

PARTICULATE EMISSIONS TEST REPORT No. 130 - 001
UNITS 1 & 2 - SJRPP

Commissioned By: St. Johns River Power Park
11201 New Berlin Road
Jacksonville, FL 32226

Prepared By: Coastal Air Consulting, Inc.
January 13, 2003



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COMPLETE EMISSIONS TESTING SERVICES • PERMITTING ASSISTANCE • CEMS CERTIFICATION • AMBIENT AIR MONITORING

STATEMENT OF VALIDITY

All testing activities and results represented herein were conducted and obtained in accordance with the approved, industry standard, EPA protocols listed in CFR 40 Part 60. The contents have been reviewed and verified, to the extent practical, to be valid and accurate representation of the source emissions at the time of testing.

Stephen C. Webb
President

PROJECT STATISTICS

Client: St. Johns River Power Park

Facility: SJRPP Units 1 & 2

Location: 11201 New Berlin Road
Jacksonville, FL 32226

Type of Process Tested: Coal Fired Utility Steam Generating Units

Test Protocols Performed: Particulate-EPA Method 5B
Opacity-EPA Method 9

Testing Firm: Coastal Air Consulting, Inc.
1531 Wyngate Dr.
DeLand, FL 32724

Test Personnel: Steve Webb Site Supervisor
Joe Cieslinske Technician
Monte Crosby Technician
Melvin Petiet Technician

Test Date: December 9 & 10, 2002

Client Representative: Bruce Kofler

Observers: John Gay DEP Northeast District
William Coffman City of Jacksonville

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1.0 Introduction

Coastal Air Consulting, Inc. (Coastal) was contracted by SJRPP to perform the annual compliance testing for particulate emissions at the SJRPP Units 1 & 2 in Jacksonville, Florida.

The sampling program was conducted on December 9 & 10, 2002. The testing was performed by Coastal personnel. Mr. Bruce Kofler of SJRPP coordinated plant operations during the testing.

2.0 Test Program Summary

A summary of test results developed by this source sampling program is presented in TABLES 1 and 2 as follows;

TABLE 1
Summary of Particulate Emissions

Source	Particulate (lb/mmBtu)	Permit (lb/mmBtu)
Unit 1 Compliance	0.005	0.03
Unit 2 Compliance	0.003	0.03

TABLE 2
Summary of Visible Emissions

Source	Average VE (%)	Highest 6 min (%)	Permitted (%)
Unit 1 Stack Soot Blowing	10.7	11.7	20
Unit 2 Stack Soot Blowing	5.3	7.5	20
Flyash Area Around Baghouse	0.2	1.9	10
Limestone Hopper	0.0	0.0	10
Limestone Day Baghouse Unit 1	0.0	0.0	10
Limestone Day Baghouse Unit 2	0.0	0.0	10
Flyash Silo Baghouse Unit 1	0.0	0.0	10
Flyash Silo Baghouse Unit 2	0.0	0.0	10

3.0 Results of Testing

Individual test run results are shown in Tables 3 and 4 and are tabulated in Appendix 1. These results indicate that Units 1 and 2 were in compliance at the time of testing under normal operating conditions.

TABLE 3
COASTAL AIR CONSULTING, INC.

PARTICULATE EMISSION TEST SUMMARY

CLIENT: St. Johns River Power Park
 PLANT: SJRPP
 UNIT: 1
 TEST: COMPLIANCE
 METHOD: 5B

	Soot Blowing		
	RUN 1	RUN 2	RUN 3
DATE OF RUN	12/9/02	12/9/02	12/9/02
GROSS LOAD (MW)	655	661	670
START TIME (24-HR CLOCK)	900	1216	1516
END TIME (24-HR CLOCK)	1110	1424	1724
VOL DRY GAS SAMPLED METER COND (DCF)	113.497	115.477	112.782
BAROMETRIC PRESSURE (IN. HG)	29.63	29.63	29.63
AVG ORIFICE PRESSURE DROP (IN. H2O)	2.788	2.917	2.800
AVG GAS METER TEMP (F)	100.2	101.5	101.4
GAS METER CALIBRATION FACTOR	1.0050	1.0050	1.0050
VOL GAS SAMPLED STD COND (DSCF)	107.166	108.811	106.257
TOTAL WATER COLLECTED (G)	317.4	354.5	348.6
VOL WATER COLLECTED STD COND (SCF)	14.97	16.71	16.44
MOISTURE IN STACK GAS (% VOL)	12.25	13.32	13.40
MOLE FRACTION DRY GAS	0.877	0.867	0.866
CO2 VOL PERCENT DRY	12.2	12.4	12.6
O2 VOL PERCENT DRY	6.4	6.6	6.6
N2 VOL PERCENT DRY	81.40	81.00	80.80
MOL. WT. DRY STACK GAS (LB/LB-MOLE)	30.21	30.25	30.28
MOL. WT. WET STACK GAS (LB/LB-MOLE)	28.71	28.62	28.63
ELEV. DIFF. FROM MANOM. TO BAROM. (FT)	0.00	0.00	0.00
STACK GAS STATIC PRESSURE (IN. H2O GAGE)	-0.76	-0.78	-0.81
STACK GAS STATIC PRESSURE (IN. HG ABS.)	29.57	29.57	29.57
AVERAGE SQUARE ROOT VELOCITY HEAD	1.176	1.205	1.180
PITOT TUBE COEFFICIENT	0.84	0.84	0.84
AVG STACK TEMP (F)	146.9	152.9	147.6
STACK GAS VELOCITY STACK COND (FT/SEC)	71.41	73.65	71.79
CROSS SECTION STACK AREA (SQ FT)	471.435	471.435	471.435
STACK GAS FLOW RATE STD COND (DSCFM)	1524026.2	1537534.1	1510328.4
STACK GAS FLOW RATE STACK COND (ACFM)	2019915.2	2083285.5	2030657.0
NET TIME OF RUN (MIN)	120	120	120
NOZZLE DIAMETER (IN)	0.225	0.225	0.225
PERCENT ISOKINETIC	100.11	100.75	100.16
PARTICULATE COLLECTED (MG)	11.6	20.0	19.2
WEIGHTED AVERAGE F FACTOR (DSCF/MILL. BTU)	9780.00	9780.00	9780.00
HEAT INPUT COAL (%)	100.0	100.0	100.0
PARTICULATE EMISSIONS (GRAINS/SCF)	0.0017	0.0028	0.0028
PARTICULATE EMISSIONS (LB/HR)	21.81	37.37	36.09
PARTICULATE EMISSIONS (LB/MILL. BTU)	0.0034	0.0058	0.0057
AVERAGE PARTICULATE EMISSIONS (LB/HR)		31.76	
AVERAGE PARTICULATE EMISSIONS (LB/MMBTU)		0.0049	

NOTE: STANDARD CONDITIONS – 68F, 29.92 in. Hg

TABLE 4
COASTAL AIR CONSULTING, INC.

PARTICULATE EMISSION TEST SUMMARY

CLIENT: St. Johns River Power Park
 PLANT: SJRPP
 UNIT: 2
 TEST: COMPLIANCE
 METHOD: 5B

	<u>RUN 1</u>	<u>RUN 2</u>	<u>RUN 3</u>
DATE OF RUN	12/10/02	12/10/02	12/10/02
GROSS LOAD (MW)	659	664	665
START TIME (24-HR CLOCK)	915	1210	1500
END TIME (24-HR CLOCK)	1124	1416	1706
VOL DRY GAS SAMPLED METER COND (DCF)	111.855	113.809	111.991
BAROMETRIC PRESSURE (IN. HG)	29.65	29.65	29.65
AVG ORIFICE PRESSURE DROP (IN. H2O)	2.717	2.750	2.700
AVG GAS METER TEMP (F)	95.9	98.4	98.1
GAS METER CALIBRATION FACTOR	1.0050	1.0050	1.0050
VOL GAS SAMPLED STD COND (DSCF)	106.476	107.860	106.187
TOTAL WATER COLLECTED (G)	321.7	313.8	322.4
VOL WATER COLLECTED STD COND (SCF)	15.17	14.80	15.20
MOISTURE IN STACK GAS (% VOL)	12.47	12.06	12.52
MOLE FRACTION DRY GAS	0.875	0.879	0.875
CO2 VOL PERCENT DRY	12.8	12.6	12.8
O2 VOL PERCENT DRY	6.0	6.2	5.9
N2 VOL PERCENT DRY	81.20	81.20	81.30
MOL. WT. DRY STACK GAS (LB/LB-MOLE)	30.29	30.26	30.28
MOL. WT. WET STACK GAS (LB/LB-MOLE)	28.76	28.78	28.75
ELEV. DIFF. FROM MANOM. TO BAROM. (FT)	0.00	0.00	0.00
STACK GAS STATIC PRESSURE (IN. H2O GAGE)	-0.80	-0.78	-0.82
STACK GAS STATIC PRESSURE (IN. HG ABS.)	29.59	29.59	29.59
AVERAGE SQUARE ROOT VELOCITY HEAD	1.163	1.171	1.159
PITOT TUBE COEFFICIENT	0.84	0.84	0.84
AVG STACK TEMP (F)	141.1	141.6	144.2
STACK GAS VELOCITY STACK COND (FT/SEC)	70.22	70.64	70.17
CROSS SECTION STACK AREA (SQ FT)	471.435	471.435	471.435
STACK GAS FLOW RATE STD COND (DSCFM)	1510379.9	1525372.5	1500726.3
STACK GAS FLOW RATE STACK COND (ACFM)	1986330.3	1998335.8	1985069.7
NET TIME OF RUN (MIN)	120	120	120
NOZZLE DIAMETER (IN)	0.225	0.225	0.225
PERCENT ISOKINETIC	100.36	100.67	100.73
PARTICULATE COLLECTED (MG)	9.1	12.6	5.8
WEIGHTED AVERAGE F FACTOR (DSCF/MILL. BTU)	9780.00	9780.00	9780.00
HEAT INPUT COAL (%)	100.0	100.0	100.0
PARTICULATE EMISSIONS (GRAINS/SCF)	0.0013	0.0018	0.0008
PARTICULATE EMISSIONS (LB/HR)	17.07	23.56	10.84
PARTICULATE EMISSIONS (LB/MILL. BTU)	0.0026	0.0036	0.0016
AVERAGE PARTICULATE EMISSIONS (LB/HR)		17.16	
AVERAGE PARTICULATE EMISSIONS (LB/MMBTU)		0.0026	

NOTE: STANDARD CONDITIONS – 68F, 29.92 in. Hg

4.0 Description of Source

St. Johns River Power Park Units 1 and 2 are coal fired utility steam generators. These units are located in Duval County, Florida.

The flue gas is exhausted through the Units 1 and 2 common stack. A schematic of the process and stack sampling location is included in Appendix 3 "Figures".

5.0 Sampling Procedures

EPA testing protocols utilized during this test program include the following;

EPA Method 1	Sample and Velocity Traverse for Stationary Sources
EPA Method 2	Determination of Stack Gas Velocity and Volumetric Flow Rate
EPA Method 3	Gas Analysis for CO ₂ , O ₂ , Excess Air and Dry Molecular Weight
EPA Method 4	Determination of Moisture Content in Stack Gas
EPA Method 5B	Determination of Nonsulfuric Acid Particulate Matter From Stationary Sources

The test runs were conducted in triplicate for all parameters with each being 120 minutes in duration.

5.1 Particulate – EPA Method 5B

This method of analysis is similar to EPA Method 5 except where specifically modified for the determination of nonsulfuric acid particulate matter from stationary sources. Emissions were determined in accordance with procedures outlined in EPA Method 5B. Specifically, while maintaining the probe liner and filter heater box to 320 ± 25 °F a sample of flue gas is isokinetically extracted from the stack gas stream and the particulate emissions are calculated by gravimetrically determining the amount of particulate matter collected in the glass nozzle, glass probe liner and glass fiber filter.

Gas sample volume is measured by passing the gas through a set of weighed impingers used to determine moisture content then through a calibrated dry gas meter. An S-type pitot tube is attached to the probe to simultaneously measure stack gas velocity and is used to maintain an isokinetic sampling profile. A "K-type" thermocouple, integral with the probe is used to measure the flue gas temperature.

Following each run, the nozzle, probe liner and filter holder upstream of the filter are brushed and rinsed with acetone and stored in a leak free container for transport to the laboratory. The total impinger content is weighed and compared to pretest weights to calculate the increase in grams of moisture used in determining flue gas water content.

Particulate matter is determined by drying each filter at 320 °F for six hours, desiccated to a final weight and results are recorded to within +/- 0.1 mg. Evaporate the acetone rinse in a tared beaker, desiccate to a final weight and record results to within +/- 0.1 mg.

Testing was conducted in a vertical section of the stack which is 294.0 inches in diameter. There are four test ports orientated 90 degrees apart. The test ports are located greater than 8 duct diameters downstream and greater than 2 duct diameters upstream from the nearest flow disturbance. The sampling was performed at three (3) traverse points for each port, 12 total points. Each test point was sampled for 10 minutes for a total sample time of 120 minutes.

6.0 Operating Conditions

St. Johns River Power Park personnel monitored operating conditions throughout the duration of the sampling program. The units were operating under normal conditions at an approximate output of 662 MW (gross).

7.0 Quality Assurance Procedures

Quality assurance procedures followed during these testing activities were applied consistent with the requirements outlined by the EPA methods referenced in CFR 40 Part 60. The specific procedures for this test program are listed below.

7.1 Isokinetic Equipment

- Nozzles - Inspected and measured across three different diameters to ensure uniformity to determine the appropriate nozzle diameter.
- S-type pitot tubes were visually inspected and measured to meet the design specifications of EPA Method 2 for a 0.84 pitot coefficient.
- Both legs of the pitot tube were leaked checked before and after each sample run.
- Thermocouples were calibrated prior to the testing and a post-test check is performed after each testing project.
- Manometers are leveled and zeroed before each sample run.
- Dry gas meters are fully calibrated on a semi-annual schedule using a set of EPA critical orifices.
- Post-test dry gas meter checks were completed to verify the accuracy of the meter Y values.
- Pre-test and post-test leak checks were completed and were less than 0.02 cfm at the highest sampling vacuum.

7.2 Chain of Custody

All the field samples were collected, sealed and transported to the Coastal office in DeLand, FL under the supervision of Steve Webb.

APPENDIX 1
REFERENCE DATA

UNIT 1

PARTICULATE TEST FIELD DATA SHEET

Client: SJRPP
 Plant & Unit: SJRPP 1
 Type of test: Compliance
 Method: 1-4 and 5B
 Run Number: 1
 Date: 12/9/02
 Sample Location: Stack
 Operators: JLC/MLC

Reference: 2.03
 Bar. Pressure (in.Hg): 29.63
 Static Pressure (H2O): -0.76
 Meter Box #: CAC1
 Ini. Pitot Leak Check: OK @ 4"
 Fin. Pitot Leak Check: OK @ 6"
 Ini. Leak Rate: 0.00@ 15 "
 Fin. Leak Rate: 0.00@ 6 "

Filter #: B13
 Nozzle #: G1
 Nozzle Dia.(in): 0.225
 ^H@ 1.797 Yi 1.0050
 Pitot # CAC11G 0.84
 Thermocouple # 11G
 Impinger Set: A
 Sample Head: A

POINT #	CLOCK TIME	SAMPLE TIME	DRY GAS VOLUME	VELOCITY	ORIFICE	METER	STACK	PROBE	HOT BOX	IMPINGER	VAC.
				HEAD (in H2O)	"H (in H2O)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	(IN.HG)
			590.536								
S-1	900	10	600.1	1.50	3.00	85	146	313	315	60	5.0
S-2		20	610.2	1.50	3.00	92	147	313	318	57	5.0
S-3		30	617.425	0.93	1.86	96	145	313	325	58	3.0
W-1		10	628.4	1.60	3.20	98	146	310	315	60	5.0
W-2		20	637.5	1.50	3.00	99	146	315	324	61	5.0
W-3		30	646.579	1.20	2.40	102	146	308	315	63	4.0
N-1		10	656.6	1.60	3.20	102	146	316	318	64	5.0
N-2		20	666.8	1.60	3.20	107	146	313	316	60	5.0
N-3		30	675.677	1.20	2.40	107	147	308	313	63	4.0
E-1		10	685.6	1.60	3.20	102	148	308	315	62	5.0
E-2		20	695.7	1.50	3.00	105	150	311	321	64	5.0
E-3	1110	30	704.033	1.00	2.00	107	150	308	316	62	5.0

113.497	1.176	2.788	100.2	146.9
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MOISTURE, PARTICULATE CATCH AND DRY MOLECULAR WEIGHT DATA

PLANT: SJRPP #1
DATE: 12/9/02

RUN 1

METHOD 4 MOISTURE DETERMINATION

IMPG SET:	A				
	IMPG.#1	IMPG.#2	IMPG.#3	IMPG.#4	WT. BY
FINAL WT.	913.0	740.7	620.1	951.1	SCW
INITIAL WT.	694.0	696.2	608.5	908.8	SCW
NET WT.	219.0	44.5	11.6	42.3	SCW
TOTAL WT.	317.4	note: all weights in grams			

PARTICULATE FILTER CATCH

FILTER #	B13	BY	BEAKER #	1	BY
FINAL WT.	0.3285	SCW	FINAL WT.	72.9430	SCW
INITIAL WT.	0.3236	SCW	INITIAL WT.	72.9363	SCW
NET WT.	0.0049	SCW	NET WT.	0.0067	SCW
TOTAL CATCH (grams)			0.0116		
TOTAL CATCH (mg)			11.6		

DRY MOLECULAR WEIGHT

GAS	1	2	3	AVG	Fo: 1.189
CO2	12.2	12.2	12.2	12.2	ALLOWED Fo RANGE OIL: 1.210 TO 1.370 COAL: 1.083 TO 1.230
O2+CO2	18.6	18.6	18.6	-----	
O2	6.4	6.4	6.4	6.4	

4 MINUTE ORSAT ANALYZER CHECK

	BEFORE	AFTER	
BURETTE MENISCUS READING:	15	15	<0.2 ? YES
CO2 CAPILLARY TUBE LEVEL:	OK	OK	
O2 CAPILLARY TUBE LEVEL:	OK	OK	

PARTICULATE TEST FIELD DATA SHEET

Client: SJRPP
 Plant & Unit: SJRPP 1
 Type of Test: Soot Blowing
 Method: 1-4 and 5B
 Run Number: 2
 Date: 12/9/02
 Sample Location: Stack
 Operators: JLC/MLC

Reference: 2.01
 Bar. Pressure (in.Hg): 29.63
 Static Pressure (H2O): -0.78
 Meter Box #: CAC1
 Ini. Pitot Leak Check: OK @ 5"
 Fin. Pitot Leak Check: OK @ 4"
 Ini. Leak Rate: 0.00@ 15 "
 Fin. Leak Rate: 0.00@ 6 "

Filter #: B15
 Nozzle #: G2
 Nozzle Diam.(in): 0.225
 ^H@ 1.797 Yi 1.0050
 Pitot # CAC11G 0.84
 Thermocouple # 11G
 Impinger Set: B
 Sample Head: A

POINT #	CLOCK TIME	SAMPLE TIME	DRY GAS VOLUME	VELOCITY	ORIFICE	METER	STACK	PROBE	HOT BOX	IMPINGER	VAC. (IN.HG)
				HEAD (in H2O)	^H (in H2O)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	
			704.650								
E-1	1216	10	715.4	1.60	3.20	90	153	300	310	63	5.0
E-2		20	724.0	1.60	3.20	96	154	307	314	51	5.0
E-3		30	733.895	1.20	2.40	100	153	306	318	53	4.0
N-1		10	743.7	1.60	3.20	98	153	308	313	55	5.0
N-2		20	753.5	1.60	3.20	102	154	308	318	53	5.0
N-3		30	762.419	1.20	2.40	104	153	306	318	56	4.0
W-1		10	772.5	1.60	3.20	102	153	310	312	55	5.0
W-2		20	782.4	1.50	3.00	104	153	310	319	53	5.0
W-3		30	791.189	1.20	2.40	106	154	312	319	55	4.0
S-1		10	801.3	1.60	3.20	102	153	306	316	59	5.0
S-2		20	811.4	1.60	3.20	107	151	316	319	55	5.0
S-3	1424	30	820.127	1.20	2.40	107	151	308	319	58	4.5

115.477	1.205	2.917	101.5	152.9
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MOISTURE, PARTICULATE CATCH AND DRY MOLECULAR WEIGHT DATA

PLANT: SJRPP #1
DATE: 12/9/02

RUN 2 SB

METHOD 4 MOISTURE DETERMINATION

IMPG SET:	B				
	IMPG.#1	IMPG.#2	IMPG.#3	IMPG.#4	WT. BY
FINAL WT.	909.7	824.2	606.1	1032.2	SCW
INITIAL WT.	715.0	699.6	600.5	1002.6	SCW
NET WT.	194.7	124.6	5.6	29.6	SCW
TOTAL WT.	354.5	note: all weights in grams			

PARTICULATE FILTER CATCH

FILTER #	B15	BY	BEAKER #	3	BY
FINAL WT.	0.3370	SCW	FINAL WT.	73.2826	SCW
INITIAL WT.	0.3248	SCW	INITIAL WT.	73.2748	SCW
NET WT.	0.0122	SCW	NET WT.	0.0078	SCW
TOTAL CATCH (grams)			0.0200		
TOTAL CATCH (mg)			20		

DRY MOLECULAR WEIGHT

GAS	1	2	3	AVG	Fo: 1.153
CO2	12.4	12.4	12.4	12.4	ALLOWED Fo RANGE OIL: 1.210 TO 1.370 COAL: 1.083 TO 1.230
O2+CO2	19.0	19.0	19.0	-----	
O2	6.6	6.6	6.6	6.6	

4 MINUTE ORSAT ANALYZER CHECK

	BEFORE	AFTER	
BURETTE MENISCUS READING:	15	15	<0.2 ? YES
CO2 CAPILLARY TUBE LEVEL:	OK	OK	
O2 CAPILLARY TUBE LEVEL:	OK	OK	

PARTICULATE TEST FIELD DATA SHEET

Client: SJRPP
 Plant & Unit: SJRPP 1
 Type of test: Compliance
 Method: 1-4 and 5B
 Run Number: 3
 Date: 12/9/02
 Sample Location: Stack
 Operators: JLC/MLC

Reference: 1.99
 Bar. Pressure (in.Hg): 29.63
 Static Pressure (H2O): -0.81
 Meter Box #: CAC1
 Ini. Pitot Leak Check: OK @ 5"
 Fin. Pitot Leak Check: OK @ 6"
 Ini. Leak Rate: 0.00 @ 15 "
 Fin. Leak Rate: 0.00 @ 6 "

Filter #: B14
 Nozzle #: G1
 Nozzle Diam.(in): 0.225
 ^H@ 1.797 Yi 1.0050
 Pitot # CAC11G 0.84
 Thermocouple # 11G
 Impinger Set: C
 Sample Head: A

POINT #	CLOCK TIME	SAMPLE TIME	DRY GAS VOLUME	VELOCITY HEAD (in H2O)	ORIFICE ^H (in H2O)	METER TEMP (F)	STACK TEMP (F)	PROBE TEMP (F)	HOT BOX TEMP (F)	IMPINGER TEMP (F)	VAC. (IN.HG)
			820.341								
S-1	1516	10	830.6	1.60	3.20	91	152	310	308	63	5.0
S-2		20	840.1	1.50	3.00	97	151	308	321	46	5.0
S-3		30	848.924	1.20	2.40	100	147	307	319	46	4.5
W-1		10	859.0	1.60	3.20	98	147	310	320	49	5.0
W-2		20	868.4	1.40	2.80	102	147	310	320	46	5.0
W-3		30	877.230	1.20	2.40	104	147	310	320	48	4.0
N-1		10	887.4	1.60	3.20	101	147	300	322	54	5.0
N-2		20	897.3	1.60	3.20	104	147	304	321	50	5.0
N-3		30	905.633	1.10	2.20	106	147	304	320	52	4.5
E-1		10	916.1	1.60	3.20	101	147	302	319	57	5.0
E-2		20	924.6	1.30	2.60	106	146	306	321	52	5.0
E-3	1724	30	933.123	1.10	2.20	107	146	303	319	54	4.0

112.78	1.180	2.800	101.4	147.6
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MOISTURE, PARTICULATE CATCH AND DRY MOLECULAR WEIGHT DATA

PLANT: SJRPP #1
DATE: 12/9/02

RUN 3

METHOD 4 MOISTURE DETERMINATION

IMPG SET:	C				
	IMPG.#1	IMPG.#2	IMPG.#3	IMPG.#4	WT. BY
FINAL WT.	929.8	793.7	623.7	1049.2	SCW
INITIAL WT.	721.3	687.0	618.5	1021.0	SCW
NET WT.	208.5	106.7	5.2	28.2	SCW
TOTAL WT.	348.6	note: all weights in grams			

PARTICULATE FILTER CATCH

FILTER #	B14	BY	BEAKER #	2	BY
FINAL WT.	0.3273	SCW	FINAL WT.	73.0668	SCW
INITIAL WT.	0.3228	SCW	INITIAL WT.	73.0521	SCW
NET WT.	0.0045	SCW	NET WT.	0.0147	SCW
TOTAL CATCH (grams)			0.0192		
TOTAL CATCH (mg)			19.2		

DRY MOLECULAR WEIGHT

GAS	1	2	3	AVG	Fo: 1.135
CO2	12.6	12.6	12.6	12.6	ALLOWED Fo RANGE OIL: 1.210 TO 1.370 COAL: 1.083 TO 1.230
O2+CO2	19.2	19.2	19.2	-----	
O2	6.6	6.6	6.6	6.6	

4 MINUTE ORSAT ANALYZER CHECK

	BEFORE	AFTER	
BURETTE MENISCUS READING:	15	15	<0.2 ? YES
CO2 CAPILLARY TUBE LEVEL:	OK	OK	
O2 CAPILLARY TUBE LEVEL:	OK	OK	

UNIT 2

PARTICULATE TEST FIELD DATA SHEET

Client: SJRPP	Reference: 2.03	Filter #: B16
Plant & Unit: SJRPP 2	Bar. Pressure (in.Hg): 29.65	Nozzle #: G2
Type of test: Compliance	Static Pressure (H2O): -0.8	Nozzle Dia.(in): 0.225
Method: 1-4 and 5B	Meter Box #: CAC1	^H@ 1.797 Yi 1.0050
Run Number: 1	Ini. Pitot Leak Check: OK @ 4"	Pitot # CAC11G 0.84
Date: 12/10/02	Fin. Pitot Leak Check: OK @ 6"	Thermocouple # 11G
Sample Location: Stack	Ini. Leak Rate:0.00@ 15 "	Impinger Set: A
Operators: JLC/MLC	Fin. Leak Rate:0.00@ 6 "	Sample Head: A

POINT #	CLOCK TIME	SAMPLE TIME	DRY GAS	VELOCITY	ORIFICE	METER	STACK	PROBE	HOT BOX	IMPINGER	VAC. (IN.HG)
			VOLUME	HEAD (in H2O)	^H (in H2O)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	
			940.965								
E-1	915	10	951.0	1.60	3.20	83	143	308	331	60	5.0
E-2		20	961.1	1.60	3.20	89	141	308	328	48	5.0
E-3		30	969.935	1.30	2.60	93	141	308	330	52	4.0
N-1		10	979.8	1.50	3.00	93	141	309	319	56	5.0
N-2		20	989.4	1.50	3.00	98	141	306	327	54	5.0
N-3		30	998.095	1.10	2.20	99	141	307	324	57	4.5
W-1		10	1007.3	1.30	2.60	96	141	300	324	60	4.0
W-2		20	1016.3	1.30	2.60	100	141	301	325	59	4.0
W-3		30	1024.856	1.10	2.20	101	140	302	324	62	4.0
S-1		10	1034.1	1.30	2.60	96	141	301	307	62	4.5
S-2		20	1043.6	1.40	2.80	101	141	300	318	60	5.0
S-3	1124	30	1052.820	1.30	2.60	102	141	301	315	60	4.5

111.855	1.163	2.717	95.9	141.1
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MOISTURE, PARTICULATE CATCH AND DRY MOLECULAR WEIGHT DATA

PLANT: SJRPP #2

RUN 1

DATE: 12/10/02

METHOD 4 MOISTURE DETERMINATION

IMPG SET:	A				
	IMPG.#1	IMPG.#2	IMPG.#3	IMPG.#4	WT. BY
FINAL WT.	892.0	823.6	621.7	977.7	SCW
INITIAL WT.	692.3	740.7	612.0	948.3	SCW
NET WT.	199.7	82.9	9.7	29.4	SCW
TOTAL WT.	321.7	note: all weights in grams			

PARTICULATE FILTER CATCH

FILTER #	B16	BY	BEAKER #	4	BY
FINAL WT.	0.3252	SCW	FINAL WT.	72.5498	SCW
INITIAL WT.	0.3219	SCW	INITIAL WT.	72.5440	SCW
NET WT.	0.0033	SCW	NET WT.	0.0058	SCW
TOTAL CATCH (grams)			0.0091		
TOTAL CATCH (mg)			9.1		

DRY MOLECULAR WEIGHT

GAS	1	2	3	AVG	Fo: 1.164
CO2	12.8	12.8	12.8	12.8	ALLOWED Fo RANGE OIL: 1.210 TO 1.370 COAL: 1.083 TO 1.230
O2+CO2	18.8	18.8	18.8	-----	
O2	6.0	6.0	6.0	6.0	

4 MINUTE ORSAT ANALYZER CHECK

	BEFORE	AFTER	
BURETTE MENISCUS READING:	15	15	<0.2 ? YES
CO2 CAPILLARY TUBE LEVEL:	OK	OK	
O2 CAPILLARY TUBE LEVEL:	OK	OK	

PARTICULATE TEST FIELD DATA SHEET

Client: SJRPP	Reference: 2.03	Filter #: B17
Plant & Unit: SJRPP 2	Bar. Pressure (in.Hg): 29.65	Nozzle #: G1
Type of test: Soot Blow	Static Pressure (H2O): -0.78	Nozzle Diam.(in): 0.225
Method: 1-4 and 5B	Meter Box #: CAC1	^H@ 1.797 Yi 1.0050
Run Number: 2	Ini. Pitot Leak Check: OK @ 6"	Pitot # CAC11G 0.84
Date: 12/10/02	Fin. Pitot Leak Check: OK @ 4"	Thermocouple # 11G
Sample Location: Stack	Ini. Leak Rate:0.00@ 15 "	Impinger Set: B
Operators: JLC/MLC	Fin. Leak Rate:0.00@ 6 "	Sample Head: A

POINT #	CLOCK TIME	SAMPLE TIME	VELOCITY		ORIFICE	METER	STACK	PROBE	HOT BOX	IMPINGER	VAC. (IN.HG)
			DRY GAS VOLUME	HEAD (in H2O)	^H (in H2O)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	
			53.151								
S-1	1210	10	63.0	1.50	3.00	88	140	318	316	62	5.0
S-2		20	72.5	1.50	3.00	95	141	320	318	47	5.0
S-3		30	81.928	1.30	2.60	98	141	303	316	49	5.0
W-1		10	91.5	1.50	3.00	95	140	300	305	54	5.0
W-2		20	100.8	1.30	2.60	101	141	301	318	50	4.5
W-3		30	109.367	1.10	2.20	101	141	303	318	51	4.0
N-1		10	119.3	1.50	3.00	98	140	301	319	55	5.0
N-2		20	129.8	1.50	3.00	101	142	322	321	51	5.0
N-3		30	138.471	1.30	2.60	102	142	318	320	52	4.5
E-1		10	149.3	1.60	3.20	98	141	318	324	55	5.0
E-2		20	158.5	1.30	2.60	102	144	316	320	52	5.0
E-3	1416	30	166.960	1.10	2.20	102	146	317	319	54	4.0

113.809	1.171	2.750	98.4	141.6
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MOISTURE, PARTICULATE CATCH AND DRY MOLECULAR WEIGHT DATA

PLANT: SJRPP #2

RUN 2 SB

DATE: 12/10/02

METHOD 4 MOISTURE DETERMINATION

IMPG SET:	B				
	IMPG.#1	IMPG.#2	IMPG.#3	IMPG.#4	WT. BY
FINAL WT.	909.6	802.8	608.8	1019.2	SCW
INITIAL WT.	719.1	709.2	606.1	992.2	SCW
NET WT.	190.5	93.6	2.7	27.0	SCW
TOTAL WT.	313.8	note: all weights in grams			

PARTICULATE FILTER CATCH

FILTER #	B17	BY	BEAKER #	5	BY
FINAL WT.	0.3246	SCW	FINAL WT.	72.3273	SCW
INITIAL WT.	0.3201	SCW	INITIAL WT.	72.3192	SCW
NET WT.	0.0045	SCW	NET WT.	0.0081	SCW
TOTAL CATCH (grams)			0.0126		
TOTAL CATCH (mg)			12.6		

DRY MOLECULAR WEIGHT

GAS	1	2	3	AVG	Fo: 1.167
CO2	12.6	12.6	12.6	12.6	ALLOWED Fo RANGE OIL: 1.210 TO 1.370 COAL: 1.083 TO 1.230
O2+CO2	18.8	18.8	18.8	-----	
O2	6.2	6.2	6.2	6.2	

4 MINUTE ORSAT ANALYZER CHECK

	BEFORE	AFTER	
BURETTE MENISCUS READING:	15	15	<0.2 ? YES
CO2 CAPILLARY TUBE LEVEL:	OK	OK	
O2 CAPILLARY TUBE LEVEL:	OK	OK	

PARTICULATE TEST FIELD DATA SHEET

Client: SJRPP	Reference: 2.03	Filter #: B18
Plant & Unit: SJRPP 2	Bar. Pressure (in.Hg): 29.65	Nozzle #: G2
Type of test: Compliance	Static Pressure (H2O): -0.82	Nozzle Diam.(in): 0.225
Method: 1-4 and 5B	Meter Box #: CAC1	^H@ 1.797 Yi 1.0050
Run Number: 3	Ini. Pitot Leak Check: OK @ 6"	Pitot # CAC11G 0.84
Date: 12/10/02	Fin. Pitot Leak Check: OK @ 6"	Thermocouple # 11G
Sample Location: Stack	Ini. Leak Rate:0.00@ 15 "	Impinger Set: C
Operators: JLC/MLC	Fin. Leak Rate:0.00@ 6 "	Sample Head: A

POINT #	CLOCK TIME	SAMPLE TIME	DRY GAS VOLUME	VELOCITY	ORIFICE	METER	STACK	PROBE	HOT BOX	IMPINGER	VAC. (IN.HG)
				HEAD (in H2O)	^H (in H2O)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	TEMP (F)	
			167.255								
E-1	1500	10	177.1	1.50	3.00	88	145	312	326	55	5.0
E-2		20	187.2	1.30	2.60	93	144	310	330	48	5.0
E-3		30	195.160	1.10	2.20	97	144	313	319	50	4.0
N-1		10	204.7	1.50	3.00	95	143	314	326	52	4.5
N-2		20	214.5	1.50	3.00	99	144	313	327	52	4.5
N-3		30	222.922	1.10	2.20	101	144	314	319	54	4.0
W-1		10	232.7	1.50	3.00	98	144	304	333	57	5.0
W-2		20	242.3	1.50	3.00	101	145	300	322	56	5.0
W-3		30	251.230	1.20	2.40	102	144	300	319	58	4.0
S-1		10	259.9	1.50	3.00	98	144	305	322	61	5.0
S-2		20	270.4	1.40	2.80	102	145	311	323	58	5.0
S-3	1706	30	279.246	1.10	2.20	103	144	303	321	61	4.0

111.99	1.159	2.700	98.1	144.2
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MOISTURE, PARTICULATE CATCH AND DRY MOLECULAR WEIGHT DATA

PLANT: SJRPP #2
DATE: 12/10/02

RUN 3

METHOD 4 MOISTURE DETERMINATION

IMPG SET:	C				
	IMPG.#1	IMPG.#2	IMPG.#3	IMPG.#4	WT. BY
FINAL WT.	944.8	793.7	626.6	994.9	SCW
INITIAL WT.	736.2	709.0	623.7	968.7	SCW
NET WT.	208.6	84.7	2.9	26.2	SCW
TOTAL WT.	322.4	note: all weights in grams			

PARTICULATE FILTER CATCH

FILTER #	B18	BY	BEAKER #	7	BY
FINAL WT.	0.3211	SCW	FINAL WT.	72.5330	SCW
INITIAL WT.	0.3168	SCW	INITIAL WT.	72.5315	SCW
NET WT.	0.0043	SCW	NET WT.	0.0015	SCW
TOTAL CATCH (grams)			0.0058		
TOTAL CATCH (mg)			5.8		

DRY MOLECULAR WEIGHT

GAS	1	2	3	AVG	Fo: 1.172
CO2	12.8	12.8	12.8	12.8	ALLOWED Fo RANGE OIL: 1.210 TO 1.370 COAL: 1.083 TO 1.230
O2+CO2	18.7	18.7	18.7	-----	
O2	5.9	5.9	5.9	5.9	

4 MINUTE ORSAT ANALYZER CHECK

	BEFORE	AFTER	
BURETTE MENISCUS READING:	15	15	<0.2 ? YES
CO2 CAPILLARY TUBE LEVEL:	OK	OK	
O2 CAPILLARY TUBE LEVEL:	OK	OK	

VISIBLE EMISSIONS

VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 2038 Other _____

Company Name H. John River Power Park
 Facility Name _____
 Street Address 11201 New Berlin Rd.
 City Jacksonville State Fl. Zip 32226

Process Coal Fired Boiler Start Plan Unit # 1 Operating Mode 100%
 Control Equipment ESP Operating Mode 100%

Describe Emission Point
Concrete double Stack

Height of Emiss. Pt. Start 650 End Height of Emiss. Pt. Rel. to Observer Start 650 End
 Direction to Emiss. Pt. Start 2000' End Direction to Emiss. Pt. (Degrees) Start 370° End

Vertical Angle to Obs. Pt. Start 16° End Direction to Obs. Pt. (Degrees) Start 370° End
 Distance and Direction to Observation Point from Emission Point Start 1000' down wind End

Describe Emissions
 Start Starting Plume End
 Emission Color Start St. Brown End Water Droplet Plume Attached Detached None

Describe Plume Background
 Start Blue End Sky Conditions Start overcast End
 Background Color Start Grey End Wind Direction Start SW End
 Wind Speed Start 10 mph End Ambient Temp. Start 61° End 63° Wet Bulb Temp. 59° RH Percent 90%

Source Layout Sketch
 Draw North Arrow TN MN

 Longitude W Latitude N Declination _____
 Stack With Plume Sun Wind

Additional Information
Sun location an estimate due to overcast sky

Form Number _____ Page 1 of 1
 Continued on VEO Form Number _____

Observation Date		Time Zone				Start Time		End Time	
<u>12-9-02</u>		<u>E</u>				<u>1215</u>		<u>1315</u>	
Sec	0	15	30	45	Sec	0	15	30	45
1	10	10	10	10	31	10	15	10	10
2	10	10	10	10	32	10	10	10	10
3	15	15	10	10	33	10	10	10	15
4	10	10	10	10	34	15	15	15	10
5	10	10	15	10	35	10	10	15	10
6	10	10	10	10	36	10	15	10	10
7	10	10	10	10	37	10	10	10	10
8	10	10	10	15	38	10	10	10	10
9	10	10	10	10	39	10	10	10	10
10	10	10	10	10	40	10	10	10	10
11	10	15	10	10	41	10	10	10	10
12	10	10	10	10	42	10	10	10	10
13	10	10	15	15	43	10	15	15	10
14	15	10	10	10	44	10	10	10	10
15	10	10	10	10	45	10	10	15	10
16	10	10	15	10	46	10	10	10	10
17	10	10	10	10	47	10	10	10	10
18	10	10	10	10	48	10	10	10	10
19	10	10	10	10	49	10	10	10	10
20	10	10	10	10	50	10	10	10	10
21	10	15	15	15	51	10	10	10	10
22	15	10	10	15	52	10	10	10	10
23	10	15	10	10	53	10	10	10	10
24	10	10	10	10	54	10	10	10	10
25	10	10	10	10	55	10	15	15	15
26	10	10	15	15	56	10	10	10	10
27	10	10	10	10	57	10	10	10	10
28	10	10	10	10	58	10	10	10	10
29	10	10	15	15	59	10	10	10	10
30	10	10	10	10	60	10	10	10	10

Observer's Name (Print) Melvin Petiet
 Observer's Signature _____ Date 12-9-02
 Organization CAC
 Certified By ETA Date 12-4-02

Visible Emission Evaluation Spreadsheet

	0	15	30	45		
1	10	10	10	10	"ROLLING" SIX MINUTE AVERAGE	
2	10	10	10	10		
3	15	15	10	10		
4	10	10	10	10		
5	10	10	15	10		
6	10	10	10	10		10.63
7	10	10	10	10		10.63
8	10	10	10	15		10.83
9	10	10	10	10		10.42
10	10	10	10	10		10.42
11	10	15	10	10		10.42
12	10	10	10	10		10.42
13	10	10	15	15		10.83
14	15	10	10	10		10.83
15	10	10	10	10		10.83
16	10	10	15	10		11.04
17	10	10	10	10		10.83
18	10	10	10	10		10.83
19	10	10	10	10		10.42
20	10	10	10	10		10.21
21	10	15	15	15		10.83
22	15	10	10	15		11.04
23	10	15	10	10		11.25
24	10	10	10	10		11.25
25	10	10	10	10		11.25
26	10	10	15	15		11.87
27	10	10	10	10		11.04
28	10	10	10	10		10.63
29	10	10	15	15		10.83
30	10	10	10	10		10.83
31	10	15	10	10		11.04
32	10	10	10	10		10.63
33	10	10	10	15		10.83
34	15	15	15	10		11.48
35	10	10	15	10		11.25
36	10	15	10	10		11.48
37	10	10	10	10		11.25
38	10	10	10	10		11.25
39	10	10	10	10		11.04
40	10	10	10	10		10.42
41	10	10	10	10		10.21
42	10	10	10	10		10.00
43	10	15	15	10		10.42
44	10	10	10	10		10.42
45	10	10	15	10		10.63
46	10	10	10	10		10.63
47	10	10	10	10		10.63
48	10	10	10	10		10.63
49	10	10	10	10		10.21
50	10	10	10	10		10.21
51	10	10	10	10		10.00
52	10	10	10	10		10.00
53	10	10	10	10		10.00
54	10	10	10	10		10.00
55	10	15	15	15		10.63
56	10	10	10	10		10.63
57	10	10	10	10		10.63
58	10	10	10	10		10.63
59	10	10	10	10		10.63
60	10	10	10	10		10.63

Client: _____
Plant: SJRPP

Observation Date: 12/9/02

Gross Generation: 661 MW

Unit: 1

Fuel: 100 _____
Coal% _____ Oil %

Particulate Test: Yes Type / Run #: SB 2

Start: 1215 Stop: 1315

Observer: Melvin Petiet

Over-all Average Opacity: 10.67

Highest 6-Minute Average: 11.87

Next Highest 6-Minute Average: 11.48

VISIBLE EMISSION OBSERVATION FORM 1

Form Number		Page	Of
Continued on VEO Form Number			

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Company Name
 JEA St. Johns River Power Park

Facility Name
 SSRPP

Street Address
 11201 New Berlin Rd

City Jacksonville State FL Zip 32226

Process Coal Fired Boiler Unit # 2 Operating Mode 100% Soot Blowing

Control Equipment ESP Operating Mode 100%

Describe Emission Point
 Concrete double stack

Height of Emis. Pt. Start ~650' End 11' Height of Emis. Pt. Rel. to Observer Start ~650' End 11'

Distance to Emis. Pt. Start ~2600' End 11' Direction to Emis. Pt. (Degrees) Start 150 End 11

Vertical Angle to Obs. Pt. Start < 18° End Direction to Obs. Pt. (Degrees) Start 150 End 11

Distance and Direction to Observation Point from Emission Point Start ~600' above End ✓

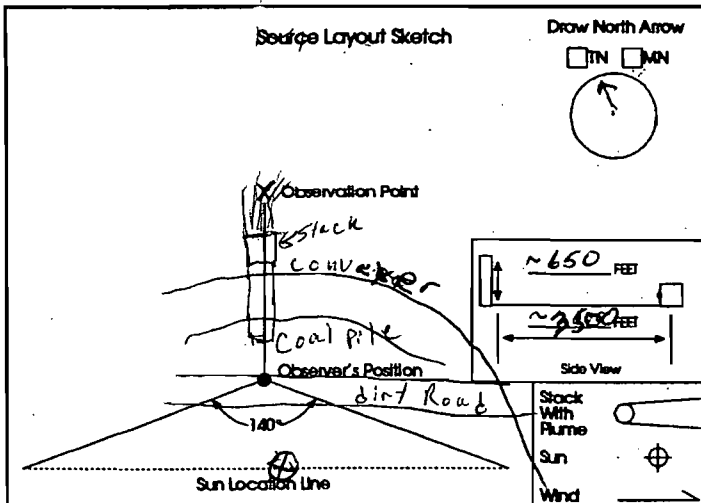
Describe Emissions
 Start Straight above End 11' Emission Color Water Droplet Plume

Start light Brown End Attached Detached None

Describe Plume Background
 Start SKY End 11' Background Color Sky Conditions Start Gray End 11'

Wind Speed Start 0 End 0 Wind Direction Start SE End NOWIND

Ambient Temp. Start 67°F End 65° Wet Bulb Temp. RH Percent



Longitude W Latitude N Declination

Additional Information

Observation Date		Time Zone				Start Time		End Time			
12-12-01		EST				1040		1140			
Min	Sec	0	15	30	45	Min	Sec	0	15	30	45
	1	5	5	5	5		5	31	5	5	5
2	5	5	5	5	5	32	5	5	5	5	5
3	5	5	5	5	5	33	5	5	5	5	5
4	5	5	5	5	5	34	5	5	5	5	5
5	5	5	5	5	5	35	5	5	5	5	5
6	5	5	5	5	5	36	5	5	5	5	5
7	5	5	5	5	5	37	5	5	5	5	5
8	5	5	5	5	5	38	5	5	5	5	5
9	5	5	5	5	5	39	5	5	5	5	5
10	5	5	5	5	5	40	5	5	5	5	5
11	5	5	5	5	5	41	5	5	5	5	5
12	5	5	5	5	5	42	5	5	5	5	5
13	5	5	5	5	5	43	5	5	5	5	5
14	5	5	5	5	5	44	5	5	5	5	5
15	5	5	5	5	5	45	5	5	5	5	5
16	5	5	5	5	5	46	5	5	5	10	10
17	5	5	5	5	5	47	10	10	10	10	10
18	5	5	5	5	5	48	10	5	5	5	5
19	5	5	5	5	5	49	5	5	5	5	5
20	5	5	5	5	5	50	5	5	5	5	5
21	5	5	5	5	5	51	5	10	10	10	10
22	5	5	5	5	5	52	10	10	10	10	10
23	5	5	5	5	5	53	10	10	5	5	5
24	5	5	5	5	5	54	5	5	5	5	5
25	5	5	5	5	5	55	5	5	5	5	5
26	5	5	5	5	5	56	5	5	5	5	5
27	5	5	5	5	5	57	5	5	5	5	5
28	5	5	5	5	5	58	5	5	5	5	5
29	5	5	5	5	5	59	5	5	5	5	5
30	5	5	5	5	5	60	5	5	5	5	5

Observer's Name (Print) Steve Webb

Observer's Signature Stephen C. Webb Date 12-12-02

Organization Coastal Air Consulting

Certified by ETA Date 8-14-02

Visible Emission Evaluation Spreadsheet

	0	15	30	45	
1	5	5	5	5	
2	5	5	5	5	
3	5	5	5	5	
4	5	5	5	5	
5	5	5	5	5	
6	5	5	5	5	5.00
7	5	5	5	5	5.00
8	5	5	5	5	5.00
9	5	5	5	5	5.00
10	5	5	5	5	5.00
11	5	5	5	5	5.00
12	5	5	5	5	5.00
13	5	5	5	5	5.00
14	5	5	5	5	5.00
15	5	5	5	5	5.00
16	5	5	5	5	5.00
17	5	5	5	5	5.00
18	5	5	5	5	5.00
19	5	5	5	5	5.00
20	5	5	5	5	5.00
21	5	5	5	5	5.00
22	5	5	5	5	5.00
23	5	5	5	5	5.00
24	5	5	5	5	5.00
25	5	5	5	5	5.00
26	5	5	5	5	5.00
27	5	5	5	5	5.00
28	5	5	5	5	5.00
29	5	5	5	5	5.00
30	5	5	5	5	5.00
31	5	5	5	5	5.00
32	5	5	5	5	5.00
33	5	5	5	5	5.00
34	5	5	5	5	5.00
35	5	5	5	5	5.00
36	5	5	5	5	5.00
37	5	5	5	5	5.00
38	5	5	5	5	5.00
39	5	5	5	5	5.00
40	5	5	5	5	5.00
41	5	5	5	5	5.00
42	5	5	5	5	5.00
43	5	5	5	5	5.00
44	5	5	5	5	5.00
45	5	5	5	5	5.00
46	5	5	5	5	5.00
47	10	10	10	10	6.04
48	10	5	5	5	6.25
49	5	5	5	5	6.25
50	5	5	5	5	6.25
51	5	10	10	10	6.88
52	10	10	10	10	7.50
53	10	10	5	5	7.08
54	5	5	5	5	6.88
55	5	5	5	5	6.88
56	5	5	5	5	6.88
57	5	5	5	5	6.25
58	5	5	5	5	5.42
59	5	5	5	5	5.00
60	5	5	5	5	5.00

"ROLLING"
SIX
MINUTE
AVERAGE

Client: _____
Plant: SJRPP

Observation Date: 12/12/02

Gross Generation: Normal MW

Unit: 2

Fuel: 100 _____
Coal% Oil %

Particulate Test: No Type / Run #: SB

Start: 1040 Stop: 1140

Observer: Stephen Webb

Over-all Average Opacity: 6.31

Highest 6-Minute Average: 7.50

Next Highest 6-Minute Average: 7.08

EPA

VISIBLE EMISSION OBSERVATION FORM 1

Form Number Page 1 of 1
Continued on VEO Form Number

Method Used (Circle One)
Method 9 203A 2038 Other: _____

Company Name SEA
Facility Name St Johns River Power Park (SJRPP)
Street Address 11201 New Berlin Rd
City Jacksonville State FL Zip 32226

Process Loading Unit # _____ Operating Mode Operating
Control Equipment _____ Operating Mode _____

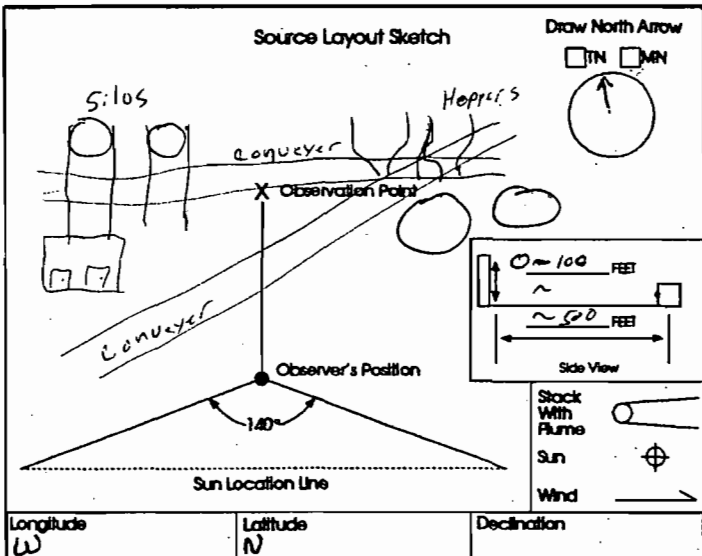
Describe Emission Point
All Fly Ash Area Around Baghouse

Height of Emis. Pt. Start 0-100' End ""
Distance to Emis. Pt. Start ~500' End ""
Height of Emis. Pt. Rel. to Observer Start 0-100' End ""
Direction to Emis. Pt. (Degrees) Start 25° End ""

Vertical Angle to Obs. Pt. Start <18° End ""
Distance and Direction to Observation Point from Emission Point Start 25° End ""
Direction to Obs. Pt. (Degrees) Start -25° End ""

Describe Emissions
Start clear End clear
Emission Color Start clear End ""
Water Droplet Plume Attached Detached None

Describe Plume Background
Start SKY End _____
Background Color Start Gray End ""
Wind Speed Start 0-3 End ""
Ambient Temp. Start 63 End 60
Sky Conditions Start overcast End ""
Wind Direction Start Variable End ""
Wet Bulb Temp. _____ RH Percent _____



Additional Information
Pb 30.22" Hg

Observation Date	Time Zone	Start Time	End Time						
12-12-02	EST	1220	1320						
Sec Min	0	15	30	45	Sec Min	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	5	5	5	5	48	0	0	0	0
19	5	5	5	5	49	0	0	0	0
20	5	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Observer's Name (Print) Stephen C. Webb
Observer's Signature Stephen C. Webb Date 12-12-02
Organization Coastal Air Consulting, Inc.
Certified By ETA Date 8-14-02

Visible Emission Evaluation Spreadsheet

	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	0.00
7	0	0	0	0	0.00
8	0	0	0	0	0.00
9	0	0	0	0	0.00
10	0	0	0	0	0.00
11	0	0	0	0	0.00
12	0	0	0	0	0.00
13	0	0	0	0	0.00
14	0	0	0	0	0.00
15	0	0	0	0	0.00
16	0	0	0	0	0.00
17	0	0	0	0	0.00
18	5	5	5	5	0.83
19	5	5	5	5	1.67
20	5	0	0	0	1.88
21	0	0	0	0	1.88
22	0	0	0	0	1.88
23	0	0	0	0	1.88
24	0	0	0	0	1.04
25	0	0	0	0	0.21
26	0	0	0	0	0.00
27	0	0	0	0	0.00
28	0	0	0	0	0.00
29	0	0	0	0	0.00
30	0	0	0	0	0.00
31	0	0	0	0	0.00
32	0	0	0	0	0.00
33	0	0	0	0	0.00
34	0	0	0	0	0.00
35	0	0	0	0	0.00
36	0	0	0	0	0.00
37	0	0	0	0	0.00
38	0	0	0	0	0.00
39	0	0	0	0	0.00
40	0	0	0	0	0.00
41	0	0	0	0	0.00
42	0	0	0	0	0.00
43	0	0	0	0	0.00
44	0	0	0	0	0.00
45	0	0	0	0	0.00
46	0	0	0	0	0.00
47	0	0	0	0	0.00
48	0	0	0	0	0.00
49	0	0	0	0	0.00
50	0	0	0	0	0.00
51	0	0	0	0	0.00
52	0	0	0	0	0.00
53	0	0	0	0	0.00
54	0	0	0	0	0.00
55	0	0	0	0	0.00
56	0	0	0	0	0.00
57	0	0	0	0	0.00
58	0	0	0	0	0.00
59	0	0	0	0	0.00
60	0	0	0	0	0.00

"ROLLING"
SIX
MINUTE
AVERAGE

Client: _____
Plant: SJRPP

Observation Date: 12/12/02

Gross Generation: NA MW

Unit: All Fly Ash Area Around Baghouse

Fuel: NA _____
Coal% _____ Oil % _____

Particulate Test: NA Type / Run #: NA

Start: 1220 Stop: 1320

Observer: Stephen Webb

Over-all Average Opacity: 0.19

Highest 6-Minute Average: 1.88

Next Highest 6-Minute Average: 1.67

EPA

VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Company Name *St. Johns River Power Park*
 Facility Name _____
 Street Address *11201 New Berlin Rd.*
 City *Jacksonville* State *FL* Zip *32226*

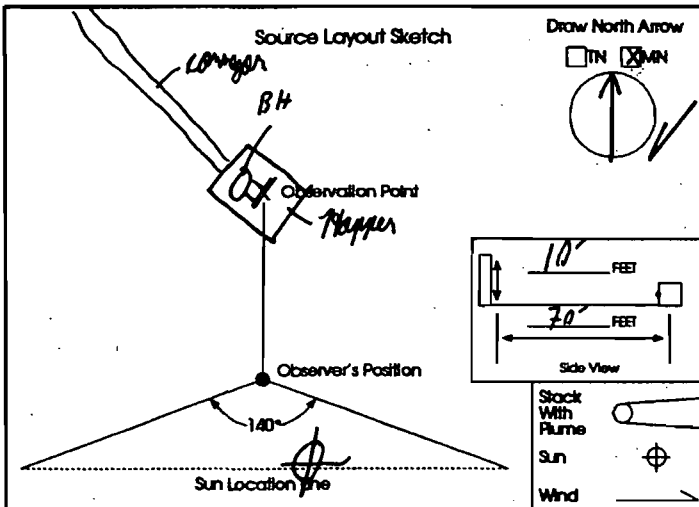
Process *Limester Pellet Hopper* Unit # _____ Operating Mode *Loading*
 Control Equipment *Danfoss* Operating Mode *operating*

Describe Emission Point *10" x 10" vent on E side of Danfoss*
 Height of Emiss. Pt. Start *10'* End Height of Emiss. Pt. Rel. to Observer Start *5'* End
 Distance to Emiss. Pt. Start *70'* End Direction to Emiss. Pt. (Degrees) Start *360°* End

Vertical Angle to Obs. Pt. Start *2°* End Direction to Obs. Pt. (Degrees) Start *360°* End
 Distance and Direction to Observation Point from Emission Point Start *at exit* End

Describe Emissions Start *clear* End
 Emission Color Start *clear* End Water Droplet Plume Attached Detached None

Describe Plume Background Start *E cooling tower* End
 Background Color Start *overcast* End Sky Conditions Start *overcast* End
 Wind Speed Start *10-12 mph* End Wind Direction Start *SW* End
 Ambient Temp. Start *55°* End Wet Bulb Temp. *53°* RH Percent *88%*



Longitude *W* Latitude *N* Declination _____

Additional Information *Sun location an estimate due to overcast sky*

Form Number _____ Page _____ of _____
 Continued on VEO Form Number _____

Observation Date		Time Zone				Start Time		End Time	
<i>12-10-02</i>		<i>E</i>				<i>0935</i>		<i>1035</i>	
Min	Sec				Min	Sec			
	0	15	30	45		0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Observer's Name (Print) *Melvin Petiet*
 Observer's Signature _____ Date *12-10-02*
 Organization *CAC*
 Certified by *ETA* Date *12-4-02*

Visible Emission Evaluation Spreadsheet

	0	15	30	45	
1	0	0	0	0	"ROLLING" SIX MINUTE AVERAGE
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	0.00
8	0	0	0	0	0.00
9	0	0	0	0	0.00
10	0	0	0	0	0.00
11	0	0	0	0	0.00
12	0	0	0	0	0.00
13	0	0	0	0	0.00
14	0	0	0	0	0.00
15	0	0	0	0	0.00
16	0	0	0	0	0.00
17	0	0	0	0	0.00
18	0	0	0	0	0.00
19	0	0	0	0	0.00
20	0	0	0	0	0.00
21	0	0	0	0	0.00
22	0	0	0	0	0.00
23	0	0	0	0	0.00
24	0	0	0	0	0.00
25	0	0	0	0	0.00
26	0	0	0	0	0.00
27	0	0	0	0	0.00
28	0	0	0	0	0.00
29	0	0	0	0	0.00
30	0	0	0	0	0.00
31	0	0	0	0	0.00
32	0	0	0	0	0.00
33	0	0	0	0	0.00
34	0	0	0	0	0.00
35	0	0	0	0	0.00
36	0	0	0	0	0.00
37	0	0	0	0	0.00
38	0	0	0	0	0.00
39	0	0	0	0	0.00
40	0	0	0	0	0.00
41	0	0	0	0	0.00
42	0	0	0	0	0.00
43	0	0	0	0	0.00
44	0	0	0	0	0.00
45	0	0	0	0	0.00
46	0	0	0	0	0.00
47	0	0	0	0	0.00
48	0	0	0	0	0.00
49	0	0	0	0	0.00
50	0	0	0	0	0.00
51	0	0	0	0	0.00
52	0	0	0	0	0.00
53	0	0	0	0	0.00
54	0	0	0	0	0.00
55	0	0	0	0	0.00
56	0	0	0	0	0.00
57	0	0	0	0	0.00
58	0	0	0	0	0.00
59	0	0	0	0	0.00
60	0	0	0	0	0.00

Client: _____
 Plant: SJRPP

Observation Date: 12/10/02

Gross Generation: NA MW

Unit: Limestone Hopper

Fuel: NA
 Coal% _____ Oil % _____

Particulate Test: NA Type / Run #: NA

Start: 935 Stop: 1035

Observer: Milvin Petiet

Over-all Average Opacity: 0.00

Highest 6-Minute Average: 0.00

Next Highest 6-Minute Average: 0.00

VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 2038 Other: _____

Company Name *St. Johns River Power Prod.*
 Facility Name _____
 Street Address *11201 New Berlin Rd.*
 City *Jacksonville* State *FL* Zip *32226*

Process *Limestone dry Lilo BH* Unit # *1* Operating Mode *loading*
 Control Equipment *baghouse* Operating Mode *operating*

Describe Emission Point *Red baghouse on top of limestone Lilo*
 Height of Emiss. Pt. Start *60* End Height of Emiss. Pt. Rel. to Observer Start *55* End
 Distance to Emiss. Pt. Start *220* End Direction to Emiss. Pt. (Degrees) Start *327* End

Vertical Angle to Obs. Pt. Start *10* End Direction to Obs. Pt. (Degrees) Start *327* End
 Distance and Direction to Observation Point from Emission Point Start *at exit* End

Describe Emissions Start *clear* End
 Emission Color Start *clear* End Water Droplet Plume Attached Detached None

Describe Plume Background Start *sky* End _____
 Background Color Start *gray* End Sky Conditions Start *overcast* End
 Wind Speed Start *10-12 mph* End Wind Direction Start *SW* End
 Ambient Temp. Start *55* End *55* Wet Bulb Temp. *53* RH Percent *88%*

Source Layout Sketch
 Draw North Arrow TN MN

 Longitude *W* Latitude *N* Declination _____
 Stack With Plume Sun Wind _____

Additional Information *Sun location as estimated due to overcast sky*

Form Number _____ Page *1* of *1*
 Continued on VEO Form Number _____

Observation Date		Time Zone				Start Time		End Time	
<i>12-10-02</i>		<i>E</i>				<i>0830</i>		<i>0930</i>	
Sec	0	15	30	45	Sec	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Observer's Name (Print) *Melvin Tetiet*
 Observer's Signature *[Signature]* Date *12-10-02*
 Organization *CAC*
 Certified By *ETA* Date *12-4-02*

Visible Emission Evaluation Spreadsheet

Client: _____

Plant: SJRPP

Observation Date: 12/10/02

Gross Generation: NA MW

Unit: Limestone Day Silo Baghouse Unit 1

Fuel: NA _____
 Coal% _____ Oil % _____

Particulate Test: NA Type / Run #: NA

Start: 830 Stop: 830

Observer: Milvin Petiet

Over-all Average Opacity:

Highest 6-Minute Average:

Next Highest 6-Minute Average:

	0	15	30	45	
1	0	0	0	0	"ROLLING" SIX MINUTE AVERAGE
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	
31	0	0	0	0	
32	0	0	0	0	
33	0	0	0	0	
34	0	0	0	0	
35	0	0	0	0	
36	0	0	0	0	
37	0	0	0	0	
38	0	0	0	0	
39	0	0	0	0	
40	0	0	0	0	
41	0	0	0	0	
42	0	0	0	0	
43	0	0	0	0	
44	0	0	0	0	
45	0	0	0	0	
46	0	0	0	0	
47	0	0	0	0	
48	0	0	0	0	
49	0	0	0	0	
50	0	0	0	0	
51	0	0	0	0	
52	0	0	0	0	
53	0	0	0	0	
54	0	0	0	0	
55	0	0	0	0	
56	0	0	0	0	
57	0	0	0	0	
58	0	0	0	0	
59	0	0	0	0	
60	0	0	0	0	

EPA

VISIBLE EMISSION OBSERVATION FORM 1

Form Number _____ Page 1 of 1
 Continued on VEO Form Number _____

Method Used (Circle One)
 Method 9 203A 2038 Other

Company Name St. Johns River Power Park
 Facility Name _____
 Street Address 11201 New Berlin Rd.
 City Jacksonville State FL Zip 32226

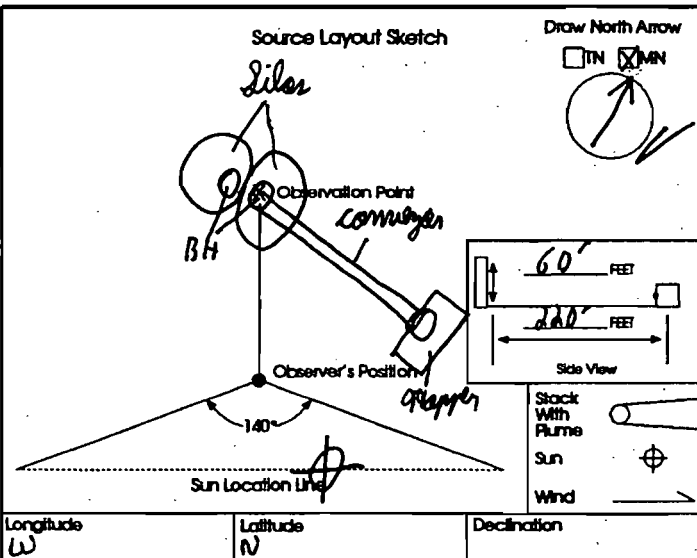
Process Limestone Dry Silo RH Unit # 2 Operating Mode Loading
 Control Equipment Daytone Operating Mode operating

Describe Emission Point Red Daytone on top of limestone silo
 Height of Emiss. Pt. Start 60' End Height of Emiss. Pt. Rel. to Observer Start 55' End
 Distance to Emiss. Pt. Start 220' End Direction to Emiss. Pt. (Degrees) Start 330° End

Vertical Angle to Obs. Pt. Start 10° End Direction to Obs. Pt. (Degrees) Start 330° End
 Distance and Direction to Observation Point from Emission Point Start at end End

Describe Emissions Start clear End
 Emission Color Start clear End Water Droplet Plume
 Attached Detached None

Describe Plume Background Start concrete stack End
 Background Color Start concrete End Sky Conditions Start overcast End
 Wind Speed Start 10-12 mph End Wind Direction Start SW End
 Ambient Temp. Start 55° End 55° Wet Bulb Temp. 53° RH Percent 88%



Additional Information Sun location an estimate due to overcast sky

Observation Date		Time Zone				Start Time		End Time			
<u>12-10-02</u>		<u>E</u>				<u>0830</u>		<u>0930</u>			
Sec	Min	0	15	30	45	Sec	Min	0	15	30	45
1	0	0	0	0	0	31	0	0	0	0	0
2	0	0	0	0	0	32	0	0	0	0	0
3	0	0	0	0	0	33	0	0	0	0	0
4	0	0	0	0	0	34	0	0	0	0	0
5	0	0	0	0	0	35	0	0	0	0	0
6	0	0	0	0	0	36	0	0	0	0	0
7	0	0	0	0	0	37	0	0	0	0	0
8	0	0	0	0	0	38	0	0	0	0	0
9	0	0	0	0	0	39	0	0	0	0	0
10	0	0	0	0	0	40	0	0	0	0	0
11	0	0	0	0	0	41	0	0	0	0	0
12	0	0	0	0	0	42	0	0	0	0	0
13	0	0	0	0	0	43	0	0	0	0	0
14	0	0	0	0	0	44	0	0	0	0	0
15	0	0	0	0	0	45	0	0	0	0	0
16	0	0	0	0	0	46	0	0	0	0	0
17	0	0	0	0	0	47	0	0	0	0	0
18	0	0	0	0	0	48	0	0	0	0	0
19	0	0	0	0	0	49	0	0	0	0	0
20	0	0	0	0	0	50	0	0	0	0	0
21	0	0	0	0	0	51	0	0	0	0	0
22	0	0	0	0	0	52	0	0	0	0	0
23	0	0	0	0	0	53	0	0	0	0	0
24	0	0	0	0	0	54	0	0	0	0	0
25	0	0	0	0	0	55	0	0	0	0	0
26	0	0	0	0	0	56	0	0	0	0	0
27	0	0	0	0	0	57	0	0	0	0	0
28	0	0	0	0	0	58	0	0	0	0	0
29	0	0	0	0	0	59	0	0	0	0	0
30	0	0	0	0	0	60	0	0	0	0	0

Observer's Name (Print) Melvin Petret
 Observer's Signature _____ Date 12-10-02
 Organization CAS
 Certified By ETA Date 12-4-02

Visible Emission Evaluation Spreadsheet

	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	0.00
7	0	0	0	0	0.00
8	0	0	0	0	0.00
9	0	0	0	0	0.00
10	0	0	0	0	0.00
11	0	0	0	0	0.00
12	0	0	0	0	0.00
13	0	0	0	0	0.00
14	0	0	0	0	0.00
15	0	0	0	0	0.00
16	0	0	0	0	0.00
17	0	0	0	0	0.00
18	0	0	0	0	0.00
19	0	0	0	0	0.00
20	0	0	0	0	0.00
21	0	0	0	0	0.00
22	0	0	0	0	0.00
23	0	0	0	0	0.00
24	0	0	0	0	0.00
25	0	0	0	0	0.00
26	0	0	0	0	0.00
27	0	0	0	0	0.00
28	0	0	0	0	0.00
29	0	0	0	0	0.00
30	0	0	0	0	0.00
31	0	0	0	0	0.00
32	0	0	0	0	0.00
33	0	0	0	0	0.00
34	0	0	0	0	0.00
35	0	0	0	0	0.00
36	0	0	0	0	0.00
37	0	0	0	0	0.00
38	0	0	0	0	0.00
39	0	0	0	0	0.00
40	0	0	0	0	0.00
41	0	0	0	0	0.00
42	0	0	0	0	0.00
43	0	0	0	0	0.00
44	0	0	0	0	0.00
45	0	0	0	0	0.00
46	0	0	0	0	0.00
47	0	0	0	0	0.00
48	0	0	0	0	0.00
49	0	0	0	0	0.00
50	0	0	0	0	0.00
51	0	0	0	0	0.00
52	0	0	0	0	0.00
53	0	0	0	0	0.00
54	0	0	0	0	0.00
55	0	0	0	0	0.00
56	0	0	0	0	0.00
57	0	0	0	0	0.00
58	0	0	0	0	0.00
59	0	0	0	0	0.00
60	0	0	0	0	0.00

"ROLLING"
SIX
MINUTE
AVERAGE

Client: _____
Plant: SJRPP

Observation Date: 12/10/02

Gross Generation: NA MW

Unit: Limestone Day Silo Baghouse Unit 2

Fuel: NA _____
Coal% _____ Oil % _____

Particulate Test: NA Type / Run #: NA

Start: 830 Stop: 830

Observer: Milvin Petiet

Over-all Average Opacity:

Highest 6-Minute Average:

Next Highest 6-Minute Average:

EPA

VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 2038 Other: _____

Company Name *St John River Power Park*
 Facility Name _____
 Street Address *11201 New Deal Rd.*
 City *Jacksonville* State *Fl.* Zip *32226*

Process *Two Ad Silo Baghouses* Unit # *1* Operating Mode *operating*
 Control Equipment *Baghouses* Operating Mode *operating*

Describe Emission Point
Area around Silo Baghouses

Height of Emiss. Pt. Start *100'* End
 Height of Emiss. Pt. Rel. to Observer Start *95'* End
 Distance to Emiss. Pt. Start *500'* End
 Direction to Emiss. Pt. (Degrees) Start *40°* End

Vertical Angle to Obs. Pt. Start *9°* End
 Direction to Obs. Pt. (Degrees) Start *40°* End
 Distance and Direction to Observation Point from Emission Point Start *at exit* End

Describe Emissions
 Start *clear* End
 Emission Color Start *clear* End
 Water Droplet Plume Attached Detached None

Describe Plume Background
 Start *sky* End
 Background Color Start *clear* End
 Sky Conditions Start *overcast* End
 Wind Speed Start *10 mph* End
 Wind Direction Start *SW* End
 Ambient Temp. Start *58°* End
 Wet Bulb Temp. *56°* RH Percent *84%*

Source Layout Sketch
 Draw North Arrow TN MN

 Longitude *W* Latitude *N* Declination _____
 Stack With Plume
 Sun
 Wind

Additional Information
Sun location an estimate due to overcast sky

Form Number _____ Page _____ of _____
 Continued on VEO Form Number _____

Observation Date		Time Zone				Start Time		End Time			
12-10-02		E				1050		1150			
Min	Sec	0	15	30	45	Min	Sec	0	15	30	45
	1	0	0	0	0		0	31	0	0	0
2	0	0	0	0	0	32	0	0	0	0	
3	0	0	0	0	0	33	0	0	0	0	
4	0	0	0	0	0	34	0	0	0	0	
5	0	0	0	0	0	35	0	0	0	0	
6	0	0	0	0	0	36	0	0	0	0	
7	0	0	0	0	0	37	0	0	0	0	
8	0	0	0	0	0	38	0	0	0	0	
9	0	0	0	0	0	39	0	0	0	0	
10	0	0	0	0	0	40	0	0	0	0	
11	0	0	0	0	0	41	0	0	0	0	
12	0	0	0	0	0	42	0	0	0	0	
13	0	0	0	0	0	43	0	0	0	0	
14	0	0	0	0	0	44	0	0	0	0	
15	0	0	0	0	0	45	0	0	0	0	
16	0	0	0	0	0	46	0	0	0	0	
17	0	0	0	0	0	47	0	0	0	0	
18	0	0	0	0	0	48	0	0	0	0	
19	0	0	0	0	0	49	0	0	0	0	
20	0	0	0	0	0	50	0	0	0	0	
21	0	0	0	0	0	51	0	0	0	0	
22	0	0	0	0	0	52	0	0	0	0	
23	0	0	0	0	0	53	0	0	0	0	
24	0	0	0	0	0	54	0	0	0	0	
25	0	0	0	0	0	55	0	0	0	0	
26	0	0	0	0	0	56	0	0	0	0	
27	0	0	0	0	0	57	0	0	0	0	
28	0	0	0	0	0	58	0	0	0	0	
29	0	0	0	0	0	59	0	0	0	0	
30	0	0	0	0	0	60	0	0	0	0	

Observer's Name (Print) *Melvin Petiet*
 Observer's Signature *[Signature]* Date *12-10-02*
 Organization *CAC*
 Certified By *ETA* Date *12-4-02*

Visible Emission Evaluation Spreadsheet

	0	15	30	45	
1	0	0	0	0	"ROLLING" SIX MINUTE AVERAGE
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0.00	
7	0	0	0	0.00	
8	0	0	0	0.00	
9	0	0	0	0.00	
10	0	0	0	0.00	
11	0	0	0	0.00	
12	0	0	0	0.00	
13	0	0	0	0.00	
14	0	0	0	0.00	
15	0	0	0	0.00	
16	0	0	0	0.00	
17	0	0	0	0.00	
18	0	0	0	0.00	
19	0	0	0	0.00	
20	0	0	0	0.00	
21	0	0	0	0.00	
22	0	0	0	0.00	
23	0	0	0	0.00	
24	0	0	0	0.00	
25	0	0	0	0.00	
26	0	0	0	0.00	
27	0	0	0	0.00	
28	0	0	0	0.00	
29	0	0	0	0.00	
30	0	0	0	0.00	
31	0	0	0	0.00	
32	0	0	0	0.00	
33	0	0	0	0.00	
34	0	0	0	0.00	
35	0	0	0	0.00	
36	0	0	0	0.00	
37	0	0	0	0.00	
38	0	0	0	0.00	
39	0	0	0	0.00	
40	0	0	0	0.00	
41	0	0	0	0.00	
42	0	0	0	0.00	
43	0	0	0	0.00	
44	0	0	0	0.00	
45	0	0	0	0.00	
46	0	0	0	0.00	
47	0	0	0	0.00	
48	0	0	0	0.00	
49	0	0	0	0.00	
50	0	0	0	0.00	
51	0	0	0	0.00	
52	0	0	0	0.00	
53	0	0	0	0.00	
54	0	0	0	0.00	
55	0	0	0	0.00	
56	0	0	0	0.00	
57	0	0	0	0.00	
58	0	0	0	0.00	
59	0	0	0	0.00	
60	0	0	0	0.00	

Client: _____
 Plant: SJRPP

Observation Date: 12/10/02

Gross Generation: NA MW

Unit: Fly Ash Silo Baghouse Unit 1

Fuel: NA _____
 Coal% _____ Oil % _____

Particulate Test: NA Type / Run #: NA

Start: 1050 Stop: 1150

Observer: Milvin Petiet

Over-all Average Opacity: 0.00

Highest 6-Minute Average: 0.00

Next Highest 6-Minute Average: .00

VISIBLE EMISSION OBSERVATION FORM 1

Form Number _____ Page 1 of 1
 Continued on VEO Form Number _____

Method Used (Circle One) Method 9 203A 203B Other _____

Company Name St. Johns River Power Park
 Facility Name _____
 Street Address 11201 New Berlin Rd.
 City Jacksonville State FL Zip 32226

Process Fly ash Silo Baghouse Unit # 2 Operating Mode operating
 Control Equipment Baghouses Operating Mode operating

Describe Emission Point Area around Silo Baghouse

Height of Emiss. Pt. Start 100' End Height of Emiss. Pt. Rel. to Observer Start 95' End
 Distance to Emiss. Pt. Start 500' End Direction to Emiss. Pt. (Degrees) Start 50° End

Vertical Angle to Obs. Pt. Start 9° End Direction to Obs. Pt. (Degrees) Start 50° End
 Distance and Direction to Observation Point from Emission Point Start at eye End

Describe Emissions Start clear End
 Emission Color Start clear End Water Droplet Plume Attached Detached None

Describe Plume Background Start clear End
 Background Color Start grey End Sky Conditions Start overcast End
 Wind Speed Start 10 mph. End Wind Direction Start SW End
 Ambient Temp. Start 58° End Wet Bulb Temp. 50° RH Percent 88%

Source Layout Sketch
 Draw North Arrow TN MN

 Longitude W Latitude N Declination _____
 Stack With Plume Sun Wind

Additional Information Sun location an estimate due to overcast sky

Observation Date		Time Zone				Start Time		End Time			
<u>12-10-02</u>		<u>E</u>				<u>1050</u>		<u>1150</u>			
Min	Sec	0	15	30	45	Min	Sec	0	15	30	45
	0						0				
1	0	0	0	0	0	31	0	0	0	0	0
2	0	0	0	0	0	32	0	0	0	0	0
3	0	0	0	0	0	33	0	0	0	0	0
4	0	0	0	0	0	34	0	0	0	0	0
5	0	0	0	0	0	35	0	0	0	0	0
6	0	0	0	0	0	36	0	0	0	0	0
7	0	0	0	0	0	37	0	0	0	0	0
8	0	0	0	0	0	38	0	0	0	0	0
9	0	0	0	0	0	39	0	0	0	0	0
10	0	0	0	0	0	40	0	0	0	0	0
11	0	0	0	0	0	41	0	0	0	0	0
12	0	0	0	0	0	42	0	0	0	0	0
13	0	0	0	0	0	43	0	0	0	0	0
14	0	0	0	0	0	44	0	0	0	0	0
15	0	0	0	0	0	45	0	0	0	0	0
16	0	0	0	0	0	46	0	0	0	0	0
17	0	0	0	0	0	47	0	0	0	0	0
18	0	0	0	0	0	48	0	0	0	0	0
19	0	0	0	0	0	49	0	0	0	0	0
20	0	0	0	0	0	50	0	0	0	0	0
21	0	0	0	0	0	51	0	0	0	0	0
22	0	0	0	0	0	52	0	0	0	0	0
23	0	0	0	0	0	53	0	0	0	0	0
24	0	0	0	0	0	54	0	0	0	0	0
25	0	0	0	0	0	55	0	0	0	0	0
26	0	0	0	0	0	56	0	0	0	0	0
27	0	0	0	0	0	57	0	0	0	0	0
28	0	0	0	0	0	58	0	0	0	0	0
29	0	0	0	0	0	59	0	0	0	0	0
30	0	0	0	0	0	60	0	0	0	0	0

Observer's Name (Print) Melvin Petiet
 Observer's Signature [Signature] Date 12-10-02
 Organization CAC
 Certified By ETA Date 12-4-02

Visible Emission Evaluation Spreadsheet

Client: _____

Plant: SJRPP

Observation Date: 12/10/02

Gross Generation: NA MW

Unit: Fly Ash Silo Baghouse Unit 2

Fuel: NA Coal% Oil %

Particulate Test: NA Type / Run #: NA

Start: 1050 Stop: 1150

Observer: Milvin Petiet

Over-all Average Opacity:

Highest 6-Minute Average:

Next Highest 6-Minute Average:

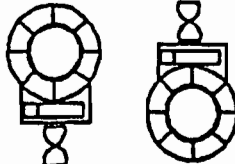
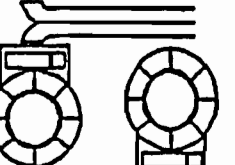
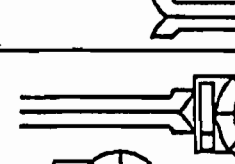
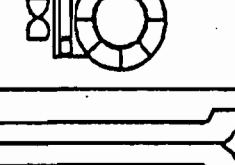
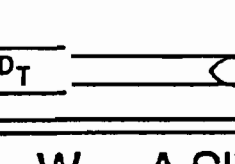
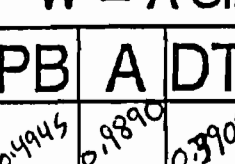
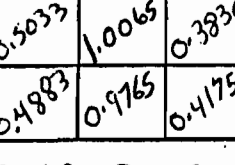
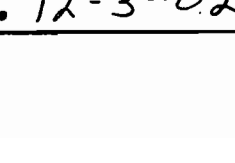
	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	0.00
7	0	0	0	0	0.00
8	0	0	0	0	0.00
9	0	0	0	0	0.00
10	0	0	0	0	0.00
11	0	0	0	0	0.00
12	0	0	0	0	0.00
13	0	0	0	0	0.00
14	0	0	0	0	0.00
15	0	0	0	0	0.00
16	0	0	0	0	0.00
17	0	0	0	0	0.00
18	0	0	0	0	0.00
19	0	0	0	0	0.00
20	0	0	0	0	0.00
21	0	0	0	0	0.00
22	0	0	0	0	0.00
23	0	0	0	0	0.00
24	0	0	0	0	0.00
25	0	0	0	0	0.00
26	0	0	0	0	0.00
27	0	0	0	0	0.00
28	0	0	0	0	0.00
29	0	0	0	0	0.00
30	0	0	0	0	0.00
31	0	0	0	0	0.00
32	0	0	0	0	0.00
33	0	0	0	0	0.00
34	0	0	0	0	0.00
35	0	0	0	0	0.00
36	0	0	0	0	0.00
37	0	0	0	0	0.00
38	0	0	0	0	0.00
39	0	0	0	0	0.00
40	0	0	0	0	0.00
41	0	0	0	0	0.00
42	0	0	0	0	0.00
43	0	0	0	0	0.00
44	0	0	0	0	0.00
45	0	0	0	0	0.00
46	0	0	0	0	0.00
47	0	0	0	0	0.00
48	0	0	0	0	0.00
49	0	0	0	0	0.00
50	0	0	0	0	0.00
51	0	0	0	0	0.00
52	0	0	0	0	0.00
53	0	0	0	0	0.00
54	0	0	0	0	0.00
55	0	0	0	0	0.00
56	0	0	0	0	0.00
57	0	0	0	0	0.00
58	0	0	0	0	0.00
59	0	0	0	0	0.00
60	0	0	0	0	0.00

"ROLLING"
SIX
MINUTE
AVERAGE

**APPENDIX 2
REFERENCE METHOD QUALITY ASSURANCE**

Equipment Calibrations

TYPE "S" PITOT TUBE CALIBRATION

PARAMETER	SPECIFICATION	EXAMPLE	MEASUREMENT INSTRUMENT
IMPACT/ a1	(< 10 DEG)		DEGREE INDICATING LEVEL
STATIC/ a2	(< 10 DEG)		DEGREE INDICATING LEVEL
STATIC/ B1	(< 5 DEG)		DEGREE INDICATING LEVEL
IMPACT/ B2	(< 5 DEG)		DEGREE INDICATING LEVEL
γ	DEGREES		DEGREE INDICATING LEVEL
θ	DEGREES		DEGREE INDICATING LEVEL
P _A	INCHES		RULER
P _B	INCHES		
P _A + P _B = A	INCHES		
D _T	INCHES		MICROMETER

$$Z = A \sin \gamma \text{ (LIMIT } < 0.125 \text{ INCHES)}$$

$$W = A \sin \theta \text{ (LIMIT } < 0.03125 \text{ INCHES)}$$

PITOT #	a1	a2	B1	B2	γ	θ	P _A	P _B	A	D _T	Z	W	DAMAGE ?
Flow	3	0	2	2	0	0	0.4945	0.4945	0.9890	0.3905	0	0	None
8G	0	0	1	3	1	0	0.5033	0.5033	1.0065	0.3930	0.0176	0	None
11G	0	2	0	0	0	0	0.4883	0.4883	0.9765	0.4175	0	0	None

CALIBRATED BY: S. Webb **DATE:** 12-3-02

SAMPLE NOZZLE CALIBRATION

REFERENCE: EPA METHOD 5

PROCEDURE: MEASURE THE INNER DIAMETER OF THE SAMPLING NOZZLE TO THE NEAREST 0.001 INCHES.
REPEAT UNTIL THREE MEASUREMENTS ARE MADE AT DIFFERENT POINTS ON THE NOZZLE DIAMETER.

DATE: 12-3-02

TOLERANCE: RANGE NOT TO EXCEED 0.004 INCHES

BY: S. Webb

NOZZLE NUMBER	1ST MEAS.	2ND MEAS.	3RD MEAS.	AVERAGE	MAXIMUM RANGE
G1	0.224	0.225	0.225	0.225	
G2	0.225	0.225	0.225	0.225	
G3	0.250	0.250	0.250	0.250	
G4	0.250	0.250	0.251	0.250	

COASTAL AIR CONSULTING, INC.
 EPA Method 5
 Meter Box Calibration
 Pre-Test Orifice Method
 English Meter Box Units, English K' Factor

Date:	8/16/2002
Box:	CAC 1
Serial:	

Barometric Pressure:	30.12	(in Hg)
Theoretical Critical Vacuum:	14.21	(in Hg)

IMPORTANT! For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
 IMPORTANT! The Critical Orifice Coefficient, K', must be entered in English units, (ft)³*(deg R)^{0.5}/((in.Hg)³*(min)).

DRY GAS METER READINGS							Critical Orifice Readings			AMBIENT TEMPERATURE		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Temp Initial (deg F)	Temp Final (deg F)	Orifice Serial #	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
0.3	16	400.324	405.497	5.173	90	90	40	0.243	23.5	84	84	84
0.67	11	394.701	399.943	5.242	89	90	48	0.357	22	84	84	84
1.2	8	388.402	393.42	5.018	89	90	55	0.471	21	83	83	83
2	7	382.654	388.104	5.45	89	90	63	0.600	19	83	83	83
3.8	5.1	375.454	381.135	5.681	88	89	73	0.841	16	83	83	83

CORRECTED VOLUME	
DRY GAS METER Vm(std) (cu ft)	ORIFICE Vcr(std) (cu ft)
5.001	5.021
5.077	5.071
4.866	4.870
5.295	5.429
5.554	5.544

DRY GAS METER CALIBRATION FACTOR Y	
Value	Variation
1.004	-0.001
0.999	-0.0065
1.001	-0.0046
1.025	0.01977
0.998	-0.0072

ORIFICE CALIBRATION FACTOR dH@	
Value (in H2O)	Variation (in H2O)
1.714	-0.084
1.773	-0.024
1.821	0.024
1.870	0.07297
1.809	0.0114

Average 1.005

Average 1.797

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +0.02.

For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +0.2.

SIGNED: Stephen C. Welch

Date: 8-16-02

$$V_{n(std)} = 17.64 (V_n) \frac{P_b + \frac{\Delta H}{13.6}}{t_n + 460}$$

$$V_{cr(std)} = K' \frac{P_b \theta}{\sqrt{t_{amb} + 460}}$$

$$Y = \frac{V_{cr(std)}}{V_m(std)}$$

$$\Delta H_{@} = \Delta H \left(\frac{.75\theta}{V_{cr(std)}} \right)^2$$

Coastal Air Consulting, Inc.
EPA Method 5
Meter Box Calibration
Post-Test Orifice Method

Date:	12/18/2002
Box:	CAC 1
Serial:	

Barometric Pressure:	30.08	(in Hg)
Theoretical Critical Vacuum:	14.19	(in Hg)

IMPORTANT! For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTANT! The Critical Orifice Coefficient, K', must be entered in English units, (ft)³/(deg R)^{0.5}/((in.Hg)³(min)).

DRY GAS METER READINGS							Critical Orifice Readings			AMBIENT TEMPERATURE		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Temp Initial (deg F)	Temp Final (deg F)	Orifice Serial #	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
2.0	10	351.744	359.756	8.012	81	81	63	0.600	19.0	74	73	73.5
2.0	10	359.756	367.774	8.018	81	81	63	0.600	19.0	73	73	73
2.0	10	367.774	375.895	8.121	81	81	63	0.600	19.0	73	72	72.5

CORRECTED VOLUME	
DRY GAS METER Vm(std) (cu ft)	ORIFICE Vcr(std) (cu ft)
7.897	7.814
7.902	7.817
8.004	7.821

DRY GAS METER CALIBRATION FACTOR Y	
Value	Variation
0.990	0.004
0.989	0.0039
0.977	-0.0082

ORIFICE CALIBRATION FACTOR dH@	
Value (in H2O)	Variation (in H2O)
1.843	0.002
1.841	0.000
1.839	-0.002

Average 0.985

Average 1.841

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +/-0.02.

For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +/-0.2.

SIGNED: Stephen C. Wehr

Date: 12-18-02

$$V_{m(std)} = 17.64 (V_m) \frac{P_b + \frac{\Delta H}{13.6}}{t_m + 460}$$

$$V_{cr(std)} = K' \frac{P_b \theta}{\sqrt{t_{amb} + 460}}$$

$$Y = \frac{V_{cr(std)}}{V_{m(std)}}$$

$$\Delta H_{@} = \Delta H \left(\frac{.75\theta}{V_{cr(std)}} \right)^2$$

Coastal Air Consulting, Inc.
EPA Method 5
Meter Box Calibration
Post-Test Orifice Method

Date:	12/18/2002
Box:	CAC 1
Serial:	

Barometric Pressure:	30.08	(in Hg)
Theoretical Critical Vacuum:	14.19	(in Hg)

IMPORTANT! For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTANT! The Critical Orifice Coefficient, K', must be entered in English units, (ft)³/(deg R)^{0.5}/((in.Hg)*(min)).

DRY GAS METER READINGS							Critical Orifice Readings			AMBIENT TEMPERATURE		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Temp Initial (deg F)	Temp Final (deg F)	Orifice Serial #	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
3.8	10	315.437	326.434	10.997	82	82	73	0.841	15.1	76	75	75.5
3.8	10	326.434	337.485	11.051	82	83	73	0.841	15.1	75	74	74.5
3.8	10	337.484	348.567	11.083	83	85	73	0.841	15.1	74	74	74

CORRECTED VOLUME

DRY GAS METER Vm(std) (cu ft)	ORIFICE Vcr(std) (cu ft)
10.866	10.931
10.909	10.941
10.911	10.946

DRY GAS METER CALIBRATION FACTOR Y	
Value	Variation
1.006	0.002
1.003	-0.0011
1.003	-0.0008

ORIFICE CALIBRATION FACTOR dH@	
Value (in H2O)	Variation (in H2O)
1.789	0.003
1.786	-0.001
1.784	-0.002

Average 1.004

Average 1.786

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +0.02.

For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +0.2.

SIGNED: Stephen C. Webb

Date: 12-18-02

$$V_{m(std)} = 17.64 (V_m) \frac{P_b + \frac{\Delta H}{13.6}}{t_m + 460}$$

$$V_{cr(std)} = K' \frac{P_b \theta}{\sqrt{t_{amb} + 460}}$$

$$Y = \frac{V_{cr(std)}}{V_{m(std)}}$$

$$\Delta H_{@} = \Delta H \left(\frac{.75\theta}{V_{cr(std)}} \right)^2$$

**THERMOCOUPLE POSTTEST
CALIBRATION CHECK**

Standard: National Bureau of Standards Thermocouple

Reference: Q.A. sec 3.1.2

Procedure: Test thermocouple and NBS thermocouple are wrapped in a heating mat. The temperature is controlled by the current flow into the mat, and is stabilized at a point within 10% of the average stack temperature during the test.

Tolerance: +/- 1.5% of actual absolute temperature

Test site: SJRPP	Check date: 12/18/02
Test date: 12/9-11/02	Check by: S. C. Webb
Avg. stack temp. 145	

T/C #	LENGTH ft	REFERENCE TEMP. F	MEASURED TEMP. F	DIFFERENCE %
FLOW	12	150	149	-0.16
11G	11	150	150	0.00

THERMOCOUPLE CALIBRATION DATA

STANDARD: National Bureau of Standards Thermocouple

REFERENCE: EPA Method 2.

FREQUENCY: Annually

PROCEDURE: Thermocouple and NBS thermocouple are inserted into a thermostatically controlled oil bath. Temperatures are stabilized at approximately 230 & 340 F. Potentiometer and thermocouple readings are compared.

TOLERANCE: +/- 1.5% of actual absolute temperature.

REFERENCE TEMPERATURES

AMBIENT 65.0 MID 230.0 HIGH 350.0

T/C. Number	Length (ft)	OBS TEMP (F)	DIFF (%)	OBS TEMP (F)	DIFF (%)	OBS TEMP (%)	DIFF (%)
15	15	65.0	0.00	232.0	0.29	349.0	-0.12
10	10	65.0	0.00	230.0	0.00	350.0	0.00
8	8	65.0	0.00	231.0	0.14	349.0	-0.12
6	6	65.0	0.00	229.0	-0.14	347.0	-0.37
3	3	65.0	0.00	230.0	0.00	348.0	-0.25
7	7	65.0	0.00	230.0	0.00	350.0	0.00
11G	11	65.0	0.00	230.0	0.00	350.0	0.00
FLOW	12	65.0	0.00	234.0	0.58	349.0	-0.12

Calibrated by: S. C. Webb
 Date: 1/2/02
 Due: 1/2/03

**DRY GAS METER
THERMOCOUPLE CALIBRATION DATA**

Frequency: Annual (two point) calibration.

Standard: ASTM Hg in glass thermometer, NBS ice point reference chamber, and potentiometer.

Reference: EPA Method 5, Section 2.1.8

Procedure: 1. Place ASTM thermometer and dry gas meter thermocouples (inlet and outlet) in hot water bath where the temperature is maintained between 100 F and 125 F. When the temperature has stabilized the thermocouple and ASTM thermometer are compared.

2. Remove ASTM thermometer and thermocouples from the warm bath, dry thoroughly, and place in a room with constant temperature and humidity. Allow a period of stabilization and record the readings.

Tolerance: +/- 5.4 F

Therm ID No.	Location	Reference Temp. (F)		Observed Temp. (F)		Difference (F)	
		1	2	1	2	1	2
1 MB	Meter Box No. CAC1	120.0	70.0	120.0	70.0	0.0	0.0
2 MB	Meter Box No. CAC1	120.0	70.0	120.0	70.0	0.0	0.0
1 MB	Meter Box No. CAC2	120.0	70.0	120.0	70.0	0.0	0.0
2 MB	Meter Box No. CAC2	120.0	70.0	120.0	70.0	0.0	0.0

CALIBRATED BY: S. Webb
DATE: 01/02/02
DUE: 01/02/03

**SAMPLE HEAD HOOK-UP THERMOCOUPLE
CALIBRATION PROCEDURES**

FREQUENCY: Quarterly (two point calibration)

1. Place ASTM thermometer and sample head hook-up thermocouple in ice bath, allow time for both to equilibrate. Compare and record readings after they have stabilized.
2. Remove both the ASTM thermometer and sample head hook-up thermocouple. Dry off thoroughly and place in a room with constant temperature and humidity. Allow a period of stabilization and record readings.

Acceptance Standard: The test thermocouple (sample head hook up) shall be acceptable if both temperatures are within + / - 2 F of the ASTM standard thermometer.

Note: If the thermocouple is not within the tolerances, discard and calibrate one which will be satisfactory.

Thermo. I.D. No.	Location	Reference Temp. (F)		Observed Temp. (F)		Difference Temp. (F)	
		1	2	1	2	1	2
A	SHH-A	32.0	65.0	32.0	65.0	0.0	0.0
B	SHH-B	32.0	65.0	32.0	65.0	0.0	0.0
						0.0	0.0
						0.0	0.0
						0.0	0.0
						0.0	0.0

Calibrated by: S. C. Webb
Date: 1/2/02
Due: 1/2/03

VE Certification

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Melvin Petiet

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of issue.

302774

Certificate Number

Jacksonville, Florida

Location

December 9, 2002

Date of Issue

Thomas Holt

President

Michael W. Lunsford

Director of Training

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Steve Webb

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of issue.

297781

Certificate Number

Orlando, Florida

Location

August 14, 2002

Date of Issue

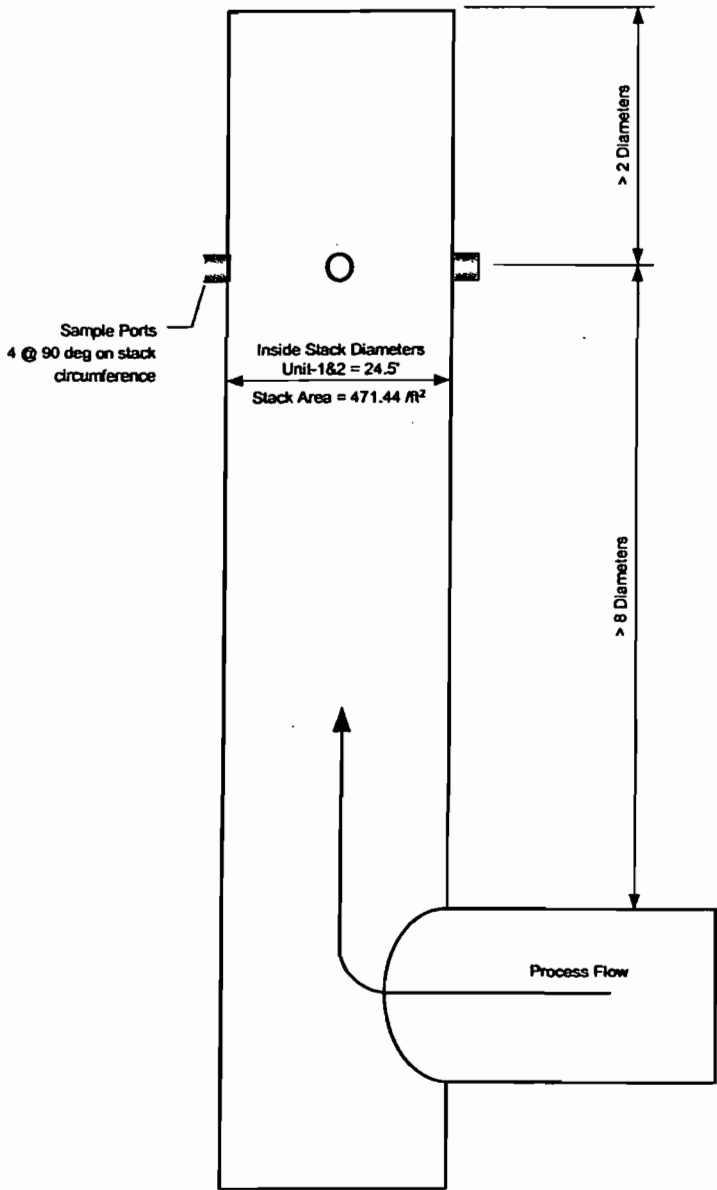
Thomas Hore

President

Michael W. Sunford

Director of Training

**APPENDIX 3
FIGURES**



**SAMPLE POINT PROFILE
Particulate, CEMS & FLOW**

UNIT 1 Particulate

- 1. 84.0"
- 2. 42.9"
- 3. 12.9"

UNIT 1 CEMS

- 1. 1.3'
- 2. 4.0'
- 3. 6.5'

UNIT 1 Flow

- 1. 95.0"
- 2. 57.0"
- 3. 30.9"
- 4. 9.4"

UNIT 2 Particulate

- 1. 84.0"
- 2. 42.9"
- 3. 12.9"

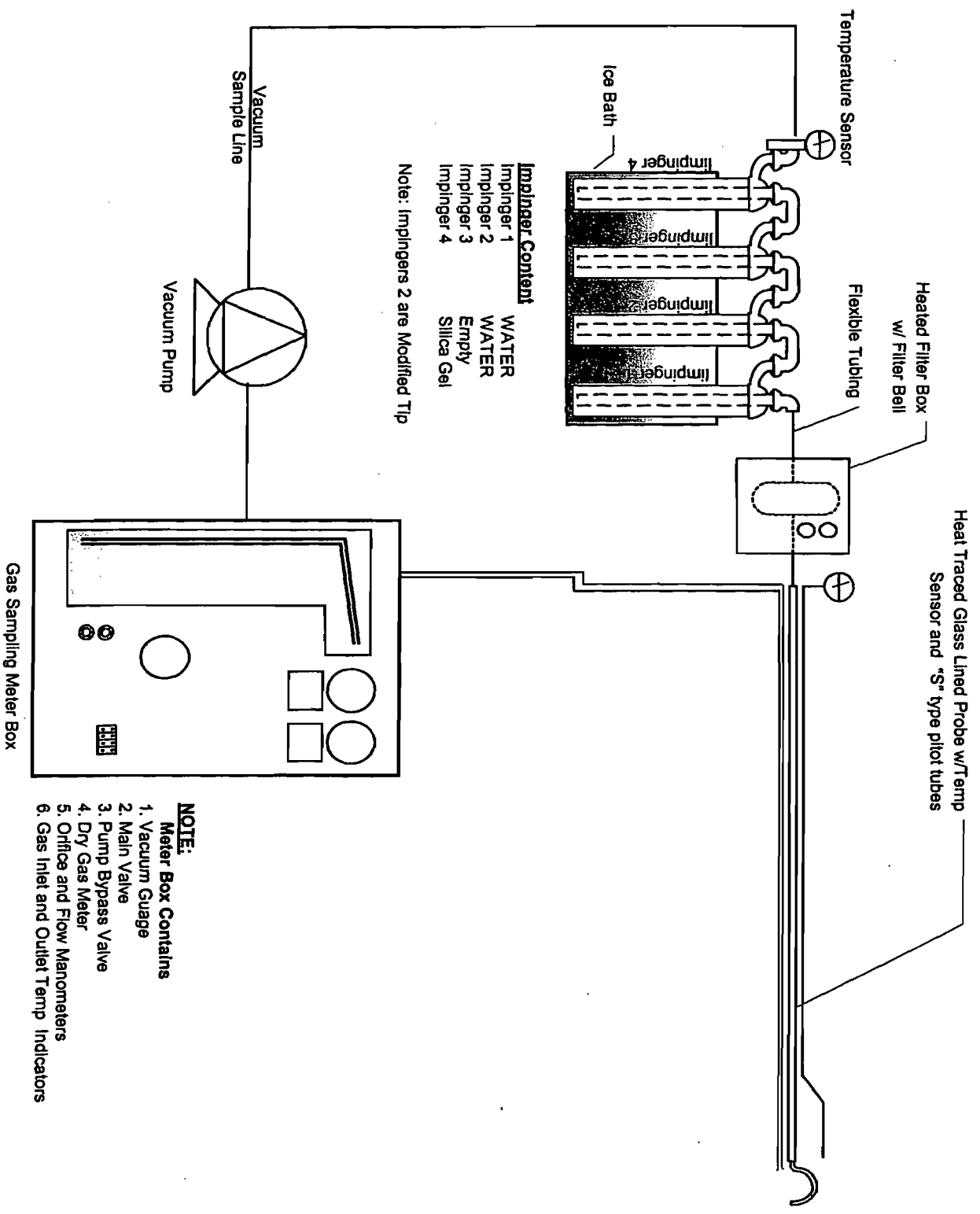
UNIT 2 CEMS

- 1. 1.3'
- 2. 4.0'
- 3. 6.5'

UNIT 2 Flow

- 1. 95.0"
- 2. 57.0"
- 3. 30.9"
- 4. 9.4"

DRAWN BY R F Cobb		TITLE St Johns River Power Park - SJRPP	Coastal Air Consulting, Inc. 1531 Wyngate Drive, Deland FL (386) 943-9241 Fax (386) 943 9212
DATE 12-06-02	SCALE NONE	DESCRIPTION Unit I & II Stack and Sample Port Configuration	



Impinger Content:
 Impinger 1 WATER
 Impinger 2 Empty
 Impinger 3 WATER
 Impinger 4 Silica Gel

Note: Impingers 2 are Modified Tip

NOTE:
Meter Box Contains
 1. Vacuum Gauge
 2. Main Valve
 3. Pump Bypass Valve
 4. Dry Gas Meter
 5. Orifice and Flow Manometers
 6. Gas Inlet and Outlet Temp Indicators

DRAWN BY R F Cobb		TITLE EPA Method 5 Sample Train	Coastal Air Consulting, Inc 1531 Wyngate Drive, Deland FL (386) 943-9241 Fax (386) 943 9212
DATE 4/15/02	SCALE NONE	DESCRIPTION	

**APPENDIX 4
SAMPLE CALCULATIONS**

SAMPLE EQUATIONS FOR ISOKINETIC SAMPLING

CALCULATIONS FOR FLUE GAS VOLUME AND ISOKINETIC RATIO

Time	Dry Gas	Pitot	Orifice	Dry Gas		Flue Gas	Stack
	Meter Ft ³	ΔP In. H ₂ O	ΔH In. H ₂ O	Temp. °F In	Out	Static Pressure In. H ₂ O	
T	V _m	Δp	ΔH	TMI	TMO	P _g	t _s

1. D_n = Nozzle Diameter (inches)

1a. A_n = Area of Nozzle (ft²)

2. P_{bar} = Barometric Pressure (in. Hg)

3. TT = Net Sampling Time (minutes)

4. V_m = V_m Final - V_m Initial = Sample Gas Volume (Ft³)

5. T_m = Average Dry Gas Temperature at Meter (°F)

$$T_m = \frac{\text{Avg. TMI} + \text{Avg. TMO}}{2}$$

6. Δp = Velocity head of stack gas (in. H₂O)

7. ΔH = Average Orifice Pressure Drop (in. H₂O)

8. Volume of dry gas sampled at standard conditions^a (DSCF)

$$V_{m(std)} = \frac{(17.64)(V_m)(Y) \left(P_{bar} + \frac{\Delta H}{13.6} \right)}{(T_m + 460)}$$

9. V_{lc} = Total Water Collected = gm H₂O Silica gel + ml Imp. H₂O = ml

10. Volume of water vapor at standard conditions^b (SCF)

$$V_{w(std)} = 0.0471(V_{lc}) = SCF$$

11. Percent moisture in flue gas

$$\%M = \frac{100(V_{w(std)})}{V_{m(std)} + V_{w(std)}}$$

12. Mole fraction of water vapor in flue gas

$$B_{ws} = \frac{\%M}{100}$$

13. Molecular Weight of dry flue gas

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

- 13a. %EA = % Excess Air =

$$\frac{[(\%O_2) - 0.5(\%CO)]}{[0.264(\%N_2)] - [(\%O_2) - 0.5(\%CO)]} \times 100$$

14. Molecular weight of wet flue gas

$$M_s = M_d(1 - B_{ws}) + 18(B_{ws})$$

15. A = Cross-sectional area of stack (Ft²)

$$\frac{\pi r^2}{144}$$

16. P_s = Flue gas pressure (in, Hg)

$$P_s = P_{bar} + P_g$$

NOTE:
$$P_g(Hg) = \frac{P_g(in.H_2O)}{13.6}$$

17. T_s = Absolute stack temperature (°R)

$$T_s = 460 + t_s$$

18. Flue velocity at stack conditions (FT/SEC)

$$V_s = (K_p)(C_p) \left[(\sqrt{\Delta p})_{avg} \right] \sqrt{\frac{T_s(avg)}{P_s * M_s}}$$

C_p = pitot tube coefficient

K_p = pitot tube constant = 85.49ft/sec

19. Flue gas volumetric flow rate at standard conditions^b (SCFM)

$$Q_s = (V_s)(A) \left(\frac{528}{T_s(avg.)} \right) \left(\frac{P_s}{29.92} \right) (60)$$

20. Flue gas volumetric flow rate at standard conditions^c (DSCFM)

$$Q_{sd} = (1 - B_{ws})(V_s)(A) \left(\frac{528}{T_s(avg.)} \right) \left(\frac{P_s}{29.92} \right) (60)$$

21. Flue gas volumetric flow rate at stack conditions (ACFM)

$$Q_a = (V_s)(A)(60)$$

22. Percent Isokinetic

$$\%I = \frac{K_4(T_s)(V_{m(std)})}{P_s V_s A_n \Theta (1 - B_{ws})}$$

$K_4 = 0.09450$

$\Theta = \text{time}(\text{min})$

- NOTES: ^aDry standard cubic feet at 68°F, 29.92 in. Hg
 ^bStandard conditions at 68°F, 29.92 in. Hg
 ^cDry standard cubic feet per minute at 68°F, 29.92 in. Hg

II. Calculations for grain loading and emission rates

23. Particulate (gr/DSCF)

$$gr / DSCF = 0.01543 \left(\frac{mg}{V_{m(std)}} \right)$$

24. Particulate at stack conditions (gr/ACF)

$$gr / ACF = \frac{17.64 gr / DSCF (P_s)(M_d)}{(T_s + 460)}$$

25. Particulate (lbs/hr), concentration method

$$lbs / hr = 0.00857 * gr / DSCF * Q_{sd}$$

26. Particulate (lbs/hr), area method

$$lbs / hr = 0.132 * \frac{particulate(g) * A}{\frac{(D_n)^2}{2} * TT}$$

27. Particulate (lbs/mmBtu)

$$\frac{lbs / hr}{10^6 Btu / hr}$$

28. Particulate (lbs/ton)

$$lbs / ton = \frac{lbs / hr}{tons / hr}$$

29. Particulate (lbs/mmBtu), F-Factor Method

$$\text{Using } O_2 = \frac{(0.01543)(mg)(F - Factor)(20.9)}{(7000)(V_{m(std)})(20.9 - \%O_2)}$$

30. Particulate (gr/dscf) @ % Excess Air

$$gr/dscf @ \% EA = ((100 + \%EA)/150) (gr/dscf)$$

31. Particulate (lbs/mmBtu), F-Factor Method (Continued)

$$\text{Using CO}_2 = \frac{(0.01543)(mg)(F - \text{Factor})(100)}{(7000)(V_{m(std)})(\%CO_2)}$$

32. F-Factor (dscf/mmBtu)

Wet Basis (F_w)

$$F_w = \frac{10^6 \text{ Btu} / \text{mmBtu} [5.57(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O_2) + 0.21(\%H_2O)]}{GCV_w}$$

Dry Basis (F_d)

$$F_d = \frac{10^6 \text{ Btu} / \text{mmBtu} [3.64(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O_2)]}{GCV_d}$$

Carbon Basis (F_c)

$$F_c = \frac{10^6 \text{ Btu} / \text{mmBtu} [0.321(\%C)]}{GCV_d}$$

33. Particulate Emissions, (grams/DSCF)

$$C_s = \text{Particulate (mg)} / 1000 / \text{DSCF}$$

34. Particulate Emissions, (lb/ton) of Kiln Feed

$$(C_s) (\text{DSCFH}) / (130 \text{ tph}) (453.6\text{g/lb})$$

Calculation Quality Assurance Check

CALCULATIONS FOR RUN 1 Unit 1

1. Volume of dry gas sampled at standard conditions, DSCF

$$V_{m \text{ std}} = 17.64 * 113.497 * 1.0050 * \frac{29.63 + (2.788 / 13.6)}{100.2 + 460}$$

2. Volume of water vapor at standard conditions, SCF

$$V_{m \text{ gas}} = 0.04715 * 317.4$$

3. Percent moisture in stack gas

$$\% M = 100 * \frac{14.97}{(107.166 + 14.97)}$$

4. Mole fraction dry gas

$$M_d = (100 - 12.25) / 100$$

5. Percent nitrogen in dry stack gas, lb/lb-mole

$$\% N_2 = 100 - 12.20 - 6.40$$

6. Molecular weight of dry stack gas, lb/lb-mole

$$MW_d = (12.20 * 0.44) + (6.40 * 0.32) + (81.40 * 0.28)$$

7. Molecular weight of wet stack gas, lb/lb-mole

$$MW = (30.21 * 0.877) + [18 * (1 - 0.8775)]$$

8. Stack gas static pressure, in. Hg abs.

$$P_{sa} = (-0.76 * 13.6) + 29.63 - (0.001 * 0.00)$$

9. Stack gas velocity at standard conditions, fps

$$V_s = 85.49 * 0.84 * \left(\frac{1.176}{146.92 + 460} \right)^{1/2} \left(\frac{29.57 * 28.712}{29.57 * 28.712} \right)^{1/2}$$

10. Stack gas volumetric flow rate at standard conditions, DSCFM

$$Q_s = \frac{(1058.82 * 71.41 * 471.44 * 0.877 * 29.57)}{(146.9 + 460)}$$

11. Stack gas volumetric flow rate at stack conditions, ACFM

$$Q_a = 0.05667 * 1524026.2 * (146.9 + 460) / (29.57 * 0.877)$$

12. Percent isokinetic

$$\% I = \frac{17.326 * 107.166 * (146.9 + 460)}{71.41 * 120 * 29.57 * 0.877 * (0.225)^2}$$

13. Particulate emission rate, grains/SCF

$$Eg = 0.01543 * (11.6 / 107.166)$$

14. Particulate emission rate, lbs/HR

$$Eh = 0.00857 * 1524026.2 * 0.0017$$

15. Particulate emission rate, lbs/MMBTU

$$Eb = 9780 * 0.0017 / 7000 * [20.9 / (20.9 - 6.40)]$$

CALCULATIONS FOR RUN 1 Unit 2

1. Volume of dry gas sampled at standard conditions, DSCF

$$V_{m \text{ std}} = \frac{17.64 * 111.855 * 1.0050 * 29.65 + (2.717 / 13.6)}{95.9 + 460}$$

2. Volume of water vapor at standard conditions, SCF

$$V_{m \text{ gas}} = 0.04715 * 321.7$$

3. Percent moisture in stack gas

$$\% M = 100 * \frac{15.17}{(106.476 + 15.17)}$$

4. Mole fraction dry gas

$$M_d = \frac{(100 - 12.47)}{100}$$

5. Percent nitrogen in dry stack gas, lb/lb-mole

$$\% N_2 = 100 - 12.80 - 6.00$$

6. Molecular weight of dry stack gas, lb/lb-mole

$$M_{Wd} = (12.80 * 0.44) + (6.00 * 0.32) + (81.20 * 0.28)$$

7. Molecular weight of wet stack gas, lb/lb-mole

$$M_W = (30.29 * 0.875) + [18 * (1 - 0.8753)]$$

8. Stack gas static pressure, in. Hg abs.

$$P_{sa} = (-0.80 * 13.6) + 29.65 - (0.001 * 0.00)$$

9. Stack gas velocity at standard conditions, fps

$$V_s = \frac{85.49 * 0.84 * (1.163)^{1/2} * (141.08 + 460)^{1/2}}{(29.59 * 28.756)}$$

10. Stack gas volumetric flow rate at standard conditions, DSCFM

$$Q_s = \frac{(1058.82 * 70.22 * 471.44 * 0.875 * 29.59)}{(141.1 + 460)}$$

11. Stack gas volumetric flow rate at stack conditions, ACFM

$$Q_a = 0.05667 * 1510379.9 * (141.1 + 460) / (29.59 * 0.875)$$

12. Percent isokinetic

$$\% I = \frac{17.326 * 106.476 * (141.1 + 460)}{70.22 * 120 * 29.59 * 0.875 * (0.225)^2}$$

13. Particulate emission rate, grains/SCF

$$E_g = 0.01543 * (9.1 / 106.476)$$

14. Particulate emission rate, lbs/HR

$$E_h = 0.00857 * 1510379.9 * 0.0013$$

15. Particulate emission rate, lbs/MMBTU

$$E_b = 9780 * (0.0013 / 7000) * [20.9 / (20.9 - 6.00)]$$

**APPENDIX 5
LAB ANALYSIS**

Fuel



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1918 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306



Member of the SGS Group (Société Générale de Surveillance)

Committed To Excellence

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 752
HENDERSON, KY 42418
TEL: (270) 827-1187
FAX: (270) 827-0719

December 23, 2002

ST. JOHNS RIVER POWER PARK
11201 NEW BERLIN RD
JACKSONVILLE FL 32226

Sample identification by
SJRPP

Stack Test
Collection Date: 12-09-02
Collection Time: 09:30 am
SJRPP Lab ID#: SJ-120902-0930
SampleL: Domestic Blend
P.O. #34531

Kind of sample Coal
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 9, 2002

Date received December 17, 2002

Analysis Report No. 63-77709

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	9.13	XXXXXX		
% Ash	6.28	6.91		
Btu/lb	12747	14028	MAF	15069
% Sulfur	2.20	2.42		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Devin D. Howard
Henderson Laboratory



OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

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FAX: (270) 821-0719

December 23, 2002

ST. JOHNS RIVER POWER PARK
11201 NEW BERLIN RD
JACKSONVILLE FL 32226

Sample identification by
SJRPP

Stack Test
Collection Date: 12-09-02
Collection Time: 22:45 pm
SJRPP Lab ID#: SJ-120902-2245
SampleL: Domestic Blend
P.O. #34531

Kind of sample Coal
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 9, 2002

Date received December 17, 2002

Analysis Report No. 63-77710

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	7.70	xxxxxx		
% Ash	6.75	7.31		
Btu/lb	12855	13927	MAF	15025
% Sulfur	1.47	1.59		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Henderson Laboratory



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FAX: (270) 627-0719

December 23, 2002

ST. JOHNS RIVER POWER PARK
11201 NEW BERLIN RD
JACKSONVILLE FL 32226

Sample identification by
SJRPP

Stack Test
Collection Date: 12-10-02
Collection Time: 10:00 am
SJRPP Lab ID#: SJ-121002-1000
SampleL: Domestic Blend
P.O. #34531

Kind of sample Coal
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 10, 2002

Date received December 17, 2002

Analysis Report No. 63-77721

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	7.77	XXXXXX		
% Ash	4.90	5.31		
Btu/lb	12623	13692	MAF	14460
% Sulfur	2.78	3.01		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Henderson Laboratory



6

**APPENDIX 6
PLANT DATA**

UNIT 1

Unit 1 Particulate

Run 1

Enertec NTDAS®
Average Values Report
Generated : 12/11/02 14:54

Company: St. Johns River Power Park U#1
Plant: 11201 New Berlin Road
City/St: Jacksonville, FL 32226
Source: Unit 1

Period Start: 12/09/02 09:00
Period End: 12/09/02 11:10
Validation Type: 1/1 min
Averaging Period: 1/1 min
Type: Rolling Avg

Period Start	Average 1Stk_kscfh kscfh	Average 1Unit_Load MW
12/09/02 09:00	95934.0	657.8
12/09/02 09:01	95616.0	654.9
12/09/02 09:02	95616.0	654.9
12/09/02 09:03	95616.0	654.9
12/09/02 09:04	95616.0	654.9
12/09/02 09:05	95616.0	654.9
12/09/02 09:06	95616.0	654.9
12/09/02 09:07	95616.0	654.9
12/09/02 09:08	95616.0	654.9
12/09/02 09:09	95616.0	654.9
12/09/02 09:10	95616.0	654.9
12/09/02 09:11	95616.0	654.9
12/09/02 09:12	95616.0	654.9
12/09/02 09:13	95616.0	654.9
12/09/02 09:14	95616.0	654.9
12/09/02 09:15	95616.0	654.9
12/09/02 09:16	96060.0	654.7
12/09/02 09:17	96060.0	654.7
12/09/02 09:18	96060.0	654.7
12/09/02 09:19	96060.0	654.7
12/09/02 09:20	96060.0	654.7
12/09/02 09:21	96060.0	654.7
12/09/02 09:22	96060.0	654.7
12/09/02 09:23	96060.0	654.7
12/09/02 09:24	96060.0	654.7
12/09/02 09:25	96060.0	654.7
12/09/02 09:26	96060.0	654.7
12/09/02 09:27	96060.0	654.7
12/09/02 09:28	96060.0	654.7
12/09/02 09:29	96060.0	654.7
12/09/02 09:30	96060.0	654.7
12/09/02 09:31	95664.0	654.0
12/09/02 09:32	95664.0	654.0
12/09/02 09:33	95664.0	654.0
12/09/02 09:34	95664.0	654.0
12/09/02 09:35	95664.0	654.0
12/09/02 09:36	95664.0	654.0
12/09/02 09:37	95664.0	654.0
12/09/02 09:38	95664.0	654.0

12/09/02 09:39	95664.0	654.0
12/09/02 09:40	95664.0	654.0
12/09/02 09:41	95664.0	654.0
12/09/02 09:42	95664.0	654.0
12/09/02 09:43	95664.0	654.0
12/09/02 09:44	95664.0	654.0
12/09/02 09:45	95664.0	654.0
12/09/02 09:46	96024.0	655.7
12/09/02 09:47	96024.0	655.7
12/09/02 09:48	96024.0	655.7
12/09/02 09:49	96024.0	655.7
12/09/02 09:50	96024.0	655.7
12/09/02 09:51	96024.0	655.7
12/09/02 09:52	96024.0	655.7
12/09/02 09:53	96024.0	655.7
12/09/02 09:54	96024.0	655.7
12/09/02 09:55	96024.0	655.7
12/09/02 09:56	96024.0	655.7
12/09/02 09:57	96024.0	655.7
12/09/02 09:58	96024.0	655.7
12/09/02 09:59	96024.0	655.7
12/09/02 10:00	96024.0	655.7
12/09/02 10:01	95826.0	655.5
12/09/02 10:02	95826.0	655.5
12/09/02 10:03	95826.0	655.5
12/09/02 10:04	95826.0	655.5
12/09/02 10:05	95826.0	655.5
12/09/02 10:06	95826.0	655.5
12/09/02 10:07	95826.0	655.5
12/09/02 10:08	95826.0	655.5
12/09/02 10:09	95826.0	655.5
12/09/02 10:10	95826.0	655.5
12/09/02 10:11	95826.0	655.5
12/09/02 10:12	95826.0	655.5
12/09/02 10:13	95826.0	655.5
12/09/02 10:14	95826.0	655.5
12/09/02 10:15	95826.0	655.5
12/09/02 10:16	96042.0	654.2
12/09/02 10:17	96042.0	654.2
12/09/02 10:18	96042.0	654.2
12/09/02 10:19	96042.0	654.2
12/09/02 10:20	96042.0	654.2
12/09/02 10:21	96042.0	654.2
12/09/02 10:22	96042.0	654.2
12/09/02 10:23	96042.0	654.2
12/09/02 10:24	96042.0	654.2
12/09/02 10:25	96042.0	654.2
12/09/02 10:26	96042.0	654.2
12/09/02 10:27	96042.0	654.2
12/09/02 10:28	96042.0	654.2
12/09/02 10:29	96042.0	654.2
12/09/02 10:30	96042.0	654.2



Actual Values At: 9:15:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	12.0	194	47.0	40.1	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-21	15.0	183	61.0	37.3	0.0	0.0	0.0	2.8	1.5	1.6	50.0
1B TR-31	15.0	164	59.0	32.9	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1B TR-41	20.0	168	79.0	34.4	0.0	0.0	0.0	3.4	1.7	1.7	50.0
1B TR-51	30.0	197	134	37.0	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-61	35.0	208	166	37.3	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
1B TR-12	12.0	192	43.0	41.1	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	194	63.0	38.9	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-32	15.0	180	61.0	16.8	0.0	0.0	0.0	2.7	1.5	1.6	50.0
1B TR-42	20.0	177	79.0	36.7	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1B TR-52	30.0	197	126	37.2	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-62	35.0	209	158	38.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-72	45.0	214	203	39.1	0.0	0.0	0.0	9.6	5.4	1.5	90.0
1B TR-13	12.0	198	47.0	41.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1B TR-23	15.0	194	61.0	38.3	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-33	15.0	184	59.0	36.9	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-43	20.0	180	83.0	36.9	0.0	0.0	0.0	3.6	1.8	1.7	50.0
1B TR-53	30.0	204	134	37.8	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1B TR-63	35.0	200	156	37.8	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1B TR-73	45.0	226	179	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
1B TR-14	12.0	205	51.0	42.6	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1B TR-24	Hopper High Power Off										
1B TR-34	15.0	197	63.0	39.4	0.0	0.0	0.0	3.0	1.5	1.6	50.0
1B TR-44	20.0	185	75.0	37.8	0.0	0.0	0.0	3.7	1.7	1.8	50.0
1B TR-54	30.0	219	126	41.6	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-64	35.0	229	158	41.0	0.0	0.0	0.0	8.0	4.4	1.5	70.0
1B TR-74	36.0	212	158	38.5	0.0	0.0	0.0	7.6	4.1	1.6	90.0
1B TR-15	Hopper High Power Off										
1B TR-25	1.0	76.0	3.0	17.0	0.0	0.0	126	0.1	0.1	1.4	50.0

12:00 PM



Actual Values At: ~~10:00:00~~ AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spt/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	209	47.0	44.4	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	195	61.0	38.8	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1A TR-31	15.0	195	63.0	39.4	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	176	67.0	32.2	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	200	130	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	37.9	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	218	187	38.7	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	206	43.0	43.7	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-22	15.0	198	61.0	38.8	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	185	77.0	37.3	0.0	0.0	0.0	3.7	1.9	1.7	50.0
1A TR-52	30.0	201	126	37.6	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	207	156	38.0	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.1	5.9	1.5	90.0
1A TR-13	12.0	200	51.0	41.2	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	195	61.0	40.2	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-33	15.0	194	63.0	38.3	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	178	83.0	36.4	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	205	130	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1A TR-63	35.0	207	162	36.5	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	224	217	39.1	0.0	0.0	0.0	10.1	5.6	1.5	90.0
1A TR-14	12.0	204	51.0	42.3	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	200	61.0	39.7	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1A TR-34	15.0	176	59.0	35.2	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-44	20.0	167	75.0	33.8	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-54	30.0	193	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	199	158	35.9	0.0	0.0	0.0	7.0	3.8	1.5	70.0
1A TR-74	45.0	216	213	36.2	0.0	0.0	0.0	9.8	5.4	1.5	90.0
1A TR-15	12.0	202	43.0	42.3	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	178	59.0	37.4	0.0	0.0	0.0	2.5	1.3	1.6	49.0



Actual Values At: 10:00:00 AM

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SQ 300	Amps	Voits	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-35	15.0	175	61.0	34.0	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-45	21.0	168	83.0	33.4	0.0	0.0	0.0	3.3	1.6	1.7	50.0
1A TR-55	30.0	190	134	35.2	0.0	0.0	0.0	5.7	3.0	1.6	60.0
1A TR-65	35.0	195	156	36.9	0.0	0.0	0.0	6.8	3.6	1.6	70.0
1A TR-75	45.0	212	98.0	32.8	0.0	0.0	0.0	9.5	5.3	1.5	90.0
1A TR-16	12.0	197	47.0	41.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-26	15.0	182	71.0	51.6	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1A TR-36	15.0	174	61.0	34.7	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-46	20.0	164	79.0	33.2	0.0	0.0	0.0	3.3	1.5	1.8	50.0
1A TR-56	Power Off										
1A TR-66	35.0	200	134	33.1	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1A TR-76	45.0	220	213	39.0	0.0	0.0	0.0	9.9	5.5	1.5	90.0
Analog											
1A East	9.9	%									
1A West	7.5	%									



Actual Values At: 10:15:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	12.0	192	47.0	40.0	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-21	15.0	184	61.0	37.5	0.0	0.0	0.0	2.8	1.4	1.7	50.0
1B TR-31	15.0	165	59.0	33.0	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1B TR-41	21.0	171	77.0	34.4	0.0	0.0	0.0	3.4	1.7	1.7	50.0
1B TR-51	30.0	197	134	36.9	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-61	35.0	208	166	37.3	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1B TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
1B TR-12	12.0	191	47.0	40.7	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	194	67.0	38.7	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-32	15.0	180	59.0	16.7	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-42	20.0	177	79.0	36.7	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1B TR-52	30.0	197	126	37.2	0.0	0.0	0.0	5.9	3.2	1.6	60.0
1B TR-62	35.0	209	162	38.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-72	45.0	214	203	39.1	0.0	0.0	0.0	9.6	5.4	1.5	90.0
1B TR-13	12.0	196	47.0	40.8	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-23	15.0	193	63.0	38.1	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-33	15.0	182	59.0	36.7	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-43	20.0	180	83.0	36.8	0.0	0.0	0.0	3.6	1.8	1.7	50.0
1B TR-53	30.0	204	134	37.8	0.0	0.0	0.0	6.1	3.2	1.6	60.0
1B TR-63	35.0	200	154	37.9	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1B TR-73	45.0	226	179	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
1B TR-14	12.0	204	47.0	42.6	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1B TR-24	Hopper High Power Off										
1B TR-34	15.0	197	61.0	39.4	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-44	20.0	185	75.0	37.7	0.0	0.0	0.0	3.7	1.7	1.8	50.0
1B TR-54	30.0	219	126	41.6	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-64	35.0	229	158	41.0	0.0	0.0	0.0	8.1	4.4	1.5	70.0
1B TR-74	36.0	212	158	38.5	0.0	0.0	0.0	7.6	4.1	1.6	90.0
1B TR-15	Hopper High Power Off										
1B TR-25	1.0	73.0	3.0	20.0	0.0	0.0	112	0.1	0.0	2.9	50.0



Actual Values At: 10:15:00 AM

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12/9/02

SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-35	15.0	225	61.0	43.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
1B TR-45	20.0	204	79.0	41.6	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-55	30.0	220	128	42.1	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-65	35.0	236	162	42.6	0.0	0.0	0.0	8.3	4.6	1.5	70.0
1B TR-75	36.0	231	162	41.2	0.0	0.0	0.0	8.3	4.5	1.6	90.0
1B TR-16	Halted										
1B TR-26	No Response										
1B TR-36	16.0	232	59.0	46.6	0.0	0.0	0.0	3.5	1.9	1.5	50.0
1B TR-46	20.0	198	75.0	40.5	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-56	30.0	225	130	41.8	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-66	35.0	233	162	42.2	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-76	45.0	293	225	42.3	0.0	0.0	0.0	13.2	7.4	1.5	90.0
Analog											
1B East	8.5	%									
1B West	3.7	%									

1:00 PM



Actual Values At: ~~11:00:00~~ AM

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12/9/02

SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/MIn	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	205	47.0	43.7	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	195	61.0	38.8	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-31	15.0	195	61.0	39.3	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	176	67.0	32.2	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	200	126	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	37.9	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	217	187	38.6	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	204	45.0	43.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-22	15.0	200	63.0	38.9	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1A TR-32	Power Off										
1A TR-42	20.0	185	77.0	37.3	0.0	0.0	0.0	3.7	1.9	1.7	50.0
1A TR-52	30.0	201	126	37.6	0.0	0.0	0.0	6.0	3.1	1.6	60.0
1A TR-62	35.0	207	154	38.0	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.1	5.9	1.5	90.0
1A TR-13	12.0	197	47.0	40.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	194	61.0	40.1	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-33	15.0	193	61.0	38.3	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	177	83.0	36.5	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	205	130	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1A TR-63	35.0	207	162	36.5	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	222	197	37.9	0.0	0.0	0.0	9.5	5.3	1.5	90.0
1A TR-14	12.0	201	51.0	41.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	200	61.0	39.6	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1A TR-34	15.0	176	59.0	35.1	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-44	20.0	166	75.0	33.7	0.0	0.0	0.0	3.3	1.6	1.7	50.0
1A TR-54	30.0	193	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	199	158	35.9	0.0	0.0	0.0	7.0	3.8	1.5	70.0
1A TR-74	45.0	216	217	36.2	0.0	0.0	0.0	9.7	5.4	1.5	90.0
1A TR-15	12.0	200	43.0	41.7	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	177	59.0	37.1	0.0	0.0	0.0	2.5	1.3	1.6	49.0

12/09/02 10:31	96042.0	656.7
12/09/02 10:32	96042.0	656.7
12/09/02 10:33	96042.0	656.7
12/09/02 10:34	96042.0	656.7
12/09/02 10:35	96042.0	656.7
12/09/02 10:36	96042.0	656.7
12/09/02 10:37	96042.0	656.7
12/09/02 10:38	96042.0	656.7
12/09/02 10:39	96042.0	656.7
12/09/02 10:40	96042.0	656.7
12/09/02 10:41	96042.0	656.7
12/09/02 10:42	96042.0	656.7
12/09/02 10:43	96042.0	656.7
12/09/02 10:44	96042.0	656.7
12/09/02 10:45	96042.0	656.7
12/09/02 10:46	96084.0	652.4
12/09/02 10:47	96084.0	652.4
12/09/02 10:48	96084.0	652.4
12/09/02 10:49	96084.0	652.4
12/09/02 10:50	96084.0	652.4
12/09/02 10:51	96084.0	652.4
12/09/02 10:52	96084.0	652.4
12/09/02 10:53	96084.0	652.4
12/09/02 10:54	96084.0	652.4
12/09/02 10:55	96084.0	652.4
12/09/02 10:56	96084.0	652.4
12/09/02 10:57	96084.0	652.4
12/09/02 10:58	96084.0	652.4
12/09/02 10:59	96084.0	652.4
12/09/02 11:00	96084.0	652.4
12/09/02 11:01	96006.0	652.3
12/09/02 11:02	96006.0	652.3
12/09/02 11:03	96006.0	652.3
12/09/02 11:04	96006.0	652.3
12/09/02 11:05	96006.0	652.3
12/09/02 11:06	96006.0	652.3
12/09/02 11:07	96006.0	652.3
12/09/02 11:08	96006.0	652.3
12/09/02 11:09	96006.0	652.3
12/09/02 11:10	96006.0	652.3
Final Average*	95926.5	654.6
Maximum*	96084.0	657.8
Minimum*	95616.0	652.3

*Does not include Invalid Averaging Periods ("N/A")

Unit 1 Particulate
Run 2

Enertec NTDAHS®
Average Values Report
Generated : 12/11/02 14:55

Company: St. Johns River Power Park U#1
Plant: 11201 New Berlin Road
City/St: Jacksonville, FL 32226
Source: Unit 1

Period Start: 12/09/02 12:16
Period End: 12/09/02 14:24
Validation Type: 1/1 min
Averaging Period: 1/1 min
Type: Rolling Avg

Period Start	Average 1Stk_kscfh kscfh	Average 1Unit_Load MW
12/09/02 12:16	95874.0	658.0
12/09/02 12:17	95874.0	658.0
12/09/02 12:18	95874.0	658.0
12/09/02 12:19	95874.0	658.0
12/09/02 12:20	95874.0	658.0
12/09/02 12:21	95874.0	658.0
12/09/02 12:22	95874.0	658.0
12/09/02 12:23	95874.0	658.0
12/09/02 12:24	95874.0	658.0
12/09/02 12:25	95874.0	658.0
12/09/02 12:26	95874.0	658.0
12/09/02 12:27	95874.0	658.0
12/09/02 12:28	95874.0	658.0
12/09/02 12:29	95874.0	658.0
12/09/02 12:30	95874.0	658.0
12/09/02 12:31	96180.0	658.9
12/09/02 12:32	96180.0	658.9
12/09/02 12:33	96180.0	658.9
12/09/02 12:34	96180.0	658.9
12/09/02 12:35	96180.0	658.9
12/09/02 12:36	96180.0	658.9
12/09/02 12:37	96180.0	658.9
12/09/02 12:38	96180.0	658.9
12/09/02 12:39	96180.0	658.9
12/09/02 12:40	96180.0	658.9
12/09/02 12:41	96180.0	658.9
12/09/02 12:42	96180.0	658.9
12/09/02 12:43	96180.0	658.9
12/09/02 12:44	96180.0	658.9
12/09/02 12:45	96180.0	658.9
12/09/02 12:46	95898.0	657.7
12/09/02 12:47	95898.0	657.7
12/09/02 12:48	95898.0	657.7
12/09/02 12:49	95898.0	657.7
12/09/02 12:50	95898.0	657.7
12/09/02 12:51	95898.0	657.7
12/09/02 12:52	95898.0	657.7
12/09/02 12:53	95898.0	657.7

12/09/02	12:54	95898.0	657.7
12/09/02	12:55	95898.0	657.7
12/09/02	12:56	95898.0	657.7
12/09/02	12:57	95898.0	657.7
12/09/02	12:58	95898.0	657.7
12/09/02	12:59	95898.0	657.7
12/09/02	13:00	95898.0	657.7
12/09/02	13:01	96324.0	661.7
12/09/02	13:02	96324.0	661.7
12/09/02	13:03	96324.0	661.7
12/09/02	13:04	96324.0	661.7
12/09/02	13:05	96324.0	661.7
12/09/02	13:06	96324.0	661.7
12/09/02	13:07	96324.0	661.7
12/09/02	13:08	96324.0	661.7
12/09/02	13:09	96324.0	661.7
12/09/02	13:10	96324.0	661.7
12/09/02	13:11	96324.0	661.7
12/09/02	13:12	96324.0	661.7
12/09/02	13:13	96324.0	661.7
12/09/02	13:14	96324.0	661.7
12/09/02	13:15	96324.0	661.7
12/09/02	13:16	96636.0	663.6
12/09/02	13:17	96636.0	663.6
12/09/02	13:18	96636.0	663.6
12/09/02	13:19	96636.0	663.6
12/09/02	13:20	96636.0	663.6
12/09/02	13:21	96636.0	663.6
12/09/02	13:22	96636.0	663.6
12/09/02	13:23	96636.0	663.6
12/09/02	13:24	96636.0	663.6
12/09/02	13:25	96636.0	663.6
12/09/02	13:26	96636.0	663.6
12/09/02	13:27	96636.0	663.6
12/09/02	13:28	96636.0	663.6
12/09/02	13:29	96636.0	663.6
12/09/02	13:30	96636.0	663.6
12/09/02	13:31	96426.0	660.8
12/09/02	13:32	96426.0	660.8
12/09/02	13:33	96426.0	660.8
12/09/02	13:34	96426.0	660.8
12/09/02	13:35	96426.0	660.8
12/09/02	13:36	96426.0	660.8
12/09/02	13:37	N/A	660.8
12/09/02	13:38	N/A	660.8
12/09/02	13:39	N/A	660.8
12/09/02	13:40	N/A	660.8
12/09/02	13:41	N/A	660.8
12/09/02	13:42	N/A	660.8
12/09/02	13:43	N/A	660.8
12/09/02	13:44	N/A	660.8
12/09/02	13:45	N/A	660.8

12/09/02 13:46	N/A	664.0
12/09/02 13:47	96306.0	664.0
12/09/02 13:48	96306.0	664.0
12/09/02 13:49	96306.0	664.0
12/09/02 13:50	96306.0	664.0
12/09/02 13:51	96306.0	664.0
12/09/02 13:52	96306.0	664.0
12/09/02 13:53	96306.0	664.0
12/09/02 13:54	96306.0	664.0
12/09/02 13:55	96306.0	664.0
12/09/02 13:56	96306.0	664.0
12/09/02 13:57	96306.0	664.0
12/09/02 13:58	96306.0	664.0
12/09/02 13:59	96306.0	664.0
12/09/02 14:00	96306.0	664.0
12/09/02 14:01	96204.0	667.3
12/09/02 14:02	96204.0	667.3
12/09/02 14:03	96204.0	667.3
12/09/02 14:04	96204.0	667.3
12/09/02 14:05	96204.0	667.3
12/09/02 14:06	96204.0	667.3
12/09/02 14:07	96204.0	667.3
12/09/02 14:08	96204.0	667.3
12/09/02 14:09	96204.0	667.3
12/09/02 14:10	96204.0	667.3
12/09/02 14:11	96204.0	667.3
12/09/02 14:12	96204.0	667.3
12/09/02 14:13	96204.0	667.3
12/09/02 14:14	96204.0	667.3
12/09/02 14:15	96204.0	667.3
12/09/02 14:16	96132.0	659.8
12/09/02 14:17	96132.0	659.8
12/09/02 14:18	96132.0	659.8
12/09/02 14:19	96132.0	659.8
12/09/02 14:20	96132.0	659.8
12/09/02 14:21	96132.0	659.8
12/09/02 14:22	96132.0	659.8
12/09/02 14:23	96132.0	659.8
12/09/02 14:24	96132.0	659.8
Final Average*	96208.1	661.4
Maximum*	96636.0	667.3
Minimum*	95874.0	657.7

*Does not include Invalid Averaging Periods ("N/A")

Unit 1 Particulate
Run #3

Enertec NTDAS®
Average Values Report
Generated : 12/11/02 14:56

Company: St. Johns River Power Park U#1
Plant: 11201 New Berlin Road
City/St: Jacksonville, FL 32226
Source: Unit 1

Period Start: 12/09/02 15:16
Period End: 12/09/02 17:24
Validation Type: 1/1 min
Averaging Period: 1/1 min
Type: Rolling Avg

Period Start	Average 1stk_kscfh	Average 1Unit Load MW
12/09/02 15:16	95676.0	668.9
12/09/02 15:17	95676.0	668.9
12/09/02 15:18	95676.0	668.9
12/09/02 15:19	95676.0	668.9
12/09/02 15:20	95676.0	668.9
12/09/02 15:21	95676.0	668.9
12/09/02 15:22	95676.0	668.9
12/09/02 15:23	95676.0	668.9
12/09/02 15:24	95676.0	668.9
12/09/02 15:25	95676.0	668.9
12/09/02 15:26	95676.0	668.9
12/09/02 15:27	95676.0	668.9
12/09/02 15:28	95676.0	668.9
12/09/02 15:29	95676.0	668.9
12/09/02 15:30	95676.0	668.9
12/09/02 15:31	95322.0	672.3
12/09/02 15:32	95322.0	672.3
12/09/02 15:33	95322.0	672.3
12/09/02 15:34	95322.0	672.3
12/09/02 15:35	95322.0	672.3
12/09/02 15:36	95322.0	672.3
12/09/02 15:37	95322.0	672.3
12/09/02 15:38	95322.0	672.3
12/09/02 15:39	95322.0	672.3
12/09/02 15:40	95322.0	672.3
12/09/02 15:41	95322.0	672.3
12/09/02 15:42	95322.0	672.3
12/09/02 15:43	95322.0	672.3
12/09/02 15:44	95322.0	672.3
12/09/02 15:45	95322.0	672.3
12/09/02 15:46	94524.0	667.9
12/09/02 15:47	94524.0	667.9
12/09/02 15:48	94524.0	667.9
12/09/02 15:49	94524.0	667.9
12/09/02 15:50	94524.0	667.9
12/09/02 15:51	94524.0	667.9
12/09/02 15:52	94524.0	667.9
12/09/02 15:53	94524.0	667.9
12/09/02 15:54	94524.0	667.9

12/09/02	15:55	94524.0	667.9
12/09/02	15:56	94524.0	667.9
12/09/02	15:57	94524.0	667.9
12/09/02	15:58	94524.0	667.9
12/09/02	15:59	94524.0	667.9
12/09/02	16:00	94524.0	667.9
12/09/02	16:01	95058.0	668.4
12/09/02	16:02	95058.0	668.4
12/09/02	16:03	95058.0	668.4
12/09/02	16:04	95058.0	668.4
12/09/02	16:05	95058.0	668.4
12/09/02	16:06	95058.0	668.4
12/09/02	16:07	95058.0	668.4
12/09/02	16:08	95058.0	668.4
12/09/02	16:09	95058.0	668.4
12/09/02	16:10	95058.0	668.4
12/09/02	16:11	95058.0	668.4
12/09/02	16:12	95058.0	668.4
12/09/02	16:13	95058.0	668.4
12/09/02	16:14	95058.0	668.4
12/09/02	16:15	95058.0	668.4
12/09/02	16:16	94242.0	674.7
12/09/02	16:17	94242.0	674.7
12/09/02	16:18	94242.0	674.7
12/09/02	16:19	94242.0	674.7
12/09/02	16:20	94242.0	674.7
12/09/02	16:21	94242.0	674.7
12/09/02	16:22	94242.0	674.7
12/09/02	16:23	94242.0	674.7
12/09/02	16:24	94242.0	674.7
12/09/02	16:25	94242.0	674.7
12/09/02	16:26	94242.0	674.7
12/09/02	16:27	94242.0	674.7
12/09/02	16:28	94242.0	674.7
12/09/02	16:29	94242.0	674.7
12/09/02	16:30	94242.0	674.7
12/09/02	16:31	94092.0	671.6
12/09/02	16:32	94092.0	671.6
12/09/02	16:33	94092.0	671.6
12/09/02	16:34	94092.0	671.6
12/09/02	16:35	94092.0	671.6
12/09/02	16:36	94092.0	671.6
12/09/02	16:37	94092.0	671.6
12/09/02	16:38	94092.0	671.6
12/09/02	16:39	94092.0	671.6
12/09/02	16:40	94092.0	671.6
12/09/02	16:41	94092.0	671.6
12/09/02	16:42	94092.0	671.6
12/09/02	16:43	94092.0	671.6
12/09/02	16:44	94092.0	671.6
12/09/02	16:45	94092.0	671.6
12/09/02	16:46	94860.0	672.9

12/09/02 16:47	94860.0	672.9
12/09/02 16:48	94860.0	672.9
12/09/02 16:49	94860.0	672.9
12/09/02 16:50	94860.0	672.9
12/09/02 16:51	94860.0	672.9
12/09/02 16:52	94860.0	672.9
12/09/02 16:53	94860.0	672.9
12/09/02 16:54	94860.0	672.9
12/09/02 16:55	94860.0	672.9
12/09/02 16:56	94860.0	672.9
12/09/02 16:57	94860.0	672.9
12/09/02 16:58	94860.0	672.9
12/09/02 16:59	94860.0	672.9
12/09/02 17:00	94860.0	672.9
12/09/02 17:01	95286.0	669.4
12/09/02 17:02	95286.0	669.4
12/09/02 17:03	95286.0	669.4
12/09/02 17:04	95286.0	669.4
12/09/02 17:05	95286.0	669.4
12/09/02 17:06	95286.0	669.4
12/09/02 17:07	95286.0	669.4
12/09/02 17:08	95286.0	669.4
12/09/02 17:09	95286.0	669.4
12/09/02 17:10	95286.0	669.4
12/09/02 17:11	95286.0	669.4
12/09/02 17:12	95286.0	669.4
12/09/02 17:13	95286.0	669.4
12/09/02 17:14	95286.0	669.4
12/09/02 17:15	95286.0	669.4
12/09/02 17:16	94812.0	663.4
12/09/02 17:17	94812.0	663.4
12/09/02 17:18	94812.0	663.4
12/09/02 17:19	94812.0	663.4
12/09/02 17:20	94812.0	663.4
12/09/02 17:21	94812.0	663.4
12/09/02 17:22	94812.0	663.4
12/09/02 17:23	94812.0	663.4
12/09/02 17:24	94812.0	663.4
Final Average*	94877.6	670.2
Maximum*	95676.0	674.7
Minimum*	94092.0	663.4

*Does not include Invalid Averaging Periods ("N/A")

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Actual Values At: ~~6:00:00~~ AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	202	47.0	43.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-21	15.0	195	63.0	38.6	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-31	15.0	197	63.0	39.5	0.0	0.0	0.0	3.0	1.6	1.5	50.0
1A TR-41	20.0	177	67.0	32.2	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	201	126	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	37.9	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	218	189	38.6	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	202	45.0	42.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-22	15.0	198	61.0	38.7	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	185	79.0	37.3	0.0	0.0	0.0	3.7	1.9	1.7	50.0
1A TR-52	30.0	201	126	37.6	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	207	154	38.0	0.0	0.0	0.0	7.2	3.8	1.6	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.1	5.9	1.5	90.0
1A TR-13	12.0	196	51.0	40.2	0.0	0.0	0.0	2.4	1.1	1.7	50.0
1A TR-23	15.0	194	63.0	40.0	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1A TR-33	15.0	193	63.0	38.2	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	177	83.0	36.4	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	205	130	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1A TR-63	35.0	207	162	36.6	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	225	217	39.2	0.0	0.0	1.0	10.1	5.7	1.5	90.0
1A TR-14	12.0	200	51.0	41.4	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	200	61.0	39.5	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1A TR-34	15.0	177	59.0	35.3	0.0	0.0	0.0	2.7	1.3	1.7	50.0
1A TR-44	20.0	171	77.0	34.0	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-54	30.0	192	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	198	158	35.9	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1A TR-74	45.0	215	213	36.1	0.0	0.0	0.0	9.7	5.4	1.5	90.0
1A TR-15	12.0	198	43.0	41.3	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	177	59.0	36.9	0.0	0.0	0.0	2.5	1.3	1.6	49.0



Actual Values At: 6:00:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-35	15.0	174	61.0	34.0	0.0	0.0	0.0	2.6	1.3	1.6	50.0
1A TR-45	20.0	167	83.0	33.5	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-55	30.0	189	134	35.2	0.0	0.0	0.0	5.7	3.0	1.6	60.0
1A TR-65	35.0	195	156	36.9	0.0	0.0	0.0	6.8	3.6	1.6	70.0
1A TR-75	45.0	212	98.0	32.8	0.0	0.0	0.0	9.5	5.3	1.5	90.0
1A TR-16	12.0	192	47.0	40.0	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1A TR-26	15.0	180	71.0	50.9	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1A TR-36	15.0	174	61.0	34.7	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-46	20.0	164	79.0	33.1	0.0	0.0	0.0	3.3	1.6	1.7	50.0
1A TR-56	Power Off										
1A TR-66	35.0	200	134	33.1	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1A TR-76	45.0	220	213	39.0	0.0	0.0	0.0	9.9	5.5	1.5	90.0
Analog											
1A East	8.5	%									
1A West	7.4	%									



Actual Values At: 6:15:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/MIn	KVA	KW	Fm Factor	EM Limit
IB TR-11	12.0	190	47.0	39.3	0.0	0.0	0.0	2.3	1.1	1.7	50.0
IB TR-21	15.0	183	63.0	37.2	0.0	0.0	0.0	2.7	1.5	1.5	50.0
IB TR-31	15.0	164	59.0	32.8	0.0	0.0	0.0	2.5	1.2	1.7	50.0
IB TR-41	20.0	170	77.0	34.4	0.0	0.0	0.0	3.4	1.7	1.7	50.0
IB TR-51	30.0	197	132	37.0	0.0	0.0	0.0	5.9	3.1	1.6	60.0
IB TR-61	35.0	208	166	37.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
IB TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
IB TR-12	12.0	190	45.0	40.6	0.0	0.0	0.0	2.3	1.1	1.7	50.0
IB TR-22	15.0	194	63.0	38.7	0.0	0.0	0.0	2.9	1.6	1.5	50.0
IB TR-32	15.0	180	59.0	16.8	0.0	0.0	0.0	2.7	1.5	1.5	50.0
IB TR-42	20.0	178	83.0	36.9	0.0	0.0	0.0	3.6	1.8	1.7	50.0
IB TR-52	30.0	198	126	37.3	0.0	0.0	0.0	5.9	3.1	1.6	60.0
IB TR-62	35.0	210	162	38.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
IB TR-72	45.0	215	203	39.1	0.0	0.0	0.0	9.7	5.4	1.5	90.0
IB TR-13	12.0	194	47.0	40.3	0.0	0.0	0.0	2.3	1.1	1.7	50.0
IB TR-23	15.0	194	63.0	38.1	0.0	0.0	0.0	2.9	1.5	1.6	50.0
IB TR-33	15.0	184	59.0	36.9	0.0	0.0	0.0	2.7	1.5	1.5	50.0
IB TR-43	20.0	180	79.0	36.8	0.0	0.0	0.0	3.6	1.8	1.7	50.0
IB TR-53	30.0	205	134	37.8	0.0	0.0	0.0	6.2	3.3	1.6	60.0
IB TR-63	35.0	201	156	38.0	0.0	0.0	0.0	7.0	3.7	1.6	70.0
IB TR-73	45.0	226	181	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
IB TR-14	12.0	201	51.0	41.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
IB TR-24	Hopper High Power Off										
IB TR-34	15.0	197	63.0	39.4	0.0	0.0	0.0	3.0	1.6	1.5	50.0
IB TR-44	20.0	185	75.0	37.8	0.0	0.0	0.0	3.7	1.7	1.8	50.0
IB TR-54	30.0	220	126	41.7	0.0	0.0	0.0	6.6	3.5	1.6	60.0
IB TR-64	35.0	231	162	41.2	0.0	0.0	0.0	8.1	4.5	1.5	70.0
IB TR-74	36.0	214	162	38.7	0.0	0.0	0.0	7.7	4.1	1.6	90.0
IB TR-15	Hopper High Power Off										
IB TR-25	1.0	75.0	3.0	19.1	0.0	0.0	207	0.1	0.0	2.1	50.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-35	15.0	222	63.0	43.2	0.0	0.0	0.0	3.3	1.8	1.5	50.0
1B TR-45	20.0	203	83.0	41.4	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-55	30.0	221	126	42.2	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-65	35.0	236	162	42.6	0.0	0.0	0.0	8.3	4.6	1.5	70.0
1B TR-75	36.0	232	162	41.2	0.0	0.0	0.0	8.4	4.5	1.6	90.0
1B TR-16	Halted										
1B TR-26	No Response										
1B TR-36	15.0	225	61.0	45.8	0.0	0.0	0.0	3.4	1.9	1.5	50.0
1B TR-46	20.0	199	77.0	40.8	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-56	30.0	226	130	41.9	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-66	35.0	234	162	42.3	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-76	45.0	295	225	42.3	0.0	0.0	0.0	13.3	7.4	1.5	90.0
Analog											
1B East	8.4	%									
1B West	3.1	%									

9:00



Actual Values At: ~~7:00:00~~ AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	205	47.0	43.6	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	195	61.0	38.7	0.0	0.0	0.0	2.9	1.6	1.6	50.0
1A TR-31	15.0	194	61.0	39.2	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	175	67.0	32.1	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	200	130	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	38.0	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	217	187	38.7	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	202	45.0	42.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-22	15.0	196	61.0	38.4	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	185	77.0	37.2	0.0	0.0	0.0	3.7	1.9	1.7	50.0
1A TR-52	30.0	201	126	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	206	154	37.9	0.0	0.0	0.0	7.2	3.8	1.6	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.1	5.9	1.5	90.0
1A TR-13	12.0	199	51.0	40.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	194	61.0	40.1	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1A TR-33	15.0	194	61.0	38.1	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	177	83.0	36.4	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	205	130	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1A TR-63	35.0	207	162	36.6	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	225	217	39.2	0.0	0.0	0.0	10.1	5.7	1.5	90.0
1A TR-14	12.0	201	51.0	41.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	198	61.0	39.4	0.0	0.0	0.0	3.0	1.6	1.6	50.0
1A TR-34	15.0	175	59.0	35.1	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-44	20.0	168	75.0	34.0	0.0	0.0	0.0	3.4	1.7	1.6	50.0
1A TR-54	30.0	193	0.0	32.9	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	198	156	35.9	0.0	0.0	0.0	6.9	3.7	1.6	70.0
1A TR-74	45.0	216	213	36.2	0.0	0.0	0.0	9.8	5.5	1.5	90.0
1A TR-15	12.0	197	45.0	41.2	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	177	59.0	37.0	0.0	0.0	0.0	2.5	1.3	1.6	49.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
IB TR-11	12.0	193	47.0	40.0	0.0	0.0	0.0	2.3	1.1	1.7	50.0
IB TR-21	15.0	182	61.0	37.1	0.0	0.0	0.0	2.7	1.5	1.5	50.0
IB TR-31	15.0	164	59.0	32.8	0.0	0.0	0.0	2.5	1.2	1.7	50.0
IB TR-41	20.0	169	79.0	34.5	0.0	0.0	0.0	3.4	1.7	1.7	50.0
IB TR-51	30.0	197	134	36.9	0.0	0.0	0.0	5.9	3.1	1.6	60.0
IB TR-61	35.0	208	166	37.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
IB TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
IB TR-12	12.0	190	45.0	40.5	0.0	0.0	0.0	2.3	1.1	1.7	50.0
IB TR-22	15.0	194	63.0	38.7	0.0	0.0	0.0	2.9	1.6	1.5	50.0
IB TR-32	15.0	180	61.0	16.7	0.0	0.0	0.0	2.7	1.5	1.5	50.0
IB TR-42	20.0	177	83.0	36.7	0.0	0.0	0.0	3.5	1.8	1.7	50.0
IB TR-52	30.0	197	126	37.2	0.0	0.0	0.0	5.9	3.1	1.6	60.0
IB TR-62	35.0	209	162	38.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
IB TR-72	45.0	214	203	39.1	0.0	0.0	0.0	9.6	5.4	1.5	90.0
IB TR-13	12.0	195	47.0	40.4	0.0	0.0	0.0	2.3	1.1	1.7	50.0
IB TR-23	15.0	191	61.0	37.8	0.0	0.0	0.0	2.9	1.4	1.7	50.0
IB TR-33	15.0	182	59.0	36.8	0.0	0.0	0.0	2.7	1.5	1.5	50.0
IB TR-43	20.0	179	83.0	36.8	0.0	0.0	0.0	3.6	1.8	1.7	50.0
IB TR-53	30.0	204	134	37.8	0.0	0.0	0.0	6.1	3.2	1.6	60.0
IB TR-63	35.0	200	156	37.8	0.0	0.0	0.0	7.0	3.7	1.6	70.0
IB TR-73	45.0	226	177	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
IB TR-14	12.0	202	51.0	42.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
IB TR-24	Hopper High Power Off										
IB TR-34	15.0	196	63.0	39.4	0.0	0.0	0.0	2.9	1.6	1.6	50.0
IB TR-44	20.0	185	75.0	37.6	0.0	0.0	0.0	3.7	1.7	1.8	50.0
IB TR-54	30.0	220	126	41.7	0.0	0.0	0.0	6.6	3.5	1.6	60.0
IB TR-64	35.0	230	156	41.0	0.0	0.0	0.0	8.0	4.4	1.5	70.0
IB TR-74	36.0	212	158	38.5	0.0	0.0	0.0	7.6	4.1	1.6	90.0
IB TR-15	Hopper High Power Off										
IB TR-25	2.0	90.0	11.0	18.3	0.0	0.0	210	0.1	0.0	2.7	50.0

10:00



Actual Values At: ~~8:00~~ 9:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	206	47.0	43.9	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	195	63.0	38.7	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1A TR-31	15.0	195	61.0	39.2	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	176	67.0	32.2	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	201	130	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	38.0	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	218	191	38.7	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	203	43.0	43.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-22	15.0	196	61.0	38.3	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	184	77.0	37.0	0.0	0.0	0.0	3.7	1.8	1.7	50.0
1A TR-52	30.0	200	126	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	207	154	38.0	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-72	45.0	226	217	39.5	0.0	0.0	0.0	10.2	5.9	1.5	90.0
1A TR-13	12.0	198	51.0	40.7	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	194	61.0	40.0	0.0	0.0	0.0	2.9	1.6	1.7	50.0
1A TR-33	15.0	193	61.0	38.1	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	177	77.0	36.4	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	205	126	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1A TR-63	35.0	207	158	36.6	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	224	213	39.2	0.0	0.0	1.0	10.1	5.6	1.5	90.0
1A TR-14	12.0	201	47.0	41.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	198	61.0	39.4	0.0	0.0	0.0	3.0	1.6	1.6	50.0
1A TR-34	15.0	177	59.0	35.1	0.0	0.0	0.0	2.6	1.3	1.6	50.0
1A TR-44	20.0	165	75.0	33.7	0.0	0.0	0.0	3.4	1.6	1.7	50.0
1A TR-54	30.0	193	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	198	156	35.9	0.0	0.0	0.0	6.9	3.7	1.6	70.0
1A TR-74	45.0	217	213	36.2	0.0	0.0	0.0	9.8	5.5	1.5	90.0
1A TR-15	12.0	200	45.0	41.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	177	59.0	37.1	0.0	0.0	0.0	2.5	1.3	1.6	49.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-35	15.0	174	61.0	34.0	0.0	0.0	0.0	2.6	1.4	1.7	50.0
1A TR-45	20.0	167	83.0	33.4	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-55	30.0	190	134	35.2	0.0	0.0	0.0	5.7	3.0	1.6	60.0
1A TR-65	35.0	195	156	36.9	0.0	0.0	0.0	6.8	3.6	1.6	70.0
1A TR-75	45.0	212	98.0	32.9	0.0	0.0	0.0	9.5	5.3	1.5	90.0
1A TR-16	12.0	194	47.0	40.4	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1A TR-26	15.0	180	71.0	50.9	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1A TR-36	15.0	173	61.0	34.7	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-46	20.0	165	83.0	33.3	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-56	Power Off										
1A TR-66	35.0	200	134	33.1	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1A TR-76	45.0	220	213	39.0	0.0	0.0	0.0	9.9	5.5	1.5	90.0
Analog											
1A East	10.1	%									
1A West	7.5	%									



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	12.0	194	47.0	40.1	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-21	15.0	184	61.0	37.3	0.0	0.0	0.0	2.8	1.5	1.5	50.0
1B TR-31	15.0	164	59.0	32.9	0.0	0.0	0.0	2.5	1.2	1.6	50.0
1B TR-41	20.0	170	79.0	34.5	0.0	0.0	0.0	3.4	1.7	1.7	50.0
1B TR-51	30.0	197	134	37.0	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-61	35.0	208	166	37.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
1B TR-12	12.0	190	47.0	40.5	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	194	61.0	38.8	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-32	15.0	180	61.0	16.7	0.0	0.0	0.0	2.7	1.5	1.6	50.0
1B TR-42	20.0	177	77.0	36.7	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1B TR-52	30.0	198	126	37.3	0.0	0.0	0.0	5.9	3.2	1.6	60.0
1B TR-62	35.0	209	160	38.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-72	45.0	215	203	39.1	0.0	0.0	0.0	9.6	5.4	1.5	90.0
1B TR-13	12.0	195	47.0	40.5	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-23	15.0	193	67.0	38.0	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-33	15.0	184	59.0	36.9	0.0	0.0	0.0	2.8	1.5	1.5	50.0
1B TR-43	20.0	180	83.0	36.9	0.0	0.0	0.0	3.6	1.8	1.7	50.0
1B TR-53	30.0	205	132	37.8	0.0	0.0	0.0	6.2	3.2	1.6	60.0
1B TR-63	35.0	201	156	37.9	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1B TR-73	45.0	226	179	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
1B TR-14	12.0	204	47.0	42.3	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1B TR-24	Hopper High Power Off										
1B TR-34	15.0	197	63.0	39.4	0.0	0.0	0.0	3.0	1.5	1.6	50.0
1B TR-44	20.0	185	75.0	37.8	0.0	0.0	0.0	3.7	1.7	1.8	50.0
1B TR-54	30.0	220	126	41.7	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-64	35.0	231	158	41.0	0.0	0.0	0.0	8.1	4.4	1.5	70.0
1B TR-74	36.0	213	162	38.7	0.0	0.0	0.0	7.7	4.1	1.6	90.0
1B TR-15	Hopper High Power Off										
1B TR-25	2.0	85.0	7.0	16.5	0.0	0.0	190	0.1	0.0	2.3	50.0

2:00 PM



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	207	47.0	44.1	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	195	67.0	38.5	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-31	15.0	195	67.0	39.2	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	175	67.0	32.0	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	201	126	37.4	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	37.9	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	217	189	38.6	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	203	45.0	43.0	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-22	15.0	196	61.0	38.3	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	185	79.0	37.0	0.0	0.0	0.0	3.7	1.9	1.7	50.0
1A TR-52	30.0	201	130	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	207	156	38.0	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.1	5.9	1.5	90.0
1A TR-13	12.0	200	47.0	40.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	194	63.0	40.0	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1A TR-33	15.0	193	63.0	38.1	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	177	83.0	36.3	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	204	126	37.1	0.0	0.0	0.0	6.1	3.1	1.6	60.0
1A TR-63	35.0	207	162	36.5	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	222	213	39.1	0.0	0.0	0.0	10.0	5.6	1.5	90.0
1A TR-14	12.0	204	47.0	42.5	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-24	15.0	198	61.0	39.4	0.0	0.0	0.0	3.0	1.6	1.6	50.0
1A TR-34	15.0	175	61.0	35.1	0.0	0.0	0.0	2.6	1.4	1.5	50.0
1A TR-44	20.0	166	75.0	33.7	0.0	0.0	0.0	3.3	1.7	1.6	50.0
1A TR-54	30.0	193	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	199	158	35.9	0.0	0.0	0.0	7.0	3.8	1.5	70.0
1A TR-74	45.0	217	213	36.2	0.0	0.0	0.0	9.7	5.4	1.5	90.0
1A TR-15	12.0	200	43.0	41.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	178	59.0	37.3	0.0	0.0	0.0	2.5	1.3	1.6	49.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	12.0	192	47.0	40.0	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-21	15.0	183	61.0	37.2	0.0	0.0	0.0	2.8	1.5	1.5	50.0
1B TR-31	15.0	164	59.0	33.0	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1B TR-41	21.0	172	79.0	34.4	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1B TR-51	30.0	197	134	36.9	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-61	35.0	208	166	37.3	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1B TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
1B TR-12	12.0	188	47.0	40.2	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	194	63.0	38.8	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-32	15.0	180	61.0	16.8	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-42	20.0	176	77.0	36.6	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1B TR-52	30.0	197	126	37.2	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-62	35.0	209	162	38.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-72	45.0	214	203	39.1	0.0	0.0	0.0	9.6	5.4	1.5	90.0
1B TR-13	12.0	195	47.0	40.5	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-23	15.0	192	67.0	38.0	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-33	15.0	183	59.0	36.8	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-43	20.0	180	83.0	36.7	0.0	0.0	0.0	3.6	1.8	1.7	50.0
1B TR-53	30.0	204	134	37.7	0.0	0.0	0.0	6.1	3.2	1.6	60.0
1B TR-63	35.0	200	156	37.8	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1B TR-73	45.0	226	179	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
1B TR-14	12.0	204	47.0	42.5	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1B TR-24	Hopper High Power Off										
1B TR-34	15.0	197	61.0	39.5	0.0	0.0	0.0	2.9	1.6	1.7	50.0
1B TR-44	20.0	185	75.0	37.6	0.0	0.0	0.0	3.7	1.7	1.8	50.0
1B TR-54	30.0	219	126	41.6	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-64	35.0	230	162	41.0	0.0	0.0	0.0	8.0	4.4	1.5	70.0
1B TR-74	36.0	212	158	38.5	0.0	0.0	0.0	7.6	4.1	1.6	90.0
1B TR-15	Hopper High Power Off										
1B TR-25	2.0	83.0	7.0	17.3	0.0	0.0	206	0.2	0.1	2.9	50.0

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spt/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	207	47.0	44.1	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	196	61.0	38.9	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-31	15.0	195	61.0	39.4	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	175	67.0	32.2	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	200	130	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	37.9	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	217	189	38.7	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	205	43.0	43.5	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-22	15.0	199	61.0	38.8	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	185	77.0	37.2	0.0	0.0	0.0	3.7	1.9	1.7	50.0
1A TR-52	30.0	201	126	37.6	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	207	154	38.0	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.2	5.9	1.5	90.0
1A TR-13	12.0	198	51.0	40.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	195	61.0	40.3	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-33	15.0	194	61.0	38.2	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	178	79.0	36.4	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	205	126	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
1A TR-63	35.0	207	162	36.5	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	223	213	39.1	0.0	0.0	1.0	10.1	5.6	1.5	90.0
1A TR-14	12.0	203	51.0	42.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	200	61.0	39.6	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1A TR-34	15.0	177	59.0	35.2	0.0	0.0	0.0	2.7	1.3	1.7	50.0
1A TR-44	20.0	168	75.0	33.9	0.0	0.0	0.0	3.4	1.7	1.7	50.0
1A TR-54	30.0	193	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	198	156	35.9	0.0	0.0	0.0	7.0	3.8	1.6	70.0
1A TR-74	45.0	215	213	36.2	0.0	0.0	0.0	9.7	5.4	1.5	90.0
1A TR-15	12.0	199	45.0	41.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	179	59.0	37.5	0.0	0.0	0.0	2.5	1.3	1.6	49.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-35	15.0	174	61.0	34.0	0.0	0.0	0.0	2.6	1.4	1.6	50.0
1A TR-45	20.0	165	83.0	33.4	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-55	30.0	190	134	35.2	0.0	0.0	0.0	5.7	3.0	1.6	60.0
1A TR-65	35.0	195	156	36.9	0.0	0.0	0.0	6.8	3.6	1.6	70.0
1A TR-75	45.0	212	98.0	32.8	0.0	0.0	0.0	9.5	5.3	1.5	90.0
1A TR-16	12.0	196	45.0	40.8	0.0	0.0	0.0	2.4	1.1	1.7	50.0
1A TR-26	15.0	180	71.0	51.3	0.0	0.0	0.0	2.7	1.4	1.7	50.0
1A TR-36	15.0	173	61.0	34.7	0.0	0.0	0.0	2.6	1.3	1.7	50.0
1A TR-46	20.0	165	83.0	33.3	0.0	0.0	0.0	3.3	1.7	1.7	50.0
1A TR-56	Power Off										
1A TR-66	35.0	200	134	33.1	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1A TR-76	45.0	220	213	39.0	0.0	0.0	0.0	9.9	5.5	1.5	90.0
Analog											
1A East	10.1	%									
1A West	7.5	%									



Actual Values At: 12:15:00 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-35	15.0	222	61.0	43.4	0.0	0.0	0.0	3.3	1.7	1.6	50.0
1B TR-45	20.0	201	79.0	41.2	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-55	30.0	219	126	42.0	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-65	35.0	235	162	42.5	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-75	36.0	231	162	41.1	0.0	0.0	0.0	8.3	4.5	1.6	90.0
1B TR-16	Halted										
1B TR-26	No Response										
1B TR-36	15.0	229	61.0	46.1	0.0	0.0	0.0	3.4	1.9	1.5	50.0
1B TR-46	20.0	196	77.0	40.2	0.0	0.0	0.0	3.9	2.0	1.7	50.0
1B TR-56	30.0	225	130	41.7	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-66	35.0	233	162	42.2	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-76	45.0	293	227	42.2	0.0	0.0	0.0	13.2	7.4	1.5	90.0
Analog											
1B East	8.7	%									
1B West	4.2	%									

3:00



Actual Values At: ~~1:00:04~~ PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1A TR-11	12.0	207	51.0	44.1	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-21	15.0	194	67.0	38.5	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-31	15.0	194	61.0	39.1	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-41	20.0	175	67.0	32.0	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-51	30.0	200	126	37.4	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-61	35.0	215	162	37.8	0.0	0.0	0.0	7.5	4.1	1.5	70.0
1A TR-71	40.0	217	187	38.6	0.0	0.0	0.0	8.7	4.9	1.5	90.0
1A TR-12	12.0	205	45.0	43.2	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1A TR-22	15.0	197	61.0	38.5	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1A TR-32	Power Off										
1A TR-42	20.0	184	77.0	37.0	0.0	0.0	0.0	3.7	1.8	1.7	50.0
1A TR-52	30.0	201	126	37.5	0.0	0.0	0.0	6.0	3.2	1.6	60.0
1A TR-62	35.0	207	154	38.0	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-72	45.0	225	217	39.5	0.0	0.0	0.0	10.1	5.9	1.5	90.0
1A TR-13	12.0	199	51.0	40.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-23	15.0	194	63.0	40.0	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1A TR-33	15.0	193	61.0	38.2	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1A TR-43	20.0	177	83.0	36.4	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1A TR-53	30.0	204	126	37.2	0.0	0.0	0.0	6.1	3.1	1.7	60.0
1A TR-63	35.0	207	162	36.5	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1A TR-73	45.0	223	213	39.1	0.0	0.0	2.0	10.0	5.6	1.5	90.0
1A TR-14	12.0	203	51.0	41.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-24	15.0	198	61.0	39.4	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1A TR-34	15.0	175	59.0	35.1	0.0	0.0	0.0	2.6	1.3	1.6	50.0
1A TR-44	20.0	168	77.0	33.7	0.0	0.0	0.0	3.3	1.6	1.7	50.0
1A TR-54	30.0	193	0.0	32.8	0.0	0.0	0.0	5.8	3.1	1.6	60.0
1A TR-64	35.0	199	156	35.9	0.0	0.0	0.0	7.0	3.8	1.5	70.0
1A TR-74	45.0	217	213	36.2	0.0	0.0	0.0	9.7	5.4	1.5	90.0
1A TR-15	12.0	199	43.0	41.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1A TR-25	14.0	178	59.0	37.3	0.0	0.0	0.0	2.5	1.3	1.6	49.0



Actual Values At: 1:15:01 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	12.0	193	45.0	40.1	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-21	15.0	183	61.0	37.3	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-31	15.0	164	59.0	33.0	0.0	0.0	0.0	2.5	1.2	1.7	50.0
1B TR-41	20.0	168	77.0	34.4	0.0	0.0	0.0	3.4	1.7	1.8	50.0
1B TR-51	30.0	197	134	36.9	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-61	35.0	208	166	37.3	0.0	0.0	0.0	7.2	4.0	1.5	70.0
1B TR-71	36.0	200	162	36.1	0.0	0.0	0.0	7.2	3.9	1.6	90.0
1B TR-12	12.0	190	47.0	40.5	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	192	61.0	38.4	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-32	15.0	180	61.0	16.8	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-42	20.0	177	77.0	36.6	0.0	0.0	0.0	3.5	1.8	1.7	50.0
1B TR-52	30.0	197	126	37.2	0.0	0.0	0.0	5.9	3.1	1.6	60.0
1B TR-62	35.0	209	162	38.4	0.0	0.0	0.0	7.3	4.0	1.5	70.0
1B TR-72	45.0	214	203	39.1	0.0	0.0	0.0	9.6	5.4	1.5	90.0
1B TR-13	12.0	199	47.0	41.3	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1B TR-23	15.0	192	59.0	38.1	0.0	0.0	0.0	2.9	1.4	1.7	50.0
1B TR-33	15.0	183	59.0	36.8	0.0	0.0	0.0	2.7	1.5	1.5	50.0
1B TR-43	20.0	179	83.0	36.7	0.0	0.0	0.0	3.6	1.8	1.7	50.0
1B TR-53	30.0	202	130	37.6	0.0	0.0	0.0	6.1	3.2	1.6	60.0
1B TR-63	35.0	200	158	37.9	0.0	0.0	0.0	7.0	3.7	1.6	70.0
1B TR-73	45.0	226	177	35.5	0.0	0.0	0.0	10.2	5.7	1.5	90.0
1B TR-14	12.0	204	45.0	42.5	0.0	0.0	0.0	2.4	1.2	1.7	50.0
1B TR-24	Hopper High Power Off										
1B TR-34	15.0	196	67.0	39.3	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-44	20.0	185	75.0	37.6	0.0	0.0	0.0	3.7	1.7	1.8	50.0
1B TR-54	30.0	220	126	41.6	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-64	35.0	229	158	40.9	0.0	0.0	0.0	8.0	4.4	1.5	70.0
1B TR-74	36.0	212	158	38.5	0.0	0.0	0.0	7.6	4.1	1.6	90.0
1B TR-15	Hopper High Power Off										
1B TR-25	1.0	80.0	3.0	20.2	0.0	0.0	213	0.1	0.1	1.3	50.0



Actual Values At: 1:15:01 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-35	15.0	222	61.0	43.4	0.0	0.0	0.0	3.3	1.8	1.6	50.0
1B TR-45	20.0	204	83.0	41.4	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-55	30.0	220	130	42.0	0.0	0.0	0.0	6.6	3.5	1.6	60.0
1B TR-65	35.0	234	162	42.3	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-75	36.0	232	162	41.2	0.0	0.0	0.0	8.3	4.5	1.6	90.0
1B TR-16	Halted										
1B TR-26	No Response										
1B TR-36	16.0	231	61.0	46.6	0.0	0.0	0.0	3.4	1.9	1.5	50.0
1B TR-46	20.0	197	77.0	40.5	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-56	30.0	225	126	41.6	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-66	35.0	233	162	42.2	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-76	45.0	293	225	42.3	0.0	0.0	0.0	13.2	7.4	1.5	90.0
Analog											
1B East	8.8	%									
1B West	3.8	%									

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # ONE

Date: 12 / 9 / 02

PARAMETER	UNITS	READING (30 minute intervals)					
		PETENSON	PETENSON	PETENSON	PETENSON	PETENSON	PETENSON
Person Recording Data	PETENSON	PETENSON	PETENSON	PETENSON	PETENSON	PETENSON	PETENSON
Time		0800	0935	0901	0930	1000	1030
Steam Flow	LB/HR x 10 ⁶	4.54	4.46	4.45	4.49	4.48	4.51
Air Flow	%	71	72	70	72	70	70
Generator Load (Gross)	Megawatts	663	660	654	669	661	665
Boiler Thermal Demand	Megawatts	669	658	658	674	664	671
O2 Flue Gas	%	2.90 3.02	3.02 3.11	3.00 3.07	2.71 2.87	2.97 3.01	2.48 2.94
Fuel Flow	%	99.2	99.1	99.1	99	99.2	99.2
COAL TOTALIZER	TONS						
A		72	72	71	71	73	72
B		72	72	72	72	72	72
C		81	81	81	81	81	81
D		0	0	0	0	0	0
E		93	93	93	93	93	93
F		82	82	82	83	82	82
G		97	97	97	97	97	97

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # ONE

Date: 12 / 9 / 02

PARAMETER	UNITS	READING (30 minute intervals)					
		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Person Recording Data							
Time		1100	1130	1200	1230	1300	1330
Steam Flow	LB/HR x 10 ⁶	4.45	4.50	4.60	4.48	4.52	4.48
Air Flow	%	70	70	71	71	70	71
Generator Load (Gross)	Megawatts	655	669	671	659	667	658
Boiler Thermal Demand	Megawatts	658	674	679	662	671	658
O2 Flue Gas	%	2.93 3.15	2.61 2.78	2.59 2.88	2.91 3.09	2.63 2.73	2.73 2.88
Fuel Flow	%	99.4	99.3	99.2	99.1	99.1	99
COAL TOTALIZER	TONS						
A		72	72	71	73	72	72
B		72	72	72	72	72	72
C		81	81	81	81	81	81
D		0	0	0	0	0	0
E		93	94	93	93	93	93
F		82	84	82	82	82	82
G		97	96	97	97	97	97

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # ONE

Date: 12 / 9 / 02

PARAMETER	UNITS	READING (30 minute intervals)					
		PETEMAN	PETEMON	PETERANN	PETERANW	PETERANW	PETERANW
Person Recording Data		PETEMAN	PETEMON	PETERANN	PETERANW	PETERANW	PETERANW
Time		1400	1430	1500	1530	1600	1630
Steam Flow	LB/HR x 10 ⁶	4.58	4.63	4.54	4.62	4.64	4.57
Air Flow	%	69	72	71	71	71	70
Generator Load (Gross)	Megawatts	671	675	674	675	680	662
Boiler Thermal Demand	Megawatts	676	683	683	680	687	667
O2 Flue Gas	%	2.42 2.78	2.38 2.49	2.33 2.60	2.72 2.91	2.32 2.66	2.54 2.90
Fuel Flow	%	99.4	98.9	99.1	99	98.8	99
COAL TOTALIZER	TONS						
A		72	72	72	72	72	72
B		72	72	72	73	72	72
C		81	81	82	81	81	81
D		Ø	Ø	Ø	Ø	Ø	Ø
E		93	93	93	93	93	93
F		82	82	82	82	82	82
G		97	95	96	96	96	96

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # ONE

Date: 12 / 9 / 02

PARAMETER	UNITS	READING (30 minute intervals)					
		PETENSON	TOSO	TOSO	TOSO	TOSO	TOSO
Person Recording Data							
Time		1700	1730	1800	1830	1900	1930
Steam Flow	LB/HR x 10 ⁶	4.71	4.60	4.65	4.60	4.67	4.58
Air Flow	%	71	72	71	71	72	71
Generator Load (Gross)	Megawatts	686	680	680	680	682	676
Boiler Thermal Demand	Megawatts	690	688	685	684	687	683
O2 Flue Gas	%	2.41	2.64	2.76	2.34	2.34	2.41
Fuel Flow	%	97.1	97.2	97.0	97.3	97.0	96.4
COAL TOTALIZER	TONS						
A		71	72	73	73	72	71
B		72	72	72	72	72	72
C		81	81	81	81	81	81
D		8	—	—	—	—	—
E		90	89	90	90	90	89
F		82	82	82	82	82	81
G		90	90	90	90	90	89

**ST. JOHNS RIVER POWER PARK
FLUE GAS DESULFURIZATION
OPERATIONAL PARAMETERS**

Date: 12 / 9 / 07
Initials: LYH

UNIT # 1

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000			
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800	5.7	5.8	0.5
0900	5.6	5.9	
1000	5.8	5.8	
1100	5.5	5.8	
1200	5.5	5.7	
1300	5.5	5.7	
1400	5.5	5.7	
1500	5.6	5.7	
1600	5.6	5.8	
1700	5.7	5.9	
1800	5.7	5.8	
1900	5.7	5.8	
2000	5.7	6.0	
2100			
2200			
2300			

Daily Water System Use: _____ (Total Gallons) / 1440 (min/day) = GPM

COMMENTS:

WW Start - 749 x 10 →
End - 799

UNIT 2

Enertec NTDAS®
Average Values Report
Generated : 12/10/02 18:03

Unit Load
Run #1

Company: St. Johns Unit 2
Plant:
City/St:
Source: Unit 2

Period Start: 12/10/02 09:15
Period End: 12/10/02 11:24
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start	Average 2Unit_Load MW
12/10/02 09:15	665.0
12/10/02 09:16	666.9
12/10/02 09:17	667.3
12/10/02 09:18	667.6
12/10/02 09:19	669.7
12/10/02 09:20	670.2
12/10/02 09:21	669.6
12/10/02 09:22	668.2
12/10/02 09:23	667.4
12/10/02 09:24	667.9
12/10/02 09:25	668.1
12/10/02 09:26	669.0
12/10/02 09:27	669.0
12/10/02 09:28	668.3
12/10/02 09:29	667.1
12/10/02 09:30	661.4
12/10/02 09:31	652.6
12/10/02 09:32	650.7
12/10/02 09:33	651.1
12/10/02 09:34	653.4
12/10/02 09:35	655.0
12/10/02 09:36	653.3
12/10/02 09:37	657.1
12/10/02 09:38	657.2
12/10/02 09:39	656.9
12/10/02 09:40	659.9
12/10/02 09:41	663.1
12/10/02 09:42	663.6
12/10/02 09:43	660.1
12/10/02 09:44	655.8
12/10/02 09:45	653.8
12/10/02 09:46	652.8
12/10/02 09:47	651.9
12/10/02 09:48	657.8
12/10/02 09:49	658.1
12/10/02 09:50	657.6
12/10/02 09:51	656.5
12/10/02 09:52	657.9
12/10/02 09:53	660.9
12/10/02 09:54	660.9
12/10/02 09:55	659.7
12/10/02 09:56	658.1
12/10/02 09:57	656.7
12/10/02 09:58	659.0
12/10/02 09:59	660.5
12/10/02 10:00	659.6
12/10/02 10:01	660.7
12/10/02 10:02	660.4

12/10/02	10:03	657.1
12/10/02	10:04	653.6
12/10/02	10:05	653.0
12/10/02	10:06	656.4
12/10/02	10:07	658.6
12/10/02	10:08	660.5
12/10/02	10:09	658.0
12/10/02	10:10	654.1
12/10/02	10:11	652.2
12/10/02	10:12	653.8
12/10/02	10:13	657.4
12/10/02	10:14	659.2
12/10/02	10:15	661.6
12/10/02	10:16	658.6
12/10/02	10:17	656.9
12/10/02	10:18	660.7
12/10/02	10:19	663.9
12/10/02	10:20	664.9
12/10/02	10:21	663.3
12/10/02	10:22	660.2
12/10/02	10:23	660.2
12/10/02	10:24	661.0
12/10/02	10:25	661.2
12/10/02	10:26	655.5
12/10/02	10:27	651.4
12/10/02	10:28	650.4
12/10/02	10:29	652.6
12/10/02	10:30	656.0
12/10/02	10:31	658.2
12/10/02	10:32	658.9
12/10/02	10:33	659.1
12/10/02	10:34	656.3
12/10/02	10:35	654.8
12/10/02	10:36	655.9
12/10/02	10:37	659.5
12/10/02	10:38	657.4
12/10/02	10:39	657.5
12/10/02	10:40	654.8
12/10/02	10:41	656.9
12/10/02	10:42	660.2
12/10/02	10:43	659.6
12/10/02	10:44	654.7
12/10/02	10:45	651.3
12/10/02	10:46	653.0
12/10/02	10:47	657.1
12/10/02	10:48	658.0
12/10/02	10:49	658.1
12/10/02	10:50	659.7
12/10/02	10:51	662.4
12/10/02	10:52	662.7
12/10/02	10:53	662.8
12/10/02	10:54	661.4
12/10/02	10:55	660.2
12/10/02	10:56	655.7
12/10/02	10:57	657.6
12/10/02	10:58	658.9
12/10/02	10:59	655.7
12/10/02	11:00	654.3
12/10/02	11:01	656.7
12/10/02	11:02	656.4
12/10/02	11:03	660.0
12/10/02	11:04	661.8

12/10/02 11:05	662.1
12/10/02 11:06	661.7
12/10/02 11:07	660.8
12/10/02 11:08	659.6
12/10/02 11:09	660.8
12/10/02 11:10	662.8
12/10/02 11:11	664.8
12/10/02 11:12	664.6
12/10/02 11:13	660.4
12/10/02 11:14	654.7
12/10/02 11:15	656.3
12/10/02 11:16	660.1
12/10/02 11:17	663.4
12/10/02 11:18	662.9
12/10/02 11:19	662.6
12/10/02 11:20	664.8
12/10/02 11:21	666.2
12/10/02 11:22	665.4
12/10/02 11:23	660.9
12/10/02 11:24	656.4
Final Average*	659.4
Maximum*	670.2
Minimum*	650.4

*Does not include Invalid Averaging Periods ("N/A")

Enertec NTDAHS®
Average Values Report
Generated : 12/10/02 18:03

2 Unit Load
Run #2

Company: St. Johns Unit 2
Plant:
City/St:
Source: Unit 2

Period Start: 12/10/02 12:10
Period End: 12/10/02 14:16
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start	Average 2Unit Load MW
12/10/02 12:10	657.1
12/10/02 12:11	655.4
12/10/02 12:12	659.8
12/10/02 12:13	663.3
12/10/02 12:14	664.7
12/10/02 12:15	666.1
12/10/02 12:16	667.1
12/10/02 12:17	666.4
12/10/02 12:18	666.7
12/10/02 12:19	667.8
12/10/02 12:20	667.6
12/10/02 12:21	666.6
12/10/02 12:22	666.5
12/10/02 12:23	663.4
12/10/02 12:24	658.2
12/10/02 12:25	660.2
12/10/02 12:26	662.3
12/10/02 12:27	664.2
12/10/02 12:28	665.2
12/10/02 12:29	665.5
12/10/02 12:30	664.9
12/10/02 12:31	660.0
12/10/02 12:32	656.4
12/10/02 12:33	660.1
12/10/02 12:34	665.8
12/10/02 12:35	667.3
12/10/02 12:36	666.9
12/10/02 12:37	667.7
12/10/02 12:38	668.5
12/10/02 12:39	668.6
12/10/02 12:40	666.4
12/10/02 12:41	663.5
12/10/02 12:42	660.2
12/10/02 12:43	659.2
12/10/02 12:44	659.7
12/10/02 12:45	660.9
12/10/02 12:46	663.1
12/10/02 12:47	662.9
12/10/02 12:48	661.8
12/10/02 12:49	662.3
12/10/02 12:50	663.0
12/10/02 12:51	663.5
12/10/02 12:52	663.1
12/10/02 12:53	662.6
12/10/02 12:54	660.4
12/10/02 12:55	655.4
12/10/02 12:56	659.9
12/10/02 12:57	665.2

12/10/02	12:58	666.0
12/10/02	12:59	664.9
12/10/02	13:00	663.3
12/10/02	13:01	663.0
12/10/02	13:02	662.5
12/10/02	13:03	658.1
12/10/02	13:04	655.3
12/10/02	13:05	655.1
12/10/02	13:06	656.9
12/10/02	13:07	663.5
12/10/02	13:08	666.6
12/10/02	13:09	667.3
12/10/02	13:10	668.0
12/10/02	13:11	665.4
12/10/02	13:12	663.7
12/10/02	13:13	662.1
12/10/02	13:14	658.9
12/10/02	13:15	659.1
12/10/02	13:16	660.2
12/10/02	13:17	662.6
12/10/02	13:18	663.8
12/10/02	13:19	662.8
12/10/02	13:20	660.9
12/10/02	13:21	661.8
12/10/02	13:22	665.1
12/10/02	13:23	667.3
12/10/02	13:24	667.9
12/10/02	13:25	667.0
12/10/02	13:26	666.9
12/10/02	13:27	666.3
12/10/02	13:28	665.6
12/10/02	13:29	664.8
12/10/02	13:30	664.5
12/10/02	13:31	663.0
12/10/02	13:32	661.4
12/10/02	13:33	660.8
12/10/02	13:34	661.7
12/10/02	13:35	664.6
12/10/02	13:36	665.0
12/10/02	13:37	666.0
12/10/02	13:38	667.1
12/10/02	13:39	667.8
12/10/02	13:40	668.3
12/10/02	13:41	668.2
12/10/02	13:42	668.8
12/10/02	13:43	668.5
12/10/02	13:44	667.4
12/10/02	13:45	667.0
12/10/02	13:46	665.7
12/10/02	13:47	663.8
12/10/02	13:48	663.5
12/10/02	13:49	663.8
12/10/02	13:50	663.4
12/10/02	13:51	663.7
12/10/02	13:52	663.0
12/10/02	13:53	661.7
12/10/02	13:54	662.0
12/10/02	13:55	664.5
12/10/02	13:56	667.1
12/10/02	13:57	667.4
12/10/02	13:58	666.9
12/10/02	13:59	665.8

13/10/02	14:00	665.4
12/10/02	14:01	666.3
12/10/02	14:02	665.6
12/10/02	14:03	664.5
12/10/02	14:04	664.6
12/10/02	14:05	664.6
12/10/02	14:06	665.3
12/10/02	14:07	666.0
12/10/02	14:08	666.3
12/10/02	14:09	667.4
12/10/02	14:10	667.5
12/10/02	14:11	668.3
12/10/02	14:12	667.8
12/10/02	14:13	667.4
12/10/02	14:14	666.4
12/10/02	14:15	665.3
12/10/02	14:16	666.5
Final Average*		664.0
Maximum*		668.8
Minimum*		655.1

*Does not include Invalid Averaging Periods ("N/A")

Enertec NTDAHS®
Average Values Report
Generated : 12/10/02 18:02

#2 Unit Load
Run #3

Company: St. Johns Unit 2
Plant:
City/St:
Source: Unit 2

Period Start: 12/10/02 15:10
Period End: 12/10/02 17:06
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start	Average 2Unit_Load MW
12/10/02 15:10	665.5
12/10/02 15:11	665.0
12/10/02 15:12	665.7
12/10/02 15:13	665.0
12/10/02 15:14	664.8
12/10/02 15:15	666.6
12/10/02 15:16	668.0
12/10/02 15:17	667.5
12/10/02 15:18	667.2
12/10/02 15:19	666.5
12/10/02 15:20	666.6
12/10/02 15:21	666.5
12/10/02 15:22	666.3
12/10/02 15:23	665.0
12/10/02 15:24	662.2
12/10/02 15:25	657.0
12/10/02 15:26	657.5
12/10/02 15:27	662.1
12/10/02 15:28	664.0
12/10/02 15:29	665.9
12/10/02 15:30	665.9
12/10/02 15:31	666.9
12/10/02 15:32	667.0
12/10/02 15:33	667.1
12/10/02 15:34	666.7
12/10/02 15:35	665.5
12/10/02 15:36	666.5
12/10/02 15:37	667.8
12/10/02 15:38	669.3
12/10/02 15:39	670.0
12/10/02 15:40	668.0
12/10/02 15:41	665.2
12/10/02 15:42	663.0
12/10/02 15:43	659.1
12/10/02 15:44	658.1
12/10/02 15:45	657.8
12/10/02 15:46	660.7
12/10/02 15:47	664.8
12/10/02 15:48	666.6
12/10/02 15:49	666.6
12/10/02 15:50	666.9
12/10/02 15:51	667.2
12/10/02 15:52	667.2
12/10/02 15:53	666.6
12/10/02 15:54	665.7
12/10/02 15:55	664.8
12/10/02 15:56	660.3
12/10/02 15:57	659.1

12/10/02	15:58	663.9
12/10/02	15:59	667.1
12/10/02	16:00	667.1
12/10/02	16:01	665.0
12/10/02	16:02	660.9
12/10/02	16:03	658.5
12/10/02	16:04	662.6
12/10/02	16:05	665.6
12/10/02	16:06	666.7
12/10/02	16:07	667.8
12/10/02	16:08	668.2
12/10/02	16:09	667.2
12/10/02	16:10	665.5
12/10/02	16:11	664.9
12/10/02	16:12	665.0
12/10/02	16:13	665.1
12/10/02	16:14	665.9
12/10/02	16:15	665.1
12/10/02	16:16	664.0
12/10/02	16:17	662.9
12/10/02	16:18	662.9
12/10/02	16:19	663.3
12/10/02	16:20	663.7
12/10/02	16:21	663.2
12/10/02	16:22	664.2
12/10/02	16:23	664.0
12/10/02	16:24	665.0
12/10/02	16:25	666.3
12/10/02	16:26	668.5
12/10/02	16:27	669.2
12/10/02	16:28	669.3
12/10/02	16:29	668.4
12/10/02	16:30	667.8
12/10/02	16:31	667.0
12/10/02	16:32	668.2
12/10/02	16:33	668.1
12/10/02	16:34	668.1
12/10/02	16:35	667.3
12/10/02	16:36	666.8
12/10/02	16:37	666.9
12/10/02	16:38	666.1
12/10/02	16:39	664.5
12/10/02	16:40	661.6
12/10/02	16:41	661.2
12/10/02	16:42	665.0
12/10/02	16:43	665.9
12/10/02	16:44	666.8
12/10/02	16:45	667.8
12/10/02	16:46	666.0
12/10/02	16:47	665.6
12/10/02	16:48	666.4
12/10/02	16:49	666.5
12/10/02	16:50	665.8
12/10/02	16:51	666.6
12/10/02	16:52	666.3
12/10/02	16:53	665.7
12/10/02	16:54	664.5
12/10/02	16:55	660.8
12/10/02	16:56	661.3
12/10/02	16:57	664.8
12/10/02	16:58	664.2
12/10/02	16:59	663.4

12/10/02 17:00	662.8
12/10/02 17:01	660.3
12/10/02 17:02	658.0
12/10/02 17:03	657.9
12/10/02 17:04	660.8
12/10/02 17:05	663.5
12/10/02 17:06	666.0
Final Average*	664.9
Maximum*	670.0
Minimum*	657.0

*Does not include Invalid Averaging Periods ("N/A")

800

Actual Values At: ~~6:45:00~~ AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	202	47.0	38.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	191	63.0	35.6	0.0	0.0	0.0	2.9	1.4	1.6	50.0
2B TR-31	15.0	196	63.0	37.6	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-41	20.0	187	79.0	35.8	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	211	158	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	219	213	36.9	0.0	0.0	0.0	9.8	5.5	1.5	90.0
2B TR-12	12.0	199	47.0	39.4	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	194	67.0	36.5	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-32	15.0	197	67.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	130	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	216	158	36.3	0.0	0.0	0.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	234	217	37.3	0.0	0.0	0.0	10.5	6.1	1.5	90.0
2B TR-13	12.0	201	51.0	40.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	205	67.0	38.3	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	210	67.0	39.6	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	187	79.0	36.5	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.2	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.2	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	218	203	39.1	0.0	0.0	0.0	9.8	5.7	1.5	90.0
2B TR-14	12.0	203	51.0	35.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-24	15.0	214	61.0	39.8	0.0	0.0	0.0	3.2	1.7	1.5	50.0
2B TR-34	15.0	192	63.0	36.8	0.0	0.0	0.0	2.9	1.4	1.6	50.0
2B TR-44	20.0	170	77.0	34.6	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	211	130	38.6	0.0	0.0	0.0	6.3	3.4	1.6	60.0
2B TR-64	35.0	214	166	37.3	0.0	0.0	0.0	7.5	3.9	1.6	70.0
2B TR-74	45.0	223	209	36.0	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	198	47.0	39.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	211	67.0	39.3	0.0	0.0	0.0	3.2	1.8	1.5	50.0

9:00



Actual Values At: 7:45:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	204	47.0	39.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	191	63.0	35.6	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-31	15.0	195	67.0	37.6	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-41	20.0	187	83.0	35.7	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-51	30.0	204	130	37.1	0.0	0.0	0.0	6.1	3.2	1.6	60.0
2B TR-61	35.0	211	158	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	219	213	36.9	0.0	0.0	0.0	9.9	5.5	1.5	90.0
2B TR-12	12.0	200	45.0	39.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	194	67.0	36.4	0.0	0.0	0.0	2.9	1.6	1.6	50.0
2B TR-32	15.0	197	67.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	189	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	134	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	217	160	36.3	0.0	0.0	1.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	232	217	37.1	0.0	0.0	0.0	10.4	5.8	1.5	90.0
2B TR-13	12.0	202	51.0	40.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	205	67.0	38.1	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	210	67.0	39.5	0.0	0.0	0.0	3.1	1.7	1.6	50.0
2B TR-43	20.0	187	79.0	36.6	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.1	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-63	35.0	220	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	218	203	39.1	0.0	0.0	0.0	9.8	5.6	1.5	90.0
2B TR-14	12.0	203	51.0	35.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-24	15.0	214	67.0	39.8	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-34	15.0	192	63.0	36.7	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-44	20.0	168	75.0	34.6	0.0	0.0	0.0	3.3	1.6	1.7	50.0
2B TR-54	30.0	210	130	38.5	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-64	35.0	215	169	37.3	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-74	45.0	222	209	36.0	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	198	47.0	39.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	211	67.0	39.2	0.0	0.0	0.0	3.2	1.8	1.5	50.0



Actual Values At: 10:45:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Mln	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	203	47.0	38.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	191	67.0	35.6	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-31	15.0	196	67.0	37.6	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-41	20.0	187	83.0	35.8	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-51	30.0	204	130	37.1	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	210	158	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	219	217	37.0	0.0	0.0	0.0	9.9	5.7	1.5	90.0
2B TR-12	12.0	200	47.0	39.7	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	194	67.0	36.5	0.0	0.0	0.0	2.9	1.5	1.6	50.0
2B TR-32	15.0	197	67.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	134	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	217	162	36.4	0.0	0.0	4.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	233	217	37.2	0.0	0.0	0.0	10.5	6.1	1.5	90.0
2B TR-13	12.0	202	51.0	40.2	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	206	67.0	38.5	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	210	67.0	39.6	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	187	79.0	36.6	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.1	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	217	203	39.1	0.0	0.0	0.0	9.8	5.7	1.5	90.0
2B TR-14	12.0	204	51.0	35.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-24	15.0	212	61.0	39.8	0.0	0.0	0.0	3.3	1.8	1.5	50.0
2B TR-34	15.0	192	61.0	36.9	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-44	21.0	172	79.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	210	130	38.5	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-64	35.0	215	169	37.4	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-74	45.0	223	209	36.0	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	198	47.0	39.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	212	71.0	39.4	0.0	0.0	0.0	3.2	1.8	1.5	50.0



Actual Values At: 10:45:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-35	15.0	194	67.0	37.1	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-45	20.0	182	77.0	35.6	0.0	0.0	0.0	3.6	1.8	1.7	50.0
2B TR-55	30.0	221	134	39.4	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-65	35.0	222	158	40.0	0.0	0.0	0.0	7.8	4.3	1.5	70.0
2B TR-75	45.0	246	217	39.1	0.0	0.0	0.0	11.1	6.4	1.5	90.0
2B TR-16	12.0	205	51.0	40.3	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-26	5.0	151	11.0	34.7	0.0	0.0	45.0	0.8	0.3	1.7	50.0
2B TR-36	15.0	207	67.0	38.3	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-46	20.0	186	79.0	36.9	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-56	30.0	221	130	41.1	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-66	35.0	213	154	40.6	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-76	45.0	255	217	40.4	0.0	0.0	0.0	11.5	6.6	1.5	90.0
Analog											
2B East	8.8	%									
2B West	10.5	%									



Actual Values At: 11:36:41 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2A TR-11	12.0	220	47.0	43.4	0.0	0.0	0.0	2.6	1.3	1.7	50.0
2A TR-21	15.0	200	67.0	38.0	0.0	0.0	0.0	3.0	1.6	1.6	50.0
2A TR-31	0.0	67.0	0.0	19.2	0.0	0.0	119	0.1	0.0	3.0	50.0
2A TR-41	20.0	186	79.0	36.8	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2A TR-51	Power Off										
2A TR-61	35.0	229	154	39.9	0.0	0.0	0.0	8.0	0.0	1.6	70.0
2A TR-71	45.0	246	217	40.6	0.0	0.0	0.0	11.1	6.4	1.5	90.0
2A TR-12	12.0	211	51.0	40.9	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2A TR-22	15.0	205	61.0	38.0	0.0	0.0	0.0	3.1	1.5	1.7	50.0
2A TR-32	15.0	196	67.0	36.6	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2A TR-42	21.0	182	83.0	35.1	0.0	0.0	0.0	3.6	0.0	1.7	50.0
2A TR-52	30.0	200	130	36.4	0.0	0.0	0.0	6.0	3.0	1.7	60.0
2A TR-62	35.0	209	154	36.6	0.0	0.0	0.0	7.3	4.0	1.5	70.0
2A TR-72	45.0	221	217	36.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2A TR-13	12.0	208	45.0	39.2	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2A TR-23	15.0	198	67.0	37.3	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2A TR-33	15.0	197	67.0	37.3	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2A TR-43	20.0	184	75.0	36.2	0.0	0.0	0.0	3.7	1.8	1.7	50.0
2A TR-53	30.0	199	130	35.2	0.0	0.0	0.0	6.0	3.2	1.6	60.0
2A TR-63	35.0	203	158	30.8	0.0	0.0	0.0	7.1	3.9	1.5	70.0
2A TR-73	45.0	224	213	35.4	0.0	0.0	0.0	10.1	5.6	1.5	90.0
2A TR-14	12.0	206	51.0	41.4	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2A TR-24	15.0	202	65.0	37.8	0.0	0.0	0.0	3.0	1.7	1.5	50.0
2A TR-34	15.0	191	67.0	36.2	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2A TR-44	20.0	177	83.0	35.1	0.0	0.0	0.0	3.5	1.8	1.7	50.0
2A TR-54	30.0	195	134	35.2	0.0	0.0	0.0	5.9	3.1	1.6	60.0
2A TR-64	35.0	201	158	36.5	0.0	0.0	0.0	7.0	3.7	1.6	70.0
2A TR-74	45.0	215	213	36.2	0.0	0.0	0.0	9.7	0.0	1.5	90.0
2A TR-15	5.0	160	11.0	37.3	0.0	0.0	55.0	0.7	0.3	1.8	50.0
2A TR-25	15.0	206	67.0	41.8	0.0	0.0	0.0	3.1	1.7	1.5	50.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	203	47.0	39.0	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	191	63.0	35.6	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-31	15.0	197	61.0	37.8	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-41	20.0	187	83.0	35.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	211	162	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	220	217	36.9	0.0	0.0	0.0	9.9	5.7	1.5	90.0
2B TR-12	12.0	200	51.0	39.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	194	67.0	36.5	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-32	15.0	198	67.0	37.0	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	134	36.5	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-62	35.0	215	156	36.2	0.0	0.0	0.0	7.5	4.0	1.6	70.0
2B TR-72	45.0	234	217	37.2	0.0	0.0	0.0	10.5	6.1	1.5	90.0
2B TR-13	12.0	203	51.0	40.4	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	208	67.0	38.7	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	212	71.0	39.7	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	187	79.0	36.5	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.1	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	217	203	39.1	0.0	0.0	0.0	9.8	5.6	1.5	90.0
2B TR-14	12.0	204	51.0	35.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-24	15.0	212	61.0	40.0	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-34	15.0	193	61.0	37.0	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-44	21.0	173	77.0	34.7	0.0	0.0	0.0	3.4	1.6	1.7	50.0
2B TR-54	30.0	211	130	38.5	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-64	35.0	215	169	37.3	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-74	45.0	222	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	199	47.0	39.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	213	71.0	39.5	0.0	0.0	0.0	3.2	1.8	1.5	50.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-35	15.0	194	67.0	37.3	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-45	20.0	182	77.0	35.7	0.0	0.0	0.0	3.6	1.8	1.7	50.0
2B TR-55	30.0	220	134	39.3	0.0	0.0	0.0	6.6	3.4	1.6	60.0
2B TR-65	35.0	222	156	39.9	0.0	0.0	0.0	7.8	4.3	1.5	70.0
2B TR-75	45.0	246	217	39.1	0.0	0.0	0.0	11.1	6.4	1.5	90.0
2B TR-16	12.0	205	51.0	40.2	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-26	5.0	154	11.0	35.5	0.0	0.0	61.0	0.7	0.3	1.7	50.0
2B TR-36	15.0	208	67.0	38.0	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-46	20.0	187	77.0	36.9	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-56	30.0	220	130	40.9	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-66	35.0	212	154	40.6	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-76	45.0	255	217	40.4	0.0	0.0	0.0	11.5	6.6	1.5	90.0
Analog											
2B East	8.8	%									
2B West	10.5	%									



Actual Values At: 11:45:00 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	205	47.0	39.4	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-21	15.0	193	67.0	35.9	0.0	0.0	0.0	2.9	1.5	1.6	50.0
2B TR-31	15.0	197	63.0	37.7	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-41	20.0	188	83.0	35.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-51	30.0	204	130	37.2	0.0	0.0	0.0	6.2	3.2	1.6	60.0
2B TR-61	35.0	211	162	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	220	217	36.9	0.0	0.0	0.0	9.9	5.7	1.5	90.0
2B TR-12	12.0	202	47.0	40.0	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	195	67.0	36.8	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-32	15.0	198	67.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	132	36.5	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-62	35.0	217	162	36.2	0.0	0.0	0.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	233	217	37.2	0.0	0.0	0.0	10.5	6.1	1.5	90.0
2B TR-13	12.0	204	51.0	40.5	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	208	67.0	38.7	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	212	67.0	39.8	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	187	77.0	36.7	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	208	130	38.1	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	220	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	218	203	39.1	0.0	0.0	0.0	9.8	5.6	1.5	90.0
2B TR-14	12.0	207	51.0	36.5	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-24	16.0	218	63.0	40.1	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-34	15.0	192	61.0	36.9	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-44	20.0	170	79.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	210	130	38.5	0.0	0.0	0.0	6.3	3.4	1.6	60.0
2B TR-64	35.0	215	169	37.3	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-74	45.0	222	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	200	47.0	40.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	213	67.0	39.5	0.0	0.0	0.0	3.1	1.8	1.5	50.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-35	15.0	195	67.0	37.3	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-45	20.0	182	79.0	35.7	0.0	0.0	0.0	3.6	1.8	1.7	50.0
2B TR-55	30.0	219	130	39.3	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-65	35.0	222	156	40.0	0.0	0.0	0.0	7.8	4.3	1.5	70.0
2B TR-75	45.0	246	217	39.1	0.0	0.0	0.0	11.1	6.4	1.5	90.0
2B TR-16	12.0	206	51.0	40.4	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-26	5.0	154	11.0	35.2	0.0	0.0	56.0	0.8	0.4	1.7	50.0
2B TR-36	15.0	210	67.0	38.1	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-46	20.0	188	79.0	37.0	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-56	30.0	221	130	41.1	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-66	35.0	213	154	40.6	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-76	45.0	255	217	40.4	0.0	0.0	0.0	11.5	6.6	1.5	90.0
Analog											
2B East	9.0	%									
2B West	10.8	%									



Actual Values At: 12:45:01 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	204	47.0	39.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	192	67.0	35.7	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-31	15.0	196	63.0	37.5	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-41	20.0	187	83.0	35.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	209	158	36.3	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	219	213	36.9	0.0	0.0	0.0	9.8	5.5	1.5	90.0
2B TR-12	12.0	203	47.0	40.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	195	67.0	36.7	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-32	15.0	197	67.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	130	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	217	162	36.2	0.0	0.0	0.0	7.6	4.1	1.5	70.0
2B TR-72	45.0	232	217	37.0	0.0	0.0	0.0	10.4	5.8	1.5	90.0
2B TR-13	12.0	204	51.0	40.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	208	67.0	38.7	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	211	67.0	39.7	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	188	79.0	36.6	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	208	130	38.1	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-63	35.0	220	162	39.1	0.0	0.0	0.0	7.7	4.0	1.6	70.0
2B TR-73	45.0	217	201	39.0	0.0	0.0	0.0	9.7	5.6	1.5	90.0
2B TR-14	12.0	205	51.0	36.2	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-24	15.0	217	67.0	40.1	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-34	15.0	193	63.0	37.0	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-44	20.0	168	77.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	211	130	38.5	0.0	0.0	0.0	6.3	3.4	1.6	60.0
2B TR-64	35.0	215	166	37.3	0.0	0.0	0.0	7.5	4.0	1.6	70.0
2B TR-74	45.0	222	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	200	51.0	40.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	214	67.0	39.4	0.0	0.0	0.0	3.2	1.7	1.6	50.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	202	47.0	38.7	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	192	63.0	35.8	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-31	15.0	196	63.0	37.6	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-41	20.0	188	83.0	35.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	210	158	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	218	213	36.9	0.0	0.0	0.0	9.9	5.5	1.5	90.0
2B TR-12	12.0	205	47.0	40.8	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-22	15.0	195	67.0	36.6	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-32	15.0	197	67.0	36.8	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	207	130	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	217	158	36.3	0.0	0.0	2.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	232	217	37.0	0.0	0.0	0.0	10.4	5.8	1.5	90.0
2B TR-13	12.0	204	51.0	40.5	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	207	67.0	38.6	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	211	67.0	39.7	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	188	79.0	36.7	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.1	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	217	201	39.0	0.0	0.0	0.0	9.7	5.5	1.5	90.0
2B TR-14	12.0	204	51.0	36.0	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-24	15.0	217	61.0	40.1	0.0	0.0	0.0	3.3	1.8	1.5	50.0
2B TR-34	15.0	193	61.0	37.0	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-44	21.0	168	75.0	34.6	0.0	0.0	0.0	3.4	1.6	1.7	50.0
2B TR-54	30.0	211	130	38.6	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-64	35.0	214	166	37.3	0.0	0.0	0.0	7.5	3.9	1.6	70.0
2B TR-74	45.0	223	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	199	47.0	40.0	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	16.0	214	67.0	39.4	0.0	0.0	0.0	3.1	1.7	1.5	50.0



Actual Values At: 2:45:00 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	202	51.0	38.8	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	191	67.0	35.6	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-31	15.0	197	63.0	37.6	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-41	20.0	188	83.0	35.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.2	1.6	60.0
2B TR-61	35.0	211	162	36.4	0.0	0.0	0.0	7.4	4.1	1.5	70.0
2B TR-71	45.0	220	213	37.0	0.0	0.0	0.0	9.9	5.7	1.5	90.0
2B TR-12	12.0	200	47.0	39.5	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	195	67.0	36.7	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-32	15.0	198	67.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	38.0	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	209	132	36.6	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-62	35.0	217	158	36.4	0.0	0.0	0.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	233	217	37.2	0.0	0.0	0.0	10.5	6.1	1.5	90.0
2B TR-13	12.0	202	51.0	40.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	206	67.0	38.4	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	212	67.0	39.8	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	188	79.0	36.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-53	30.0	209	126	38.1	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	218	203	39.1	0.0	0.0	0.0	9.8	5.6	1.5	90.0
2B TR-14	12.0	204	51.0	36.0	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-24	15.0	212	61.0	39.9	0.0	0.0	0.0	3.3	1.8	1.5	50.0
2B TR-34	15.0	194	67.0	37.0	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-44	20.0	171	77.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	211	130	38.6	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-64	35.0	215	166	37.3	0.0	0.0	0.0	7.5	4.0	1.6	70.0
2B TR-74	45.0	222	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	198	47.0	39.9	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	211	67.0	39.1	0.0	0.0	0.0	3.2	1.8	1.5	50.0



Actual Values At: 2:45:00 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-35	15.0	196	67.0	37.4	0.0	0.0	0.0	2.9	1.6	1.6	50.0
2B TR-45	20.0	183	77.0	35.8	0.0	0.0	0.0	3.7	1.8	1.7	50.0
2B TR-55	30.0	221	130	39.3	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-65	35.0	222	156	39.9	0.0	0.0	0.0	7.8	4.3	1.5	70.0
2B TR-75	45.0	246	217	39.1	0.0	0.0	0.0	11.1	6.4	1.5	90.0
2B TR-16	12.0	205	51.0	40.1	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-26	2.0	95.0	3.0	20.0	0.0	0.0	101	0.2	0.0	3.0	50.0
2B TR-36	15.0	206	67.0	37.9	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-46	20.0	188	79.0	37.0	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-56	30.0	220	130	41.2	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-66	35.0	213	150	40.6	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-76	45.0	255	217	40.4	0.0	0.0	0.0	11.5	6.6	1.5	90.0
Analog											
2B East	8.7	%									
2B West	9.7	%									



Actual Values At: 3:45:00 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	204	51.0	39.1	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-21	15.0	191	61.0	35.7	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-31	15.0	197	67.0	37.6	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-41	20.0	187	79.0	35.8	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	209	158	36.3	0.0	0.0	0.0	7.3	3.9	1.6	70.0
2B TR-71	45.0	218	213	36.9	0.0	0.0	0.0	9.8	5.5	1.5	90.0
2B TR-12	12.0	201	47.0	39.7	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	194	67.0	36.5	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-32	15.0	198	65.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	38.0	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	209	134	36.6	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-62	35.0	217	162	36.3	0.0	0.0	2.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	234	217	37.2	0.0	0.0	0.0	10.5	6.1	1.5	90.0
2B TR-13	12.0	205	51.0	40.8	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-23	15.0	207	67.0	38.6	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	210	67.0	39.5	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	187	77.0	36.5	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.1	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.1	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	218	203	39.1	0.0	0.0	0.0	9.8	5.6	1.5	90.0
2B TR-14	12.0	204	51.0	36.1	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-24	15.0	218	61.0	40.3	0.0	0.0	0.0	3.3	1.8	1.5	50.0
2B TR-34	15.0	194	63.0	37.1	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-44	21.0	170	75.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	211	130	38.7	0.0	0.0	0.0	6.3	3.4	1.6	60.0
2B TR-64	35.0	215	166	37.3	0.0	0.0	0.0	7.5	4.1	1.6	70.0
2B TR-74	45.0	222	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	200	47.0	40.2	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	213	67.0	39.6	0.0	0.0	0.0	3.2	1.8	1.5	50.0



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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-35	15.0	196	67.0	37.3	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-45	20.0	183	77.0	35.8	0.0	0.0	0.0	3.7	1.8	1.7	50.0
2B TR-55	31.0	225	134	39.4	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-65	35.0	220	154	39.8	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-75	45.0	247	217	39.1	0.0	0.0	0.0	11.1	6.4	1.5	90.0
2B TR-16	12.0	207	51.0	40.6	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-26	5.0	153	11.0	35.2	0.0	0.0	79.0	0.8	0.3	1.9	50.0
2B TR-36	15.0	202	67.0	37.7	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-46	20.0	188	77.0	37.0	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-56	30.0	220	130	41.1	0.0	0.0	0.0	6.6	3.5	1.6	60.0
2B TR-66	35.0	213	150	40.6	0.0	0.0	0.0	7.5	4.1	1.5	70.0
2B TR-76	45.0	255	217	40.4	0.0	0.0	0.0	11.5	6.6	1.5	90.0
Analog											
2B East	9.0	%									
2B West	10.7	%									



Actual Values At: 4:45:00 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	207	47.0	39.5	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-21	15.0	192	67.0	35.6	0.0	0.0	0.0	2.9	1.6	1.5	50.0
2B TR-31	15.0	197	63.0	37.6	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-41	20.0	187	79.0	35.7	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-51	30.0	205	130	37.2	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	209	156	36.3	0.0	0.0	0.0	7.4	3.9	1.6	70.0
2B TR-71	45.0	219	213	36.9	0.0	0.0	0.0	9.9	5.5	1.5	90.0
2B TR-12	12.0	202	51.0	40.0	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	195	67.0	36.9	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-32	15.0	198	63.0	36.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	38.0	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	130	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	217	158	36.2	0.0	0.0	1.0	7.4	4.0	1.5	70.0
2B TR-72	45.0	232	217	37.1	0.0	0.0	0.0	10.4	6.0	1.5	90.0
2B TR-13	12.0	205	51.0	40.7	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-23	15.0	207	67.0	38.6	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	209	67.0	39.4	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-43	20.0	187	77.0	36.6	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-53	30.0	209	130	38.2	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	219	158	38.9	0.0	0.0	0.0	7.7	4.0	1.6	70.0
2B TR-73	45.0	217	201	39.1	0.0	0.0	0.0	9.8	5.5	1.5	90.0
2B TR-14	12.0	206	51.0	36.3	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-24	16.0	217	61.0	40.0	0.0	0.0	0.0	3.3	1.8	1.5	50.0
2B TR-34	15.0	193	61.0	37.0	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-44	20.0	169	75.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	211	130	38.7	0.0	0.0	0.0	6.3	3.4	1.6	60.0
2B TR-64	35.0	215	166	37.3	0.0	0.0	0.0	7.5	4.0	1.6	70.0
2B TR-74	45.0	223	209	35.9	0.0	0.0	0.0	10.0	5.6	1.5	90.0
2B TR-15	12.0	201	47.0	40.3	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	215	67.0	40.0	0.0	0.0	0.0	3.2	1.7	1.6	50.0



Actual Values At: 5:45:00 PM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
2B TR-11	12.0	207	51.0	39.7	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-21	15.0	191	67.0	35.7	0.0	0.0	0.0	2.9	1.4	1.7	50.0
2B TR-31	15.0	197	63.0	37.7	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-41	20.0	187	83.0	35.8	0.0	0.0	0.0	3.7	1.9	1.7	50.0
2B TR-51	30.0	206	130	37.3	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-61	35.0	210	156	36.3	0.0	0.0	0.0	7.4	3.9	1.6	70.0
2B TR-71	45.0	219	217	36.9	0.0	0.0	0.0	9.9	5.5	1.5	90.0
2B TR-12	12.0	203	51.0	40.2	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-22	15.0	195	67.0	36.8	0.0	0.0	0.0	2.9	1.6	1.6	50.0
2B TR-32	15.0	198	67.0	37.0	0.0	0.0	0.0	3.0	1.5	1.7	50.0
2B TR-42	20.0	190	83.0	37.9	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-52	30.0	208	130	36.5	0.0	0.0	0.0	6.2	3.3	1.6	60.0
2B TR-62	35.0	216	158	36.3	0.0	0.0	0.0	7.6	4.2	1.5	70.0
2B TR-72	45.0	233	217	37.1	0.0	0.0	0.0	10.4	6.1	1.5	90.0
2B TR-13	12.0	205	51.0	40.6	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-23	15.0	208	67.0	38.8	0.0	0.0	0.0	3.1	1.7	1.5	50.0
2B TR-33	15.0	210	67.0	39.5	0.0	0.0	0.0	3.2	1.8	1.5	50.0
2B TR-43	20.0	188	77.0	36.8	0.0	0.0	0.0	3.8	1.9	1.7	50.0
2B TR-53	30.0	210	130	38.3	0.0	0.0	0.0	6.3	3.3	1.6	60.0
2B TR-63	35.0	221	162	39.2	0.0	0.0	0.0	7.7	4.1	1.6	70.0
2B TR-73	45.0	217	201	39.0	0.0	0.0	0.0	9.8	5.5	1.5	90.0
2B TR-14	12.0	206	51.0	36.2	0.0	0.0	0.0	2.5	1.2	1.7	50.0
2B TR-24	15.0	215	61.0	40.1	0.0	0.0	0.0	3.3	1.8	1.5	50.0
2B TR-34	15.0	194	61.0	37.2	0.0	0.0	0.0	2.9	1.5	1.7	50.0
2B TR-44	21.0	173	77.0	34.7	0.0	0.0	0.0	3.4	1.7	1.7	50.0
2B TR-54	30.0	211	130	38.7	0.0	0.0	0.0	6.3	3.4	1.6	60.0
2B TR-64	35.0	215	166	37.3	0.0	0.0	0.0	7.5	4.1	1.6	70.0
2B TR-74	45.0	224	209	36.0	0.0	0.0	0.0	10.1	5.6	1.5	90.0
2B TR-15	12.0	200	47.0	40.2	0.0	0.0	0.0	2.4	1.2	1.7	50.0
2B TR-25	15.0	212	67.0	39.6	0.0	0.0	0.0	3.1	1.8	1.5	50.0

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # 2

Date: 12 / 10 / 02

PARAMETER	UNITS	READING (30 minute intervals)					
		DB	DB	DB	DB	DB	DB
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		09:00	09:30	10:00	10:30	11:00	11:30
Steam Flow	LB/HR x 10 ⁶	4.64	4.73	4.64	4.65	4.72	4.72
Air Flow	%	66	66	66	66	66	66
Generator Load (Gross)	Megawatts	660	658	653	652	659	663
Boiler Thermal Demand	Megawatts	663	660	657	654	662	666
O2 Flue Gas	%	2.8	2.8	2.9	2.8	2.8	2.6
Fuel Flow	%	93.2	93.5	93.4	93.4	92.8	93.3
COAL TOTALIZER	TONS						
A		18819	18843	18864	18888	18909	18934
B		14847	14869	14889	14912	14930	14954
C		11306	11328	11347	11370	11388	11412
D		19605	19605	19605	19605	19605	19605
E		4637	4656	4673	4692	4708	4729
F		13055	13076	13095	13117	13135	13158
G		6612	6632	6650	6670	6687	6708

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # 2

Date: 12/10/02

PARAMETER	UNITS	READING (30 minute intervals)					
		DB	DB	DB	DB	DB	DB
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		12:00	12:30	13:00	13:30	14:00	14:30
Steam Flow	LB/HR x 10 ⁶	4.71	4.70	4.74	4.76	4.76	4.72
Air Flow	%	67	67	67	67	68	67
Generator Load (Gross)	Megawatts	662	659	662	668	667	668
Boiler Thermal Demand	Megawatts	664	663	664	678	670	671
O2 Flue Gas	%	2.8	2.9	2.9	2.9	3.0	3.1
Fuel Flow	%	94.4	94.5	93.5	94.5	94.5	94
COAL TOTALIZER	TONS						
A		18954	18976	18995	19018	19040	19065
B		14971	14993	15011	15031	15052	15076
C		11428	11450	11468	11488	11509	11532
D		19605	19605	19605	19605	19605	19605
E		4742	4762	4778	4796	4814	4835
F		13172	13194	13212	13232	13252	13274
G		6728	6746	6761	6780	6800	6822

**ST. JOHNS RIVER POWER PARK
BOILER CONTROL ROOM DATA**

UNIT # 2

Date: 12/10/02

PARAMETER	UNITS	READING (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		15:00	15:30	16:00	16:30	17:00	17:30
Steam Flow	LB/HR x 10 ⁶	4.73	4.67	4.74	4.74	4.75	4.74
Air Flow	%	68	67	68	66	66	67
Generator Load (Gross)	Megawatts	664	657	665	667	664	670
Boiler Thermal Demand	Megawatts	667	661	668	670	667	667
O2 Flue Gas	%	3.1	3.0	3.0	2.8	2.9	3.1
Fuel Flow	%	93.9	93.4	94.2	93.9	94	93.6
COAL TOTALIZER	TONS						
A		19083	19107	19127	19148	19171	19191
B		15093	15115	15135	15154	15177	15196
C		11549	11572	11591	11610	11633	11651
D		19605	19605	19605	19605	19605	19605
E		4850	4870	4887	4904	4923	4940
F		13291	13312	13331	13350	13371	13389
G		6838	6859	6877	6895	6916	6933

**ST. JOHNS RIVER POWER PARK
FLUE GAS DESULFURIZATION
OPERATIONAL PARAMETERS
UNIT # 2**

Date: 12/10/02
Initials: LSA

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000			
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800	5.8	5.8	5.3
0900	6.0		5.6
1000	6.0		5.6
1100	6.0		5.6
1200	6.0		5.6
1300	6.0		5.6
1400	5.9		5.7
1500	5.9		5.6
1600	5.8		5.5
1700	5.9		5.6
1800			
1900			
2000			
2100			
2200			
2300			

Daily Water System Use: _____ (Total Gallons) / 1440 (min/day) = GPM

COMMENTS: Start 798
END 834