	08VAIN:V5180	CHG IN HR DUE TO RH STM TMP DEV	-3.72	BTU/KW
	MAX 1ST PASS RISR RW PN	810.11	DEG F	08VAIN:V5215	CHG IN HR DUE TO MN STM PR DEV	2.33	BTU/KW
	MAX FURN EXT SCN WAL TUB	1028.01	DEG F	08VAIN:V5250	CHG IN HR DUE TO CND PRESS DEV	-40.00	BTU/KW
	MAX 3RD PASS RISER TEMP	1034.79	DEG F	08VAIN:V5300	CHG IN HR DUE TO RH SPRAY FLOW	21.67	BTU/KW
	MAX PRI SH OUTLT LEG TMP	769.07	DEG F	08VAIN:V5350	GROSS CORR TURBINE HEAT RATE	0.00	BTU/KW
	MAX 3RD PASS S WALL TEMP	753.52	DEG F	08VAIN:V5365	NET TURBINE HEAT RATE	9255.13	BTU/KW
	MAX 3RD PASS SCREEN TEMP	862.30	DEG F	08VAIN:V5740	LP HTR 2 DRAIN CLR TEMP DIFF	0.00	DEGF
	MAX IN PLAT OUTLET TEMP	912.01	DEG F	08VAIN:V5745	LP HTR 3 DRAIN CLR TEMP DIFF	13.37	DEGF
	MAX SSH OUTLET LEG TEMP	1075.54	DEG F	08VAIN:V5750	LP HTR 4 DRAIN CLR TEMP DIFF	-4.00	DEGF
	MAX SSH INT OUTLET TEMP	945.85	DEG F	08VAIN:V5755	HP HTR 6E DRAIN CLR TEMP DIFF	9.25	DEGF
	MAX CONV PASS SW RISER T	769.50	DEG F	08VAIN:V5760	HP HTR 6W DRAIN CLR TEMP DIFF	54.58	DEGF
	1ST STG SHELL INNER MTL TMP ROC	97.74	DEGF/H	08VAIN:V5765	HP HTR 7E DRAIN CLR TEMP DIFF	17.45	DEGF
	RH BOWL INNER SURF MTL TMP ROC	9.59	DEGF/H	08VAIN:V5770	HP HTR 7W DRAIN CLR TEMP DIFF	-4.00	DEGF
	EX V CHST OUTR SURF MTL TMP ROC	29.44	DEGF/H	08VAIN:V5775	LP HTR 1E TTD	63.04	DEGF
	GROSS GEN LOAD ROC	-10.12	MW/HR	08VAIN:V5780	LP HTR 1W TTD	21.27	DEGF
	THROTTLE STEAM TEMP ROC	0.00	DEGF/H	08VAIN:V5785	LP HTR 2 TTD	3.61	DEGF
	THROTTLE STEAM PRESS ROC	-10.00	PSI/HR	08VAIN:V5790	LP HTR 3 TTD	28.61	DEGF
	CONV PASS OUTLET TEMP ROC	68.04	DEGF/H	08VAIN:V5795	LP HTR 4 TTD	-4.00	DEGF
	FIRST PASS COOLING TEMP ROC	17.75	DEGF/H	08VAIN:V5805	HP HTR 6E TTD	0.70	DEGF
	FEEDWATER ECON INLET TEMP ROC	12.04	DEGF/H	08VAIN:V5810	HP HTR 6W TTD	-1.78	DEGF

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HP HTR 7E TTD	0.01	DEGF	CP05I:B12	SEC AIR 8_3 DMPR POS FEEDBACK	58.52	%
HP HTR 7W TTD	-4.00	DEGF	CP05I:B13	GAS VLV 8_3 POS FEEDBACK	42.95	%
BOILER EFF I/O	67.79	%	CP05I:B9	SEC AIR 8_1 DMPR POS FEEDBACK	64.85	%
BOILER EFF H/L	85.83	%	CP06AM:B1A	AM AIN BLOCK	67.36	%
CONDENSER CLEANLINESS FACTOR	102.00	%	CP06AM:B2A	AM AIN BLOCK	73.17	%
APH AIR SIDE EFFECTIVENESS	78.00	%	CP06AM:B3A	AM AIN BLOCK	69.67	%
APH GAS SIDE EFFECTIVENESS	72.90	%	CP06AM:B4A	AM AIN BLOCK	66.19	%
NET UNIT HEAT RATE	10200.00	BTU/KW	CP06AM:B5A	AM AIN BLOCK	87.16	%
NUHR (HL)	10782.70	BTU/KW	CP06AM:B6A	AM AIN BLOCK	71.77	%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	73.06	%

	OFF BOGEY BOILER EFF (HL)	65.65	%	CP06I:B10	GAS VLV 8_5 POS FEEDBACK	[illegible]	%
	OFF BOGEY BOILER EFF (HL)	0.24	%	CP06I:B11	SEC AIR 8_6 DMPR POS FEEDBACK	71.95	%
	BFP W EFFICIENCY	0.00	%	CP06I:B8	SEC AIR 8_4 DMPR POS FEEDBACK	64.76	%
	BFP E EFFICIENCY	0.00	%	CP06I:B9	SEC AIR 8_5 DMPR POS FEEDBACK	66.83	%
N	CYCL 1 AIR/FUEL RATIO	9.42	%	CP07AM:B1A	AM AIN BLOCK	57.75	%
N	CYCL 2 AIR/FUEL RATIO	9.66	%	CP07AM:B2A	AM AIN BLOCK	45.79	%
N	CYCL 3 AIR/FUEL RATIO	9.34	%	CP07AM:B3A	AM AIN BLOCK	72.57	%
N	CYCL 4 AIR/FUEL RATIO	9.36	%	CP07AM:B4A	AM AIN BLOCK	85.46	%
N	CYCL 5 AIR/FUEL RATIO	9.33	%	CP07AM:B5A	AM AIN BLOCK	75.70	%
N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
				CP09AM:B7A			
	MUBFP SCOOP TUBE POS FEEDBACK	-2.00	%	CP09I:B10	WEST GAS RECIRC DMPR DRIVES FBK	0.54	%
	CONDENSATE VALVES POS FEEDBACK	-2.00	%	CP09I:B11	EAST GAS TEMPERING DMPR DR FBK	92.76	%
	TDBFP EAST SPD POS FEEDBACK	-2.00	%	CP09I:B12	WEST GAS TEMPERING DMPR DR FBK	87.07	%
	TDBFP WEST SPD POS FEEDBACK	-2.00	%	CP09I:B13	GAS RECIRC FAN AMPS EAST	139.71	AMPS
	AM AIN BLOCK	50.28	%	CP09I:B14	GAS RECIRC FAN AMPS WEST	140.14	AMPS
	AM AIN BLOCK	15.88	%	CP09I:B7	GAS RECIRC FAN INLET DMPR E FBK	94.22	%
	AM AIN BLOCK	15.88	%	CP09I:B8	GAS RECIRC FAN INLET DMPR W FBK	95.00	%
	AM AIN BLOCK	66.59	%	CP09I:B9	EAST GAS RECIRC DMPR DRIVES FBK	29.35	%
	AM AIN BLOCK	50.34	%	CP10AM:B1A	AM AIN BLOCK	100.00	%
	AM AIN BLOCK	73.19	%	CP10AM:B2A	AM AIN BLOCK	0.00	%
	AM AIN BLOCK	66.04	%	CP10AM:B3A	AM AIN BLOCK	0.01	%
	AM AIN BLOCK	73.13	%	CP11AM:B1A	AM AIN BLOCK	0.03	%
	AM AIN BLOCK	59.67	%	CP11I:B1	I81012 INPUTS	119.97	DEGF
	AM AIN BLOCK	42.74	%	CP11I:B1B	HYDROGEN TEMP	27.24	DEGC
	AM AIN BLOCK	72.97	%	RECORDERS:ZERO_OUT	OUTPUT ZERO TO UNUSED PENS	0.00	%
	GAS VLV 8_1 POS FEEDBACK	50.84	%				
	SEC AIR 8_2 DMPR POS FEEDBACK	64.69	%				

33:56:2	2.47IN WC (2.5) HIGH	HORIZONTAL RH FURNACE DIFF PRES	HIABS RTN
34:26:2	2.51IN WC (2.5) HIGH	HORIZONTAL RH FURNACE DIFF PRES	HIABS ALM
41:56:2	2.47IN WC (2.5) HIGH	HORIZONTAL RH FURNACE DIFF PRES	HIABS RTN
44:26:7	2.52IN WC (2.5) HIGH	HORIZONTAL RH FURNACE DIFF PRES	HIABS ALM

DAILY SUMMARY REPORT
For 59_U8_Opacity %

From: 12/09/99 00:00
To: 12/10/99 00:00
Printed: 12/10/99

NIPSCO
Bailly Generating Station
Unit #8

12/09/99 Six Minute Values

Hour	Min 00	06	12	18	24	30	36	42	48	54
00	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	4.0	5.0
01	3.0	3.0	3.0	4.0	5.0	5.0	5.0	3.0	3.0	3.0
02	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
03	5.0	4.0	6.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
04	3.0	3.0	3.0	5.0	3.0	3.0	4.0	5.0	4.0	4.0
05	4.0	5.0	3.0	3.0	CAL	4.0	4.0	4.0	4.0	4.0
06	4.0	4.0	4.0	5.0	5.0	5.0	7.0	6.0	5.0	6.0
07	7.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0	5.0	6.0
08	8.0	5.0	6.0	5.0	6.0	5.0	8.0	6.0	6.0	6.0
09	6.0	6.0	6.0	6.0	5.0	5.0	7.0	6.0	6.0	5.0
10	6.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	5.0
11	5.0	5.0	6.0	7.0	6.0	8.0	6.0	6.0	6.0	5.0
12	5.0	5.0	5.0	5.0	6.0	6.0	8.0	6.0	6.0	8.0
13	7.0	6.0	6.0	6.0	5.0	5.0	4.0	4.0	7.0	6.0
14	5.0	6.0	6.0	5.0	6.0	6.0	7.0	6.0	5.0	5.0
15	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
16	5.0	4.0	7.0	6.0	5.0	4.0	5.0	5.0	5.0	5.0
17	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	5.0	6.0
18	5.0	5.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0
19	4.0	5.0	5.0	5.0	5.0	6.0	9.0	6.0	5.0	5.0
20	10.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	6.0	6.0
21	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
22	5.0	5.0	4.0	4.0	5.0	4.0	4.0	3.0	6.0	4.0
23	4.0	4.0	5.0	5.0	3.0	4.0	3.0	4.0	4.0	3.0

12/09/99 DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
4.9	0	6	0	6	1434

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

				Other	I
12/09/99	05:31:00 05:34:00				
Span 0	05:31:00 05:34:00	0.0	-0.1	0.1	

DAILY SUMMARY REPORT
For 59_U7_Opacity %

From: 12/09/99 00:00
To: 12/10/99 00:00
Printed: 12/10/99

NIPSCO
Bailly Generating Station
Unit #7

12/09/99 — Six Minute Values

Hour	00	06	12	18	24	30	36	42	48	54
00	9.0	10.0	12.0	11.0	8.0	9.0	5.0	12.0	11.0	9.0
01	9.0	12.0	6.0	7.0	12.0	13.0	6.0	10.0	6.0	14.0
02	6.0	10.0	5.0	7.0	13.0	9.0	7.0	14.0	6.0	6.0
03	9.0	13.0	7.0	8.0	7.0	12.0	7.0	7.0	6.0	5.0
04	14.0	8.0	7.0	10.0	9.0	5.0	8.0	12.0	10.0	6.0
05	8.0	8.0	11.0	6.0	9.0	5.0	CAL	5.0	9.0	7.0
06	12.0	7.0	6.0	9.0	12.0	5.0	8.0	5.0	13.0	5.0
07	8.0	5.0	4.0	15.0	8.0	8.0	CAL	3.0	5.0	9.0
08	8.0	CAL	8.0	CAL	4.0	4.0	CAL	BAD	BAD	BAD
09	BAD	BAD	BAD	BAD	BAD	BAD	BAD	BAD	BAD	BAD
10	7.0	16.0	8.0	18.0	9.0	11.0	20.0	20.0	10.0	24.0
11	11.0	10.0	19.0	22.0	11.0	18.0	13.0	21.0	13.0	17.0
12	13.0	10.0	22.0	16.0	15.0	18.0	16.0	11.0	16.0	20.0
13	19.0	14.0	17.0	16.0	21.0	13.0	18.0	12.0	18.0	20.0
14	20.0	13.0	24.0	11.0	12.0	19.0	25.0	12.0	21.0	12.0
15	25.0	12.0	19.0	13.0	12.0	27.0	19.0	14.0	25.0	15.0
16	12.0	19.0	25.0	20.0	17.0	16.0	23.0	19.0	16.0	16.0
17	12.0	26.0	21.0	18.0	20.0	24.0	12.0	15.0	20.0	25.0
18	13.0	21.0	13.0	29.0	13.0	22.0	13.0	16.0	32.0	21.0
19	12.0	33.0	12.0	12.0	21.0	29.0	14.0	19.0	14.0	29.0
20	15.0	18.0	15.0	12.0	32.0	19.0	17.0	26.0	21.0	11.0
21	17.0	25.0	22.0	14.0	18.0	19.0	24.0	13.0	20.0	12.0
22	23.0	35.0	25.0	19.0	32.0	13.0	12.0	20.0	28.0	12.0
23	19.0	14.0	25.0	13.0	18.0	14.0	13.0	26.0	18.0	14.0

12/09/99 — DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
14.3	0	108	0	30	1332

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

12/09/99	08:39:00 08:45:00		Other	
Span 0	08:42:00 08:45:00	0.0	0.1	0.1
Span 1	08:39:00 08:42:00	45.0	45.0	0.0

Point	24_Load	28_SO2i-n#m	28_SO2o-ut#m	28_NOx#m	35_Heat-Hr
Units	MWatts	#/mmBtu	#/mmBtu	#/mmBtu	mmBtu
Full Scale	1000	9.000	2.000	4.000	20000.000
12/09/99 00	344	4.770	0.183!	1.026!	3796.683!
12/09/99 01	344	4.785	0.187!	1.033!	3733.143!
12/09/99 02	345	4.789	0.219!	1.011!	3778.778!
12/09/99 03	350	4.822	0.220!	1.017!	3783.682!
12/09/99 04	390	4.764	0.229!	1.153!	4391.706!
12/09/99 05	412	4.446	0.216!	1.284!	4594.927!
12/09/99 06	444	4.427	0.221!	1.378!	5089.978!
12/09/99 07	452	4.344	0.195!	1.481!	5106.206!
12/09/99 08	438	4.695>	0.238>!	1.441>!	4709.888>!
12/09/99 09	486	4.889	0.256!	1.472!	5862.799!
12/09/99 10	491	4.948	0.259!	1.480!	5977.826!
12/09/99 11	489	4.968	0.261!	1.467!	5746.328!
12/09/99 12	489	4.950	0.274!	1.489!	5831.679!
12/09/99 13	476	4.947	0.275!	1.440!	5550.352!
12/09/99 14	485	4.997	0.285!	1.445!	5881.725!
12/09/99 15	484	5.283	0.306!	1.456!	5667.398!
12/09/99 16	464	5.063	0.279!	1.414!	5400.497!
12/09/99 17	483	5.271	0.308!	1.427!	5657.466!
12/09/99 18	483	5.416	0.317!	1.407!	5760.649!
12/09/99 19	483	5.183	0.297!	1.417!	5619.866!
12/09/99 20	484	5.090	0.291!	1.449!	5735.684!
12/09/99 21	481	5.046	0.285!	1.433!	5604.228!
12/09/99 22	363	4.986	0.204!	1.217!	3888.112!
12/09/99 23	343	5.012	0.196!	1.132!	3699.491!
Average	438	4.912	0.250	1.332	5036.212
Minimum	343	4.344	0.183	1.011	3699.491
Maximum	491	5.416	0.317	1.489	5977.826
Missing (%)	0.00	0.00	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00	100.00	100.00
Available(%)	NA	NA	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
BinMaximum	- BinAverage	+ MaxPotential	¦ Other

DAILY SUMMARY REPORT
For 59_U8_Opacity %

From: 12/09/99 00:00
To: 12/10/99 00:00
Printed: 12/10/99

NIPSCO
Bailly Generating Station
Unit #8

12/09/99 — Six Minute Values

Hour	00	06	12	18	24	30	36	42	48	54
00	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	4.0	5.0
01	3.0	3.0	3.0	4.0	5.0	5.0	5.0	3.0	3.0	3.0
02	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
03	5.0	4.0	6.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
04	3.0	3.0	3.0	5.0	3.0	3.0	4.0	5.0	4.0	4.0
05	4.0	5.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0
06	4.0	4.0	4.0	5.0	5.0	5.0	7.0	6.0	5.0	6
07	7.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0	5.0	6
08	8.0	5.0	6.0	5.0	6.0	5.0	8.0	6.0	6.0	6
09	6.0	6.0	6.0	6.0	5.0	5.0	7.0	6.0	6.0	5
10	6.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	5
11	5.0	5.0	6.0	7.0	6.0	8.0	6.0	6.0	6.0	5
12	5.0	5.0	5.0	5.0	6.0	6.0	8.0	6.0	6.0	8
13	7.0	6.0	6.0	6.0	5.0	5.0	4.0	4.0	7.0	6
14	5.0	6.0	6.0	5.0	6.0	6.0	7.0	6.0	5.0	5
15	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5
16	5.0	4.0	7.0	6.0	5.0	4.0	5.0	5.0	5.0	5
17	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	5.0	6
18	5.0	5.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4
19	4.0	5.0	5.0	5.0	5.0	6.0	9.0	6.0	5.0	5
20	10.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	6.0	6
21	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5
22	5.0	5.0	4.0	4.0	5.0	4.0	4.0	3.0	6.0	4
23	4.0	4.0	5.0	5.0	3.0	4.0	3.0	4.0	4.0	3

12/09/99 — DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
4.9	0	6	0	6	1434

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

				Other	I
12/09/99	05:31:00 05:34:00				
Span 0	05:31:00 05:34:00	0.0	-0.1	0.1	

From: 12/09/99 00:00
To: 12/10/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 6MinInlet						
Analog Point 04_Opacity7		Units %				
12/09/99	05:40:00	05:46:00	Other	Absolute Difference		
Span 0	05:43:00	05:46:00	0.0	0.1	0.1	
Span 1	05:40:00	05:43:00	45.0	45.0	0.0	
12/09/99	07:40:00	07:46:00	Other	Absolute Difference		
Span 0	07:43:00	07:46:00	0.0	0.1	0.1	
Span 1	07:40:00	07:43:00	45.0	56.3	11.3	SA
12/09/99	08:24:00	08:27:00	Other	Absolute Difference		I
Span 0	08:24:00	08:27:00	0.0	0.1	0.1	
12/09/99	08:39:00	08:45:00	Other	Absolute Difference		
Span 0	08:42:00	08:45:00	0.0	0.1	0.1	
Span 1	08:39:00	08:42:00	45.0	45.0	0.0	
Data Group 6MinInlet						
Analog Point 04_Opacity8		Units %				
12/09/99	05:28:00	05:34:00	Other	Absolute Difference		
Span 0	05:31:00	05:34:00	0.0	-0.1	0.1	
Span 1	05:28:00	05:31:00	45.0	45.1	0.1	
12/09/99	05:31:00	05:34:00	Other	Absolute Difference		I
Span 0	05:31:00	05:34:00	0.0	-0.1	0.1	
Data Group 6MinBypass						
Analog Point 05_Opacity		Units %				
12/09/99	04:57:00	05:03:00	Other	Absolute Difference		
Span 0	05:00:00	05:03:00	0.0	0.1	0.1	
Span 1	04:57:00	05:00:00	45.0	45.3	0.3	
12/09/99	05:00:00	05:03:00	Other	Absolute Difference		I
Span 0	05:00:00	05:03:00	0.0	0.1	0.1	

Calibration Single Failure - OOC(S)
Calibration Multiple Failure - OOC(M)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Calibration Multiple Warning - MW
Span Single Alarm - SA
Span Multiple Warning - MW

From: 12/09/99 00:00
To: 12/10/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinInlet75						
Analog Point 11_SO2_Inlet			Units ppm			
12/09/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-30.0	0.8	
Span 1	08:10:00	08:20:00	3240.0	3218.0	0.6	
Data Group 15MinInlet75						
Analog Point 11_CO2_Inlet			Units %			
12/09/99	08:04:00	08:20:00	Daily	Absolute Difference		
Span 0	08:04:00	08:10:00	0.00	-0.22	0.22	
Span 1	08:10:00	08:20:00	16.83	16.61	0.22	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/09/99 00:00
To: 12/10/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinPrimary75						
Analog Point 12_SO2_Low			Units ppm			
12/09/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-3.0	0.6	
Span 1	08:10:00	08:20:00	438.0	438.0	0.4	
Data Group 15MinPrimary75						
Analog Point 12_NOX			Units ppm			
12/09/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-3.0	0.2	
Span 1	08:10:00	08:20:00	1288.0	1281.0	0.5	
Data Group 15MinPrimary75						
Analog Point 12_CO2			Units %			
12/09/99	08:04:00	08:30:00	Daily	Absolute Difference		
Span 0	08:04:00	08:10:00	0.00	0.02	0.02	
Span 1	08:20:00	08:30:00	16.83	16.83	0.00	
Data Group 15MinPrimary75						
Analog Point 12_SO2_Hi			Units ppm			
12/09/99	08:04:00	08:30:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-16.0	0.4	
Span 1	08:20:00	08:30:00	3240.0	3226.0	0.4	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/08/99 00:00
To: 12/10/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinBackup75						
Analog Point 13_SO2_Low			Units ppm			
12/09/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-1.5	0.3	
Span 1	06:10:00	06:20:00	436.0	440.5	0.9	
Data Group 15MinBackup75						
Analog Point 13_NOX			Units ppm			
12/09/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	2.0	0.1	
Span 1	06:10:00	06:20:00	1288.0	1280.0	0.5	
Data Group 15MinBackup75						
Analog Point 13_CO2			Units %			
12/09/99	06:04:00	06:30:00	Daily	Absolute Difference		
Span 0	06:04:00	06:10:00	0.00	-0.07	0.07	
Span 1	06:20:00	06:30:00	16.83	16.76	0.07	
Data Group 15MinBackup75						
Analog Point 13_SO2_Hi			Units ppm			
12/09/99	06:04:00	06:30:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-6.0	0.2	
Span 1	06:20:00	06:30:00	3240.0	3244.0	0.1	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

Point	55_Flow-MACFM	56_Flow-MACFM
Units	MACM	MACFM
Full Scale	2.500	2.500
12/09/99 00	1.335!	1.382@
12/09/99 01	1.328!	1.390@
12/09/99 02	1.327!	1.424@
12/09/99 03	1.332!	1.393@
12/09/99 04	1.485!	1.494@
12/09/99 05	1.545!	1.521@
12/09/99 06	1.695!	1.634@
12/09/99 07	1.723!	1.637@
12/09/99 08	1.693!	1.614@
12/09/99 09	1.942!	1.773@
12/09/99 10	1.939!	1.770@
12/09/99 11	1.911!	1.773@
12/09/99 12	1.935!	1.788@
12/09/99 13	1.868!	1.759@
12/09/99 14	1.937!	1.802@
12/09/99 15	1.905!	1.816@
12/09/99 16	1.813!	1.713@
12/09/99 17	1.906!	1.776@
12/09/99 18	1.916!	1.763@
12/09/99 19	1.897!	1.761@
12/09/99 20	1.909!	1.769@
12/09/99 21	1.890!	1.769@
12/09/99 22	1.382!	1.415@
12/09/99 23	1.341!	1.373@
Average	1.706	1.638
Minimum	1.327	1.373
Maximum	1.942	1.816
Missing (%)	0.00	0.00
Invalid (%)	0.00	0.00
O O Cal (%)	0.00	0.00
In Cal (%)	0.00	0.00
Valid (%)	100.00	100.00
Available(%)	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

Point	24_CO2o-ut	24_Flow	24_Load	24_Heat7	24_Heat8
Units	%	SCFH	MWatts	mmBtu	mmBtu
Full Scale	20.0	150000000.0	1000	5000.000	5000.000
12/09/99 00	10.1!	67663663.6!	344	1335.461!	2461.222!
12/09/99 01	10.1!	66531267.7!	344	1302.259!	2430.884!
12/09/99 02	10.1!	67344560.6!	345	1347.217!	2442.514!
12/09/99 03	10.2!	66770850.9!	350	1351.315!	2432.367!
12/09/99 04	10.5!	75286390.2!	390	1407.598!	2995.369!
12/09/99 05	10.7!	77297835.6!	412	1382.939!	3211.988!
12/09/99 06	10.7!	85625804.9!	444	1432.989!	3656.989!
12/09/99 07	10.7!	85898788.8!	452	1400.818!	3705.388!
12/09/99 08	9.9>!	85634327.2!	438	1344.146>!	3376.495>!
12/09/99 09	10.9!	96816858.9!	486	1881.886!	3980.913!
12/09/99 10	11.0!	97818973.2!	491	1960.143!	4017.683!
12/09/99 11	10.9!	94893493.8!	489	1891.940!	3854.388!
12/09/99 12	10.8!	97194643.6!	489	1908.116!	3911.637!
12/09/99 13	10.8!	92505862.6!	476	1877.325!	3673.027!
12/09/99 14	10.9!	97129409.9!	485	1952.490!	3929.235!
12/09/99 15	10.8!	94456625.3!	484	1885.230!	3782.169!
12/09/99 16	10.7!	90849488.6!	464	1873.879!	3526.618!
12/09/99 17	10.8!	94291096.7!	483	1885.822!	3771.644!
12/09/99 18	10.8!	96010821.9!	483	1920.216!	3840.433!
12/09/99 19	10.8!	93664435.4!	483	1873.289!	3746.577!
12/09/99 20	10.8!	95594732.4!	484	1919.795!	3827.740!
12/09/99 21	10.8!	93403800.0!	481	1887.495!	3716.733!
12/09/99 22	10.1!	69293077.5!	363	1349.593!	2538.519!
12/09/99 23	10.0!	66590836.4!	343	1283.497!	2415.994!
Average	10.6	85356985.2	438	1652.311	3385.272
Minimum	9.9	66531267.7	343	1283.497	2415.994
Maximum	11.0	97818973.2	491	1960.143	4017.683
Missing (%)	0.00	0.00	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00	100.00	100.00
Available(%)	NA	NA	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

Point 24_CO2in

Units	%
Full Scale	20.0
12/09/99 00	11.5
12/09/99 01	11.5
12/09/99 02	11.4
12/09/99 03	11.5
12/09/99 04	11.8
12/09/99 05	12.0
12/09/99 06	12.3
12/09/99 07	12.2
12/09/99 08	12.1>
12/09/99 09	12.3
12/09/99 10	12.4
12/09/99 11	12.3
12/09/99 12	12.2
12/09/99 13	12.1
12/09/99 14	12.1
12/09/99 15	12.0
12/09/99 16	11.9
12/09/99 17	12.0
12/09/99 18	12.0
12/09/99 19	11.9
12/09/99 20	11.9
12/09/99 21	11.9
12/09/99 22	11.3
12/09/99 23	11.2
Average	11.9
Minimum	11.2
Maximum	12.4

Missing (%)	0.00
Invalid (%)	0.00
O O Cal (%)	0.00
In Cal (%)	0.00
Valid (%)	100.00
Available(%)	NA

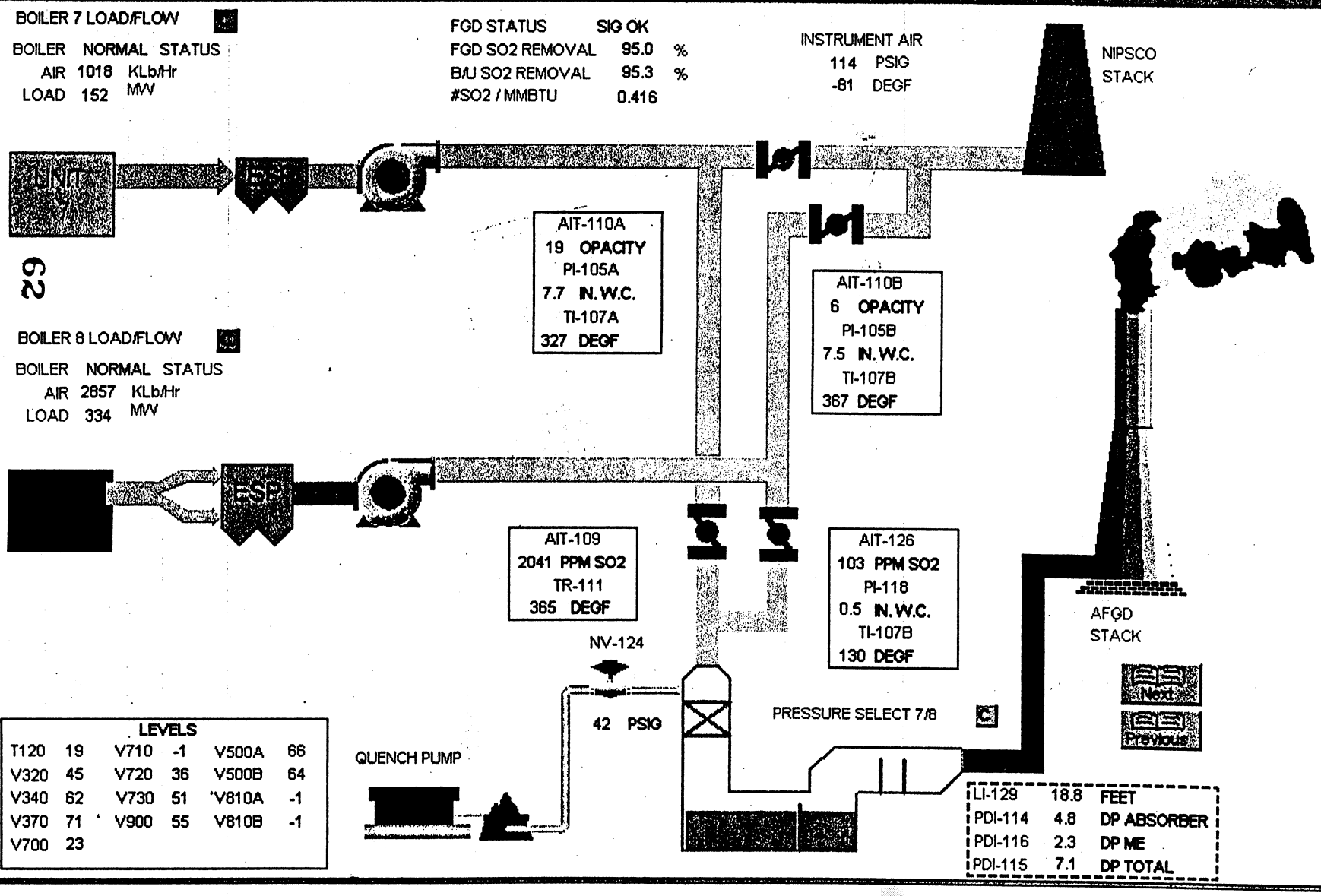
M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

2 Area 1	13:12:02	12/09/99	AR-138B	Lo Alarm	ABS TANK pH	AIT-138B
2 Area 1	12:42:21	12/09/99	YAH-173C	Alarm	CENTRIFUGE M300	VIBRATION

9 13:15

Operator Window 81 Graphic 1

Select Redraw Zoom ?



2 Area 1	12:42:21	12/09/99	YAH-173C	Alarm	CENTRIFUGE M300	VIBRATION
2 Area 1	09:44:56	12/09/99	UA-426A	Alarm	SILO 'A' SCREW PUMP MALFUNCTION	

Operator Window #1 Graphic 1

dow Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER	NORMAL	STATUS
AIR	1011	KLb/Hr
LOAD	153	MW

FGD STATUS	SIG OK	
FGD SO2 REMOVAL	94.9	%
B/U SO2 REMOVAL	95.3	%
#SO2 / MMBTU	0.411	

INSTRUMENT AIR
110 PSIG
-81 DEGF

NIPSCO STACK

ESP

AIT-110A
31 OPACITY
PI-105A
7.4 IN.W.C.
TI-107A
326 DEGF

AIT-110B
9 OPACITY
PI-105B
7.2 IN.W.C.
TI-107B
368 DEGF

63

BOILER 8 LOAD/FLOW

BOILER	NORMAL	STATUS
AIR	2856	KLb/Hr
LOAD	332	MW

ESP

AIT-109
2025 PPM SO2
TR-111
366 DEGF

AIT-126
102 PPM SO2
PI-118
0.2 IN.W.C.
TI-107B
130 DEGF

AFGD STACK

NV-124

45 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	65
V320	53	V720	36	V500B	64
V340	61	V730	51	V810A	-1
V370	65	V900	56	V810B	-1
V700	49				

LI-129	18.6	FEET
PDI-114	4.8	DP ABSORBER
PDI-116	2.2	DP ME
PDI-115	7.0	DP TOTAL

2 Area 1	12:42:21	12/09/99	YAH-173C	Alarm	CENTRIFUGE M300	VIBRATION
2 Area 1	09:44:56	12/09/99	UA-426A	Alarm	SILO "A" SCREW PUMP MALFUNCTION	

Operator Window 81 Graphic 1

dow Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1009 KLb/Hr
LOAD 151 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.1 %
B/U SO2 REMOVAL 95.5 %
#SO2 / MMBTU 0.387

INSTRUMENT AIR
112 PSIG
-81 DEGF

NIPSCO STACK

AIT-110A
29 OPACITY
PI-105A
7.3 IN.W.C.
TI-107A
327 DEGF

AIT-110B
6 OPACITY
PI-105B
6.9 IN.W.C.
TI-107B
367 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2886 KLb/Hr
LOAD 331 MW

AIT-109
1996 PPM SO2
TR-111
365 DEGF

AIT-126
98 PPM SO2
PI-118
0.1 IN.W.C.
TI-107B
130 DEGF

AFGD STACK

NV-124

47 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	66
V320	47	V720	36	V500B	64
V340	57	V730	51	V810A	-1
V370	81	V900	55	V810B	-1
V700	35				

LI-129	18.7	FEET
PDI-114	4.8	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	6.8	DP TOTAL

2 Area 1	12:42:21	12/09/99	YAM-173C	Alarm	CENTRIFUGE M300	VIBRATION
2 Area 1	09:44:56	12/09/99	UA-426A	Alarm	SILO 'A' SCREW PUMP MALFUNCTION	

Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1005 KLb/Hr
LOAD 152 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 94.8 %
B/U SO2 REMOVAL 95.1 %
#SO2 / MMBTU 0.437

INSTRUMENT AIR
115 PSIG
-80 DEGF

NIPSCO STACK

AIT-110A
34 OPACITY
PI-105A
8.0 IN.W.C.
TI-107A
327 DEGF

AIT-110B
6 OPACITY
PI-105B
7.9 IN.W.C.
TI-107B
361 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2932 KLb/Hr
LOAD 336 MW

AIT-109
2079 PPM SO2
TR-111
359 DEGF

AIT-126
110 PPM SO2
PI-118
0.6 IN.W.C.
TI-107B
130 DEGF

AFGD STACK

NV-124

45 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	66
V320	48	V720	36	V500B	62
V340	59	V730	51	V810A	-1
V370	78	V900	54	V810B	-1
V700	27				

LI-129	18.7	FEET
PDI-114	4.9	DP ABSORBER
PDI-116	2.4	DP ME
PDI-115	7.2	DP TOTAL

2	Area 1	14:27:41	12/09/99	YAH-173H	Alarm	CENTRIFUGE M300H	VIBRATION
2	Area 1	14:12:55	12/09/99	YAH-173D	Alarm	CENTRIFUGE M300D	VIBRATION

9 14:31

Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1010 KLb/Hr
LOAD 153 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 94.9 %
B/U SO2 REMOVAL 95.3 %
#SO2 / MMBTU 0.418

INSTRUMENT AIR
110 PSIG
-80 DEGF

NIPSCO STACK

AIT-110A
12 OPACITY
PI-105A
7.4 IN.W.C.
TI-107A
326 DEGF

AIT-110B
5 OPACITY
PI-105B
7.1 IN.W.C.
TI-107B
361 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2866 KLb/Hr
LOAD 329 MW

AIT-109
2046 PPM SO2
TR-111
359 DEGF

AIT-126
105 PPM SO2
PI-118
0.0 IN.W.C.
TI-107B
130 DEGF

AFGD STACK

NV-124

44 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	66
V320	56	V720	36	V500B	64
V340	57	V730	51	V810A	-1
V370	60	V900	53	V810B	-1
V700	22				

LI-129	18.7	FEET
PDI-114	4.8	DP ABSORBER
PDI-116	2.2	DP ME
PDI-115	7.1	DP TOTAL

Quick Keys

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 20 22 23 25 31 32

Set Clear Close

Next Previous

9 15:26

2 Area 1	14:37:48	12/09/99	YAH-173A	Alarm	CENTRIFUGE M300A	VIBRATION
2 Area 1	14:27:41	12/09/99	YAH-173H	Alarm	CENTRIFUGE M300H	VIBRATION

14:33:36 12/09/99 Con10 User NYERSGS Logged Out of Terminal Con10

perator Window #1 Graphic 1

Select Redraw Zoom ?

Quick K

Inlet
ABSORE
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
MJE
M300
V-320
Thick
Sumps
WWTP
G-Vent
Alarm
HVAC
Trends
Ready
Fatal
Util
HR MTR
24
125
Sel
Close

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1014 KLb/Hr
LOAD 151 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 94.8 %
B/U SO2 REMOVAL 95.2 %
#SO2 / MMBTU 0.439

INSTRUMENT AIR
111 PSIG
-80 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
12 OPACITY
PI-105A
7.1 IN.W.C.
TI-107A
327 DEGF

AIT-110B
5 OPACITY
PI-105B
7.0 IN.W.C.
TI-107B
363 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2843 KLb/Hr
LOAD 330 MW

ESP

AIT-109
2128 PPM SO2
TR-111
362 DEGF

AIT-126
109 PPM SO2
PI-118
0.1 IN.W.C.
TI-107B
129 DEGF

AFGD STACK

NV-124

25 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS

T120	18	V710	-1	V500A	66
V320	54	V720	36	V500B	64
V340	62	V730	51	V810A	-1
V370	77	V900	55	V810B	-1
V700	37				

LI-129	18.4	FEET
PDI-114	4.7	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.0	DP TOTAL

2 Area 1	14:37:48	12/09/99	YAH-173A	Alarm	CENTRIFUGE M300A	VIBRATION
2 Area 1	14:27:41	12/09/99	YAH-173H	Alarm	CENTRIFUGE M300H	VIBRATION

Operator Window #1 Graphic 1

Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1019 KLb/Hr
LOAD 152 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 94.8 %
B/U SO2 REMOVAL 95.2 %
#SO2 / MMBTU 0.436

INSTRUMENT AIR
109 PSIG
-80 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
26 OPACITY
PI-105A
7.8 IN.W.C.
TI-107A
327 DEGF

AIT-110B
5 OPACITY
PI-105B
7.4 IN.W.C.
TI-107B
365 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2865 KLb/Hr
LOAD 326 MW

ESP

AIT-109
2073 PPM SO2
TR-111
363 DEGF

AIT-126
109 PPM SO2
PI-118
0.4 IN.W.C.
TI-107B
129 DEGF

AFGD STACK

NV-124

27 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	66
V320	48	V720	36	V500B	62
V340	55	V730	51	V810A	-1
V370	65	V900	54	V810B	-1
V700	26				

LI-129	18.6	FEET
PDI-114	4.7	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.0	DP TOTAL

Quick K

Inlet
ABSORB
Analyz
P-120S
V-370
Silos
Unload
O2/Air
ABS
M/E
M300
V-720
Truck
Sorbent
WWTP
Glycol
Alarm
WAG
Trends
Ready
Batch
Util
HR MTR
24
25
Sel
Class

2	Area 1	09:44:56	12/09/99	UA-426A	Alarm	SILO 'A' SCREW PUMP MALFUNCTION
2	Area 1	06:44:35	12/09/99	UA-152A-F	Alarm	PUMPS (P120A-F) PUMP IN STANDBY

9 16:31

Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER	NORMAL	STATUS
AIR	1003	KLb/Hr
LOAD	153	MW

FGD STATUS	SIG OK	
FGD SO2 REMOVAL	95.3	%
B/U SO2 REMOVAL	95.7	%
#SO2 / MMBTU	0.371	

INSTRUMENT AIR
117 PSIG
-80 DEGF

NIPSCO STACK

AIT-110A
24 OPACITY
PI-105A
6.4 IN.W.C.
TI-107A
328 DEGF

AIT-110B
3 OPACITY
PI-105B
6.1 IN.W.C.
TI-107B
360 DEGF

69

BOILER 8 LOAD/FLOW

BOILER	NORMAL	STATUS
AIR	2610	KLb/Hr
LOAD	303	MW

AIT-109
1976 PPM SO2
TR-111
359 DEGF

AIT-126
93 PPM SO2
PI-118
-0.1 IN.W.C.
TI-107B
129 DEGF

AFGD STACK

NV-124

24 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	66
V320	49	V720	36	V500B	59
V340	57	V730	51	V810A	-1
V370	65	V900	53	V810B	-1
V700	23				

LI-129	18.6	FEET
PDI-114	4.1	DP ABSORBER
PDI-116	1.9	DP ME
PDI-115	6.1	DP TOTAL

Quick K

Inlet
ABSORB
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

TEST 2 – PLANT DATA

COMPLIANCE EMISSIONS MW AND COAL FLOW TEST DATA SHEET
BAILLY GENERATING STATION: UNIT #7

Date of Run: 12/10/99 | Run Number: #2 | Time Started: 8:35 am | Time Ended: 11:00 am | Initials: JRH / SLB

Reading Number	Time Hrs/Mins	Coal Scales Numbers 7-1	7-2	7-3	7-4
Fifth					
Fourth					
Third					
Second					
First	11:12	872336		162754	229066
Initial	08:40	871404		161620	228166
Difference	02:32	932	0	1,134	900
Constant		100	100	100	100
Coal Flow-lbs/hr		36,789	39,026	44,763	35,526

Total Coal Flow = 156,105 lbs/hour

Please Note that Intergraters were not working for Feeder #2, so an average Coal Flow was calculated for that Feeder.

Reading Number	Time Hrs/Mins	Generator XFMR Output MW Gross	Main Transformer Output West Reading #	Main Transformer Output East Reading #	Unit Net Load MW Net
Fifth					
Fourth					
Third					
Second					
First	11:10	497407.0	99305.6	52952.9	
Initial	08:37	496967.0	99281.6	52935.2	
Difference	02:33	440.0	24.0	17.7	Generator minus XFER
Constant		1000	1000	1000	West and East
MW/hr		172.5	9.4	6.9	156.2

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/10/99 TEST NUMBER 2

TIME		8:35	9:05	9:35
NUMBER OF CYCLONES IN USE		4	4	4
EXCESS OXYGEN (%) (E/W)		3.0/2.5	3.3/2.6	3.3/2.7
TOTAL AIR FLOW (%)		84	85	84
STEAM FLOW (KLB/HR)		1200	1200	1200
FEEDWATER FLOW (KLB/HR)		1165	1165	1155
THROTTLE PRESSURE (PSI)		2300	2300	2300
MAIN STEAM TEMPERATURE (°F)		994	992	991
HOT REHEAT TEMPERATURE (°F)		1005	1007	995
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H20) (E/W)		-0.3/-0.3	0/-0.2	0/-0.2
F.D. FAN AMPS (E/W)		320/260	320/250	310/300
F.D. FAN PRESSURE ("H20)				
I.D. FAN AMPS (E/W)		290/300	290/300	285/300
I.D. FAN SPEED (RPM) (E/W)		800/810	800/810	800/810
OPACITY (%) (6-MIN AVG)		30	18.1	11.9
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.26	27.49	27.29
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE (LB/~~HR~~) %		74	74	73

U7EMCR

Data by: SLB

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/10/99 TEST NUMBER 2

TIME		10:05	10:35	11:05
NUMBER OF CYCLONES IN USE		4	4	4
EXCESS OXYGEN (%)	(E/W)	3.1/2.5	3.2/2.5	3.4/3.0
TOTAL AIR FLOW (%)		84	85	85
STEAM FLOW (KLB/HR)		1200	1200	1200
FEEDWATER FLOW (KLB/HR)		1160	1168	1145
THROTTLE PRESSURE (PSI)		2350	2350	2350
MAIN STEAM TEMPERATURE (°F)		1000	1002	1000
HOT REHEAT TEMPERATURE (°F)		1000	996	1005
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H20)	(E/W)	-0.2/-0.2	-0.2/-0.2	-0.2/-0.2
F.D. FAN AMPS	(E/W)	320/250	320/260	320/300
F.D. FAN PRESSURE ("H20)				
I.D. FAN AMPS	(E/W)	290/300	290/300	290/300
I.D. FAN SPEED (RPM)	(E/W)	800/810	800/810	800/810
OPACITY (%) (6-MIN AVG)		20.3	22.4	21.0
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.35	27.27	27.47
SOOTBLOWING	(YES OR NO)			
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE (LB/HR)	90	72	75	74

U7EMCR

Data by: SLB

BAILLY GENERATING STATION - UNIT 7
PRECIPITATOR DATA SHEET

DATE 12/10/99 TEST NO. #2 INITIALS CAM

TIME 8:50

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					Off
7B-T2	150	70	38	150	
TB-T3	220	<50	42	150	
7B-T4	220	100	38	250	
7B-T5	290	90	42	400	
7B-T6	300	190	42	850	
7A-T1	240	80	40	350	
7A-T2	200	130	42	300	
7A-T3	260	120	42	650	
7A-T4					off
7A-T5	270	190	40	600	
7A-T6	300	200	52	600	

TIME 9:20

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	140	60	38	150	
TB-T3	210	<50	42	200	
7B-T4	240	90	38	250	
7B-T5	300	130	44	650	
7B-T6	300	190	42	850	
7A-T1	250	100	42	400	
7A-T2	200	130	42	350	
7A-T3	260	150	42	650	
7A-T4					off
7A-T5	250	180	40	850	

BAILLY GENERATING STATION - UNIT 7
PRECIPITATOR DATA SHEET

DATE 12-10-99 TEST NO. #2 INITIALS CAM

TIME 9:50

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	150	70	38	150	
TB-T3	230	<50	44	200	
7B-T4	220	110	36	150	
7B-T5	260	120	46	350	
7B-T6	250	160	38	650	
7A-T1	240	90	40	400	
7A-T2	210	130	40	300	
7A-T3	260	160	42	650	
7A-T4					off
7A-T5	260	190	40	600	
7A-T6	320	200	54	600	

TIME 10:20

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	150	70	38	150	
TB-T3	230	<50	44	200	
7B-T4	220	100	36	300	
7B-T5	300	150	44	500	
7B-T6	270	190	40	800	
7A-T1	240	100	40	300	
7A-T2	180	130	40	300	
7A-T3	260	130	42	650	
7A-T4	~~130~~		75		off
7A-T5	270	190	40	850	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

COMPLIANCE EMISSIONS MW AND COAL FLOW TEST DATA SHEET
BAILLY GENERATING STATION: UNIT #8

Date of Run: 12/10/99 Run Number: #2 Time Started: 8:35 AM Time Ended: 11:00 AM Initials: JRH/ SLB

Reading Number	Time Hrs/Mins	Coal Scales Numbers 1	2	3	4	5	6	7	8		
Fifth											
Fourth											
Third											
Second											
First	11:15	456,571	237,092	274,492	525,578	412,932	657,417	802,165	988,009		
Initial	08:45	455,730	236,157	273,387	524,655	411,819	656,480	801,228	987,071		
Difference	02:30	841	935	1,105	923	1,113	937	937	938		
Constant		100	100	100	100	100	100	100	100		
Coal Flow-lbs/hr		33,640	37,400	44,200	36,920	44,520	37,480	37,480	37,520		

Total Coal Flow = 309,160 lbs/hour

Reading Number	Time Hrs/Mins	Generator Transformer Output MW Gross	Main Transformer West Reading	Main Transformer East Reading	Unit Net Load MW Net	
Fifth						
Fourth						
Third						
Second						
First	11:12	55786.0	7738.3	12000.3		
Initial	08:41	55705.0	7720.0	11980.8		
Difference	02:30	81.0	18.3	19.5	Generator minus XFER	
Constant		1000	1000	1000	West and East	
MW/hr		322.9	7.3	7.8	307.9	

Compliance Group 12/99 JRH

12/15/99 + ^

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/10/99

TEST NUMBER 2 SLB

TIME		8:35	9:05	9:35
NUMBER OF CYCLONES IN USE		8	8	8
EXCESS OXYGEN (E/W)		2.50/2.73	2.90/2.80	2.55/2.60
AIR FLOW (KLB/HR)		2840	2834	2810
FEEDWATER FLOW (KLB/HR)		2284	2210	2269
THROTTLE PRESSURE (PSI)		3413	3410	3403
MAIN STEAM TEMPERATURE (°F)		999	1004	999
HOT REHEAT TEMPERATURE (°F)		1003	1006	1002
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	171	171	172
	AIR OUT (°F)	579	580	585
	GAS IN (°F)	691	693	694
	GAS OUT (°F)	313	316	316
FURNACE DRAFT ("H_2O) (E/W)		-0.4	-0.3	-0.5
F.D. FAN AMPS (E/W)		606/572	622/576	607/586
I.D. FAN AMPS (E/W)		549/561	559/565	556/559
I.D. FAN SPEED (RPM) (E/W)		759/762	759/762	759/762
I.D. FAN SUCTION PRESS ("H_2O)		-0.5	0.0	-0.7
OPACITY (%) (6-MIN AVG)		5.9	7.1	6.4
BAROMETRIC PRESSURE ("Hg)		29.40	29.42	29.43
AMBIENT TEMPERATURE (°F)		47.3	46.8	46.1
CONDENSER BACKPRESSURE ("Hg)		28.4	28.5	28.5
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/10/99

TEST NUMBER 2 / 5CB

TIME		10:05	10:35	11:05
NUMBER OF CYCLONES IN USE		8	8	8
EXCESS OXYGEN (E/W)		2.53/2.61	2.56/2.66	2.52/2.53
AIR FLOW (KLB/HR)		2797	2797	2800
FEEDWATER FLOW (KLB/HR)		2265	2264	2266
THROTTLE PRESSURE (PSI)		3404	3402	3399
MAIN STEAM TEMPERATURE (°F)		1001	1000	1003
HOT REHEAT TEMPERATURE (°F)		1004	1005	1002
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	172	172	173
	AIR OUT (°F)	586	580	585
	GAS IN (°F)	694	690	690
	GAS OUT (°F)	317	317	316
FURNACE DRAFT ("H_2O) (E/W)		-0.5	-0.4	-0.4
F.D. FAN AMPS (E/W)		605/571	595/563	611/563
I.D. FAN AMPS (E/W)		555/561	551/562	551/562
I.D. FAN SPEED (RPM) (E/W)		759/762	759/762	759/762
I.D. FAN SUCTION PRESS ("H_2O)		-0.4	-0.6	-0.5
OPACITY (%) (6-MIN AVG)		8.7	6.5	7.7
BAROMETRIC PRESSURE ("Hg)		29.44	29.45	29.44
AMBIENT TEMPERATURE (°F)		46.3	46.1	46.1
CONDENSER BACKPRESSURE ("Hg)		28.5	28.5	28.5
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

BAILLY GENERATING STATION - UNIT 8
PRECIPITATOR POWER

Date: 12/10/99 Test No.: #2 Time: 9:00/9:30 Initials: CAM

FIELD	VOLTS (AC)		AMPS (AC)		KV (DC)		MA (DC)		COMMENTS	
									5PM	5PM
8E-B1	50	50	50	50	48	48	<50	<50	6	6
8E-B2	Ø	Ø	150	150	Ø	Ø	600	600	Ø	Ø
8E-B3	260	260	200	200	52	52	850	900	Ø	Ø
8E-B4	140	150	80	80	44	46	100	100	10	10
8E-B5	270	250	220	210	44	48	80	85	6	6
8E-B6	220	220	80	80	48	48	350	250	3	3
8E-A1	290	290	110	130	48	50	680	600	7	7
8E-A2	50	50	150	150	10	10	Ø	Ø	Ø	Ø
8E-A3	250	250	120	110	46	46	450	400	3	4
8E-A4	280	280	130	130	52	52	600	600	9	9
8E-A5	90	90	150	150	8	8	Ø	Ø	Ø	Ø
8E-A6	250	240	150	150	42	42	450	550	7	7
8W-B1	240	260	110	110	42	44	350	350	6	7
8W-B2	200	260	100	100	42	44	400	400	7	7
8W-B3	270	260	160	140	24	24	600	450	4	4
8W-B4	230	250	170	160	54	54	700	700	7	8
8W-B5	220	220	150	160	44	44	600	650	8	7
8W-B6	140	150	130	90	32	34	350	250	5	5
8W-A1	150	150	100	100	54	54	400	350	Ø	Ø
8W-A2	250	250	120	140	48	48	500	450	6	6
8W-A3	230	230	130	190	40	40	600	800	Ø	Ø
8W-A4	270	250	200	170	44	44	800	850	6	7
8W-A5										off
8W-A6	240	240	160	160	40	40	600	600	Ø	Ø

BAILLY GENERATING STATION - UNIT 8
PRECIPITATOR POWER

Date: 12-10-99 Test No.: #2 Time: 10:00/10:30 Initials: CAM

FIELD	VOLTS (AC)		AMPS (AC)		KV (DC)		MA (DC)		COMMENTS 5PM	5PM
8E-B1	50	50	50	50	48	48	<50	<50	6	6
8E-B2	Ø	Ø	150	150	Ø	Ø	600	600	Ø	Ø
8E-B3	270	270	200	200	52	52	950	1000	Ø	Ø
8E-B4	150	150	80	80	46	46	100	100	10	10
8E-B5	270	270	220	220	46	46	850	1000	4	6
8E-B6	220	220	80	70	48	48	350	250	3	3
8E-A1	280	290	120	140	50	50	500	600	7	8
8E-A2	50	50	150	150	10	10	Ø	Ø	Ø	Ø
8E-A3	250	260	110	130	46	46	450	500	3	3
8E-A4	300	310	130	130	50	52	500	550	9	10
8E-A5	90	90	150	150	8	8	Ø	Ø	Ø	Ø
8E-A6	240	240	150	150	42	42	450	450	7	7
8W-B1	220	220	90	90	40	42	400	500	6	6
8W-B2	260	270	120	130	44	44	450	450	7	7
8W-B3	270	260	170	150	24	24	600	400	5	5
8W-B4	280	240	150	150	54	54	700	650	6	7
8W-B5	220	220	150	150	44	44	650	650	7	8
8W-B6	140	140	130	130	34	32	350	350	5	5
8W-A1	250	245	90	100	54	54	350	350	Ø	Ø
8W-A2	260	240	100	110	46	46	350	400	6	6
8W-A3	230	230	220	180	42	40	750	800	Ø	Ø
8W-A4	260	250	170	170	44	44	850	800	7	7
8W-A5										off
8W-A6	240	240	160	160	40	40	600	600	Ø	Ø

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263	FD FAN 8W AIR DISCHARGE TEMP	74.14	DEG F	0813BT:A9349	PSH OUTLET TUBE TC11 TEMP	790.32	DEG F
264	FD FAN 8E AIR DISCHARGE TEMP	107.30	DEG F	0813BT:A9350	PSH OUTLET TUBE TC12 TEMP	305.20	DEG F
276	FD FAN 8W MOTOR OUTBRD BRG TEMP	148.87	DEG F	0813BT:A9351	PSH OUTLET TUBE TC13 TEMP	817.58	DEG F
277	FD FAN 8W MOTOR INBOARD BRG TEMP	130.21	DEG F	0813BT:A9352	PSH OUTLET TUBE TC14 TEMP	819.76	DEG F
278	FD FAN 8W FAN OUTBOARD BRG TEMP	145.62	DEG F	0813BT:A9353	PSH OUTLET TUBE TC15 TEMP	808.37	DEG F
279	FD FAN 8W FAN INBOARD BRG TEMP	159.24	DEG F	0813BT:A9354	PSH OUTLET TUBE TC16 TEMP	811.36	DEG F
292	GLYCOL TEMP TO EAST PREHEATER	210.64	DEG F	0813BT:A9361	SSH OUTLET TUBE TC30 TEMP	981.99	DEG F
293	GLYCOL TEMP TO WEST PREHEATER	202.89	DEG F	0813BT:A9362	SSH OUTLET TUBE TC31 TEMP	969.48	DEG F
318	FD FAN 8E MOTOR OUTBRD BRG TEMP	130.02	DEG F	0813BT:A9363	SSH OUTLET TUBE TC32 TEMP	1001.00	DEG F
319	FD FAN 8E MOTOR INBOARD BRG TEMP	156.03	DEG F	0813BT:A9364	SSH OUTLET TUBE TC33 TEMP	1224.00	DEG F
320	FD FAN 8E FAN OUTBOARD BRG TEMP	139.99	DEG F	0813BT:A9365	SSH OUTLET TUBE TC34 TEMP	1224.00	DEG F

21	FD FAN 8E FAN INBOARD BRG TEMP	167.75	DEG F	0813BT:A9366	SSH OUTLET TUBE TC35 TEMP	1224.00	DEG F	
00	WEST FD FAN SYSTEM OIL TEMP	306.00	DEG F	0813BT:A9367	SSH OUTLET TUBE TC36 TEMP	987.70	DEG F	
01	EAST FD FAN SYSTEM OIL TEMP	306.00	DEG F	0813BT:A9368	SSH OUTLET TUBE TC37 TEMP	999.77	DEG	
75	FLUE GAS TEMP TO ECONOMIZER	990.57	DEG F	0813BT:A9369	SSH OUTLET TUBE TC38 TEMP	1002.27	DEG	
84	GR FAN 8E FAN OUTBOARD BRG TEMP	125.84	DEG F	0813BT:A9370	SSH OUTLET TUBE TC39 TEMP	991.14	DEG	
85	GR FAN 8E FAN INBOARD BRG TEMP	108.28	DEG F	0813BT:A9371	SSH OUTLET TUBE TC40 TEMP	1025.78	DEG F	
86	GR FAN 8E MOTOR OUTBRD BRG TEMP	119.50	DEG F	0813BT:A9372	SSH OUTLET TUBE TC41 TEMP	1224.00	DEG F	
87	GR FAN 8E MOTOR INBOARD BRG TEMP	112.13	DEG F	0813BT:A9373	SSH OUTLET TUBE TC42 TEMP	1018.53	DEG	
88	GR FAN 8W FAN OUTBRD BRG TEMP	99.86	DEG F	0813BT:A9374	SSH OUTLET TUBE TC43 TEMP	1025.82	DEG	
89	GR FAN 8W FAN INBOARD BRG TEMP	122.11	DEG F	0813BT:A9375	SSH OUTLET TUBE TC44 TEMP	984.58	DEG	
90	GR FAN 8W MOTOR OUTBRD BRG TEMP	115.96	DEG F	0813BT:A9376	SSH OUTLET TUBE TC45 TEMP	966.56	DEG	
91	GR FAN 8W MOTOR INBOARD BRG TEMP	107.76	DEG F	0813BT:A9377	REHEAT OUTLET TUBE TC60 TEMP	869.03	DEG F	
95	ID FAN 8E THRUST BEARING A TEMP	144.02	DEG F	0813BT:A9378	REHEAT OUTLET TUBE TC61 TEMP	885.44	DEG F	
96	ID FAN 8E THRUST BEARING B TEMP	158.50	DEG F	0813BT:A9379	REHEAT OUTLET TUBE TC62 TEMP	965.04	DEG	
56	ID FAN 8E FAN OUTBRD BRG TEMP	150.05	DEG F	0813BT:A9380	REHEAT OUTLET TUBE TC63 TEMP	1005.86	DEG	
67	ID FAN 8E MOTOR INBOARD BRG TEMP	118.78	DEG F	0813BT:A9381	REHEAT OUTLET TUBE TC64 TEMP	1000.78	DEG	
68	ID FAN 8E MOTOR OUTBRD BRG TEMP	132.95	DEG F	0813BT:A9382	REHEAT OUTLET TUBE TC65 TEMP	1011.74	DEG F	
69	ID FAN 8W THRUST BEARING A TEMP	174.69	DEG F	0813BT:A9383	REHEAT OUTLET TUBE TC66 TEMP	1015.29	DEG F	
56	ID FAN 8W THRUST BEARING B TEMP	160.89	DEG F	0813BT:A9384	REHEAT OUTLET TUBE TC67 TEMP	1007.08	DEG	
57	ID FAN 8W FAN OUTBOARD BRG TEMP	176.63	DEG F	0813BT:A9385	REHEAT OUTLET TUBE TC68 TEMP	1000.78	DEG	
58	ID FAN 8W MOTOR INBOARD BRG TEMP	104.53	DEG F	0813BT:A9386	REHEAT OUTLET TUBE TC69 TEMP	996.96	DEG	
65	AIR HEATER GAS INLET TEMPERATURE	693.45	DEG F	0813BT:A9387	REHEAT OUTLET TUBE TC70 TEMP	1039.65	DEG F	
02	W ID FAN SYSTEM OIL TEMPERATURE	72.91	DEG F	0813BT:A9388	REHEAT OUTLET TUBE TC71 TEMP	1038.06	DEG F	
03	E ID FAN SYSTEM OIL TEMPERATURE	73.10	DEG F	0813BT:A9389	REHEAT OUTLET TUBE TC72 TEMP	1015.56	DEG	
89	STEAM SEAL HEADER TEMPERATURE	741.64	DEG F	0813BT:A9390	REHEAT OUTLET TUBE TC73 TEMP	1041.18	DEG	
00	CONVECTION PASS OUTLET TEMP	761.73	DEG F	0813BT:A9391	REHEAT OUTLET TUBE TC74 TEMP	1005.07	DEG	
62	ECONOMIZER OUTLET TEMPERATURE	471.22	DEG F	0813BT:A9392	REHEAT OUTLET TUBE TC75 TEMP	1224.00	DEG	
93	CNVECTN PASS OUT TO FLSHTNK TC76	736.04	DEG F	0813BT:A9397	3RD PASS FEEDWATER TC90 TEMP	774.79	DEG F	
64	PSH BYPASS LINE TO FLSHTNK TC340	750.12	DEG F	0813BT:A9398	3RD PASS FRONT WALL TC91 TEMP	789.03	DEG F	
03	PIU3 REF JUNCT CAB 11-B	23.41	DEG C	0813BT:A9399	3RD PASS FEEDWATER TC92 TEMP	759.32	DEG	
04	PIU4 REF JUNCT CAB 11-C	23.59	DEG C	0813BT:A9400	3RD PASS FRONT WALL TC93 TEMP	756.85	DEG	
03	SSH OUTLET HEADER 8W TEMP	998.11	DEG F	0813BT:A9401	3RD PASS FEEDWATER TC94 TEMP	753.38	DEG	
04	SEC SUPERHEATER OUTLET TEMP 8E	1005.18	DEG F	0813BT:A9402	3RD PASS FRONT WALL TC95 TEMP	763.22	DEG F	
65	REHEATER OUTLET TEMP 8S	1018.68	DEG F	0813BT:A9403	3RD PASS FEEDWATER TC96 TEMP	763.34	DEG F	
66	REHEATER OUTLET TEMP 8N	1009.99	DEG F	0813BT:A9404	3RD PASS FRONT WALL TC97 TEMP	739.76	DEG F	
39	PSH OUTLET TUBE TC1 TEMP	791.98	DEG F	0813BT:A9405	3RD PASS FEEDWATER TC98 TEMP	761.03	DEG F	
40	PSH OUTLET TUBE TC2 TEMP	816.18	DEG F	0813BT:A9406	3RD PASS FRONT WALL TC99 TEMP	755.67	DEG F	
41	PSH OUTLET TUBE TC3 TEMP	815.06	DEG F	0813BT:A9407	3RD PASS SIDE WALL TC101 TEMP	743.47	DEG F	
42	PSH OUTLET TUBE TC4 TEMP	820.35	DEG F	0813BT:A9408	3RD PASS FRONT WALL TC102 TEMP	746.83	DEG F	
43	PSH OUTLET TUBE TC5 TEMP	814.63	DEG F	0813BT:A9409	3RD PASS SCREEN TC103 TEMP	747.38	DEG F	
44	PSH OUTLET TUBE TC6 TEMP	631.84	DEG F	0813BT:A9410	3RD PASS FRONT WALL TC104 TEMP	748.60	DEG F	
45	PSH OUTLET TUBE TC7 TEMP	804.67	DEG F	0813BT:A9411	3RD PASS SOUTH WALL TC105 TEMP	749.57	DEG F	
46	PSH OUTLET TUBE TC8 TEMP	773.82	DEG F	0813BT:A9412	3RD PASS SIDE WALL TC106 TEMP	747.69	DEG F	
47	PSH OUTLET TUBE TC9 TEMP	819.02	DEG F	0813BT:A9413	3RD PASS SOUTH WALL TC107 TEMP	749.57	DEG F	
48	PSH OUTLET TUBE TC10 TEMP	817.19	DEG F	0813BT:A9414	3RD PASS SIDE WALL TC108 TEMP	761.29	DEG F	

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15	3RD PASS SOUTH WALL TC109 TEMP	760.93	DEG F	0813BT:A9476	SSH INLET PLATEN OUTLET TC207	118.79	DEG F	
16	3RD PASS SIDE WALL TC110 TEMP	103.85	DEG F	0813BT:A9477	SSH INLET PLATEN OUTLET TC208	1224.00	DEG F	
17	3RD PASS SOUTH WALL TC103 TEMP	754.07	DEG F	0813BT:A9478	SSH INLET PLATEN OUTLET TC209	1224.00	DEG F	
18	3RD PASS SIDE WALL TC112 TEMP	760.97	DEG F	0813BT:A9479	SSH INLET PLATEN OUTLET TC210	889.35	DEG F	
19	3RD PASS SCREEN TC115 TEMP	740.53	DEG F	0813BT:A9480	SSH INLET PLATEN OUTLET TC211	915.96	DEG F	
20	3RD PASS SCREEN TC116 TEMP	746.14	DEG F	0813BT:A9481	SSH INLET PLATEN OUTLET TC212	888.40	DEG F	
21	3RD PASS SCREEN TC117 TEMP	748.93	DEG F	0813BT:A9482	SSH INLET PLATEN OUTLET TC213	886.99	DEG F	
22	3RD PASS SCREEN TC118 TEMP	745.55	DEG F	0813BT:A9483	SSH INLET PLATEN OUTLET TC214	1224.00	DEG F	
23	3RD PASS SCREEN TC119 TEMP	745.40	DEG F	0813BT:A9484	SSH INLET PLATEN OUTLET TC215	1224.00	DEG F	
24	3RD PASS SCREEN TC120 TEMP	744.26	DEG F	0813BT:A9485	SSH INLET PLATEN OUTLET TC216	892.48	DEG F	
25	3RD PASS SCREEN TC121 TEMP	748.77	DEG F	0813BT:A9486	SSH INLET PLATEN OUTLET TC217	1224.00	DEG F	

26	3RD PASS SCREEN TC123 TEMP	743.[illegible]	DEG F	[illegible]	SSH INLET PLATEN OUTLET TC219	834.77	DEG F
27	3RD PASS SCREEN TC124 TEMP	742.66	DEG F	0813BT:A9489	SSH INLET PLATEN OUTLET TC220	1224.00	DEG F
28	3RD PASS SCREEN TC125 TEMP	747.33	DEG F	0813BT:A9490	SSH INLET PLATEN OUTLET TC221	894.36	DEG F
29	3RD PASS SCREEN TC126 TEMP	750.37	DEG F	0813BT:A9491	SSH INLET PLATEN OUTLET TC222	874.10	DEG F
30	3RD PASS SCREEN TC127 TEMP	740.42	DEG F	0813BT:A9492	SSH INLET PLATEN OUTLET TC223	876.88	DEG F
31	3RD PASS SCREEN TC128 TEMP	742.82	DEG F	0813BT:A9493	SSH INLET PLATEN OUTLET TC224	881.99	DEG F
32	3RD PASS SCREEN TC129 TEMP	742.88	DEG F	0813BT:A9494	SSH INTRMDT PLATEN OUT LEG TC241	924.59	DEG F
33	3RD PASS SCREEN TC130 TEMP	742.12	DEG F	0813BT:A9495	SSH INTRMDT PLATEN OUT LEG TC242	1224.00	DEG F
34	3RD PASS SCREEN TC131 TEMP	737.53	DEG F	0813BT:A9496	SSH INTRMDT PLATEN OUT LEG TC243	912.84	DEG F
35	3RD PASS SCREEN TC132 TEMP	739.02	DEG F	0813BT:A9497	SSH INTRMDT PLATEN OUT LEG TC244	1224.00	DEG F
36	3RD PASS SCREEN TC133 TEMP	739.99	DEG F	0813BT:A9498	SSH INTRMDT PLATEN OUT LEG TC245	880.80	DEG F
37	3RD PASS SCREEN TC134 TEMP	834.01	DEG F	0813BT:A9499	SSH INTRMDT PLATEN OUT LEG TC246	1224.00	DEG F
38	3RD PASS SCREEN TC135 TEMP	751.13	DEG F	0813BT:A9500	FURNACE FLOOR TEMPERATURE	680.11	DEG F
39	3RD PASS SCREEN TC136 TEMP	743.51	DEG F	0813BT:A9501	SSH INTRMDT PLATEN OUT LEG TC248	1224.00	DEG F
40	3RD PASS SCREEN TC137 TEMP	739.88	DEG F	0813BT:A9502	SSH INTRMDT PLATEN OUT LEG TC249	1143.89	DEG F
41	1ST PASS RISER TC150 TEMP	711.65	DEG F	0813BT:A9504	SSH INTRMDT PLATEN OUT LEG TC251	1224.00	DEG F
42	1ST PASS RISER TC151 TEMP	714.77	DEG F	0813BT:A9505	SSH INTRMDT PLATEN OUT LEG TC252	-24.00	DEG F
43	1ST PASS RISER TC152 TEMP	717.33	DEG F	0813BT:A9506	SSH INTRMDT PLATEN OUT LEG TC253	963.73	DEG F
44	1ST PASS RISER TC153 TEMP	712.63	DEG F	0813BT:A9507	SSH INTRMDT PLATEN OUT LEG TC254	1224.00	DEG F
45	1ST PASS RISER TC154 TEMP	709.24	DEG F	0813BT:A9508	SSH INTRMDT PLATEN OUT LEG TC255	1224.00	DEG F
46	1ST PASS RISER TC155 TEMP	717.71	DEG F	0813BT:A9509	SSH INTRMDT PLATEN OUT LEG TC256	1224.00	DEG F
47	1ST PASS RISER TC156 TEMP	717.70	DEG F	0813BT:A9510	SSH INTRMDT PLATEN OUT LEG TC257	1224.00	DEG F
48	1ST PASS RISER TC157 TEMP	713.66	DEG F	0813BT:A9511	SSH INTRMDT PLATEN OUT LEG TC258	1224.00	DEG F
49	1ST PASS RISER TC158 TEMP	717.86	DEG F	0813BT:A9512	SSH INTRMDT PLATEN OUT LEG TC259	1224.00	DEG F
50	1ST PASS RISER TC159 TEMP	717.51	DEG F	0813BT:A9513	SSH INTRMDT PLATEN OUT LEG TC260	1224.00	DEG F
51	1ST PASS RISER TC160 TEMP	721.99	DEG F	0813BT:A9514	SSH INTRMDT PLATEN OUT LEG TC261	935.29	DEG F
52	1ST PASS RISER TC161 TEMP	719.76	DEG F	0813BT:A9515	SSH INTRMDT PLATEN OUT LEG TC262	933.84	DEG F
53	1ST PASS RISER TC162 TEMP	711.60	DEG F	0813BT:A9516	SSH INTRMDT PLATEN OUT LEG TC263	917.87	DEG F
54	1ST PASS RISER TC163 TEMP	717.30	DEG F	0813BT:A9517	SSH INTRMDT PLATEN OUT LEG TC264	917.21	DEG F
55	1ST PASS RISER TC164 TEMP	707.69	DEG F	0813BT:A9518	SSH INLET PLATEN HEADER TC271	877.09	DEG F
56	1ST PASS RISER TC165 TEMP	717.35	DEG F	0813BT:A9519	SSH INLET PLATEN HEADER TC272	874.90	DEG F
57	CYCLONE 4 REENTRANT THROAT TC180	665.82	DEG F	0813BT:A9520	SSH INTRMDT PLATEN HEADER TC273	888.80	DEG F
58	CYCLONE 2 REENTRANT THROAT TC187	1020.00	DEG F	0813BT:A9521	SSH INLET PLATEN HEADER TC274	1224.00	DEG F
59	CYCLONE 3 REENTRANT THROAT TC182	674.76	DEG F	0813BT:A9522	SSH INTRMDT PLATEN HEADER TC275	1005.14	DEG F
60	CYCLONE 1 REENTRANT THROAT TC187	667.13	DEG F	0813BT:A9523	SSH INLET PLATEN HEADER TC276	665.17	DEG F
61	CYCLONE 6 REENTRANT THROAT TC184	665.55	DEG F	0813BT:A9524	SSH INTRMDT PLATEN HEADER TC277	1224.00	DEG F
62	CYCLONE 5 REENTRANT THROAT TC187	676.93	DEG F	0813BT:A9525	SSH INLET PLATEN HEADER TC278	1224.00	DEG F
63	CYCLONE 8 REENTRANT THROAT TC186	667.85	DEG F	0813BT:A9526	SSH INTRMDT PLATEN HEADER TC281	908.49	DEG F
64	CYCLONE 7 REENTRANT THROAT TC187	112.64	DEG F	0813BT:A9527	SSH INTRMDT PLATEN HEADER TC282	1224.00	DEG F
65	SSH INLET PLATEN OUTLET TC201	868.97	DEG F	0813BT:A9528	SSH INTRMDT PLATEN HEADER TC283	950.28	DEG F
70	SSH INLET PLATEN OUTLET TC202	869.89	DEG F	0813BT:A9529	SSH INTRMDT PLATEN HEADER TC284	1224.00	DEG F
71	SSH INLET PLATEN OUTLET TC203	-24.00	DEG F	0813BT:A9530	SSH INTRMDT PLATEN HEADER TC285	945.51	DEG F
72	SSH INLET PLATEN OUTLET TC204	1224.00	DEG F	0813BT:A9531	SSH INTRMDT PLATEN HEADER TC286	943.74	DEG F
73	SSH INLET PLATEN OUTLET TC205	1224.00	DEG F	0813BT:A9532	SSH INTRMDT PLATEN HEADER TC287	1224.00	DEG F
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33	SSH INTRMDT PLATEN HEADER TC288	1224.00	DEG F	0813CW:A9294	CWP 8E MOTOR UPPER BEARING TEMP	153.75	DEG F
34	CONVECTION PASS SW RISER TC301	772.34	DEG F	0813CW:A9295	CWP 8E MOTOR LOWER BRG TEMP	139.20	DEG F
35	CONV PASS SIDE WALL RISER TC302	763.75	DEG F	0813CW:A9296	CWP 8E MOTOR THRUST BEARING TEMP	119.00	DEG F
36	CONVECTION PASS SW RISER TC303	767.04	DEG F	0813CW:A9297	CWP 8W MTR UPPER BEARING TEMP	130.48	DEG F
37	CONV PASS SIDE WALL RISER TC304	759.15	DEG F	0813CW:A9298	CWP 8W MOTOR LOWER BEARING TEMP	131.98	DEG F
38	CONVECTION PASS SW RISER TC305	762.28	DEG F	0813CW:A9299	CWP 8W MOTOR THRUST BRG TEMP	147.88	DEG F
39	CONV PASS SIDE WALL RISER TC306	757.43	DEG F	0813ES:A9209	EXTRACT STEAM TO LP HTR 2W	165.98	DEG F
40	CONVECTION PASS SW RISER TC307	754.19	DEG F	0813ES:A9210	EXTRACT STEAM TO LP HEATER 2E	166.02	DEG F
41	CONV PASS SIDE WALL RISER TC308	778.32	DEG F	0813ES:A9211	EXTRACT STEAM TO LP HTR 3	322.64	DEG F
42	CONVECTION PASS SW RISER TC309	774.17	DEG F	0813ES:A9212	EXTRACT STEAM TO LP HEATER 4	129.96	DEG F
43	CONV PASS SIDE WALL RISER TC310	766.81	DEG F	0813ES:A9213	12TH STAGE EXTRACTION STEAM TEMP	562.30	DEG F

44	CONVECTION PASS SW RISER TC3[illegible]	762.[illegible]	DEG F	0813ES:A92[illegible]	[illegible]	[illegible]	DEG F
45	CONV PASS SIDE WALL RISER TC312	761.93	DEG F	0813ES:A9215	EXTRACT STEAM TO HEATER 6E	803.37	DEG F
46	CONVECTION PASS SW RISER TC313	760.14	DEG F	0813ES:A9216	EXTRACT STEAM TO HP HEATER 7W	566.28	DEG F
47	CONV PASS SIDE WALL RISER TC314	759.04	DEG F	0813ES:A9217	EXTRACT STEAM TO HP HEATER 7E	567.62	DEG F
48	CONVECTION PASS FW RISER TC315	766.88	DEG F	0813ES:A9267	EXTRACT STEAM TO BFP TURBINES	570.94	DEG F
49	CONV PASS FRONT WALL RISER TC316	790.37	DEG F	0813ES:A9268	DEASRATOR STEAM INLET TEMP	489.02	DEG F
50	CONVECTION PASS FW RISER TC317	790.87	DEG F	0813ES:A9272	EXTRACT STEAM TO EVAPORATOR	532.89	DEG F
51	CONV PASS FRONT WALL RISER TC318	778.05	DEG F	0813FW:A9153	SUBFP COUPLING RUNNING OTBRD BRG	255.00	DEG F
52	CONVECTION PASS RW RISER TC319	754.19	DEG F	0813FW:A9154	SUBFP COUPLING RUNNER INBRD BRG	255.00	DEG F
53	CONV PASS REAR WALL RISER TC320	753.63	DEG F	0813FW:A9155	BFP TURB 8W THRUST BRG DRN TEMP	140.83	DEG F
54	CONVECTION PASS RW RISER TC321	765.70	DEG F	0813FW:A9156	BFPT 8W THRUST BRG METAL ACT TMP	65.98	DEG F
55	CONV PASS REAR WALL RISER TC322	760.27	DEG F	0813FW:A9157	3RD PASS SCREEN TC324 TEMP	135.66	DEG F
60	2-3 PASS TRANSITON HDR LSW TC330	728.28	DEG F	0813FW:A9158	BFPT 8W HP BRG OIL DRAIN TEMP	130.37	DEG F
61	2-3 PASS TRANSITION HDR FW TC331	727.88	DEG F	0813FW:A9159	BFP TURB 8W LP BRG DRAIN TEMP	137.00	DEG F
62	2-3 PASS TRANSITON HDR LSW TC332	733.04	DEG F	0813FW:A9160	BFPT 8W STOP VALVE METAL TEMP	870.27	DEG F
63	2-3 PASS TRANSITION HDR FW TC333	725.95	DEG F	0813FW:A9161	BFP8W OIL LEAVING COOLER TEMP	110.90	DEG F
00	LOW HD PMP 8W MTR UPR BRG TEMP	136.11	DEG F	0813FW:A9162	BFP 8W OUTBOARD BRG METAL TEMP	134.25	DEG F
01	LOW HD PMP 8E MTR LWR BRG TEMP	84.87	DEG F	0813FW:A9163	BFP 8W INBOARD BRG METAL TEMP	133.54	DEG F
04	LOW HD PMP 8W MTR UPR BRG TEMP	77.14	DEG F	0813FW:A9164	BFPT 8E THRUST BRG OIL DRAIN TMP	123.53	DEG F
05	LOW HD PMP 8W MTR LWR BRG TEMP	71.47	DEG F	0813FW:A9165	BFPT8E STOP VALVE METAL TEMP	1224.00	DEG F
10	SPARE	74.34	DEG F	0813FW:A9166	BFPT 8E THRUST BRG METAL ACT TMP	133.15	DEG F
21	SPARE	73.97	DEG F	0813FW:A9167	BFPT 8E THRUST MTL INACT FACE	255.00	DEG F
14	SPARE	74.43	DEG F	0813FW:A9168	BFPT 8E HP BEARING OIL DRAIN TMP	128.12	DEG F
15	SPARE	74.23	DEG F	0813FW:A9169	BFPT8E LP BEARING OIL DRAIN TEMP	137.63	DEG F
CONVPASS	CONV PASS ROC	5.64	DEGF/H	0813FW:A9170	BFP8E OIL LEAVING COOLER TEMP	116.61	DEG F
CONO	ECONOMIZER ROC 0 - 100	-12.20	DEGF/H	0813FW:A9171	BFP8E OUTBRD BEARING METAL TEMP	153.02	DEG F
STPASSA	FIRST PASS ROC 0 - 100	9.54	DEGF/H	0813FW:A9172	BFP 8E INBRD BRG METAL TEMP	143.81	DEG F
24	CONDENSATE TEMP FROM HEATER 5	312.89	DEG F	0813FW:A9173	SUBFP MOTOR INBOARD BRG MTL TEMP	80.44	DEG F
25	CONDENSATE TEMP FROM HEATER 1W	131.33	DEG F	0813FW:A9174	SUBFP MOTOR OUTBRD MTL TEMP	82.37	DEG F
26	CONDENSATE TEMP FROM HEATER 1E	125.57	DEG F	0813FW:A9175	SUBFP PUMP INBOARD BRG MTL TEMP	255.00	DEG F
27	CONDENSATE TEMP FROM HEATER 2	162.45	DEG F	0813FW:A9176	SUBFP PUMP OUTBOARD BRG MTL TEMP	71.52	DEG F
28	CONDENSATE TEMP FROM HEATER 3	217.56	DEG F	0813FW:A9218	SUBFP DISCHARGE HEADER TEMP	320.25	DEG F
29	CONDENSATE TEMP FROM HEATER 4	218.22	DEG F	0813FW:A9219	FEEDWATER TEMP HEATER 6W OUTLET	386.06	DEG F
30	CONDENSATE TEMP TO HEATER 2	129.45	DEG F	0813FW:A9220	FEEDWATER TEMP HEATER 6E OUTLET	388.95	DEG F
31	CONDENSATE TEMP TO HEATERS 1E-1W	91.51	DEG F	0813FW:A9221	FEEDWATER TEMP 7W HEATER OUTLET	475.83	DEG F
32	CONDNSATE TEMP FRM PACKGE EXHSTR	91.87	DEG F	0813FW:A9222	FEEDWATER TEMP HEATER 7E OUTLET	476.36	DEG F
33	CNDS FRM PACKAGE EXHUSTER 8N TMP	90.33	DEG F	0813FW:A9223	FEEDWATER TEMP AT ECON INLET	474.24	DEG F
34	CONDNSATE TEMP TO PACKAGE EXHSTR	87.06	DEG F	0813FW:A9261	REHEAT ATTEMP WATER TEMPERATURE	765.00	DEG F
35	POLISHED CONDENSATE MAKEUP TEMP	55.97	DEG F	0813GN:A9035	GENERATOR STATOR SLOT TEMP	43.91	DEG C
59	COND TEMP FROM BFP TURB CONDENS	108.09	DEG F	0813GN:A9036	GENERATOR STATOR SLOT TEMP	40.53	DEG C
73	EVAPORATOR DRAIN TEMP	224.97	DEG F	0813GN:A9037	GENERATOR STATOR SLOT TEMP	41.45	DEG C
02	CONDENSATE PUMP 8E MTR UPR BRG	94.91	DEG F	0813GN:A9040	GEN COLLECTOR BEARING TEMP	126.83	DEG F
03	CONDENSATE PUMP 8E MTR LWR BRG	98.55	DEG F	0813HD:A9240	LP HEATER 1W DRAIN TEMPERATURE	132.02	DEG F
06	CONDENSATE PUMP 8W MTR UPR BRG	114.61	DEG F	0813HD:A9241	LP HEATER 1E DRAIN TEMPERATURE	115.09	DEG F
07	CONDENSATE PUMP 8W MTR LWR BRG	101.26	DEG F	0813HD:A9242	HEATER 2 DRAIN TEMPERATURE	135.70	DEG F

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43	HEATER 3 DRAIN TEMPERATURE	175.99	DEG F	0814BF:A8047	AIR HEATER GAS OUT WE MIDDLE B1	374.57	DEG F
44	HEATER 4 DRAIN TEMPERATURE	84.46	DEG F	0814BF:A8048	AIR HEATER GAS OUT WE BOTTOM C1	336.44	DEG F
45	HP HEATER 6W DRAIN TEMPERATURE	330.64	DEG F	0814BF:A8049	AIR HEATER GAS OUT WW TOP A1	391.40	DEG F
46	HP HEATER 6E DRAIN TEMPERATURE	329.95	DEG F	0814BF:A8050	AIR HEATER GAS OUT WW MIDDLE B1	362.17	DEG F
47	HP HEATER 7W DRAIN TEMPERATURE	403.97	DEG F	0814BF:A8051	AIR HEATER GAS OUT WW BOTTOM C1	272.32	DEG F
48	HP HEATER 7E DRAIN TEMPERATURE	405.52	DEG F	0814BF:A9614	ID FAN 8E MOTOR RTD TEMP	39.69	DEG C
49	GLYCOL HEATER 8W DRAIN TEMP	220.92	DEG F	0814BF:A9906	E PRECIP E DUCT EAST SIDE TEMP	331.62	DEG F
50	GLYCOL HEATER 8E DRAIN TEMP	220.80	DEG F	0814BF:A9907	E PRECIP E DUCT TOP SIDE TEMP	343.45	DEG F
01	HRH TO RH-STOP VALVE 8S TEMP	1001.69	DEG F	0814BF:A9908	E PRECIP E DUCT WEST SIDE TEMP	351.07	DEG F
02	HRH TO RH-STOP VALVE 8N TEMP	1002.83	DEG F	0814BF:A9909	E PRECIP W DUCT EAST SIDE TEMP	374.18	DEG F
36	COLD RH FROM MAIN TURB 8N	570.94	DEG F	0814BF:A9910	E PRECIP W DUCT TOP SIDE TEMP	372.66	DEG F

[illegible]	[illegible]	[illegible]	DEG F	0814BF:A9911	PRECIP W DUCT WEST SIDE TEMP	373.91	DEG F
235	COLD REHEAT ATTEMP INLET TEMP	567.49	DEG F	0814BF:A9912	W PRECIP E DUCT EAST SIDE TEMP	343.05	DEG F
239	COLD REHEAT ATTEMP OUTLET TEMP	520.20	DEG F	0814BF:A9913	W PRECIP E DUCT TOP SIDE TEMP	363.66	DEG F
.77	1ST STAGE SHELL INNER SURF TEMP	869.92	DEG F	0814BF:A9914	W PRECIP E DUCT WEST SIDE TEMP	358.21	DEG F
.78	1ST STAGE SHELL OUTER SURF TEMP	672.96	DEG F	0814BF:A9915	W PRECIP W DUCT EAST SIDE TEMP	350.34	DEG F
.79	REHEAT BOWL INNER SURFACE TEMP	949.76	DEG F	0814BF:A9916	W PRECIP W DUCT TOP SIDE TEMP	348.39	DEG F
.80	REHEAT BOWL OUTER SURFACE TEMP	966.60	DEG F	0814BF:A9917	W PRECIP W DUCT WEST SIDE TEMP	1224.00	DEG F
.81	EXT VLV CHEST INNER SURFACE TEMP	973.22	DEG F	0814BS:CJR05	PIU5 REF JUNCT CAB 17-ET	21.91	DEG C
.82	EXT VLV CHEST OUTER SURFACE TEMP	830.29	DEG F	0814BT:A8013	DUMMY TEST POINT J TC	71.26	DEG F
.83	STOP VALVE 2 INNER SURFACE TEMP	996.05	DEG F	0814CW:A9251	CW TO CONDNSER 1EW INLET TEMP	58.24	DEG F
.84	STOP VALVE 2 OUTER SURFACE TEMP	983.72	DEG F	0814CW:A9258	CW TO CONDNSER 1EE INLET TEMP	58.01	DEG F
.85	EXHAUST HOOD 1 GENERATOR END TMP	84.07	DEG F	0814CW:A9274	OUTSIDE AMBIENT AIR TEMP	46.05	DEG F
.86	EXHAUST HOOD 2 GENERATOR END	87.01	DEG F	0814CW:A9622	CW FROM CONDNSER 4WW OUTLET TEMP	87.17	DEG F
.87	TURBINE OIL TEMP TO COOLER	149.10	DEG F	0814CW:A9624	CW FROM CONDNSER 4WW OUTLET TEMP	86.38	DEG F
.88	TURBINE OIL TEMP FROM COOLER	115.52	DEG F	0814CW:A9626	CW FROM CONDNSER 3WE OUTLET TEMP	88.06	DEG F
.90	BEARING 1 OIL DRAIN TEMPERATURE	145.37	DEG F	0814CW:A9628	CW FROM CONDNSER 3WE OUTLET TEMP	87.50	none
.91	BEARING 2 OIL DRAIN TEMPERATURE	148.58	DEG F	0814CW:A9630	CW FROM CONDNSER 2EW OUTLET TEMP	86.96	DEG F
.92	BEARING 3 OIL DRAIN TEMPERATURE	137.99	DEG F	0814CW:A9632	CW FROM CONDNSER 2EW OUTLET TEMP	77.23	DEG F
.93	BEARING 4 OIL DRAIN TEMPERATURE	131.43	DEG F	0814CW:A9634	CW FROM CONDNSER 1EE OUTLET TEMP	85.00	DEG F
.94	BEARING 5 OIL DRAIN TEMPERATURE	135.11	DEG F	0814CW:A9636	CW FROM CONDNSER 1EE OUTLET TEMP	78.64	DEG F
.95	BEARING 6 OIL DRAIN TEMPERATURE	136.82	DEG F	0814CW:A9638	CW FROM EBFP CONDNSR OUTLET TEMP	72.76	DEG F
.96	BEARING 7 OIL DRAIN TEMPERATURE	136.40	DEG F	0814CW:A9640	CW FROM EBFP CONDNSR OUTLET TEMP	72.27	DEG F
.97	BEARING 8 OIL DRAIN TEMPERATURE	133.35	DEG F	0814CW:A9642	CW FROM EBFP CONDNSR OUTLET TEMP	71.69	DEG F
.98	THRUST BRG FRONT PLATE OIL DRAIN	156.72	none	0814CW:A9644	CW FROM WBFP CONDNSR OUTLET TEMP	-6.00	DEG F
.99	THRUST BRG REAR PLATE OIL DRAIN	152.00	DEG F	0814CW:A9930	AMBIENT AIR TEMP BLR RM EL 196	94.43	DEG F
280	THRUST BEARING UPPER FRONT TEMP	171.67	DEG F	0814CW:A9931	AMBIENT AIR TEMP BLR RM EL 41	71.49	DEG F
81	THRUST BEARING UPPER REAR TEMP	146.18	DEG F	0814EL:A9015	UAT 8 HOTSPOT TEMP	51.11	DEG C
82	THRUST BEARING LOWER FRONT TEMP	161.95	DEG F	0814FW:A9019	SUBFP MOTOR TEMPERATURE	24.39	DEG C
83	THRUST BEARING LOWER REAR TEMP	149.60	DEG F	0814GN:A9021	COLD H2 FROM COOLER 2 TEMP	23.22	DEG C
08	TURBINE BEARING 1 METAL TEMP	176.71	DEG F	0814GN:A9023	COLD H2 FROM COOLER 4 TEMP	26.33	DEG C
09	TURBINE BEARING 2 METAL TEMP	255.00	DEG F	0814GN:A9025	STATOR COOLING WATER TMP OUT	35.41	DEG C
12	TURBINE BEARING 3 METAL TEMP	285.60	DEG F	0814GN:A9027	GENERATOR STATOR SLOT TEMP	38.40	DEG C
13	TURBINE BEARING 4 METAL TEMP	285.60	DEG F	0814GN:A9029	GENERATOR STATOR SLOT TEMP	42.68	DEG C
38	TURBINE BEARING 7 METAL TEMP	175.42	DEG F	0814GN:A9031	GENERATOR STATOR SLOT TEMP	42.16	DEG C
94	TURBINE BEARING 8 METAL TEMP	192.28	DEG F	0814GN:A9039	COLLECTOR HOUSING AIR OUT TEMP	37.62	DEG C
75	CROSSOVER STEAM TEMPERATURE SE	571.61	DEG F	0815BA:A9011	GLYCOL RETURN TEMPERATURE	175.45	DEG F
59	CROSSOVER STEAM TEMPERATURE NW	572.48	DEG F	0815BA:A9017	FD FAN 8E MOTOR TEMPERATURE	43.59	DEG C
18	FD FAN 8W MOTOR TEMPERATURE	45.01	DEG C	0815BA:A9046	TOTAL AIR FLOW	2797.72	KLB/HR
40	AIR HEATER GAS OUT EE TOP A1	389.04	DEG F	0815BA:A9140	EXTRACT STEAM TO GLYCOL HEATERS	8.96	PSIG
41	AIR HEATER GAS OUT EE MIDDLE B1	367.09	DEG F	0815BA:A9144	AIR HEATER AIR INLET PRESSURE	41.42	IN WC
42	AIR HEATER GAS OUT EE BOTTOM C1	304.12	DEG F	0815BA:A9145	WINDBOX PRESSURE 8W	37.28	IN WC
43	AIR HEATER GAS OUT EW TOP A1	424.49	DEG F	0815BA:A9146	WINDBOX PRESSURE 8E	37.47	IN WC
44	AIR HEATER GAS OUT EW MIDDLE B1	406.56	DEG F	0815BA:A9147	WINDBOX TO FURNACE DIFF PRESSURE	37.96	IN WC
45	AIR HEATER GAS OUT EW BOTTOM C1	353.14	DEG F	0815BA:A9148	STM TO GLYCOL HTR-DRIVE-UNIT POS	0.00	PCT
46	AIR HEATER GAS OUT WE TOP A1	406.40	DEG F	0815BA:A9566	AIR HEATER AIR OUTLET TEMP	585.58	DEG F

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69	GLYCOL TEMP	210.84	DEG F	0815BF:A9781	BYPASS STACK CO2 CONCENTRATION	-0.40	% VOL
58	8-1 CYCLONE TOTAL AIR FLOW	341.89	KPPH	0815BF:A9782	BYPASS STACK TOTAL GAS FLOW	0.00	MACFM
59	8-2 CYCLONE TOTAL AIR FLOW	352.44	KPPH	0815BF:A9783	U7 INSTANTANEOUS OPACITY	10.80	PCT
60	8-3 CYCLONE TOTAL AIR FLOW	341.47	KPPH	0815BF:A9784	U7 SIX MINUTE AVERAGE OPACITY	21.91	PCT
61	8-4 CYCLONE TOTAL AIR FLOW	342.06	KPPH	0815BF:A9785	U8 INSTANTANEOUS OPACITY	5.99	PCT
62	8-5 CYCLONE TOTAL AIR FLOW	337.40	KPPH	0815BF:A9786	U8 SIX MINUTE AVERAGE OPACITY	6.49	PCT
63	8-6 CYCLONE TOTAL AIR FLOW	338.78	KPPH	0815BF:A9787	BYPASS STACK INSTANT OPACITY	0.08	PCT
64	8-7 CYCLONE TOTAL AIR FLOW	356.20	KPPH	0815BF:A9788	BYPASS STACK SIX MIN AVG OPACITY	-2.00	PCT
65	8-8 CYCLONE TOTAL AIR FLOW	341.22	KPPH	0815BF:A9789	AFGD INLET SO2	6.31	#/MBTU
70	HI TEMP O2 PROBE EAST LOWER	2.44	PCT	0815BF:HA9568	AIR HEATER GAS OUTLET TEMP	26.37	MV
71	HI TEMP O2 PROBE EAST UPPER	2.52	PCT	0815BF:HA9683	AFGD8 WASTEWATER GAS IN EVAP TMP	18.40	MV

72	HI TEMP O2 PROBE WEST LOWER	2.49	PCT	0815BF:HA9753	AFGD WASTE WATER W EVAP TEMP	18.40	MV
73	HI TEMP O2 PROBE WEST UPPER	2.59	PCT	0815BF:HA9754	AFGD WASTE WATER W EVAP TEMP	18.40	MV
38	WEST ACCOUSTIC LEAK DETECTION	24.61	PCT	0815BM:A9047	TOTAL FUEL GAS FLOW	1.48	KCFH
39	EAST ACCOUSTIC LEAK DETECTION	24.40	PCT	0815BM:A9048	TOTAL IGNITION GAS FLOW	0.23	KCFH
46	SSH DIFFERENTIAL PRESSURE	1.41	IN WC	0815BM:A9049	CYCLONE 8-1 FUEL GAS FLOW	0.42	KCFH
47	REHEAT SH DIFFERENTIAL PRESSURE	1.30	IN WC	0815BM:A9050	CYCLONE 8-3 FUEL GAS FLOW	0.15	KCFH
48	PRIMARY SH DIFFERENTIAL PRESSURE	0.77	IN WC	0815BM:A9051	CYCLONE 8-5 FUEL GAS FLOW	0.20	KCFH
49	HORIZONTAL RH FURNACE DIFF PRES	2.70	IN WC	0815BM:A9052	CYCLONE 8-7 FUEL GAS FLOW	0.25	KCFH
50	UPPER ECON FURNACE DIFF PRESSURE	1.79	IN WC	0815BM:A9053	COAL FLOW TO CYCLONE 8-1	37.18	KPPH
51	LOWER ECON FURNACE DIFF PRESSURE	1.24	IN WC	0815BM:A9054	COAL FLOW TO CYCLONE 8-2	37.08	KPPH
52	8W AIR HTR COLD DIFF PRESSURE	3.80	IN WC	0815BM:A9055	COAL FLOW TO CYCLONE 8-3	37.13	KPPH
53	8W AIR HTR HOT DIFF PRESSURE	5.49	none	0815BM:A9056	COAL FLOW TO CYCLONE 8-4	37.18	KPPH
58	HIGH TEMP O2 PROBES TEMP	275.79	F*10	0815BM:A9057	COAL FLOW TO CYCLONE 8-5	37.03	KPPH
567	AIR HEATER AIR INLET TEMPERATURE	14.37	MV	0815BM:A9058	COAL FLOW TO CYCLONE 8-6	36.93	KPPH
43	AIR HEATER GAS SIDE DIFF PRES	9.25	IN WC	0815BM:A9059	COAL FLOW TO CYCLONE 8-7	37.21	KPPH
49	FURNACE TO ECON OUTLET DIFF PRES	9.46	IN WC	0815BM:A9060	COAL FLOW TO CYCLONE 8-8	37.16	KPPH
50	AIR HEATER GAS OUTLET PRESSURE	-48.35	IN WC	0815BM:A9141	MAIN FUEL GAS PRESSURE	17.04	PSIG
93	8W FLUE GAS OXYGEN %	2.44	PCT	0815BM:A9142	IGNITION GAS SUPPLY PRESSURE	44.12	PSIG
94	8E FLUE GAS OXYGEN %	2.52	PCT	0815BM:A9270	MAIN FUEL GAS TEMPERATURE	88.94	DEG F
06	ID FAN 8W MOTOR OB BEARING TEMP	137.93	DEG F	0815BM:A9271	IGNITION GAS TEMP	79.59	DEG F
5	ID FAN 8W MOTOR TEMPERATURE	40.08	DEG C	0815BM:A9649	8-1 CYCLONE SECONDARY AIR FLOW	296.46	KLBS
77	FGD MIST ELIMINATOR OUT GAS TEMP	-6.00	DEG F	0815BM:A9650	8-2 CYCLONE SECONDARY AIR FLOW	307.32	KLBS
78	FGD U8 DUCT INLET TEMPERATURE	-10.00	DEG F	0815BM:A9651	8-3 CYCLONE SECONDARY AIR FLOW	296.21	KLBS
79	FGD INLET U8 DUCT PRESSURE	-0.50	IN WC	0815BM:A9652	8-4 CYCLONE SECONDARY AIR FLOW	296.82	KLBS
80	FGD ABSORBER/STACK DIFF PRESSURE	-0.50	IN WC	0815BM:A9653	8-5 CYCLONE SECONDARY AIR FLOW	292.16	KLBS
91	FURNACE PRESSURE-SELECTED XMTTR	-0.50	none	0815BM:A9654	8-6 CYCLONE SECONDARY AIR FLOW	290.59	KLBS
62	AFGD PRIMARY SO2 ANALIZER OUT	0.16	#/MBTU	0815BM:A9655	8-7 CYCLONE SECONDARY AIR FLOW	310.82	KLBS
63	AFGD PRIMARY OUT BAROMETRIC PRES	29.42	IN/HGA	0815BM:A9656	8-8 CYCLONE SECONDARY AIR FLOW	295.98	KLBS
64	AFGD PRIMARY FLUE GAS TEMP	164.81	DEG F	0815BS:A9062	COLD REHEAT PREWARM PRESSURE	612.00	PSIG
65	AFGD PRIMARY OUT SO2 FLOW	99.95	LB/HR	0815BS:A9086	CONVECTION PASS OUTLET PRESSURE	3621.58	PSIG
66	AFGD PRIMARY OUT NOX LEVEL	1.53	#/MBTU	0815BS:A9137	FLASH TANK PRESSURE	64.03	PSIG
67	AFGD PRIMARY OUT CO2 LEVEL	11.05	% VOL	0815BS:A9138	FLASH TANK LEVEL	-13.89	IN
68	AFGD PRIMARY TOTAL GAS FLOW	1.27	MACFM	0815BS:A9205	PRIMARY SUPHTR OUTLET TEMP 8E	813.80	DEG F
69	AFGD BKUP SO2 ANALIZER OUT	-0.04	#/MBTU	0815BS:A9206	PRIMARY SUPHTR 8W OUTLET TEMP	807.54	DEG F
70	AFGD BKUP OUT BAROMETRIC PRESS	-0.65	IN/HGA	0815BS:A9324	START UP VLV 201 DRIVE POSITION	0.00	PCT
71	AFGD BKUP FLUE GAS TEMP	-10.00	DEG F	0815BS:A9331	ECONOMIZER INLET DISSOLVED O2	-0.22	PPB
72	AFGD BKUP OUT SO2 FLOW	0.53	LB/HR	0815BS:A9337	PH AT ECONOMIZER INLET	8.91	PH
73	AFGD BKUP OUT NOX LEVEL	1.59	#/MBTU	0815BS:A9666	FLASH TANK BAFFLE DIFF PRESSURE	-1.44	PSID
74	AFGD BKUP OUT CO2 LEVEL	10.93	% VOL	0815BS:A9690	CYCLONE FEEDWATER FLOW	2254.33	KPPH
75	AFGD BKUP TOTAL GAS FLOW	-0.05	MACFM	0815BS:CJR01	PIU1 REF JUNCT CAB 10-B	23.18	DEG C
76	BYPASS STACK SO2 CONCENTRATION	-0.18	#/MBTU	0815BS:CJR02	PIU2 REF JUNCT CAB 10-C	23.54	DEG C
77	BYPASS STACK BAROMETRIC PRESS	0.02	IN/HGA	0815BS:HA9322	E-W CONDENSATE PUMPS CONDUCT	28.56	MV
78	BYPASS STACK FLUE GAS TEMP SPARE	0.03	DEG F	0815BS:HA9329	ECONOMIZER INLET CAT COND S11.1	25.84	MV
79	BYPASS STACK SO2 FLOW	-20.00	LB/HR	0815BS:HA9330	ECONOMIZER INLET CAT COND S11.2	25.56	MV
80	BYPASS STACK NOX CONCENTRATION	-0.08	#/MBTU	0815BS:HA9334	SSH OUTLET CATION CONDUCTIVITY	25.77	MV

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335	BFP CONDENSER CATION CONDUCTIVTY	37.41	MV	0815ES:A9064	EXTRACTION STEAM FLOW TO BFP'S	183.99	KPPH
336	GLYCOL HEATER CATION CONDUCT	29.10	MV	0815ES:A9099	EXTRACT STEAM TO LP HEATER 1W	-10.41	PSIG
570	8W SUPERHEATER INLET GAS TEMP	29.97	MV	0815ES:A9100	EXT STEAM TO LP HEATER 1E	-7.16	PSIG
571	8E SUPERHEATER INLET GAS TEMP	0.03	MV	0815ES:A9101	EXTRACT STEAM TO LP HEATER 2	-9.10	PSIG
07	FURNACE FLOOR TEMPERATURE TC194	681.76	DEG F	0815ES:A9102	EXTRACT STEAM TO LP HEATER 3	12.97	PSIG
08	FURNACE FLOOR TEMPERATURE TC195	683.77	DEG F	0815ES:A9103	EXTRACT STEAM TO LP HEATER 4	0.11	PSIG
09	FURNACE FLOOR TEMPERATURE TC196	675.28	DEG F	0815ES:A9104	DEAERATOR PRESSURE	65.69	PSIG
10	FURNACE FLOOR TEMPERATURE TC197	680.67	DEG F	0815ES:A9105	EXTRACT STEAM TO HP HEATER 6W	204.48	PSIG
11	FURNACE FLOOR TEMPERATURE TC198	672.39	DEG F	0815ES:A9106	EXTRACT STEAM TO HP HEATER 6E	204.72	PSIG
12	FURNACE FLOOR TEMPERATURE TC199	687.90	DEG F	0815ES:A9107	COLD REHEAT STEAM TO HEATER 7W	532.54	PSIG
13	FURNACE FLOOR TEMPERATURE TC200	678.98	DEG F	0815ES:A9108	COLD REHEAT STEAM TO HEATER 7E	529.53	PSIG

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
071	HEATER DRAIN PUMP FLOW	294.66	KPPH	0815ES:A9118	EXTRACTION STEAM TO BFP'S PRESS	78.57	PSIG	
072	HEATING EVAPORATOR DRAIN FLOW	14.90	KPPH	0815ES:A9121	LP STEAM PRESSURE TO 8W BFPT	76.60	PSIG	
073	CONDENSATE MAKE UP FLOW	43.10	GPM	0815ES:A9122	LP STEAM PRESSURE TO 8E BFPT	76.81	PSIG	
074	CONDENSATE FLOW	1768.76	KPPH	0815ES:A9595	STEAM SEAL HEADER LOWER TEMP	1224.00	DEG F	
075	CONDENSATE FROM GLYCOL HEATER	0.00	KPPH	0815FW:A9045	TOTAL FEEDWATER FLOW FROM DA	2257.61	KLB/HR	
079	BFP CONDENSERS CONDENSATE FLOW	135.75	KPPH	0815FW:A9044	BFP 8W DISCHARGE FLOW	894.77	KPPH	
080	MAIN CONDENSER OVERFLOW	1.22	GPM	0815FW:A9066	BFP 8E DISCHARGE FLOW	1317.45	KPPH	
132	BFP 8E HOTWELL PUMP PRESSURE	16.25	PSIG	0815FW:A9067	SUBFP DISCHARGE FLOW	45.02	KPPH	
133	CONDENSATE HEADER PRESSURE	367.32	PSIG	0815FW:A9068	8W SEC SUPHTR ATTEMP WATER FLOW	10.18	KPPH	
134	HTR 1W CONDENSER ABSOLUTE PRESS	1.14	IN HG	0815FW:A9069	EAST SEC SUPHTR ATMP FLOW	29.40	KPPH	
135	HTR 1E CONDENSER ABSOLUTE PRESS	1.03	IN HG	0815FW:A9070	COLD REHEAT ATTEMP WATER FLOW	59.76	KPPH	
136	HEATER DRAIN PUMP PRESSURE	272.28	PSIG	0815FW:A9076	BFP 8W DRUM BALANCE FLOW	61.80	KPPH	
327	CONDENSATE FROM HEATER 2 CONDUCT	2.01	MMHO	0815FW:A9077	BFP 8E DRUM BALANCE FLOW	53.34	KPPH	
328	HYDRAZINE FROM HEATER 2	0.77	PPB	0815FW:A9078	SUBFP DRUM BALANCE FLOW	0.11	KPPH	
392	DEAERATOR HEATER LEVEL	9.61	FT	0815FW:A9081	BFP 8W SPEED	-8.83	RPM	
9323	HOTWELL DISCHARGE CATION CONDUCT	26.61	MV	0815FW:A9082	BFP 8E SPEED	7191.00	RPM	
961	MAIN CONDENSER VACUUM	28.51	IN HG	0815FW:A9098	ATTEM TO COLD REHEAT PRESS	-36.00	PSIG	
129	BFP 8W CONDENSER VACUUM	2.64	IN HG	0815FW:A9110	ECONOMIZER INLET FEEDWATER PRES	4008.98	PSIG	
130	BFP 8E CONDENSER VACUUM	2.10	IN HG	0815FW:A9111	BFP 8W DISCHARGE PRESSURE	4079.53	none	
131	BFP 8W HOTWELL PUMPS PRESSURE	17.49	PSIG	0815FW:A9112	BFP 8E DISCHARGE PRESSURE	4048.36	PSIG	
252	CW FROM CONDNSER 1WE INLET TEMP	58.10	DEG F	0815FW:A9113	SUBFP DISCHARGE PRESSURE	5.27	PSIG	
257	CW FROM CONDNSER 1WW INLET TEMP	57.87	DEG F	0815FW:A9114	FEEDWATER HEADER PRESSURE	4095.82	PSIG	
521	CW FROM CONDNSER 4WW OUTLET TEMP	87.03	DEG F	0815FW:A9115	BFP 8W SUCTION PRESSURE	125.71	PSIG	
523	CW FROM CONDNSER 4WW OUTLET TEMP	86.07	DEG F	0815FW:A9116	BFP 8E SUCTION PRESSURE	118.82	PSIG	
525	CW FROM CONDNSER 3WE OUTLET TEMP	87.97	DEG F	0815FW:A9117	SUBFP SUCTION PRESSURE	40.97	PSIG	
527	CW FROM CONDNSER 3WE OUTLET TEMP	88.25	DEG F	0815FW:A9123	BFP 8W TURB LUBE OIL FILTER DP	4.99	PSIG	
529	CW FROM CONDNSER 2EW OUTLET TEMP	82.68	DEG F	0815FW:A9124	BFPT 8W BEARING OIL PRESSURE	19.04	PSIG	
531	CW FROM CONDNSER 2EW OUTLET TEMP	82.80	none	0815FW:A9125	BFP 8W BEARING OIL PUMP PRESSURE	16.17	PSIG	
533	CW FROM CONDNSER 1EE OUTLET TEMP	79.03	DEG F	0815FW:A9126	BFPT 8E LUBE OIL FILTER DIF PRES	3.33	PSIG	
535	CW FROM CONDNSER 1EE OUTLET TEMP	76.58	DEG F	0815FW:A9127	BFP 8E TURBINE BEARING OIL PRESS	19.21	PSIG	
537	CW FROM EBFP CONDNSER OUTLT TEMP	72.09	DEG F	0815FW:A9128	BFP 8E BEARING OIL PUMP PRESSURE	15.21	PSIG	
539	CW FROM WBFP CONDNSER OUTLT TEMP	72.18	DEG F	0815FW:A9151	SUBFP COUPLING IMPELLR OTBRD BRG	285.00	DEG F	
541	CW FROM WBFP CONDNSER OUTLT TEMP	72.18	DEG F	0815FW:A9152	SUBFP COUPLING IMPELLR INBRD BRG	255.00	DEG F	
543	CW FROM WBFP CONDNSER OUTLT TEMP	86.66	DEG F	0815FW:A9572	BFP 8W HI PRESS BEARNG VIBRATION	1.94	MILS	
567	ATMOSPHERIC BAROMETRIC PRESSURE	29.44	IN HG	0815FW:A9573	BFP 8W LOW PRESSURE BEARING VIB	-0.58	MILS	
007	UAT 8X POWER TO 4KV BUS 8E	8.04	MW	0815FW:A9574	BFP 8E HI PRESS BEARNG VIBRATION	0.24	MILS	
008	UAT 8 POWER TO 4KV BUS 8W	7.66	MW	0815FW:A9575	BFP 8E LOW PRESSURE BEARING VIB	0.77	MILS	
009	RAT 2 POWER TO 4KV BUS 8E	-0.36	MW	0815FW:A9597	8W BFP THRUST BEARING METAL TEMP	120.29	DEG F	
010	RAT 1 POWER TO 4KV BUS 8W	-0.50	MW	0815FW:A9598	BFP 8E THRUST BEARING METAL TEMP	123.03	DEG F	
014	MAIN TRANSFORMER HOTSPOT TEMP	40.86	DEG C	0815FW:A9599	SUBFP THRUST BEARING METAL TEMP	70.09	DEG F	
045	UAT 8X POWER TO 4KV BUS 8EX	4.00	MW	0815FW:A9602	BFP SPD CHNGR LO SPD BRG OIL IN	204.00	DEG F	
046	UAT 8 POWER TO 4KV BUS 8WX	3.91	MW	0815FW:A9603	SUBFP SPD CHNGR LOSPD BRG OILOUT	255.00	DEG F	
047	RAT 2 POWER TO 4KV BUS 8EX	0.01	MW	0815FW:A9604	BFP SPD CHNGR HI SPD BRG OIL IN	204.00	DEG F	
048	RAT 1 POWER TO 4KV BUS 8WX	0.01	MW	0815FW:A9605	SUBFP SPD CHNGR HISPD BRG OILOUT	255.00	DEG F	

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043	STARTUP BFP SPEED	19.30	MV	0815TS:A9585	CONTROL VALVE POSITION	81.82	none	
111	BFP 8W DISCHARGE PRESSURE	74.39	MV	0815TS:A9586	ECCENTRICITY	1.14	MILS	
112	BFP 8E DISCHARGE PRESSURE	73.98	MV	0815TS:A9587	SHELL EXPANSION	734.50	MILS	
113	SUBFP DISCHARGE PRESSURE	20.07	MV	0815TS:A9588	ROTOR-SHELL DIFF EXPANSION	517.19	MILS	
01	GENERATOR 8 GROSS MW	324.11	MW	0815TS:A9589	STOP VALVE 2 BYPASS POSITION	95.61	PCT	
02	GENERATOR 8 STATOR VOLTAGE	21.73	KV	0815TS:A9590	CROSSOVER STEAM TEMPERATURE SW	573.97	DEG F	
03	GENERATOR 8 STATOR CURRENT	9.09	XAMPS	0815TS:A9591	CROSSOVER STEAM TEMPERATURE NE	571.67	DEG F	
04	GENERATOR 8 GROSS MEGAVARS	92.67	MVAR	08PLS01:D4001	GENERATOR OUTPUT	0.00	MW	
05	GENERATOR 8 FIELD CURRENT	1931.03	AMPS	08PLS01:D4002	COAL FLOW TO CYCLONE 8-1	0.00	XLBH	
06	GENERATOR 8 FIELD VOLTAGE	269.31	VOLTS	08PLS01:D4003	COAL FLOW TO CYCLONE 8-2	0.00	XLBH	
12	EXITATION TRANSFER VOLTAGE	4.12	VOLTS	08PLS01:D4004	COAL FLOW TO CYCLONE 8-3	0.00	XLBH	

13	138 KV BUS VOLTAGE	0.00	KV	08PLS01:P4001	GENERATOR OUTPUT	0.00	COUNTS
20	COLD H2 FROM COOLER 1 TEMP	26.98	DEG C	08PLS01:P4002	COAL FLOW TO CYCLONE 8-1	0.00	COUNTS
22	COLD H2 FROM COOLER 3 TEMP	32.17	DEG C	08PLS01:P4003	COAL FLOW TO CYCLONE 8-2	0.00	COUNTS
24	STATOR COOLING WATER INLET TEMP	28.41	DEG C	08PLS01:P4004	COAL FLOW TO CYCLONE 8-3	0.00	COUNTS
26	GENERATOR STATOR SLOT TEMP	39.56	DEG C	08PLS02:D4005	COAL FLOW TO CYCLONE 8-4	0.00	KLBH
28	GENERATOR STATOR SLOT TEMP	40.34	DEG C	08PLS02:D4006	COAL FLOW TO CYCLONE 8-5	0.00	KLBH
30	GENERATOR STATOR SLOT TEMP	39.69	DEG C	08PLS02:D4007	COAL FLOW TO CYCLONE 8-6	0.00	KLBH
32	GENERATOR STATOR SLOT TEMP	41.88	DEG C	08PLS02:D4008	COAL FLOW TO CYCLONE 8-7	0.00	KLB
33	GENERATOR STATOR SLOT TEMP	42.03	DEG C	08PLS02:D4009	COAL FLOW TO CYCLONE 8-8	0.00	KLB
34	GENERATOR STATOR SLOT TEMP	41.47	DEG C	08PLS02:P4005	COAL FLOW TO CYCL 8-4	0.00	COUNTS
38	COLLECTOR HOUSING AIR IN TEMP	27.37	DEG C	08PLS02:P4006	COAL FLOW TO CYCL 8-5	0.00	COUNTS
41	GENERATOR HYDROGEN PURITY	105.30	PCT	08PLS02:P4007	COAL FLOW TO CYCL 8-6	0.00	COUNTS
42	STATOR COOLNG WATER CONDUCTIVY	0.01	MMHO	08PLS02:P4008	COAL FLOW TO CYCL 8-7	0.00	COUNTS
83	GENERATOR WEST BUS DUCT TEMP	48.50	DEG C	08PLS02:P4009	COAL FLOW TO CYCL 8-8	0.00	COUNTS
84	GENERATOR EAST BUS DUCT TEMP	48.31	DEG C	08VAIN:A9043	STARTUP BFP SPEED	0.00	RPM
85	GENERATOR HYDROGEN PRESSURE	30.09	PSIG	08VAIN:A9073HA	CNDS MKUP 60 MIN AVG (TESTPOINT)	43.56	none
68	SOOT BLOWER HEADER PRESSURE	242.59	PSI	08VAIN:A9073TA	CNDS MKUP 10 MIN AVG (TESTPOINT)	46.94	GPM
63	MAIN STEAM FLOW TO BFP'S	0.00	KPPH	08VAIN:A9113	SUBFP DISCHARGE PRESS	5.63	PSIG
91	SECONDARY SUPHTR OUTLET PRESSURE	3480.86	PSIG	08VAIN:A9322	CONDENSATE CONDUCTIVITY	0.16	MMH
92	THROTTLE PRESS FOXBORO CONTROL	3411.25	PSIG	08VAIN:A9323	HOTWELL CONDUCTIVITY	0.15	MMH
93	STEAM CHEST PRESSURE	3388.67	PSIG	08VAIN:A9329	ECON INLET CATION CONDUCTIVITY	0.14	MMHO
94	TURBINE FIRST STAGE PRESSURE	2064.69	PSIG	08VAIN:A9330	ECON INLET CATION CONDUCTIVITY	0.14	MMHO
95	HOT REHEAT PRESS AT IP TURBINE	495.37	PSIG	08VAIN:A9335	BFP CONDENSER CATION CONDUCTIVTY	0.27	MMHO
96	HRH PRESSURE LEAVING BOILER	512.36	PSIG	08VAIN:A9336	GLYCOL HTR CATION CONDUCTIVITY	0.17	MMH
97	COLD REHEAT AT TURBINE EXHAUST	533.27	PSIG	08VAIN:A9567	AIR HTR AIR IN TEMP	172.44	DEG
19	HP STEAM PRESSURE TO 8W BFP TURB	3409.83	PSIG	08VAIN:A9568	AIR HTR GAS OUT TEMP	316.48	DEG
20	HP STEAM PRESSURE TO 8E BFPT	3393.63	PSIG	08VAIN:A9570	8W SH INLET GAS TEMP	1622.96	DEGF
39	COMPUTER THROTTLE PRESSURE	3420.70	PSIG	08VAIN:A9571	8E SH INLET GAS TEMP	250.00	DEGF
07	MAIN STEAM TEMPERATURE AT SV1	999.48	DEG F	08VAIN:A9746AM	SH PERCENT PLUGGED	-2.00	%
08	MAIN STEAM TEMPERATURE AT SV2	1000.06	DEG F	08VAIN:A9747AM	RH PERCENT PLUGGED	-2.00	%
87	MAIN TURBINE OIL HEADER PRESSURE	231.75	PSIG	08VAIN:A9748AM	P RH PERCENT PLUGGED	-2.00	%
88	MN TURB BEARING OIL HEADER PRES	27.09	PSIG	08VAIN:A9750AM	U ECON PERCENT PLUGGED	-2.00	%
89	MAIN TURB OIL PMP SUCTION PRESS	30.20	PSIG	08VAIN:A9751AM	L ECON PERCENT PLUGGED	-2.00	%
90	MAIN TURBINE STEAM SEAL PRESSURE	5.01	PSIG	08VAIN:EASTAVG	3RD PASS EAST WALL	747.36	DEG F
25	TURBINE BEARING 5 METAL TEMP	285.60	DEG F	08VAIN:EHRHTUBE	HOT REHEAT TUBES E AVG	1013.84	DEG
26	TURBINE BEARING 6 METAL TEMP	285.60	DEG F	08VAIN:FRONTAVG	3RD PASS FRONT WALL	760.80	DEG
76	TURBINE BEARING 1 VIBRATION	1.38	MILS	08VAIN:REARAVG	3RD PASS REAR SCRN	100.00	DEGF
77	TURBINE BEARING 2 VIBRATION	3.33	MILS	08VAIN:REARAVG1	3RD PASS REAR SCRN1	745.43	DEG F
78	TURBINE BEARING 3 VIBRATION	2.53	MILS	08VAIN:REARAVG2	3RD PASS REAR SCRN 2	744.03	DEG F
79	TURBINE BEARING 4 VIBRATION	2.64	MILS	08VAIN:REARAVG3	3RD PASS REAR SCRN 3	754.95	DEG
80	TURBINE BEARING 5 VIBRATION	1.24	MILS	08VAIN:V0005	TOTAL UNIT AUX POWER	22.77	MW
81	TURBINE BEARING 6 VIBRATION	1.40	MILS	08VAIN:V0010	NET POWER	301.12	MW
82	TURBINE BEARING 7 VIBRATION	1.41	MILS	08VAIN:V0020	MIN HYDROGEN GAS TEMP	23.22	DEGC
83	TURBINE BEARING 8 VIBRATION	1.40	MILS	08VAIN:V0040	AVG HOT RH IP INLT STM T	1002.26	DEG F
84	TURBINE SPEED	3598.83	RPM	08VAIN:V0045	AVG CIRC WTR INLT TEMP	58.94	DEG F

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50	AVG CW CNDSR(1E) E OUT T	78.16	DEG F	08VAIN:V0492	CONV PASS / FLSH TNK TEMP ROC	5.64	DEGF
52	AVG CW CNDSR(1E) W OUT T	82.17	DEG F	08VAIN:V0495	STOP VLV MTL TEMP ROC	0.00	DEGF
53	AVG FIRST PASS TUBE TEMP	721.09	DEG F	08VAIN:V0505	HTR 1E FW TEMP RISE	34.06	DEGF
55	AVG CW CNDSR(1W) W OUT T	87.08	DEG F	08VAIN:V0510	HTR 1W FW TEMP RISE	39.81	DEGF
57	AVG CW CNDSR(1W)E OUT T	88.14	DEG F	08VAIN:V0515	HTR 2 FW TEMP RISE	32.99	DEGF
60	HOTTEST EXH HOOD TEMP	87.01	DEGF	08VAIN:V0520	HTR 3 FW TEMP RISE	55.11	DEGF
65	AVG EXT STM HTR 1 PRESS	-8.84	PSIG	08VAIN:V0525	HTR 4 FW TEMP RISE	-4.00	DEGF
70	TOTAL AIR FLOW TO BOILER	2794.04	KLBH	08VAIN:V0530	HTR 5 FW TEMP RISE	94.67	DEGF
75	TOTAL COAL FLOW	296.92	KLBH	08VAIN:V0535	HTR 6E FW TEMP RISE	76.06	DEGF
80	TOTAL FUEL GAS FLOW	1.07	KCFH	08VAIN:V0540	HTR 6W FW TEMP RISE	204.00	DEGF
90	NET TURBINE HEAT RATE	9415.84	BTU/KW	08VAIN:V0545	HTR 7E FW TEMP RISE	87.40	DEGF

150	INTERMEDIATE PRESS TURBINE EFF	95.61	MV	08VAIN:V0555	AVG HTR (6W&E) DRAIN PRESS	194.03	PSIG
160	AH COLD END TEMP	20.12	MV	08VAIN:V0560	AVG HTR (7W&E) DRAIN PRESS	357.00	PSIG
185	RESERVE AUX POWER	-0.80	MW	08VAIN:V0565	AVG HTR 7W&E EXTR STM PR	524.58	PSIG
190	AUX POWER	15.70	MW	08VAIN:V0570	AVG HTR 6W&E EXTR STM PR	204.26	PSIG
195	AVG BFP SUCTION PRESSURE	121.84	PSIG	08VAIN:V0575	AVG MAIN STEAM TEMP	997.73	DEG F
200	AVG HTR (1W&E) DRAIN PRESS	-0.30	PSIG	08VAIN:V0576	AVG PRI SUPHTR OUT TEMP	814.16	DEG F
205	AVG BFP(N&S) COND PRESS	2.36	none	08VAIN:V0577	AVG SEC SUPHTR OUT TEMP	1001.65	DEG F
210	AVG HTR2 EXTR STM TEMP	166.00	DEG F	08VAIN:V0578	AVG MAIN STM AT SV TEMP	997.73	DEG F
215	AVG FW TEMP FRM HTR 7E&W	476.09	DEG F	08VAIN:V0579	AVG HRH STM AT RH/SV TMP	1002.26	DEG F
220	AVG FW TEMP FRM HTR 6E&W	387.51	DEG F	08VAIN:V0580	AVG HTR 6W&E EXTR STM PR	802.50	DEG F
225	AVG HTR 7E&W DRAIN TEMP	404.75	DEG F	08VAIN:V0585	AVG HTR 7W&E EXTR STM PR	566.95	DEG F
230	AVG HTR 6E&W DRAIN TEMP	330.29	DEG F	08VAIN:V0590	AVG HTR 1W&E OUT COND PR	128.45	none
235	AVG HTR 1E&W DRAIN TEMP	123.56	DEG F	08VAIN:V0595	AVG COLD REHEAT STM TEMP	568.07	DEG F
250	AVG MN CND(E&W) CW OUT T	83.89	DEGF	08VAIN:V0600	AVG GLYCO HTR DRAIN TEMP	220.86	DEG F
255	AVG MN CND(E&W) CW IN T	58.94	DEG F	08VAIN:V0605	AVG CONDENSER PRESSURE	1.10	IN HG
265	AVG AH N&S AIR INLT TEMP	90.75	DEG F	08VAIN:V0610	AVG HTR 1W&E IN COND TMP	91.10	DEG F
294	AVG MAIN STEAM TEMP AT STOP VLVS	997.73	DEG F	08VAIN:V0615	AVG CW FR WBBFP CNDSR OUT	76.99	DEG F
295	AVG HOT RH STM TEMP	1002.26	DEG F	08VAIN:V0620	AVG CW FR EBFP CNDSR OUT	71.80	DEG F
305	1ST STG IN-OUT MTL TEMP DIFF	196.96	DEGF	08VAIN:V0625	EAST PRECIP OUT AVG TEMP	352.12	DEG F
310	RH BWL IN-OUT MTL TEMP DIFF	-4.00	DEGF	08VAIN:V0630	WEST PRECIP OUT AVG TEMP	345.49	DEG F
315	EXT V IN-OUT SURF MTL TEMP DIFF	142.94	DEGF	08VAIN:V0640	AVG COAL FLOW	37.12	%
335	THROTTLE/REHEAT STEAM TEMP DIFF	4.52	DEGF	08VAIN:V5120	HOT REHEAT STEAM FLOW	0.00	KPPH
340	ECON INLET COND DIFF	0.28	MMHO	08VAIN:V5140	GROSS TURBINE HEAT RATE	8755.28	BTU/KW
345	STOP VALVE TEMP DIFF	12.33	DEGF	08VAIN:V5165	CHG IN HR DUE TO MN STM TMP DEV	2.35	BTU/KW
375	MAX 1ST PASS RISER TEMP	721.99	DEG F	08VAIN:V5180	CHG IN HR DUE TO RH STM TMP DEV	-3.38	BTU/KW
390	MAX 1ST PASS RISR RW PN	820.35	DEG F	08VAIN:V5215	CHG IN HR DUE TO MN STM PR DEV	2.93	BTU/KW
.05	MAX FURN EXT SCN WAL TUB	1025.85	DEG F	08VAIN:V5250	CHG IN HR DUE TO CND PRESS DEV	-40.00	BTU/KW
.10	MAX 3RD PASS RISER TEMP	1041.02	DEG F	08VAIN:V5300	CHG IN HR DUE TO RH SPRAY FLOW	29.52	BTU/KW
.15	MAX PRI SH OUTLT LEG TMP	789.13	DEG F	08VAIN:V5350	GROSS CORR TURBINE HEAT RATE	0.00	BTU/KW
.20	MAX 3RD PASS S WALL TEMP	761.29	DEG F	08VAIN:V5365	NET TURBINE HEAT RATE	9415.84	BTU/KW
.25	MAX 3RD PASS SCREEN TEMP	833.26	DEG F	08VAIN:V5740	LP HTR 2 DRAIN CLR TEMP DIFF	0.00	DEGF
.35	MAX IN PLAT OUTLET TEMP	915.96	DEG F	08VAIN:V5745	LP HTR 3 DRAIN CLR TEMP DIFF	13.14	DEGF
.40	MAX SSH OUTLET LEG TEMP	1143.89	DEG F	08VAIN:V5750	LP HTR 4 DRAIN CLR TEMP DIFF	-4.00	DEGF
.46	MAX SSH INT OUTLET TEMP	950.28	DEG F	08VAIN:V5755	HP HTR 6E DRAIN CLR TEMP DIFF	9.53	DEGF
.47	MAX CONV PASS SW RISER T	778.32	DEG F	08VAIN:V5760	HP HTR 6W DRAIN CLR TEMP DIFF	10.48	DEGF
.50	1ST STG SHELL INNER MTL TMP ROC	14.63	DEGF/H	08VAIN:V5765	HP HTR 7E DRAIN CLR TEMP DIFF	16.99	DEGF
.55	RH BOWL INNER SURF MTL TMP ROC	7.32	DEGF/H	08VAIN:V5770	HP HTR 7W DRAIN CLR TEMP DIFF	18.29	DEGF
.60	EX V CHST OUTR SURF MTL TMP ROC	7.05	DEGF/H	08VAIN:V5775	LP HTR 1E TTD	52.29	DEGF
.65	GROSS GEN LOAD ROC	-4.89	MW/HR	08VAIN:V5780	LP HTR 1W TTD	20.20	DEGF
.70	THROTTLE STEAM TEMP ROC	0.00	DEGF/H	08VAIN:V5785	LP HTR 2 TTD	3.84	DEGF
.75	THROTTLE STEAM PRESS ROC	-10.00	PSI/HR	08VAIN:V5790	LP HTR 3 TTD	27.25	DEGF
.80	CONV PASS OUTLET TEMP ROC	5.64	DEGF/H	08VAIN:V5795	LP HTR 4 TTD	-4.00	DEGF
.85	FIRST PASS COOLING TEMP ROC	9.54	DEGF/H	08VAIN:V5805	HP HTR 6E TTD	0.75	DEGF
.90	FEEDWATER ECON INLET TEMP ROC	12.20	DEGF/H	08VAIN:V5810	HP HTR 6W TTD	3.33	DEGF

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15	HP HTR 7E TTD	-0.80	DEGF	CP05I:B12	SEC AIR 8_3 DMPR POS FEEDBACK	57.83	%
20	HP HTR 7W TTD	0.22	DEGF	CP05I:B13	GAS VLV 8_3 POS FEEDBACK	42.73	%
75	BOILER EFF I/O	67.91	%	CP05I:B9	SEC AIR 8_1 DMPR POS FEEDBACK	63.36	%
20	BOILER EFF H/L	85.40	%	CP06AM:B1A	AM AIN BLOCK	68.15	%
70	CONDENSER CLEANLINESS FACTOR	102.00	%	CP06AM:B2A	AM AIN BLOCK	74.16	%
75	APH AIR SIDE EFFECTIVENESS	79.09	%	CP06AM:B3A	AM AIN BLOCK	70.09	%
80	APH GAS SIDE EFFECTIVENESS	72.43	%	CP06AM:B4A	AM AIN BLOCK	46.19	%
93	NET UNIT HEAT RATE	10200.00	BTU/KW	CP06AM:B5A	AM AIN BLOCK	87.70	%
95	NUHR (HL)	11026.04	BTU/KW	CP06AM:B6A	AM AIN BLOCK	69.50	%
10	CORRECTED NET UNIT HEAT RATE	0.00	BTU/KW	CP06AM:B7A	AM AIN BLOCK	74.51	%
20	OFF BOGEY BOILER EFF (HL)	85.40	%	CP06I:B10	GAS VLV 8_5 POS FEEDBACK	46.62	%

30	OFF BOILER EXHAUST FEE (FB)	0.11	%	CP061:B7	SEC AIR 8_3 DMPR POS FEEDBACK	63.24	%
95	BFP W EFFICIENCY	0.00	%	CP061:B8	SEC AIR 8_4 DMPR POS FEEDBACK	63.87	%
55	BFP E EFFICIENCY	0.00	%	CP061:B9	SEC AIR 8_5 DMPR POS FEEDBACK	66.48	%
00N	CYCL 1 AIR/FUEL RATIO	9.19	%	CP07AM:B1A	AM AIN BLOCK	58.64	%
05N	CYCL 2 AIR/FUEL RATIO	9.50	%	CP07AM:B2A	AM AIN BLOCK	45.79	%
10N	CYCL 3 AIR/FUEL RATIO	9.20	%	CP07AM:B3A	AM AIN BLOCK	73.57	%
15N	CYCL 4 AIR/FUEL RATIO	9.20	%	CP07AM:B4A	AM AIN BLOCK	84.74	%
20N	CYCL 5 AIR/FUEL RATIO	9.12	%	CP07AM:B5A	AM AIN BLOCK	76.48	%
25N	CYCL 6 AIR/FUEL RATIO	9.17	%	CP07AM:B6A	AM AIN BLOCK	31.62	%
30N	CYCL 7 AIR/FUEL RATIO	9.57	%	CP07I:B10	GAS VLV 8-7 POS FEEDBACK	47.09	%
35N	CYCL 8 AIR/FUEL RATIO	9.18	%	CP07I:B11	SEC AIR 8-8 DMPR POS FEEDBACK	79.40	%
40N	CYCL AIR/FUEL RATIO AVG	9.27	%	CP07I:B9	SEC AIR 8-7 DMPR POS FEEDBACK	63.11	%
01	AVG E. A HTR GAS OUT TMP	371.94	DEG F	CP08AM:B1A	AM AIN BLOCK	73.02	%
02	AVG W. A HTR GAS OUT TMP	354.45	DEG F	CP08AM:B2A	AM AIN BLOCK	73.01	%
03	TOT AVG A.H. GAS OUT TEMP	363.20	DEG F	CP08AM:B3A	AM AIN BLOCK	89.05	%
01	AVG HRHSTM AT HR/SV ROC	0.00	DEGF/H	CP08AM:B4A	AM AIN BLOCK	89.04	%
03	AVG SEC SH OUTLET ROC	19.07	DEGF/H	CP08I:B11	FD FAN EAST INLET VANE POS. FDBK	74.39	%
05	AVG PRI SH OUTLET ROC	0.00	DEGF/H	CP08I:B12	FD FAN WEST INLET VANE POS. FDBK	73.60	%
74	CORNING HT 02 EAST AVG	2.45	PCT	CP08I:B13	ID FAN EAST INLET VANE POS. FDBK	86.79	%
75	CORNING HT 02 WEST AVG	2.51	PCT	CP08I:B14	ID FAN WEST INLET DMPR POS. FDBK	79.86	%
TAVG	3RD PASS WEST WALL	648.51	DEG F	CP09AM:B1A	AM AIN BLOCK	22.45	%
HTUBE	HOT REHEAT TUBES W AVG	975.15	DEG F	CP09AM:B2A	AM AIN BLOCK	99.93	%
	AM AIN BLOCK	85.23	%	CP09AM:B3A	AM AIN BLOCK	99.95	%
	AM AIN BLOCK	92.69	%	CP09AM:B4A	AM AIN BLOCK	45.30	%
	AM AIN BLOCK	3.11	%	CP09AM:B5A	AM AIN BLOCK	0.00	%
	AM AIN BLOCK	69.60	%	CP09AM:B6A	AM AIN BLOCK	84.68	%
	MDBFP SCOOP TUBE POS FEEDBACK	-2.00	%	CP09AM:B7A	AM AIN BLOCK	84.68	%
	CONDENSATE VALVES POS FEEDBACK	-2.00	%	CP09I:B10	WEST GAS RECIRC DMPR DRIVES FBK	0.72	%
	TDBFP EAST SPD POS FEEDBACK	-2.00	%	CP09I:B11	EAST GAS TEMPERING DMPR DR FBK	90.72	%
	TDBFP WEST SPD POS FEEDBACK	-2.00	%	CP09I:B12	WEST GAS TEMPERING DMPR DR FBK	84.86	%
	AM AIN BLOCK	46.70	%	CP09I:B13	GAS RECIRC FAN AMPS EAST	147.86	AMPS
	AM AIN BLOCK	18.15	%	CP09I:B14	GAS RECIRC FAN AMPS WEST	143.93	AMPS
	AM AIN BLOCK	18.18	%	CP09I:B7	GAS RECIRC FAN INLET DMPR E FBK	94.29	%
	AM AIN BLOCK	66.56	%	CP09I:B8	GAS RECIRC FAN INLET DMPR W FBK	95.22	%
	AM AIN BLOCK	50.34	%	CP09I:B9	EAST GAS RECIRC DMPR DRIVES FBK	98.63	%
	AM AIN BLOCK	73.92	%	CP10AM:B1A	AM AIN BLOCK	99.99	%
	AM AIN BLOCK	65.89	%	CP10AM:B2A	AM AIN BLOCK	0.00	%
	AM AIN BLOCK	74.54	%	CP10AM:B3A	AM AIN BLOCK	0.01	%
	AM AIN BLOCK	58.99	%	CP11AM:B1A	AM AIN BLOCK	0.03	%
	AM AIN BLOCK	42.75	%	CP111:B1	IS1012 INPUTS	115.25	DEGF
	AM AIN BLOCK	74.09	%	CP11I:B1B	HYDROGEN TEMP	30.48	DEGC
	GAS VLV 8_1 POS FEEDBACK	50.87	%	RECORDERS:ZERO_OUT	OUTPUT ZERO TO UNUSED PENS	0.00	%
	SEC AIR 8_2 DMPR POS FEEDBACK	64.28	%				

DAILY SUMMARY REPORT
For 59_U8_Opacity %

From: 12/10/99 00:00
To: 12/11/99 00:00
Printed: 12/13/99

NIPSCO
Bailly Generating Station
Unit #8

12/10/99 — Six Minute Values

Hour	00	06	12	18	24	30	36	42	48	54
00	3.0	4.0	3.0	3.0	5.0	7.0	4.0	4.0	4.0	4.0
01	4.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	3.0	3.0
02	6.0	5.0	4.0	4.0	4.0	4.0	3.0	5.0	3.0	3.0
03	3.0	6.0	3.0	3.0	4.0	4.0	3.0	4.0	5.0	4.0
04	4.0	3.0	3.0	5.0	4.0	4.0	3.0	3.0	3.0	11.0
05	4.0	4.0	5.0	5.0	CAL	5.0	4.0	7.0	6.0	4.0
06	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0	5.0	5.0
07	6.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0	7.0	8.0
08	5.0	5.0	5.0	6.0	6.0	6.0	7.0	7.0	8.0	7.0
09	7.0	9.0	7.0	6.0	6.0	7.0	6.0	6.0	6.0	9.0
10	7.0	6.0	7.0	7.0	7.0	7.0	7.0	8.0	8.0	8.0
11	10.0	9.0	7.0	7.0	7.0	7.0	7.0	7.0	6.0	7.0
12	8.0	8.0	10.0	7.0	8.0	8.0	7.0	6.0	7.0	6.0
13	7.0	6.0	9.0	7.0	6.0	6.0	7.0	8.0	6.0	7.0
14	7.0	7.0	7.0	6.0	6.0	9.0	6.0	6.0	6.0	6.0
15	5.0	5.0	5.0	8.0	5.0	5.0	9.0	6.0	4.0	5.0
16	4.0	4.0	4.0	4.0	4.0	4.0	5.0	13.0	4.0	5.0
17	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0
18	4.0	4.0	5.0	4.0	5.0	5.0	7.0	6.0	5.0	5.0
19	5.0	4.0	4.0	5.0	9.0	5.0	6.0	5.0	5.0	5.0
20	4.0	4.0	5.0	6.0	8.0	5.0	5.0	5.0	4.0	8.0
21	5.0	5.0	4.0	5.0	5.0	5.0	4.0	4.0	4.0	6.0
22	4.0	4.0	5.0	5.0	4.0	6.0	9.0	4.0	4.0	4.0
23	3.0	4.0	3.0	3.0	3.0	4.0	5.0	4.0	5.0	4.0

12/10/99 — DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
5.4	0	6	0	6	1434

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

				Other	I
12/10/99	05:31:00 05:34:00				
Span 0	05:31:00 05:34:00		0.0	-0.2	0.2

Point	24_Load	28_SO2i-n#m	28_SO2o-ut#m	28_NOx#m	35_Heat-Hr
Units	MWatts	#/mmBtu	#/mmBtu	#/mmBtu	mmBtu
Full Scale	1000	9.000	2.000	4.000	20000.000
12/10/99 00	344	5.034	0.234!	1.114!	3728.219!
12/10/99 01	345	5.045	0.242!	1.133!	3670.282!
12/10/99 02	345	4.985	0.242!	1.135!	3682.982!
12/10/99 03	345	5.000	0.238!	1.148!	3681.437!
12/10/99 04	373	4.971	0.239!	1.152!	4157.820!
12/10/99 05	441	4.953	0.253!	1.349!	4992.402!
12/10/99 06	484	4.995	0.289!	1.395!	5711.498!
12/10/99 07	492	4.849	0.286!	1.436!	5732.874!
12/10/99 08	489	4.198>	0.267>!	1.477>!	5510.555>!
12/10/99 09	490	3.394	0.174!	1.532!	5615.940!
12/10/99 10	490	3.352	0.164!	1.545!	5794.942!
12/10/99 11	490	3.433	0.183!	1.568!	6296.206!
12/10/99 12	491	3.280	0.177!	1.579!	6283.160!
12/10/99 13	488	3.254	0.156!	1.587!	6183.286!
12/10/99 14	482	3.258	0.148!	1.567!	6181.920!
12/10/99 15	401	3.387	0.124!	1.333!	4562.767!
12/10/99 16	418	3.617	0.137!	1.323!	5018.872!
12/10/99 17	437	3.742	0.151!	1.424!	5200.839!
12/10/99 18	479	3.742	0.170!	1.580!	6075.021!
12/10/99 19	480	3.645	0.168!	1.595!	6062.977!
12/10/99 20	479	3.458	0.157!	1.582!	6099.054!
12/10/99 21	461	3.369	0.148!	1.524!	5702.264!
12/10/99 22	371	3.467	0.120!	1.256!	4373.587!
12/10/99 23	356	3.315	0.109!	1.156!	4147.884!
Average	436	3.989	0.191	1.395	5186.116
Minimum	344	3.254	0.109	1.114	3670.282
Maximum	492	5.045	0.289	1.595	6296.206
Missing (%)	0.00	0.00	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00	100.00	100.00
Available(%)	NA	NA	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

DAILY SUMMARY REPORT
For 59_U7_Opacity %

From: 12/10/99 00:00
To: 12/11/99 00:00
Printed: 12/13/99

NIPSCO
Bailly Generating Station
Unit #7

12/10/99 — Six Minute Values

Hour	00	06	12	18	24	30	36	42	48	54
00	20.0	14.0	12.0	17.0	20.0	15.0	15.0	15.0	19.0	16.0
01	14.0	15.0	12.0	20.0	16.0	16.0	16.0	20.0	12.0	13.0
02	16.0	20.0	12.0	16.0	13.0	22.0	12.0	16.0	12.0	14.0
03	21.0	17.0	12.0	23.0	14.0	11.0	16.0	21.0	13.0	16.0
04	13.0	23.0	17.0	16.0	15.0	13.0	26.0	19.0	15.0	23.0
05	20.0	12.0	14.0	21.0	21.0	13.0	CAL	34.0	28.0	14.0
06	22.0	13.0	23.0	31.0	23.0	13.0	37.0	11.0	9.0	23.0
07	35.0	13.0	21.0	11.0	34.0	12.0	20.0	13.0	10.0	36.0
08	19.0	14.0	33.0	18.0	11.0	19.0	30.0	20.0	16.0	18.0
09	25.0	25.0	16.0	21.0	12.0	26.0	23.0	22.0	17.0	28.0
10	12.0	13.0	19.0	24.0	12.0	22.0	12.0	30.0	12.0	21.0
11	12.0	13.0	36.0	21.0	13.0	33.0	12.0	10.0	21.0	28.0
12	15.0	16.0	15.0	26.0	17.0	16.0	18.0	12.0	31.0	19.0
13	18.0	20.0	21.0	11.0	17.0	22.0	21.0	13.0	20.0	15.0
14	22.0	12.0	23.0	12.0	15.0	18.0	21.0	11.0	18.0	11.0
15	10.0	21.0	18.0	12.0	19.0	14.0	18.0	12.0	18.0	15.0
16	12.0	19.0	16.0	15.0	15.0	13.0	13.0	15.0	14.0	14.0
17	17.0	10.0	12.0	12.0	16.0	10.0	10.0	13.0	17.0	12.0
18	14.0	15.0	11.0	15.0	12.0	16.0	15.0	13.0	12.0	16.0
19	15.0	13.0	12.0	13.0	18.0	13.0	11.0	14.0	11.0	12.0
20	12.0	13.0	12.0	12.0	11.0	14.0	14.0	11.0	11.0	11.0
21	17.0	13.0	11.0	12.0	14.0	13.0	10.0	11.0	14.0	12.0
22	11.0	12.0	25.0	13.0	12.0	12.0	16.0	16.0	11.0	11.0
23	15.0	15.0	20.0	19.0	15.0	12.0	13.0	15.0	16.0	15.0

12/10/99 — DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
16.6	0	6	0	6	1434

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

12/10/99	05:40:00 05:46:00			Other
Span 0	05:43:00 05:46:00	0.0	0.2	0.2
Span 1	05:40:00 05:43:00	45.0	46.6	1.6

Point	24_NOx	24_CO2o-ut	24_Flow	24_Load	24_Heat7
Units	ppm	%	SCFH	MWatts	mmBtu
Full Scale	1500.0	20.0	150000000.0	1000	5000.000
12/10/99 00	518.3!	10.0!	67107936.0!	344	1300.542!
12/10/99 01	527.0!	10.0!	66065079.6!	345	1276.620!
12/10/99 02	528.3!	10.0!	66293675.1!	345	1281.037!
12/10/99 03	534.0!	10.0!	66265872.8!	345	1291.171!
12/10/99 04	552.3!	10.3!	72660929.8!	373	1627.458!
12/10/99 05	665.3!	10.6!	84776638.7!	441	1720.737!
12/10/99 06	700.8!	10.8!	95191639.2!	484	2017.905!
12/10/99 07	721.5!	10.8!	95547893.8!	492	1992.523!
12/10/99 08	701.0>!	10.2>!	97245081.8!	489	1904.466>!
12/10/99 09	770.0!	10.8!	93599002.2!	490	1925.465!
12/10/99 10	791.0!	11.0!	94826327.1!	490	1975.011!
12/10/99 11	802.3!	11.0!	103028820.2!	490	2145.850!
12/10/99 12	808.3!	11.0!	102815353.1!	491	2137.042!
12/10/99 13	819.5!	11.1!	100269508.8!	488	2090.660!
12/10/99 14	809.3!	11.1!	100247346.8!	482	2116.217!
12/10/99 15	663.8!	10.7!	76756829.1!	401	1877.448!
12/10/99 16	677.0!	11.0!	82126997.2!	418	1993.141!
12/10/99 17	729.0!	11.0!	85104639.7!	437	1963.704!
12/10/99 18	823.5!	11.2!	97634264.3!	479	2194.110!
12/10/99 19	823.8!	11.1!	98318542.8!	480	2197.829!
12/10/99 20	831.8!	11.3!	97153071.9!	479	2202.790!
12/10/99 21	794.3!	11.2!	91643521.7!	461	2139.895!
12/10/99 22	619.3!	10.6!	74268460.8!	371	2086.590!
12/10/99 23	570.0!	10.6!	70435772.8!	356	1642.842!
Average	699.2	10.7	86640966.9	436	1879.211
Minimum	518.3	10.0	66065079.6	344	1276.620
Maximum	831.8	11.3	103028820.2	492	2202.790
Missing (%)	0.00	0.00	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00	100.00	100.00
Available(%)	NA	NA	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

Point	24_Heat8	24_NOX#m	24_CO2in
Units	mmBtu	#/mmBtu	%
Full Scale	5000.000	4.000	20.0
12/10/99 00	2438.515!	1.114!	11.2
12/10/99 01	2393.662!	1.133!	11.2
12/10/99 02	2391.269!	1.135!	11.2
12/10/99 03	2390.266!	1.148!	11.1
12/10/99 04	2530.362!	1.152!	11.3
12/10/99 05	3271.665!	1.349!	11.8
12/10/99 06	3693.593!	1.395!	11.9
12/10/99 07	3740.351!	1.436!	11.9
12/10/99 08	3606.089>!	1.477>!	12.0>
12/10/99 09	3690.475!	1.532!	12.3
12/10/99 10	3819.931!	1.545!	12.4
12/10/99 11	4150.356!	1.568!	12.4
12/10/99 12	4146.118!	1.579!	12.5
12/10/99 13	4092.626!	1.587!	12.4
12/10/99 14	4065.703!	1.567!	12.3
12/10/99 15	2685.319!	1.333!	11.9
12/10/99 16	3037.738!	1.323!	12.2
12/10/99 17	3237.135!	1.424!	12.3
12/10/99 18	3880.911!	1.580!	12.5
12/10/99 19	3865.148!	1.595!	12.5
12/10/99 20	3896.264!	1.582!	12.5
12/10/99 21	3562.369!	1.524!	12.4
12/10/99 22	2286.997!	1.256!	11.8
12/10/99 23	2505.042!	1.156!	11.7
Average	3307.413	1.395	12.0
Minimum	2286.997	1.114	11.1
Maximum	4150.356	1.595	12.5
Missing (%)	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00
Available(%)	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

Point	55_Flow-MACFM	56_Flow-MACFM
Units	MACM	MACFM
Full Scale	2.500	2.500
12/10/99 00	1.335!	1.390@
12/10/99 01	1.333!	1.387@
12/10/99 02	1.317!	1.418@
12/10/99 03	1.334!	1.402@
12/10/99 04	1.443!	1.469@
12/10/99 05	1.701!	1.646@
12/10/99 06	1.889!	1.771@
12/10/99 07	1.920!	1.789@
12/10/99 08	1.924!	1.805@
12/10/99 09	1.874!	1.834@
12/10/99 10	1.876!	1.825@
12/10/99 11	2.060!	1.839@
12/10/99 12	2.028!	1.827@
12/10/99 13	2.006!	1.778@
12/10/99 14	1.974!	1.745@
12/10/99 15	1.529!	1.491@
12/10/99 16	1.615!	1.558@
12/10/99 17	1.692!	1.597@
12/10/99 18	1.918!	1.722@
12/10/99 19	1.959!	1.734@
12/10/99 20	1.911!	1.720@
12/10/99 21	1.826!	1.651@
12/10/99 22	1.458!	1.433@
12/10/99 23	1.398!	1.384@
Average	1.722	1.634
Minimum	1.317	1.384
Maximum	2.060	1.839
Missing (%)	0.00	0.00
Invalid (%)	0.00	0.00
O O Cal (%)	0.00	0.00
In Cal (%)	0.00	0.00
Valid (%)	100.00	100.00
Available(%)	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 6MinInlet						
Analog Point 04_Opacity7			Units %			
12/10/99	05:40:00	05:46:00	Other	Absolute Difference		
Span 0	05:43:00	05:46:00	0.0	0.2	0.2	
Span 1	05:40:00	05:43:00	45.0	46.6	1.6	
Data Group 6MinInlet						
Analog Point 04_Opacity8			Units %			
12/10/99	05:28:00	05:34:00	Other	Absolute Difference		
Span 0	05:31:00	05:34:00	0.0	-0.2	0.2	
Span 1	05:28:00	05:31:00	45.0	45.1	0.1	
12/10/99	05:31:00	05:34:00	Other	Absolute Difference		I
Span 0	05:31:00	05:34:00	0.0	-0.2	0.2	
Data Group 6MinBypass						
Analog Point 05_Opacity			Units %			
12/10/99	04:57:00	05:03:00	Other	Absolute Difference		
Span 0	05:00:00	05:03:00	0.0	0.1	0.1	
Span 1	04:57:00	05:00:00	45.0	45.3	0.3	
12/10/99	05:00:00	05:03:00	Other	Absolute Difference		I
Span 0	05:00:00	05:03:00	0.0	0.1	0.1	

Calibration Single Failure - OOC(S)
Calibration Multiple Failure - OOC(M)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Calibration Multiple Warning - MW
Span Single Alarm - SA
Span Multiple Warning - MW

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinInlet75						
Analog Point 11_SO2_Inlet			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-28.0	0.7	
Span 1	08:10:00	08:20:00	3240.0	3198.0	1.0	
Data Group 15MinInlet75						
Analog Point 11_CO2_Inlet			Units %			
12/10/99	08:04:00	08:20:00	Daily	Absolute Difference		SW
Span 0	08:04:00	08:10:00	0.00	-0.39	0.39	
Span 1	08:10:00	08:20:00	16.83	16.32	0.51	SW
Data Group 15MinPrimary75						
Analog Point 12_SO2_Low			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-3.0	0.6	
Span 1	08:10:00	08:20:00	436.0	439.0	0.6	
Data Group 15MinPrimary75						
Analog Point 12_NOX			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-2.0	0.1	
Span 1	08:10:00	08:20:00	1288.0	1268.0	1.3	
Data Group 15MinPrimary75						
Analog Point 12_CO2			Units %			
12/10/99	08:04:00	08:30:00	Daily	Absolute Difference		
Span 0	08:04:00	08:10:00	0.00	-0.03	0.03	
Span 1	08:20:00	08:30:00	16.83	16.56	0.27	
Data Group 15MinPrimary75						
Analog Point 12_FlowMACFM			Units MACFM			
12/10/99	07:32:00	07:36:00	Daily	% Point Full Scale		
Span 0	07:32:00	07:34:00	0.000	0.000	0.000	
Span 1	07:34:00	07:36:00	1.400	1.352	1.920	
Data Group 15MinPrimary75						
Analog Point 12_SO2_Hi			Units ppm			
12/10/99	08:04:00	08:30:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-12.0	0.3	
Span 1	08:20:00	08:30:00	3240.0	3254.0	0.4	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinBackup75						
Analog Point 13_SO2_Low			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-1.8	0.4	
Span 1	06:10:00	06:20:00	436.0	434.0	0.4	
Data Group 15MinBackup75						
Analog Point 13_NOX			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	3.0	0.2	
Span 1	06:10:00	06:20:00	1288.0	1293.0	0.3	
Data Group 15MinBackup75						
Analog Point 13_CO2			Units %			
12/10/99	06:04:00	06:30:00	Daily	Absolute Difference		
Span 0	06:04:00	06:10:00	0.00	-0.09	0.09	
Span 1	06:20:00	06:30:00	16.83	16.34	0.49	
Data Group 15MinBackup75						
Analog Point 13_FlowMACFM			Units MACFM			
12/10/99	06:02:00	06:06:00	Daily	% Point Full Scale		
Span 0	06:02:00	06:04:00	0.000	0.048	1.920	
Span 1	06:04:00	06:06:00	1.400	1.414	0.560	
Data Group 15MinBackup75						
Analog Point 13_SO2_Hi			Units ppm			
12/10/99	06:04:00	06:30:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-6.0	0.2	
Span 1	06:20:00	06:30:00	3240.0	3198.0	1.0	
Data Group 15MinBypass75						
Analog Point 14_SO2			Units ppm			
NO CALIBRATION RECORDS THIS PERIOD						
Data Group 15MinBypass75						
Analog Point 14_NOX			Units ppm			
NO CALIBRATION RECORDS THIS PERIOD						

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinBypass75						
Analog Point 14_CO2			Units %			
NO CALIBRATION RECORDS THIS PERIOD						
Data Group 15MinBypass75						
Analog Point 14_FlowMACFM			Units MACFM			
12/10/99	05:06:00	05:10:00	Daily	% Point Full Scale		
Span 0	05:06:00	05:08:00	0.000	0.000	0.000	
Span 1	05:08:00	05:10:00	1.400	1.422	0.880	

Calibration Single Failure - OOC(S) Calibration Single Warning - SW
Calibration Incomplete - I Span Single Alarm - SA
Span Single Warning - SW

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinBackup75						
Analog Point 13_SO2_Low			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-1.8	0.4	
Span 1	06:10:00	06:20:00	436.0	434.0	0.4	
Data Group 15MinBackup75						
Analog Point 13_NOX			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	3.0	0.2	
Span 1	06:10:00	06:20:00	1288.0	1293.0	0.3	
Data Group 15MinBackup75						
Analog Point 13_CO2			Units %			
12/10/99	06:04:00	06:30:00	Daily	Absolute Difference		
Span 0	06:04:00	06:10:00	0.00	-0.09	0.09	
Span 1	06:20:00	06:30:00	16.83	16.34	0.49	
Data Group 15MinBackup75						
Analog Point 13_SO2_Hi			Units ppm			
12/10/99	06:04:00	06:30:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-6.0	0.2	
Span 1	06:20:00	06:30:00	3240.0	3198.0	1.0	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date / Span Number	Start Time	End Time	Cal. Type / Expected	Drift Calculation / Actual	Drift Value	Status
Data Group 15MinInlet75						
Analog Point 11_SO2_Inlet			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-28.0	0.7	
Span 1	08:10:00	08:20:00	3240.0	3198.0	1.0	
Data Group 15MinInlet75						
Analog Point 11_CO2_Inlet			Units %			
12/10/99	08:04:00	08:20:00	Daily	Absolute Difference		SW
Span 0	08:04:00	08:10:00	0.00	-0.39	0.39	
Span 1	08:10:00	08:20:00	16.83	16.32	0.51	SW

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinPrimary75						
Analog Point 12_SO2_Low			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-3.0	0.6	
Span 1	08:10:00	08:20:00	436.0	439.0	0.6	
Data Group 15MinPrimary75						
Analog Point 12_NOX			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-2.0	0.1	
Span 1	08:10:00	08:20:00	1288.0	1268.0	1.3	
Data Group 15MinPrimary75						
Analog Point 12_CO2			Units %			
12/10/99	08:04:00	08:30:00	Daily	Absolute Difference		
Span 0	08:04:00	08:10:00	0.00	-0.03	0.03	
Span 1	08:20:00	08:30:00	16.83	16.56	0.27	
Data Group 15MinPrimary75						
Analog Point 12_SO2_Hi			Units ppm			
12/10/99	08:04:00	08:30:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-12.0	0.3	
Span 1	08:20:00	08:30:00	3240.0	3254.0	0.4	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

2 Area 1	08:16:23	12/10/99	NI-SO2-EFT	Hi Alarm	SO2 OUT	#SO2/MILLION BTU
2 Area 1	08:15:34	12/10/99	FGD_SO2_RE	Lo Alarm	FGD SO2 %	REMOVAL

Operator Window #1: Graphic 1

Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1066 KLb/Hr
LOAD 160 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL -1627.5 %
B/U SO2 REMOVAL -233.9 %
#SO2 / MMBTU 1.763

INSTRUMENT AIR
112 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
10 OPACITY
PI-105A
7.6 IN.W.C.
TI-107A
328 DEGF

AIT-110B
5 OPACITY
PI-105B
7.3 IN.W.C.
TI-107B
358 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2856 KLb/Hr
LOAD 330 MW

ESP

AIT-109
28 PPM SO2
TR-111
356 DEGF

AIT-126
449 PPM SO2
PI-118
-0.1 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

31 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	70
V320	48	V720	37	V500B	64
V340	55	V730	53	V810A	-1
V370	57	V900	54	V810B	-1
V700	29				

LI-129	19.2	FEET
PDI-114	5.0	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.4	DP TOTAL

Inlet
ABSORB
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

104

2 Area 1	08:57:11	12/10/99	LISHL-146	Hi Alarm	CENT FEED TANK	(V370) LEVEL
2 Area 1	06:32:33	12/10/99	YAH-173D	Alarm	CENTRIFUGE M300D	VIBRATION

Operator Window #1: Graphic 1

Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1064 KLb/Hr
LOAD 161 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 94.7 %
B/U SO2 REMOVAL 95.4 %
#SO2 / MMBTU 0.336

INSTRUMENT AIR
112 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
26 OPACITY
PI-105A
7.7 IN.W.C.
TI-107A
328 DEGF

AIT-110B
7 OPACITY
PI-105B
7.4 IN.W.C.
TI-107B
359 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2889 KLb/Hr
LOAD 323 MW

ESP

AIT-109
1514 PPM SO2
TR-111
357 DEGF

AIT-126
81 PPM SO2
PI-118
0.1 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

21 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	70
V320	46	V720	36	V500B	66
V340	57	V730	53	V810A	-1
V370	85	V900	53	V810B	-1
V700	51				

LI-129	19.0	FEET
PDI-114	4.9	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.2	DP TOTAL

Quick K

Inlet
ABSORB
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

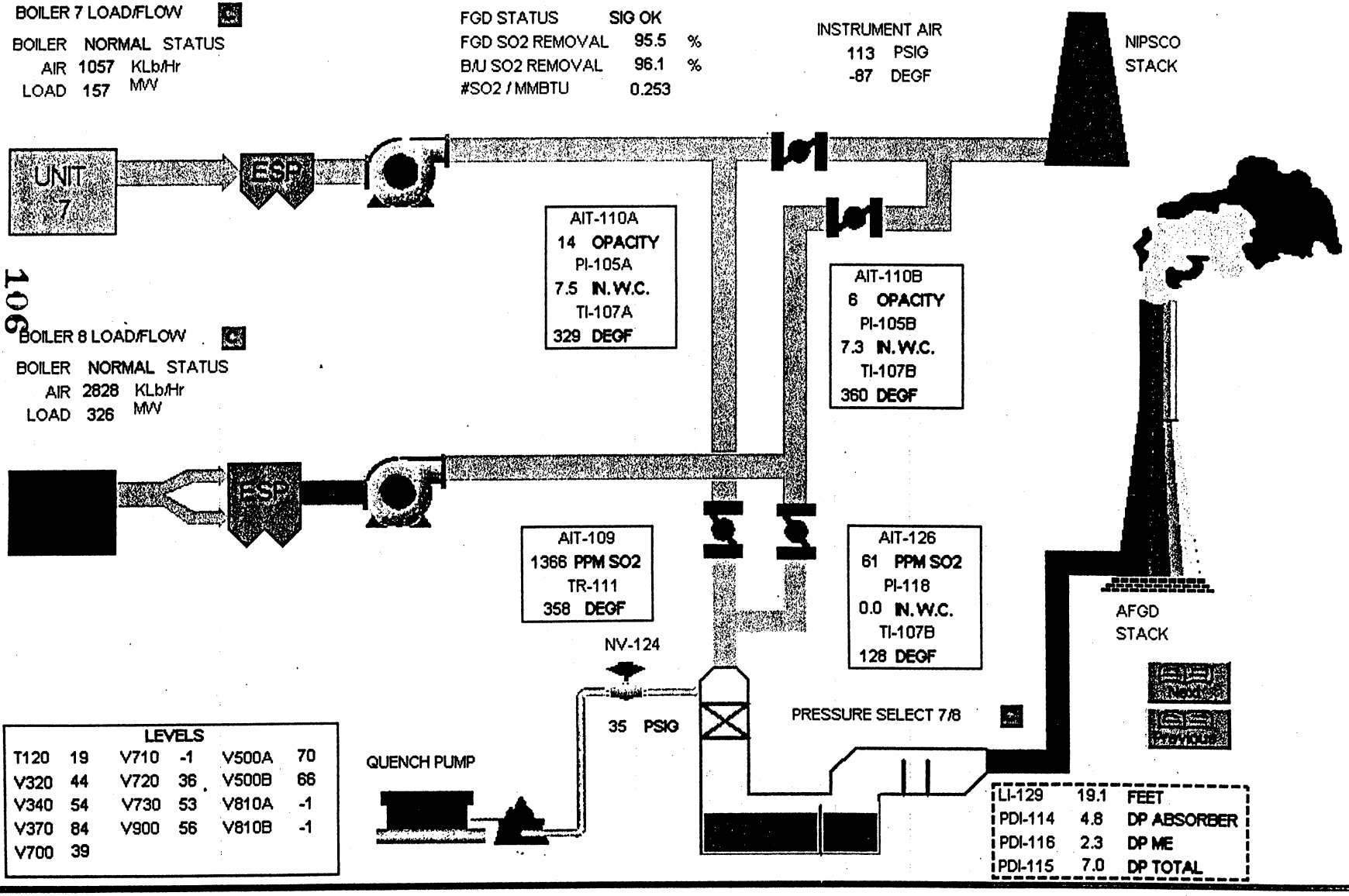
2 Area 1	05:50:51	12/10/99	LAH-243A	Alarm	SILO 'A' LEVEL	HIGH
2 Area 1	06:44:35	12/09/99	UA-152A-F	Alarm	PUMPS (P120A-F) PUMP IN STANDBY	

/10 09:27

enu

Operator Window II: Graphic 1

ndow Select Redraw Zoom ?



Quick K

Inlet
ABSORE
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

106

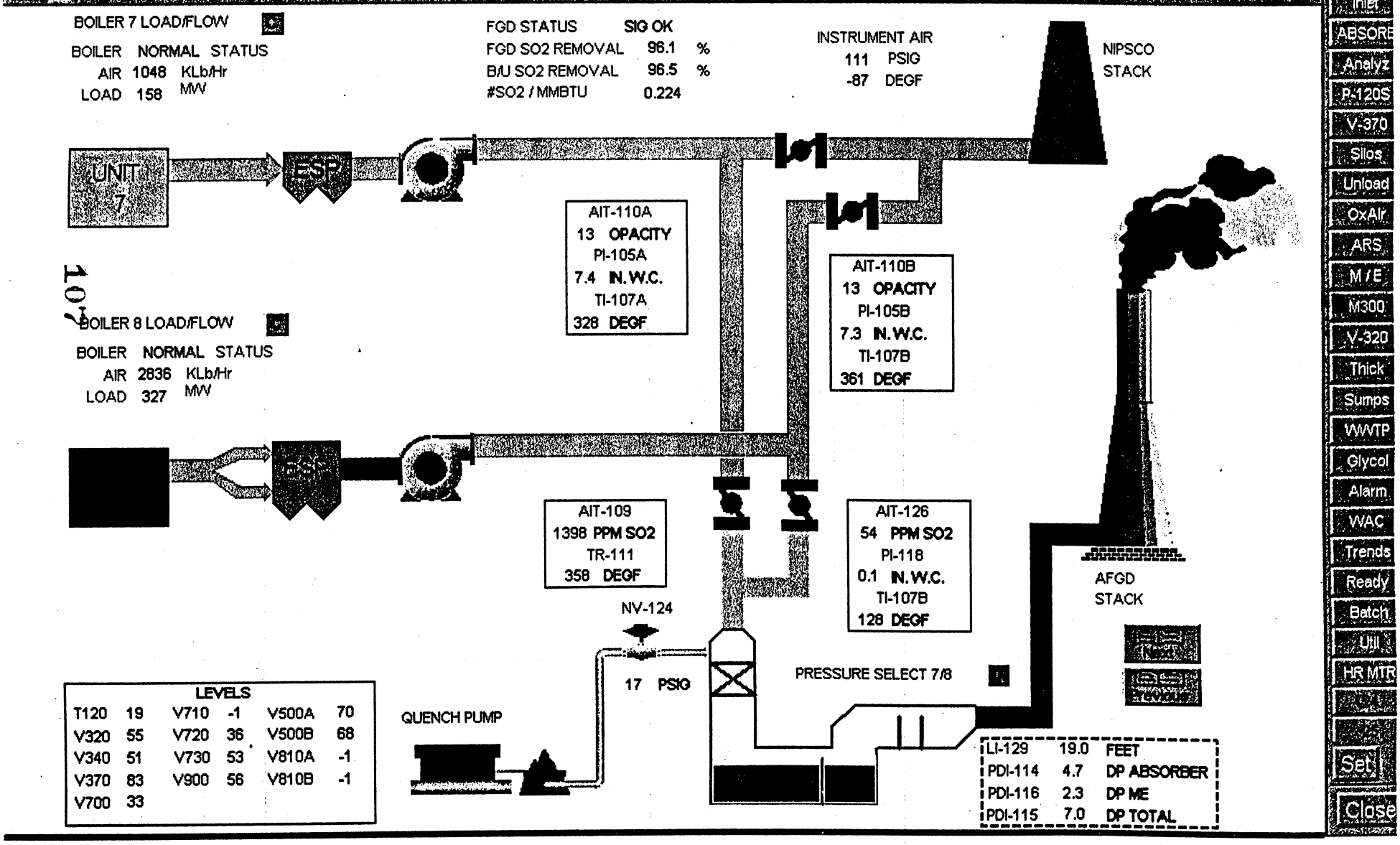
'10 10:01

enu

2 Area 1	09:29:38	12/10/99	YAH-173E	Alarm	CENTRIFUGE M300E	VIBRATION
2 Area 1	05:50:51	12/10/99	LAH-243A	Alarm	SILO 'A' LEVEL	HIGH

Operator Window #1: Graphic 1

ndow Select Redraw Zoom ?



Quick K

Inlet
ABSORE
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

107

'10 10:29

2	Area 1	09:29:38	12/10/99	YAH-173E	Alarm	CENTRIFUGE M300E	VIBRATION
2	Area 1	05:50:51	12/10/99	LAH-243A	Alarm	SILO "A" LEVEL	HIGH

Operator Window #1: Graphic 1

Window Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1044 KLb/Hr
LOAD 156 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.9 %
B/U SO2 REMOVAL 96.5 %
#SO2 / MMBTU 0.229

INSTRUMENT AIR
115 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
13 OPACITY
PI-105A
7.3 IN.W.C.
TI-107A
327 DEGF

AIT-110B
7 OPACITY
PI-105B
7.2 IN.W.C.
TI-107B
361 DEGF

108

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2826 KLb/Hr
LOAD 327 MW

ESP

AIT-109
1413 PPM SO2
TR-111
359 DEGF

AIT-126
58 PPM SO2
PI-118
0.0 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

35 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	69
V320	48	V720	36	V500B	70
V340	57	V730	53	V810A	-1
V370	51	V900	55	V810B	-1
V700	22				

LI-129	19.2	FEET
PDI-114	4.9	DP ABSORBER
PDI-116	2.4	DP ME
PDI-115	7.2	DP TOTAL

Quick K

Inlet
ABSORB
Analyz
P-120S
V-370
Silos
Unload
OxAir
ABS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
24
25
Set
Close

10 11:01

2	Area 1	10:52:29	12/10/99	YAH-173G	Alarm	CENTRIFUGE M300G	VIBRATION
2	Area 1	09:29:38	12/10/99	YAH-173E	Alarm	CENTRIFUGE M300E	VIBRATION

Operator Window #1: Graphic 1

Select Redraw Zoom

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1048 KLb/Hr
LOAD 158 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.4 %
B/U SO2 REMOVAL 95.9 %
#SO2 / MMBTU 0.262

INSTRUMENT AIR
115 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
29 OPACITY
PI-105A
7.2 IN.W.C.
TI-107A
328 DEGF

AIT-110B
7 OPACITY
PI-105B
7.0 IN.W.C.
TI-107B
361 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2811 KLb/Hr
LOAD 327 MW

ESP

AIT-109
1442 PPM SO2
TR-111
359 DEGF

AIT-126
66 PPM SO2
PI-118
-0.2 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

18 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	69
V320	49	V720	36	V500B	70
V340	61	V730	53	V810A	-1
V370	48	V900	54	V810B	-1
V700	39				

LI-129	19.0	FEET
PDI-114	4.8	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.0	DP TOTAL

Quick K

Inlet
ABSORE
Analyz
P-120S
V-370
Slice
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
24
25
Set
Close

2 Area 1	11:28:23	12/10/99	PAL-158D	Alarm	REC PUMP (P120D)	SEAL WATER PRESS
2 Area 1	11:27:50	12/10/99	PAL-158E	Alarm	REC PUMP (P120E)	SEAL WATER PRESS

Operator Window #1, Graphic 1

Window Select Redraw Zoom ?

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1050 KLb/Hr
LOAD 158 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.4 %
B/U SO2 REMOVAL 95.9 %
#SO2 / MMBTU 0.265

INSTRUMENT AIR
110 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
13 OPACITY
PI-105A
7.1 IN.W.C.
TI-107A
328 DEGF

AIT-110B
7 OPACITY
PI-105B
6.8 IN.W.C.
TI-107B
361 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2790 KLb/Hr
LOAD 327 MW

ESP

AIT-109
1413 PPM SO2
TR-111
358 DEGF

AIT-126
66 PPM SO2
PI-118
-0.1 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

43 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	66
V320	55	V720	36	V500B	71
V340	54	V730	53	V810A	-1
V370	69	V900	54	V810B	-1
V700	47				

LI-129	18.9	FEET
PDI-114	4.8	DP ABSORBER
PDI-116	2.2	DP ME
PDI-115	7.1	DP TOTAL

Quick K
Inlet
ABSORB
Analyz
P-120S
V-370
Silos
Unload
OxAir
ARS
M/E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

TEST 3 – PLANT DATA

COMPLIANCE EMISSIONS MW AND COAL FLOW TEST DATA SHEET
BAILLY GENERATING STATION: UNIT #7

Date of Run: 12/10/99 Run Number: #3 Time Started: 11:55 am Time Ended: 3:00 pm Initials: JRH / SLB

Reading Number	Time Hrs/Mins	Coal Scales Numbers 7-1	7-2	7-3	7-4
Fifth					
Fourth					
Third					
Second					
First	14:36	873555		164238	230261
Initial	11:57	872611		163086	229336
Difference	02:39	944	0	1,152	925
Constant		100	100	100	100
Coal Flow-lbs/hr		35,623	38,000	43,472	34,906

Total Coal Flow = 152,000 lbs/hour

Please Note that Intergraters were not working for Feeder #2, so an average Coal Flow was calculated for that Feeder.

Reading Number	Time Hrs/Mins	Generator XFMR Output MW Gross	Main Transformer Output West Reading #	Main Transformer Output East Reading #	Unit Net Load MW Net
Fifth					
Fourth					
Third					
Second					
First	14:34	497988.0	99337.5	52977.6	
Initial	11:55	497536.0	99313.0	52958.1	
Difference	02:39	452.0	24.5	19.5	Generator minus XFER
Constant		1000	1000	1000	West and East
MW/hr		170.6	9.2	7.4	154.0

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COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/10/99 TEST NUMBER 3

TIME		11:55	12:25	12:55
NUMBER OF CYCLONES IN USE		4	4	4
EXCESS OXYGEN (%)	(E/W)	3.5 / 3.5	3.3 / 2.9	3.0 / 2.5
TOTAL AIR FLOW (%)		84	84	80
STEAM FLOW (KLB/HR)		1200	1200	1200
FEEDWATER FLOW (KLB/HR)		1140	1147	1164
THROTTLE PRESSURE (PSI)		2300	2330	2350
MAIN STEAM TEMPERATURE (°F)		1000	995	995
HOT REHEAT TEMPERATURE (°F)		1000	1000	995
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H20)	(E/W)	0 / 0	-0.4 / -0.4	-0.2 / -0.2
F.D. FAN AMPS	(E/W)	320 / 250	320 / 250	310 / 250
F.D. FAN PRESSURE ("H20)				
I.D. FAN AMPS	(E/W)	280 / 300	290 / 300	285 / 300
I.D. FAN SPEED (RPM)	(E/W)	800 / 810	800 / 810	800 / 810
OPACITY (%) (6-MIN AVG)		20.6	26.0	31.3
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.48	27.51	27.50
SOOTBLOWING	(YES OR NO)			
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE (LB/HR)	%	73	74	72

Data by: SFB

U7EMCR

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 7 - 172 MWG - 160 MWN

DATE 12/10/99 TEST NUMBER 3

TIME		1:25	1:55	2:25
NUMBER OF CYCLONES IN USE		4	4	4
EXCESS OXYGEN (%) (E/W)		2.4/2.2	2.4/2.0	2.5/2.0
TOTAL AIR FLOW (%)		80	81	81
STEAM FLOW (KLB/HR)		1200	1200	1200
FEEDWATER FLOW (KLB/HR)		1143	1150	1146
THROTTLE PRESSURE (PSI)		2300	2350	2300
MAIN STEAM TEMPERATURE (°F)		990	995	1000
HOT REHEAT TEMPERATURE (°F)		985	990	1000
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)			
	AIR OUT (°F)			
	GAS IN (°F)			
	GAS OUT (°F)			
FURNACE DRAFT ("H20) (E/W)		0.0/0.0	0.0/0.0	0.0/0.0
F.D. FAN AMPS (E/W)		310/250	310/250	310/250
F.D. FAN PRESSURE ("H20)				
I.D. FAN AMPS (E/W)		260/300	270/300	280/300
I.D. FAN SPEED (RPM) (E/W)		800/810	800/810	800/810
OPACITY (%) (6-MIN AVG)		16.6	19.9	14.8
BAROMETRIC PRESSURE ("Hg)				
AMBIENT TEMPERATURE (°F)				
CONDENSER PRESSURE ("Hg)		27.54	27.51	27.50
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE (PPM)				
FUEL FIRING RATE (~~LB/HR~~) %		72	72	72

Data by: SAB

U7EMCR

BAILLY GENERATING STATION - UNIT 7
PRECIPITATOR DATA SHEET

DATE 12-10-99 TEST NO. #3 INITIALS CAM

TIME 12:00

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	150	70	38	200	
TB-T3	210	50	42	150	
7B-T4	220	110	36	250	
7B-T5	240	60	44	650	
7B-T6	260	150	36	850	
7A-T1	230	80	40	450	
7A-T2	190	130	42	300	
7A-T3	270	130	42	650	
7A-T4					off
7A-T5	270	190	40	850	
7A-T6	300	130	46	700	

TIME 12:50

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	150	70	38	150	
TB-T3	180	Ø	40	150	
7B-T4	240	100	36	250	
7B-T5	260	60	42	600	
7B-T6	290	190	42	850	
7A-T1	250	150	40	450	
7A-T2	220	150	42	300	
7A-T3	260	150	40	650	
7A-T4					off
7A-T5	270	150	40	850	

BAILLY GENERATING STATION - UNIT 7
PRECIPITATOR DATA SHEET

DATE 12-10-99 TEST NO. #3 INITIALS CAM

TIME 2:40

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	150	70	38	150	
TB-T3	210	<50	44	150	
7B-T4	230	90	34	300	
7B-T5	210	60	42	450	
7B-T6	260	150	42	700	
7A-T1	230	110	40	500	
7A-T2	180	120	40	300	
7A-T3	250	150	42	600	
7A-T4					off
7A-T5	270	190	38	500	
7A-T6	320	120	44	400	

TIME 3:30

FIELD	VOLTS (AC)	AMPS (AC)	KV (DC)	MA (DC)	COMMENTS
7B-T1					off
7B-T2	160	70	38	150	
TB-T3	210	<50	42	150	
7B-T4	250	130	38	350	
7B-T5	230	50	40	300	
7B-T6	260	150	40	600	
7A-T1	250	80	38	300	
7A-T2	200	180	40	250	
7A-T3	250	140	42	600	
7A-T4					off
7A-T5	270	190	40	850	

COMPLIANCE EMISSIONS MW AND COAL FLOW TEST DATA SHEET
BAILLY GENERATING STATION: UNIT #8

Date of Run: 12/10/99 Run Number: #3 Time Started: 11:55 AM Time Ended: 3:00 PM Initials: JRH/ SLB

Reading Number	Time Hrs/Mins	Coal Scales Numbers 1	2	3	4	5	6	7	8		
Fifth											
Fourth											
Third											
Second											
First	14:38	457,821	238,347	276,176	526,839	414,424	658,676	803,421	989,269		
Initial	12:00	456,851	237,373	275,203	525,868	413,266	657,699	802,446	988,292		
Difference	02:38	970	974	973	971	1,158	977	975	977		
Constant		100	100	100	100	100	100	100	100		
Coal Flow-lbs/hr		36,835	36,987	36,949	36,873	43,975	37,101	37,025	37,101		

Total Coal Flow = 302,848 lbs/hour

Reading Number	Time Hrs/Mins	Generator Transformer Output MW Gross	Main Transformer West Reading	Main Transformer East Reading	Unit Net Load MW Net	
Fifth						
Fourth						
Third						
Second						
First	14:36	55896.0	7763.2	12027.1		
Initial	11:58	55811.0	7744.0	12006.3		
Difference	02:38	85.0	19.2	20.8	Generator minus XFER	
Constant		1000	1000	1000	West and East	
MW/hr		322.8	7.3	7.9	307.6	

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/10/99

TEST NUMBER 3
SLB

TIME		11:55	12:25	12:55
NUMBER OF CYCLONES IN USE		8	8	8
EXCESS OXYGEN (E/W)		2.54/2.69	2.47/2.64	2.59/2.61
AIR FLOW (KLB/HR)		2803	2816	2834
FEEDWATER FLOW (KLB/HR)		2278	2271	2272
THROTTLE PRESSURE (PSI)		3403	3413	3400
MAIN STEAM TEMPERATURE (°F)		1002	999	999
HOT REHEAT TEMPERATURE (°F)		1004	1005	1005
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	172	172	172
	AIR OUT (°F)	583	581	581
	GAS IN (°F)	691	692	692
	GAS OUT (°F)	315	315	314
FURNACE DRAFT ("H_2O) (E/W)		-0.5	-0.4	-0.6
F.D. FAN AMPS (E/W)		607/553	610/562	611/554
I.D. FAN AMPS (E/W)		546/560	548/563	549/563
I.D. FAN SPEED (RPM) (E/W)		759/762	760/762	759/762
I.D. FAN SUCTION PRESS ("H_2O)		-0.6	-0.4	-0.5
OPACITY (%) (6-MIN AVG)		6.3	10.0	6.5
BAROMETRIC PRESSURE ("Hg)		29.46	29.48	29.48
AMBIENT TEMPERATURE (°F)		45.1	44.7	44.8
CONDENSER BACKPRESSURE ("Hg)		28.6	28.4	28.5
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

COMPLIANCE EMISSION DATA SHEET
BAILLY GENERATING STATION
UNIT 8 - 344 MWG

DATE 12/10/99

TEST NUMBER 3 SLB

TIME		1:25	1:55	2:25
NUMBER OF CYCLONES IN USE		8	8	8
EXCESS OXYGEN (E/W)		2.38/2.64	2.52/2.72	2.66/2.65
AIR FLOW (KLB/HR)		2836	2833	2819
FEEDWATER FLOW (KLB/HR)		2268	2284	2286
THROTTLE PRESSURE (PSI)		3411	3419	3399
MAIN STEAM TEMPERATURE (°F)		1002	1003	1000
HOT REHEAT TEMPERATURE (°F)		1000	1003	1003
AIR HEATER TEMPERATURES (GROUP 40)	AIR IN (°F)	173	173	173
	AIR OUT (°F)	580	578	578
	GAS IN (°F)	692	691	692
	GAS OUT (°F)	314	315	314
FURNACE DRAFT ("H_2O) (E/W)		-0.9	-0.5	-0.4
F.D. FAN AMPS (E/W)		597/555	608/556	612/564
I.D. FAN AMPS (E/W)		548/560	546/563	548/564
I.D. FAN SPEED (RPM) (E/W)		760/762	760/762	759/762
I.D. FAN SUCTION PRESS ("H_2O)		-0.8	-0.3	-0.5
OPACITY (%) (6-MIN AVG)		6.8	6.2	5.9
BAROMETRIC PRESSURE ("Hg)		29.50	29.51	29.54
AMBIENT TEMPERATURE (°F)		45.5	45.4	45.8
CONDENSER BACKPRESSURE ("Hg)		28.30	28.40	28.40
SOOTBLOWING (YES OR NO)				
GAS CONDITIONING RATE				

BAILLY GENERATING STATION - UNIT 8
PRECIPITATOR POWER

Date: 12-10-99 Test No.: #3 Time: 12:30 Initials: CAM

FIELD	VOLTS (AC)		AMPS (AC)		KV (DC)		MA (DC)		SPM	COMMENTS SPM
8E-B1	50	50	50	50	48	48	50	50	6	6
8E-B2	<50	<50	150	150	Ø	Ø	600	600	Ø	Ø
8E-B3	280	280	200	200	52	52	900	800	Ø	Ø
8E-B4	150	150	80	80	46	46	100	100	10	10
8E-B5	270	280	200	230	48	50	85	100	6	5
8E-B6	220	210	60	60	46	48	250	250	3	3
8E-A1	280	280	130	130	50	50	600	600	7	7
8E-A2	50	50	150	150	10	10	Ø	Ø	Ø	Ø
8E-A3	250	250	110	110	46	46	450	450	3	3
8E-A4	280	270	130	130	50	50	500	500	10	10
8E-A5	90	90	150	150	8	8	Ø	Ø	Ø	Ø
8E-A6	240	240	150	150	42	42	450	500	7	7
8W-B1	200	230	90	100	42	40	500	300	7	6
8W-B2	280	250	120	130	42	42	400	450	7	7
8W-B3	270	250	150	130	24	24	500	500	5	4
8W-B4	250	270	200	180	54	56	850	800	6	6
8W-B5	220	230	150	150	42	44	600	600	6	7
8W-B6	150	150	100	80	32	34	350	150	4	4
8W-A1	250	250	90	100	54	56	350	450	Ø	Ø
8W-A2	230	240	110	130	46	46	350	400	6	6
8W-A3	240	210	140	130	42	40	600	500	Ø	Ø
8W-A4	250	250	160	150	44	44	800	750	6	7
8W-A5										Ø
8W-A6	240	240	160	160	40	40	800	600	Ø	Ø

BAILLY GENERATING STATION - UNIT 8
PRECIPITATOR POWER

Date: 12-10-99 Test No.: #3 Time: 2:50 | 3:35 Initials: CAM

FIELD	VOLTS (AC)		AMPS (AC)		KV (DC)		MA (DC)		COMMENTS SPM	SPM
8E-B1	50	50	50	50	50	48	<50	<50	6	6
8E-B2	<50	<50	150	150	Ø	Ø	600	600	Ø	Ø
8E-B3	280	290	200	180	52	52	800	800	Ø	Ø
8E-B4	150	150	80	80	46	44	100	100	10	10
8E-B5	290	280	230	240	50	50	120	110	3	Ø
8E-B6	210	210	70	80	46	48	250	300	3	3
8E-A1	280	260	140	130	50	48	700	700	7	7
8E-A2	50	50	150	150	10	10	Ø	Ø	Ø	Ø
8E-A3	250	250	120	120	46	46	500	450	3	3
8E-A4	280	280	130	120	50	48	550	500	9	8
8E-A5	~~40~~ 90	90	150	150	8	8	Ø	Ø	Ø	Ø
8E-A6	240	240	150	140	42	44	450	450	7	7
8W-B1	210	200	80	100	40	34	250	300	7	6
8W-B2	260	260	120	110	44	44	500	400	6	7
8W-B3	270	280	160	170	24	24	550	620	4	4
8W-B4	250	250	170	160	56	56	550	650	7	7
8W-B5	220	230	150	150	44	42	600	650	7	7
8W-B6	160	140	70	140	32	32	300	300	5	5
8W-A1	260	260	120	110	54	52	400	400	Ø	Ø
8W-A2	250	230	120	130	48	46	500	450	6	6
8W-A3	230	230	140	150	42	40	600	600	Ø	Ø
8W-A4	270	270	170	200	46	44	800	850	6	6
8W-A5	—	—	—	—	—	—	—	—	—	off
8W-A6	240	240	160	160	40	40	650	650	Ø	Ø

73 3:41:52:0	COAL FROM FEEDER #6 NOFLOW	STATE ALM
73 3:41:52:5	COAL FROM FEEDER #6 NORMAL	STATE RTN

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63	FD FAN 8W AIR DISCHARGE TEMP	73.97	DEG F	0813BT:A9349	PSH OUTLET TUBE TC11 TEMP	793.68	DEG F
64	FD FAN 8E AIR DISCHARGE TEMP	108.94	DEG F	0813BT:A9350	PSH OUTLET TUBE TC12 TEMP	300.74	DEG F
76	FD FAN 8W MOTOR OUTBRD BRG TEMP	148.69	DEG F	0813BT:A9351	PSH OUTLET TUBE TC13 TEMP	817.13	DEG F
77	FD FAN 8W MOTOR INBOARD BRG TEMP	130.12	DEG F	0813BT:A9352	PSH OUTLET TUBE TC14 TEMP	819.18	DEG F
78	FD FAN 8W FAN OUTBOARD BRG TEMP	145.89	DEG F	0813BT:A9353	PSH OUTLET TUBE TC15 TEMP	809.47	DEG F
79	FD FAN 8W FAN INBOARD BRG TEMP	160.04	DEG F	0813BT:A9354	PSH OUTLET TUBE TC16 TEMP	811.80	DEG F
92	GLYCOL TEMP TO EAST PREHEATER	210.38	DEG F	0813BT:A9361	SSH OUTLET TUBE TC30 TEMP	989.38	DEG F
93	GLYCOL TEMP TO WEST PREHEATER	202.36	DEG F	0813BT:A9362	SSH OUTLET TUBE TC31 TEMP	976.05	DEG F
18	FD FAN 8E MOTOR OUTBRD BRG TEMP	130.21	DEG F	0813BT:A9363	SSH OUTLET TUBE TC32 TEMP	1016.17	DEG F
19	FD FAN 8E MOTOR INBOARD BRG TEMP	156.24	DEG F	0813BT:A9364	SSH OUTLET TUBE TC33 TEMP	1224.00	DEG F
20	FD FAN 8E FAN OUTBOARD BRG TEMP	140.38	DEG F	0813BT:A9365	SSH OUTLET TUBE TC34 TEMP	1224.00	DEG F
21	FD FAN 8E FAN INBOARD BRG TEMP	169.67	DEG F	0813BT:A9366	SSH OUTLET TUBE TC35 TEMP	1224.00	DEG F
00	WEST FD FAN SYSTEM OIL TEMP	306.00	DEG F	0813BT:A9367	SSH OUTLET TUBE TC36 TEMP	987.42	DEG F
01	EAST FD FAN SYSTEM OIL TEMP	306.00	DEG F	0813BT:A9368	SSH OUTLET TUBE TC37 TEMP	999.78	DEG F
75	FLUE GAS TEMP TO ECONOMIZER	988.54	DEG F	0813BT:A9369	SSH OUTLET TUBE TC38 TEMP	1023.75	DEG F
84	GR FAN 8E FAN OUTBOARD BRG TEMP	125.16	DEG F	0813BT:A9370	SSH OUTLET TUBE TC39 TEMP	995.07	DEG F
85	GR FAN 8E FAN INBOARD BRG TEMP	107.98	DEG F	0813BT:A9371	SSH OUTLET TUBE TC40 TEMP	1028.20	DEG F
86	GR FAN 8E MOTOR OUTBRD BRG TEMP	116.81	DEG F	0813BT:A9372	SSH OUTLET TUBE TC41 TEMP	1224.00	DEG F
87	GR FAN 8E MOTOR INBOARD BRG TEMP	110.56	DEG F	0813BT:A9373	SSH OUTLET TUBE TC42 TEMP	1015.86	DEG F
88	GR FAN 8W FAN OUTBRD BRG TEMP	99.66	DEG F	0813BT:A9374	SSH OUTLET TUBE TC43 TEMP	1022.23	DEG F
89	GR FAN 8W FAN INBOARD BRG TEMP	121.91	DEG F	0813BT:A9375	SSH OUTLET TUBE TC44 TEMP	983.71	DEG F
90	GR FAN 8W MOTOR OUTBRD BRG TEMP	115.94	DEG F	0813BT:A9376	SSH OUTLET TUBE TC45 TEMP	963.24	DEG F
91	GR FAN 8W MOTOR INBOARD BRG TEMP	107.24	DEG F	0813BT:A9377	REHEAT OUTLET TUBE TC60 TEMP	862.05	DEG F
95	ID FAN 8E THRUST BEARING A TEMP	146.25	DEG F	0813BT:A9378	REHEAT OUTLET TUBE TC61 TEMP	875.49	DEG F
96	ID FAN 8E THRUST BEARING B TEMP	160.48	DEG F	0813BT:A9379	REHEAT OUTLET TUBE TC62 TEMP	951.25	DEG F
66	ID FAN 8E FAN OUTBRD BRG TEMP	150.62	DEG F	0813BT:A9380	REHEAT OUTLET TUBE TC63 TEMP	993.69	DEG F
67	ID FAN 8E MOTOR INBOARD BRG TEMP	117.39	DEG F	0813BT:A9381	REHEAT OUTLET TUBE TC64 TEMP	993.62	DEG F
68	ID FAN 8E MOTOR OUTBRD BRG TEMP	132.64	DEG F	0813BT:A9382	REHEAT OUTLET TUBE TC65 TEMP	1007.67	DEG F
69	ID FAN 8W THRUST BEARING A TEMP	171.08	DEG F	0813BT:A9383	REHEAT OUTLET TUBE TC66 TEMP	1051.50	DEG F
56	ID FAN 8W THRUST BEARING B TEMP	157.71	DEG F	0813BT:A9384	REHEAT OUTLET TUBE TC67 TEMP	1040.55	DEG F
57	ID FAN 8W FAN OUTBOARD BRG TEMP	173.77	DEG F	0813BT:A9385	REHEAT OUTLET TUBE TC68 TEMP	986.73	DEG F
58	ID FAN 8W MOTOR INBOARD BRG TEMP	105.36	DEG F	0813BT:A9386	REHEAT OUTLET TUBE TC69 TEMP	982.99	DEG F
65	AIR HEATER GAS INLET TEMPERATURE	691.78	DEG F	0813BT:A9387	REHEAT OUTLET TUBE TC70 TEMP	1020.15	DEG F
02	W ID FAN SYSTEM OIL TEMPERATURE	72.91	DEG F	0813BT:A9388	REHEAT OUTLET TUBE TC71 TEMP	1019.16	DEG F
03	E ID FAN SYSTEM OIL TEMPERATURE	73.10	DEG F	0813BT:A9389	REHEAT OUTLET TUBE TC72 TEMP	1027.45	DEG F
89	STEAM SEAL HEADER TEMPERATURE	745.18	DEG F	0813BT:A9390	REHEAT OUTLET TUBE TC73 TEMP	1054.22	DEG F
00	CONVECTION PASS OUTLET TEMP	764.17	DEG F	0813BT:A9391	REHEAT OUTLET TUBE TC74 TEMP	1015.86	DEG F
62	ECONOMIZER OUTLET TEMPERATURE	466.59	DEG F	0813BT:A9392	REHEAT OUTLET TUBE TC75 TEMP	1224.00	DEG F
93	CNVECTN PASS OUT TO FLSHTNK TC76	736.76	DEG F	0813BT:A9397	3RD PASS FEEDWATER TC90 TEMP	770.70	DEG F
64	PSH BYPASS LINE TO FLSHTNK TC340	752.77	DEG F	0813BT:A9398	3RD PASS FRONT WALL TC91 TEMP	780.20	DEG F
03	PIU3 REF JUNCT CAB 11-B	23.24	DEG C	0813BT:A9399	3RD PASS FEEDWATER TC92 TEMP	761.60	DEG F

04	PT04 REF JUNCT CAB 1-C	23.41	DEG C	0813BT:A9400	3RD PASS	FRONT WALL TC93 TEMP	759.11	DEG F
03	SSH OUTLET HEADER SW TEMP	1002.11	DEG F	0813BT:A9401	3RD PASS	FEEDWATER TC94 TEMP	757.80	DEG F
04	SEC SUPERHEATER OUTLET TEMP SE	1009.40	DEG F	0813BT:A9402	3RD PASS	FRONT WALL TC95 TEMP	767.14	DEG F
05	REHEATER OUTLET TEMP SS	1016.70	DEG F	0813BT:A9403	3RD PASS	FEEDWATER TC96 TEMP	780.02	DEG F
06	REHEATER OUTLET TEMP SN	1007.88	DEG F	0813BT:A9404	3RD PASS	FRONT WALL TC97 TEMP	753.43	DEG F
39	PSH OUTLET TUBE TC1 TEMP	793.52	DEG F	0813BT:A9405	3RD PASS	FEEDWATER TC98 TEMP	794.00	DEG F
40	PSH OUTLET TUBE TC2 TEMP	826.15	DEG F	0813BT:A9406	3RD PASS	FRONT WALL TC99 TEMP	784.49	DEG F
41	PSH OUTLET TUBE TC3 TEMP	822.54	DEG F	0813BT:A9407	3RD PASS	SIDE WALL TC101 TEMP	757.10	DEG F
42	PSH OUTLET TUBE TC4 TEMP	823.68	DEG F	0813BT:A9408	3RD PASS	FRONT WALL TC102 TEMP	763.98	DEG F
43	PSH OUTLET TUBE TC5 TEMP	813.43	DEG F	0813BT:A9409	3RD PASS	SCREEN TC103 TEMP	754.64	DEG F
44	PSH OUTLET TUBE TC6 TEMP	630.96	DEG F	0813BT:A9410	3RD PASS	FRONT WALL TC104 TEMP	753.00	DEG F
45	PSH OUTLET TUBE TC7 TEMP	805.72	DEG F	0813BT:A9411	3RD PASS	SOUTH WALL TC105 TEMP	754.32	DEG F
46	PSH OUTLET TUBE TC8 TEMP	773.08	DEG F	0813BT:A9412	3RD PASS	SIDE WALL TC106 TEMP	753.91	DEG F
47	PSH OUTLET TUBE TC9 TEMP	825.27	DEG F	0813BT:A9413	3RD PASS	SOUTH WALL TC107 TEMP	745.64	DEG F
48	PSH OUTLET TUBE TC10 TEMP	828.29	DEG F	0813BT:A9414	3RD PASS	SIDE WALL TC108 TEMP	753.70	DEG F

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15	3RD PASS SOUTH WALL TC109 TEMP	753.36	DEG F	0813BT:A9476	SSH INLET PLATEN OUTLET TC207	117.50	DEG F
16	3RD PASS SIDE WALL TC110 TEMP	101.68	DEG F	0813BT:A9477	SSH INLET PLATEN OUTLET TC208	1224.00	DEG F
17	3RD PASS SOUTH WALL TC103 TEMP	755.60	DEG F	0813BT:A9478	SSH INLET PLATEN OUTLET TC209	1224.00	DEG F
18	3RD PASS SIDE WALL TC112 TEMP	757.02	DEG F	0813BT:A9479	SSH INLET PLATEN OUTLET TC210	893.39	DEG F
19	3RD PASS SCREEN TC115 TEMP	739.33	DEG F	0813BT:A9480	SSH INLET PLATEN OUTLET TC211	915.35	DEG F
20	3RD PASS SCREEN TC116 TEMP	742.24	DEG F	0813BT:A9481	SSH INLET PLATEN OUTLET TC212	892.28	DEG F
21	3RD PASS SCREEN TC117 TEMP	744.09	DEG F	0813BT:A9482	SSH INLET PLATEN OUTLET TC213	888.76	DEG F
22	3RD PASS SCREEN TC118 TEMP	743.58	DEG F	0813BT:A9483	SSH INLET PLATEN OUTLET TC214	1224.00	DEG F
23	3RD PASS SCREEN TC119 TEMP	744.84	DEG F	0813BT:A9484	SSH INLET PLATEN OUTLET TC215	1224.00	DEG F
24	3RD PASS SCREEN TC120 TEMP	742.45	DEG F	0813BT:A9485	SSH INLET PLATEN OUTLET TC216	891.75	DEG F
25	3RD PASS SCREEN TC121 TEMP	747.09	DEG F	0813BT:A9486	SSH INLET PLATEN OUTLET TC217	1224.00	DEG F
26	3RD PASS SCREEN TC122 TEMP	747.51	DEG F	0813BT:A9487	SSH INLET PLATEN OUTLET TC218	1224.00	DEG F
27	3RD PASS SCREEN TC123 TEMP	741.41	DEG F	0813BT:A9488	SSH INLET PLATEN OUTLET TC219	887.28	DEG F
28	3RD PASS SCREEN TC124 TEMP	740.04	DEG F	0813BT:A9489	SSH INLET PLATEN OUTLET TC220	1224.00	DEG F
29	3RD PASS SCREEN TC125 TEMP	744.25	DEG F	0813BT:A9490	SSH INLET PLATEN OUTLET TC221	899.14	DEG F
30	3RD PASS SCREEN TC126 TEMP	747.43	DEG F	0813BT:A9491	SSH INLET PLATEN OUTLET TC222	874.11	DEG F
31	3RD PASS SCREEN TC127 TEMP	739.81	DEG F	0813BT:A9492	SSH INLET PLATEN OUTLET TC223	877.43	DEG F
32	3RD PASS SCREEN TC128 TEMP	744.01	DEG F	0813BT:A9493	SSH INLET PLATEN OUTLET TC224	885.92	DEG F
33	3RD PASS SCREEN TC129 TEMP	749.88	DEG F	0813BT:A9494	SSH INTRMDT PLATEN OUT LEG TC241	923.61	DEG F
34	3RD PASS SCREEN TC130 TEMP	749.57	DEG F	0813BT:A9495	SSH INTRMDT PLATEN OUT LEG TC242	1224.00	DEG F
35	3RD PASS SCREEN TC131 TEMP	742.43	DEG F	0813BT:A9496	SSH INTRMDT PLATEN OUT LEG TC243	911.43	DEG F
36	3RD PASS SCREEN TC132 TEMP	741.27	DEG F	0813BT:A9497	SSH INTRMDT PLATEN OUT LEG TC244	1224.00	DEG F
37	3RD PASS SCREEN TC133 TEMP	743.61	DEG F	0813BT:A9498	SSH INTRMDT PLATEN OUT LEG TC245	882.72	DEG F
38	3RD PASS SCREEN TC134 TEMP	822.02	DEG F	0813BT:A9499	SSH INTRMDT PLATEN OUT LEG TC246	1224.00	DEG F
39	3RD PASS SCREEN TC135 TEMP	755.87	DEG F	0813BT:A9500	FURNACE FLOOR TEMPERATURE	676.48	DEG F
40	3RD PASS SCREEN TC136 TEMP	743.68	DEG F	0813BT:A9501	SSH INTRMDT PLATEN OUT LEG TC248	1224.00	DEG F
41	3RD PASS SCREEN TC137 TEMP	739.75	DEG F	0813BT:A9502	SSH INTRMDT PLATEN OUT LEG TC249	1203.11	DEG F
42	1ST PASS RISER TC150 TEMP	709.36	DEG F	0813BT:A9504	SSH INTRMDT PLATEN OUT LEG TC251	1224.00	DEG F
43	1ST PASS RISER TC151 TEMP	711.43	DEG F	0813BT:A9505	SSH INTRMDT PLATEN OUT LEG TC252	-24.00	DEG F
44	1ST PASS RISER TC152 TEMP	715.09	DEG F	0813BT:A9506	SSH INTRMDT PLATEN OUT LEG TC253	966.82	DEG F
45	1ST PASS RISER TC153 TEMP	714.91	DEG F	0813BT:A9507	SSH INTRMDT PLATEN OUT LEG TC254	1224.00	DEG F
46	1ST PASS RISER TC154 TEMP	705.72	DEG F	0813BT:A9508	SSH INTRMDT PLATEN OUT LEG TC255	1224.00	DEG F
47	1ST PASS RISER TC155 TEMP	717.10	DEG F	0813BT:A9509	SSH INTRMDT PLATEN OUT LEG TC256	1224.00	DEG F
48	1ST PASS RISER TC156 TEMP	718.57	DEG F	0813BT:A9510	SSH INTRMDT PLATEN OUT LEG TC257	1224.00	DEG F
49	1ST PASS RISER TC157 TEMP	715.12	DEG F	0813BT:A9511	SSH INTRMDT PLATEN OUT LEG TC258	1224.00	DEG F
50	1ST PASS RISER TC158 TEMP	714.07	DEG F	0813BT:A9512	SSH INTRMDT PLATEN OUT LEG TC259	1224.00	DEG F
51	1ST PASS RISER TC159 TEMP	713.36	DEG F	0813BT:A9513	SSH INTRMDT PLATEN OUT LEG TC260	1224.00	DEG F
52	1ST PASS RISER TC160 TEMP	716.80	DEG F	0813BT:A9514	SSH INTRMDT PLATEN OUT LEG TC261	946.33	DEG F
53	1ST PASS RISER TC161 TEMP	710.89	DEG F	0813BT:A9515	SSH INTRMDT PLATEN OUT LEG TC262	936.97	DEG F
54	1ST PASS RISER TC162 TEMP	705.88	DEG F	0813BT:A9516	SSH INTRMDT PLATEN OUT LEG TC263	923.82	DEG F
55	1ST PASS RISER TC163 TEMP	715.28	DEG F	0813BT:A9517	SSH INTRMDT PLATEN OUT LEG TC264	921.14	DEG F

56	1ST PASS RISER TC165 TEMP	709.13	DEG F	0813BT:A9519	SSH INLET PLATEN HEADER TC272	876.81	DEG F
57	CYCLONE 4 REENTRANT THROAT TC180	661.81	DEG F	0813BT:A9520	SSH INTRMDT PLATEN HEADER TC273	888.87	DEG F
58	CYCLONE 2 REENTRANT THROAT TC187	1020.00	DEG F	0813BT:A9521	SSH INLET PLATEN HEADER TC274	1224.00	DEG F
59	CYCLONE 3 REENTRANT THROAT TC182	670.97	DEG F	0813BT:A9522	SSH INTRMDT PLATEN HEADER TC275	1040.03	DEG F
60	CYCLONE 1 REENTRANT THROAT TC187	662.97	DEG F	0813BT:A9523	SSH INLET PLATEN HEADER TC276	1121.15	DEG F
61	CYCLONE 6 REENTRANT THROAT TC184	660.85	DEG F	0813BT:A9524	SSH INTRMDT PLATEN HEADER TC277	1224.00	DEG F
62	CYCLONE 5 REENTRANT THROAT TC187	670.36	DEG F	0813BT:A9525	SSH INLET PLATEN HEADER TC278	1224.00	DEG F
63	CYCLONE 8 REENTRANT THROAT TC186	664.54	DEG F	0813BT:A9526	SSH INTRMDT PLATEN HEADER TC281	908.46	DEG F
64	CYCLONE 7 REENTRANT THROAT TC187	116.74	DEG F	0813BT:A9527	SSH INTRMDT PLATEN HEADER TC282	1224.00	DEG F
65	SSH INLET PLATEN OUTLET TC201	870.78	DEG F	0813BT:A9528	SSH INTRMDT PLATEN HEADER TC283	950.99	DEG F
70	SSH INLET PLATEN OUTLET TC202	871.02	DEG F	0813BT:A9529	SSH INTRMDT PLATEN HEADER TC284	1224.00	DEG F
71	SSH INLET PLATEN OUTLET TC203	-24.00	DEG F	0813BT:A9530	SSH INTRMDT PLATEN HEADER TC285	944.42	DEG F
72	SSH INLET PLATEN OUTLET TC204	1224.00	DEG F	0813BT:A9531	SSH INTRMDT PLATEN HEADER TC286	946.45	DEG F
73	SSH INLET PLATEN OUTLET TC205	1224.00	DEG F	0813BT:A9532	SSH INTRMDT PLATEN HEADER TC287	1224.00	DEG F
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33	SSH INTRMDT PLATEN HEADER TC288	1224.00	DEG F	0813CW:A9294	CWP 8E MOTOR UPPER BEARING TEMP	156.40	DEG F
34	CONVECTION PASS SW RISER TC301	774.40	DEG F	0813CW:A9295	CWP 8E MOTOR LOWER BRG TEMP	139.55	DEG F
35	CONV PASS SIDE WALL RISER TC302	765.75	DEG F	0813CW:A9296	CWP 8E MOTOR THRUST BEARING TEMP	119.15	DEG F
36	CONVECTION PASS SW RISER TC303	768.51	DEG F	0813CW:A9297	CWP 8W MTR UPPER BEARING TEMP	130.83	DEG F
37	CONV PASS SIDE WALL RISER TC304	760.66	DEG F	0813CW:A9298	CWP 8W MOTOR LOWER BEARING TEMP	131.29	DEG F
38	CONVECTION PASS SW RISER TC305	763.74	DEG F	0813CW:A9299	CWP 8W MOTOR THRUST BRG TEMP	148.36	DEG F
39	CONV PASS SIDE WALL RISER TC306	758.62	DEG F	0813ES:A9209	EXTRACT STEAM TO LP HTR 2W	166.12	DEG F
40	CONVECTION PASS SW RISER TC307	755.50	DEG F	0813ES:A9210	EXTRACT STEAM TO LP HEATER 2E	166.17	DEG F
41	CONV PASS SIDE WALL RISER TC308	782.83	DEG F	0813ES:A9211	EXTRACT STEAM TO LP HTR 3	322.04	DEG F
42	CONVECTION PASS SW RISER TC309	779.11	DEG F	0813ES:A9212	EXTRACT STEAM TO LP HEATER 4	132.00	DEG F
43	CONV PASS SIDE WALL RISER TC310	771.42	DEG F	0813ES:A9213	12TH STAGE EXTRACTION STEAM TEMP	561.93	DEG F
44	CONVECTION PASS SW RISER TC311	765.89	DEG F	0813ES:A9214	EXTRACT STEAM TO HP HEATER 6W	799.60	DEG F
45	CONV PASS SIDE WALL RISER TC312	765.91	DEG F	0813ES:A9215	EXTRACT STEAM TO HEATER 6E	801.51	DEG F
46	CONVECTION PASS SW RISER TC313	764.23	DEG F	0813ES:A9216	EXTRACT STEAM TO HP HEATER 7W	568.44	DEG F
47	CONV PASS SIDE WALL RISER TC314	763.01	DEG F	0813ES:A9217	EXTRACT STEAM TO HP HEATER 7E	569.94	DEG F
48	CONVECTION PASS FW RISER TC315	771.19	DEG F	0813ES:A9267	EXTRACT STEAM TO BFP TURBINES	568.77	DEG F
49	CONV PASS FRONT WALL RISER TC316	795.36	DEG F	0813ES:A9268	DEAERATOR STEAM INLET TEMP	482.25	DEG F
50	CONVECTION PASS FW RISER TC317	794.64	DEG F	0813ES:A9272	EXTRACT STEAM TO EVAPORATOR	533.15	DEG F
51	CONV PASS FRONT WALL RISER TC318	778.38	DEG F	0813FW:A9153	SUBFP COUPLING RUNNING OTBRD BRG	255.00	DEG F
52	CONVECTION PASS RW RISER TC319	755.07	DEG F	0813FW:A9154	SUBFP COUPLING RUNNER INBRD BRG	255.00	DEG F
53	CONV PASS REAR WALL RISER TC320	754.39	DEG F	0813FW:A9155	BFP TURB 8W THRUST BRG DRN TEMP	141.84	DEG F
54	CONVECTION PASS RW RISER TC321	768.99	DEG F	0813FW:A9156	BFPT 8W THRUST BRG METAL ACT TMP	66.79	DEG F
55	CONV PASS REAR WALL RISER TC322	764.51	DEG F	0813FW:A9157	3RD PASS SCREEN TC124 TEMP	136.96	DEG F
60	2-3 PASS TRANSITON HDR LSW TC330	725.19	DEG F	0813FW:A9158	BFPT 8W HP BRG OIL DRAIN TEMP	131.38	DEG F
61	2-3 PASS TRANSITION HDR FW TC331	726.50	DEG F	0813FW:A9159	BFP TURB 8W LP BRG DRAIN TEMP	139.09	DEG F
62	2-3 PASS TRANSITON HDR LSW TC332	731.19	DEG F	0813FW:A9160	BFPT 8W STOP VALVE METAL TEMP	853.95	DEG F
63	2-3 PASS TRANSITION HDR FW TC333	726.23	DEG F	0813FW:A9161	BFP8W OIL LEAVING COOLER TEMP	114.10	DEG F
00	LOW HD PMP 8W MTR UPR BRG TEMP	138.26	DEG F	0813FW:A9162	BFP 8W OUTBOARD BRG METAL TEMP	136.09	DEG F
01	LOW HD PMP 8E MTR LWR BRG TEMP	86.66	DEG F	0813FW:A9163	BFP 8W INBOARD BRG METAL TEMP	134.71	DEG F
04	LOW HD PMP 8W MTR UPR BRG TEMP	76.33	DEG F	0813FW:A9164	BFPT 8E THRUST BRG OIL DRAIN TMP	120.32	DEG F
05	LOW HD PMP 8W MTR LWR BRG TEMP	72.00	DEG F	0813FW:A9165	BFPT8E STOP VALVE METAL TEMP	1224.00	DEG F
10	SPARE	74.01	DEG F	0813FW:A9166	BFPT 8E THRUST BRG METAL ACT TMP	137.63	DEG F
11	SPARE	73.66	DEG F	0813FW:A9167	BFPT 8E THRUST MTL INACT FACE	255.00	DEG F
14	SPARE	74.01	DEG F	0813FW:A9168	BFPT 8E HP BEARING OIL DRAIN TMP	122.95	DEG F
15	SPARE	74.06	DEG F	0813FW:A9169	BFPT8E LP BEARING OIL DRAIN TEMP	142.47	DEG F
ONVPASS	CONV PASS ROC	9.64	DEGF/H	0813FW:A9170	BFP8E OIL LEAVING COOLER TEMP	122.49	DEG F
CONO	ECONOMIZER ROC 0 - 100	0.00	DEGF/H	0813FW:A9171	BFP8E OUTBRD BEARING METAL TEMP	155.61	DEG F
STPASSA	FIRST PASS ROC 0 - 100	-1.20	DEGF/H	0813FW:A9172	BFP 8E INBRD BRG METAL TEMP	146.56	DEG F
24	CONDENSATE TEMP FROM HEATER 5	312.85	DEG F	0813FW:A9173	SUBFP MOTOR INBOARD BRG MTL TEMP	80.53	DEG F
25	CONDENSATE TEMP FROM HEATER 1W	132.25	DEG F	0813FW:A9174	SUBFP MOTOR OUTBRD MTL TEMP	82.20	DEG F
26	CONDENSATE TEMP FROM HEATER 1E	126.33	DEG F	0813FW:A9175	SUBFP PUMP INBOARD BRG MTL TEMP	77.82	DEG F

27	CONDENSATE TEMP FROM HEATER 2	162.83	DEG F	0813FW:[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	CONDENSATE TEMP FROM HEATER 3	217.52	DEG F	0813FW:A9218	SUBFP DISCHARGE HEADER TEMP	320.13	DEG F	
29	CONDENSATE TEMP FROM HEATER 4	248.31	DEG F	0813FW:A9219	FEEDWATER TEMP HEATER 6W OUTLET	386.07	DEG	
30	CONDENSATE TEMP TO HEATER 2	130.21	DEG F	0813FW:A9220	FEEDWATER TEMP HEATER 6E OUTLET	388.92	DEG	
31	CONDENSATE TEMP TO HEATERS 1E-1W	96.33	DEG F	0813FW:A9221	FEEDWATER TEMP 7W HEATER OUTLET	476.16	DEG	
32	CONDNSATE TEMP FRM PACKGE EXHSTR	96.64	DEG F	0813FW:A9222	FEEDWATER TEMP HEATER 7E OUTLET	476.52	DEG F	
33	CNDS FRM PACKAGE EXHUSTER 8N TMP	95.15	DEG F	0813FW:A9223	FEEDWATER TEMP AT DOON INLET	474.45	DEG F	
34	CONDNSATE TEMP TO PACKAGE EXHSTR	91.83	DEG F	0813FW:A9261	REHEAT ATTEMP WATER TEMPERATURE	765.00	DEG	
35	POLISHED CONDENSATE MAKEUP TEMP	58.08	DEG F	0813GN:A9035	GENERATOR STATOR SLOT TEMP	44.03	DEG	
69	COND TEMP FROM BFP TURB CONDENS	107.19	DEG F	0813GN:A9036	GENERATOR STATOR SLOT TEMP	40.63	DEG	
73	EVAPORATOR DRAIN TEMP	224.49	DEG F	0813GN:A9037	GENERATOR STATOR SLOT TEMP	41.65	DEG C	
02	CONDENSATE PUMP 8E MTR UPR BRG	93.10	DEG F	0813GN:A9040	GEN COLLECTOR BEARING TEMP	126.91	DEG F	
03	CONDENSATE PUMP 8E MTR LWR BRG	95.20	DEG F	0813HD:A9240	LP HEATER 1W DRAIN TEMPERATURE	132.75	DEG F	
06	CONDENSATE PUMP 8W MTR UPR BRG	114.50	DEG F	0813HD:A9241	LP HEATER 1E DRAIN TEMPERATURE	116.27	DEG	
07	CONDENSATE PUMP 8W MTR LWR BRG	99.75	DEG F	0813HD:A9242	HEATER 2 DRAIN TEMPERATURE	130.30	DEG	

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43	HEATER 3 DRAIN TEMPERATURE	176.05	DEG F	0814BF:A8047	AIR HEATER GAS OUT WE MIDDLE B1	371.18	DEG	
44	HEATER 4 DRAIN TEMPERATURE	84.48	DEG F	0814BF:A8048	AIR HEATER GAS OUT WE BOTTOM C1	332.43	DEG	
45	HP HEATER 6W DRAIN TEMPERATURE	330.54	DEG F	0814BF:A8049	AIR HEATER GAS OUT WW TOP A1	387.76	DEG F	
46	HP HEATER 6E DRAIN TEMPERATURE	329.85	DEG F	0814BF:A8050	AIR HEATER GAS OUT WW MIDDLE B1	358.66	DEG F	
47	HP HEATER 7W DRAIN TEMPERATURE	404.12	DEG F	0814BF:A8051	AIR HEATER GAS OUT WW BOTTOM C1	271.90	DEG	
48	HP HEATER 7E DRAIN TEMPERATURE	405.62	DEG F	0814BF:A9614	ID FAN 8E MOTOR RTD TEMP	38.27	DEG	
49	GLYCOL HEATER 8W DRAIN TEMP	220.02	DEG F	0814BF:A9906	E PRECIP E DUCT EAST SIDE TEMP	331.74	DEG	
50	GLYCOL HEATER 8E DRAIN TEMP	219.86	DEG F	0814BF:A9907	E PRECIP E DUCT TOP SIDE TEMP	343.51	DEG F	
01	HRH TO RH-STOP VALVE 8S TEMP	999.38	DEG F	0814BF:A9908	E PRECIP E DUCT WEST SIDE TEMP	351.04	DEG F	
02	HRH TO RH-STOP VALVE 8N TEMP	1000.32	DEG F	0814BF:A9909	E PRECIP W DUCT EAST SIDE TEMP	373.63	DEG F	
36	COLD RH FROM MAIN TURB 8N	573.28	DEG F	0814BF:A9910	E PRECIP W DUCT TOP SIDE TEMP	372.02	DEG F	
37	COLD REHEAT FROM MAIN TURB 8S	567.67	DEG F	0814BF:A9911	E PRECIP W DUCT WEST SIDE TEMP	372.29	DEG	
38	COLD REHEAT ATTEMP INLET TEMP	569.82	DEG F	0814BF:A9912	W PRECIP E DUCT EAST SIDE TEMP	340.18	DEG F	
39	COLD REHEAT ATTEMP OUTLET TEMP	525.92	DEG F	0814BF:A9913	W PRECIP E DUCT TOP SIDE TEMP	361.80	DEG F	
77	1ST STAGE SHELL INNER SURF TEMP	874.40	DEG F	0814BF:A9914	W PRECIP E DUCT WEST SIDE TEMP	355.67	DEG F	
78	1ST STAGE SHELL OUTER SURF TEMP	673.12	DEG F	0814BF:A9915	W PRECIP W DUCT EAST SIDE TEMP	348.14	DEG	
79	REHEAT BOWL INNER SURFACE TEMP	947.65	DEG F	0814BF:A9916	W PRECIP W DUCT TOP SIDE TEMP	346.22	DEG	
80	REHEAT BOWL OUTER SURFACE TEMP	964.37	DEG F	0814BF:A9917	W PRECIP W DUCT WEST SIDE TEMP	1224.00	DEG	
81	EXT VLV CHEST INNER SURFACE TEMP	974.87	DEG F	0814BS:CJR05	PIU5 REF JUNCT CAB 17-ET	21.95	DEG C	
82	EXT VLV CHEST OUTER SURFACE TEMP	831.31	DEG F	0814BT:A8013	DUMMY TEST POINT J TC	71.33	DEG F	
83	STOP VALVE 2 INNER SURFACE TEMP	997.82	DEG F	0814CW:A9251	CW TO CONDNSER 1EW INLET TEMP	56.46	DEG	
84	STOP VALVE 2 OUTER SURFACE TEMP	982.78	DEG F	0814CW:A9258	CW TO CONDNSER 1EE INLET TEMP	56.16	DEG	
85	EXHAUST HOOD 1 GENERATOR END TMP	92.88	DEG F	0814CW:A9274	OUTSIDE AMBIENT AIR TEMP	45.28	DEG	
86	EXHAUST HOOD 2 GENERATOR END	91.13	DEG F	0814CW:A9622	CW FROM CONDNSER 4WW OUTLET TEMP	88.46	DEG F	
87	TURBINE OIL TEMP TO COOLER	149.23	DEG F	0814CW:A9624	CW FROM CONDNSER 4WW OUTLET TEMP	87.34	DEG F	
88	TURBINE OIL TEMP FROM COOLER	115.82	DEG F	0814CW:A9626	CW FROM CONDNSER 3WE OUTLET TEMP	91.31	DEG F	
90	BEARING 1 OIL DRAIN TEMPERATURE	145.48	DEG F	0814CW:A9628	CW FROM CONDNSER 3WE OUTLET TEMP	90.63	DEG	
91	BEARING 2 OIL DRAIN TEMPERATURE	148.73	DEG F	0814CW:A9630	CW FROM CONDNSER 2EW OUTLET TEMP	100.36	none	
92	BEARING 3 OIL DRAIN TEMPERATURE	138.09	DEG F	0814CW:A9632	CW FROM CONDNSER 2EW OUTLET TEMP	96.46	DEG	
93	BEARING 4 OIL DRAIN TEMPERATURE	131.71	DEG F	0814CW:A9634	CW FROM CONDNSER 1EE OUTLET TEMP	100.15	DEG F	
94	BEARING 5 OIL DRAIN TEMPERATURE	135.01	DEG F	0814CW:A9636	CW FROM CONDNSER 1EE OUTLET TEMP	99.50	DEG	
95	BEARING 6 OIL DRAIN TEMPERATURE	137.09	DEG F	0814CW:A9638	CW FROM EBFP CONDNSR OUTLET TEMP	70.99	DEG	
96	BEARING 7 OIL DRAIN TEMPERATURE	136.38	DEG F	0814CW:A9640	CW FROM EBFP CONDNSR OUTLET TEMP	70.17	DEG	
97	BEARING 8 OIL DRAIN TEMPERATURE	133.50	DEG F	0814CW:A9642	CW FROM EBFP CONDNSR OUTLET TEMP	69.19	DEG	
98	THRUST BRG FRONT PLATE OIL DRAIN	156.52	none	0814CW:A9644	CW FROM WBFP CONDNSR OUTLET TEMP	-6.00	DEG F	
99	THRUST BRG REAR PLATE OIL DRAIN	152.27	DEG F	0814CW:A9930	AMBIENT AIR TEMP BLR RM EL 196	93.99	DEG F	
80	THRUST BEARING UPPER FRONT TEMP	172.13	DEG F	0814CW:A9931	AMBIENT AIR TEMP BLR RM EL 41	71.73	DEG	
81	THRUST BEARING UPPER REAR TEMP	146.23	DEG F	0814EL:A9015	UAT 8 HOTSPOT TEMP	51.11	DEG	
82	THRUST BEARING LOWER FRONT TEMP	162.54	DEG F	0814FW:A9019	SUBFP MOTOR TEMPERATURE	24.39	DEG	
83	THRUST BEARING LOWER REAR TEMP	149.57	DEG F	0814GN:A9021	COLD H2 FROM COOLER 2 TEMP	24.00	DEG C	
03	TURBINE BEARING 1 METAL TEMP	176.47	DEG F	0814GN:A9023	COLD H2 FROM COOLER 4 TEMP	26.46	DEG C	

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3-2	TURBINE BEARING 3 METAL TEMP	285.60	DEG F	0814GN:A9027	GENERATOR STATOR SLOT TEMP	38.74	DEG C
3-3	TURBINE BEARING 4 METAL TEMP	285.60	DEG F	0814GN:A9029	GENERATOR STATOR SLOT TEMP	42.62	DEG C
448	TURBINE BEARING 7 METAL TEMP	175.76	DEG F	0814GN:A9031	GENERATOR STATOR SLOT TEMP	41.90	DEG C
394	TURBINE BEARING 8 METAL TEMP	192.16	DEG F	0814GN:A9039	COLLECTOR HOUSING AIR OUT TEMP	36.97	DEG C
575	CROSSOVER STEAM TEMPERATURE SE	569.34	DEG F	0815BA:A9011	GLYCOL RETURN TEMPERATURE	175.89	DEG F
529	CROSSOVER STEAM TEMPERATURE NW	570.19	DEG F	0815BA:A9017	FD FAN 8E MOTOR TEMPERATURE	43.59	DEG C
318	FD FAN 8W MOTOR TEMPERATURE	45.01	DEG C	0815BA:A9046	TOTAL AIR FLOW	2829.57	KLB/HR
340	AIR HEATER GAS OUT EE TOP A1	390.04	DEG F	0815BA:A9140	EXTRACT STEAM TO GLYCOL HEATERS	8.67	PSIG
341	AIR HEATER GAS OUT EE MIDDLE B1	367.36	DEG F	0815BA:A9144	AIR HEATER AIR INLET PRESSURE	41.54	IN WC
342	AIR HEATER GAS OUT EE BOTTOM C1	303.04	DEG F	0815BA:A9145	WINDBOX PRESSURE 8W	37.34	IN WC
343	AIR HEATER GAS OUT EW TOP A1	420.77	DEG F	0815BA:A9146	WINDBOX PRESSURE 8E	37.57	IN WC
344	AIR HEATER GAS OUT EW MIDDLE B1	403.50	DEG F	0815BA:A9147	WINDBOX TO FURNACE DIFF PRESSURE	37.96	IN WC
345	AIR HEATER GAS OUT EW BOTTOM C1	350.32	DEG F	0815BA:A9148	STM TO GLYCOL HTR DRIVE UNIT POS	0.00	PCT
346	AIR HEATER GAS OUT WE TOP A1	401.63	DEG F	0815BA:A9566	AIR HEATER AIR OUTLET TEMP	579.26	DEG F

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69	GLYCOL TEMP	210.31	DEG F	0815BF:A9781	BYPASS STACK CO2 CONCENTRATION	-0.40	% VOL
58	8-1 CYCLONE TOTAL AIR FLOW	345.42	KPPH	0815BF:A9782	BYPASS STACK TOTAL GAS FLOW	0.00	MACFM
59	8-2 CYCLONE TOTAL AIR FLOW	357.49	KPPH	0815BF:A9783	U7 INSTANTANEOUS OPACITY	29.17	PCT
60	8-3 CYCLONE TOTAL AIR FLOW	345.50	KPPH	0815BF:A9784	U7 SIX MINUTE AVERAGE OPACITY	21.72	PCT
61	8-4 CYCLONE TOTAL AIR FLOW	347.60	KPPH	0815BF:A9785	U8 INSTANTANEOUS OPACITY	6.08	PCT
62	8-5 CYCLONE TOTAL AIR FLOW	345.94	KPPH	0815BF:A9786	U8 SIX MINUTE AVERAGE OPACITY	6.09	PCT
63	8-6 CYCLONE TOTAL AIR FLOW	347.17	KPPH	0815BF:A9787	BYPASS STACK INSTANT OPACITY	0.08	PCT
64	8-7 CYCLONE TOTAL AIR FLOW	360.08	KPPH	0815BF:A9788	BYPASS STACK SIX MIN AVG OPACITY	-2.00	PCT
65	8-8 CYCLONE TOTAL AIR FLOW	346.10	KPPH	0815BF:A9789	AFGD INLET SO2	6.10	#/MBTU
70	HI TEMP O2 PROBE EAST LOWER	2.48	PCT	0815BF:HA9568	AIR HEATER GAS OUTLET TEMP	26.18	MV
71	HI TEMP O2 PROBE EAST UPPER	2.56	PCT	0815BF:HA9683	AFGDS WASTEWATER GAS IN EVAP TMP	18.40	MV
72	HI TEMP O2 PROBE WEST LOWER	2.63	PCT	0815BF:HA9684	AFGDS WASTEWATER EAST EVAP TMP	18.40	MV
73	HI TEMP O2 PROBE WEST UPPER	2.77	PCT	0815BF:HA9754	AFGD WASTE WATER W EVAP TEMP	18.40	MV
88	WEST ACCOUSTIC LEAK DETECTION	24.69	PCT	0815BM:A9047	TOTAL FUEL GAS FLOW	1.51	KCFH
89	EAST ACCOUSTIC LEAK DETECTION	24.36	PCT	0815BM:A9048	TOTAL IGNITION GAS FLOW	0.23	KCFH
46	SSH DIFFERENTIAL PRESSURE	1.27	IN WC	0815BM:A9049	CYCLONE 8-1 FUEL GAS FLOW	0.46	KCFH
47	REHEAT SH DIFFERENTIAL PRESSURE	0.94	IN WC	0815BM:A9050	CYCLONE 8-3 FUEL GAS FLOW	0.15	KCFH
48	PRIMARY SH DIFFERENTIAL PRESSURE	0.85	IN WC	0815BM:A9051	CYCLONE 8-5 FUEL GAS FLOW	0.20	KCFH
49	HORIZONTAL RH FURNACE DIFF PRES	2.69	IN WC	0815BM:A9052	CYCLONE 8-7 FUEL GAS FLOW	0.21	KCFH
50	UPPER ECON FURNACE DIFF PRESSURE	1.69	IN WC	0815BM:A9053	COAL FLOW TO CYCLONE 8-1	36.92	KPPH
51	LOWER ECON FURNACE DIFF PRESSURE	1.24	IN WC	0815BM:A9054	COAL FLOW TO CYCLONE 8-2	37.04	KPPH
52	8W AIR HTR COLD DIFF PRESSURE	3.87	IN WC	0815BM:A9055	COAL FLOW TO CYCLONE 8-3	37.03	KPPH
53	8W AIR HTR HOT DIFF PRESSURE	5.44	IN WC	0815BM:A9056	COAL FLOW TO CYCLONE 8-4	36.96	KPPH
58	HIGH TEMP O2 PROBES TEMP	268.67	none	0815BM:A9057	COAL FLOW TO CYCLONE 8-5	37.07	KPPH
567	AIR HEATER AIR INLET TEMPERATURE	14.38	MV	0815BM:A9058	COAL FLOW TO CYCLONE 8-6	37.01	KPPH
43	AIR HEATER GAS SIDE DIFF PRES	9.27	IN WC	0815BM:A9059	COAL FLOW TO CYCLONE 8-7	37.10	KPPH
49	FURNACE TO ECON OUTLET DIFF PRES	8.76	IN WC	0815BM:A9060	COAL FLOW TO CYCLONE 8-8	37.02	KPPH
50	AIR HEATER GAS OUTLET PRESSURE	-48.27	IN WC	0815BM:A9141	MAIN FUEL GAS PRESSURE	17.01	PSIG
93	8W FLUE GAS OXYGEN %	2.74	PCT	0815BM:A9142	IGNITION GAS SUPPLY PRESSURE	44.33	PSIG
94	8E FLUE GAS OXYGEN %	2.55	PCT	0815BM:A9270	MAIN FUEL GAS TEMPERATURE	87.76	DEG F
06	ID FAN 8W MOTOR OB BEARING TEMP	137.32	DEG F	0815BM:A9271	IGNITION GAS TEMP	83.81	DEG F
15	ID FAN 8W MOTOR TEMPERATURE	38.66	DEG C	0815BM:A9649	8-1 CYCLONE SECONDARY AIR FLOW	299.98	KLBS
77	FGD MIST ELIMINATOR OUT GAS TEMP	-6.00	DEG F	0815BM:A9650	8-2 CYCLONE SECONDARY AIR FLOW	312.51	KLBS
78	FGD U8 DUCT INLET TEMPERATURE	-10.00	DEG F	0815BM:A9651	8-3 CYCLONE SECONDARY AIR FLOW	299.45	KLBS
79	FGD INLET U8 DUCT PRESSURE	-0.50	IN WC	0815BM:A9652	8-4 CYCLONE SECONDARY AIR FLOW	302.29	KLBS
80	FGD ABSOREER/STACK DIFF PRESSURE	-0.50	IN WC	0815BM:A9653	8-5 CYCLONE SECONDARY AIR FLOW	300.67	KLBS
81	FURNACE PRESSURE-SELECTED KMTTR	-0.55	IN WC	0815BM:A9654	8-6 CYCLONE SECONDARY AIR FLOW	298.83	KLBS
82	AFGD PRIMARY SO2 ANALIZER OUT	0.16	none	0815BM:A9655	8-7 CYCLONE SECONDARY AIR FLOW	314.67	KLBS
83	AFGD PRIMARY OUT BAROMETRIC PRES	29.50	IN/HGA	0815BM:A9656	8-8 CYCLONE SECONDARY AIR FLOW	301.19	KLBS
84	AFGD PRIMARY FLUE GAS TEMP	165.34	DEG F	0815BS:A9062	COLD REHEAT PREWARM PRESSURE	612.00	PSIG
85	AFGD PRIMARY OUT SO2 FLOW	99.95	LB/HR	0815BS:A9036	CONVECTION PASS OUTLET PRESSURE	3624.53	PSIG

66	AFGD PRIMARY OUT NOX LEVEL	1.57	#/MBTU	0815BS:A9137	FLASH TANK PRESSURE	[illegible]	PSIG
67	AFGD PRIMARY OUT CO2 LEVEL	11.12	% VOL	0815BS:A9138	FLASH TANK LEVEL	-14.91	IN
68	AFGD PRIMARY TOTAL GAS FLOW	1.17	MACFM	0815BS:A9205	PRIMARY SUPHTR OUTLET TEMP 8E	82.30	DEG F
69	AFGD BKUP SO2 ANALIZER OUT	-0.04	#/MBTU	0815BS:A9206	PRIMARY SUPHTR 8W OUTLET TEMP	807.14	DEG F
70	AFGD BKUP OUT BAROMETRIC PRESS	-0.65	IN/HGA	0815BS:A9324	START UP VLV 20% DRIVE POSITION	0.00	PCT
71	AFGD BKUP FLUE GAS TEMP	-10.00	DEG F	0815BS:A9331	ECONOMIZER INLET DISSOLVED O2	-0.22	PPB
72	AFGD BKUP OUT SO2 FLOW	0.59	LB/HR	0815BS:A9337	PH AT ECONOMIZER INLET	8.55	PH
73	AFGD BKUP OUT NOX LEVEL	1.61	#/MBTU	0815BS:A9666	FLASH TANK BAFFLE DIFF PRESSURE	-2.15	PSID
74	AFGD BKUP OUT CO2 LEVEL	10.97	% VOL	0815BS:A9690	CYCLONE FEEDWATER FLOW	2244.33	KPPH
75	AFGD BKUP TOTAL GAS FLOW	-0.05	MACFM	0815BS:CJR01	PIU1 REF JUNCT CAB I0-B	23.00	DEG C
76	BYPASS STACK SO2 CONCENTRATION	-0.18	#/MBTU	0815BS:CJR02	PIU2 REF JUNCT CAB I0-C	23.37	DEG C
77	BYPASS STACK BAROMETRIC PRESS	0.02	IN/HGA	0815BS:HA9322	E-W CONDENSATE PUMPS CONDUCT	28.67	MV
78	BYPASS STACK FLUE GAS TEMP SPARE	0.03	DEG F	0815BS:HA9329	ECONOMIZER INLET CAT COND S11.1	25.94	MV
79	BYPASS STACK SO2 FLOW	-20.00	LB/HR	0815BS:HA9330	ECONOMIZER INLET CAT COND S11.2	25.56	MV
80	BYPASS STACK NOX CONCENTRATION	-0.08	#/MBTU	0815BS:HA9334	SSH OUTLET CATION CONDUCTIVITY	25.69	MV

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335	BFP CONDENSER CATION CONDUCTIVTY	38.35	MV	0815ES:A9064	EXTRACTION STEAM FLOW TO BFP'S	183.44	KPPH
336	GLYCOL HEATER CATION CONDUCT	29.11	MV	0815ES:A9099	EXTRACT STEAM TO LP HEATER 1W	-11.10	PSIG
570	8W SUPERHEATER INLET GAS TEMP	28.44	MV	0815ES:A9100	EXT STEAM TO LP HEATER 1E	-5.48	PSIG
571	8E SUPERHEATER INLET GAS TEMP	0.03	MV	0815ES:A9101	EXTRACT STEAM TO LP HEATER 2	-9.10	PSIG
07	FURNACE FLOOR TEMPERATURE TC194	677.54	DEG F	0815ES:A9102	EXTRACT STEAM TO LP HEATER 3	12.92	PSIG
08	FURNACE FLOOR TEMPERATURE TC195	680.43	DEG F	0815ES:A9103	EXTRACT STEAM TO LP HEATER 4	0.11	PSIG
09	FURNACE FLOOR TEMPERATURE TC196	671.92	DEG F	0815ES:A9104	DEAERATOR PRESSURE	65.49	PSIG
10	FURNACE FLOOR TEMPERATURE TC197	674.60	DEG F	0815ES:A9105	EXTRACT STEAM TO HP HEATER 6W	204.05	PSIG
11	FURNACE FLOOR TEMPERATURE TC198	668.44	DEG F	0815ES:A9106	EXTRACT STEAM TO HP HEATER 6E	204.30	PSIG
12	FURNACE FLOOR TEMPERATURE TC199	680.81	DEG F	0815ES:A9107	COLD REHEAT STEAM TO HEATER 7W	532.27	PSIG
13	FURNACE FLOOR TEMPERATURE TC200	674.11	DEG F	0815ES:A9108	COLD REHEAT STEAM TO HEATER 7E	529.41	PSIG
3B	ATMOS WET BULB TEMP	40.35	DEG F	0815ES:A9109	LP TURBINE STEAM INLET PRESSURE	85.24	PSIG
71	HEATER DRAIN PUMP FLOW	284.76	KPPH	0815ES:A9118	EXTRACTION STEAM TO BFP'S PRESS	78.68	PSIG
72	HEATING EVAPORATOR DRAIN FLOW	0.00	KPPH	0815ES:A9121	LP STEAM PRESSURE TO 8W BFPT	76.49	PSIG
73	CONDENSATE MAKE UP FLOW	0.33	GPM	0815ES:A9122	LP STEAM PRESSURE TO 8E BFPT	76.76	PSIG
74	CONDENSATE FLOW	1764.95	KPPH	0815ES:A9595	STEAM SEAL HEADER LOWER TEMP	1224.00	DEG F
75	CONDENSATE FROM GLYCOL HEATER	0.00	KPPH	0815FW:A9045	TOTAL FEEDWATER FLOW FROM DA	2281.45	KLB/H
79	BFP CONDENSERS CONDENSATE FLOW	117.11	KPPH	0815FW:A9065	BFP 8W DISCHARGE FLOW	891.29	KPPH
80	MAIN CONDENSER OVERFLOW	1.20	GPM	0815FW:A9066	BFP 8E DISCHARGE FLOW	1338.82	KPPH
32	BFP 8E HOTWELL PUMP PRESSURE	18.45	PSIG	0815FW:A9067	SUBFP DISCHARGE FLOW	47.13	KPPH
33	CONDENSATE HEADER PRESSURE	366.70	PSIG	0815FW:A9068	8W SEC SUPHTR ATTEMP WATER FLOW	10.22	KPPH
34	HTR 1W CONDENSER ABSOLUTE PRESS	1.34	IN HG	0815FW:A9069	EAST SEC SUPHTR ATMP FLOW	41.08	KPPH
35	HTR 1E CONDENSER ABSOLUTE PRESS	1.43	IN HG	0815FW:A9070	COLD REHEAT ATTEMP WATER FLOW	53.87	KPPH
36	HEATER DRAIN PUMP PRESSURE	277.42	PSIG	0815FW:A9076	BFP 8W DRUM BALANCE FLOW	62.09	KPPH
27	CONDENSATE FROM HEATER 2 CONDUCT	1.87	MMHO	0815FW:A9077	BFP 8E DRUM BALANCE FLOW	53.28	KPPH
28	HYDRAZINE FROM HEATER 2	0.77	PPB	0815FW:A9078	SUBFP DRUM BALANCE FLOW	0.11	KPPH
92	DEAERATOR HEATER LEVEL	9.60	FT	0815FW:A9081	BFP 8W SPEED	48.41	RPM
323	HOTWELL DISCHARGE CATION CONDUCT	27.00	MV	0815FW:A9082	BFP 8E SPEED	7191.00	RPM
61	MAIN CONDENSER VACUUM	28.17	IN HG	0815FW:A9098	ATTEM TO COLD REHEAT PRESS	-36.00	PSIG
29	BFP 8W CONDENSER VACUUM	2.56	IN HG	0815FW:A9110	ECONOMIZER INLET FEEDWATER PRES	4007.93	PSIG
30	BFP 8E CONDENSER VACUUM	2.09	IN HG	0815FW:A9111	BFP 8W DISCHARGE PRESSURE	4079.18	none
31	BFP 8W HOTWELL PUMPS PRESSURE	17.10	PSIG	0815FW:A9112	BFP 8E DISCHARGE PRESSURE	4048.36	PSIG
52	CW FROM CONDNSER 1WE INLET TEMP	56.25	DEG F	0815FW:A9113	SUBFP DISCHARGE PRESSURE	5.86	PSIG
57	CW FROM CONDNSER 1WW INLET TEMP	55.92	DEG F	0815FW:A9114	FEEDWATER HEADER PRESSURE	4095.47	PSIG
21	CW FROM CONDNSER 4WW OUTLET TEMP	89.16	DEG F	0815FW:A9115	BFP 8W SUCTION PRESSURE	125.57	PSIG
23	CW FROM CONDNSER 4WW OUTLET TEMP	86.45	DEG F	0815FW:A9116	BFP 8E SUCTION PRESSURE	118.65	PSIG
25	CW FROM CONDNSER 3WE OUTLET TEMP	91.87	DEG F	0815FW:A9117	SUBFP SUCTION PRESSURE	39.90	PSIG
27	CW FROM CONDNSER 3WE OUTLET TEMP	92.41	DEG F	0815FW:A9123	BFP 8W TURB LUBE OIL FILTER DP	4.94	PSIG
29	CW FROM CONDNSER 2EW OUTLET TEMP	98.00	DEG F	0815FW:A9124	BFPT 8W BEARING OIL PRESSURE	18.91	PSIG
31	CW FROM CONDNSER 2EW OUTLET TEMP	99.85	none	0815FW:A9125	BFP 8W BEARING OIL PUMP PRESSURE	16.29	PSIG
33	CW FROM CONDNSER 1EE OUTLET TEMP	100.18	DEG F	0815FW:A9126	BFPT 8E LUBE OIL FILTER DIF PRES	3.21	PSIG

35	CW FROM CONDNSER TEP OUTLET TEMP	59.19	DEG F	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	CW FROM LBFP CONDNSER OUTLT TEMP	70.10	DEG F	0815FW:A9128	BFP 8E BEARING OIL PUMP PRESSURE	14.97	PSIG	
39	CW FROM EBFP CONDNSER OUTLT TEMP	70.38	DEG F	0815FW:A91[illegible]	SUBFP COUPLING IMPELLER OTBRD BRG	255.00	DEG F	
41	CW FROM WBFP CONDNSER OUTLT TEMP	69.56	DEG F	0815FW:A9152	SUBFP COUPLING IMPELLER INBRD BRG	255.00	DEG F	
43	CW FROM WBFP CONDNSER OUTLT TEMP	84.53	DEG F	0815FW:A9572	BFP 8W HI PRESS BEARNG VIBRATION	1.98	MILS	
67	ATMOSPHERIC BAROMETRIC PRESSURE	29.51	IN HG	0815FW:A9573	BFP 8W LOW PRESSURE BEARING VIB	-0.58	MILS	
07	UAT 8X POWER TO 4KV BUS 8Z	8.20	MW	0815FW:A9574	BFP 8E HI PRESS BEARNG VIBRATION	0.24	MILS	
08	UAT 8 POWER TO 4KV BUS 8W	7.58	MW	0815FW:A9575	BFP 8E LOW PRESSURE BEARING VIB	0.79	MILS	
09	RAT 2 POWER TO 4KV BUS 8Z	-0.36	MW	0815FW:A9597	8W BFP THRUST BEARING METAL TEMP	122.94	DEG F	
10	RAT 1 POWER TO 4KV BUS 8W	-0.49	MW	0815FW:A9598	BFP 8E THRUST BEARING METAL TEMP	128.62	DEG F	
14	MAIN TRANSFORMER HOTSPOT TEMP	41.64	DEG C	0815FW:A9599	SUBFP THRUST BEARING METAL TEMP	67.79	DEG F	
45	UAT 8X POWER TO 4KV BUS 8EX	4.01	MW	0815FW:A9602	BFP SPD CHNGR LO SPD BRG OIL IN	204.00	DEG F	
46	UAT 8 POWER TO 4KV BUS 8WX	3.84	MW	0815FW:A9603	SUBFP SPD CHNGR LOSPD BRG OILOUT	78.83	DEG F	
47	RAT 2 POWER TO 4KV BUS 8EX	0.01	MW	0815FW:A9604	BFP SPD CHNGR HI SPD BRG OIL IN	204.00	DEG F	
48	RAT 1 POWER TO 4KV BUS 8WX	0.01	MW	0815FW:A9[illegible]	SUBFP SPD CHNGR HISPD BRG OILOUT	77.56	DEG F	

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043	STARTUP BFP SPEED	19.27	MV	0815TS:A9585	CONTROL VALVE POSITION	82.10	PCT	
111	BFP 8W DISCHARGE PRESSURE	74.39	MV	0815TS:A9586	ECCENTRICITY	1.14	MILS	
112	BFP 8E DISCHARGE PRESSURE	73.97	MV	0815TS:A9587	SHELL EXPANSION	738.11	MILS	
113	SUBFP DISCHARGE PRESSURE	20.08	MV	0815TS:A9588	ROTOR-SHELL DIFF EXPANSION	518.70	MILS	
001	GENERATOR 8 GROSS MW	321.98	MW	0815TS:A9589	STOP VALVE 2 BYPASS POSITION	95.63	PCT	
002	GENERATOR 8 STATOR VOLTAGE	21.75	KV	0815TS:A9590	CROSSOVER STEAM TEMPERATURE SW	571.94	DEG F	
003	GENERATOR 8 STATOR CURRENT	9.16	KAMPS	0815TS:A9591	CROSSOVER STEAM TEMPERATURE NE	569.49	DEG F	
004	GENERATOR 8 GROSS MEGAVARS	107.67	MVAR	08PLS01:D4001	GENERATOR OUTPUT	0.00	MW	
005	GENERATOR 8 FIELD CURRENT	1970.51	AMPS	08PLS01:D4002	COAL FLOW TO CYCLONE 8-1	0.00	KLBH	
006	GENERATOR 8 FIELD VOLTAGE	273.54	VOLTS	08PLS01:D4003	COAL FLOW TO CYCLONE 8-2	0.00	KLBH	
12	EXITATION TRANSFER VOLTAGE	4.28	VOLTS	08PLS01:D4004	COAL FLOW TO CYCLONE 8-3	0.00	KLBH	
013	138 KV BUS VOLTAGE	0.00	KV	08PLS01:P4001	GENERATOR OUTPUT	0.00	COUNTS	
020	COLD H2 FROM COOLER 1 TEMP	27.24	DEG C	08PLS01:P4002	COAL FLOW TO CYCLONE 8-1	0.00	COUNTS	
022	COLD H2 FROM COOLER 3 TEMP	32.95	DEG C	08PLS01:P4003	COAL FLOW TO CYCLONE 8-2	0.00	COUNTS	
024	STATOR COOLING WATER INLET TEMP	28.80	DEG C	08PLS01:P4004	COAL FLOW TO CYCLONE 8-3	0.00	COUNTS	
026	GENERATOR STATOR SLOT TEMP	39.56	DEG C	08PLS02:D4005	COAL FLOW TO CYCLONE 8-4	0.00	KLBH	
028	GENERATOR STATOR SLOT TEMP	40.34	DEG C	08PLS02:D4006	COAL FLOW TO CYCLONE 8-5	0.00	KLBH	
030	GENERATOR STATOR SLOT TEMP	40.08	DEG C	08PLS02:D4007	COAL FLOW TO CYCLONE 8-6	0.00	KLBH	
032	GENERATOR STATOR SLOT TEMP	41.96	DEG C	08PLS02:D4008	COAL FLOW TO CYCLONE 8-7	0.00	KLBH	
033	GENERATOR STATOR SLOT TEMP	42.09	DEG C	08PLS02:D4009	COAL FLOW TO CYCLONE 8-8	0.00	KLBH	
034	GENERATOR STATOR SLOT TEMP	41.48	DEG C	08PLS02:P4005	COAL FLOW TO CYCL 8-4	0.00	COUNTS	
038	COLLECTOR HOUSING AIR IN TEMP	25.94	DEG C	08PLS02:P4006	COAL FLOW TO CYCL 8-5	0.00	COUNTS	
041	GENERATOR HYDROGEN PURITY	105.32	PCT	08PLS02:P4007	COAL FLOW TO CYCL 8-6	0.00	COUNTS	
042	STATOR COOLNG WATER CONDUCTIVY	0.01	MMHO	08PLS02:P4008	COAL FLOW TO CYCL 8-7	0.00	COUNTS	
083	GENERATOR WEST BUS DUCT TEMP	48.53	DEG C	08PLS02:P4009	COAL FLOW TO CYCL 8-8	0.00	COUNTS	
084	GENERATOR EAST BUS DUCT TEMP	48.42	DEG C	08VAIN:A9043	STARTUP BFP SPEED	0.00	RPM	
085	GENERATOR HYDROGEN PRESSURE	29.87	PSIG	08VAIN:A9073HA	CNDS MKUP 60 MIN AVG (TESTPOINT)	36.27	none	
068	SOOT BLOWER HEADER PRESSURE	252.78	PSI	08VAIN:A9073TA	CNDS MKUP 10 MIN AVG (TESTPOINT)	20.82	GPM	
063	MAIN STEAM FLOW TO BFP'S	0.00	KPPH	08VAIN:A9113	SUBFP DISCHARGE PRESS	5.86	PSIG	
091	SECONDARY SUPHTR OUTLET PRESSURE	3482.62	PSIG	08VAIN:A9322	CONDENSATE CONDUCTIVITY	0.16	MMHO	
092	THROTTLE PRESS FOXBORO CONTROL	3410.00	PSIG	08VAIN:A9323	HOTWELL CONDUCTIVITY	0.15	MMHO	
093	STEAM CHEST PRESSURE	3388.09	PSIG	08VAIN:A9329	ECON INLET CATION CONDUCTIVITY	0.14	MMHO	
094	TURBINE FIRST STAGE PRESSURE	2077.34	PSIG	08VAIN:A9330	ECON INLET CATION CONDUCTIVITY	0.14	MMHO	
095	HOT REHEAT PRESS AT IP TURBINE	495.37	PSIG	08VAIN:A9335	BFP CONDENSER CATION CONDUCTIVTY	0.29	MMHO	
096	HRH PRESSURE LEAVING BOILER	512.03	PSIG	08VAIN:A9336	GLYCOL HTR CATION CONDUCTIVITY	0.17	MMHO	
097	COLD REHEAT AT TURBINE EXHAUST	533.31	PSIG	08VAIN:A9567	AIR HTR AIR IN TEMP	172.61	DEGF	
19	HP STEAM PRESSURE TO 8W BFP TURB	3407.85	PSIG	08VAIN:A9568	AIR HTR GAS OUT TEMP	314.14	DEGF	
20	HP STEAM PRESSURE TO 8E BFPT	3390.56	PSIG	08VAIN:A9570	8W SH INLET GAS TEMP	1517.47	DEGF	
39	COMPUTER THROTTLE PRESSURE	3420.51	PSIG	08VAIN:A9571	8E SH INLET GAS TEMP	250.00	DEGF	
007	MAIN STEAM TEMPERATURE AT SV1	1003.03	DEG F	08VAIN:A9746AM	SH PERCENT PLUGGED	-2.00	*	
008	MAIN STEAM TEMPERATURE AT SV2	1003.41	DEG F	08VAIN:A9747AM	RH PERCENT PLUGGED	-2.00	*	

67	MAIN TURBINE OIL HEADER PRESSURE	231.69	PSIG	08VAIN:A9748AM	F SH PERCENT PLUGGED	-2.00	%
38	MN TURB BEARING OIL HEADER PRES	26.97	PSIG	08VAIN:A9750AM	U ECON PERCENT PLUGGED	-2.00	%
89	MAIN TURB OIL PMP SUCTION PRESS	30.46	PSIG	08VAIN:A9751AM	L ECON PERCENT PLUGGED	-2.00	%
90	MAIN TURBINE STEAM SEAL PRESSURE	5.00	PSIG	08VAIN:EASTAVG	3RD PASS EAST WALL	756.13	DEG
25	TURBINE BEARING 5 METAL TEMP	285.60	DEG F	08VAIN:EHRHTUBE	HOT REHEAT TUBES E AVG	1027.31	DEG
26	TURBINE BEARING 6 METAL TEMP	285.60	DEG F	08VAIN:FRONTAVG	3RD PASS FRONT WALL	769.18	DEG F
76	TURBINE BEARING 1 VIBRATION	1.40	MILS	08VAIN:REARAVG	3RD PASS REAR SCRN	100.00	DEGF
77	TURBINE BEARING 2 VIBRATION	3.45	MILS	08VAIN:REARAVG1	3RD PASS REAR SCRN1	743.25	DEG
78	TURBINE BEARING 3 VIBRATION	2.69	MILS	08VAIN:REARAVG2	3RD PASS REAR SCRN 2	744.57	DEG
79	TURBINE BEARING 4 VIBRATION	2.66	MILS	08VAIN:REARAVG3	3RD PASS REAR SCRN 3	755.52	DEG
80	TURBINE BEARING 5 VIBRATION	1.17	MILS	08VAIN:V0005	TOTAL UNIT AUX POWER	22.80	MW
81	TURBINE BEARING 6 VIBRATION	1.41	MILS	08VAIN:V0010	NET POWER	299.41	MW
82	TURBINE BEARING 7 VIBRATION	1.52	MILS	08VAIN:V0020	MIN HYDROGEN GAS TEMP	24.00	DEGC
83	TURBINE BEARING 8 VIBRATION	1.46	MILS	08VAIN:V0040	AVG HOT RH 1P INLT STM T	999.85	DEG
84	TURBINE SPEED	3598.83	RPM	08VAIN:V0045	AVG CIRC WTR INLT TEMP	56.63	DEG

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50	AVG CW CNDSR(1E) E OUT T	98.43	DEG F	08VAIN:V0492	CONV PASS / FLSH TNK TEMP ROC	9.64	DEG
52	AVG CW CNDSR(1E) W OUT T	97.39	DEG F	08VAIN:V0495	STOP VLV MTL TEMP ROC	7.05	DEGF
53	AVG FIRST PASS TUBE TEMP	718.80	DEG F	08VAIN:V0505	HTR 1E FW TEMP RISE	29.99	DEGF
55	AVG CW CNDSR(1W) W OUT T	87.08	DEG F	08VAIN:V0510	HTR 1W FW TEMP RISE	35.92	DEGF
57	AVG CW CNDSR(1W)E OUT T	90.29	DEG F	08VAIN:V0515	HTR 2 FW TEMP RISE	32.62	DEG
60	HOTTEST EXH HOOD TEMP	92.88	DEGF	08VAIN:V0520	HTR 3 FW TEMP RISE	54.69	DEG
65	AVG EXT STM HTR 1 PRESS	-8.46	PSIG	08VAIN:V0525	HTR 4 FW TEMP RISE	-4.00	DEG
70	TOTAL AIR FLOW TO BOILER	2829.28	KLBH	08VAIN:V0530	HTR 5 FW TEMP RISE	94.54	DEGF
75	TOTAL COAL FLOW	296.37	KLBH	08VAIN:V0535	HTR 6E FW TEMP RISE	76.06	DEGF
80	TOTAL FUEL GAS FLOW	1.07	KCFH	08VAIN:V0540	HTR 6W FW TEMP RISE	204.00	DEGF
90	NET TURBINE HEAT RATE	9404.69	BTU/KW	08VAIN:V0545	HTR 7E FW TEMP RISE	87.61	DEGF
45	HIGH PRESS TURBINE EFF	74.83	MV	08VAIN:V0550	HTR 7W FW TEMP RISE	90.09	DEGF
50	INTERMEDIATE PRESS TURBINE EFF	95.86	MV	08VAIN:V0555	AVG HTR (6W&E) DRAIN PRESS	194.05	PSIG
60	AH COLD END TEMP	20.12	MV	08VAIN:V0560	AVG HTR (7W&E) DRAIN PRESS	357.00	PSIG
85	RESERVE AUX POWER	-0.80	MW	08VAIN:V0565	AVG HTR 7W&E EXTR STM PR	534.63	PSIG
90	AUX POWER	15.77	MW	08VAIN:V0570	AVG HTR 6W&E EXTR STM PR	204.26	PSIG
95	AVG BFP SUCTION PRESSURE	121.84	PSIG	08VAIN:V0575	AVG MAIN STEAM TEMP	999.50	DEG
00	AVG HTR (1W&E) DRAIN PRESS	-0.30	PSIG	08VAIN:V0576	AVG PRI SUPHTR OUT TEMP	814.25	DEG
05	AVG BFP(N&S) COND PRESS	2.36	none	08VAIN:V0577	AVG SEC SUPHTR OUT TEMP	1005.75	DEG F
10	AVG HTR2 EXTR STM TEMP	166.15	DEG F	08VAIN:V0578	AVG MAIN STM AT SV TEMP	999.50	DEG F
15	AVG FW TEMP FRM HTR 7E&W	476.34	DEG F	08VAIN:V0579	AVG HRH STM AT RH/SV TMP	999.85	DEG
20	AVG FW TEMP FRM HTR 6E&W	387.49	DEG F	08VAIN:V0580	AVG HTR 6W&E EXTR STM PR	800.55	DEG
25	AVG HTR 7E&W DRAIN TEMP	404.87	DEG F	08VAIN:V0585	AVG HTR 7W&E EXTR STM PR	569.19	DEG
30	AVG HTR 6E&W DRAIN TEMP	330.19	DEG F	08VAIN:V0590	AVG HTR 1W&E OUT COND PR	129.29	none
35	AVG HTR 1E&W DRAIN TEMP	124.51	DEG F	08VAIN:V0595	AVG COLD REHEAT STM TEMP	570.47	DEG F
50	AVG MN CND(E&W) CW OUT T	93.30	DEGF	08VAIN:V0600	AVG GLYCO HTR DRAIN TEMP	219.94	DEG F
55	AVG MN CND(E&W) CW IN T	56.63	DEG F	08VAIN:V0605	AVG CONDENSER PRESSURE	1.35	IN H
65	AVG AH N&S AIR INLT TEMP	91.39	DEG F	08VAIN:V0610	AVG HTR 1W&E IN COND TMP	95.90	DEG
94	AVG MAIN STEAM TEMP AT STOP VLVS	999.50	DEG F	08VAIN:V0615	AVG CW FR WBBFP CNDSR OUT	75.98	DEG
95	AVG HOT RH STM TEMP	999.85	DEG F	08VAIN:V0620	AVG CW FR EBFP CNDSR OUT	71.81	DEG F
05	1ST STG IN-OUT MTL TEMP DIFF	201.27	DEGF	08VAIN:V0625	EAST PRECIP OUT AVG TEMP	352.12	DEG F
10	RH BWL IN-OUT MTL TEMP DIFF	-4.00	DEGF	08VAIN:V0630	WEST PRECIP OUT AVG TEMP	345.49	DEG
15	EXT V IN-OUT SURF MTL TEMP DIFF	143.57	DEGF	08VAIN:V0640	AVG COAL FLOW	57.05	%
35	THROTTLE/REHEAT STEAM TEMP DIFF	0.35	DEGF	08VAIN:V5120	HOT REHEAT STEAM FLOW	0.00	KPPH
40	ECON INLET COND DIFF	0.38	MMHO	08VAIN:V5140	GROSS TURBINE HEAT RATE	8740.83	BTU/KW
45	STOP VALVE TEMP DIFF	15.03	DEGF	08VAIN:V5165	CHG IN HR DUE TO MN STM TMP DEV	-0.59	BTU/KW
75	MAX 1ST PASS RISER TEMP	718.57	DEG F	08VAIN:V5180	CHG IN HR DUE TO RH STM TMP DEV	-3.39	BTU/KW
90	MAX 1ST PASS RISR RW PN	828.29	DEG F	08VAIN:V5215	CHG IN HR DUE TO MN STM PR DEV	2.84	BTU/
05	MAX FURN EXT SCN WAL TUB	1028.35	DEG F	08VAIN:V5250	CHG IN HR DUE TO CND PRESS DEV	-40.00	BTU/
10	MAX 3RD PASS RISER TEMP	1054.22	DEG F	08VAIN:V5300	CHG IN HR DUE TO RH SPRAY FLOW	31.74	BTU/
15	MAX PRI SH OUTLT LEG TMP	794.16	DEG F	08VAIN:V5350	GROSS CORR TURBINE HEAT RATE	0.00	BTU/KW

.20	MAX 3RD PASS S WALL TEMP	783.14	DEG F	08VAIN:V5735			
.25	MAX 3RD PASS SCREEN TEMP	822.02	DEG F	08VAIN:V5740	LP HTR 2 DRAIN CLR TEMP DIFF	0.00	DEGF
.35	MAX IN PLAT OUTLET TEMP	915.35	DEG F	08VAIN:V5745	LP HTR 3 DRAIN CLR TEMP DIFF	13.64	DEGF
.40	MAX SSH OUTLET LEG TEMP	1200.00	DEG F	08VAIN:V5750	LP HTR 4 DRAIN CLR TEMP DIFF	-4.00	DEGF
.46	MAX SSH INT OUTLET TEMP	950.99	DEG F	08VAIN:V5755	HP HTR 6E DRAIN CLR TEMP DIFF	9.48	DEGF
.47	MAX CONV PASS SW RISER T	782.83	DEG F	08VAIN:V5760	HP HTR 6W DRAIN CLR TEMP DIFF	10.06	DEGF
.50	1ST STG SHELL INNER MTL TMP ROC	7.32	DEGF/H	08VAIN:V5765	HP HTR 7E DRAIN CLR TEMP DIFF	16.67	DEGF
.55	RH BOWL INNER SURF MTL TMP ROC	12.20	DEGF/H	08VAIN:V5770	HP HTR 7W DRAIN CLR TEMP DIFF	18.12	DEGF
.60	EX V CHST OUTR SURF MTL TMP ROC	7.05	DEGF/H	08VAIN:V5775	LP HTR 1E TTD	62.01	DEGF
.65	GROSS GEN LOAD ROC	-2.83	MW/HR	08VAIN:V5780	LP HTR 1W TTD	19.17	DEGF
.70	THROTTLE STEAM TEMP ROC	0.00	DEGF/H	08VAIN:V5785	LP HTR 2 TTD	3.79	DEGF
.75	THROTTLE STEAM PRESS ROC	-10.00	PSI/HR	08VAIN:V5790	LP HTR 3 TTD	28.28	DEGF
.80	CONV PASS OUTLET TEMP ROC	19.28	DEGF/H	08VAIN:V5795	LP HTR 4 TTD	-2.00	DEGF
.85	FIRST PASS COOLING TEMP ROC	1.21	DEGF/H	08VAIN:V5805	HP HTR 6E TTD	0.24	DEGF
.90	FEEDWATER ECON INLET TEMP ROC	0.00	DEGF/H	08VAIN:V5810	HP HTR 6W TTD	3.16	DEGF

.15	HP HTR 7E TTD	-0.79	DEGF	CP05I:B12	SEC AIR 8_3 DMPR POS FEEDBACK	59.91	%
.20	HP HTR 7W TTD	0.10	DEGF	CP05I:B13	GAS VLV 8_3 POS FEEDBACK	43.00	%
.75	BOILER EFF I/O	67.91	%	CP05I:B9	SEC AIR 8_1 DMPR POS FEEDBACK	65.23	%
.20	BOILER EFF H/L	85.37	%	CP06AM:B1A	AM AIN BLOCK	68.99	%
.70	CONDENSER CLEANLINESS FACTOR	102.00	%	CP06AM:B2A	AM AIN BLOCK	74.26	%
.75	APH AIR SIDE EFFECTIVENESS	78.64	%	CP06AM:B3A	AM AIN BLOCK	71.96	%
.80	APH GAS SIDE EFFECTIVENESS	72.60	%	CP06AM:B4A	AM AIN BLOCK	46.19	%
.93	NET UNIT HEAT RATE	10200.00	BTU/KW	CP06AM:B5A	AM AIN BLOCK	87.70	%
.95	NUHR (HL)	11016.00	BTU/KW	CP06AM:B6A	AM AIN BLOCK	68.10	%
.10	CORRECTED NET UNIT HEAT RATE	0.00	BTU/KW	CP06AM:B7A	AM AIN BLOCK	74.21	%
.20	OFF BOGEY BOILER EFF (HL)	85.37	%	CP06I:B10	GAS VLV 8_5 POS FEEDBACK	46.64	%
.30	OFF BOGEY BOILER EFF (HL)	0.14	%	CP06I:B11	SEC AIR 8_6 DMPR POS FEEDBACK	71.55	%
.95	BFP W EFFICIENCY	0.00	%	CP06I:B8	SEC AIR 8_4 DMPR POS FEEDBACK	66.85	%
.55	BFP E EFFICIENCY	0.00	%	CP06I:B9	SEC AIR 8_5 DMPR POS FEEDBACK	69.70	%
.00N	CYCL 1 AIR/FUEL RATIO	9.35	%	CP07AM:B1A	AM AIN BLOCK	59.63	%
.05N	CYCL 2 AIR/FUEL RATIO	9.63	%	CP07AM:B2A	AM AIN BLOCK	45.79	%
.10N	CYCL 3 AIR/FUEL RATIO	9.32	%	CP07AM:B3A	AM AIN BLOCK	73.21	%
.15N	CYCL 4 AIR/FUEL RATIO	9.39	%	CP07AM:B4A	AM AIN BLOCK	85.85	%
.20N	CYCL 5 AIR/FUEL RATIO	9.34	%	CP07AM:B5A	AM AIN BLOCK	76.03	%
.25N	CYCL 6 AIR/FUEL RATIO	9.38	%	CP07AM:B6A	AM AIN BLOCK	31.72	%
.30N	CYCL 7 AIR/FUEL RATIO	9.70	%	CP07I:B10	GAS VLV 8-7 POS FEEDBACK	47.51	%
.35N	CYCL 8 AIR/FUEL RATIO	9.35	%	CP07I:B11	SEC AIR 8-8 DMPR POS FEEDBACK	82.77	%
.40N	CYCL AIR/FUEL RATIO AVG	9.43	%	CP07I:B9	SEC AIR 8-7 DMPR POS FEEDBACK	64.93	%
.01	AVG E. A HTR GAS OUT TMP	372.94	DEG F	CP08AM:B1A	AM AIN BLOCK	73.79	%
.02	AVG W. A HTR GAS OUT TMP	354.45	DEG F	CP08AM:B2A	AM AIN BLOCK	73.78	%
.03	TOT AVG A.H. GAS OUT TEMP	363.70	DEG F	CP08AM:B3A	AM AIN BLOCK	86.04	%
.01	AVG HRHSTM AT HR/SV ROC	19.97	DEGF/H	CP08AM:B4A	AM AIN BLOCK	86.00	%
.03	AVG SEC SH OUTLET ROC	3.18	DEGF/H	CP08I:B11	FD FAN EAST INLET VANE POS. FDBK	75.17	%
.05	AVG PRI SH OUTLET ROC	0.00	DEGF/H	CP08I:B12	FD FAN WEST INLET VANE POS. FDBK	74.46	%
.74	CORNING HT 02 EAST AVG	2.47	PCT	CP08I:B13	ID FAN EAST INLET VANE POS. FDBK	77.51	%
.75	CORNING HT 02 WEST AVG	2.68	PCT	CP08I:B14	ID FAN WEST INLET DMPR POS. FDBK	74.09	%
TAVG	3RD PASS WEST WALL	644.45	DEG F	CP09AM:B1A	AM AIN BLOCK	16.35	%
HTUBE	HOT REHEAT TUBES W AVG	961.46	DEG F	CP09AM:B2A	AM AIN BLOCK	99.96	%
	AM AIN BLOCK	86.25	%	CP09AM:B3A	AM AIN BLOCK	100.02	%
	AM AIN BLOCK	92.68	%	CP09AM:B4A	AM AIN BLOCK	0.02	%
	AM AIN BLOCK	3.11	%	CP09AM:B5A	AM AIN BLOCK	0.00	%
	AM AIN BLOCK	69.44	%	CP09AM:B6A	AM AIN BLOCK	84.62	%
	MDBFP SCOOP TUBE POS FEEDBACK	2.96	%	CP09AM:B7A	AM AIN BLOCK	84.62	%
	CONDENSATE VALVES POS FEEDBACK	-2.00	%	CP09I:B10	WEST GAS RECIRC DMPR DRIVES FBK	0.65	%
	TDBFP EAST SPD POS FEEDBACK	-2.00	%	CP09I:B11	EAST GAS TEMPERING DMPR DR FBK	91.89	%
	TDBFP WEST SPD POS FEEDBACK	-2.00	%	CP09I:B12	WEST GAS TEMPERING DMPR DR FBK	85.30	%

A	AM AIN BLOCK	48.68	%	CP091:B13	GAS RECIRC FAN AMPS EAST	128.79	AMPS
A	AM AIN BLOCK	31.14	%	CP091:B14	GAS RECIRC FAN AMPS WEST	137.43	AMPS
A	AM AIN BLOCK	31.11	%	CP091:B7	GAS RECIRC FAN INLET DMPR E FBK	94.13	%
A	AM AIN BLOCK	68.34	%	CP091:B8	GAS RECIRC FAN INLET DMPR W FBK	95.22	%
A	AM AIN BLOCK	50.35	%	CP091:B9	EAST GAS RECIRC DMPR DRIVES FBK	102.00	%
A	AM AIN BLOCK	73.96	%	CP10AM:B1A	AM AIN BLOCK	99.99	%
A	AM AIN BLOCK	66.49	%	CP10AM:B2A	AM AIN BLOCK	0.01	%
A	AM AIN BLOCK	74.70	%	CP10AM:B3A	AM AIN BLOCK	0.02	%
A	AM AIN BLOCK	59.13	%	CP11AM:B1A	AM AIN BLOCK	0.03	%
A	AM AIN BLOCK	42.75	%	CP111:B1	I81012 INPUTS	115.37	DEGF
A	AM AIN BLOCK	74.09	%	CP111:B1B	HYDROGEN TEMP	30.10	DEGC
	GAS VLV 8_1 POS FEEDBACK	50.92	%	RECORDERS:ZERO_OUT	OUTPUT ZERO TO UNUSED PENS	0.00	%
	SEC AIR 8_2 DMPR POS FEEDBACK	64.89	%				

DAILY SUMMARY REPORT
For 88_U8_Opacity %

From: 12/10/99 00:00
To: 12/11/99 00:00
Printed: 12/13/99

NIPSCO
Bailly Generating Station
Unit #8

12/10/99 — Six Minute Values

Hour	00	06	12	18	24	30	36	42	48	54
00	3.0	4.0	3.0	3.0	5.0	7.0	4.0	4.0	4.0	4.0
01	4.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	3.0	3.0
02	6.0	5.0	4.0	4.0	4.0	4.0	3.0	5.0	3.0	3.0
03	3.0	6.0	3.0	3.0	4.0	4.0	3.0	4.0	5.0	4.0
04	4.0	3.0	3.0	5.0	4.0	4.0	3.0	3.0	3.0	11.0
05	4.0	4.0	5.0	5.0	CAL	5.0	4.0	7.0	6.0	4.0
06	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0	5.0	5.0
07	6.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0	7.0	8.0
08	5.0	5.0	5.0	6.0	6.0	6.0	7.0	7.0	8.0	7.0
09	7.0	9.0	7.0	6.0	6.0	7.0	6.0	6.0	6.0	9.0
10	7.0	6.0	7.0	7.0	7.0	7.0	7.0	8.0	8.0	8.0
11	10.0	9.0	7.0	7.0	7.0	7.0	7.0	7.0	6.0	7.0
12	8.0	8.0	10.0	7.0	8.0	8.0	7.0	6.0	7.0	6.0
13	7.0	6.0	9.0	7.0	6.0	6.0	7.0	8.0	6.0	7.0
14	7.0	7.0	7.0	6.0	6.0	9.0	6.0	6.0	6.0	6.0
15	5.0	5.0	5.0	8.0	5.0	5.0	9.0	6.0	4.0	5.0
16	4.0	4.0	4.0	4.0	4.0	4.0	5.0	13.0	4.0	5.0
17	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0
18	4.0	4.0	5.0	4.0	5.0	5.0	7.0	6.0	5.0	5.0
19	5.0	4.0	4.0	5.0	9.0	5.0	6.0	5.0	5.0	5.0
20	4.0	4.0	5.0	6.0	8.0	5.0	5.0	5.0	4.0	8.0
21	5.0	5.0	4.0	5.0	5.0	5.0	4.0	4.0	4.0	6.0
22	4.0	4.0	5.0	5.0	4.0	6.0	9.0	4.0	4.0	4.0
23	3.0	4.0	3.0	3.0	3.0	4.0	5.0	4.0	5.0	4.0

12/10/99 — DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
5.4	0	6	0	6	1434

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

			Other	I
12/10/99	05:31:00 05:34:00			
Span 0	05:31:00 05:34:00	0.0	-0.2	0.2

Point	24_Load	28_SO2i-n#m	28_SO2o-ut#m	28_NOx#m	35_Heat-Hr
Units	MWatts	#/mmBtu	#/mmBtu	#/mmBtu	mmBtu
Full Scale	1000	9.000	2.000	4.000	20000.000
12/10/99 00	344	5.034	0.234!	1.114!	3728.219!
12/10/99 01	345	5.045	0.242!	1.133!	3670.282!
12/10/99 02	345	4.985	0.242!	1.135!	3682.982!
12/10/99 03	345	5.000	0.238!	1.148!	3681.437!
12/10/99 04	373	4.971	0.239!	1.152!	4157.820!
12/10/99 05	441	4.953	0.253!	1.349!	4992.402!
12/10/99 06	484	4.995	0.289!	1.395!	5711.498!
12/10/99 07	492	4.849	0.286!	1.436!	5732.874!
12/10/99 08	489	4.198>	0.267>!	1.477>!	5510.555>!
12/10/99 09	490	3.394	0.174!	1.532!	5615.940!
12/10/99 10	490	3.352	0.164!	1.545!	5794.942!
12/10/99 11	490	3.433	0.183!	1.568!	6296.206!
12/10/99 12	491	3.280	0.177!	1.579!	6283.160!
12/10/99 13	488	3.254	0.156!	1.587!	6183.286!
12/10/99 14	482	3.258	0.148!	1.567!	6181.920!
12/10/99 15	401	3.387	0.124!	1.333!	4562.767!
12/10/99 16	418	3.617	0.137!	1.323!	5018.872!
12/10/99 17	437	3.742	0.151!	1.424!	5200.839!
12/10/99 18	479	3.742	0.170!	1.580!	6075.021!
12/10/99 19	480	3.645	0.168!	1.595!	6062.977!
12/10/99 20	479	3.458	0.157!	1.582!	6099.054!
12/10/99 21	461	3.369	0.148!	1.524!	5702.264!
12/10/99 22	371	3.467	0.120!	1.256!	4373.587!
12/10/99 23	356	3.315	0.109!	1.156!	4147.884!
Average	436	3.989	0.191	1.395	5186.116
Minimum	344	3.254	0.109	1.114	3670.282
Maximum	492	5.045	0.289	1.595	6296.206
Missing (%)	0.00	0.00	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00	100.00	100.00
Available(%)	NA	NA	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

DAILY SUMMARY REPORT
For 59_U7_Opacity %

From: 12/10/99 00:00
To: 12/11/99 00:00
Printed: 12/13/99

NIPSCO
Bailly Generating Station
Unit #7

12/10/99 — Six Minute Values

Hour	00	06	12	18	24	30	36	42	48	54
00	20.0	14.0	12.0	17.0	20.0	15.0	15.0	15.0	19.0	16.0
01	14.0	15.0	12.0	20.0	16.0	16.0	16.0	20.0	12.0	13.0
02	18.0	20.0	12.0	16.0	13.0	22.0	12.0	16.0	12.0	14.0
03	21.0	17.0	12.0	23.0	14.0	11.0	16.0	21.0	13.0	16.0
04	13.0	23.0	17.0	16.0	15.0	13.0	26.0	19.0	15.0	23.0
05	20.0	12.0	14.0	21.0	21.0	13.0	CAL	34.0	28.0	14.0
06	22.0	13.0	23.0	31.0	23.0	13.0	37.0	11.0	9.0	23.0
07	35.0	13.0	21.0	11.0	34.0	12.0	20.0	13.0	10.0	36.0
08	19.0	14.0	33.0	18.0	11.0	19.0	30.0	20.0	16.0	18.0
09	25.0	25.0	16.0	21.0	12.0	26.0	23.0	22.0	17.0	28.0
10	12.0	13.0	19.0	24.0	12.0	22.0	12.0	30.0	12.0	21.0
11	12.0	13.0	36.0	21.0	13.0	33.0	12.0	10.0	21.0	28.0
12	15.0	16.0	15.0	26.0	17.0	16.0	18.0	12.0	31.0	19.0
13	18.0	20.0	21.0	11.0	17.0	22.0	21.0	13.0	20.0	15.0
14	22.0	12.0	23.0	12.0	15.0	18.0	21.0	11.0	18.0	11.0
15	10.0	21.0	18.0	12.0	19.0	14.0	18.0	12.0	18.0	15.0
16	12.0	19.0	16.0	15.0	15.0	13.0	13.0	15.0	14.0	14.0
17	17.0	10.0	12.0	12.0	16.0	10.0	10.0	13.0	17.0	12.0
18	14.0	15.0	11.0	15.0	12.0	16.0	15.0	13.0	12.0	16.0
19	15.0	13.0	12.0	13.0	18.0	13.0	11.0	14.0	11.0	12.0
20	12.0	13.0	12.0	12.0	11.0	14.0	14.0	11.0	11.0	11.0
21	17.0	13.0	11.0	12.0	14.0	13.0	10.0	11.0	14.0	12.0
22	11.0	12.0	25.0	13.0	12.0	12.0	16.0	16.0	11.0	11.0
23	15.0	15.0	20.0	19.0	15.0	12.0	13.0	15.0	16.0	15.0

12/10/99 — DAILY SUMMARY

Limit 0.0 %

Daily Avg	*Total Min. In Excess	Time Out Of Service	Time Unit Off Line	Time In Cal	Time In Service
16.6	0	6	0	6	1434

*Calculated using 40CFR 60.42a(b), 1 excess between 40% - 40% allowed per hr

12/10/99			Other	
Span 0	05:43:00 05:46:00	0.0	0.2	0.2
Span 1	05:40:00 05:43:00	45.0	46.6	1.6

Point	24_NOx	24_CO2o-ut	24_Flow	24_Load	24_Heat7
Units	ppm	%	SCFH	MWatts	mmBtu
Full Scale	1500.0	20.0	150000000.0	1000	5000.000
12/10/99 00	518.3!	10.0!	67107936.0!	344	1300.542!
12/10/99 01	527.0!	10.0!	66065079.6!	345	1276.620!
12/10/99 02	528.3!	10.0!	66293675.1!	345	1281.037!
12/10/99 03	534.0!	10.0!	66265872.8!	345	1291.171!
12/10/99 04	552.3!	10.3!	72660929.8!	373	1627.458!
12/10/99 05	665.3!	10.6!	84776638.7!	441	1720.737!
12/10/99 06	700.8!	10.8!	95191639.2!	484	2017.905!
12/10/99 07	721.5!	10.8!	95547893.8!	492	1992.523!
12/10/99 08	701.0>!	10.2>!	97245081.8!	489	1904.466>!
12/10/99 09	770.0!	10.8!	93599002.2!	490	1925.465!
12/10/99 10	791.0!	11.0!	94826327.1!	490	1975.011!
12/10/99 11	802.3!	11.0!	103028820.2!	490	2145.850!
12/10/99 12	808.3!	11.0!	102815353.1!	491	2137.042!
12/10/99 13	819.5!	11.1!	100269508.8!	488	2090.660!
12/10/99 14	809.3!	11.1!	100247346.8!	482	2116.217!
12/10/99 15	663.8!	10.7!	76756829.1!	401	1877.448!
12/10/99 16	677.0!	11.0!	82126997.2!	416	1993.141!
12/10/99 17	729.0!	11.0!	85104639.7!	437	1963.704!
12/10/99 18	823.5!	11.2!	97634264.3!	479	2194.110!
12/10/99 19	823.8!	11.1!	98318542.8!	480	2197.829!
12/10/99 20	831.8!	11.3!	97153071.9!	479	2202.790!
12/10/99 21	794.3!	11.2!	91643521.7!	461	2139.895!
12/10/99 22	619.3!	10.6!	74268460.8!	371	2086.590!
12/10/99 23	570.0!	10.8!	70435772.8!	356	1642.842!
Average	699.2	10.7	86640966.9	436	1879.211
Minimum	518.3	10.0	66065079.6	344	1276.620
Maximum	831.8	11.3	103028820.2	492	2202.790
Missing (%)	0.00	0.00	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00	100.00	100.00
Available(%)	NA	NA	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

Point	24_Heat8	24_NOX#m	24_CO2in
Units	mmBtu	#/mmBtu	%
Full Scale	5000.000	4.000	20.0
12/10/99 00	2438.515!	1.114!	11.2
12/10/99 01	2393.662!	1.133!	11.2
12/10/99 02	2391.269!	1.135!	11.2
12/10/99 03	2390.266!	1.148!	11.1
12/10/99 04	2530.362!	1.152!	11.3
12/10/99 05	3271.665!	1.349!	11.8
12/10/99 06	3693.593!	1.395!	11.9
12/10/99 07	3740.351!	1.436!	11.9
12/10/99 08	3606.089>!	1.477>!	12.0>
12/10/99 09	3690.475!	1.532!	12.3
12/10/99 10	3819.931!	1.545!	12.4
12/10/99 11	4150.356!	1.568!	12.4
12/10/99 12	4146.118!	1.579!	12.5
12/10/99 13	4092.626!	1.587!	12.4
12/10/99 14	4065.703!	1.567!	12.3
12/10/99 15	2685.319!	1.333!	11.9
12/10/99 16	3037.738!	1.323!	12.2
12/10/99 17	3237.135!	1.424!	12.3
12/10/99 18	3880.911!	1.580!	12.5
12/10/99 19	3865.148!	1.595!	12.5
12/10/99 20	3896.264!	1.582!	12.5
12/10/99 21	3562.369!	1.524!	12.4
12/10/99 22	2286.997!	1.256!	11.8
12/10/99 23	2505.042!	1.156!	11.7
Average	3307.413	1.395	12.0
Minimum	2286.997	1.114	11.1
Maximum	4150.356	1.595	12.5
Missing (%)	0.00	0.00	0.00
Invalid (%)	0.00	0.00	0.00
O O Cal (%)	0.00	0.00	0.00
In Cal (%)	0.00	0.00	0.00
Valid (%)	100.00	100.00	100.00
Available(%)	NA	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

Point	55_Flow-MACFM	56_Flow-MACFM
Units	MACM	MACFM
Full Scale	2.500	2.500
12/10/99 00	1.335!	1.390@
12/10/99 01	1.333!	1.387@
12/10/99 02	1.317!	1.418@
12/10/99 03	1.334!	1.402@
12/10/99 04	1.443!	1.469@
12/10/99 05	1.701!	1.646@
12/10/99 06	1.889!	1.771@
12/10/99 07	1.920!	1.789@
12/10/99 08	1.924!	1.805@
12/10/99 09	1.874!	1.834@
12/10/99 10	1.876!	1.825@
12/10/99 11	2.060!	1.839@
12/10/99 12	2.028!	1.827@
12/10/99 13	2.006!	1.778@
12/10/99 14	1.974!	1.745@
12/10/99 15	1.529!	1.491@
12/10/99 16	1.615!	1.558@
12/10/99 17	1.692!	1.597@
12/10/99 18	1.918!	1.722@
12/10/99 19	1.959!	1.734@
12/10/99 20	1.911!	1.720@
12/10/99 21	1.826!	1.651@
12/10/99 22	1.458!	1.433@
12/10/99 23	1.398!	1.384@
Average	1.722	1.634
Minimum	1.317	1.384
Maximum	2.060	1.839
Missing (%)	0.00	0.00
Invalid (%)	0.00	0.00
O O Cal (%)	0.00	0.00
In Cal (%)	0.00	0.00
Valid (%)	100.00	100.00
Available(%)	NA	NA

M MissingData	F PowerFailure	P InPurge	f DiscreteMissing
D Downed	C InCalibration	O Part60-OOC	O Part75-OOC
B NoSamples	< TooFewSamples	r Reserved_1	u Reserved_2
A HighAlarm	a LowAlarm	m EPA_MinCO2MaxO2	G EPA_AppG_CO2
> EnoughSamples	E Edited	S StackOffline	! PrimaryMonitor
@ BackupMonitor	# Alternate	$ ReferenceMethod	% Parametric
^ Average_HB_HA	& Init_QA_Hrs_Avg	* 90thPercentile	(95thPercentile
) BinMaximum	- BinAverage	+ MaxPotential	¦ Other

From: 12/10/99 00:00
To: 12/11/99 00:00

Date / Span Number	Start Time	End Time	Cal. Type / Expected	Drift Calculation / Actual	Drift Value	Status
Data Group 6MinInlet						
Analog Point 04_Opacity7			Units %			
12/10/99	05:40:00	05:46:00	Other	Absolute Difference		
Span 0	05:43:00	05:46:00	0.0	0.2	0.2	
Span 1	05:40:00	05:43:00	45.0	46.6	1.6	
Data Group 6MinInlet						
Analog Point 04_Opacity8			Units %			
12/10/99	05:28:00	05:34:00	Other	Absolute Difference		
Span 0	05:31:00	05:34:00	0.0	-0.2	0.2	
Span 1	05:28:00	05:31:00	45.0	45.1	0.1	
12/10/99	05:31:00	05:34:00	Other	Absolute Difference		I
Span 0	05:31:00	05:34:00	0.0	-0.2	0.2	
Data Group 6MinBypass						
Analog Point 05_Opacity			Units %			
12/10/99	04:57:00	05:03:00	Other	Absolute Difference		
Span 0	05:00:00	05:03:00	0.0	0.1	0.1	
Span 1	04:57:00	05:00:00	45.0	45.3	0.3	
12/10/99	05:00:00	05:03:00	Other	Absolute Difference		I
Span 0	05:00:00	05:03:00	0.0	0.1	0.1	

Calibration Single Failure - OOC(S)
Calibration Multiple Failure - OOC(M)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Calibration Multiple Warning - MW
Span Single Alarm - SA
Span Multiple Warning - MW

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinInlet75						
Analog Point 11_SO2_Inlet			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-28.0	0.7	
Span 1	08:10:00	08:20:00	3240.0	3198.0	1.0	
Data Group 15MinInlet75						
Analog Point 11_CO2_Inlet			Units %			
12/10/99	08:04:00	08:20:00	Daily	Absolute Difference		SW
Span 0	08:04:00	08:10:00	0.00	-0.39	0.39	
Span 1	08:10:00	08:20:00	16.83	16.32	0.51	SW
Data Group 15MinPrimary75						
Analog Point 12_SO2_Low			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-3.0	0.6	
Span 1	08:10:00	08:20:00	436.0	439.0	0.6	
Data Group 15MinPrimary75						
Analog Point 12_NOX			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-2.0	0.1	
Span 1	08:10:00	08:20:00	1288.0	1268.0	1.3	
Data Group 15MinPrimary75						
Analog Point 12_CO2			Units %			
12/10/99	08:04:00	08:30:00	Daily	Absolute Difference		
Span 0	08:04:00	08:10:00	0.00	-0.03	0.03	
Span 1	08:20:00	08:30:00	16.83	16.56	0.27	
Data Group 15MinPrimary75						
Analog Point 12_FlowMACFM			Units MACFM			
12/10/99	07:32:00	07:36:00	Daily	% Point Full Scale		
Span 0	07:32:00	07:34:00	0.000	0.000	0.000	
Span 1	07:34:00	07:36:00	1.400	1.352	1.920	
Data Group 15MinPrimary75						
Analog Point 12_SO2_Hi			Units ppm			
12/10/99	08:04:00	08:30:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-12.0	0.3	
Span 1	08:20:00	08:30:00	3240.0	3254.0	0.4	

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date / Span Number	Start Time	End Time	Cal. Type / Expected	Drift Calculation / Actual	Drift Value	Status
Data Group 15MinBackup75						
Analog Point 13_SO2_Low			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-1.8	0.4	
Span 1	06:10:00	06:20:00	436.0	434.0	0.4	
Data Group 15MinBackup75						
Analog Point 13_NOX			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	3.0	0.2	
Span 1	06:10:00	06:20:00	1288.0	1293.0	0.3	
Data Group 15MinBackup75						
Analog Point 13_CO2			Units %			
12/10/99	06:04:00	06:30:00	Daily	Absolute Difference		
Span 0	06:04:00	06:10:00	0.00	-0.09	0.09	
Span 1	06:20:00	06:30:00	16.83	16.34	0.49	
Data Group 15MinBackup75						
Analog Point 13_FlowMACFM			Units MACFM			
12/10/99	06:02:00	06:06:00	Daily	% Point Full Scale		
Span 0	06:02:00	06:04:00	0.000	0.048	1.920	
Span 1	06:04:00	06:06:00	1.400	1.414	0.560	
Data Group 15MinBackup75						
Analog Point 13_SO2_Hi			Units ppm			
12/10/99	06:04:00	06:30:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-6.0	0.2	
Span 1	06:20:00	06:30:00	3240.0	3198.0	1.0	
Data Group 15MinBypass75						
Analog Point 14_SO2			Units ppm			
NO CALIBRATION RECORDS THIS PERIOD						
Data Group 15MinBypass75						
Analog Point 14_NOX			Units ppm			
NO CALIBRATION RECORDS THIS PERIOD						

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status

Data Group 15MinBypass75
Analog Point 14_CO2 Units %
NO CALIBRATION RECORDS THIS PERIOD

Data Group 15MinBypass75
Analog Point 14_FlowMACFM Units MACFM

12/10/99	05:06:00	05:10:00	Daily	% Point Full Scale	
Span 0	05:06:00	05:08:00	0.000	0.000	0.000
Span 1	05:08:00	05:10:00	1.400	1.422	0.880

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinBackup75						
Analog Point 13_SO2_Low			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-1.8	0.4	
Span 1	06:10:00	06:20:00	436.0	434.0	0.4	
Data Group 15MinBackup75						
Analog Point 13_NOX			Units ppm			
12/10/99	06:04:00	06:20:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	3.0	0.2	
Span 1	06:10:00	06:20:00	1288.0	1293.0	0.3	
Data Group 15MinBackup75						
Analog Point 13_CO2			Units %			
12/10/99	06:04:00	06:30:00	Daily	Absolute Difference		
Span 0	06:04:00	06:10:00	0.00	-0.09	0.09	
Span 1	06:20:00	06:30:00	16.83	16.34	0.49	
Data Group 15MinBackup75						
Analog Point 13_SO2_Hi			Units ppm			
12/10/99	06:04:00	06:30:00	Daily	% Point Full Scale		
Span 0	06:04:00	06:10:00	0.0	-6.0	0.2	
Span 1	06:20:00	06:30:00	3240.0	3198.0	1.0	

Calibration Single Failure - OOC(S)
Calibration Single Warning - SW
Calibration Incomplete - I
Span Single Alarm - SA
Span Single Warning - SW

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinInlet75						
Analog Point 11_SO2_Inlet			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-28.0	0.7	
Span 1	08:10:00	08:20:00	3240.0	3198.0	1.0	
Data Group 15MinInlet75						
Analog Point 11_CO2_Inlet			Units %			
12/10/99	08:04:00	08:20:00	Daily	Absolute Difference		SW
Span 0	08:04:00	08:10:00	0.00	-0.39	0.39	
Span 1	08:10:00	08:20:00	16.83	16.32	0.51	SW

Calibration Single Failure - OOC(S)
Calibration Incomplete - I
Span Single Warning - SW
Calibration Single Warning - SW
Span Single Alarm - SA

From: 12/10/99 00:00
To: 12/11/99 00:00

Date Span Number	Start Time	End Time	Cal. Type Expected	Drift Calculation Actual	Drift Value	Status
Data Group 15MinPrimary75						
Analog Point 12_SO2_Low			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-3.0	0.6	
Span 1	08:10:00	08:20:00	436.0	439.0	0.6	
Data Group 15MinPrimary75						
Analog Point 12_NOX			Units ppm			
12/10/99	08:04:00	08:20:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-2.0	0.1	
Span 1	08:10:00	08:20:00	1288.0	1268.0	1.3	
Data Group 15MinPrimary75						
Analog Point 12_CO2			Units %			
12/10/99	08:04:00	08:30:00	Daily	Absolute Difference		
Span 0	08:04:00	08:10:00	0.00	-0.03	0.03	
Span 1	08:20:00	08:30:00	16.83	16.56	0.27	
Data Group 15MinPrimary75						
Analog Point 12_SO2_Hi			Units ppm			
12/10/99	08:04:00	08:30:00	Daily	% Point Full Scale		
Span 0	08:04:00	08:10:00	0.0	-12.0	0.3	
Span 1	08:20:00	08:30:00	3240.0	3254.0	0.4	

Calibration Single Failure - OOC(S)
Calibration Single Warning - SW
Calibration Incomplete - I
Span Single Alarm - SA
Span Single Warning - SW

/10 12:00

2 Area 1	11:30:16	12/10/99	PAL-158H	Alarm	REC PUMP (P120H)	SEAL WATER PRESS
2 Area 1	11:28:23	12/10/99	PAL-158D	Alarm	REC PUMP (P120D)	SEAL WATER PRESS

Operator Window #1: Graphic 1

Quick K

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1038 KLb/Hr
LOAD 158 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.3 %
B/U SO2 REMOVAL 95.8 %
#SO2 / MMBTU 0.262

INSTRUMENT AIR
117 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
43 OPACITY
PI-105A
7.3 IN.W.C.
TI-107A
328 DEGF

AIT-110B
6 OPACITY
PI-105B
6.9 IN.W.C.
TI-107B
360 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2821 KLb/Hr
LOAD 328 MW

ESP

AIT-109
1400 PPM SO2
TR-111
358 DEGF

AIT-126
65 PPM SO2
PI-118
-0.1 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

26 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	66
V320	44	V720	36	V500B	72
V340	62	V730	53	V810A	-1
V370	58	V900	56	V810B	-1
V700	38				

LI-129	19.1	FEET
PDI-114	4.9	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.1	DP TOTAL

Next

Previous

145

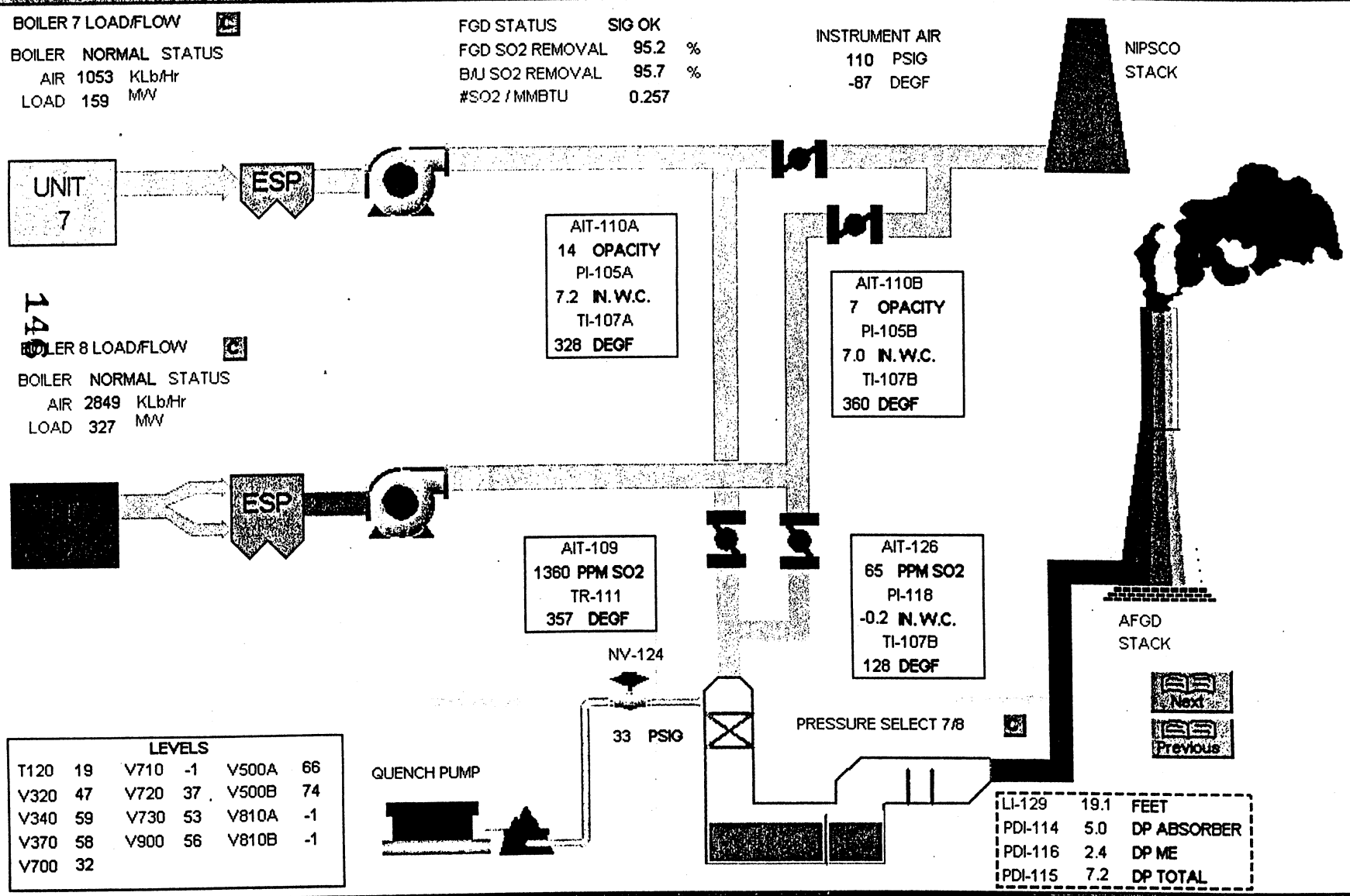
[redacted]

2 Area 1	12:12:01	12/10/99	LAH-243B	Alarm	SILO "B" LEVEL	HIGH
2 Area 1	11:30:16	12/10/99	PAL-158H	Alarm	REC PUMP (P120H) SEAL WATER PRESS	

10 12:34

Operator Window #1: Graphic 1

Select Redraw Zoom



Quick K

Thief
ABSORB
Analyz
P-120S
V-370
SIRA
Unload
OxAir
ARS
M7E
M300
V-320
Thick
Sumps
WWTP
Glycol
Alarm
WAG
Trends
Ready
Batch
Unit
HRMTR
24
25
Sh
Close

/10 13:05

2 Area 1	12:12:01	12/10/99	LAH-243B	Alarm	SILO "B" LEVEL	HIGH
2 Area 1	11:30:16	12/10/99	PAL-158H	Alarm	REC PUMP (P120H) SEAL WATER PRESS	

Operator Window #1: Graphic 1

Quick K

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1024 KLb/Hr
LOAD 157 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.8 %
B/U SO2 REMOVAL 96.2 %
#SO2 / MMBTU 0.228

INSTRUMENT AIR
117 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
17 OPACITY
PI-105A
7.2 IN.W.C.
TI-107A
326 DEGF

AIT-110B
6 OPACITY
PI-105B
6.9 IN.W.C.
TI-107B
360 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2843 KLb/Hr
LOAD 328 MW

ESP

AIT-109
1326 PPM SO2
TR-111
357 DEGF

AIT-126
56 PPM SO2
PI-118
-0.2 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

26 PSIG

PRESSURE SELECT 7/8

Next

Previous

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	65
V320	56	V720	36	V500B	75
V340	54	V730	53	V810A	-1
V370	76	V900	55	V810B	-1
V700	23				

LI-129	18.9	FEET
PDI-114	4.7	DP ABSORBER
PDI-116	2.2	DP ME
PDI-115	7.0	DP TOTAL

2	Area 1	12:12:01	12/10/99	LAH-243B	Alarm	SILO "B" LEVEL	HIGH
2	Area 1	11:30:16	12/10/99	PAL-158H	Alarm	REC PUMP (P120H) SEAL WATER PRESS	

10 13:31

Operator Window #1: Graphic 1

BOILER 7 LOAD/FLOW C
BOILER NORMAL STATUS
AIR 1012 KLb/Hr
LOAD 156 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.8 %
B/U SO2 REMOVAL 96.2 %
#SO2 / MMBTU 0.236

INSTRUMENT AIR
112 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
24 OPACITY
PI-105A
7.1 IN.W.C.
TI-107A
324 DEGF

AIT-110B
5 OPACITY
PI-105B
6.9 IN.W.C.
TI-107B
360 DEGF

BOILER 8 LOAD/FLOW C
BOILER NORMAL STATUS
AIR 2835 KLb/Hr
LOAD 325 MW

ESP

AIT-109
1383 PPM SO2
TR-111
357 DEGF

AIT-126
59 PPM SO2
PI-118
0.0 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

40 PSIG

PRESSURE SELECT 7/8 C

QUENCH PUMP

LEVELS					
T120	19	V710	-1	V500A	65
V320	43	V720	36	V500B	75
V340	58	V730	53	V810A	-1
V370	57	V900	54	V810B	-1
V700	51				

LI-129	19.0	FEET
PDI-114	4.7	DP ABSORBER
PDI-116	2.2	DP ME
PDI-115	7.1	DP TOTAL

Next
Previous

Quick K

148

/10 14:01

2	Area 1	12:12:01	12/10/99	LAH-243B	Alarm	SILO "B" LEVEL	HIGH
2	Area 1	11:30:16	12/10/99	PAL-158H	Alarm	REC PUMP (P120H) SEAL WATER PRESS	

Operator Window #1: Graphic 1

BOILER 7 LOAD/FLOW C
BOILER NORMAL STATUS
AIR 1017 KLb/Hr
LOAD 157 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 95.8 %
B/U SO2 REMOVAL 96.3 %
#SO2 / MMBTU 0.218

INSTRUMENT AIR
116 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
13 OPACITY
PI-105A
7.1 IN.W.C.
TI-107A
325 DEGF

AIT-110B
6 OPACITY
PI-105B
6.9 IN.W.C.
TI-107B
360 DEGF

149

BOILER 8 LOAD/FLOW C
BOILER NORMAL STATUS
AIR 2835 KLb/Hr
LOAD 327 MW

ESP

AIT-109
1335 PPM SO2
TR-111
357 DEGF

AIT-126
55 PPM SO2
PI-118
-0.1 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

30 PSIG

PRESSURE SELECT 7/8 C

QUENCH PUMP

Next
Previous

LEVELS					
T120	19	V710	-1	V500A	65
V320	54	V720	36	V500B	75
V340	60	V730	53	V810A	-1
V370	49	V900	57	V810B	-1
V700	41				

LI-129	18.9	FEET
PDI-114	4.8	DP ABSORBER
PDI-116	2.3	DP ME
PDI-115	7.0	DP TOTAL

Quick K

24
25

2/10 14:56

2 Area 1	12:12:01	12/10/99	LAH-243B	Alarm	SILO "B" LEVEL	HIGH
2 Area 1	11:30:16	12/10/99	PAL-158H	Alarm	REC PUMP (P120H) SEAL WATER PRESS	

Operator Window #1: Graphic 1

Window Select Redraw Zoom

BOILER 7 LOAD/FLOW

BOILER NORMAL STATUS
AIR 1032 KLb/Hr
LOAD 157 MW

FGD STATUS SIG OK
FGD SO2 REMOVAL 96.2 %
B/U SO2 REMOVAL 96.8 %
#SO2 / MMBTU 0.204

INSTRUMENT AIR
112 PSIG
-87 DEGF

NIPSCO STACK

UNIT 7

ESP

AIT-110A
18 OPACITY

Info
Completed Print Request
OK

AIT-110B
5 OPACITY
PI-105B
6.1 IN.W.C.
TI-107B
358 DEGF

BOILER 8 LOAD/FLOW

BOILER NORMAL STATUS
AIR 2601 KLb/Hr
LOAD 297 MW

ESP

AIT-109
1298 PPM SO2
TR-111
357 DEGF

AIT-126
48 PPM SO2
PI-118
-0.1 IN.W.C.
TI-107B
128 DEGF

AFGD STACK

NV-124

33 PSIG

PRESSURE SELECT 7/8

QUENCH PUMP

LEVELS

T120	19	V710	-1	V500A	65
V320	52	V720	36	V500B	75
V340	57	V730	53	V810A	-1
V370	80	V900	57	V810B	-1
V700	34				

LI-129	18.7	FEET
PDI-114	4.2	DP ABSORBER
PDI-116	2.0	DP ME
PDI-115	6.2	DP TOTAL

Quick K
Inlet
ABSORB
Analyz
R-120S
Y-370
Silos
Unload
OxAir
ARS
M/E
M300
Y-320
Thick
Sumps
WWTP
Glycol
Alarm
WAC
Trends
Ready
Batch
Util
HR MTR
Set
Close

150

SUMMARY OF RESULTS CALCULATIONS

$$Vm\ (std) = 17.647 \times Vm \times \left[\frac{P_{bar} + \frac{DH}{13.6}}{(460 + Tm)} \right] \times Y$$

$$Vw\ (std) = 0.0471 \times Vlc$$

Vlc = water + silica net

$$Bws = \left[\frac{Vw\ (std)}{Vw\ (std) + Vm\ (std)} \right]$$

$$Md = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + [0.28 \times (100 - \%CO_2 - \%O_2)]$$

$$MS = Md \times (1 - Bws) + (18 \times Bws)$$

$$Vs = \sqrt{\frac{(Ts + 460)}{Ms \times Ps}} \times \sqrt{DP} \times Cp \times 85.49$$

Cp = pitot tube correction factor
Ps = absolute flue gas pressure
Ms = molecular weight of gas (lb/lb mole)
Md = dry molecular weight of gas (lb/lb mole)
Bws = water vapor in gas stream proportion by volume

$$Acfm = Vs \times Area\ (of\ stack\ or\ duct) \times 60$$

$$Dscfm = Acfm \times 17.647 \times \left[\frac{Ps}{(460 + Ts)} \right] \times (1 - Bws)$$

$$Scfm = Acfm \times 17.647 \times \left[\frac{Ps}{(460 + Ts)} \right]$$

$$Scfh = Scfm \times 60 \frac{min}{hr}$$

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CALCULATION FORMULAS

1. $$V_{m(std)} = V_m Y \left(\frac{T_{std}}{T_m}\right)\left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{P_{std}}\right) = K_1 V_m Y \frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}$$

2. $$V_{w(std)} = V_{lc}\left(\frac{\rho_w}{M_w}\right)\left(\frac{RT_{std}}{P_{std}}\right) = K_2 V_{lc}$$

3. $$B_{ws} = \frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

4a. $$C_a = \frac{m_a}{V_a \rho_a}$$

4b. $$W_a = C_a V_{aw} \rho_a$$

5. $$C_S = (15.43 \text{ grains/gram})\,(m_n / V_{m(std)})$$

6. $$C_{acf} = 15.43 K_i \left(\frac{m_n P_s}{V_{w(std)} + V_{m(std)}\, T_s}\right)$$

7. $$\%EA = \left(\frac{\%O_2 - (0.5\,\%CO}{0.264\,\%N_2 - (\%O_2 - 0.5\,\%CO}\right) \times 100$$

8. $$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$$

9. $$M_s = M_d(1 - B_{ws}) + 18.0 B_{ws}$$

10. $$v_s = K_p C_p \sqrt{\frac{\Delta P\, T_s}{P_s M_s}}$$

11. $$Q_{acfm} = v_s A (60_{sec/min})$$

12. $$Q_{sd} = (3600_{sec/hr})(1 - B_{ws})\, v_s \left(\frac{T_{std} P_s}{T_s P_{std}}\right) A$$

13. $$E \text{ (emission rate, lbs/hr)} = Q_{std}(C_s / 7000 \text{ grains/lb})$$

14. $$IKV = \frac{T_s V_{m(std)} P_{std}}{T_{std} v_s \theta A_n P_s 60(1 - B_{ws})} = K_4 \frac{T_s V_{m(std)}}{P_s v_s A_n \theta (1 - B_{ws})}$$

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NOMENCLATURE

A = Cross-sectional area of stack or duct, ft^2
A_n = Cross-sectional area of nozzle, ft^2
B_{ws} = Water vapor in gas stream, proportion by volume
C_a = Acetone blank residue concentration, g/g
C_{acf} = Concentration of particulate matter in gas stream at actual conditions, gr/acf
C_p = Pitot tube coefficient, dimensionless
C_s = Concentration of particulate matter in gas stream, dry basis, corrected to standard conditions, gr/dscf
IKV = Isokinetic sampling variance, must be $.90 \leq IKV \leq 1.10$
M_d = Dry molecular weight of gas, lb/lb-mole
m_n = Total amount of particulate matter collected, grams
M_s = Molecular weight of gas, wet basis, lb/lb-mole
M_w = Molecular weight of water, 18.0 lb/lb-mole
m_a = Mass of residue of acetone after evaporation, grams
P_{bar} = Barometric pressure at testing site, in. Hg
P_g = Static pressure of gas, in. Hg (in. H_2O/13.6)
P_s = Absolute pressure of gas, in. Hg = $P_{bar} + P_g$
P_{std} = Standard absolute pressure, 29.92 in. Hg
Q_{acfm} = Actual volumetric gas flow rate, acfm
Q_{sd} = Dry volumetric gas flow rate corrected to standard conditions, dscf/hr
R = Ideal gas constant, 21.85 in. Hg-ft^3/°R-lb-mole
T_m = Absolute dry gas meter temperature, °R
T_s = Absolute gas temperature, °R
T_{std} = Standard absolute temperature, 528°R
V_a = Volume of acetone blank, ml
V_{aw} = Volume of acetone used in wash, ml
V_{1c} = Total volume of liquid collected in impingers and silica gel, ml
V_m = Volume of gas sample as measured by dry gas meter, dcf
$V_{m(std)}$ = Volume of gas sample measured by dry gas meter, corrected to standard conditions, dscf
v_s = Gas velocity, ft/sec
$V_{w(std)}$ = Volume of water vapor in gas sample, corrected to standard conditions, scf
W_a = Weight of residue in acetone wash, grams
Y = Dry gas meter calibration factor
ΔH = Average pressure differential across the orifice meter, in. H_2O
Δp = Velocity head of gas, in. H_2O
ρ_a = Density of acetone, 0.7855 g/ml (average)
ρ_w = Density of water, 0.002201 lb/ml
θ = Total sampling time, minutes
K_1 = 17.64 °R/in. Hg
K_2 = 0.04707 ft^3/ml
K_4 = 0.09450/100 = 0.000945
K_p = Pitot tube constant, $85.49 \frac{ft}{sec}\left[\frac{(lb/lb-mole)(in.Hg)}{(°R)(in.H_2O)}\right]^{1/2}$
%EA = Percent excess air
$\%CO_2$ = Percent carbon dioxide by volume, dry basis
$\%O_2$ = Percent oxygen by volume, dry basis
%CO = Percent carbon monoxide by volume, dry basis
$\%N_2$ = Percent nitrogen by volume, dry basis
0.264 = Ratio of O_2 to N_2 in air, v/v
0.28 = Molecular weight of N_2 or CO, divided by 100
0.32 = Molecular weight of O_2 divided by 100
0.44 = Molecular weight of CO_2 divided by 100
13.6 = Specific gravity of mercury (Hg)

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MERCURY CALCULATIONS

Determination of Speciated Mercury

Concentration

$$\frac{\text{ug of Mercury detected} \times \frac{10^{-6}\,\text{g}}{\text{ug}}}{453.6\,\text{g/lb}} = \text{lbs Mercury/sample}$$

$$\frac{\text{lbs Mercury/sample}}{\text{Vm(std)}} = \text{lbs Mercury/dscf}$$

Emission Rates

$$\text{lbs Mercury/hr} = \text{lbs/dscf} \times \text{dscf/min} \times 60\ \text{min/hr}$$

$$\text{lbs Mercury}/10^{12}\,\text{Btu} = \text{lbs/dscf} \times F_d\,\text{Factor}\left(\text{dscf}/10^6\,\text{Btu}\right) \times \frac{20.9\%}{20.9\% - O_2\%} \times 10^6$$

Mercury Fractions

Elemental Mercury Catch – mercury collected in the acidified hydrogen peroxide (HNO_3-H_2O_2) and potassium permanganate (H_2SO_4-$KMnO_4$) impinger solutions.

Oxidized Mercury Catch – mercury collected in the aqueous potassium chloride (KCl) impinger solution.

Particle-bound Mercury Catch – mercury associated with the particulate matter collected in the front half of the sampling train.

Determination of Mercury Available from Coal

$$\text{lbs Mercury/hr} = \frac{\text{ug Mercury}}{\text{g Coal}}(\text{dry}) \times \frac{10^{-6}\,\text{g}}{\text{ug}} \times \frac{\text{lbs Coal (wet)}}{\text{hr}} \times (1 - B_{ws})\ \text{moisture corr.}$$

$$\text{lbs Mercury}/10^{12}\,\text{Btu} = \frac{\text{lbs Mercury}}{\text{hr}} \div \frac{10^{12}\,\text{Btu}}{\text{hr}}$$

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EMISSION RATE CALCULATIONS

A pollutant emission rate (E), expressed as pounds of pollutant per million Btu heat input from the fuel combusted can be calculated by several methods as follows:

1. $C = C_s/7000$ where, C = pollutant concentration, lb/dscf
   c_s = pollutant concentration, grains/dscf

2. If fuel flow is monitored and the fuel combusted during the test is sampled and analyzed for gross calorific value, then:

$$E = \frac{Q_{sd} C}{\text{fuel flow rate (lb / hr) GCV}} \times 10^6$$

where, E = lbs per million Btu
GCV = gross calorific value, Btu / lb
Q_{sd} = dry volumetric gas flow at standard conditions, dscf / hr

3. If an integrated gas sample is taken during the test and analyzed for $\%CO_2$ or $\%O_2$, dry basis by volume, with an Orsat gas analyzer, then

$$E = C F_c \frac{100}{(\%CO_2)} \text{ or, } E = C F \frac{20.9}{(20.9 - \%O_2)} \quad \text{where,}$$

$\%CO_2$ and $\%O_2$ are expressed as percent; and, for example, for subbituminous and bituminous coals:

F_c = a factor representing a ratio of the volume of carbon dioxide generated to the calorific value of the fuel combusted, 1800 scf CO_2/million Btu.

F = a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted, 9780 dscf/million Btu.

4. If fuel sample increments are taken and composited during the test and an ultimate analysis is performed and the GCV is determined, then

$$F_c = \frac{321 \times 10^3 (\%C)}{GCV} \quad \text{where, } \%C = \text{carbon content by weight expressed as percent}$$

$$F = \frac{[3.64\,(\%H) + 1.53\,(\%C) + 0.57\,(\%S) + 0.14\,(\%N) - 0.46\,(\%O_2)]}{GVC} \times 10^6$$

where, H, C, S, N, and O are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent) respectively.

5. If fuels other than subbituminous and bituminous coals are fired, other F-factors than those above will apply; and, if combinations of different fuels are fired, the F-factors must be prorated according to the fraction of the total heat input derived from each type of fuel.

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MOSTARDI PLATT ASSOCIATES, INC.
TEST SUPPORT DATA

TEST RUN NO. 1

COMPANY: NIPSCO
PLANT: Bailey
TEST LOCATION: Unit 7 Precip Outlet
CLIENT: Electric Power Research Inst.
OPERATOR: D Holm
DATE: 12/9/99
CONTROL BOX: E15 POT. NO.: E15
METER NO.: E15
METER CALIBRATION FACTOR: 1.001
PITOT ID NO.: 318 A
PITOT TUBE COEFFICIENT: 0.837
PORT LENGTH: 23 in.
PORT SIZE: 6 in.
PORT TYPE:

IMPINGER H_2O
FINAL: 4808.3 ml/gm
INITIAL: 4671.2 ml/gm
GAIN: 137.1 ml/gm

SILICA GEL:
FINAL WT: 751.1 gm
INITIAL WT: 730.4 gm
WT. GAIN: 20.7 gm

TOTAL H_2O COLLECTED: 157.8
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: 103 TARE WT: 3.4029
FILTER NO: TARE WT:
BAROMETRIC PRESSURE in. Hg: 29.46
FLUE PRESSURE in. H_2O: +7.0
FLUE PRESSURE in. Hg ABS: 29.975
PROBE LENGTH: 13 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO:
CALIBRATED NOZZLE DIAMETER: 0.240
LEAK CHECK: PRE: 0.002 POST: 0.003 @ 13 in. Hg
DUCT SHAPE: Rectangular DIAMETER:
DUCT AREA: 216.0 sq. ft. L 13.5 W 16'
DISTURBANCE UPSTREAM: DOWNSTREAM:
TEST LENGTH: 150 min
MINUTES PER POINT: 6
TOTAL NUMBER OF TRAVERSE POINTS: 25
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 13.0
O_2: 6.0

PITOT LEAK CHECK: PRE ✓ POST ✓
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_C = 1,800 Other =
Circle to indicate "Yes" or add other value if not given.

Form 1053 [Rev. 6/97]

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC

PROJECT NIPSCO Bailey
TEST RUN NO. 1
TEST LOCATION Unit 7 Precip Outlet

DATE 12/9/99 PAGE 1 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	Orifice (H) in. H_2O (1.9066)	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	Meter Rate cfm (0.7997)	Pump Vacuum in. Hg	x 6 Notes		Probe Temp. °F	Filter Holder Temp. °F	Imping Outle Temp.
1-1	0.29	0.5385	1310	32.105	0.55	320	70	69	0.431	2	2.584		246	232	< 68 °F
-2	0.42	0.6481	1316	34.650	0.80	320	72	69	0.518	3	3.110	34.689	245	232	
-3	0.45	0.6708	1322	37.810	0.86	322	71	68	0.537	3	3.219	37.799	245	232	
-4	0.41	0.6403	1328	41.070	0.78	323	73	67	0.512	3	3.072	41.018	245	231	
-5	0.36	0.6000	1334	44.120	0.69	321	72	67	0.480	3	2.879	44.090	244	231	
		0.6195	1340	46.910	0.736	321.2	71.6	68.0				46.969			
2-1	0.46	0.6782	1342	46.910	0.88	319	71	67	0.542	3	3.254		244	232	
-2	0.44	0.6633	1348	50.170	0.84	320	71	67	0.531	3	3.183	50.223	246	232	
-3	0.45	0.6708	1354	53.370	0.86	322	73	67	0.537	3	3.219	53.406	245	233	
-4	0.38	0.6164	1400	56.610	0.73	324	73	67	0.493	3	2.958	56.625	244	233	
-5	0.33	0.5745	1406	59.570	0.63	324	73	67	0.459	3	2.756	59.583	244	233	
		0.6406	1412	59.570	0.788	321.8	72.2	67.0				62.339			
3-1	0.59	0.7681	1414	59.570	1.12	323	72	66	0.614	5	3.686		243	231	
-2	0.60	0.7746	1420	66.060	1.14	323	73	66	0.619	5	3.717	66.025	243	232	
-3	0.52	0.7211	1426	69.770	0.99	324	73	66	0.577	4	3.460	69.742	244	232	
-4	0.51	0.7141	1432	73.210	0.97	322	73	66	0.571	4	3.427	73.202	243	232	
-5	0.35	0.5916	1438	76.670	0.67	323	72	66	0.473	4	2.839	76.629	243	231	
		0.7139	1444	79.510	0.978	323.0	72.6	66.0				79.468			
4-1	0.56	0.7483	1446	79.510	1.07	320	70	65	0.598	4	3.591		243	232	
-2	0.60	0.7746	1452	83.080	1.14	318	72	65	0.619	5	3.717	83.059	243	232	
-3	0.53	0.7280	1458	86.810	1.01	318	72	65	0.582	4	3.493	86.776	243	231	
-4	0.51	0.7141	1504	90.300	0.97	315	71	64	0.571	4	3.427	90.269	242	232	
-5	0.52	0.7211	1510	93.720	0.99	310	71	64	0.577	4	3.460	93.696	242	232	
		0.7372	1516	93.720	1.036	316.2	71.2	64.6				97.156			

FIELD TEST DATA SHEET FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO Bailey

TEST RUN NO. 1

TEST LOCATION Unit 7 Precip Outlet

DATE 12/9/99 PAGE 2 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	1.9066 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	0.7997 Meter Rate cfm	Pump Vacuum in. Hg	x6 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
S-1	0.41	0.6403	1519	93.720	0.78	318	69	63	0.512	4	3.072	97.156	243	230	≤ 68°F
-2	0.38	0.6164	1525	100.250	0.73	320	69	63	0.493	4	2.958	100.228	243	232	
-3	0.48	0.6928	1531	103.220	0.92	320	70	63	0.554	4	3.324	103.186	243	232	
-4	0.68	0.8246	1537	106.540	1.30	319	69	63	0.659	5	3.957	106.510	243	231	
-5	0.68	0.8246	1543	110.490	1.30	319	68	62	0.659	5	3.957	110.467	244	231	
		0.7197	1549	114.440	1.006	319.2	69.0	62.8				114.424			
		0.6862		82.335	0.9088	320.3	71.3	65.7				82.319			

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Form 1026 [Rev. 5/27]

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MOSTARDI-PLATT ASSOCIATES, INC.
TEST SUPPORT DATA

TEST RUN NO. 2

COMPANY: NIPSCO
PLANT: Bailey
TEST LOCATION: Unit 7 Precip outlet
CLIENT:
OPERATOR: D. Helm
DATE: 12/10/99
CONTROL BOX: E15 POT. NO.: E15
METER NO.: E15
METER CALIBRATION FACTOR: 1.001
PITOT ID NO.: 318A
PITOT TUBE COEFFICIENT: 0.837
PORT LENGTH: 23 in.
PORT SIZE: 6 in.
PORT TYPE:

IMPINGER H_2O
FINAL: 4823.0 ml/gm
INITIAL: 4685.6 ml/gm
GAIN: 137.4 ml/gm

SILICA GEL:
FINAL WT: 758.3 gm
INITIAL WT: 741.1 gm
WT. GAIN: 17.2 gm

TOTAL H_2O COLLECTED: 154.6
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: 080 TARE WT: 3.4325
FILTER NO: TARE WT:
BAROMETRIC PRESSURE in. Hg: 29.31
FLUE PRESSURE in. H_2O: +7.0
FLUE PRESSURE in. Hg ABS: 29.825
PROBE LENGTH: 13 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO:
CALIBRATED NOZZLE DIAMETER: 0.240
LEAK CHECK: PRE: 0.001 POST: 0.002 @ 13 in. Hg
DUCT SHAPE: Rectangular DIAMETER:
DUCT AREA: 216.0 sq. ft. L 13.5 W 16.0
DISTURBANCE UPSTREAM: DOWNSTREAM:
TEST LENGTH: 150 min
MINUTES PER POINT: 6
TOTAL NUMBER OF TRAVERSE POINTS: 25
GAS ANALYSIS (ORSAT/BYRITE):
CO_2: 12.0
O_2: 6.0

PITOT LEAK CHECK: PRE ✓ POST ✓
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other =
Circle to indicate "Yes" or add other value if not given.

Form 1053 [Rev. 6/97]

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO Bailey
TEST RUN NO. 2
TEST LOCATION Unit 7 Precip Outlet

DATE 12/10/99 PAGE 1 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	1.8801 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	0.7886 Meter Rate cfm	Pump Vacuum in. Hg	x 6 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
1-1	0.40	0.6325	841	14.910	0.75	308	45	44	0.499	5	2.993		238	230	≤68°F
-2	0.41	0.6403	847	17.980	0.77	310	50	41	0.505	5	3.030	17.903	239	232	Silylized
-3	0.43	0.6557	853	20.940	0.81	310	50	42	0.517	5	3.103	20.933	239	231	
-4	0.41	0.6403	859	24.060	0.77	311	50	42	0.505	5	3.030	24.036	240	232	
-5	0.37	0.6083	905	27.050	0.70	313	54	44	0.480	4	2.878	27.066	240	232	
		0.6354	911	29.930	0.760	310.4	49.8	42.6				29.944			
2-1	0.57	0.7550	913	29.930	1.07	316	56	47	0.595	6	3.572		241	231	
-2	0.52	0.7211	919	33.480	0.98	317	58	48	0.569	6	3.412	33.516	241	231	
-3	0.48	0.6928	925	36.940	0.90	317	58	49	0.546	6	3.278	36.928	242	231	
-4	0.32	0.5657	931	40.270	0.60	320	58	49	0.446	5	2.677	40.206	241	233	
-5	0.31	0.5568	937	42.900	0.58	318	58	51	0.439	4	2.634	42.883	241	232	
		0.6583	943	45.550	0.826	317.6	57.6	48.8				45.517			
3-1	0.58	0.7616	945	45.550	1.09	320	58	54	0.601	6	3.604		242	231	
-2	0.56	0.7483	951	49.150	1.05	320	58	54	0.590	6	3.541	49.121	242	233	
-3	0.51	0.7141	957	52.690	0.96	319	59	52	0.563	6	3.379	52.662	242	232	
-4	0.43	0.6557	1003	56.080	0.81	318	59	52	0.517	6	3.103	56.041	243	232	
-5	0.32	0.5657	1009	59.130	0.60	318	59	52	0.446	5	2.677	59.144	242	232	
		0.6891	1015	61.810	0.902	319.0	58.6	52.8				61.821			
4-1	0.60	0.7746	1017	61.810	1.13	320	58	53	0.611	6	3.665		240	231	
-2	0.61	0.7810	1023	65.510	1.15	322	60	53	0.616	6	3.696	65.486	242	231	
-3	0.56	0.7483	1029	69.200	1.05	321	60	53	0.590	6	3.541	69.182	242	231	
-4	0.55	0.7416	1035	72.690	1.03	320	60	53	0.585	6	3.509	72.723	241	231	
-5	0.51	0.7141	1041	76.260	0.96	319	60	54	0.563	6	3.379	76.232	240	231	
		0.7519	1047	79.650	1.064	320.4	59.6	53.2				79.611			
															✓

Form 1026 [Rev. 5/27]

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO- Bailey
TEST RUN NO. 2
TEST LOCATION Unit 7 Precip Outlet

DATE 12/10/99 PAGE 2 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	1.8801 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	0.7886 Meter Rate cfm	Pump Vacuum in. Hg	× 6 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
5-1	0.35	0.5916	1049	79.650	0.66	322	60	54	0.467	4	2.799	79.611	242	230	≤ 68°F
-2	0.39	0.6245	1055	82.440	0.73	323	60	54	0.493	5	2.955	82.410	243	232	
-3	0.46	0.6782	1101	85.390	0.87	323	59	54	0.535	5	3.209	85.365	242	231	
-4	0.68	0.8246	1107	88.610	1.28	322	60	54	0.650	6	3.902	88.574	242	231	
-5	0.71	0.8426	1113	92.460	1.34	323	60	54	0.665		3.987	92.476	242	231	
		0.7123	1119	94.470	0.976	322.6	59.8	54.0				94.463			
		0.6894			0.9056	318.0	57.1	50.3				79.553			

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Form 1026 (Rev. 5/2/71

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STA -PL AS CIA, INC.

TEST SUPPORT DATA

TEST RUN NO. 3

COMPANY: NIPSCO
PLANT: Bailey
TEST LOCATION: Unit 7 Precip Outlet
CLIENT:
OPERATOR: D. Helm
DATE: 12/10/99
CONTROL BOX: E15 POT. NO.: E15
METER NO.: E15
METER CALIBRATION FACTOR: 1.001
PITOT ID NO.: 318A
PITOT TUBE COEFFICIENT: 0.837
PORT LENGTH: 23 in.
PORT SIZE: 6 in.
PORT TYPE:

IMPINGER H_2O
FINAL: 4665.7 ml/gm
INITIAL: 4522.8 ml/gm
GAIN: 142.9 ml/gm

SILICA GEL:
FINAL WT: 773.6 gm
INITIAL WT: 755.9 gm
WT. GAIN: 17.7 gm

TOTAL H_2O COLLECTED: 160.6
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: 104 TARE WT: 3.2084
FILTER NO: TARE WT:
BAROMETRIC PRESSURE in. Hg: 29.31
FLUE PRESSURE in. H_2O: +7.0
FLUE PRESSURE in. Hg ABS: 29.825
PROBE LENGTH: 13 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO:
CALIBRATED NOZZLE DIAMETER: 0.240
LEAK CHECK: PRE: 0.001 POST: 0.001 @ 13 in. Hg
DUCT SHAPE: Rectangular DIAMETER:
DUCT AREA: 216.0 sq. ft. L 13.5' W 16.0'
DISTURBANCE UPSTREAM: DOWNSTREAM:
TEST LENGTH: 150 min
MINUTES PER POINT: 6
TOTAL NUMBER OF TRAVERSE POINTS: 25
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 11.8
O_2: 5.7

PITOT LEAK CHECK: PRE ✓ POST ✓
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other = _____
Circle to indicate "Yes" or add other value if not given.

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO - Bailey
TEST RUN NO. 3
TEST LOCATION Unit 7 Precip Outlet

DATE 12/7/99 PAGE 1 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	1.8826 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	0.7891 Meter Rate cfm	Pump Vacuum in. Hg	×6 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
1-1	0.36	0.6000	1155	95.214	0.68	312	52	51	0.477	5	2.841		236	230	≤68°F
-2	0.41	0.6403	1201	98.030	0.77	314	56	51	0.505	5	3.032	98.055	239	231	Filling iced
-3	0.44	0.6633	1207	101.110	0.83	315	56	51	0.523	5	3.141	101.087	240	230	
-4	0.43	0.6557	1213	104.210	0.81	315	56	51	0.517	5	3.105	104.228	240	230	
-5	0.38	0.6164	1219	107.350	0.72	317	57	51	0.486	5	2.919	107.333	241	232	
		0.6351	1225	110.270	0.762	314.6	55.4	51.0				110.252			
2-1	0.57	0.7550	1227	110.270	1.07	319	57	51	0.596	6	3.575		239	231	
-2	0.53	0.7280	1233	113.850	1.00	321	58	52	0.575	6	3.447	113.827	240	231	
-3	0.47	0.6856	1239	117.250	0.89	323	58	52	0.541	6	3.246	117.274	242	231	
-4	0.44	0.6633	1245	120.560	0.83	326	58	52	0.523	6	3.406	120.520	242	231	
-5	0.33	0.5745	1251	123.700	0.62	324	57	52	0.453	5	2.720	123.661	241	232	
		0.6813	1257	126.360	0.882	322.6	57.6	51.8				126.381			
3-1	0.62	0.7874	1259	126.360	1.17	318	60	54	0.621	7	3.728		242	231	
-2	0.52	0.7211	1305	130.120	0.98	317	60	54	0.569	6	3.414	130.109	242	231	
-3	0.50	0.7071	1311	133.560	0.94	320	61	54	0.558	6	3.348	133.523	241	231	
-4	0.42	0.6481	1317	136.910	0.79	319	61	55	0.511	6	3.068	136.871	242	232	
-5	0.34	0.5831	1323	139.920	0.64	319	61	55	0.460	5	2.761	139.939	242	232	
		0.6894	1329	142.680	0.904	318.6	60.6	54.4				142.700			
4-1	0.54	0.7348	1331	142.680	1.02	317	61	54	0.580	8	3.479		242	231	
-2	0.62	0.7874	1337	146.190	1.17	318	61	54	0.621	9	3.728	146.179	242	232	
-3	0.61	0.7810	1343	149.940	1.15	318	61	55	0.616	9	3.698	149.907	243	232	
-4	0.57	0.7550	1349	153.590	1.07	320	62	55	0.596	8	3.575	153.605	243	231	
-5	0.52	0.7211	1355	157.150	0.98	321	62	55	0.569	7	3.414	157.180	242	232	
		0.7559	1401	160.580	1.078	318.8	61.4	54.6				160.594			

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FIELD TEST DATA SHEET FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT Nipsco - Bailey
TEST RUN NO. 3
TEST LOCATION Unit 7 Precip Outlet

DATE 12/10/99 PAGE 2 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	1.8826 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	0.7891 Meter Rate cfm	Pump Vacuum in. Hg	×6 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
5-1	0.41	0.6403	1403	160.580	0.77	322	61	55	0.505	7	3.032	160.594	242	231	≥68°F
-2	0.39	0.6245	1409	163.640	0.73	325	60	55	0.493	7	2.957	163.626	242	232	
-3	0.54	0.7348	1415	166.600	1.02	324	60	55	0.580	8	3.479	166.583	242	232	
-4	0.67	0.8185	1421	170.050	1.26	324	60	54	0.646	9	3.875	170.062	242	231	
-5	0.69	0.8307	1427	173.950	1.30	323	60	54	0.656	9	3.933	173.937	242	231	
		0.7298	1433	177.860	1.016	323.6	60.2	54.6				177.870			
		0.6983		82.646	0.9284	319.6	59.0	53.3				82.656			

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PITOT TRAVERSE DATA

Project: NIPSCO - Bailey

Location: Unit 7 Precip Outlet

Date: 12/9/99 Test No: Prelim Time: 1008 - 1048

Point No.	ΔP	$\sqrt{\Delta P}$	t_s	α	Point No.	ΔP	$\sqrt{\Delta P}$	t_s	α
1-1	0.31		318	0°	5-1	0.33		324	15°
-2	0.45		319	-5°	-2	0.44		324	5°
-3	0.43		319	0°	-3	0.57		324	15°
-4	0.37		318	-3°	-4	0.72		324	6°
-5	0.34		319	5°	-5	0.70		325	7°
		0.6149	318.6				0.7356	324.2	
2-1	0.54		313	2°					
-2	0.49		317	3°					
-3	0.39		319	5°			0.6823	319.9	
-4	0.32		318	5°					
-5	0.30		317	8°					
		0.6346	316.8						
3-1	0.60		318	0°					
-2	0.54		318	5°					
-3	0.47		318	5°					
-4	0.44		318	6°					
-5	0.28		319	8°					
		0.6775	318.2						
4-1	0.57		319	0°					
-2	0.65		322	0°					
-3	0.51	-	322	-2°					
-4	0.57		323	2°					
-5	0.51		322	0°					
		0.7489	321.6						

P_{bar} _____ "Hg Static _____ "H_2O P_g _____ "Hg P_s _____ "Hg Pitot ID 620A C_p 0.841 Temp. ID E15

0.44 × _____ $\%CO_2$ = _____ $\sqrt{\Delta P}$ _____ t_s _____ °F T _____ °R Flue Area 216.0 ft^2

0.32 × _____ $\%O_2$ = + _____ Duct Dimensions 13.5' x 16'

0.28 × _____ $\%N_2$ = + _____ B_{ws} _____ 1 - B_{ws} _____ Disturbance: Upstream _____

(_____ Md × _____ 1-B_{ws}) + (18 × _____ B_{ws}) = _____ (Ms) Downstream _____

$$v_s = 85.49 \times ____ Cp \times \sqrt{\frac{(____)Ts\ °R}{____ Ms \times ____ Ps}} \times ____ \sqrt{\Delta P} = ____ \text{ ft/sec (Vs)}$$

Q_{acfm} = _____ Vs × _____ Flue Area × 60 = _____ acfm Port Length 23 Inches

$$Q_{dscfm} = 17.647 \times ACFM \times \frac{Ps}{Ts\ °R} = ____ \text{ SCFM}$$

$$Q_{dscfm} = 17.647 \times ACFM \times \frac{Ps}{Ts\ °R} \times (1\text{-}Bws) = ____ \text{ DSCFM}$$

Pre-test leak check ✓ "H_2O

Post-test leak check ✓ "H_2O

Data Taken By: DSH, RC, Craig Vale

Field Engineer / Test Technician

Form 1012 [Rev 5 97]

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MOSTARDI-PLATT ASSOCIATES, INC.
TEST SUPPORT DATA

TEST RUN NO. 1

COMPANY: NJ PSCO
PLANT: Bailly Station
TEST LOCATION: Unit 8 Pielip out
CLIENT: Electric Power Research Inst.
OPERATOR: PC
DATE: 12/9/99
CONTROL BOX: N-3 POT. NO.: N-3
METER NO.: N-3
METER CALIBRATION FACTOR: 1.012
PITOT ID NO.: 310 A
PITOT TUBE COEFFICIENT: 836
PORT LENGTH: 17 in.
PORT SIZE: 6 in.
PORT TYPE: Flange

IMPINGER H_2O
FINAL: 4985.7 ml/gm
INITIAL: 4790.0 ml/gm
GAIN: 195.7 ml/gm
TOTAL H_2O COLLECTED: 221.8

SILICA GEL:
FINAL WT: 734.7 gm
INITIAL WT: 708.6 gm
WT. GAIN: 26.1 gm

DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: 102 TARE WT: 3.2799
FILTER NO: TARE WT:
BAROMETRIC PRESSURE in. Hg: 29.46
FLUE PRESSURE in. H_2O: +6.5
FLUE PRESSURE in. Hg ABS: 29.94
PROBE LENGTH: 15 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO:
CALIBRATED NOZZLE DIAMETER: 0.245
LEAK CHECK: PRE: 0.005 POST: 0.000 @ 10/10 in. Hg
DUCT SHAPE: RECT DIAMETER:
DUCT AREA: 468 sq. ft. L 18' W 26'
DISTURBANCE UPSTREAM: DOWNSTREAM:
TEST LENGTH: 150 min
MINUTES PER POINT: 5
TOTAL NUMBER OF TRAVERSE POINTS: 30
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 12.5 / 12.3 / 12.4
O_2: 5.5 / 5.5 / 5.6

PITOT LEAK CHECK: PRE 0/3" POST 0/3
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other = _____
Circle to indicate "Yes" or add other value if not given.

Form 1053 [Rev. 6/97]

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(317) 806-6210.

FIELD TEST DATA SHEET FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

120ft³

PROJECT NIPSCO Bailly

TEST RUN NO. 1 Unit 8

TEST LOCATION Unit 8 Breech.

2.03

DATE 12/9/99 806 10

PAGE 1 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft³	Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	Meter Rate cfm	Pump Vacuum in. Hg	Notes	Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
1/1	0.45	.671	1303	79.506	0.91	367	74	72	.541	4	HTD LINE 225	225	IN STACK	66
2	0.50	.707	1308	82.2	1.02	367	75	72	.570	4	82.21 225	245		66
3	0.90	.949	1313	85.1	1.83	367	75	73	.765	5	85.06 225	255		66
4	1.25	1.118	1318	88.5	2.53	367	75	75	.901	7	88.88 225	265		66
5	1.10	1.049	1323	93.0	2.23	367	77	75	.845	7	93.39 225	255		66
6	0.85	.922	1328	97.5	1.73	365	77	75	.743	6	97.62 225	250		66
		(.903)	1333	101.345	(1.71)	(366.7)		(74.6)			101.34 225			
2/1	0.40	.632	1336	101.345	0.81	364	76	72	.509	4	225	240		66
2	0.50	.707	1341	104.0	1.02	362	76	72	.570	5	103.89 225	240		66
3	0.90	.949	1346	106.7	1.83	359	75	73	.765	5	106.74 224	240		66
4	1.00	1.000	1351	110.6	2.03	358	75	73	.806	5	110.57 224	241		66
5	1.10	1.049	1356	114.6	2.23	358	75	73	.845	5	114.60 224	241		66
6	1.20	1.095	1401	118.6	2.44	358	74	72	.883	6	118.83 224	248		66
		(.905)	1406	123.225	(1.73)	(359.8)		(73.8)			123.24			
3/1	0.50	.707	1409	123.225	1.02	359	75	73	.570	5	224	248		65
2	0.65	.806	1414	126.1	1.32	360	74	73	.650	5	126.09 224	248		64
3	0.80	.894	1419	129.4	1.62	360	75	71	.721	5	129.34 224	255		64
4	1.00	1.000	1424	132.8	2.03	360	74	71	.806	5	132.94 223	255		64
5	1.10	1.049	1429	136.7	2.23	361	75	72	.845	7	136.97 227	258		64
6	0.65	.806	1434	141.0	1.32	360	75	71	.650	6	141.20 227	258		64
		(.877)	1439	144.450	(1.59)	(360)		(73.25)			144.45			

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FIELD TEST DATA SHEET FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO Bailly
TEST RUN NO. 1
TEST LOCATION Unit 8 INLET

DATE 12/9/99 PAGE 2 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	Meter Rate cfm	Pump Vacuum in. Hg	Notes	HT/LINE	Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
4/1	.70	.837	1442	144.410	1.42	350	73	70	.674	5		225	260	IN STACK	65
2	1.00	1.000	1447	147.9	2.03	353	72	69	.806	5	147.82	225	260		65
3	0.90	.949	1452	151.9	1.83	353	72	70	.765	5	151.85	225	260		65
4	0.90	.949	1457	155.7	1.83	357	73	68	.765	5	155.67	225	260		66
5	0.80	.894	1502	159.6	1.62	356	72	69	.721	5	159.50	225	260		65
6	0.60	.775	1507	163.0	1.22	356	72	69	.624	5	163.10	225	261		65
		.901	1512	166.389	1.66	354.2		70.75			166.22				
168															
5/1	.70	.837	1515	166.389	1.42	357	71	68	.674	5		225	260		65
2	1.00	1.000	1520	169.6	2.03	359	71	68	.806	5	169.59	225	261		65
3	1.20	1.095	1525	173.6	2.44	359	72	68	.883	8	173.62	225	261		65
4	1.10	1.048	1530	177.9	2.23	360	71	68	.845	8	178.03	225	260		65
5	0.90	.949	1535	182.0	1.83	359	71	68	.765	7	182.26	225	260		65
6	0.80	.894	1540	186.0	1.62	353	71	68	.721	5	186.08	225	260		65
			1545	189.683	1.93	357.8		64.6			189.68				
		0.971													
		0.911													

Form 1026 [Rev. 5/27]

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MOSTARDI-PLATT ASSOCIATES, INC.
TEST SUPPORT DATA

TEST RUN NO. 2

COMPANY: NIPSCO
PLANT: Bailey Station
TEST LOCATION: Unit 8 Precip Outlet
CLIENT:
OPERATOR: D. Runyan
DATE: 12/10/95
CONTROL BOX: N-3 POT. NO.: N-3
METER NO.: N-3
METER CALIBRATION FACTOR: 1.012
PITOT ID NO.: 310A
PITOT TUBE COEFFICIENT: .0836
PORT LENGTH: 17 in.
PORT SIZE: 6 in.
PORT TYPE: Flange

IMPINGER H_2O
FINAL: 4811.4 ml/gm
INITIAL: 4624.1 ml/gm
GAIN: 187.3 ml/gm

SILICA GEL:
FINAL WT: 733.6 gm
INITIAL WT: 712.8 gm
WT. GAIN: 20.8 gm

TOTAL H_2O COLLECTED: 208.1
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: TARE WT:
FILTER NO: #100 TARE WT: 3.6362
BAROMETRIC PRESSURE in. Hg: 29.31
FLUE PRESSURE in. H_2O: +6.5
FLUE PRESSURE in. Hg ABS: 29.78
PROBE LENGTH: 15 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO:
CALIBRATED NOZZLE DIAMETER: 0.245
LEAK CHECK: PRE: 0.005/10" POST: 0.00 @ 12 in. Hg
DUCT SHAPE: Rect DIAMETER:
DUCT AREA: 468 sq. ft. L 18' W 26'
DISTURBANCE UPSTREAM: DOWNSTREAM:
TEST LENGTH: 150 min
MINUTES PER POINT: 5
TOTAL NUMBER OF TRAVERSE POINTS: 30
GAS ANALYSIS (ORSAT/FYRITE): 30
CO_2: 12.4
O_2: 5.6

PITOT LEAK CHECK: PRE 0.0/4" POST 0.0/4"
ΔH@ 1.756
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other = _____
Circle to indicate "Yes" or add other value if not given.

FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO - Bailey
TEST RUN NO. 2 - Hg Test
TEST LOCATION Unit 8 Precip Outlet

DATE 12-10-99 PAGE 1 OF 2.

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	2.06 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	.799 Meter Rate cfm	Pump Vacuum in. Hg	x5 Notes		Probe Temp. °F	Line ~~Filter Holder~~ Temp. °F	Impinger Outlet Temp. °F
1-1	0.45	0.671	8:38	89.913	0.927	314	50	52	0.536	3.0	2.680		230	230	<68°F
2	0.65	0.806	8:43	92.6	1.34	315	51	54	0.644	3.0	3.221	92.593	232	230	Fully
3	1.16	1.08	8:48	95.8	2.39	325	57	56	0.861	5.0	4.303	95.814	257	230	160°
4	1.38	1.17	8:53	100.1	2.84	324	59	57	0.939	5.0	4.693	100.117	258	230	
5	1.41	1.19	8:58	104.8	2.91	328	62	58	0.949	5.0	[illegible]	104.810	258	230	
6	1.40	1.183	9:03	109.5	2.88	332	61	58	0.945	5.0	4.727	109.554	256	230	
		6.10	9:08	114.295	13.28	1614		675				114.291			
2-1	0.48	0.693	9:09	114.295	0.98	330	62	59	0.554	3.0	2.768		258	230	
2	0.51	0.714	9:14	117.0	1.05	333	63	61	0.571	3.0	2.853	117.059	254	230	
3	0.72	0.849	9:19	119.9	1.48	334	64	61	0.678	4.0	3.390	119.912	260	230	
4	1.0	1.0	9:24	123.3	2.06	336	64	62	.799	5.0	3.995	123.302	264	230	
5	1.32	1.15	9:29	127.3	2.72	329	64	61	0.918	5.0	4.590	127.297	264	230	
6	1.25	1.12	9:34	131.8	2.58	335	65	61	0.893	5.0	4.467	131.887	264	230	
		5.526	9:39	136.363	10.87	1997		747				136.354			
3-1	0.61	0.781	9:40	136.363	1.26	338	66	61	0.624	3.0	3.120		266	230	
2	0.70	0.837	9:45	139.4	1.44	339	65	61	0.668	3.0	3.342	139.474	265	230	
3	0.80	0.894	9:50	142.8	1.65	338	64	61	0.715	4.0	3.573	142.816	265	230	
4	0.87	0.933	9:55	146.3	1.79	352	64	62	0.745	4.0	3.726	146.389	265	230	
5	0.63	0.794	10:00	150.1	1.30	342	64	60	0.634	3.0	3.171	150.115	265	230	
6	0.60	0.775	10:05	153.2	1.24	347	64	60	0.619	3.0	3.100	153.286	265	230	
		5.014	10:10	156.401	8.68	2056		752				156.381			
4-1	0.68	0.825	10:11	156.401	1.40	341	63	62	0.659	4.0	3.294		263	230	
2	0.92	0.959	10:16	159.6	1.90	343	65	62	0.766	5.0	3.832	159.675	264	230	
3	0.86	0.927	10:21	163.5	1.77	343	65	62	0.741	5.0	3.705	163.507	266	230	
4	0.82	0.906	10:26	167.2	1.69	343	66	64	0.724	4.0	3.618	167.212	264	230	
5	0.59	0.768	10:31	170.8	1.22	349	66	64	0.614	4.0	3.069	170.830	265	230	
6	0.55	0.742	10:36	173.9	1.13	354	66	64	0.593	3.0	2.963	173.899	265	230	
		5.127	10:41	176.867	9.11	2078		765				176.862			

21.767 41.986 7745 2943

Form 1026 [Rev. 5/27]

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO- Bailey
TEST RUN NO. 2 / Hg Test
TEST LOCATION Unit 8 Precip Outlet

DATE 12/10/97 PAGE 2 OF 2.

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	2.06 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	.799 Meter Rate cfm	Pump Vacuum in. Hg	× 5 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
5-1	0.65	0.806	10:42	176.862	1.34	346	68	64	0.644	3.0	3.221		263	230	<68°F
2	1.0	1.0	10:47	180.0	2.06	348	67	64	0.799	5.0	3.995	180.083	265	230	fully
3	1.40	1.18	10:52	184.0	2.88	344	66	64	0.945	5.0	4.727	184.078	265	230	iced
4	1.30	1.14	10:57	188.8	2.68	347	66	63	0.911	5.0	4.555	188.805	265	230	
5	0.50	0.707	11:02	193.3	1.03	349	67	63	0.565	4.0	2.825	193.360	265	230	
6	0.48	0.693	11:07	196.1	0.989	347	66	63	0.554	3.0	2.768	196.185	265	230	
			11:12	198.954								198.953			
		5.526			10.975	2001		77							
				109.041											
		0.9098			1.765										
								62.03							
						327.53									

Form 1026 (Rev. 5/27)

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MOSTARDI-PLATT ASSOCIATES, INC.
TEST SUPPORT DATA

TEST RUN NO. 3-

COMPANY: NIPSCO
PLANT: Bailey Station
TEST LOCATION: Unit 8 Precip Outlet
CLIENT:
OPERATOR: D. Runyan
DATE: 12-10-99
CONTROL BOX: N3 POT. NO.: N3
METER NO.: N3
METER CALIBRATION FACTOR: 1.012
PITOT ID NO.: 310A
PITOT TUBE COEFFICIENT: 0.836
PORT LENGTH: 17 in.
PORT SIZE: 6 in.
PORT TYPE: Flange

IMPINGER H_2O
FINAL: 5008.0 ml/gm
INITIAL: 4819.6 ml/gm
GAIN: 188.4 ml/gm
TOTAL H_2O COLLECTED: 210.8

SILICA GEL:
FINAL WT: 746.4 gm
INITIAL WT: 724.0 gm
WT. GAIN: 22.4 gm

DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: TARE WT:
FILTER NO: #101 TARE WT: 3.2441
BAROMETRIC PRESSURE in. Hg: 29.31
FLUE PRESSURE in. H_2O: +6.5
FLUE PRESSURE in. Hg ABS: 29.78
PROBE LENGTH: 15 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO:
CALIBRATED NOZZLE DIAMETER: 0.245
LEAK CHECK: PRE: 0.001/10 POST: 0.00 @ 7 in. Hg
DUCT SHAPE: Rectangular DIAMETER:
DUCT AREA: 468 sq. ft. L 18' W 26'
DISTURBANCE UPSTREAM: DOWNSTREAM:
TEST LENGTH: 150 min
MINUTES PER POINT: 5
TOTAL NUMBER OF TRAVERSE POINTS: 30
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 12.5
O_2: 6.5

PITOT LEAK CHECK: PRE 0.0/4" POST 0.0/4"
ΔH@ 1.786
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other = _____
Circle to indicate "Yes" or add other value if not given.

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO - Bailey
TEST RUN NO. 3 - Hg
TEST LOCATION Unit 8 Precip Outlet

DATE 12/10/99 PAGE 1 OF 2

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	2.06 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	.799 Meter Rate cfm	Pump Vacuum in. Hg	x5 Notes		Probe Temp. °F	Line ~~Filter Holder~~ Temp. °F	Impinger Outlet Temp. °F
1-1	0.40	0.632	11:55	99.171	0.824	356	56	55	0.505	3.0	2.527		269	232	<68°F
2	0.62	0.787	12:00	101.6	1.27	355	54	56	0.629	4.0	3.146	101.698	272	232	fully
3	1.12	1.06	12:05	104.8	2.31	356	56	56	0.846	5.0	4.228	104.844	272	231	ice
4	1.30	1.140	12:10	109.0	2.35	357	60	56	0.911	5.0	4.555	109.072	270	232	
5	1.37	1.17	12:15	113.6	2.82	356	60	56	0.935	5.0	4.676	113.627	270	231	
6	1.30	1.06	12:20	118.3	2.35	355	61	56	0.911	5.0	4.555	118.303	271	230	
		5.849	12:25	122.860	11.924	2135		682				122.858			
2-1	0.45	0.671	12:26	122.860	0.927	357	62	58	0.536	3.0	2.680		272	230	
2	0.50	0.707	12:31	125.5	1.03	356	62	58	0.565	3.0	2.825	125.538	271	230	
3	0.65	0.806	12:36	128.3	1.34	357	63	58	0.644	4.0	3.221	128.363	270	231	
4	1.0	1.0	12:41	131.5	2.06	357	63	59	0.799	5.0	3.995	131.584	276	230	
5	1.26	1.122	12:46	135.6	2.60	358	64	60	0.897	5.0	4.484	135.579	270	232	
6	1.20	1.10	12:51	140.0	2.47	354	64	59	0.875	5.0	4.376	140.163	271	232	
		5.406	12:56	144.435	10.427	2139		730				144.439	268	230	
3-1	0.60	0.775	12:57	144.435	1.24	358	64	60	0.619	4.0	3.095				
2	0.65	0.806	13:02	147.5	1.34	358	64	60	0.644	4.0	3.221	147.534	270	230	
3	0.78	0.883	13:07	150.7	1.61	359	64	61	0.706	4.0	3.528	150.755	270	230	
4	0.85	0.922	13:12	157.8	1.75	359	64	61	0.737	5.0	3.683	157.811	270	230	
5	0.65	0.806	13:17	161.5	1.34	358	64	61	0.644	4.0	3.221	161.494	269	230	
6	0.63	0.794	13:22	164.7	1.30	358	64	60	0.634	4.0	3.171	164.715	269	230	
			13:27	167.888	8.58	2150		747				167.886	268	231	
4-1	0.70	0.837	13:28	167.888	1.44	358	64	60	0.668	4.0	3.342				
2	0.85	0.922	13:33	171.2	1.75	358	63	59	0.737	4.0	3.683	171.228	270	230	
3	0.83	0.911	13:38	174.9	1.71	359	63	59	0.728	4.0	3.640	174.911	270	230	
4	0.77	0.877	13:43	178.5	1.59	359	63	59	0.701	4.0	3.506	178.551	270	230	
5	0.55	0.742	13:48	182.0	1.13	357	63	58	0.593	3.0	2.963	182.657	271	230	
6	0.50	0.707	13:53	185.0	1.03	357	63	58	0.565	3.0	2.825	185.020	270	230	
		9.912	13:58	187.848	8.63	2144		791				187.845			

21.237 8572 2950

qa. 17.

FIELD TEST DATA SHEET FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO-Bailey
TEST RUN NO. 3 - Hg Test
TEST LOCATION Unit #8 Precip outlet

DATE 12-10-99 PAGE 2 OF 2.

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	2.06 Orifice (H) in. H_2O	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	.799 Meter Rate cfm	Pump Vacuum in. Hg	x5 Notes		Probe Temp. °F	Line ~~Filter Holder~~ Temp. °F	Impinger Outlet Temp. °F
5-1	0.65	0.806	13:59	187.848	1.34	358	65	63	0.644	4.0	3.220		268	230	<68°F
2	1.0	1.0	14:04	191.0	2.06	358	65	63	0.799	5.0	3.995	191.068	268	230	fully
3	1.25	1.118	14:09	195.0	2.58	360	64	63	0.893	5.0	4.467	195.063	269	230	ice
4	1.30	1.140	14:14	199.5	2.68	358	64	62	0.911	5.0	4.555	199.530	268	230	
5	0.65	0.806	14:19	204.0	1.34	358	64	62	0.644	4.0	3.221	204.085	270	230	
6	0.57	0.755	14:24	207.3	1.17	357	63	62	0.663	4.0	3.016	207.306	270	230	
			14:29	210.301	1.17	214.9		76.0				210.322	268		
1-4		5.625		111.15											
						357.4		61.83							
		0.854			1.33										

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PITOT TRAVERSE DATA

Project: NJPSCO : Bailly

Location: Unit 8 Null Pt.

Date: 12/9/99 Test No: Prelim Time: 1120

Point No.	ΔP	√ΔP	t_s	α	Point No.	ΔP	√ΔP	t_s	α
1/1	0.43		371	12	4/1	0.70		365	5
2	0.63		370	-5	2	0.91		365	0
3	1.15		360	-5	3	0.85		355	0
4	1.40		364	0	4	0.81		353	5
5	1.40		364	5	5	0.57		350	0
		.978					.874		
2/1	0.48		344	5					
2	0.50		360	5	5/1	0.66		335	0
3	0.70		370	10	2	1.00		338	0
4	1.00		368	5	3	1.35		328	-5
5	1.30		370	-8	4	1.30		315	0
		.875			5	0.50		328	10
							.964		
3/1	0.60		363	0					
2	0.67		369	5	6/1				
3	0.80		371	5	2	N/A			
4	0.85		370	0	3				
5	0.63		365	-5	4				
		.811			5				
			365.3						

P_{bar} 29.46 "Hg Static +6.5 "H_2O P_g ___ "Hg P_s 29.94 "Hg Pitot ID ___ C_p .620B .841 Temp. ID ___

0.44 × ___ %CO_2 = ___ √ΔP ___ t_s ___ °F T ___ °R Flue Area ___ ft^2

0.32 × ___ %O_2 = + ___ Duct Dimensions 18" × 26"

0.28 × ___ %N_2 = + ___ B_{ws} ___ 1 - B_{ws} ___ Disturbance: Upstream ___

(___ Md × ___ 1-B_{ws}) + (18 × ___ B_{ws}) = ___ (Ms) Downstream ___

$$v_s = 85.49 \times ___ Cp \times \sqrt{\frac{(___)Ts\ °R}{___ Ms \times ___ Ps}} \times ___ \sqrt{\Delta P} = ___ \text{ ft/sec (Vs)}$$

Q_{acfm} = ___ Vs × ___ Flue Area × 60 = ___ acfm Port Length ___ Inches

$$Q_{dscfm} = 17.647 \times ACFM \times \frac{Ps}{Ts\ °R} = ___ \text{ SCFM}$$

$$Q_{dscfm} = 17.647 \times ACFM \times \frac{Ps}{Ts\ °R} \times (1\text{-}Bws) = ___ \text{ DSCFM}$$

Pre-test leak check ___ "H_2O

Post-test leak check ___ "H_2O

Data Taken By: ___ / ___

Field Engineer / Test Technician

Form 1012 [Rev. 5/97]

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STA -PL . ' AS . . CIA . . , INC.

TEST SUPPORT DATA

TEST RUN NO. 1

COMPANY: NIPSCO
PLANT: Bailly station
TEST LOCATION: 7 and 8 Stack Common Scrubber
CLIENT: Electric Power Research Inst
OPERATOR: T. Russ
DATE: 12/9/94
CONTROL BOX: E43 POT. NO.: E43
METER NO.: E43
METER CALIBRATION FACTOR: 1.001
PITOT ID NO.: S16A
PITOT TUBE COEFFICIENT: .830
PORT LENGTH: 66 in.
PORT SIZE: 4 in.
PORT TYPE: Flange

IMPINGER H_2O
FINAL: 4981.1 ml/gm
INITIAL: 4523.2 ml/gm
GAIN: 457.9 ml/gm

SILICA GEL:
FINAL WT: 775.1 gm
INITIAL WT: 750.0 gm
WT. GAIN: 25.1 gm

TOTAL H_2O COLLECTED: 483.0
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: — TARE WT: —
FILTER NO: 810 TARE WT: 0.6652
BAROMETRIC PRESSURE in. Hg: 29.26
FLUE PRESSURE in. H_2O: -1.6
FLUE PRESSURE in. Hg ABS: 29.30
PROBE LENGTH: 16 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO: D set Nozz 10
CALIBRATED NOZZLE DIAMETER: .310
LEAK CHECK: PRE: 0.008 POST: 0.006 @ 10/6 in. Hg
DUCT SHAPE: Circular DIAMETER: 33 ft
DUCT AREA: 855.2986 sq. ft. L — W —
DISTURBANCE UPSTREAM: 200 DOWNSTREAM: 280
TEST LENGTH: 150 min
MINUTES PER POINT: 12.5
TOTAL NUMBER OF TRAVERSE POINTS: 12
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 12.0
O_2: 7.0

PITOT LEAK CHECK: PRE ✓ POST ✓
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other = _____
Circle to indicate "Yes" or add other value if not given.

Form 1053 [Rev. 6/97]

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO
TEST RUN NO. 1
TEST LOCATION 7 and 8 Stack

DATE 12/9/99 PAGE 1 OF 1

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	Orifice (H) in. H_2O (6.17)	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	Meter Rate cfm (1.42)	Pump Vacuum in. Hg	X 6.25	Notes	Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
1-1	.38	.616	1310	12.841	2.34	131	63	62	.875	5	5.47		265	247	<68°
-1	.38	.616	1316.25	18.308	2.34	131	63	62	.875	5	5.47	18.311	265	247	Fully
-2	.31	.556	1322.5	23.784	1.91	130	63	62	.790	5	4.94	23.781	265	248	iced
-2	.31	.556	1328.75	28.718	1.91	130	64	62	.790	5	4.94	28.722	266	264	
-3	.28	.529	1335	33.660	1.72	131	64	62	.751	5	4.69	33.662	266	264	
-3	.28	.529	1341.25	38.350	1.72	131	65	62	.751	5	4.69	38.358	265	263	
		3.402	1347.5	43.039	11.94	784	754					43.048			
2-1	.30	.547	1350	43.039	1.85	129	64	62	.777	5	4.86		258	268	
-1	.30	.547	1356.25	47.894	1.85	130	64	62	.777	5	4.86	47.909	261	268	
-2	.28	.529	1402.50	52.759	1.72	130	65	62	.751	5	4.69	52.769	263	268	
-2	.28	.529	1408.75	57.451	1.72	131	64	62	.751	5	4.69	57.459	267	267	
-3	.26	.509	1415	62.144	1.60	130	64	62	.724	5	4.52	62.149	262	268	
-3	.26	.509	1421.25	66.670	1.60	130	64	62	.724	5	4.52	66.674	263	268	
		3.17	1427.5	72.196	10.34	780	757					72.196			
3-1	.32	.565	1433	72.196	1.97	130	63	61	.803	5	5.02		260	268	
-1	.32	.565	1439.25	77.218	1.97	131	63	61	.803	5	5.02	77.214	260	268	
-2	.27	.519	1445.5	82.238	1.66	129	63	61	.737	5	4.61	82.234	263	268	
-2	.27	.519	1451.75	86.848	1.66	130	64	61	.737	5	4.61	86.845	264	268	
-3	.25	.500	1458	91.458	1.54	130	64	61	.710	5	4.43	91.455	263	268	
-3	.25	.500	1504.25	95.899	1.54	130	64	61	.710	5	4.43	95.892	263	268	
		3.168	1510.50	100.328	10.34	780	747					100.322			
4-1	.31	.556	1512	100.328	1.91	129	64	61	.790	5	4.94		259	266	
-1	.31	.556	1518.25	105.268	1.91	130	64	61	.790	5	4.94	105.262	259	263	
-2	.28	.529	1524.5	110.208	1.72	130	64	61	.751	5	4.69	110.207	258	263	
-2	.28	.529	1530.75	114.894	1.72	130	63	61	.751	5	4.69	114.892	257	262	
-3	.26	.509	1537	119.588	1.60	130	63	61	.724	5	4.52	119.582	258	262	
-3	.26	.509	1543.25	124.109	1.60	130	63	61	.724	5	4.52	124.102	257	262	
		3.188	1549.5	128.628	10.46	779	747					128.622			
		.538		115.727	1.79	130	63								

Form 1020 (Rev. 5/2?)

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Customer NIPSCO BAILLY Test No. #1

Test Location UNITS 7 + 8 STACK

PROCEDURE FOR DETERMINING PERCENT MOISTURE
AT SATURATED CONDITIONS IN A SUPERSATURATED GAS STREAM

Determine the following parameters:

Barometric Pressure, P_{bar}	29.26	"Hg
Static Pressure, P_g = _____ "H_2O/13.6 =	0.60	"Hg
Absolute Flue Gas Pressure, $P_s = P_{bar} + P_g$ =	29.30	"Hg
Average Flue Gas Temperature, t_s	130.1	°F
Saturated Vapor Pressure of Water at t_s, V.P.	4.537	"Hg
Total Volume of Liquid Collected in impingers and silica gel by the condensation method, V_{lc}	483	mls
Moisture Content determined by condensation method, percent by volume = $B_{ws} \times 100$	16.5	%
Dry Gas Sample Volume as measured by dry gas meter, corrected to standard conditions, $V_{m(std)}$	115.033	ft^3

1. Theoretical maximum water vapor content, percent by volume, in a saturated gas stream

$$\% \text{ Moisture (saturated)} = \frac{\text{V.P.}}{P_s} \times 100 = \underline{15.5}\ \%$$

2. Moisture content in the form of water droplets in the supersaturated gas stream, expressed here as percent by volume for the purpose of comparison

$$\overset{16.5}{\% \text{ Moisture (droplets)}} = \left(B_{ws} \times 100\right) - \overset{15.5}{\% \text{ Moisture (saturated)}} = \underline{1.0}\ \%$$

3. Milliliters of actual collected condensate attributable to the theoretical saturation water vapor content of the gas stream

$$V_{lc}\text{ (saturated)} = \frac{\left(\dfrac{V_{m(std)}}{1 - \dfrac{\% \text{ Moisture (saturated)}}{100}}\right) - V_{m(std)}}{0.04707} = \underline{448.3}\ \text{mls}^*$$

*This number replaces V_{lc} in all calculations involving supersaturated gas streams.

4. Water droplet concentration, using 1 milliliter H_2O = 1 gram

$$\frac{[V_{lc} - V_{lc}\text{ (saturated)}] \times 15.43}{[0.04707 \times V_{lc}\text{ (saturated)}] + V_{m(std)}} = \text{grains/scf}$$

Rationale: When dealing with supersaturated gas streams as for example, after some scrubbers and certain water injection systems, the moisture that is not in the form of water vapor must be separated from that which is in the vapor state in order to correctly determine the volumetric gas flow rate at actual conditions. In these situations, the value for B_{ws} to be used in all calculations will be equal to the % Moisture (saturated) divided by 100. These calculations include those for all volumetric flow rates, wet molecular weight of the gas, pollutant concentrations and emission rates on a wet basis, and the isokinetic sampling rates and the final isokinetic variances. All additional moisture condensed in the impingers and collected in the silica gel is considered to be excess moisture attributable to water droplets, not water vapor in the gas stream.

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MOSTARDI-PLATT ASSOCIATES, INC.
TEST SUPPORT DATA

TEST RUN NO. 2

COMPANY: NIPSCO
PLANT: Bailly Station
TEST LOCATION: Units 7 and 8 Stack C
CLIENT: NIPSCO
OPERATOR: T. Russ
DATE: 12/10/99
CONTROL BOX: E43 POT. NO.: E43
METER NO.: E43
METER CALIBRATION FACTOR: 1.001
PITOT ID NO.: S16A
PITOT TUBE COEFFICIENT: .83
PORT LENGTH: 66 in.
PORT SIZE: 4 in.
PORT TYPE: Flange

IMPINGER H_2O
FINAL: 5048.4 ml/gm
INITIAL: 4652.8 ml/gm
GAIN: 395.6 ml/gm

SILICA GEL:
FINAL WT: 821.7 gm
INITIAL WT: 801.8 gm
WT. GAIN: 19.9 gm

TOTAL H_2O COLLECTED: 415.5
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: TARE WT:
FILTER NO: 782 TARE WT: 0.6394
BAROMETRIC PRESSURE in. Hg: 29.11
FLUE PRESSURE in. H_2O: +.6
FLUE PRESSURE in. Hg ABS: 29.15
PROBE LENGTH: 16 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO: Dset 10
CALIBRATED NOZZLE DIAMETER: .310
LEAK CHECK: PRE: 0.011 POST: 0.008 @ 12/6 in. Hg
DUCT SHAPE: Circular DIAMETER: 37
DUCT AREA: 855.2986 sq. ft. L — W —
DISTURBANCE UPSTREAM: 200 DOWNSTREAM: 050
TEST LENGTH: 150 min
MINUTES PER POINT: 12.5
TOTAL NUMBER OF TRAVERSE POINTS: 12
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 12.2
O_2: 7.0

PITOT LEAK CHECK: PRE ✓ POST ✓
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other = _____
Circle to indicate "Yes" or add other value if not given.

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FIELD TEST DATA SHEET FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO

TEST RUN NO. 2

TEST LOCATION Units 7 and 8 Stack

DATE 12/10/94 PAGE 1 OF 1

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	Orifice (H) in. H_2O (6.18)	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	Meter Rate cfm (1.43)	Pump Vacuum in. Hg	X 6.25 Notes		Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
1-1	.30	.547	837	29.321	1.85	128	51	50	.783	4	4.89		242	258	<680
-1	.30	.547	843.25	34.211	1.85	128	51	50	.783	4	4.89	34.216	248	260	Fully iced
-2	.32	.565	849.5	39.108	1.97	129	58	51	.808	4	5.05	39.106	243	254	
-2	.32	.565	855.75	44.168	1.97	129	59	51	.808	4	5.05	44.161	244	254	
-3	.28	.529	902	49.208	1.73	128	62	54	.756	4	4.72	49.211	251	253	
-3	.28	.529	908.25	53.944	1.73	128	63	56	.756	4	4.72	53.940	250	253	
		3.282	914.5	58.663	11.10	770	656					58.660			
2-1	.31	.556	916	58.663	1.91	129	64	56	.796	4	4.97		253	254	
-1	.31	.556	922.25	63.633	1.91	129	64	56	.796	4	4.97	63.636	252	256	
-2	.29	.538	928.50	68.601	1.79	129	64	56	.770	4	4.81	68.606	253	255	
-2	.29	.538	934.75	73.421	1.79	129	65	56	.770	4	4.81	73.418	250	255	
-3	.28	.529	941	78.231	1.73	130	65	56	.756	4	4.72	78.228	251	255	
-3	.28	.529	947.25	82.944	1.73	129	65	56	.756	4	4.72	82.948	251	255	
		3.246	953.5	87.672	10.86	775	723					87.668			
3-1	.30	.547	955	87.672	1.85	129	65	56	.783	4	4.89		251	256	
-1	.30	.547	1001.25	92.456	1.85	130	65	57	.783	4	4.89	92.558	252	256	
-2	.29	.538	1007.50	97.440	1.79	130	66	57	.770	4	4.81	97.448	253	256	
-2	.29	.538	1013.75	102.253	1.79	129	65	57	.770	4	4.81	102.258	253	255	
-3	.28	.529	1020	107.070	1.73	129	66	57	.756	4	4.72	107.068	252	255	
-3	.28	.529	1026.25	111.785	1.73	129	66	57	.756	4	4.72	111.788	252	255	
		3.228	1032.50	116.506	10.74	776	733					116.508			
4-1	.31	.556	1034	116.506	1.91	129	66	57	.796	4	4.97		253	254	
-1	.31	.556	1040.25	121.483	1.91	129	67	57	.796	4	4.97	121.478	254	254	
-2	.29	.538	1046.50	126.456	1.79	129	67	58	.770	4	4.81	126.448	253	255	
-2	.29	.538	1052.75	131.262	1.79	129	67	58	.770	4	4.81	131.258	253	256	
-3	.27	.519	1059	136.066	1.66	129	67	58	.743	4	4.64	136.068	252	256	
-3	.27	.519	1105.25	140.711	1.66	129	67	58	.743	4	4.64	140.708	251	255	
		3.228	1111.50	145.354	10.72	774	747					145.348			
		.540		116.033	1.80	129	60								

Form 1026 [Rev. 5/27]

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Customer NIPSCO - BAILLY Test No. #2

Test Location UNITS 7 & 8 STACK

PROCEDURE FOR DETERMINING PERCENT MOISTURE
AT SATURATED CONDITIONS IN A SUPERSATURATED GAS STREAM

Determine the following parameters:

Barometric Pressure, P_{bar}	29.11	"Hg
Static Pressure, P_g = _____ "H_2O/13.6 =	0.60	"Hg
Absolute Flue Gas Pressure, $P_s = P_{bar} + P_g$ =	29.15	"Hg
Average Flue Gas Temperature, t_s	1290	°F
Saturated Vapor Pressure of Water at t_s, V.P.	4.406	"Hg
Total Volume of Liquid Collected in impingers and silica gel by the condensation method, V_{lc}	416	mls
Moisture Content determined by condensation method, percent by volume = $B_{ws} \times 100$	14.5	%
Dry Gas Sample Volume as measured by dry gas meter, corrected to standard conditions, $V_{m(std)}$	115.360	ft^3

1. Theoretical maximum water vapor content, percent by volume, in a saturated gas stream

$$\% \text{ Moisture (saturated)} = \frac{V.P.}{P_s} \times 100 = \underline{15.1}\ \%$$

2. Moisture content in the form of water droplets in the supersaturated gas stream, expressed here as percent by volume for the purpose of comparison

$$\% \text{ Moisture (droplets)} = \left(B_{WS} \times 100\right) - \% \text{ Moisture (saturated)} = _____\ \%$$

3. Milliliters of actual collected condensate attributable to the theoretical saturation water vapor content of the gas stream

$$V_{lc} \text{ (saturated)} = \frac{\left(\dfrac{V_{m(std)}}{1 - \dfrac{\% \text{ Moisture (saturated)}}{100}}\right) - V_{m(std)}}{0.04707} = _____\ \text{mls}^*$$

*This number replaces V_{lc} in all calculations involving supersaturated gas streams.

4. Water droplet concentration, using 1 milliliter H_2O = 1 gram

$$\frac{[V_{lc} - V_{lc} \text{ (saturated)}] \times 15.43}{[0.04707 \times V_{lc} \text{ (saturated)}] + V_{m(std)}} = \text{grains/scf}$$

Rationale: When dealing with supersaturated gas streams as for example, after some scrubbers and certain water injection systems, the moisture that is not in the form of water vapor must be separated from that which is in the vapor state in order to correctly determine the volumetric gas flow rate at actual conditions. In these situations, the value for B_{ws} to be used in all calculations will be equal to the % Moisture (saturated) divided by 100. These calculations include those for all volumetric flow rates, wet molecular weight of the gas, pollutant concentrations and emission rates on a wet basis, and the isokinetic sampling rates and the final isokinetic variances. All additional moisture condensed in the impingers and collected in the silica gel is considered to be excess moisture attributable to water droplets, not water vapor in the gas stream.

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STA -PL AS CIAT, INC.

TEST SUPPORT DATA

TEST RUN NO. 3

COMPANY: NIPSCO
PLANT: Bailly
TEST LOCATION: Units 7+8 Stack
CLIENT: NIPSCO
OPERATOR: J Ross
DATE: 12/10/99
CONTROL BOX: E43 POT. NO.: E43
METER NO.: E43
METER CALIBRATION FACTOR: 1.001
PITOT ID NO.: 516 A
PITOT TUBE COEFFICIENT: .83
PORT LENGTH: 66 in.
PORT SIZE: 4 in.
PORT TYPE: Flange

IMPINGER H_2O
FINAL: 5114.3 ml/gm
INITIAL: 4711.3 ml/gm
GAIN: 403.0 ml/gm

SILICA GEL:
FINAL WT: 761.6 gm
INITIAL WT: 743.2 gm
WT. GAIN: 18.4 gm

TOTAL H_2O COLLECTED: 421.4
DESCRIPTION OF IMPINGER H_2O:
SILICA GEL EXHAUSTED?:
IMPINGERS RECOVERED BY:
SILICA GEL WEIGHED BY:

COMMENTS & NOTES

THIMBLE NO: — TARE WT: —
FILTER NO: TARE WT:
BAROMETRIC PRESSURE in. Hg: 29.11
FLUE PRESSURE in. H_2O: +.6
FLUE PRESSURE in. Hg ABS: 29.15
PROBE LENGTH: 16 ft.
PROBE LINER MATERIAL: Teflon
NOZZLE IDENTIFICATION NO: A set 10
CALIBRATED NOZZLE DIAMETER: .308
LEAK CHECK: PRE: 0.010 POST: @ 12 in. Hg
DUCT SHAPE: Circular DIAMETER: 33ft
DUCT AREA: 855.2968 sq. ft. L — W —
DISTURBANCE UPSTREAM: 200 DOWNSTREAM: 250
TEST LENGTH: 150 min
MINUTES PER POINT: 12.5
TOTAL NUMBER OF TRAVERSE POINTS: 12
GAS ANALYSIS (ORSAT/FYRITE):
CO_2: 12
O_2: 7

PITOT LEAK CHECK: PRE POST
ΔH@
SAMPLES REMOVED FROM SITE BY:

For computer data entry: Supervisor, please complete.
Do you want to enter a fuel analysis? Y ☐ N ☐
What value do you want to use? F = 9,780 F_c = 1,800 Other =
Circle to indicate "Yes" or add other value if not given.

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FIELD TEST DATA SHEET
FOR ISOKINETIC SAMPLING

MOSTARDI-PLATT ASSOCIATES, INC.

PROJECT NIPSCO
TEST RUN NO. 3
TEST LOCATION Units 7+8 Stack

DATE 12/10/99 PAGE 1 OF 1

Port-Point No.	Velocity Head (P) in. H_2O	$\sqrt{P}$	Clock Time 24 hr.	Meter Volume (Vm) ft^3	Orifice (H) in. H_2O (6.12)	Stack Temp (t_s) °F	Meter Temp. (t_m) Inlet °F	Meter Temp. (t_m) Outlet °F	Meter Rate cfm (1.43)	Pump Vacuum in. Hg	6.25 X	Notes	Probe Temp. °F	Filter Holder Temp. °F	Impinger Outlet Temp. °F
1-1	.30	.547	1155	45.735	1.83	129	62	61	.783	4	4.89		251	257	<68°
-1	.30	.547	1206.25	50.636	1.83	129	62	61	.783	4	4.89	50.630	252	257	Fully
-2	.28	.529	1212.50	55.523	1.71	130	64	62	.756	4	4.72	55.520	255	260	iced
-2	.28	.529	1218.75	60.254	1.71	130	64	62	.756	4	4.72	60.249	256	260	
-3	.27	.519	1225	64.974	1.65	130	65	63	.743	4	4.64	64.969	256	260	
-3	.27	.519	1231.25	69.617	1.65	129	65	63	.743	4	4.64	69.613	255	260	
		3.19	1237.50	74.256	10.38	777	754					74.253			
2-1	.31	.556	1239	74.256	1.89	129	66	63	.796	4	4.97		256	263	
-1	.31	.556	1245.25	79.238	1.89	129	67	64	.796	4	4.97	79.224	256	263	
-2	.29	.538	1251.50	84.204	1.77	130	68	65	.770	4	4.81	84.194	256	262	
-2	.29	.538	1257.75	89.014	1.77	130	69	66	.770	4	4.81	89.011	255	262	
-3	.27	.519	1304	93.828	1.65	129	72	66	.743	4	4.64	93.821	254	260	
-3	.27	.519	1310.25	98.460	1.65	129	73	67	.743	4	4.64	98.461	255	262	
		3.226	1316.50	103.104	10.62	776	806					103.101			
3-1	.31	.556	1318	103.104	1.89	129	73	67	.796	4	4.97		259	259	
-1	.31	.556	1324.25	108.075	1.89	130	73	68	.796	4	4.97	108.071	259	260	
-2	.28	.529	1330.5	113.036	1.71	130	74	68	.756	4	4.72	113.041	259	260	
-2	.28	.529	1336.75	117.766	1.71	130	74	68	.756	4	4.72	117.761	258	261	
-3	.26	.509	1343	122.489	1.59	129	75	68	.729	4	4.55	122.481	258	261	
-3	.26	.509	1349.25	127.040	1.59	129	76	68	.729	4	4.55	127.031	258	260	
		3.188	1355.5	131.588	10.38	777	852					131.581			
4-1	.30	.547	1357	131.588	1.83	130	76	68	.783	4	4.89		257	261	
-1	.30	.547	1403.25	136.475	1.83	130	77	68	.783	4	4.89	136.471	257	261	
-2	.29	.538	1409.5	141.366	1.77	130	78	69	.770	4	4.81	141.361	257	262	
-2	.29	.538	1415.75	146.184	1.77	130	78	69	.770	4	4.81	146.171	256	262	
-3	.27	.519	1422	150.974	1.65	129	78	69	.743	4	4.64	150.981	256	260	
-3	.27	.519	1428.25	155.617	1.65	129	78	69	.743	4	4.64	155.621	256	260	
		3.208	1434.5	160.261	10.50	778	877					160.261			
		.5338		114.526	1.745	129	68								

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Customer NIPSCO - BAILLY Test No. #3

Test Location UNITS 7 & 8 STACK

PROCEDURE FOR DETERMINING PERCENT MOISTURE
AT SATURATED CONDITIONS IN A SUPERSATURATED GAS STREAM

Determine the following parameters:

Barometric Pressure, P_{bar}	29.11	"Hg
Static Pressure, P_g = _____ "H_2O/13.6 =	0.60	"Hg
Absolute Flue Gas Pressure, $P_s = P_{bar} + P_g$ =	29.15	"Hg
Average Flue Gas Temperature, t_s	129.5	°F
Saturated Vapor Pressure of Water at t_s, V.P.	4.513	"Hg
Total Volume of Liquid Collected in impingers and silica gel by the condensation method, V_{lc}	421	mls
Moisture Content determined by condensation method, percent by volume = $B_{ws} \times 100$	15.1	%
Dry Gas Sample Volume as measured by dry gas meter, corrected to standard conditions, $V_{m(std)}$	111.918	ft^3

1. Theoretical maximum water vapor content, percent by volume, in a saturated gas stream

$$\% \text{ Moisture (saturated)} = \frac{\text{V.P.}}{P_s} \times 100 = \underline{15.5}\ \%$$

2. Moisture content in the form of water droplets in the supersaturated gas stream, expressed here as percent by volume for the purpose of comparison

$$\% \text{ Moisture (droplets)} = \left(B_{ws} \times 100\right) - \% \text{ Moisture (saturated)} = _____\ \%$$

3. Milliliters of actual collected condensate attributable to the theoretical saturation water vapor content of the gas stream

$$V_{lc}\text{ (saturated)} = \frac{\left(\dfrac{V_{m(std)}}{1 - \dfrac{\% \text{ Moisture (saturated)}}{100}}\right) - V_{m(std)}}{0.04707} = _____\ \text{mls}^*$$

*This number replaces V_{lc} in all calculations involving supersaturated gas streams.

4. Water droplet concentration, using 1 milliliter H_2O = 1 gram

$$\frac{[V_{lc} - V_{lc}\text{ (saturated)}] \times 15.43}{[0.04707 \times V_{lc}\text{ (saturated)}] + V_{m(std)}} = \text{grains/scf}$$

Rationale: When dealing with supersaturated gas streams as for example, after some scrubbers and certain water injection systems, the moisture that is not in the form of water vapor must be separated from that which is in the vapor state in order to correctly determine the volumetric gas flow rate at actual conditions. In these situations, the value for B_{ws} to be used in all calculations will be equal to the % Moisture (saturated) divided by 100. These calculations include those for all volumetric flow rates, wet molecular weight of the gas, pollutant concentrations and emission rates on a wet basis, and the isokinetic sampling rates and the final isokinetic variances. All additional moisture condensed in the impingers and collected in the silica gel is considered to be excess moisture attributable to water droplets, not water vapor in the gas stream.

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PITOT TRAVERSE DATA

Project: NIPSCO

Location: 7 and 8 stack

Date: 12/9/99 Test No: 1 Null Point Time: 955-1010

Point No.	ΔP	√ΔP	t_s	α	Point No.	ΔP	√ΔP	t_s	α
1-1	.30		129	8					
-2	.29		129	10					
-3	.28		130	9					
		1.615	388						
2-1	.31		130	0					
-2	.28		130	8					
-3	.28		131	8					
		1.615	391						
3-1	.30		130	2					
-2	.29		131	4					
-3	.27		131	8					
		1.6058	392						
4-1	.30		130	6					
-2	.29		131	8					
-3	.28		130	9					
		1.6153	391						

P_{bar} 29.80 "Hg Static .6 "H_2O P_g ____ "Hg P_s 29.30 "Hg Pitot ID 516A C_p .830 Temp. ID E43

0.44 × 12 %CO_2 = 5.28 √ΔP .537 t_s 130 °F T 590 °R Flue Area 855.2486 ft²

0.32 × 6.8 %O_2 = + 2.176 Duct Dimensions 73

0.28 × 81.2 %N_2 = + 22.736 B_{ws} .154 1 - B_{ws} ____ Disturbance: Upstream 200

(30.147 Md × .846 1-B_{ws}) + (18 × .154 B_{ws}) = 28.31 (Ms) Downstream 280

v_s = 85.49 × .83 Cp × $\sqrt{\frac{(590)\ Ts\ °R}{28.31\ Ms \times 29.30\ Ps}}$ × .537 √ΔP = 32.13 ft/sec (Vs)

Q_{acfm} = ____ Vs × 855.2486 Flue Area × 60 = 1,649,145 acfm Port Length 66 Inches

Q_{dscfm} = 17.647 × ACFM × $\frac{Ps}{Ts\ °R}$ = 1,445,258 SCFM

Q_{dscfm} = 17.647 × ACFM × $\frac{Ps}{Ts\ °R}$ × (1-Bws) = 1,222,688 DSCFM

Pre-test leak check ✓ "H_2O Data Taken By: TR, NS

Post-test leak check ✓ "H_2O Field Engineer / Test Technician

Form 1012 [Rev. 5/97]

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CALIBRATION PROCEDURES

PITOT TUBES

The pitot tubes used during this test program are fabricated according to the specification described and illustrated in the *Code of Federal Regulations*, Title 40, Part 60, Appendix A, Methods 1 through 5 as published in the *Federal Register*, Volume 42, No. 160; hereafter referred to by the appropriate method number. The pitot tubes comply with the alignment specifications in Method 2, Section 4; and the pitot tube assemblies are in compliance with specifications in the same section.

Pitot tube assemblies are calibrated in accordance with Method 2, Section 4, against a standard hemispherical pitot utilizing a wind tunnel meeting the specification in Method 2, Section 4.1.2.

NOZZLES

The nozzles are measured according to Method 5, Section 5.1.

TEMPERATURE SENSING DEVICES

The potentiometer and thermocouples are calibrated against a mercury thermometer in a calibration well. Alternatively, readings are checked utilizing a NBS traceable millivolt source.

DRY GAS METERS

The test meters are calibrated according to Method 5, Section 5.3 and "Procedures for Calibrating and Using Dry Gas Volume Meters as Calibration Standards" by P.R. Westlin and R.T. Shigehara, March 10, 1978.

ANALYTICAL BALANCE

The accuracy of the analytical balance is checked with Class S, Stainless Steel Type 303 weights manufactured by F. Hopken and Son, Jersey City, New Jersey.

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Pitot Tube Calibration Data

Calibration Pitot Tube: Type: Hemi Std. Size (OD): 0.25 Pitot ID #: 160-18

Type "S" Pitot Tube ID Number: 318 Cp(std) = 0.99

Calibration Date: 9/8/95 Performed By: BR/BDL

P_{std}, (in.) H_2O		A-Side Calibration		
Set Value	Read Value	P_s, (in.) H_2O	$C_{p(S)}$ [a]	DEV. [b]
0.25	0.24	0.34	0.832	0.006
0.55	0.55	0.76	0.842	0.005
0.85	0.84	1.20	0.828	0.009
1.00	0.99	1.40	0.833	0.005
2.00	1.90	2.60	0.846	0.009
3.00	2.90	4.00	0.843	0.006
		Average	0.837	0.006

P_{std}, (in.) H_2O		B-Side Calibration		
Set Value	Read Value	P_s, (in.) H_2O	$C_{p(S)}$ [a]	DEV. [b]
0.25	0.24	0.34	0.832	0.005
0.55	0.55	0.77	0.837	0.000
0.85	0.84	1.20	0.828	0.008
1.00	0.99	1.40	0.833	0.004
2.00	1.90	2.60	0.846	0.010
3.00	2.90	4.00	0.843	0.007
		Average	0.836	0.006

$\overline{C_p}(A) - \overline{C_p}(B) =$ 0.001 ***(must be ≤ 0.01)***

[a] $C_{p(S)} = C_{p(std)}\sqrt{\frac{\Delta P_{std}}{\Delta P_s}}$

[b] $DEV = C_{p(S)} - \overline{C_p}$, (must be ≤ 0.01)

Pitot Tube Calibration Data

Calibration Pitot Tube: Type: Hemi Std. Size (OD): 0.25 Pitot ID #: 160-18

Type "S" Pitot Tube ID Numbe 310 Cp(std) = 0.99

Calibration Date: 9/8/95 Performed By: BR/BDL

P_{std}, (in.) H_2O		A-Side Calibration		
Set Value	Read Value	P_s, (in.) H_2O	$C_{p(S)}$ [a]	DEV. [b]
0.25	0.24	0.34	0.832	0.005
0.55	0.55	0.77	0.837	0.000
0.85	0.84	1.20	0.828	0.008
1.00	0.99	1.40	0.833	0.004
2.00	1.90	2.60	0.846	0.010
3.00	2.90	4.00	0.843	0.007
		Average	0.836	0.006

P_{std}, (in.) H_2O		B-Side Calibration		
Set Value	Read Value	P_s, (in.) H_2O	$C_{p(S)}$ [a]	DEV. [b]
0.25	0.24	0.34	0.832	0.005
0.55	0.55	0.77	0.837	0.000
0.85	0.84	1.20	0.828	0.008
1.00	0.99	1.40	0.833	0.004
2.00	1.90	2.60	0.846	0.010
3.00	2.90	4.00	0.843	0.007
		Average	0.836	0.006

$\overline{C_p}(A) - \overline{C_p}(B) =$ 0.000 (must be ≤ 0.01)

[a] $C_{p(S)} = C_{p(std)}\sqrt{\frac{\Delta P_{std}}{\Delta P_s}}$

[b] $DEV = C_{p(S)} - \overline{C_p}$, (must be ≤ 0.01)

Pitot Tube Calibration Data

Calibration Pitot Tube: Type: HEMI STD Size (OD): 1/4" Pitot ID #: 16018

Type "S" Pitot Tube ID Number: 516 (1/4") Cp(std) = 0.99

Calibration Date: 12/4/1997 Performed By: M. McIntyre

P_{std}, (in.) H_2O		A-Side Calibration		
Set Value	Read Value	P_s, (in.) H_2O	$C_{p(S)}$ [a]	DEV. [b]
0.25	0.27	0.39	0.829	0.001
0.55	0.55	0.78	0.828	0.002
0.85	0.85	1.20	0.831	0.001
1.00	1.05	1.50	0.828	0.002
2.00	2.00	2.80	0.837	0.007
3.00	3.00	4.30	0.827	0.003
		Average	0.830	0.003

P_{std}, (in.) H_2O		B-Side Calibration		
Set Value	Read Value	P_s, (in.) H_2O	$C_{p(S)}$ [a]	DEV. [b]
0.25	0.26	0.37	0.830	0.001
0.55	0.55	0.78	0.828	0.003
0.85	0.85	1.20	0.831	0.000
1.00	1.05	1.50	0.828	0.003
2.00	2.00	2.80	0.837	0.006
3.00	3.00	4.25	0.832	0.001
		Average	0.831	0.002

$\overline{C_p}(A) - \overline{C_p}(B) =$ 0.001 ***(must be ≤ 0.01)***

[a] $C_{p(S)} = C_{p(std)}\sqrt{\frac{\Delta P_{std}}{\Delta P_s}}$

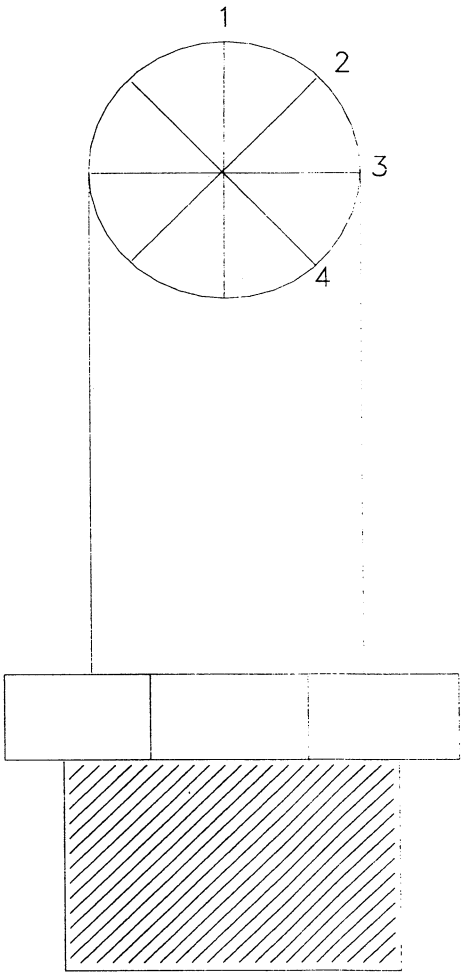
[b] $DEV = C_{p(S)} - \overline{C_p}$, (must be ≤ 0.01)

Nozzle Calibration

Date: 12/9/99

Nozzle ID No.: N/A

Analyst: PFC



Pre Test		Post Test
0.240	1	√
0.240	2	√
0.239	3	√
0.239	4	√

Average
0.240

DWG-AN2 (indnozzl.xls)

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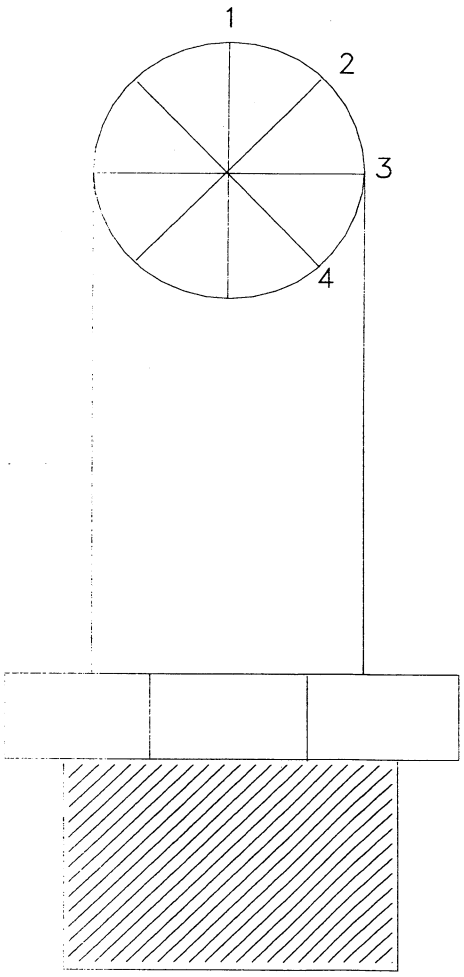
Nozzle Calibration

Date: 12/9/99

Nozzle ID No.: N/A

Analyst: PFC



Pre Test		Post Test
0.246	1	√
0.245	2	√
0.244	3	√
0.245	4	√

Average
0.245

DWG-AN2 (indnozzl.xls)

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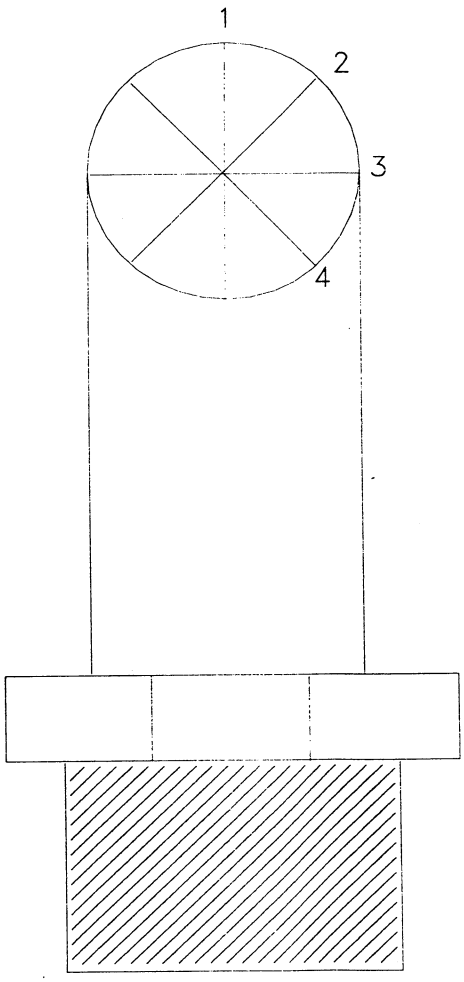
Nozzle Calibration

Date: 12/9/99

Nozzle ID No.: B Set - #10

Analyst: TER



Pre Test		Post Test
0.310	1	√
0.310	2	√
0.310	3	√
0.308	4	√

Average
0.310

DWG-AN2 (indnozzl.xls)

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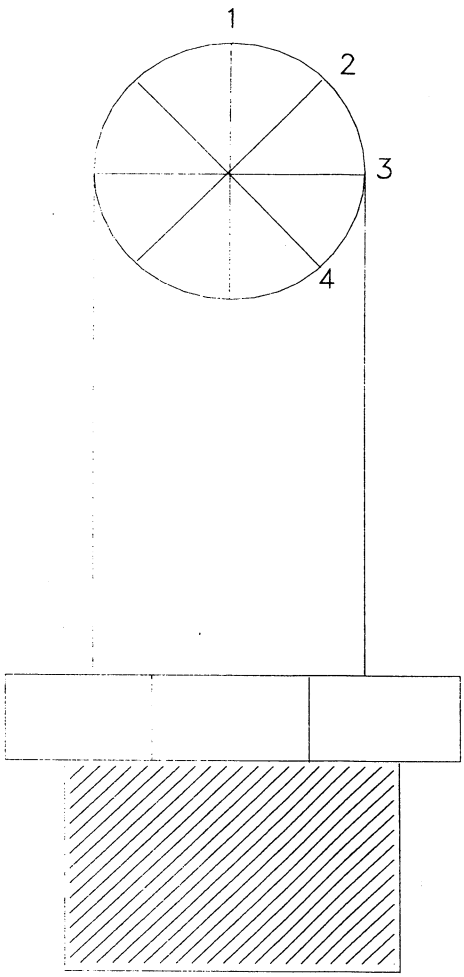
Nozzle Calibration

Date: 12/9/99

Nozzle ID No.: A Set - #10

Analyst: TER



Pre Test		Post Test
0.309	1	√
0.308	2	√
0.308	3	√
0.307	4	√

Average
0.308

DWG-AN2 (indnozzl.xls)

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STACK TEMPERATURE SENSOR CALIBRATION DATA FORM
(FOR K-TYPE THERMOCOUPLES)

EPA Control Module Number: E15 Name: Rich Russ

Ambient Temperature: 65 °F Date: 11-30-99

Model 1061; S/N: A20821 Reference Source (T/C Calibrator): Transmation, Inc.

Date of Calibration Verification: 10/18/94

Primary Standards Directly Traceable to
National Institute of Standards and Technology (NIST)

Reference[a] Source Temperature, (°F)	Test Thermometer Temperature, (°F)	Temperature Difference,[b] %
50	50	0.000
100	100	0.000
150	150	0.000
200	200	0.000
250	250	0.000
300	300	0.000
350	350	0.000
400	400	0.000
450	450	0.000
500	500	0.000
550	550	0.000
600	600	0.000
650	650	0.000
700	700	0.000
800	800	0.000
900	900	0.000
1000	1000	0.000
1100	1100	0.000
1200	1200	0.000

[a]Every (50°F) for each reference point.

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

STACK TEMPERATURE SENSOR CALIBRATION DATA FORM
(FOR K-TYPE THERMOCOUPLES)

EPA Control Module Number: E15 Name: Rich Russ

Ambient Temperatu 65 °F Date: 12-29-99

Model 1061; S/N: A20821 Reference Source (T/C Calibrator): Transmation, Inc.

Date of Calibration Verification: 10/18/94

Primary Standards Directly Traceable to
National Institute of Standards and Technology (NIST)

Reference[a] Source Temperature, (°F)	Test Thermometer Temperature, (°F)	Temperature Difference,[b] %
50	50	0.000
100	100	0.000
150	150	0.000
200	200	0.000
250	250	0.000
300	300	0.000
350	350	0.000
400	400	0.000
450	450	0.000
500	500	0.000
550	550	0.000
600	600	0.000
650	650	0.000
700	700	0.000
800	800	0.000
900	900	0.000
1000	1000	0.000
1100	1100	0.000
1200	1200	0.000

[a]Every (50°F) for each reference point.

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

STACK TEMPERATURE SENSOR CALIBRATION DATA FORM
(FOR K-TYPE THERMOCOUPLES)

EPA Control Module Number: En3 Name: Rich Russ

Ambient Temperature: 65 °F Date: 11-30-99

Model 1061; S/N: A20821 Reference Source (T/C Calibrator): Transmation, Inc.

Date of Calibration Verification: 10/18/94

Primary Standards Directly Traceable to
National Institute of Standards and Technology (NIST)

Reference[a] Source Temperature, (°F)	Test Thermometer Temperature, (°F)	Temperature Difference,[b] %
50	50	0.000
100	100	0.000
150	151	0.164
200	201	0.152
250	251	0.141
300	301	0.132
350	351	0.123
400	401	0.116
450	451	0.110
500	501	0.104
550	551	0.099
600	601	0.094
650	651	0.090
700	701	0.086
800	801	0.079
900	902	0.147
1000	1002	0.137
1100	1102	0.128
1200	1202	0.120

[a]Every (50°F) for each reference point.

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

STACK TEMPERATURE SENSOR CALIBRATION DATA FORM
(FOR K-TYPE THERMOCOUPLES)

EPA Control Module Number: En3 Name: Rich Russ

Ambient Temperatu 66 °F Date: 01-06-00

Model 1061; S/N: A20821 Reference Source (T/C Calibrator): Transmation, Inc.

Date of Calibration Verification: 10/18/94

Primary Standards Directly Traceable to
National Institute of Standards and Technology (NIST)

Reference[a] Source Temperature, (°F)	Test Thermometer Temperature, (°F)	Temperature Difference,[b] %
50	51	0.196
100	101	0.179
150	151	0.164
200	201	0.152
250	251	0.141
300	301	0.132
350	351	0.123
400	401	0.116
450	451	0.110
500	501	0.104
550	551	0.099
600	601	0.094
650	651	0.090
700	702	0.172
800	802	0.159
900	902	0.147
1000	1002	0.137
1100	1102	0.128
1200	1202	0.120

[a]Every (50°F) for each reference point.

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

STACK TEMPERATURE SENSOR CALIBRATION DATA FORM
(FOR K-TYPE THERMOCOUPLES)

EPA Control Module Number: E43 Name: Rich Russ

Ambient Temperature 65 °F Date: 11-29-99

Model 1061; S/N: A20821 Reference Source (T/C Calibrator): Transmation, Inc.

Date of Calibration Verification: 10/18/94

Primary Standards Directly Traceable to
National Institute of Standards and Technology (NIST)

Reference[a] Source Temperature, (°F)	Test Thermometer Temperature, (°F)	Temperature Difference,[b] %
50	50	0.000
100	100	0.000
150	150	0.000
200	200	0.000
250	250	0.000
300	300	0.000
350	350	0.000
400	400	0.000
450	450	0.000
500	500	0.000
550	550	0.000
600	600	0.000
650	650	0.000
700	700	0.000
800	800	0.000
900	900	0.000
1000	1000	0.000
1100	1101	0.064
1200	1201	0.060

[a]Every (50°F) for each reference point.

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

STACK TEMPERATURE SENSOR CALIBRATION DATA FORM
(FOR K-TYPE THERMOCOUPLES)

EPA Control Module Number: E43 Name: CLARKHILL

Ambient Temperature: 68 °F Date: 2/4/00

Model 1061; S/N: A20821 Reference Source (T/C Calibrator): Transmation, Inc.

Date of Calibration Verification: 10/18/94

Primary Standards Directly Traceable to
National Institute of Standards and Technology (NIST)

Reference[a] Source Temperature, (°F)	Test Thermometer Temperature, (°F)	Temperature Difference,[b] %
50	50	0.000
100	100	0.000
150	150	0.000
200	200	0.000
250	250	0.000
300	300	0.000
350	350	0.000
400	400	0.000
450	450	0.000
500	500	0.000
550	551	0.099
600	601	0.094
650	651	0.090
700	701	0.086
800	801	0.079
900	901	0.074
1000	1001	0.068
1100	1101	0.064
1200	1202	0.120

[a]Every (50°F) for each reference point.

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

METER BOX CALIBRATION

Dry Gas Meter No.	E15	Date:	11-30-99
Standard Meter No.	677191	Calibrated By:	Rich Russ
Standard Meter (Yr)	0.9991	Barometric Pressure :	30.11

Formula Protection Password: MPA

Run Number		Orifice Setting in H20 Chg (H)	Standard Meter Gas Volume Vr	Dry Meter Gas Volume Vd	Standard Meter Temp. F tr	Dry Gas Meter Inlet Temp. F tdi	Dry Gas Meter Outlet Temp. F tdo	Dry Gas Meter Avg. Temp. F td	Time Min.	Time Sec.	Y	Chg (H@)
Final			43.463	97.289	67	72	69					
Inital			38.450	92.246	67	72	69					
Difference	1	0.20	5.013	5.043	67	72	69	70.5	19	12	1.000	1.616
Final			48.682	102.519	67	73	69					
Inital			43.674	97.498	67	71	69					
Difference	2	0.50	5.008	5.021	67	72	69	70.5	12	30	1.003	1.716
Final			38.324	92.120	67	74	70					
Inital			33.302	87.056	67	72	70					
Difference	3	0.70	5.022	5.064	67	73	70	71.5	10	36	0.998	1.715
Final			54.077	7.935	67	76	69					
Inital			49.040	2.872	67	73	69					
Difference	4	0.90	5.037	5.063	67	74.5	69	71.75	9	25	1.002	1.729
Final			67.469	21.318	67	76	67					
Inital			62.447	16.281	67	72	67					
Difference	5	1.20	5.022	5.037	67	74	67	70.5	7	56	1.001	1.649
Final			73.034	26.873	67	79	68					
Inital			67.815	21.656	67	74	67					
Difference	6	2.00	5.219	5.217	67	76.5	67.5	72	6	36	1.005	1.757
									Average		1.001	1.697

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METER BOX CALIBRATION

Dry Gas Meter No.	E15	Date:	12-29-99
Standard Meter No.	3623851	Calibrated By:	Rich Russ
Standard Meter (Yr)	1.0063	Barometric Pressure :	29.77

Formula Protection Password: MPA

Run Number		Orifice Setting in H20 Chg (H)	Standard Meter Gas Volume Vr	Dry Meter Gas Volume Vd	Standard Meter Temp. F tr	Dry Gas Meter Inlet Temp. F tdi	Dry Gas Meter Outlet Temp. F tdo	Dry Gas Meter Avg. Temp. F td	Time Min.	Time Sec.	Y	Chg (H@)
Final			8.852	66.539	65	79	76					
Inital			3.829	61.394	65	80	75					
Difference	1	0.20	5.023	5.145	65	79.5	75.5	77.5	19	10	0.999	1.589
Final			22.354	80.370	65	83	77					
Inital			17.329	75.232	65	81	77					
Difference	2	0.50	5.025	5.138	65	82	77	79.5	12	22	1.004	1.646
Final			103.041	60.591	65	82	75					
Inital			98.018	55.461	65	79	74					
Difference	3	0.70	5.023	5.130	65	80.5	74.5	77.5	10	26	1.001	1.648
Final			29.243	87.414	65	85	78					
Inital			24.210	82.265	65	83	77					
Difference	4	0.90	5.033	5.149	65	84	77.5	80.75	9	14	1.005	1.643
Final			35.831	94.184	65	86	78					
Inital			30.809	89.030	65	84	78					
Difference	5	1.20	5.022	5.154	65	85	78	81.5	8	2	1.002	1.663
Final			43.316	101.868	65	88	79					
Inital			38.019	96.409	65	86	79					
Difference	6	2.00	5.297	5.459	65	87	79	83	6	42	0.999	1.728
									Average		1.001	1.653

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VOLUME METERING SYSTEM FIELD AUDIT

Date: 11-30-99 Name: Rich Russ

EPA Control Module No.: E15 Ambient Temperature: 66 °F

Calibration (Y): 1.001 Barometric Pressure: 30.11 "Hg

Delta H: 1.697

#VALUE!

Run No.	Time (Minutes)	Gas Meter Reading/Gas Meter Temperature (Cubic Feet)	Inlet (°F)	Outlet (°F)	Yc (Calculated)
1	0	28.123	75	68	0.991
	10	35.705	80	69	
	Vm=	7.582	Avg.= 73.00	533.00	
2	0	35.705	80	69	0.998
	10	43.247	82	70	
	Vm=	7.542	Avg.= 75.25	535.25	
3	0	43.247	82	70	1.000
	10	50.786	82	71	
	Vm=	7.539	Avg.= 76.25	536.25	

$$Yc = \frac{10}{Vm}\sqrt{\frac{Pbar}{0.0319Tm}}$$

Limit: 0.97Y < Yc < 1.03Y

Limit: 0.971 < Yc < 1.031

$$\text{Calc. Delta H @} = \frac{0.0319\ (\text{Delta H})(Tm)(100)}{Pbar(Y^2)(Vm^2)}$$ (From Calibration Data) = 1.607

METER BOX CALIBRATION

Dry Gas Meter No.	En3	Date:	11-30-99
Standard Meter No.	3623851	Calibrated By:	Rich Russ
Standard Meter (Yr)	1.0063	Barometric Pressure :	30.11

Formula Protection Password: MPA

Run Number		Orifice Setting in H20 Chg (H)	Standard Meter Gas Volume Vr	Dry Meter Gas Volume Vd	Standard Meter Temp. F tr	Dry Gas Meter Inlet Temp. F tdi	Dry Gas Meter Outlet Temp. F tdo	Dry Gas Meter Avg. Temp. F td	Time Min.	Time Sec.	Y	Chg (H@)
Final			75.272	92.443	61	72	72					
Inital			70.262	87.409	61	70	69					
Difference	1	0.20	5.010	5.034	61	71	70.5	70.75	19	39	1.013	1.656
Final			80.945	98.182	62	75	74					
Inital			75.925	93.114	61	72	72					
Difference	2	0.50	5.020	5.068	61.5	73.5	73	73.25	12	54	1.012	1.772
Final			69.385	86.524	60	71	68					
Inital			64.310	81.440	60	69	66					
Difference	3	0.70	5.075	5.084	60	70	67	68.5	10	55	1.013	1.744
Final			87.042	104.341	64	78	75					
Inital			82.015	99.263	63	75	74					
Difference	4	0.90	5.027	5.078	63.5	76.5	74.5	75.5	9	36	1.010	1.767
Final			93.071	10.440	64	81	76					
Inital			88.036	5.339	64	78	76					
Difference	5	1.20	5.035	5.101	64	79.5	76	77.75	8	22	1.010	1.780
Final			99.369	16.794	65	83	78					
			94.339	11.717	64	81	77					
Difference	6	2.00	5.030	5.077	64.5	82	77.5	79.75	6	33	1.015	1.819
									Average		1.012	1.756

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METER BOX CALIBRATION

Dry Gas Meter No.	En3	Date:	01-06-00
Standard Meter No.	3623851	Calibrated By:	Rich Russ
Standard Meter (Yr)	1.0063	Barometric Pressure :	30.14

Formula Protection Password: MPA

Run Number		Orifice Setting in H20 Chg (H)	Standard Meter Gas Volume Vr	Dry Meter Gas Volume Vd	Standard Meter Temp. F tr	Dry Gas Meter Inlet Temp. F tdi	Dry Gas Meter Outlet Temp. F tdo	Dry Gas Meter Avg. Temp. F td	Time Min.	Time Sec.	Y	Chg (H@)
Final			52.926	20.412	65	74	75					
Inital			47.878	15.304	65	72	76					
Difference	1	0.20	5.048	5.108	65	73	75.5	74.25	19	20	1.005	1.591
Final			64.412	31.930	65	73	72					
Inital			59.379	26.887	65	73	74					
Difference	2	0.50	5.033	5.043	65	73	73	73	12	30	1.012	1.676
Final			58.844	26.344	65	74	74					
Inital			53.754	21.217	65	73	74					
Difference	3	0.70	5.090	5.127	65	73.5	74	73.75	10	49	1.008	1.716
Final			69.670	37.208	65	75	74					
Inital			64.624	32.160	65	72	72					
Difference	4	0.90	5.046	5.048	65	73.5	73	73.25	9	25	1.013	1.703
Final			75.038	42.576	66	77	75					
Inital			70.019	37.552	65	75	75					
Difference	5	1.20	5.019	5.024	65.5	76	75	75.5	8	7	1.015	1.701
Final			80.425	47.986	66	79	76					
			75.321	42.887	66	77	76					
Difference	6	2.00	5.104	5.099	66	78	76	77	7	28	1.017	2.318
									Average		1.012	1.784

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VOLUME METERING SYSTEM FIELD AUDIT

Date: 11-30-99 Name: Rich Russ

EPA Control Module No.: En3 Ambient Temperature: 66 °F

Calibration (Y): 1.012 Barometric Pressure: 30.11 "Hg

Delta H: 1.756

Run No.	Time (Minutes)	Gas Meter Reading/Gas Meter Temperature (Cubic Feet)	Inlet (°F)	Outlet (°F)	Yc (Calculated)
1	0	23.719	84	78	1.025
	10	31.107	85	79	
	Vm=	7.388	Avg.= 81.50	541.50	
2	0	31.107	85	79	1.017
	10	38.560	86	80	
	Vm=	7.453	Avg.= 82.50	542.50	
3	0	38.560	86	80	1.012
	10	46.058	87	80	
	Vm=	7.498	Avg.= 83.25	543.25	

$$Yc = \frac{10}{Vm}\sqrt{\frac{Pbar}{0.0319Tm}}$$

Limit: $0.97Y < Yc < 1.03Y$

Limit: $0.982 < Yc < 1.042$

$$\text{Calc. Delta H @} = \frac{0.0319\,(\text{Delta H})(Tm)(100)}{Pbar(Y^2)(Vm^2)}$$ (From Calibration Data) = 1.909

METER BOX CALIBRATION

Dry Gas Meter No.	E43	Date:	11-29-99
Standard Meter No.	3623851	Calibrated By:	Rich Russ
Standard Meter (Yr)	1.0063	Barometric Pressure :	29.98

Formula Protection Password: MPA

Run Number		Orifice Setting in H20 Chg (H)	Standard Meter Gas Volume Vr	Dry Meter Gas Volume Vd	Standard Meter Temp. F tr	Dry Gas Meter Inlet Temp. F tdi	Dry Gas Meter Outlet Temp. F tdo	Dry Gas Meter Avg. Temp. F td	Time Min.	Time Sec.	Y	Chg (H@)
Final			87.876	21.329	64	75	72					
Inital			82.852	16.239	64	74	71					
Difference	1	0.20	5.024	5.090	64	74.5	71.5	73	19	9	1.004	1.582
Final			93.150	26.698	64	77	72					
Inital			88.127	21.582	64	74	72					
Difference	2	0.50	5.023	5.116	64	75.5	72	73.75	12	29	0.999	1.679
Final			82.747	16.124	64	78	71					
Inital			77.713	11.026	64	77	70					
Difference	3	0.70	5.034	5.098	64	77.5	70.5	74	10	37	1.005	1.692
Final			98.556	32.209	65	78	71					
Inital			93.514	27.065	64	75	72					
Difference	4	0.90	5.042	5.144	64.5	76.5	71.5	74	9	31	0.996	1.745
Final			104.870	38.627	65	80	73					
Inital			99.845	33.525	65	77	72					
Difference	5	1.20	5.025	5.102	65	78.5	72.5	75.5	8	19	1.002	1.788
Final			10.285	44.119	65	83	74					
Inital			5.125	38.884	65	79	73					
Difference	6	2.00	5.160	5.235	65	81	73.5	77.25	6	40	1.004	1.810
									Average		1.001	1.716

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METER BOX CALIBRATION

Dry Gas Meter No.	E43	Date:	Feb. 4,00
Standard Meter No.	677191	Calibrated By:	clark hill
Standard Meter (Yr)	0.9991	Barometric Pressure :	29.60

Formula Protection Password: MPA

Run Number		Orifice Setting in H20 Chg (H)	Standard Meter Gas Volume Vr	Dry Meter Gas Volume Vd	Standard Meter Temp. F tr	Dry Gas Meter Inlet Temp. F tdi	Dry Gas Meter Outlet Temp. F tdo	Dry Gas Meter Avg. Temp. F td	Time Min.	Time Sec.	Y	Chg (H@)
Final			10.809	299.964	67	78	76					
Inital			5.804	294.849	67	77	76					
Difference	1	0.20	5.005	5.115	67	77.5	76	76.75	19	47	0.996	1.730
Final			5.679	294.721	67	78	76					
Inital			0.676	289.615	66	77	76					
Difference	2	0.50	5.003	5.106	66.5	77.5	76	76.75	12	31	0.998	1.730
Final			84.901	273.558	65	75	70					
Inital			79.894	268.501	65	73	69					
Difference	3	0.70	5.007	5.057	65	74	69.5	71.75	10	33	1.001	1.724
Final			21.156	311.242	68	82	77					
Inital			16.140	306.117	68	78	77					
Difference	4	0.90	5.016	5.125	68	80	77	78.5	9	27	0.996	1.770
Final			16.140	305.403	68	79	77					
Inital			11.122	300.279	67	78	76					
Difference	5	1.20	5.018	5.124	67.5	78.5	76.5	77.5	8	21	0.995	1.841
Final			100.430	289.368	66	79	76					
Inital			95.414	284.260	66	76	74					
Difference	6	2.00	5.016	5.108	66	77.5	75	76.25	6	40	0.996	1.951
									Average		0.997	1.791

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VOLUME METERING SYSTEM FIELD AUDIT

Date: 11-29-99 Name: Rich Russ

EPA Control Module No.: E43 Ambient Temperature: 65 °F

Calibration (Y): 1.001 Barometric Pressure: 29.98 "Hg

Delta H: 1.716

#VALUE!

Run No.	Time (Minutes)	Gas Meter Reading/Gas Meter Temperature (Cubic Feet)	Inlet (°F)	Outlet (°F)	Yc (Calculated)
1	0	73.550	78	73	1.010
	10	81.029	81	73	
	Vm=	7.479	Avg.= 76.25	536.25	
2	0	81.029	81	73	1.004
	10	88.566	84	74	
	Vm=	7.537	Avg.= 78.00	538.00	
3	0	88.566	84	74	0.998
	10	96.154	84	74	
	Vm=	7.588	Avg.= 79.00	539.00	

$$Yc = \frac{10}{Vm}\sqrt{\frac{Pbar}{0.0319\ Tm}}$$

Limit: 0.97Y <Yc< 1.03Y

Limit: 0.971 <Yc< 1.031

Calc. Delta H @ = $\frac{0.0319\ (\text{Delta H})(\text{Tm})(100)}{\text{Pbar}(Y^2)(Vm^2)}$ (From Calibration Data) = #VALUE!

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.: 94912 **TEST RUN NO.:** 1 **TEST DATE:** 12/9/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.46 **in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	7 **in. H2O**
TEST LOC.:	Unit 7 Precipitator Outlet	**FLUE PRESSURE (Ps)**	29.97 **in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	13 **ft.**
OPERATOR:	D. Helm	**PROBE LINER MATERIAL:**	Teflon
CONTROL BOX:	E-15	**NOZZLE IDENTIFICATION NO.:**	N/A
METER NO.:	E-15	**CALIBRATED NOZZLE DIAMETER:**	0.240 **in.**
METER CALIBRATION FACTOR:	1.001	**LEAK CHECK PRE:**	0.002 **POST:** 0.003 @ 13 in. Hg.
PITOT ID NO.:	318A	**DUCT SHAPE:**	Circular DIA. Feet Rectangular 13.5 Feet 16 Feet
PITOT TUBE COEFFICIENT:	0.837	**DUCT AREA:**	216 **sq. ft.**
PORT LENGTH:	23 in.	**TEST LENGTH:**	150 **min.**
PORT SIZE:	6 in.	**MINUTES PER POINT:**	6
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	25

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/9/99 **Test Run:** 1

Location: Unit 7 Precipitator Outlet

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.29	0.539	13:10	32.11	0.55	320	70	69	2	2.545
1-2	0.42	0.648	13:16	34.65	0.80	320	72	69	3	3.160
1-3	0.45	0.671	13:22	37.81	0.86	322	71	68	3	3.260
1-4	0.41	0.640	13:28	41.07	0.78	323	73	67	3	3.050
1-5	0.36	0.600	13:34	44.12	0.69	321	72	67	3	2.790
			13:40	46.91						0.000
2-1	0.46	0.678	13:42	46.91	0.88	319	71	67	3	3.260
2-2	0.44	0.663	13:48	50.17	0.84	320	71	67	3	3.200
2-3	0.45	0.671	13:54	53.37	0.86	322	73	67	3	3.240
2-4	0.38	0.616	14:00	56.61	0.73	324	73	67	3	2.960
2-5	0.33	0.574	14:06	59.57	0.63	324	73	67	3	0.000
			14:12	59.57						0.000
3-1	0.59	0.768	14:14	59.57	1.12	323	72	66	5	6.490
3-2	0.60	0.775	14:20	66.06	1.14	323	73	66	5	3.710
3-3	0.52	0.721	14:26	69.77	0.99	324	73	66	4	3.440
3-4	0.51	0.714	14:32	73.21	0.97	322	73	66	4	3.460
3-5	0.35	0.592	14:38	76.67	0.67	323	72	66	4	2.840
			14:44	79.51						0.000
4-1	0.56	0.748	14:46	79.51	1.07	320	70	65	4	3.570
4-2	0.60	0.775	14:52	83.08	1.14	318	72	65	5	3.730
4-3	0.53	0.728	14:58	86.81	1.01	318	72	65	4	3.490
4-4	0.51	0.714	15:04	90.30	0.97	315	71	64	4	3.420
4-5	0.52	0.721	15:10	93.72	0.99	310	71	64	4	0.000
			15:16	93.72						0.000
5-1	0.41	0.640	15:19	93.72	0.78	318	69	63	4	6.530
5-2	0.38	0.616	15:25	100.25	0.73	320	69	63	4	2.970
5-3	0.48	0.693	15:31	103.22	0.92	320	70	63	4	3.320
5-4	0.68	0.825	15:37	106.54	1.30	319	69	63	5	3.950
5-5	0.68	0.825	15:43	110.49	1.30	319	68	62	5	3.950
			15:49	114.44						0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
		0.686		82.335	0.91	320	71	66		#####
							68.50			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/9/99 **Test Run:** 1

Location: Unit 7 Precipitator Outlet

SILICA GEL FINAL WT.:	751.10	**grams**
SILICA GEL INITIAL WT.:	730.40	**grams**
DIFFERENCE:	20.70	
FINAL IMPINGER WATER:	4808.30	**mls.**
INITIAL IMPINGER WATER:	4671.20	**mls.**
DIFFERENCE:	137.10	
TOTAL WATER GAIN:	157.80	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.017		0.000000017
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000017
KCl:	5.090		0.000005090
		Oxidized Total:	0.000005090
HNO_3/H_2O_2:	0.649		0.000000649
$KMNO_4$:	3.232		0.000003232
		Elemental Total:	0.000003881

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	13.00			13.00
Oxygen:	6.00			6.00

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ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/9/99
Test Run:	1
Stack or Duct No.:	Unit 7 Precipitator Outlet
Start Time:	13:10
Stop Time:	15:49

Pb:	29.46	Inches Hg
Static	7.00	Inches H2O
Ps:	29.97	Inches Hg Abs.
Vlc:	158	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	6.00	%
% CO2:	13.00	%
% N2:	81.00	%
Delta H:	0.91	Inches H20
Cp:	0.837	Dimensionless - pitot
Tm:	68.50	°F
Sqrt P:	0.686	Inches H20
Ts:	320.28	°F
Vm:	82.335	Cubic Feet
Dn:	0.240	Inches - nozzle
As:	216.00	Sq. Feet
Yd:	1.001	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	81.257	cubic feet (dry)
Vwstd:	7.432	cubic feet (wet)
Bwo:	0.084	
Md:	30.320	lb/lb-mole (dry)
Ms:	29.288	lb/lb-mole (wet)
Excess Air (%)	39.002	
Vs:	46.293	fps
ACFM:	599953.	
DSCFM:	372634.	
WSCFM:	406717	
%I:	100.0	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.: 94912 **TEST RUN NO.:** 2 **TEST DATE:** 12/10/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.31 **in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	7 **in. H2O**
TEST LOC.:	Unit 7 Precipitator Outlet	**FLUE PRESSURE (Ps)**	29.82 **in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	13 **ft.**
OPERATOR:	D. Helm	**PROBE LINER MATERIAL:**	Teflon
CONTROL BOX:	E-15	**NOZZLE IDENTIFICATION NO.:**	N/A
METER NO.:	E-15	**CALIBRATED NOZZLE DIAMETER:**	0.240 **in.**
METER CALIBRATION FACTOR:	1.001	**LEAK CHECK PRE:**	0.001 **POST:** 0.002 @ 13 in. Hg.
PITOT ID NO.:	318A	**DUCT SHAPE:**	Circular DIA. Feet Rectangular 13.5 Feet 16 Feet
PITOT TUBE COEFFICIENT:	0.837	**DUCT AREA:**	216 **sq. ft.**
PORT LENGTH:	23 in.	**TEST LENGTH:**	150 **min.**
PORT SIZE:	6 in.	**MINUTES PER POINT:**	6
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	25

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/10/99 **Test Ru** 2

Location: Unit 7 Precipitator Outlet

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.40	0.632	8:41	14.91	0.75	308	45	44	5	3.070
1-2	0.41	0.640	8:47	17.98	0.77	310	50	41	5	2.960
1-3	0.43	0.656	8:53	20.94	0.81	310	50	42	5	3.120
1-4	0.41	0.640	8:59	24.06	0.77	311	50	42	5	2.990
1-5	0.37	0.608	9:05	27.05	0.70	313	54	44	4	2.880
			9:11	29.93						0.000
2-1	0.57	0.755	9:13	29.93	1.07	316	56	47	6	3.550
2-2	0.52	0.721	9:19	33.48	0.98	317	58	48	6	3.460
2-3	0.48	0.693	9:25	36.94	0.90	317	58	49	6	3.330
2-4	0.32	0.566	9:31	40.27	0.60	320	58	49	5	2.630
2-5	0.31	0.557	9:37	42.90	0.58	318	58	51	4	2.650
			9:43	45.55						0.000
3-1	0.58	0.762	9:45	45.55	1.09	320	58	54	6	3.600
3-2	0.56	0.748	9:51	49.15	1.05	320	58	54	6	3.540
3-3	0.51	0.714	9:57	52.69	0.96	319	59	52	6	3.390
3-4	0.43	0.656	10:03	56.08	0.81	318	59	52	6	3.050
3-5	0.32	0.566	10:09	59.13	0.60	318	59	52	5	2.680
			10:15	61.81						0.000
4-1	0.60	0.775	10:17	61.81	1.13	320	58	53	6	3.700
4-2	0.61	0.781	10:23	65.51	1.15	322	60	53	6	3.690
4-3	0.56	0.748	10:29	69.20	1.05	321	60	53	6	3.490
4-4	0.55	0.742	10:35	72.69	1.03	320	60	53	6	3.570
4-5	0.51	0.714	10:41	76.26	0.96	319	60	54	6	3.390
			10:47	79.65						0.000
5-1	0.35	0.592	10:49	79.65	0.66	322	60	54	4	2.790
5-2	0.39	0.624	10:55	82.44	0.73	323	60	54	5	2.950
5-3	0.46	0.678	11:01	85.39	0.87	323	59	54	5	3.220
5-4	0.68	0.825	11:07	88.61	1.28	322	60	54	6	3.850
5-5	0.71	0.843	11:13	92.46	1.34	323	60	54	6	2.010
			11:19	94.47						0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
		0.689		79.560	0.91	318	57	50		#####
							53.68			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/10/99 **Test Run:** 2

Location: Unit 7 Precipitator Outlet

SILICA GEL FINAL WT.:	758.30	**grams**
SILICA GEL INITIAL WT.:	741.10	**grams**
DIFFERENCE:	17.20	
FINAL IMPINGER WATER:	4823.00	**mls.**
INITIAL IMPINGER WATER:	4685.60	**mls.**
DIFFERENCE:	137.40	
TOTAL WATER GAIN:	154.60	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.027		0.000000027
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000027
KCl:	4.780		0.000004780
		Oxidized Total:	0.000004780
HNO_3/H_2O_2:	0.887		0.000000887
$KMNO_4$:	4.062		0.000004062
		Elemental Total:	0.000004949

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.00			12.00
Oxygen:	6.00			6.00

ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/10/99
Test Run:	2
Stack or Duct No.:	Unit 7 Precipitator Outlet
Start Time:	8:41
Stop Time:	11:19

Pb:	29.31	Inches Hg
Static	7.00	Inches H2O
Ps:	29.82	Inches Hg Abs.
Vlc:	155	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	6.00	%
% CO2:	12.00	%
% N2:	82.00	%
Delta H:	0.91	Inches H20
Cp:	0.837	Dimensionless - pitot
Tm:	53.68	°F
Sqrt P:	0.689	Inches H20
Ts:	318.00	°F
Vm:	79.560	Cubic Feet
Dn:	0.240	Inches - nozzle
As:	216.00	Sq. Feet
Yd:	1.001	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	80.373	cubic feet (dry)
Vwstd:	7.282	cubic feet (wet)
Bwo:	0.083	
Md:	30.160	lb/lb-mole (dry)
Ms:	29.150	lb/lb-mole (wet)
Excess Air (%)	38.344	
Vs:	46.666	fps
ACFM:	604793.	
DSCFM:	375154.	
WSCFM:	409142	
%I:	98.3	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.:	94912	**TEST RUN NO.:**	3	**TEST DATE:**	12/10/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.31	**in. Hg.**	
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	7	**in. H2O**	
TEST LOC.:	Unit 7 Precipitator Outlet	**FLUE PRESSURE (Ps)**	29.82	**in. Hg. abs.**	
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	13	**ft.**	
OPERATOR:	D. Helm	**PROBE LINER MATERIAL:**	Teflon		
CONTROL BOX:	E-15	**NOZZLE IDENTIFICATION NO.:**	N/A		
METER NO.:	E-15	**CALIBRATED NOZZLE DIAMETER:**	0.240	**in.**	
METER CALIBRATION FACTOR:	1.001	**LEAK CHECK PRE:**	0.001	**POST:**	0.001 @ 13 in. Hg.
PITOT ID NO.:	318A	**DUCT SHAPE:**	Circular DIA.		Feet
			Rectangular	13.5 Feet	16 Feet
PITOT TUBE COEFFICIENT:	0.837	**DUCT AREA:**	216	**sq. ft.**	
PORT LENGTH:	23 in.	**TEST LENGTH:**	150	**min.**	
PORT SIZE:	6 in.	**MINUTES PER POINT:**	6		
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	25		

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/10/99 **Test Ru** 3

Location: Unit 7 Precipitator Outlet

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.36	0.600	11:55	95.21	0.68	312	52	51	5	2.816
1-2	0.41	0.640	12:01	98.03	0.77	314	56	51	5	3.080
1-3	0.44	0.663	12:07	101.11	0.83	315	56	51	5	3.100
1-4	0.43	0.656	12:13	104.21	0.81	315	56	51	5	3.140
1-5	0.38	0.616	12:19	107.35	0.72	317	57	51	5	2.920
			12:25	110.27						0.000
2-1	0.57	0.755	12:27	110.27	1.07	319	57	51	6	3.580
2-2	0.53	0.728	12:33	113.85	1.00	321	58	52	6	3.400
2-3	0.47	0.686	12:39	117.25	0.89	323	58	52	6	3.310
2-4	0.44	0.663	12:45	120.56	0.83	326	58	52	6	3.140
2-5	0.33	0.574	12:51	123.70	0.62	324	57	52	5	2.660
			12:57	126.36						0.000
3-1	0.62	0.787	12:59	126.36	1.17	318	60	54	7	3.760
3-2	0.52	0.721	13:05	130.12	0.98	317	60	54	6	3.440
3-3	0.50	0.707	13:11	133.56	0.94	320	61	54	6	3.350
3-4	0.42	0.648	13:17	136.91	0.79	319	61	55	6	3.010
3-5	0.34	0.583	13:23	139.92	0.64	319	61	55	5	2.760
			13:29	142.68						0.000
4-1	0.54	0.735	13:31	142.68	1.02	317	61	54	8	3.510
4-2	0.62	0.787	13:37	146.19	1.17	318	61	54	9	3.750
4-3	0.61	0.781	13:43	149.94	1.15	318	61	55	9	3.650
4-4	0.57	0.755	13:49	153.59	1.07	320	62	55	8	3.560
4-5	0.52	0.721	13:55	157.15	0.98	321	62	55	7	3.430
			14:01	160.58						0.000
5-1	0.41	0.640	14:03	160.58	0.77	322	61	55	7	3.060
5-2	0.39	0.624	14:09	163.64	0.73	325	60	55	7	2.960
5-3	0.54	0.735	14:15	166.60	1.02	324	60	55	8	3.450
5-4	0.67	0.819	14:21	170.05	1.26	324	60	54	9	3.900
5-5	0.69	0.831	14:27	173.95	1.30	323	60	54	9	3.910
			14:33	177.86						0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
		0.698		82.646	0.93	320	59	53		#####
							56.16			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/10/99 **Test Run:** 3

Location: Unit 7 Precipitator Outlet

SILICA GEL FINAL WT.:	773.60	**grams**
SILICA GEL INITIAL WT.:	755.90	**grams**
DIFFERENCE:	17.70	
FINAL IMPINGER WATER:	4665.70	**mls.**
INITIAL IMPINGER WATER:	4522.80	**mls.**
DIFFERENCE:	142.90	
TOTAL WATER GAIN:	160.60	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.263		0.000000263
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000263
KCl:	4.540		0.000004540
		Oxidized Total:	0.000004540
HNO_3/H_2O_2:	0.712		0.000000712
$KMNO_4$:	3.872		0.000003872
		Elemental Total:	0.000004584

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	11.80			11.80
Oxygen:	5.70			5.70

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ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/10/99
Test Run:	3
Stack or Duct No.:	Unit 7 Precipitator Outlet
Start Time:	11:55
Stop Time:	14:33

Pb:	29.31	Inches Hg
Static	7.00	Inches H2O
Ps:	29.82	Inches Hg Abs.
Vlc:	161	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	5.70	%
% CO2:	11.80	%
% N2:	82.50	%
Delta H:	0.93	Inches H20
Cp:	0.837	Dimensionless - pitot
Tm:	56.16	°F
Sqrt P:	0.698	Inches H20
Ts:	319.64	°F
Vm:	82.646	Cubic Feet
Dn:	0.240	Inches - nozzle
As:	216.00	Sq. Feet
Yd:	1.001	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	83.094	cubic feet (dry)
Vwstd:	7.564	cubic feet (wet)
Bwo:	0.083	
Md:	30.116	lb/lb-mole (dry)
Ms:	29.105	lb/lb-mole (wet)
Excess Air (%)	35.448	
Vs:	47.353	fps
ACFM:	613697.	
DSCFM:	379725.	
WSCFM:	414293	
%I:	100.4	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.:	94912	**TEST RUN NO.:**	1	**TEST DATE:**	12/9/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.46	**in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	6.5	**in. H2O**
TEST LOC.:	Unit 8 Precipitator Outlet	**FLUE PRESSURE (Ps)**	29.94	**in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	15	**ft.**
OPERATOR:	P. Coleman	**PROBE LINER MATERIAL:**	Teflon	
CONTROL BOX:	N-3	**NOZZLE IDENTIFICATION NO.:**	N/A	
METER NO.:	N-3	**CALIBRATED NOZZLE DIAMETER:**	0.245	**in.**
METER CALIBRATION FACTOR:	1.012	**LEAK CHECK PRE:**	0.005	**POST:** 0.000 @ 10 in. Hg.
PITOT ID NO.:	310A	**DUCT SHAPE:**	Circular DIA.	Feet
			Rectangular 18 Feet	26 Feet
PITOT TUBE COEFFICIENT:	0.836	**DUCT AREA:**	468	**sq. ft.**
PORT LENGTH:	17 in.	**TEST LENGTH:**	150	**min.**
PORT SIZE:	6 in.	**MINUTES PER POINT:**	5	
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	30	

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/9/99 **Test Ru** 1

Location: Unit 8 Precipitator Outlet

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.45	0.671	13:03	79.51	0.90	367	74	72	4	2.694
1-2	0.50	0.707	13:08	82.20	1.02	367	75	72	4	2.900
1-3	0.90	0.949	13:13	85.10	1.83	367	75	73	5	3.400
1-4	1.25	1.118	13:18	88.50	2.53	367	75	75	7	4.500
1-5	1.10	1.049	13:23	93.00	2.23	367	77	75	7	4.500
1-6	0.85	0.922	13:28	97.50	1.73	365	77	75	6	3.845
			13:33	101.35						0.000
2-1	0.40	0.632	13:36	101.35	0.81	364	76	72	4	2.655
2-2	0.50	0.707	13:41	104.00	1.02	362	76	72	5	2.700
2-3	0.90	0.949	13:46	106.70	1.83	359	75	73	5	3.900
2-4	1.00	1.000	13:51	110.60	2.03	358	75	73	5	4.000
2-5	1.10	1.049	13:56	114.60	2.23	358	75	73	5	4.000
2-6	1.20	1.095	14:01	118.60	2.44	358	74	72	6	4.625
			14:06	123.23						0.000
3-1	0.50	0.707	14:09	123.23	1.02	359	75	73	5	2.875
3-2	0.65	0.806	14:14	126.10	1.32	360	74	73	5	3.300
3-3	0.80	0.894	14:19	129.40	1.62	360	75	71	5	3.400
3-4	1.00	1.000	14:24	132.80	2.03	360	74	71	5	3.900
3-5	1.10	1.049	14:29	136.70	2.23	361	75	72	7	4.300
3-6	0.65	0.806	14:34	141.00	1.32	360	75	71	6	3.450
			14:39	144.45						0.000
4-1	0.70	0.837	14:42	144.45	1.42	350	73	70	5	3.450
4-2	1.00	1.000	14:47	147.90	2.03	353	72	69	5	4.000
4-3	0.90	0.949	14:52	151.90	1.83	353	72	70	5	3.800
4-4	0.90	0.949	14:57	155.70	1.83	357	73	68	5	3.900
4-5	0.80	0.894	15:02	159.60	1.62	356	72	69	5	3.400
4-6	0.60	0.775	15:07	163.00	1.22	356	72	69	5	3.389
			15:12	166.39						0.000
5-1	0.70	0.837	15:15	166.39	1.42	357	71	68	5	3.211
5-2	1.00	1.000	15:20	169.60	2.03	359	71	68	5	4.000
5-3	1.20	1.095	15:25	173.60	2.44	359	72	68	8	4.300
5-4	1.10	1.049	15:30	177.90	2.23	360	71	68	8	4.100
5-5	0.90	0.949	15:35	182.00	1.83	359	71	68	7	4.000
5-6	0.80	0.894	15:40	186.00	1.62	353	71	68	5	3.683
			15:45	189.68						0.000
										0.000
										0.000
										0.000
		0.911		110.177	1.72	360	74	71		#####
							72.40			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/9/99 **Test Run:** 1

Location: Unit 8 Precipitator Outlet

SILICA GEL FINAL WT.:	734.70	**grams**
SILICA GEL INITIAL WT.:	708.60	**grams**
DIFFERENCE:	26.10	
FINAL IMPINGER WATER:	4985.70	**mls.**
INITIAL IMPINGER WATER:	4790.00	**mls.**
DIFFERENCE:	195.70	
TOTAL WATER GAIN:	221.80	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.144		0.000000144
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000144
KCl:	9.830		0.000009830
		Oxidized Total:	0.000009830
HNO_3/H_2O_2:	0.980		0.000000980
$KMNO_4$:	7.292		0.000007292
		Elemental Total:	0.000008272

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.50	12.30	12.40	12.40
Oxygen:	5.50	5.50	5.60	5.53

Mostardi Platt

ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/9/99
Test Run:	1
Stack or Duct No.:	Unit 8 Precipitator Outlet
Start Time:	13:03
Stop Time:	15:45

Pb:	29.46	Inches Hg
Static	6.50	Inches H2O
Ps:	29.94	Inches Hg Abs.
Vlc:	222	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	5.53	%
% CO2:	12.40	%
% N2:	82.07	%
Delta H:	1.72	Inches H20
Cp:	0.836	Dimensionless - pitot
Tm:	72.40	°F
Sqrt P:	0.911	Inches H20
Ts:	359.70	°F
Vm:	110.177	Cubic Feet
Dn:	0.245	Inches - nozzle
As:	468.00	Sq. Feet
Yd:	1.012	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	109.345	cubic feet (dry)
Vwstd:	10.447	cubic feet (wet)
Bwo:	0.087	
Md:	30.205	lb/lb-mole (dry)
Ms:	29.141	lb/lb-mole (wet)
Excess Air (%)	34.300	
Vs:	63.129	fps
ACFM:	1772660.	
DSCFM:	1042882.	
WSCFM:	1142519	
%I:	100.0	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.:	94912	**TEST RUN NO.:**	2	**TEST DATE:**	12/10/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.31 **in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	6.5 **in. H2O**
TEST LOC.:	Unit 8 Precipitator Outlet	**FLUE PRESSURE (Ps)**	29.79 **in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	15 **ft.**
OPERATOR:	P. Coleman	**PROBE LINER MATERIAL:**	Teflon
CONTROL BOX:	N-3	**NOZZLE IDENTIFICATION NO.:**	N/A
METER NO.:	N-3	**CALIBRATED NOZZLE DIAMETER:**	0.245 **in.**
METER CALIBRATION FACTOR:	1.012	**LEAK CHECK PRE:**	0.005 **POST:** 0.000 @ 12 in. Hg.
PITOT ID NO.:	310A	**DUCT SHAPE:**	Circular DIA. Feet Rectangular 18 Feet 26 Feet
PITOT TUBE COEFFICIENT:	0.836	**DUCT AREA:**	468 **sq. ft.**
PORT LENGTH:	17 in.	**TEST LENGTH:**	150 **min.**
PORT SIZE:	6 in.	**MINUTES PER POINT:**	5
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	30

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/10/99 **Test Ru** 2

Location: Unit 8 Precipitator Outlet

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.45	0.671	8:38	89.91	0.93	314	50	52	3	2.687
1-2	0.65	0.806	8:43	92.60	1.34	315	51	54	3	3.200
1-3	1.16	1.077	8:48	95.80	2.39	325	57	56	5	4.300
1-4	1.38	1.175	8:53	100.10	2.84	324	59	57	5	4.700
1-5	1.41	1.187	8:58	104.80	2.91	328	62	58	5	4.700
1-6	1.40	1.183	9:03	109.50	2.88	332	61	58	5	4.795
			9:08	114.30						0.000
2-1	0.48	0.693	9:09	114.30	0.99	330	62	59	3	2.705
2-2	0.51	0.714	9:14	117.00	1.05	333	63	61	3	2.900
2-3	0.72	0.849	9:19	119.90	1.48	334	64	61	4	3.400
2-4	1.00	1.000	9:24	123.30	2.06	336	64	62	5	4.000
2-5	1.32	1.149	9:29	127.30	2.72	329	64	61	5	4.500
2-6	1.25	1.118	9:34	131.80	2.58	335	65	61	5	4.563
			9:39	136.36						0.000
3-1	0.61	0.781	9:40	136.36	1.26	338	66	61	3	3.037
3-2	0.70	0.837	9:45	139.40	1.44	339	65	61	3	3.400
3-3	0.80	0.894	9:50	142.80	1.65	338	64	61	4	3.500
3-4	0.87	0.933	9:55	146.30	1.79	352	64	62	4	3.800
3-5	0.63	0.794	10:00	150.10	1.30	342	64	60	3	3.100
3-6	0.60	0.775	10:05	153.20	1.24	347	64	60	3	3.201
			10:10	156.40						0.000
4-1	0.68	0.825	10:11	156.40	1.40	341	63	62	4	3.199
4-2	0.92	0.959	10:16	159.60	1.90	343	65	62	5	3.900
4-3	0.86	0.927	10:21	163.50	1.77	343	65	62	5	3.700
4-4	0.82	0.906	10:26	167.20	1.69	343	66	64	4	3.600
4-5	0.59	0.768	10:31	170.80	1.22	349	66	64	4	3.100
4-6	0.55	0.742	10:36	173.90	1.13	359	66	64	3	2.967
			10:41	176.87						0.000
5-1	0.65	0.806	10:42	176.86	1.34	346	68	64	3	3.138
5-2	1.00	1.000	10:47	180.00	2.06	348	67	64	5	4.000
5-3	1.40	1.183	10:52	184.00	2.88	344	66	64	5	4.800
5-4	1.30	1.140	10:57	188.80	2.68	347	66	63	5	4.500
5-5	0.50	0.707	11:02	193.30	1.03	349	67	63	4	2.800
5-6	0.48	0.693	11:07	196.10	0.99	347	66	63	3	2.854
			11:12	198.95						0.000
										0.000
										0.000
										0.000
		0.910		109.046	1.76	338	63	61		#####
							62.07			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/10/99 **Test Run:** 2

Location: Unit 8 Precipitator Outlet

SILICA GEL FINAL WT.:	733.60	**grams**
SILICA GEL INITIAL WT.:	712.80	**grams**
DIFFERENCE:	20.80	
FINAL IMPINGER WATER:	4811.40	**mls.**
INITIAL IMPINGER WATER:	4624.10	**mls.**
DIFFERENCE:	187.30	
TOTAL WATER GAIN:	208.10	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.196		0.000000196
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000196
KCl:	5.910		0.000005910
		Oxidized Total:	0.000005910
HNO_3/H_2O_2:	1.180		0.000001180
$KMNO_4$:	7.552		0.000007552
		Elemental Total:	0.000008732

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.40			12.40
Oxygen:	5.60			5.60

ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/10/99
Test Run:	2
Stack or Duct No.:	Unit 8 Precipitator Outlet
Start Time:	8:38
Stop Time:	11:12

Pb:	29.31	Inches Hg
Static	6.50	Inches H2O
Ps:	29.79	Inches Hg Abs.
Vlc:	208	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	5.60	%
% CO2:	12.40	%
% N2:	82.00	%
Delta H:	1.76	Inches H20
Cp:	0.836	Dimensionless - pitot
Tm:	62.07	°F
Sqrt P:	0.910	Inches H20
Ts:	338.33	°F
Vm:	109.046	Cubic Feet
Dn:	0.245	Inches - nozzle
As:	468.00	Sq. Feet
Yd:	1.012	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	109.817	cubic feet (dry)
Vwstd:	9.802	cubic feet (wet)
Bwo:	0.082	
Md:	30.208	lb/lb-mole (dry)
Ms:	29.208	lb/lb-mole (wet)
Excess Air (%)	34.895	
Vs:	62.279	fps
ACFM:	1748803.	
DSCFM:	1057156.	
WSCFM:	1151511	
%I:	99.1	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.:	94912	**TEST RUN NO.:**	3	**TEST DATE:**	12/10/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.31	**in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	6.5	**in. H2O**
TEST LOC.:	Unit 8 Precipitator Outlet	**FLUE PRESSURE (Ps)**	29.79	**in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	15	**ft.**
OPERATOR:	D. Runyan	**PROBE LINER MATERIAL:**	Teflon	
CONTROL BOX:	N-3	**NOZZLE IDENTIFICATION NO.:**	N/A	
METER NO.:	N-3	**CALIBRATED NOZZLE DIAMETER:**	0.245	**in.**
METER CALIBRATION FACTOR:	1.012	**LEAK CHECK PRE:**	0.001	**POST:** 0.000 @ 7 in. Hg.
PITOT ID NO.:	310A	**DUCT SHAPE:**	Circular DIA.	Feet
			Rectangular 18 Feet	26 Feet
PITOT TUBE COEFFICIENT:	0.836	**DUCT AREA:**	468	**sq. ft.**
PORT LENGTH:	17 in.	**TEST LENGTH:**	150	**min.**
PORT SIZE:	6 in.	**MINUTES PER POINT:**	5	
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	30	

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/10/99 **Test Ru** 3

Location: Unit 8 Precipitator Outlet

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.40	0.632	11:55	99.17	0.82	356	56	55	3	2.429
1-2	0.62	0.787	12:00	101.60	1.27	355	54	56	4	3.200
1-3	1.12	1.058	12:05	104.80	2.31	356	56	56	5	4.200
1-4	1.30	1.140	12:10	109.00	2.35	357	60	56	5	4.600
1-5	1.37	1.170	12:15	113.60	2.82	356	60	56	5	4.700
1-6	1.30	1.140	12:20	118.30	2.35	355	61	56	5	4.560
			12:25	122.86						0.000
2-1	0.45	0.671	12:26	122.86	0.93	357	62	58	3	2.640
2-2	0.50	0.707	12:31	125.50	1.03	356	62	58	3	2.800
2-3	0.65	0.806	12:36	128.30	1.34	357	63	58	4	3.200
2-4	1.00	1.000	12:41	131.50	2.06	357	63	59	5	4.100
2-5	1.26	1.122	12:46	135.60	2.60	358	64	60	5	4.400
2-6	1.20	1.095	12:51	140.00	2.47	354	64	59	5	4.435
			12:56	144.44						0.000
3-1	0.60	0.775	12:57	144.44	1.24	358	64	60	4	3.065
3-2	0.65	0.806	13:02	147.50	1.34	358	64	60	4	3.200
3-3	0.78	0.883	13:07	150.70	1.61	359	64	61	4	7.100
3-4	0.85	0.922	13:12	157.80	1.75	359	64	61	5	3.700
3-5	0.65	0.806	13:17	161.50	1.34	358	64	61	4	3.200
3-6	0.63	0.794	13:22	164.70	1.30	358	64	60	4	3.188
			13:27	167.89						0.000
4-1	0.70	0.837	13:28	167.89	1.44	358	64	60	4	3.312
4-2	0.85	0.922	13:33	171.20	1.75	358	63	59	4	3.700
4-3	0.83	0.911	13:38	174.90	1.71	359	63	59	4	3.600
4-4	0.77	0.877	13:43	178.50	1.59	359	63	59	4	3.500
4-5	0.55	0.742	13:48	182.00	1.13	357	63	58	3	3.000
4-6	0.50	0.707	13:53	185.00	1.03	357	63	58	3	2.848
			13:58	187.85						0.000
5-1	0.65	0.806	13:59	187.85	1.34	358	65	63	4	3.152
5-2	1.00	1.000	14:04	191.00	2.06	358	65	63	5	4.000
5-3	1.25	1.118	14:09	195.00	2.58	360	64	63	5	4.500
5-4	1.30	1.140	14:14	199.50	2.68	358	64	62	5	4.500
5-5	0.65	0.806	14:19	204.00	1.34	358	64	62	4	3.300
5-6	0.57	0.755	14:24	207.30	1.17	357	63	62	4	3.021
			14:29	210.32						0.000
										0.000
										0.000
										0.000
		0.898		111.150	1.69	357	62	59		#####
							60.85			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/10/99 **Test Run:** 3

Location: Unit 8 Precipitator Outlet

SILICA GEL FINAL WT.:	746.40	**grams**
SILICA GEL INITIAL WT.:	724.00	**grams**
DIFFERENCE:	22.40	
FINAL IMPINGER WATER:	5008.00	**mls.**
INITIAL IMPINGER WATER:	4819.60	**mls.**
DIFFERENCE:	188.40	
TOTAL WATER GAIN:	210.80	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.130		0.000000130
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000130
KCl:	9.730		0.000009730
		Oxidized Total:	0.000009730
HNO_3/H_2O_2:	1.230		0.000001230
$KMNO_4$:	6.132		0.000006132
		Elemental Total:	0.000007362

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.50			12.50
Oxygen:	6.50			6.50

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ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/10/99
Test Run:	3
Stack or Duct No.:	Unit 8 Precipitator Outlet
Start Time:	11:55
Stop Time:	14:29

Pb:	29.31	Inches Hg
Static	6.50	Inches H2O
Ps:	29.79	Inches Hg Abs.
Vlc:	211	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	6.50	%
% CO2:	12.50	%
% N2:	81.00	%
Delta H:	1.69	Inches H20
Cp:	0.836	Dimensionless - pitot
Tm:	60.85	°F
Sqrt P:	0.898	Inches H20
Ts:	357.37	°F
Vm:	111.150	Cubic Feet
Dn:	0.245	Inches - nozzle
As:	468.00	Sq. Feet
Yd:	1.012	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	112.177	cubic feet (dry)
Vwstd:	9.929	cubic feet (wet)
Bwo:	0.081	
Md:	30.260	lb/lb-mole (dry)
Ms:	29.263	lb/lb-mole (wet)
Excess Air (%)	43.671	
Vs:	62.144	fps
ACFM:	1745014.	
DSCFM:	1031006.	
WSCFM:	1122260	
%I:	103.8	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.:	94912	**TEST RUN NO.:**	1	**TEST DATE:**	12/9/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.26	**in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	0.6	**in. H2O**
TEST LOC.:	Unit 7 and 8 Common Scrubber Stack	**FLUE PRESSURE (Ps)**	29.30	**in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	16	**ft.**
OPERATOR:	T. Russ	**PROBE LINER MATERIAL:**	Teflon	
CONTROL BOX:	E-43	**NOZZLE IDENTIFICATION NO.:**	D Set Nozzle 10	
METER NO.:	E-43	**CALIBRATED NOZZLE DIAMETER:**	0.310	**in.**
METER CALIBRATION FACTOR:	1.001	**LEAK CHECK PRE:**	0.008	**POST:** 0.006 @ 6 in. Hg.
PITOT ID NO.:	516A	**DUCT SHAPE:**	Circular DIA. 33 Feet Rectangular Feet Feet	
PITOT TUBE COEFFICIENT:	0.830	**DUCT AREA:**	855.29788	**sq. ft.**
PORT LENGTH:	66 in.	**TEST LENGTH:**	150	**min.**
PORT SIZE:	4 in.	**MINUTES PER POINT:**	12.5	
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	12	

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/9/99 **Test Ru** 1

Location: Unit 7 and 8 Common Scrubber Stack

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.38	0.616	13:10	12.84	2.34	131	63	62	5	5.467
1-1	0.38	0.616	13:16	18.31	2.34	131	63	62	5	5.476
1-2	0.31	0.557	13:22	23.78	1.91	130	63	62	5	4.934
1-2	0.31	0.557	13:28	28.72	1.91	130	64	62	5	4.942
1-3	0.28	0.529	13:35	33.66	1.72	131	64	62	5	4.690
1-3	0.28	0.529	13:41	38.35	1.72	131	65	62	5	4.689
			13:47	43.04						0.000
2-1	0.30	0.548	13:50	43.04	1.85	129	64	62	5	4.855
2-1	0.30	0.548	13:56	47.89	1.85	130	64	62	5	4.865
2-2	0.28	0.529	14:02	52.76	1.72	130	65	62	5	4.692
2-2	0.28	0.529	14:08	57.45	1.72	131	64	62	5	4.693
2-3	0.26	0.510	14:15	62.14	1.60	130	64	62	5	4.526
2-3	0.26	0.510	14:21	66.67	1.60	130	64	62	5	5.526
			14:27	72.20						0.000
3-1	0.32	0.566	14:33	72.20	1.97	130	63	61	5	5.022
3-1	0.32	0.566	14:39	77.22	1.97	131	63	61	5	5.020
3-2	0.27	0.520	14:45	82.24	1.66	129	63	61	5	4.610
3-2	0.27	0.520	14:51	86.85	1.66	130	64	61	5	4.610
3-3	0.25	0.500	14:58	91.46	1.54	130	64	61	5	4.441
3-3	0.25	0.500	15:04	95.90	1.54	130	64	61	5	4.429
			15:10	100.33						0.000
4-1	0.31	0.557	15:12	100.33	1.91	129	64	61	5	4.940
4-1	0.31	0.557	15:18	105.27	1.91	130	64	61	5	4.940
4-2	0.28	0.529	15:24	110.21	1.72	130	64	61	5	4.686
4-2	0.28	0.529	15:30	114.89	1.72	130	63	61	5	4.694
4-3	0.26	0.510	15:37	119.59	1.60	130	63	61	5	4.521
4-3	0.26	0.510	15:43	124.11	1.60	130	63	61	5	4.519
			15:49	128.63						0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
		0.539		115.787	1.80	130	64	62		#####
							62.60			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/9/99 **Test Run:** 1

Location: Unit 7 and 8 Common Scrubber Stack

SILICA GEL FINAL WT.:	775.10	**grams**
SILICA GEL INITIAL WT.:	750.00	**grams**
DIFFERENCE:	25.10	
FINAL IMPINGER WATER:	4981.10	**mls.**
INITIAL IMPINGER WATER:	4523.20	**mls.**
DIFFERENCE:	457.90	
TOTAL WATER GAIN:	483.00	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.001		0.000000001
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000001
KCl:	0.906		0.000000906
		Oxidized Total:	0.000000906
HNO_3/H_2O_2:	0.754		0.000000754
$KMNO_4$:	6.492		0.000006492
		Elemental Total:	0.000007246

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.00			12.00
Oxygen:	7.00			7.00

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ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/9/99
Test Run:	1
Stack or Duct No.:	Unit 7 and 8 Common Scrubber Stack
Start Time:	13:10
Stop Time:	15:49

Pb:	29.26	Inches Hg
Static	0.60	Inches H2O
Ps:	29.30	Inches Hg Abs.
Vlc:	448	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	7.00	%
% CO2:	12.00	%
% N2:	81.00	%
Delta H:	1.80	Inches H20
Cp:	0.830	Dimensionless - pitot
Tm:	62.60	°F
Sqrt P:	0.539	Inches H20
Ts:	130.13	°F
Vm:	115.787	Cubic Feet
Dn:	0.310	Inches - nozzle
As:	855.30	Sq. Feet
Yd:	1.001	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	115.033	cubic feet (dry)
Vwstd:	21.115	cubic feet (wet)
Bwo:*	0.155	Theoretical maximum moisture
Md:	30.200	lb/lb-mole (dry)
Ms:	28.308	lb/lb-mole (wet)
Excess Air (%)	48.665	
Vs:	32.269	fps
ACFM:	1655988.	
DSCFM:	1226094.	
WSCFM:	1451151	
%I:	102.1	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

* Gas stream was supersaturated; maximum moisture yield was applied.

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.: 94912 **TEST RUN NO.:** 2 **TEST DATE:** 12/10/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**	29.11 **in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**	0.6 **in. H2O**
TEST LOC.:	Unit 7 and 8 Common Scrubber Stack	**FLUE PRESSURE (Ps)**	29.15 **in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**	16 **ft.**
OPERATOR:	T. Russ	**PROBE LINER MATERIAL:**	Teflon
CONTROL BOX:	E-43	**NOZZLE IDENTIFICATION NO.:**	D Set Nozzle 10
METER NO.:	E-43	**CALIBRATED NOZZLE DIAMETER:**	0.310 **in.**
METER CALIBRATION FACTOR:	1.001	**LEAK CHECK PRE:**	0.011 **POST:** 0.008 @ 6 in. Hg.
PITOT ID NO.:	516A	**DUCT SHAPE:**	Circular DIA. 33 Feet Rectangular Feet Feet
PITOT TUBE COEFFICIENT:	0.830	**DUCT AREA:**	855.29788 **sq. ft.**
PORT LENGTH:	66 in.	**TEST LENGTH:**	150 **min.**
PORT SIZE:	4 in.	**MINUTES PER POINT:**	12.5
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**	12

ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/10/99 **Test Ru** 2

Location: Unit 7 and 8 Common Scrubber Stack

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.30	0.548	8:37	29.32	1.85	128	51	50	4	4.890
1-1	0.30	0.548	8:43	34.21	1.85	128	51	50	4	4.897
1-2	0.32	0.566	8:49	39.11	1.97	129	58	51	4	5.060
1-2	0.32	0.566	8:55	44.17	1.97	129	59	51	4	5.040
1-3	0.28	0.529	9:02	49.21	1.73	128	62	54	4	4.736
1-3	0.28	0.529	9:08	53.94	1.73	128	63	56	4	4.719
			9:14	58.66						0.000
2-1	0.31	0.557	9:16	58.66	1.91	129	64	56	4	4.970
2-1	0.31	0.557	9:22	63.63	1.91	129	64	56	4	4.968
2-2	0.29	0.539	9:28	68.60	1.79	129	64	56	4	4.820
2-2	0.29	0.539	9:34	73.42	1.79	129	65	56	4	4.810
2-3	0.28	0.529	9:41	78.23	1.73	130	65	56	4	4.713
2-3	0.28	0.529	9:47	82.94	1.73	129	65	56	4	4.728
			9:53	87.67						0.000
3-1	0.30	0.548	9:55	87.67	1.85	129	65	56	4	4.784
3-1	0.30	0.548	10:01	92.46	1.85	130	65	57	4	4.984
3-2	0.29	0.539	10:07	97.44	1.79	130	66	57	4	4.813
3-2	0.29	0.539	10:13	102.25	1.79	129	65	57	4	4.817
3-3	0.28	0.529	10:20	107.07	1.73	129	66	57	4	4.715
3-3	0.28	0.529	10:26	111.79	1.73	129	66	57	4	4.721
			10:32	116.51						0.000
4-1	0.31	0.557	10:34	116.51	1.91	129	66	57	4	4.977
4-1	0.31	0.557	10:40	121.48	1.91	129	67	57	4	4.973
4-2	0.29	0.539	10:46	126.46	1.79	129	67	58	4	4.806
4-2	0.29	0.539	10:52	131.26	1.79	129	67	58	4	4.804
4-3	0.27	0.520	10:59	136.07	1.66	129	67	58	4	4.645
4-3	0.27	0.520	11:05	140.71	1.66	129	67	58	4	4.643
			11:11	145.35						0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
		0.541		116.033	1.81	129	64	56		#####
							59.58			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/10/99 **Test Run:** 2

Location: Unit 7 and 8 Common Scrubber Stack

SILICA GEL FINAL WT.:	821.70	**grams**
SILICA GEL INITIAL WT.:	801.80	**grams**
DIFFERENCE:	19.90	
FINAL IMPINGER WATER:	5048.40	**mls.**
INITIAL IMPINGER WATER:	4652.80	**mls.**
DIFFERENCE:	395.60	
TOTAL WATER GAIN:	415.50	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.001		0.000000001
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000001
KCl:	0.788		0.000000788
		Oxidized Total:	0.000000788
HNO_3/H_2O_2:	0.342		0.000000342
$KMNO_4$:	6.332		0.000006332
		Elemental Total:	0.000006674

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.20			12.20
Oxygen:	7.00			7.00

ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/10/99
Test Run:	2
Stack or Duct No.:	Unit 7 and 8 Common Scrubber Stack
Start Time:	8:37
Stop Time:	11:11

Pb:	29.11	Inches Hg
Static	0.60	Inches H2O
Ps:	29.15	Inches Hg Abs.
Vlc:	416	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	7.00	%
% CO2:	12.20	%
% N2:	80.80	%
Delta H:	1.81	Inches H20
Cp:	0.830	Dimensionless - pitot
Tm:	59.58	°F
Sqrt P:	0.541	Inches H20
Ts:	128.96	°F
Vm:	116.033	Cubic Feet
Dn:	0.310	Inches - nozzle
As:	855.30	Sq. Feet
Yd:	1.001	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	115.360	cubic feet (dry)
Vwstd:	19.570	cubic feet (wet)
Bwo:	0.145	
Md:	30.232	lb/lb-mole (dry)
Ms:	28.458	lb/lb-mole (wet)
Excess Air (%)	48.844	
Vs:	32.370	fps
ACFM:	1661134.	
DSCFM:	1240616.	
WSCFM:	1451078	
%I:	101.2	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

ONTARIO HYDRO METHOD TEST SUPPORT DATA

PROJECT NO.:	94912	**TEST RUN NO.:**	3	**TEST DATE:**	12/10/99

CUSTOMER:	Northern Indiana Public Service Company	**BAROMETRIC PRESSURE (Pb)**		29.11	**in. Hg.**
PLANT:	Bailly Generating Station	**STATIC PRESSURE**		0.6	**in. H2O**
TEST LOC.:	Unit 7 and 8 Common Scrubber Stack	**FLUE PRESSURE (Ps)**		29.15	**in. Hg. abs.**
CLIENT:	Electric Power Research Institute	**PROBE LENGTH:**		16	**ft.**
OPERATOR:	T. Russ	**PROBE LINER MATERIAL:**		Teflon	
CONTROL BOX:	E-43	**NOZZLE IDENTIFICATION NO.:**		A Set 10	
METER NO.:	E-43	**CALIBRATED NOZZLE DIAMETER:**		0.308	**in.**
METER CALIBRATION FACTOR:	1.001	**LEAK CHECK**	**PRE:**	0.010	**POST:** 0.000 @ 12 in. Hg.
PITOT ID NO.:	516A	**DUCT SHAPE:**	Circular Rectangular	DIA.	33 Feet Feet Feet
PITOT TUBE COEFFICIENT:	0.830	**DUCT AREA:**		855.29788	**sq. ft.**
PORT LENGTH:	66 in.	**TEST LENGTH:**		150	**min.**
PORT SIZE:	4 in.	**MINUTES PER POINT:**		12.5	
PORT TYPE:	Flange	**TOTAL NUMBER OF TRAVERSE POINTS:**		12	

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ONTARIO HYDRO METHOD TRAVERSE DATA

Company: Northern Indiana Public Service Company Date: 12/10/99 **Test Ru** 3

Location: Unit 7 and 8 Common Scrubber Stack

Point	Δp	Sq. Root Δp	Time	Volume cubic feet	ΔH	Stack Temp °F	Meter Inlet °F	Meter Outlet °F	Vacuum in. Hg	
1-1	0.30	0.548	11:55	45.74	1.83	129	62	61	4	4.901
1-1	0.30	0.548	12:06	50.64	1.83	129	62	61	4	4.887
1-2	0.28	0.529	12:12	55.52	1.71	130	64	62	4	4.731
1-2	0.28	0.529	12:18	60.25	1.71	130	64	62	4	4.720
1-3	0.27	0.520	12:25	64.97	1.65	130	65	63	4	4.643
1-3	0.27	0.520	12:31	69.62	1.65	129	65	63	4	4.639
			12:37	74.26						0.000
2-1	0.31	0.557	12:39	74.26	1.89	129	66	63	4	4.982
2-1	0.31	0.557	12:45	79.24	1.89	129	67	64	4	4.966
2-2	0.29	0.539	12:51	84.20	1.77	130	68	65	4	4.810
2-2	0.29	0.539	12:57	89.01	1.77	130	69	66	4	4.814
2-3	0.27	0.520	13:04	93.83	1.65	129	72	66	4	4.632
2-3	0.27	0.520	13:10	98.46	1.65	129	73	67	4	4.644
			13:16	103.10						0.000
3-1	0.31	0.557	13:18	103.10	1.89	129	73	67	4	4.971
3-1	0.31	0.557	13:24	108.08	1.89	130	73	68	4	4.961
3-2	0.28	0.529	13:30	113.04	1.71	130	74	68	4	4.730
3-2	0.28	0.529	13:36	117.77	1.71	130	74	68	4	4.723
3-3	0.26	0.510	13:43	122.49	1.59	129	75	68	4	4.551
3-3	0.26	0.510	13:49	127.04	1.59	129	76	68	4	4.548
			13:55	131.59						0.000
4-1	0.30	0.548	13:57	131.59	1.83	130	76	68	4	4.887
4-1	0.30	0.548	14:03	136.48	1.83	130	77	68	4	4.891
4-2	0.29	0.539	14:09	141.37	1.77	130	78	69	4	4.818
4-2	0.29	0.539	14:15	146.18	1.77	130	78	69	4	4.790
4-3	0.27	0.520	14:22	150.97	1.65	129	78	69	4	4.643
4-3	0.27	0.520	14:28	155.62	1.65	129	78	69	4	4.644
			14:34	160.26						0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
										0.000
		0.534		114.526	1.75	130	71	66		#####
							68.52			

MOISTURE, DILUENT AND MERCURY DATA

Company Northern Indiana Public Service **Date:** 12/10/99 **Test Run:** 3

Location: Unit 7 and 8 Common Scrubber Stack

SILICA GEL FINAL WT.:	761.60	**grams**
SILICA GEL INITIAL WT.:	743.20	**grams**
DIFFERENCE:	18.40	
FINAL IMPINGER WATER:	5114.30	**mls.**
INITIAL IMPINGER WATER:	4711.30	**mls.**
DIFFERENCE:	403.00	
TOTAL WATER GAIN:	421.40	

ITEM	MERCURY (UG)		= NET WT. (G)
FILTER:	0.006		0.000000006
PROBE WASH:	0.000		0.000000000
		Particle-bound Total:	0.000000006
KCl:	0.940		0.000000940
		Oxidized Total:	0.000000940
HNO_3/H_2O_2:	0.380		0.000000380
$KMNO_4$:	6.472		0.000006472
		Elemental Total:	0.000006852

Orsat Analysis	1	2	3	Average
Carbon Dioxide:	12.00			12.00
Oxygen:	7.00			7.00

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ONTARIO HYDRO METHOD DATA ENTRY FORM

Field Data/Calculated Data

Company:	Northern Indiana Public Service Company
Date:	12/10/99
Test Run:	3
Stack or Duct No.:	Unit 7 and 8 Common Scrubber Stack
Start Time:	11:55
Stop Time:	14:34

Pb:	29.11	Inches Hg
Static	0.60	Inches H2O
Ps:	29.15	Inches Hg Abs.
Vlc:	421	ml + grams
Mn:	0.0000	gm
Test Time:	150	minutes
% O2:	7.00	%
% CO2:	12.00	%
% N2:	81.00	%
Delta H:	1.75	Inches H20
Cp:	0.830	Dimensionless - pitot
Tm:	68.52	°F
Sqrt P:	0.534	Inches H20
Ts:	129.50	°F
Vm:	114.526	Cubic Feet
Dn:	0.308	Inches - nozzle
As:	855.30	Sq. Feet
Yd:	1.001	Mcf
CF:	N/A	Process tons/hr
Heat Input:	N/A	MM BTU/hr
Fd:	N/A	dscf/10^6 Btu
Fc:	N/A	scf/10^6 Btu

Vmstd:	111.918	cubic feet (dry)
Vwstd:	19.848	cubic feet (wet)
Bwo:	0.151	
Md:	30.200	lb/lb-mole (dry)
Ms:	28.362	lb/lb-mole (wet)
Excess Air (%)	48.665	
Vs:	32.018	fps
ACFM:	1643117.	
DSCFM:	1218014.	
WSCFM:	1434021	
%I:	101.3	isokinetic variance
GR/ACF:	---	
GR/DSCF:	---	
lbs/hr	---	
lbs/ton prod.:	N/A	
lbs/MM BTU:	N/A	Heat Input
lbs/MM BTU:	N/A	O2 Basis
lbs/MM BTU:	N/A	CO2 Basis

Project Summary-Samples Received Report

Project	*Client*	*Unit*
94912	NIPSCO	BAILLY/CHESTERTON,IN

Project	*Sample*	*Sample Point*	*Date Received*	*Analyte Detail*
94912	001	STACK FILT T1	12/10/1999	Mercury
94912	002	STACK FILT T2	12/10/1999	Mercury
94912	003	STACK FILT T3	12/10/1999	Mercury
94912	004	ST HNO3 RNS T1	12/10/1999	Mercury
94912	005	ST HNO3 RNS T2	12/10/1999	Mercury
94912	006	ST HNO3 RNS T3	12/10/1999	Mercury
94912	007	ST KCL IMP T1	12/10/1999	Mercury
94912	008	ST KCL IMP T2	12/10/1999	Mercury
94912	009	ST KCL IMP T3	12/10/1999	Mercury
94912	010	ST HNO3/H2O2 T1	12/10/1999	Mercury
94912	011	ST HNO3/H2O2 T2	12/10/1999	Mercury
94912	012	ST HNO3/H2O2 T3	12/10/1999	Mercury
94912	013	ST KMNO4 IMP T1	12/10/1999	Mercury
94912	014	ST KMNO4 IMP T2	12/10/1999	Mercury
94912	015	ST KMNO4 IMP T3	12/10/1999	Mercury
94912	016	7 PRC OUT FLT-1	12/10/1999	Mercury
94912	017	7 PRC OUT FLT-2	12/10/1999	Mercury
94912	018	7 PRC OUT FLT-3	12/10/1999	Mercury
94912	019	7 PREC HNO3 T1	12/10/1999	Mercury
94912	020	7 PREC HNO3 T2	12/10/1999	Mercury
94912	021	7 PREC HNO3 T3	12/10/1999	Mercury
94912	022	7 PREC KCL T1	12/10/1999	Mercury
94912	023	7 PREC KCL T2	12/10/1999	Mercury
94912	024	7 PREC KCL T3	12/10/1999	Mercury
94912	025	7 HNO3/H2O2 T1	12/10/1999	Mercury
94912	026	7 HNO3/H2O2 T2	12/10/1999	Mercury

Project	*Sample*	*Sample Point*	*Date Received*	*Analyte Detail*
94912	027	7 HNO3/H2O2 T3	12/10/1999	Mercury
94912	028	7 PRC KMNO4 T1	12/10/1999	Mercury
94912	029	7 PRC KMNO4 T2	12/10/1999	Mercury
94912	030	7 PRC KMNO4 T3	12/10/1999	Mercury
94912	031	8 PRC OUT FLT-1	12/10/1999	Mercury
94912	032	8 PRC OUT FLT-2	12/10/1999	Mercury
94912	033	8 PRC OUT FLT-3	12/10/1999	Mercury
94912	034	8 PREC HNO3 T1	12/10/1999	Mercury
94912	035	8 PREC HNO3 T2	12/10/1999	Mercury
94912	036	8 PREC HNO3 T3	12/10/1999	Mercury
94912	037	8 PREC KCL T1	12/10/1999	Mercury
94912	038	8 PREC KCL T2	12/10/1999	Mercury
94912	039	8 PREC KCL T3	12/10/1999	Mercury
94912	040	8 HNO3/H2O2 T1	12/10/1999	Mercury
94912	041	8 HNO3/H2O2 T2	12/10/1999	Mercury
94912	042	8 HNO3/H2O2 T3	12/10/1999	Mercury
94912	043	8 PRC KMNO4 T1	12/10/1999	Mercury
94912	044	8 PRC KMNO4 T2	12/10/1999	Mercury
94912	045	8 PRC KMNO4 T3	12/10/1999	Mercury
94912	046	ST FLD BLNK KCL	12/10/1999	Mercury
94912	047	ST F/BHNO3/H2O2	12/10/1999	Mercury
94912	048	ST FLD BL KMNO4	12/10/1999	Mercury
94912	049	7 PRC F/BL KCL	12/10/1999	Mercury
94912	050	7 F/B HNO3/H2O2	12/10/1999	Mercury
94912	051	7 FLD BL KMNO4	12/10/1999	Mercury
94912	052	8 PRC F/BL KCL	12/10/1999	Mercury
94912	053	8 F/B HNO3/H2O2	12/10/1999	Mercury
94912	054	8 FLD BL KMNO4	12/10/1999	Mercury
94912	055	BLANK:QRTZ FLT	12/10/1999	Mercury
94912	056	BLANK:QRTZ FLT	12/10/1999	Mercury

Project	Sample	Sample Point	Date Received	Analyte Detail
94912	057	BLANK:QRTZ FLT	12/10/1999	Mercury
94912	058	BLANK M5 FLT	12/10/1999	Mercury
94912	059	BLANK M5 FLT	12/10/1999	Mercury
94912	060	BLANK M5 FLT	12/10/1999	Mercury
94912	061	REAG BL HNO3	12/10/1999	Mercury
94912	062	REAG BL KCL	12/10/1999	Mercury
94912	063	R/BL HNO3/H2O2	12/10/1999	Mercury
94912	064	REAG BL KMNO4	12/10/1999	Mercury
94912	065	R/BL HYDROXYLAM	12/10/1999	Mercury
94912	067	COAL UNIT 7 T1	12/10/1999	Chlorine
94912	067	COAL UNIT 7 T1	12/10/1999	Mercury
94912	067	COAL UNIT 7 T1	12/10/1999	Ultimate/Proximate on Coal
94912	068	COAL UNIT 7 T2	12/10/1999	Ultimate/Proximate on Coal
94912	068	COAL UNIT 7 T2	12/10/1999	Chlorine
94912	068	COAL UNIT 7 T2	12/10/1999	Mercury
94912	069	COAL UNIT 7 T3	12/10/1999	Mercury
94912	069	COAL UNIT 7 T3	12/10/1999	Chlorine
94912	069	COAL UNIT 7 T3	12/10/1999	Ultimate/Proximate on Coal
94912	070	COAL UNIT 8 T1	12/10/1999	Chlorine
94912	070	COAL UNIT 8 T1	12/10/1999	Mercury
94912	070	COAL UNIT 8 T1	12/10/1999	Ultimate/Proximate on Coal
94912	071	COAL UNIT 8 T2	12/10/1999	Mercury
94912	071	COAL UNIT 8 T2	12/10/1999	Chlorine
94912	071	COAL UNIT 8 T2	12/10/1999	Ultimate/Proximate on Coal
94912	072	COAL UNIT 8 T3	12/10/1999	Ultimate/Proximate on Coal
94912	072	COAL UNIT 8 T3	12/10/1999	Chlorine
94912	072	COAL UNIT 8 T3	12/10/1999	Mercury
94912	073	ASH UNIT 7 T1	12/10/1999	Hold
94912	074	ASH UNIT 7 T2	12/10/1999	Hold
94912	075	ASH UNIT 7 T3	12/10/1999	Hold

Project	*Sample*	*Sample Point*	*Date Received*	*Analyte Detail*
94912	076	ASH UNIT 8 T1	12/10/1999	Hold
94912	077	ASH UNIT 8 T2	12/10/1999	Hold
94912	078	ASH UNIT 8 T3	12/10/1999	Hold
94912	079	SLAG UNIT 7 T1	12/10/1999	Hold
94912	080	SLAG UNIT 7 T2	12/10/1999	Hold
94912	081	SLAG UNIT 7 T3	12/10/1999	Hold
94912	082	SLAG UNIT 8 T1	12/10/1999	Hold
94912	083	SLAG UNIT 8 T2	12/10/1999	Hold
94912	084	SLAG UNIT 8 T3	12/10/1999	Hold

LABORATORY REPORT

TEI Analytical, Inc.
7177 N. Austin
Niles, IL 60714-4617
847-647-1345

PREPARED FOR:

Frank Jarke
Mostardi-Platt Associates, Inc.
945 Oaklawn Avenue
Elmhurst, IL 60126

Report #: 38881 Corrected
Report Date: 2/28/00
Sample Received:
1/3/00 15:45

TEI	94912	Type	<0.004	mg/kg	Date	%RSD	Lin.Reg.	Blank	CPI	MS	MSD
38881	001	Filter		<0.004	1/24/2000	3.49	0.99999	0.11	97.1	101	97.1
38882	002	Filter		<0.004	1/24/2000	0.384	0.99999	0.11	97.1	101	97.1
38883	003	Filter		0.008	1/24/2000	0.971	0.99999	0.11	97.1	101	97.1
38884	004	HNO3	<0.004		2/23/2000	3.09	1	NA	97.4	85.4	86
38885	005	HNO3	<0.004		2/23/2000	0.184	1	NA	97.4	85.4	86
38886	006	HNO3	<0.004		2/23/2000	3.13	1	NA	97.4	85.4	86
38887	007	KCl	0.906		2/3/2000	0.831	0.99997	0.232	93.2	111	95
38888	008	KCl	0.788		2/10/2000	0.654	0.99999	0.668	105	101	103
38889	009	KCl	0.94		2/10/2000	0.62	0.99999	0.668	105	101	103
38890	010	H2O2	0.784		2/10/2000	0.152	0.99999	0.262	105	100	95.8
38891	011	H2O2	0.372		2/10/2000	3.52	0.99999	0.262	105	100	95.8
38892	012	H2O2	0.41		2/10/2000	1.54	0.99999	0.262	105	100	95.8
38893	013	KMnO4	6.5		2/23/2000	0.136	1	0.031	97.4	102	105
38894	014	KMnO4	6.34		2/23/2000	0.068	1	0.031	97.4	102	105
38895	015	KMnO4	6.48		2/23/2000	0.265	1	0.031	98	100	86
38896	016	Filter		0.005	1/27/2000	1.61	0.99927	0.11	97.1	101	97.1
38897	017	Filter		0.008	1/27/2000	2.2	0.99927	0.11	97.1	101	97.1
38898	018	Filter		0.082	1/27/2000	0.631	0.99927	0.11	97.1	101	97.1
38899	019	HNO3	<0.004		2/23/2000	1.82	1	NA	97.4	85.4	86
38900	020	HNO3	<0.004		2/23/2000	5.16	1	NA	97.4	85.4	86
38901	021	HNO3	<0.004		2/23/2000	3	1	NA	97.4	85.4	86
38902	022	KCl	5.09		2/10/2000	0.228	0.99999	0.668	105	101	103
38903	023	KCl	4.78		2/10/2000	0.108	0.99999	0.668	105	101	103
38904	024	KCl	4.54		2/10/2000	0.099	0.99999	0.668	105	101	103
38905	025	H2O2	0.679		2/3/2000	0.153	0.99997	0.116	95.2	120	117

*** CORRECTED REPORT ***

Gayle E. O'Neill, Ph.D.

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Report #: 38881 Corrected
Report Date: 2/28/00
Sample Received:
1/3/00 15:45

TEI	94912	Type	<0.004	mg/kg	Date	%RSD	Lin.Reg.	Blank	CPI	MS	MSD
38906	026	H2O2	0.917		2/3/2000	0.67	0.99997	0.116	95.2	120	117
38907	027	H2O2	0.742		2/3/2000	0.722	0.99997	0.116	95.2	120	117
38908	028	KmnO4	3.24		2/23/2000	0.155	1	0.031	98	100	86
38909	029	KmnO4	4.07		2/23/2000	0.093	1	0.031	98	100	86
38910	030	KmnO4	3.88		2/23/2000	0.278	1	0.031	98	100	86
38911	031	Filter		0.044	2/26/2000	0.762	0.99999	0.123	96	105	91.4
38912	032	Filter		0.054	2/26/2000	0.668	0.99999	0.123	96	105	91.4
38913	033	Filter		0.04	2/26/2000	0.248	0.99999	0.123	96	105	91.4
38914	034	HNO3	<0.004		2/23/2000	2.36	1	NA	97.4	85.4	86
38915	035	HNO3	<0.004		2/23/2000	0.731	1	NA	97.4	85.4	86
38916	036	HNO3	<0.004		2/23/2000	4.5	1	NA	97.4	85.4	86
38917	037	KCl	9.83		2/10/2000	0.407	0.99999	0.668	105	101	103
38918	038	KCl	5.91		2/10/2000	0.17	0.99999	0.668	105	101	103
38919	039	KCl	9.73		2/10/2000	0.392	0.99999	0.668	105	101	103
38920	040	H2O2	1.01		2/10/2000	1.49	0.99999	0.262	105	100	95.8
38921	041	H2O2	1.21		2/10/2000	0.543	0.99999	0.262	105	100	95.8
38922	042	H2O2	1.26		2/10/2000	0.624	0.99999	0.262	105	100	95.8
38923	043	KmnO4	7.3		2/23/2000	0.241	1	0.031	97.4	102	105
38924	044	KmnO4	7.56		2/23/2000	0.359	1	0.031	97.4	102	105
38925	045	KmnO4	6.14		2/23/2000	0.149	1	0.031	97.4	102	105
38926	046	KCl	0.615		2/10/2000	2.57	0.99943	0.444	98.4	112	109
38927	047	H2O2	0.209		2/10/2000	1.52	0.99999	0.262	105	100	95.8
38928	048	KmnO4	0.062		2/23/2000	12.2	1	0.031	97.4	102	105
38929	049	KCl	0.186		2/25/2000	1.09	0.99943	0.444	98.4	112	109
38930	050	H2O2	0.233		2/10/2000	2.6	0.99999	0.262	105	100	95.8

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Report #: 38881 Corrected
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1/3/00 15:45

TEI	94912	Type	<0.004	mg/kg	Date	%RSD	Lin.Reg.	Blank	CPI	MS	MSD
38931	051	KMnO4	<0.03		2/23/2000	22	1	0.031	97.4	102	105
38932	052	KCl	0.12		2/25/2000	0.367	0.99943	0.444	98.4	112	109
38933	053	H2O2	0.293		2/10/2000	1.51	0.99999	0.262	105	100	95.8
38934	054	KMnO4	<0.03		2/23/2000	23.2	1	0.031	97.4	102	105
38935	055	Filter		0.359	2/26/2000	0.24	0.99999	0.123	96	105	91.4
38936	056	Filter		0.306	2/26/2000	0.275	0.99999	0.123	96	105	91.4
38937	057	Filter		0.256	2/26/2000	0.322	0.99999	0.123	96	105	91.4
38938	058	Filter		0.359	2/26/2000	0.475	0.99999	0.123	96	105	91.4
38939	059	Filter		0.269	2/26/2000	0.254	0.99999	0.123	96	105	91.4
38940	060	Filter		0.231	2/26/2000	0.173	0.99999	0.123	96	105	91.4
38941	061	HNO3	<0.004		2/23/2000	4.18	0.99999	NA	97.4	85.4	86
38942	062	KCl	<0.003		2/25/2000	2.63	1	0.444	98.4	112	109
38943	063	H2O2	0.030		2/10/2000	1.36	0.99999	0.262	105	100	95.8
38944	064	KMnO4	0.009		2/25/2000	15.9	0.99943	0.031	106	112	109
38945	065	NH2OH	<0.003		2/25/2000	3.43	0.99943	NA	106	112	109
38946	066	KMnO4	0.006		2/25/2000	9.93	0.99943	0.031	106	112	109

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945 Oaklawn Avenue
Elmhurst, IL 60126

Report #: 38881 Corrected
Report Date: 2/28/00
Sample Received:
1/3/00 15:45

Mercury (Ontario Hydro Method)

The QAPP called for the analysis of all samples in duplicate with every tenth sample run in triplicate. To simplify the instrument setup, we chose to run all samples, blanks, standards, matrix spikes and matrix spike duplicates in triplicate. The reported %RSD is for the triplicate measurements.

All sample results are reported as total micrograms in the sample received by the laboratory, with the exception of the filter samples. The filter sample results are expressed as mg/kg.

The instrument was calibrated at least daily with a blank and four standards. The Lin.Reg. column in this report represents the linear regression coefficient obtained during the calibration.

The laboratory method blank is reported in ug/l in the Blank column of this report. For samples requiring only addition of Hydroxylamine Hydrochloride, NA is entered in this column. No laboratory method blanks were applicable for these samples.

The CPI column presents the % Recovery of an independent standard (obtained from CPI). The calibration curve was prepared in our laboratory from Mercuric Chloride in accordance with EPA Method 7470.

The MS and MSD columns present the % Recovery of the Matrix Spikes and Matrix Spike Duplicates.

*** CORRECTED REPORT ***

Gayle E. O'Neill, Ph.D.

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SINCE 1908®
SGS Member of the SGS Group (Société Générale de Surveillance)

ADDRESS ALL CORRESPONDENCE TO:
16130 VAN DRUNEN RD.
SOUTH HOLLAND, IL 60473
TEL: (708) 331-2900
FAX: (708) 333-3060

December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us Coal

Sample taken at ------

Sample taken by Mostardi-Platt Assoc., Inc.

Date sampled December 9-10, 1999

Date received December 21, 1999

MPA Sample No: 94912-067
Test 1; Unit 7

P.O. No. 22785

Analysis Report No. 71-110086

PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	12.37	xxxxx
% Ash	7.58	8.65
% Volatile	33.66	38.41
% Fixed Carbon	46.39	52.94
	100.00	100.00
Btu/lb	11336	12936
% Sulfur	2.67	3.05
MAF Btu		14161

ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	12.37	xxxxx
% Carbon	64.27	73.34
% Hydrogen	4.20	4.79
% Nitrogen	1.11	1.27
% Sulfur	2.67	3.05
% Ash	7.58	8.65
% Oxygen(diff)	7.80	8.90
	100.00	100.00
CHLORIDE ug/g	477	544

METHODS
Moisture: ASTM D 3302; Ash: ASTM D 3174; Volatile: ASTM D 3175; Fixed Carbon: Calculated Value; ASTM D 3172
Btu/lb: ASTM 3286; Sulfur: ASTM D 4239 (Method C); Carbon, Hydrogen & Nitrogen: ASTM D 5373; Chloride: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Nauses V.P.

South Holland Laboratory

MEMBER ACIL

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OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES
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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us Coal

Sample taken at ------

MPA Sample No: 94912-067
Test 1; Unit 7

Sample taken by Mostardi-Platt Assoc., Inc.

Date sampled December 9-10, 1999

Date received December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110086

	Dry Basis, ug/g	MDL, ug/g
Mercury, Hg	0.05	0.01

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.10

MDL Denotes Method Detection Limit

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Nauses

South Holland Laboratory

MEMBER ACIL

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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us: Coal

Sample taken at: ------

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

MPA Sample No: 94912-068
Test 2; Unit 7

P.O. No. 22785

Analysis Report No. 71-110087

PROXIMATE ANALYSIS	As Received	Dry Basis
% Moisture	13.53	xxxxx
% Ash	7.60	8.79
% Volatile	32.56	37.66
% Fixed Carbon	46.31	53.55
	100.00	100.00
Btu/lb	11178	12927
% Sulfur	2.44	2.82
MAF Btu		14173

ULTIMATE ANALYSIS	As Received	Dry Basis
% Moisture	13.53	xxxxx
% Carbon	63.31	73.22
% Hydrogen	4.19	4.85
% Nitrogen	1.09	1.26
% Sulfur	2.44	2.82
% Ash	7.60	8.79
% Oxygen(diff)	7.84	9.06
	100.00	100.00
CHLORIDE ug/g	392	454

METHODS
Moisture: ASTM D 3302; Ash: ASTM D 3174; Volatile: ASTM D 3175; Fixed Carbon: Calculated Value; ASTM D 3172
Btu/lb: ASTM 3286; Sulfur: ASTM D 4239 (Method C); Carbon, Hydrogen & Nitrogen: ASTM D 5373; Chloride: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Hausey, C

South Holland Laboratory

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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us Coal

Sample taken at ------

MPA Sample No: 94912-068
Test 2; Unit 7

Sample taken by Mostardi-Platt Assoc., Inc.

Date sampled December 9-10, 1999

Date received December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110087

	Dry Basis, ug/g	MDL, ug/g
Mercury, Hg	0.05	0.01

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.10

MDL Denotes Method Detection Limit

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Nauser, P.E.
South Holland Laboratory

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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us: Coal

MPA Sample No: 94912-069
Test 3; Unit 7

Sample taken at: ------

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110088

PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	13.21	xxxxx
% Ash	8.06	9.29
% Volatile	32.49	37.44
% Fixed Carbon	46.24	53.27
	100.00	100.00
Btu/lb	11223	12931
% Sulfur	2.48	2.86
MAF Btu		14255

ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	13.21	xxxxx
% Carbon	63.29	72.92
% Hydrogen	4.15	4.78
% Nitrogen	1.07	1.23
% Sulfur	2.48	2.86
% Ash	8.06	9.29
% Oxygen(diff)	7.74	8.92
	100.00	100.00
CHLORIDE ug/g	480	553

METHODS

Moisture: ASTM D 3302; Ash: ASTM D 3174; Volatile: ASTM D 3175; Fixed Carbon: Calculated Value; ASTM D 3172
Btu/lb: ASTM 3286; Sulfur: ASTM D 4239 (Method C); Carbon, Hydrogen & Nitrogen: ASTM D 5373; Chloride: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Nowsek

South Holland Laboratory

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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us Coal

Sample taken at ------

MPA Sample No: 94912-069
Test 3; Unit 7

Sample taken by Mostardi-Platt Assoc., Inc.

Date sampled December 9-10, 1999

Date received December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110088

	Dry Basis, ug/g	MDL, ug/g
Mercury, Hg	0.05	0.01

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.10

MDL Denotes Method Detection Limit

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Hauser

South Holland Laboratory

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945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us: Coal

Sample taken at: ------

MPA Sample No: 94912-070
Test 1; Unit 8

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110089

PROXIMATE ANALYSIS	As Received	Dry Basis
% Moisture	15.31	xxxxx
% Ash	7.61	8.99
% Volatile	34.94	41.26
% Fixed Carbon	42.14	49.75
	100.00	100.00
Btu/lb	10673	12602
% Sulfur	2.73	3.22
MAF Btu		13847

ULTIMATE ANALYSIS	As Received	Dry Basis
% Moisture	15.31	xxxxx
% Carbon	60.28	71.18
% Hydrogen	4.24	5.01
% Nitrogen	1.13	1.33
% Sulfur	2.73	3.22
% Ash	7.61	8.99
% Oxygen(diff)	8.70	10.27
	100.00	100.00
CHLORIDE ug/g	687	811

METHODS
Moisture: ASTM D 3302; Ash: ASTM D 3174; Volatile: ASTM D 3175; Fixed Carbon: Calculated Value; ASTM D 3172
Btu/lb: ASTM 3286; Sulfur: ASTM D 4239 (Method C); Carbon, Hydrogen & Nitrogen: ASTM D 5373; Chloride: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Joseph B Nauser V.C.
South Holland Laboratory

MEMBER ACIL

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ADDRESS ALL CORRESPONDENCE
16130 VAN DRUNEN
SOUTH HOLLAND, IL 60
TEL: (708) 331-2
FAX: (708) 333-3

December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us Coal

Sample taken at ------

MPA Sample No: 94912-070
Test 1; Unit 8

Sample taken by Mostardi-Platt Assoc., Inc.

Date sampled December 9-10, 1999

Date received December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110089

	Dry Basis, ug/g	MDL, ug/g
Mercury, Hg	0.08	0.01

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.10

MDL Denotes Method Detection Limit

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Nauser, P.E.
South Holland Laboratory

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OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILIT
F-465
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ADDRESS ALL CORRESPONDENCE TO:
16130 VAN DRUNEN RD.
SOUTH HOLLAND, IL 60473
TEL: (708) 331-2900
FAX: (708) 333-3060

December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us: Coal

Sample taken at: ------

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

MPA Sample No: 94912-071
Test 2; Unit 8

P.O. No. 22785

Analysis Report No. 71-110090

PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	15.41	xxxxx
% Ash	7.55	8.93
% Volatile	34.79	41.13
% Fixed Carbon	42.25	49.94
	100.00	100.00
Btu/lb	10689	12636
% Sulfur	2.77	3.27
MAF Btu		13875

ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	15.41	xxxxx
% Carbon	60.25	71.23
% Hydrogen	4.29	5.07
% Nitrogen	0.91	1.08
% Sulfur	2.77	3.27
% Ash	7.55	8.93
% Oxygen(diff)	8.82	10.42
	100.00	100.00
CHLORIDE ug/g	391	462

METHODS

Moisture: ASTM D 3302; Ash: ASTM D 3174; Volatile: ASTM D 3175; Fixed Carbon: Calculated Value; ASTM D 3172
Btu/lb: ASTM 3286; Sulfur: ASTM D 4239 (Method C); Carbon, Hydrogen & Nitrogen: ASTM D 5373; Chloride: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B. Nauses, V.C.

South Holland Laboratory

MEMBER ACIL

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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us: Coal

Sample taken at: ------

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

MPA Sample No: 94912-071
Test 2; Unit 8

P.O. No. 22785

Analysis Report No. 71-110090

	Dry Basis, ug/g	MDL, ug/g
Mercury, Hg	0.09	0.01

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.10

MDL Denotes Method Detection Limit

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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South Holland Laboratory

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December 30, 1999

MOSTARDI-PLATT ASSOCIATES, INC
945 Oaklawn Avenue
Elmhurst, IL 60126
Attn: Frank Jarke

Sample identification by
Mostardi-Platt Assoc., Inc.

Kind of sample reported to us: Coal

Sample taken at: ------

MPA Sample No: 94912-072
Test 3; Unit 8

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110091

PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	15.90	xxxxx
% Ash	8.54	10.15
% Volatile	32.83	39.04
% Fixed Carbon	42.73	50.81
	100.00	100.00
Btu/lb	10724	12752
% Sulfur	1.95	2.32
MAF Btu		14193

ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	15.90	xxxxx
% Carbon	60.38	71.79
% Hydrogen	4.17	4.96
% Nitrogen	1.00	1.19
% Sulfur	1.95	2.32
% Ash	8.54	10.15
% Oxygen(diff)	8.06	9.59
	100.00	100.00
CHLORIDE ug/g	737	877

METHODS

Moisture: ASTM D 3302; Ash: ASTM D 3174; Volatile: ASTM D 3175; Fixed Carbon: Calculated Value; ASTM D 3172
Btu/lb: ASTM 3286; Sulfur: ASTM D 4239 (Method C); Carbon, Hydrogen & Nitrogen: ASTM D 5373; Chloride: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Joseph B Nauses V.P.

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MPA Sample No: 94912-072
Test 3; Unit 8

Sample taken by: Mostardi-Platt Assoc., Inc.

Date sampled: December 9-10, 1999

Date received: December 21, 1999

P.O. No. 22785

Analysis Report No. 71-110091

	Dry Basis, ug/g	MDL, ug/g
Mercury, Hg	0.07	0.01

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.10

MDL Denotes Method Detection Limit

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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LIST OF PARTICIPANTS

Name	Organization	Project Role
Steve Barnes	NIPSCO	Plant Coordinator
Paul Chu	EPRI	Plant Manager
James R. Platt	Mostardi Platt	Vice President
John Wendell	Mostardi Platt	Laboratory Chemist
Tim Russ	Mostardi Platt	Project Manager
Paul Coleman	Mostardi Platt	Project Manager
Dan Runyan	Mostardi Platt	Field Engineer
Paul Kotelman	Mostardi Platt	Test Technician
David Helm	Mostardi Platt	Test Technician
Norm Smith	Mostardi Platt	Test Technician
Peter Nemeth	Mostardi Platt	Test Technician
Mike Taylor	Mostardi Platt	Test Technician
Corey Shelby	Mostardi Platt	Test Technician
Gayle E. O'Neill, Ph.D.	TEI Analytical, Inc.	Speciated Hg Sample Analysis
Joseph Houser	CTE	Coal Sample Analysis