

PARTICULATE AND  
VISIBLE EMISSIONS  
TEST REPORT  
FOR  
ST. JOHNS RIVER POWER PARK  
UNITS 1 & 2  
JACKSONVILLE, FL  
December 10, 12 & 26, 2001

Job # 01-315

Test Report Date: 1-26-02



GRACE CONSULTING, INC.  
EMISSIONS TESTING SERVICES

RECEIVED

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BUREAU OF AIR REGULATION

January 26, 2002

I, Hal Stiles, here by certify that the data obtained for St. Johns River Power Park, Units 1 & 2 in Jacksonville, FL. are in accordance with procedures set forth by the USEPA. This report accurately represents the data obtained from the testing procedures and analysis of this data.

Hal Stiles  
Crew Chief

I, Carl Vineyard, hereby certify that I have reviewed this report and to the best of my knowledge, the data presented herein is complete and accurate.

Carl Vineyard, P.E.  
Test Engineer

Grace Consulting, Inc.  
P.O. Box 58  
Wellington, Ohio 44090

Phone: 440-647-6672  
Fax: 440-647-6673

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## INTRODUCTION

This report presents the results of the emissions tests performed for St. Johns River Power Park, Unit 1 & 2 in Jacksonville, FL.

The purpose of the tests was to determine the emissions of the unit. The results can be found in the Summary of Test Results section of this report.

The testing was performed by Grace Consulting, Inc., located at 510 Dickson Street - Wellington, OH 44090. Present during the testing was Hal, Stiles, Tim Moody, Josh Nichols, Ernie Givens and Dale Vineyard from Grace Consulting, Inc. Mark Loechelt was present from St. Johns River Power Park.

The tests were performed on December 10, 12 & 26, 2001. The testing was completed in accordance with USEPA test methods as published in the July 1, 2001 Federal Register, - "Standards of Performance for New Stationary Sources" and subsequent revisions.

The sampling and analytical procedures can be found in the Sampling and Analytical Procedures section of this report. The raw field data and the equations used to determine the final results are presented in the Appendix section.

SUMMARY OF TEST RESULTS

The following presents the results of the emissions tests performed for St. Johns River Power Park, Units 1 & 2 in Jacksonville, FL.

**PARTICULATE EMISSIONS**  
Method 5B

Run #	Location	Test Date	lb/dscf	lbs/hr	gr/dscf .
1	Unit 1	12-11-01	8.09E-07	69.94	5.66E-03
2	Unit 1	12-11-01	7.72E-07	65.70	5.41E-03
3	Unit 1	12-11-01	6.06E-07	53.14	4.24E-03
AVG.			7.29E-07	62.93	5.10E-03
1	Unit 2	12-10-01	3.69E-07	31.26	2.58E-03
2	Unit 2	12-10-01	3.71E-07	31.81	2.59E-03
3	Unit 2	12-10-01	3.91E-07	34.29	2.74E-03
AVG.			3.77E-07	32.45	2.64E-03

**VISIBLE EMISSIONS**

Run #	Location	Test Date	Times	%Opacity
1	Lime Belt Baghouse	12-10-01	08:40-09:40	0.0
1	Lime Pile Hopper	12-10-01	08:40-09:40	0.0
1	Unit 1 Flyash Baghouse	12-12-01	10:30-11:30	0.0
1	Unit 2 Flyash Baghouse	12-12-01	11:30-12:30	0.0
1	Flyash Area	12-12-01	12:30-13:30	2.5
1	Unit 1 Stack soot run	12-12-01	14:10-15:10	6.8
1	Unit 1 Stack	12-26-01	09:45-10:45	11.2
1	Unit 2 Stack	12-26-01	09:45-10:45	10.9

The complete results can be found on the computer printouts following.

**GRACE CONSULTING, INC.**  
Particulate Analysis

JEA -SJRPP  
Jacksonville, FL  
Unit 1 stack  
01-315

Run Number			1	2	3
Date			12/11/2001	12/11/01	12/11/01
Location			Unit 1 stack	Unit 1 stack	Unit 1 stack
Comment			RM 5B	RM 5B	RM 5B
Start Time			8:00	10:20	12:45
End Time			10:04	12:26	14:49
Barometric Pressure	In. Hg.	Pb	30.27	30.27	30.27
Static Pressure	In. H2O	Pf	0.8	0.8	0.8
Volume of Condensate	mls.	Vlc	302.3	340	266
Volume Sampled	dcf	Vm	114.989	113.455	115.595
Meter Correction Factor		Y	1.017	1.017	1.017
Square Root of Delta P			1.082	1.078	1.086
Orifice Pressure	In. H2O		3	2.98	3.02
Meter Temperature	Degree F		96	96	95
Flue Temperature	Degree F		139	139	139
Percent CO2	%		12.8	12.8	13.1
Percent O2	%		6.1	6.2	6
Diameter of Nozzle	In.		0.238	0.238	0.238
Area of Flue	Sq. ft.		471.435	471.435	471.435
Sample Time	min.		120	120	120
Weight Gain	grams		0.0415	0.0391	0.0313
F-Factor			9,780	9,780	9,780
Absolute Flue Pressure	in. Hg	Ps	30.33	30.33	30.33
Corrected Sample Volume	dscf	Vms	113.17	111.66	113.98
Moisture of Flue Gas	%	Bws	11.17%	12.54%	9.90%
Molecular Weight	lb/lb-mole	Ms	28.92	28.75	29.11
Velocity of Flue Gas	fps	Vs	64.21	64.16	64.23
Volume of Flue Gas	ACFM	Vo	1,816,306	1,814,765	1,816,874
Volume of Flue Gas	DSCFM	Qsd	1,441,617	1,418,212	1,462,718
Dust Concentration	lb/dscf	Wd	8.09E-07	7.72E-07	6.06E-07
Dust Concentration	lb/hr	Wh	69.94	65.70	53.14
Dust Concentration	gr/acf	Wa	4.49E-03	4.22E-03	3.41E-03
Dust Concentration	gr/dscf	Ws	5.66E-03	5.41E-03	4.24E-03
Isokinetic Rate	%	%I	99.9	100.1	99.1
Particulate Emissions	lb/mmBtu	DI	0.011	0.011	0.008

Averages: Flue Temp.:	139	Part. Emis: lb/dscf	7.29E-07
ACFM:	1,815,982	lb/hr	62.93
DSCFM:	1,440,849	gr/acf	4.04E-03
Percent O2:	6.10%	gr/dscf	5.10E-03
		lb/mmBtu	0.010

**GRACE CONSULTING, INC.**  
Particulate Analysis

St. Johns River Power Park  
Jacksonville, FL  
Unit 2  
01-315

Run Number			1	2	3
Date			12/10/01	12/10/01	12/10/01
Location			Unit 2	Unit 2	Unit 2
Comment			Method 5B	Method 5B	Method 5B
Start Time			12:48	15:25	17:50
End Time			14:58	17:30	19:58
Barometric Pressure	In. Hg.	Pb	30.21	30.21	30.21
Static Pressure	In. H2O	Pf	0.78	0.78	0.78
Volume of Condensate	mls.	Vlc	317.1	307.4	286.7
Volume Sampled	dcf	Vm	113.9	114.704	115.577
Meter Correction Factor		Y	1.017	1.017	1.017
Square Root of Delta P			1.07	1.078	1.094
Orifice Pressure	In. H2O		2.94	2.98	3.07
Meter Temperature	Degree F		99	97	97
Flue Temperature	Degree F		139	139	139
Percent CO2	%		13.5	13.2	13.3
Percent O2	%		5.6	5.9	5.9
Diameter of Nozzle	In.		0.238	0.238	0.238
Area of Flue	Sq. ft.		471.435	471.435	471.435
Sample Time	min.		120	120	120
Weight Gain	grams		0.0186	0.0189	0.0201
F-Factor			9,780	9,780	9,780
Absolute Flue Pressure	in. Hg	Ps	30.27	30.27	30.27
Corrected Sample Volume	dscf	Vms	111.26	112.46	113.34
Moisture of Flue Gas	%	Bws	11.83%	11.40%	10.64%
Molecular Weight	lb/lb-mole	Ms	28.92	28.94	29.05
Velocity of Flue Gas	fps	Vs	63.56	64.02	64.85
Volume of Flue Gas	ACFM	Vo	1,797,982	1,810,762	1,834,217
Volume of Flue Gas	DSCFM	Qsd	1,413,614	1,430,583	1,461,529
Dust Concentration	lb/dscf	Wd	3.69E-07	3.71E-07	3.91E-07
Dust Concentration	lb/hr	Wh	31.26	31.81	34.29
Dust Concentration	gr/acf	Wa	2.03E-03	2.05E-03	2.18E-03
Dust Concentration	gr/dscf	Ws	2.58E-03	2.59E-03	2.74E-03
Isokinetic Rate	%	%I	100.1	100.0	98.6
Particulate Emissions	lb/mmBtu	DI	0.005	0.005	0.005

Averages: Flue Temp.:	139	Part. Emis: lb/dscf	3.77E-07
ACFM:	1,814,320	lb/hr	32.45
DSCFM:	1,435,242	gr/acf	2.09E-03
Percent O2:	5.80%	gr/dscf	2.64E-03
		lb/mmBtu	0.005

METHOD 5B - DETERMINATION OF NONSULFURIC ACID PARTICULATE MATTER EMISSIONS FROM STATIONARY SOURCES

NOTE: This method does not include all of the specifications (e.g., equipment and supplies) and procedures (e.g., sampling and analytical) essential to its performance. Some material is incorporated by reference from other methods in this part. Therefore, to obtain reliable results, persons using this method should have a thorough knowledge of at least the following additional test methods: Method 1, Method 2, Method 3, Method 5.

1.0 Scope and Application.

1.1 Analyte. Nonsulfuric acid particulate matter. No CAS number assigned.

1.2 Applicability. This method is determining applicable for the determination of nonsulfuric acid particulate matter from stationary sources, only where specified by an applicable subpart of the regulations or where approved by the Administrator for a particular application.

1.3 Data Quality Objectives. Adherence to the requirements of this method will enhance the quality of the data obtained from air pollutant sampling methods.

2.0 Summary of Method.

Particulate matter is withdrawn isokinetically from the source and collected on a glass fiber filter maintained at a



temperature of  $160 \pm 14$  °C ( $320 \pm 25$  °F). The collected sample is then heated in an oven at  $160$  °C ( $320$  °F) for 6 hours to volatilize any condensed sulfuric acid that may have been collected, and the nonsulfuric acid particulate mass is determined gravimetrically.

3.0 *Definitions.* [Reserved]

4.0 *Interferences.* [Reserved]

5.0 *Safety.*

5.1 *Disclaimer.* This method may involve hazardous materials, operations, and equipment. This test method may not address all of the safety problems associated with its use. It is the responsibility of the user of this test method to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to performing this test method.

6.0 *Equipment and Supplies.*

Same as Method 5, Section 6.0, with the following addition and exceptions:

6.1 *Sample Collection.* The probe liner heating system and filter heating system must be capable of maintaining a sample gas temperature of  $160 \pm 14$  °C ( $320 \pm 25$  °F).

6.2 *Sample Preparation.* An oven is required for drying the sample.

7.0 *Reagents and Standards.*

Same as Method 5, Section 7.0.

*8.0 Sample Collection, Preservation, Storage, and Transport.*

Same as Method 5, with the exception of the following:

8.1 Initial Filter Tare. Oven dry the filter at  $160 \pm 5$  °C ( $320 \pm 10$  °F) for 2 to 3 hours, cool in a desiccator for 2 hours, and weigh. Desiccate to constant weight to obtain the initial tare weight. Use the applicable specifications and techniques of Section 8.1.3 of Method 5 for this determination.

8.2 Probe and Filter Temperatures. Maintain the probe outlet and filter temperatures at  $160 \pm 14$  °C ( $320 \pm 25$  °F).

*9.0 Quality Control.*

Same as Method 5, Section 9.0.

*10.0 Calibration and Standardization.*

Same as Method 5, Section 10.0.

*11.0 Analytical Procedure.*

Same as Method 5, Section 11.0, except replace Section 11.2.2 with the following:

11.1 Container No. 2. Note the level of liquid in the container, and confirm on the analysis sheet whether leakage occurred during transport. If a noticeable amount of leakage has occurred, either void the sample or use methods, subject to the approval of the Administrator, to correct the

final results. Measure the liquid in this container either volumetrically to  $\pm 1$  ml or gravimetrically to  $\pm 0.5$  g.

Transfer the contents to a tared 250 ml beaker, and evaporate to dryness at ambient temperature and pressure.

Then oven dry the probe and filter samples at a temperature of  $160 \pm 5$  °C ( $320 \pm 10$  °F) for 6 hours. Cool in a desiccator for 2 hours, and weigh to constant weight.

Report the results to the nearest 0.1 mg.

*12.0 Data Analysis and Calculations.*

Same as in Method 5, Section 12.0.

*13.0 Method Performance.* [Reserved]

*14.0 Pollution Prevention.* [Reserved]

*15.0 Waste Management.* [Reserved]

*16.0 References.*

Same as Method 5, Section 17.0.

*17.0 Tables, Diagrams, Flowcharts, and Validation Data.*

[Reserved]



color and luminescence contrast decrease toward zero. As a result, significant negative bias and negative errors can be made when a plume is viewed under less contrasting conditions. A negative bias decreases rather than increases the possibility that a plant operator will be incorrectly cited for a violation of opacity standards as a result of observer error.

(d) Studies have been undertaken to determine the magnitude of positive errors made by qualified observers while reading plumes under contrasting conditions and using the procedures set forth in this method. The results of these studies (field trials) which involve a total of 769 sets of 25 readings each are as follows:

(1) For black plumes (133 sets at a smoke generator), 100 percent of the sets were read with a positive error of less than 7.5 percent opacity; 99 percent were read with a positive error of less than 5 percent opacity. (Note: For a set, positive error = average opacity determined by observers' 25 observations - average opacity determined from transmissometer's 25 recordings.)

(2) For white plumes (170 sets at a smoke generator, 168 sets at a coal-fired power plant, 298 sets at a sulfuric acid plant), 99 percent of the sets were read with a positive error of less than 7.5 percent opacity; 95 percent were read with a positive error of less than 5 percent opacity.

(e) The positive observational error associated with an average of twenty-five readings is therefore established. The accuracy of the method must be taken into account when determining possible violations of applicable opacity standards.

## 1. PRINCIPLE AND APPLICABILITY

1.1 **Principle.** The opacity of emissions from stationary sources is determined visually by a qualified observer.

1.2 **Applicability.** This method is applicable for the determination of the opacity of emissions from stationary sources pursuant to § 60.11(b) and for visually determining opacity of emissions.

## 2. PROCEDURES

The observer qualified in accordance with Section 3 of this method shall use the following procedures for visually determining the opacity of emissions.

2.1 **Position.** The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with

maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).

**2.2 Field Records.** The observer shall record the name of the plant, emission location, facility type, observer's name and affiliation, and the date on a field data sheet (Figure 9-1). The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time opacity readings are initiated and completed.

Figure 9-1. Record of visual determination of opacity.

Company _____	
Location _____	
Test No. _____	
Date _____	
Type Facility _____	
Control Device _____	
Hours of Observation _____	
Observer _____	

Observer Certification Date \_\_\_\_\_ Observer Affiliation \_\_\_\_\_

Point of Emissions		Height of Discharge		
CLOCK TIME	Initial			Final
<b>OBSERVER LOCATION</b>				
Distance to discharge				
Direction from				
Height of observation				
<b>BACKGROUND DESCRIPTION</b>				
<b>WEATHER CONDITIONS</b>				
Wind Direction				
Wind Speed				
Ambient Temperature				
SKY CONDITIONS (clear, overcast, % clouds, etc.)				
<b>PLUME DESCRIPTION</b>				
Color				
Distance Visible				
<b>OTHER INFORMATION</b>				

SUMMARY OF AVERAGE OPACITY

Set Number	Time	Opacity	
	Start - End	Sum	Average

Readings ranged from \_\_\_ to \_\_\_ % opacity.

The source was/was not in compliance with \_\_\_ at the time evaluation was made.

### Visual Determination of Opacity

Company \_\_\_\_\_  
 Location \_\_\_\_\_  
 Job # \_\_\_\_\_  
 Run # \_\_\_\_\_

Observer \_\_\_\_\_  
 Date \_\_\_\_\_  
 Start Time \_\_\_\_\_  
 End Time \_\_\_\_\_

	0	15	30	45
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				

	0	15	30	45
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				

% Opacity \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**2.3 Observations.** Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume but instead shall observe the plume momentarily at 15-second intervals.

**2.3.1 Attached Steam Plumes.** When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

**2.3.2 Detached Steam Plume.** When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

**2.4 Recording Observations.** Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on an observational record sheet. (See Figure 9-2 for an example.) A minimum of 24 observations shall be recorded. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

**2.5 Data Reduction.** Opacity shall be determined as an average of 24 consecutive observations recorded at 15-second intervals. Divide the observations recorded on the record sheet into sets of 24 consecutive observations. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on a record sheet. (See Figure 9-1 for an example.)

### **3. QUALIFICATION AND TESTING**

**3.1 Certification Requirements.** To receive certification as a qualified observer, a candidate must be tested and demonstrate the ability to assign opacity readings in 5 percent increments to 25 different black plumes and 25 different white plumes, with an error not to exceed 15 percent opacity on any one reading and average error not to exceed 7.5 percent opacity in each category. Candidates shall be tested according to the procedures described in Section 3.2. Smoke generators used pursuant to Section 3.2 shall be equipped with a smoke meter which meets the requirements of Section 3.3. The certification shall be valid for a period of 6 months, at which time the qualification procedure must be repeated by any observer in order to retain certification.

**3.2 Certification Procedure.** The certification test consists of showing the candidate a complete run of 50 plumes--25 black plumes and 25 white plumes-generated by a smoke generator. Plumes within each set of 25 black and 25 white runs shall be presented in random order. The candidate assigns an opacity value to each plume and records his observation on a suitable form. At the completion of each run of 50 readings, the score of the candidate is determined. If a candidate fails to qualify, the complete run of 50 readings must be repeated in any retest. The smoke test may be administered as part of a smoke school or training program and may be preceded by training or familiarization runs of the smoke generator during which candidates are shown black and white plumes of known opacity.

**3.3 Smoke Generator Specifications.** Any smoke generator used for the purposes of Section 3.2 shall be equipped with a smoke meter installed to measure opacity across the diameter of the smoke generator stack. The smoke meter output shall display in-stack opacity based upon a pathlength equal to the stack exit diameter, on a full 0 to 100 percent chart recorder scale. The smoke meter optical design and performance shall meet the specifications shown in Table 9-1. The smoke meter shall be calibrated as prescribed in Section 3.3.1 prior to the conduct of each smoke reading test. At the completion of each test, the zero and span drift shall be checked and if the drift exceeds  $\pm 1$  percent opacity, the condition shall be corrected prior to conducting any subsequent test runs. The smoke meter shall be demonstrated, at the time of installation, to meet the specifications listed in Table 9-1. This demonstration shall be repeated following any subsequent repair or replacement of the photocell or associated electronic circuitry including the chart recorder or output meter, or every 6 months, whichever occurs first.

TABLE 9-1 - SMOKE METER DESIGN AND PERFORMANCE SPECIFICATIONS

Parameter	Specification
a. Light Source	Incandescent lamp operated at nominal rated voltage
b. Spectral reponse of photocell	Photopic (daylight spectral response of the human eye - Citation 3)
c. Angle of view	15° maximum total angle
d. Angle of projection	15° maximum total angle
e. Calibration error	$\pm 3\%$ opacity, maximum
f. Zero and span drift	$\pm 1\%$ opacity, 30 minutes
g. Response time	5 seconds

**3.3.1 Calibration.** The smoke meter is calibrated after allowing a minimum of 30 minutes warmup by alternately producing simulated opacity of 0 percent and 100 percent. When stable response at 0 percent or 100 percent is noted, the smoke meter is adjusted to produce an output of 0 percent or 100 percent, as appropriate. This calibration shall be repeated until stable 0 percent and 100 percent opacity values may be produced by alternately switching the power to the light source on and off while the smoke generator is not producing smoke.

**3.3.2 Smoke Meter Evaluation.** The smoke meter design and performance are to be evaluated as follows:

**3.3.2.1 Light Source.** Verify from manufacturer's data and from voltage measurements made at the lamp, as installed, that the lamp is operated within  $\pm 5$  percent of the nominal rated voltage.

**3.3.2.2 Spectral Response of Photocell.** Verify from manufacturer's data that the photocell has a photopic response; i.e., the spectral sensitivity of the cell shall closely approximate the standard spectral-luminosity in (b) of Table 9-1.

**3.3.2.3 Angle of View.** Check construction geometry to ensure that the total angle of view of the smoke plume, as seen by the photocell, does not exceed  $15^\circ$ . The total angle of view may be calculated from:  $\theta = 2 \tan^{-1} (d/2L)$ , where  $\theta$  = total angle of view;  $d$  = the sum of the photocell diameter + the diameter of the limiting aperture; and  $L$  = the distance from the photocell to the limiting aperture. The limiting aperture is the point in the path between the photocell and the smoke plume where the angle of view is most restricted. In smoke generator smoke meters this is normally an orifice plate.

**3.3.2.4 Angle of Projection.** Check construction geometry to ensure that the total angle of projection of the lamp on the smoke plume does not exceed  $15^\circ$ . The total angle of projection may be calculated from:  $\theta = 2 \tan^{-1} (d/2L)$ , where  $\theta$  = total angle of projection;  $d$  = the sum of the length of the lamp filament + the diameter of the limiting aperture; and  $L$  = the distance from the lamp to the limiting aperture.

**3.3.2.5 Calibration Error.** Using neutral-density filters of known opacity, check the error between the actual response and the theoretical linear response of the smoke meter. This check is accomplished by first calibrating the smoke meter according to Section 3.3.1 and then inserting a series of three neutral-density filters of nominal opacity of 20, 50, and 75 percent in the smoke meter pathlength. Filters calibrated within 2 percent shall be used. Care should be taken when inserting the filters to prevent stray light from affecting the meter. Make a total of five nonconsecutive readings for each filter. The

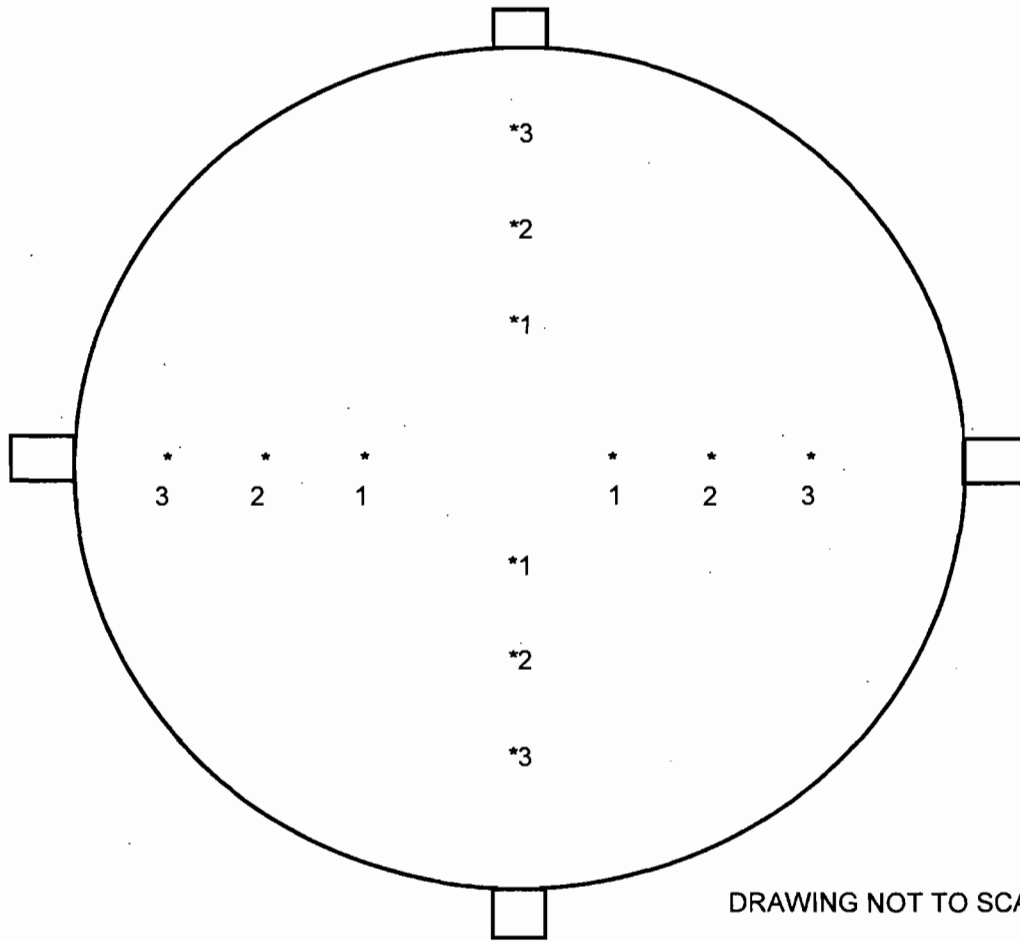
maximum error on any one reading shall be 3 percent opacity.

**3.3.2.6 Zero and Span Drift.** Determine the zero and span drift by calibrating and operating the smoke generator in a normal manner over a 1-hour period. The drift is measured by checking the zero and span at the end of this period.

**3.3.2.7 Response Time.** Determine the response time by producing the series of five simulated 0 percent and 100 percent opacity values and observing the time required to reach stable response. Opacity values of 0 percent and 100 percent may be simulated by alternately switching the power to the light source off and on while the smoke generator is not operating.

#### **4. BIBLIOGRAPHY**

1. Air Pollution Control District Rules and Regulations, Los Angeles County Air Pollution Control District, Regulation IV, Prohibitions, Rule 50.
2. Weisburd, Melvin I., Field Operations and Enforcement Manual for Air, U.S. Environmental Protection Agency, Research Triangle Park, NC, APTD-1100, August 1972, pp. 4.1-4.36.
3. Condon, E.U., and Odishaw, H., Handbook of Physics, McGraw-Hill Co., New York, NY, 1958, Table 3.1, p. 6-52.



DRAWING NOT TO SCALE

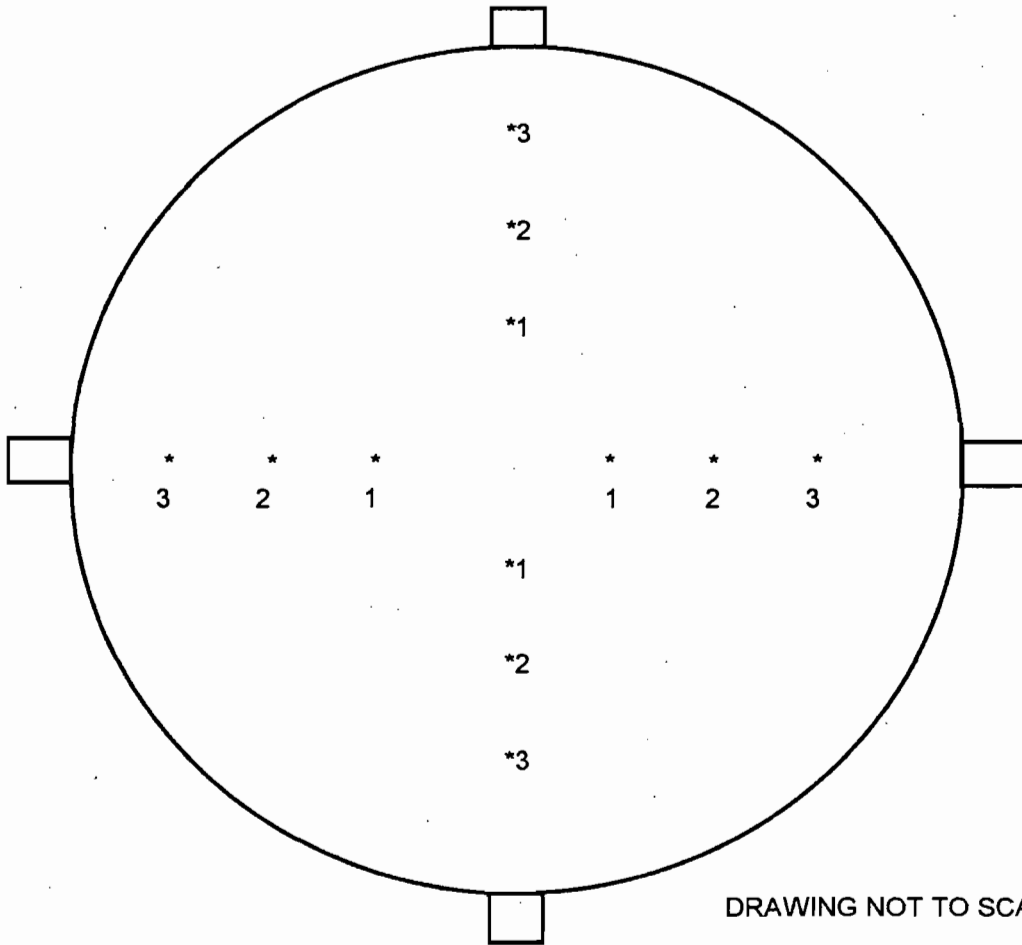
**POINTS   DISTANCE FROM INSIDE WALL**

1)	87.024 "
2)	42.924 "
3)	12.936 "

STACK AREA = 471.435 sq ft  
 STACK DIAMETER = 24.50'

St. Johns River Power Park  
 Unit 1





DRAWING NOT TO SCALE

POINTS    DISTANCE FROM INSIDE WALL

1)	87.024 "
2)	42.924 "
3)	12.936 "

STACK AREA = 471.435 sq ft  
 STACK DIAMETER = 24.50 '

St. Johns River Power Park  
 Unit 2



APPENDIX

**SAMPLE CALCULATIONS**

St. Johns River Power Park  
Jacksonville, FL Unit 1

12/11/01  
RUN 1

$$P_s = P_b + \left( \frac{P_f}{13.6} \right)$$

$$30.33 = 30.27 + \left( \frac{.8}{13.6} \right)$$

$V_m = (\text{Final Dry Gas Meter reading} - \text{Initial Dry Gas Meter reading}) \times Y$

$$116.943813 = (704.707 - 589.718) \times 1.017$$

$$V_m(\text{std}) = V_m \times \frac{528}{T_m + 460} \times \left( \frac{P_b + \frac{\text{Delta}H}{13.6}}{29.92} \right)$$

$$105.0481877 = 116.943813 \times \frac{528}{599} \times \left( \frac{30.27 + \frac{3.00}{13.6}}{29.92} \right)$$

$$V_{wc} = .04706 \times V_I$$

$$V_{wsg} = .04715 \times W_{sg}$$

$$V_{wc}(\text{std}) = V_{wc} + V_{wsg}$$

$$11.755588 = .04706 \times 249.8 \text{ ml of condensate}$$

$$2.475375 = .04715 \times 52.5 \text{ g. of silica gel}$$

$$14.230963 \text{ } V_{wc}(\text{std}) = 11.755588 + 2.475375$$



$$Bws = \frac{Vwc(std)}{Vwc(std) + Vm(std)} \times 100$$

$$11.17\% = \frac{14.230963}{14.230963 + 113.17} \times 100$$

$$\%N_2 \text{ dry} = 100 - (\%CO_2 + \%O_2 + \%CO)$$

$$81.1 = 100 - (12.8 + 6.1 + 0)$$

$$Md = (.44 \times \%CO_2) + (.32 \times \%O_2) + (.28 \times (\%N_2 + \%CO))$$

$$30.292 = (.44 \times 12.8\%) + (.32 \times 6.1\%) + (.28 \times 81.1\%)$$

$$Ms = Md (1 - Bws) + (18.0 \times Bws)$$

$$28.92 = 30.292 \times (1 - 11.17\%) + (18.0 \times 11.17\%)$$

$$Vs = 85.49 \times Cp \times \sqrt{\Delta P} \times \sqrt{\frac{Ts}{Ps \times Ms}}$$

$$64.21 = 85.49 \times .84 \times 1.082 \sqrt{\frac{599}{30.33 \times 28.92}}$$

$$\text{ACFM} = 60 \times V_s \times A$$

$$1,816,306 = 60 \times 64.21 \times 471.435$$

$$\text{DSCFM} = T_{\text{std}} \times \text{ACFM} \times P_s \times \left( \frac{1 - (Bws - 100)}{(T_s \times 29.92)} \right)$$

$$1,441,617 = 544 \times 1,816,306 \times 30.33 \times \left( \frac{.8883}{599 \times 29.92} \right)$$

Wg = Weight gain in grams

$$Wg = .0415$$

$$Wp = .002205 \times Wg$$

$$.000091507 = .002205 \times .0415$$

$$Wd = \frac{Wp}{Vm(\text{std})} \quad (\text{lb/dscf})$$

$$8.09\text{E-}07 = \frac{.000091507}{113.17}$$

Wh = Wd x Qsd (lb/hr)

$$69.94 = 8.09\text{E-}07 \times 86,497,020$$

## SAMPLE CALCULATIONS

St. Johns River Power Park  
Jacksonville, FL Unit 2  
12/10/01  
RUN 1

$$P_s = P_b + \left( \frac{P_f}{13.6} \right)$$

$$30.27 = 30.21 + \left( \frac{.78}{13.6} \right)$$

$V_m = (\text{Final Dry Gas Meter reading} - \text{Initial Dry Gas Meter reading}) \times Y$

$$115.8363 = (358.980 - 245.080) \times 1.017$$

$$V_m(\text{std}) = V_m \times \frac{528}{T_m + 460} \times \left( \frac{P_b + \frac{\text{Delta}H}{13.6}}{29.92} \right)$$

$$111.26 = 115.8363 \times \frac{528}{559} \times \left( \frac{30.21 + \frac{2.94}{13.6}}{29.92} \right)$$

$$V_{wc} = .04706 \times V_l$$

$$V_{wsg} = .04715 \times W_{sg}$$

$$V_{wc}(\text{std}) = V_{wc} + V_{wsg}$$

$$12.58855 = .04706 \times 267.5 \text{ ml of condensate}$$

$$2.33864 = .04715 \times 49.6 \text{ g. of silica gel}$$

$$14.92719 V_{wc}(\text{std}) = 12.58855 + 2.33864$$

$$Bws = \frac{Vwc(std)}{Vwc(std) + Vm(std)} \times 100$$

$$11.83\% = \frac{14.92719}{14.92719 + 111.26} \times 100$$

$$\%N_2 \text{ dry} = 100 - (\%CO_2 + \%O_2 + \%CO)$$

$$80.9 = 100 - (13.5 + 5.6 + 0)$$

$$Md = (.44 \times \%CO_2) + (.32 \times \%O_2) + (.28 \times (\%N_2 + \%CO))$$

$$30.384 = (.44 \times 13.5\%) + (.32 \times 5.6\%) + (.28 \times 80.9\%)$$

$$Ms = Md(1 - Bws) + (18.0 \times Bws)$$

$$28.92 = 30.384 \times (1 - 11.83\%) + (18.0 \times 11.83\%)$$

$$Vs = 85.49 \times Cp \times \sqrt{\Delta P} \times \sqrt{\frac{Ts}{Ps \times Ms}}$$

$$63.56 = 85.49 \times .84 \times 1.070 \times \sqrt{\frac{599}{30.27 \times 28.92}}$$

$$\text{ACFM} = 60 \times V_s \times A$$

$$1,797,982 = 60 \times 63.56 \times 471.435$$

$$\text{DSCFM} = T_{\text{std}} \times \text{ACFM} \times P_s \times \left( \frac{1 - (B_{ws} - 100)}{(T_s \times 29.92)} \right)$$

$$1,413,614 = 544 \times 1,797,982 \times 30.27 \times \left( \frac{.8817}{599 \times 29.92} \right)$$

Wg = Weight gain in grams

$$W_g = .0186$$

$$W_p = .002205 \times W_g$$

$$.000041013 = .002205 \times .0186$$

$$W_d = \frac{W_p}{V_m(\text{std})} \quad (\text{lb/dscf})$$

$$3.69\text{E-}07 = \frac{.000041013}{111.26}$$

Wh = Wd x Qsd (lb/hr)

$$31.26 = 3.69\text{E-}07 \times 84,816,840$$

## NOMENCLATURE

A	=	cross-sectional area of stack, (ft <sup>2</sup> )
acf	=	actual cubic feet
acfm	=	actual cubic feet per minute
A <sub>n</sub>	=	cross-sectional area of nozzle, (ft <sup>2</sup> )
B <sub>ws</sub>	=	water vapor in the gas stream, proportion by volume
C <sub>a</sub>	=	acetone blank residue concentration, mg/mg
C <sub>p</sub>	=	pitot tube coefficient, dimensionless
C <sub>p(s)</sub>	=	type S pitot tube coefficient, dimensionless
C <sub>p(std)</sub>	=	standard pitot tube coefficient; use 0.99
C <sub>s</sub>	=	concentration of particulate matter in stack gas, dry basis, corrected to standard conditions, (gr/dscf)
D <sub>e</sub>	=	equivalent diameter
D <sub>l</sub>	=	dust loading per heat input, (lb/mmBtu)
dscf	=	dry standard cubic feet
dscm	=	dry standard cubic meters
fps	=	feet per second
gms	=	grams
gm-mole	=	gram-mole
grs	=	grains
ΔH	=	orifice pressure drop in inches water, average
hr	=	hour
I	=	percent of isokinetic sampling
In. Hg	=	inches mercury
L	=	length.
L <sub>1</sub>	=	Individual leakage rate observed during the leak-check conducted prior to the first component change, (ft <sup>3</sup> /min)
L <sub>a</sub>	=	maximum acceptable leakage rate for either a pretest leak-check or for a leak-check following a component change; equal to 0.00057 m <sup>3</sup> /min (0.020 cfm) or 4 percent of the average sampling rate, whichever is less
lbs	=	pounds
lb-mole	=	pound-mole
L <sub>i</sub>	=	Individual leakage rate observed during the leak-check conducted prior to the "i <sup>th</sup> " component change (i = 1, 2, 3..n), (cfm)
L <sub>p</sub>	=	leakage rate observed during the post-test leak-check, (cfm)
%M	=	percent moisture by volume
m <sub>a</sub>	=	mass of residue of acetone after evaporation, mg
M <sub>d</sub>	=	molecular weight of stack gas, dry basis, (lb/lb-mole)
mmBtu	=	million Btu
m <sub>n</sub>	=	total amount of particulate matter collected, mg
M <sub>s</sub>	=	molecular weight of stack gas, wet basis, (lb/lb-mole)
M <sub>w</sub>	=	molecular weight of water, (18.0 lb/lb-mole)
n	=	total number of traverse points
P <sub>b</sub>	=	barometric pressure at the sampling site, (in Hg)
P <sub>f</sub>	=	static pressure in flue in inches water, average
P <sub>g</sub>	=	stack static pressure, (in. Hg)
P <sub>s</sub>	=	absolute stack gas pressure, (in. Hg)
P <sub>std</sub>	=	standard absolute pressure, (29.92 in. Hg)
Q <sub>sd</sub>	=	dry volumetric stack gas flow rate corrected to standard conditions, (dscf/hr)
R	=	ideal gas constant, { 21.85 [(in Hg) (ft <sup>3</sup> ) / [(°R) (lb-mole) ] }
√ΔP	=	square root of velocity head in inches water, average
scf	=	standard cubic feet
scm	=	standard cubic meters
T	=	sensitivity factor for differential pressure gauges

Client: SJRPP				Date: 12-11-01				Orsat Analysis				
Project No: 01-315				Operator: Nichols Givens				CO <sub>2</sub> %	+O <sub>2</sub>	O <sub>2</sub> %		
Sampling Location: Unit 1				Run No:				12.8	18.9	6.1		
Filter No: 01-534		Acetone No:		Condensate: 249.8 ml or (g)				12.8	18.9	6.1		
Barometric Pressure: 30.27		Static Pressure: -80		Probe Number:				12.8	18.9	6.1		
Nozzle Diameter: .238		Nozzle Number: N3		Pitot Number:								
Meter Corr. Factor: 1.017		Pitot Coefficient: .84		Meter No: 4A		RM: 5h		Sil. Gel				
Sample Pt. Time: 10min		Meter Orifice: 3.2978		Date Calibrated: 10-2-01		Flue Area: 471.43 in <sup>2</sup>		52.5 g				
Assumed % Moisture: 12%		Delta H @: 1.798		Leak Test Initial: .002 @ 15 in		Final: .00 @ 6 in (1 min.)						
Saturated Gas Stream: Y or N												
Sample Point	Delta P	Sq. Rt. Delta P	Delta H	Temperature (Degrees Fahrenheit)						Vac. Pr. (in. Hg)	Dry Gas Meter Reading (Cubic Feet)	
				Stack	Probe 223-273	Imp. Out < 68	Oven 223-273	Meter In	Meter Out			
Start Time: 8:00											Initial DCSM Reading: 589.718	
A 1	1.3	1.140	3.317	139	325	54	326	88	87	4	599.535	
2	1.2	1.095	3.061	139	326	54	325	96	87	4	609.082	
3	1.0	1.000	2.551	139	325	55	324	100	88	4	617.931	
B 1	1.3	1.140	3.317	139	326	55	325	95	89	4	627.937	
2	1.2	1.095	3.061	139	327	56	326	102	90	4	637.555	
3	1.1	1.019	2.806	139	326	57	327	103	90	4	646.888	
C 1	1.3	1.140	3.317	139	325	58	326	99	91	4	656.820	
2	1.2	1.095	3.061	139	326	58	327	105	91	4	666.484	
3	.99	.995	2.526	139	326	59	326	106	92	4	676.123	
D 1	1.2	1.095	3.061	139	327	61	327	101	93	4	685.761	
2	1.3	1.140	3.317	139	326	62	326	108	94	4	695.830	
3	1.0	1.000	2.551	139	327	64	325	107	94	4	704.707	
Stop Time: 10:04												
avg's.		1.082	3.00	139				96			114.989	





Particulate Field Data Sheet

Client: SJRPP					Date: 12-11-01					Orsat Analysis		
Project No: 01-315				Operator: Nichols/Givens						CO <sub>2</sub> %	+O <sub>2</sub>	O <sub>2</sub> %
Sampling Location: Unit 1					Run No: 3					13.1	19.1	6.0
Filter No: A-585			Acetone No:		Condensate: 233.3 ml or g					13.1	19.1	6.0
Barometric Pressure: 30.27			Static Pressure: .80		Probe Number:					13.1	19.1	6.0
Nozzle Diameter: .283			Nozzle Number: N3		Pitot Number:							
Meter Corr. Factor: 1.017			Pitot Coefficient: .84		Meter No: 4A			RM: 5b		Sil. Gel		
Sample Pt. Time: 10 min			Meter Orifice: 3.2978		Date Calibrated: 10-2-01			Flue Area: ft <sup>2</sup>		32.7 g		
Assumed % Moisture: 12%			Delta H @: 1.798		Leak Test Initial: 1.00 @ 5 in			Final: .60 @ 5 in (1 min.)				
Saturated Gas Stream: Y or N												
Sample Point	Delta P	Sq. Rt. Delta P	Delta H	Temperature (Degrees Fahrenheit)						Vac. Pr. (in. Hg)	Dry Gas Meter Reading (Cubic Feet)	
				Stack	Probe 223-273	Imp. Out < 68	Oven 223-273	Meter In	Meter Out			
Start Time: 12:45		Initial DSM Reading:									819.200	
A 1	1.3	1.140	3.317	139	320	55	322	94	88	4	829.474	
2	1.2	1.095	3.061	139	325	56	326	100	88	4	839.015	
3	1.1	1.049	2.806	139	326	56	327	103	89	3	848.187	
B 1	1.3	1.140	3.317	139	324	57	326	98	89	4	<del>848.18</del> 858.845	
2	1.2	1.095	3.061	139	325	58	328	103	89	4	868.473	
3	1.0	1.000	2.551	139	324	58	325	104	89	3	877.273	
C 1	1.2	1.095	3.061	139	324	59	327	98	90	4	886.895	
2	1.3	1.140	3.317	139	326	60	328	103	90	4	896.858	
3	1.1	1.049	2.806	139	324	61	329	104	91	3	906.246	
D 1	1.3	1.140	3.317	139	325	62	324	97	91	4	916.218	
2	1.2	1.095	3.061	139	326	63	325	104	90	4	925.887	
3	.99	.995	2.526	139	327	65	327	104	91	3	934.895	
Stop Time: 2:49												
avg's.		1.086	3.02	139				95			115.595	

Particulate Field Data Sheet

Client: SJRPD				Date: 12-10-01				Orsat Analysis				
Project No: 01-315				Operator: Nichols Given				CO <sub>2</sub> %	+O <sub>2</sub>	O <sub>2</sub> %		
Sampling Location: Unit 2				Run No: 1				13.5	19.1	5.6		
Filter No: 01-531		Acetone No:		Condensate: 267.5 ml or g		13.5		19.1		5.6		
Barometric Pressure: 30.21		Static Pressure: .78		Probe Number:		13.5		19.1		5.6		
Nozzle Diameter: .238		Nozzle Number: N3		Pitot Number:								
Meter Corr. Factor: 1.017		Pitot Coefficient: .84		Meter No: 4A		RM: 5b		Sil. Gel				
Sample Pt. Time: 10 min		Meter Orifice: 3.2578		Date Calibrated: 10-2-01		Flue Area: 471.43 ft. <sup>2</sup>		49.6 g				
Assumed % Moisture: 12%		Delta H @: 1.798		Leak Test Initial: .002015		Final:		(1 min.)				
Saturated Gas Stream: Y or N												
				Temperature (Degrees Fahrenheit)						Dry Gas		
Sample Point	Delta P	Sq. Rt. Delta P	Delta H	Stack	Probe 223-273	Imp. Out < 68	Oven 223-273	Meter In	Meter Out	Vac. Pr. (in. Hg)	Meter Reading (Cubic Feet)	
Start Time: 12:58				Initial DCM Reading:							245.083	
A1	1.2	1.095	3.068	137	324	58	324	97	94	4	254.885	
2	1.2	1.095	3.068	139	325	57	325	109	95	4	264.545	
3	1.0	1.000	2.592	139	322	57	328	108	95	3	273.478	
B1	1.3	1.140	3.323	137	326	58	328	100	95	4	283.441	
2	1.2	1.095	3.068	139	326	57	329	107	95	4	293.190	
3	1.0	1.000	2.592	139	325	59	326	107	95	3	302.086	
C1	1.3	1.140	3.323	139	326	60	325	101	94	4	311.999	
2	1.1	1.049	2.812	139	325	60	328	106	94	3	321.450	
3	1.1	1.049	2.812	139	326	61	324	106	94	3	330.780	
D1	1.2	1.095	3.068	139	325	63	325	97	93	4	340.461	
2	1.2	1.095	3.068	139	326	64	326	106	93	4	350.025	
3	1.98	.990	2.505	139	327	65	327	107	94	3	358.980	
Stop Time: 2:58												
avg's.		1.070	2.94	139				99			113.900	

Particulate Field Data Sheet

Client: <b>STRPP</b>				Date: <b>12-10-01</b>				Orsat Analysis			
Project No: <b>01-315</b>			Operator: <b>Nichols / Givens</b>			CO <sub>2</sub> %		+O <sub>2</sub>		O <sub>2</sub> %	
Sampling Location: <b>Unit 2 stack</b>				Run No: <b>2</b>				<b>13.2</b>	<b>19.1</b>	<b>5.9</b>	
Filter No: <b>01-586</b>		Acetone No:		Condensate: <b>255.8 ml or (g)</b>				<b>13.2</b>	<b>19.1</b>	<b>5.9</b>	
Barometric Pressure: <b>30.21</b>		Static Pressure: <b>.78</b>		Probe Number:				<b>13.2</b>	<b>19.1</b>	<b>5.9</b>	
Nozzle Diameter: <b>.238</b>		Nozzle Number: <b>N3</b>		Pitot Number:							
Meter Corr. Factor: <b>1.017</b>		Pitot Coefficient: <b>.84</b>		Meter No: <b>4A</b>		RM: <b>5b</b>		Sil. Gel			
Sample Pt. Time: <b>10 min</b>		Meter Orifice: <b>3.2975</b>		Date Calibrated: <b>10-2-01</b>		Flue Area: <b>ft<sup>2</sup> 5.6 g</b>					
Assumed % Moisture: <b>12%</b>		Delta H @: <b>1.798</b>		Leak Test Initial: <b>002@4in</b>		Final: <b>001@5in (1 min.)</b>					
Saturated Gas Stream: Y or N											
				Temperature (Degrees Fahrenheit)						Dry Gas	
Sample Point	Delta P	Sq. Rt. Delta P	Delta H	Stack	Probe 223-273	Imp. Out < 68	Oven 223-273	Meter In	Meter Out	Vac. Pr. (in. Hg)	Meter Reading (Cubic Feet)
Start Time: <b>3:25</b>				Initial DGM Reading: <b>359.085</b>							
<b>D1</b>	<b>1.2</b>	<b>1.095</b>	<b>3.068</b>	<b>139</b>	<b>326</b>	<b>58</b>	<b>327</b>	<b>91</b>	<b>90</b>	<b>3</b>	<b>368.785</b>
<b>2</b>	<b>1.3</b>	<b>1.140</b>	<b>3.323</b>	<b>139</b>	<b>325</b>	<b>58</b>	<b>327</b>	<b>100</b>	<b>89</b>	<b>4</b>	<b>379.325</b>
<b>3</b>	<b>1.1</b>	<b>1.049</b>	<b>2.812</b>	<b>139</b>	<b>326</b>	<b>59</b>	<b>325</b>	<b>103</b>	<b>91</b>	<b>3</b>	<b>388.075</b>
<b>A1</b>	<b>1.2</b>	<b>1.095</b>	<b>3.068</b>	<b>139</b>	<b>328</b>	<b>59</b>	<b>325</b>	<b>99</b>	<b>91</b>	<b>3</b>	<b>397.684</b>
<b>2</b>	<b>1.3</b>	<b>1.140</b>	<b>3.323</b>	<b>139</b>	<b>327</b>	<b>60</b>	<b>325</b>	<b>104</b>	<b>92</b>	<b>4</b>	<b>407.775</b>
<b>3</b>	<b>1.0</b>	<b>1.000</b>	<b>2.556</b>	<b>139</b>	<b>328</b>	<b>61</b>	<b>326</b>	<b>105</b>	<b>92</b>	<b>3</b>	<b>416.709</b>
<b>B1</b>	<b>1.3</b>	<b>1.140</b>	<b>3.323</b>	<b>139</b>	<b>326</b>	<b>62</b>	<b>325</b>	<b>101</b>	<b>93</b>	<b>4</b>	<b>426.750</b>
<b>2</b>	<b>1.2</b>	<b>1.095</b>	<b>3.068</b>	<b>139</b>	<b>328</b>	<b>62</b>	<b>326</b>	<b>105</b>	<b>93</b>	<b>3</b>	<b>436.378</b>
<b>3</b>	<b>1.0</b>	<b>1.000</b>	<b>2.556</b>	<b>139</b>	<b>325</b>	<b>63</b>	<b>327</b>	<b>106</b>	<b>93</b>	<b>3</b>	<b>445.337</b>
<b>C1</b>	<b>1.3</b>	<b>1.140</b>	<b>3.323</b>	<b>139</b>	<b>326</b>	<b>63</b>	<b>325</b>	<b>108</b>	<b>94</b>	<b>4</b>	<b>455.537</b>
<b>2</b>	<b>1.1</b>	<b>1.049</b>	<b>2.812</b>	<b>139</b>	<b>326</b>	<b>64</b>	<b>324</b>	<b>106</b>	<b>94</b>	<b>3</b>	<b>465.999</b>
<b>3</b>	<b>.99</b>	<b>.995</b>	<b>2.531</b>	<b>139</b>	<b>326</b>	<b>64</b>	<b>325</b>	<b>106</b>	<b>93</b>	<b>3</b>	<b>473.789</b>
Stop Time: <b>5:30</b>											
avg's.		<b>1.078</b>	<b>2.98</b>	<b>139</b>				<del>107</del>			<b>114.704</b>

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Particulate Field Data Sheet

Client: <u>SJPPP</u>				Date: <u>12-10-01</u>				Orsat Analysis			
Project No: <u>01-315</u>				Operator: <u>Nicholas Givenis</u>				CO <sub>2</sub> %	+O <sub>2</sub>	O <sub>2</sub> %	
Sampling Location: <u>Unit 2</u>				Run No: <u>3</u>				<u>13.3</u>	<u>19.2</u>	<u>5.9</u>	
Filter No: <u>01-534</u>		Acetone No:		Condensate: <u>226.5 ml or @</u>				<u>13.3</u>	<u>19.2</u>	<u>5.9</u>	
Barometric Pressure: <u>30.21</u>		Static Pressure: <u>.78</u>		Probe Number:				<u>13.3</u>	<u>19.2</u>	<u>5.9</u>	
Nozzle Diameter: <u>.238</u>		Nozzle Number: <u>N.3</u>		Pitot Number:							
Meter Corr. Factor: <u>1.017</u>		Pitot Coefficient: <u>.84</u>		Meter No: <u>4A</u>				RM: <u>5b</u>		Sil. Gel	
Sample Pt. Time: <u>10 min</u>		Meter Orifice: <u>3.2978</u>		Date Calibrated: <u>12-10-01</u>				Flue Area: <u>471.935 ft.<sup>2</sup></u>		<u>60.2 g</u>	
Assumed % Moisture: <u>12%</u>		Delta H @: <u>1.798</u>		Leak Test Initial: <u>0016 @ 15 in</u>				Final: <u>0016 @ 1 min.</u>			
Saturated Gas Stream: <u>Y or N</u>											
Sample Point	Delta P	Sq. Rt. Delta P	Delta H	Temperature (Degrees Fahrenheit)						Vac. Pr. (in. Hg)	Dry Gas Meter Reading (Cubic Feet)
				Stack	Probe 223-273	Imp. Out < 68	Oven 223-273	Meter In	Meter Out		
Start Time: <u>5:50</u>				Initial DSM Reading:						<u>473.929</u>	
C 1	1.3	1.140	3.323	138	328	55	325	93	90	3	483.850
2	1.2	1.095	3.068	138	329	56	326	103	90	3	493.415
3	1.0	1.000	2.556	138	327	57	327	105	92	2	502.254
B 1	1.3	1.140	3.323	139	326	58	328	101	93	3	512.325
2	1.3	1.140	3.323	139	326	59	326	105	93	3	522.365
3	1.1	1.049	2.812	139	327	60	326	106	93	2	531.715
A 1	1.3	1.140	3.323	139	326	61	327	106	93	3	541.820
2	1.3	1.140	3.323	139	326	62	327	103	93	3	551.925
3	1.0	1.000	2.556	139	326	62	327	106	93	2	560.729
D 1	1.3	1.140	3.323	139	325	63	326	96	93	3	570.726
2	1.3	1.140	3.323	139	326	63	326	105	93	3	580.615
3	1.1	1.000	2.556	139	326	65	328	106	94	2	589.499
Stop Time: <u>7:58</u>											
avg's.		<u>1.094</u>	<u>3.07</u>	<u>139</u>				<u>97</u>			<u>115.577</u>

Visual Determination of Opacity (page 1)

Company JRA  
 Location Jacksonville, FL  
 Job # 01-315  
 Run # 1

Observer [Signature]  
 Date 12-10-01  
 Start Time 08:40  
 End Time 09:40

Fire Belt ~~House~~  
Bag House

	0	15	30	45
0	0	0	0	0
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
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

	0	15	30	45
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

% Opacity 0.0

Comments: Rained

Visual Determination of Opacity (page 2)

Company

J. E. A.

Location

Jacksonville 78

Job #

01-315

Test Date

12-10-01

Type of Facility

Power Plant

Observer

Deborah [unclear]

OBSERVER LOCATION -

Distance to discharge

150'

Direction from discharge

S @ E

Height of observation point

65' about

BACKGROUND DESCRIPTION -

Shrubs

WEATHER CONDITIONS -

Wind Direction

NE

Wind Speed

5-10

Ambient Temperature

62

SKY CONDITIONS (Clear, overcast, % clouds, etc.)

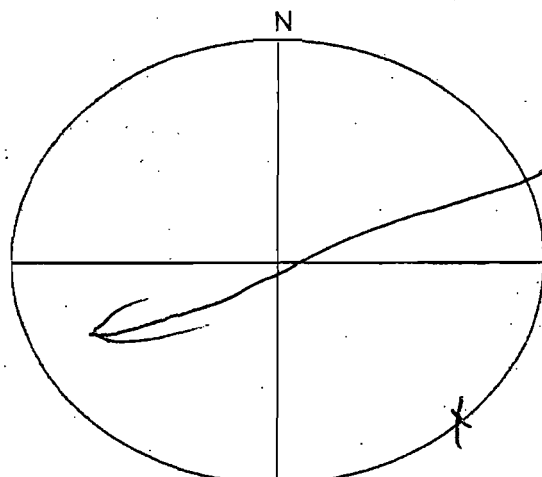
100

PLUME DESCRIPTION -

Color

Distance Visible

Sun Direction



X Reader

Rained Hard  
Fast 50 min  
Dale

Visual Determination of Opacity (page 1)

Company JEA  
 Location Tomballville, TX  
 Job # 01-315-1, 78  
 Run # 1

Observer Dalvin  
 Date 12-10-58  
 Start Time 8:48  
 End Time 09:40

*Time Pile # 5001*

	0	15	30	45
0	0	0	0	0
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
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

	0	15	30	45
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

% Opacity 0.0

Comments: Rained

Visual Determination of Opacity (page 2)

Company

JEA

Location

Jacksonville, Fl.

Job #

01-315

Test Date

12-10-01

Type of Facility

Power Plant

Observer

Dale Vineyard

OBSERVER LOCATION -

Distance to discharge

600

Direction from discharge

SW

Height of observation point

121' about

BACKGROUND DESCRIPTION -

WEATHER CONDITIONS -

Wind Direction

NE

Wind Speed

5 to 10

Ambient Temperature

62

SKY CONDITIONS (Clear, overcast, % clouds, etc.)

100

PLUME DESCRIPTION -

Color

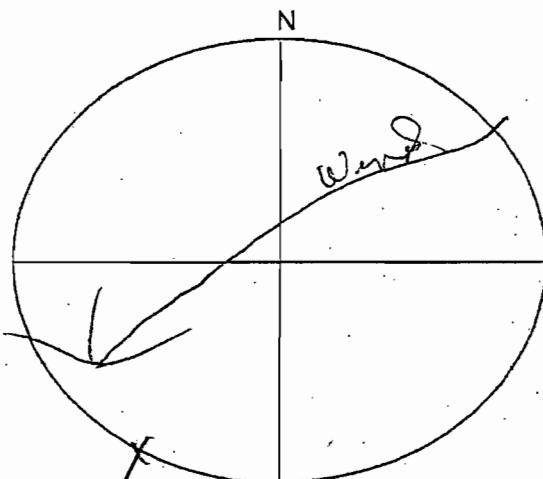
\_\_\_\_\_

Distance Visible

\_\_\_\_\_

Sun Direction

(S)



Rained Hardly  
First 30 min.  
A.V.

X Reader



Visual Determination of Opacity (page 1)

Company J. E. A.  
 Location Jacksonville, FL  
 Job # 01-315  
 Run # 1

Observer Dale Vignarol  
 Date 12-20-01  
 Start Time 10:30  
 End Time 11:30

*Unit # 1  
 Flyash bag house*

	0	15	30	45
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				

	0	15	30	45
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				

% Opacity 0.0

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Visual Determination of Opacity (page 2)

Company JE A  
Location Jacksonville, FL  
Job # 01-315  
Test Date 12-1-01  
Type of Facility Paper Plant  
Observer David Vineyard

OBSERVER LOCATION -

Distance to discharge 200'  
Direction from discharge SE  
Height of observation point 125' about

BACKGROUND DESCRIPTION -

WEATHER CONDITIONS -

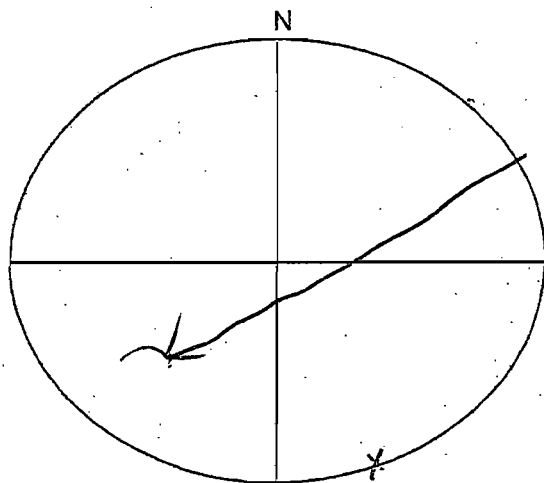
Wind Direction NE  
Wind Speed 0 to 5  
Ambient Temperature 76

SKY CONDITIONS (Clear, overcast, 0 clouds, etc.)

PLUME DESCRIPTION -

Color \_\_\_\_\_  
Distance Visible \_\_\_\_\_

Sun Direction (S)



Visual Determination of Opacity (page 1)

Company  
Location  
Job #  
Run #

J.E.A.  
Jacksonville, FL  
01-315  
2

Observer  
Date  
Start Time  
End Time

*John V. ...*  
12-12-01  
11:30  
12:30

Unit 2  
7 Bay Area

	0	15	30	45
0	0	0	0	0
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
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

	0	15	30	45
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

% Opacity

0.0

Comments:

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Visual Determination of Opacity (page 2)

Company JEA  
Location Jacksonville, FL  
Job # 01-315  
Test Date 12-11-01  
Type of Facility Power Plant  
Observer Dale Vinyard

OBSERVER LOCATION -

Distance to discharge 200'  
Direction from discharge SW  
Height of observation point 125' about

BACKGROUND DESCRIPTION -

WEATHER CONDITIONS -

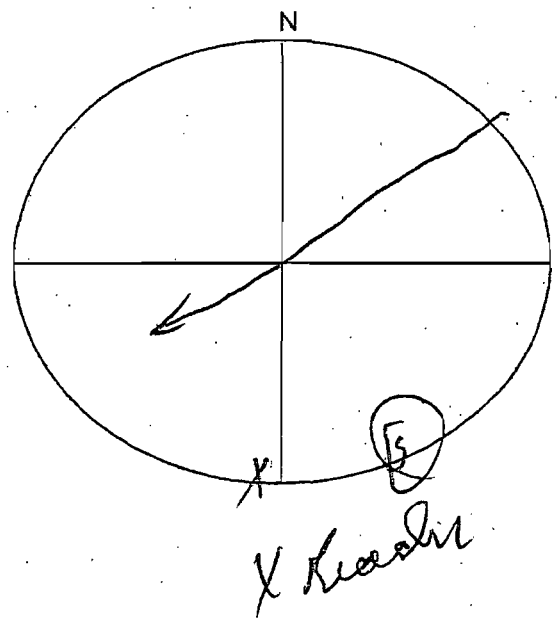
Wind Direction N-E  
Wind Speed 5 to 10  
Ambient Temperature 76.0°

SKY CONDITIONS (Clear, overcast, % clouds, etc.)

PLUME DESCRIPTION -

Color \_\_\_\_\_  
Distance Visible \_\_\_\_\_

Sun Direction (S)



Visual Determination of Opacity (page 1)

Company  
Location  
Job #  
Run #

TEA  
Jacksonville Fl.  
01-315  
3

Observer  
Date  
Start Time  
End Time

Del Vineyard  
12-17-01  
12:30  
13:30

*Fl. York Area*

	0	15	30	45
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				

	0	15	30	45
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				

% Opacity

2.5

Comments:

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Visual Determination of Opacity (page 2)

Company TEA  
Location Jacksonville, FL  
Job # 01-215  
Test Date 12-11-01  
Type of Facility Power Plant  
Observer Don Vineyard

OBSERVER LOCATION -

Distance to discharge 200'  
Direction from discharge SW  
Height of observation point 125'

BACKGROUND DESCRIPTION -

WEATHER CONDITIONS -

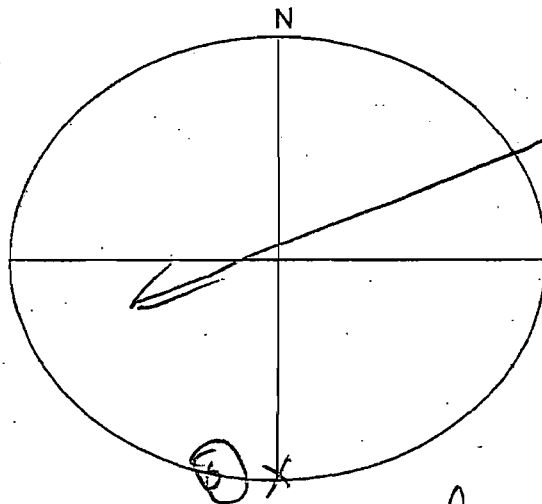
Wind Direction NE  
Wind Speed 0 to 8  
Ambient Temperature 72°/0

SKY CONDITIONS (Clear, overcast, % clouds, etc.)

PLUME DESCRIPTION -

Color Brown or Dark  
Distance Visible \_\_\_\_\_

Sun Direction (S)



X Reader

Visual Determination of Opacity (page 1)

Company JFA  
 Location Jacksonville, FL  
 Job # 01-315  
 Run # 4

Observer Dale Vineyard  
 Date 1-22-01  
 Start Time 14:10  
 End Time 15:10

*Start Run unit 1 stop*

	0	15	30	45
0	10	5	5	10
1	10	5	5	5
2	5	10	5	5
3	5	5	5	5
4	10	10	5	5
5	5	5	5	5
6	5	5	5	10
7	5	5	10	10
8	10	5	5	5
9	5	5	5	5
10	5	5	5	5
11	5	5	10	5
12	10	10	10	10
13	5	5	5	5
14	5	10	5	5
15	5	10	5	5
16	5	5	10	10
17	5	10	5	5
18	10	10	10	5
19	5	5	5	5
20	5	5	5	5
21	10	5	5	10
22	10	10	10	10
23	10	10	5	5
24	5	5	5	5
25	5	10	10	5
26	5	5	5	10
27	5	5	5	10
28	10	10	10	10
29	5	5	5	5

*stop*

*stop*

	0	15	30	45
30	10	10	10	10
31	5	5	5	10
32	5	5	10	10
33	10	5	5	15
34	10	5	5	5
35	5	5	5	10
36	10	5	5	5
37	10	5	10	10
38	10	5	5	5
39				
40				
41				
42				
43		10	10	10
44	5	5	5	10
45	5	5	5	
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				

% Opacity \_\_\_\_\_

Comments:

Clouds make Hard Reading  
Clouds could not read B. Rankin

6.84

Visual Determination of Opacity (page 2)

Company JE A  
 Location Jacksonville, FL  
 Job # 01-3#5  
 Test Date 12-11-01  
 Type of Facility Power Plant  
 Observer Dale Vineyard

OBSERVER LOCATION -

Distance to discharge 1860'  
 Direction from discharge SW  
 Height of observation point 650'

BACKGROUND DESCRIPTION -

Clouds + Sky

WEATHER CONDITIONS -

Wind Direction NE  
 Wind Speed 10  
 Ambient Temperature 78 °F

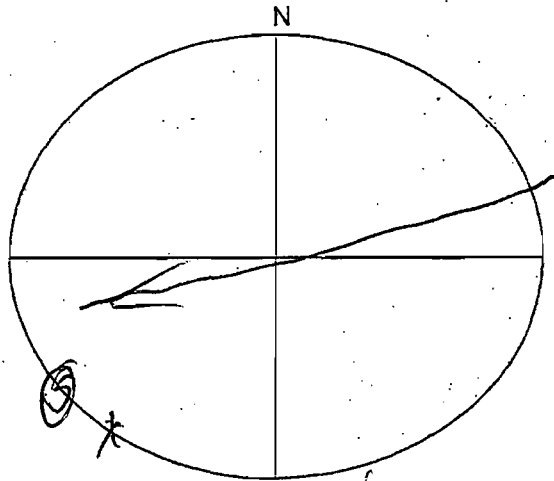
SKY CONDITIONS (Clear, overcast, % clouds, etc.)

90%

PLUME DESCRIPTION -

Color Dark  
 Distance Visible 150'

Sun Direction (S)



X Reader



EPA

VISIBLE EMISSION OBSERVATION FORM 1

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

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

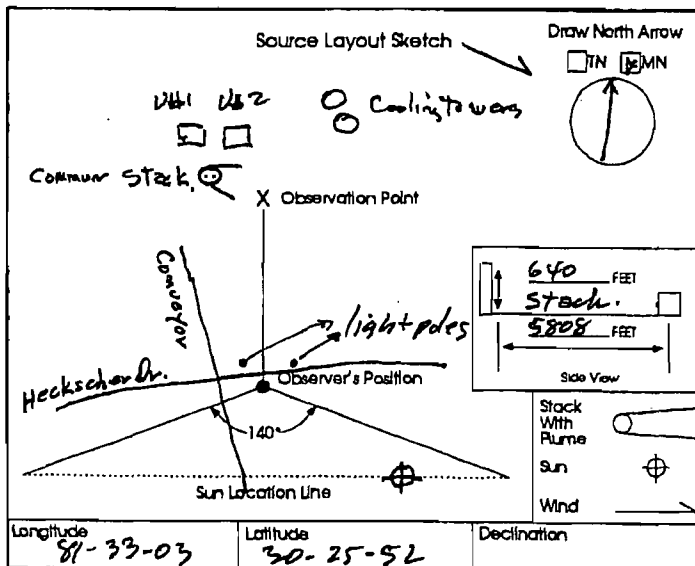
Process Coal-fired Boiler Unit # 1 Operating Mode 100%  
 Control Equipment Electrostatic Precipitator Operating Mode 100%

Describe Emission Point Stack Unit #1 (left side)  
 Height of Emiss. Pt. Start 640' End 640' Height of Emiss. Pt. Rel. to Observer Start 645' End 645'  
 Distance to Emiss. Pt. Start 1.1 Miles End 1.1 Miles Direction to Emiss. Pt. (Degrees) Start 325° NW End 325° NW

Vertical Angle to Obs. Pt. Start 9° End 10° Direction to Obs. Pt. (Degrees) Start 330° NW End 330° NW  
 Distance and Direction to Observation Point from Emission Point Start 900' 160' End 1100' 170°

Describe Emissions Start Continuous plume End Continuous plume.  
 Emission Color Start Gray End Gray Water Droplet Plume Attached  Detached  None

Describe Plume Background Start Open Sky End Open Sky  
 Background Color Start Blue End Blue Sky Conditions Start clear End clear.  
 Wind Speed Start 8-10 mph End 5-8 mph. Wind Direction Start NW End NW  
 Ambient Temp. Start 48° F End 48° F Wet Bulb Temp. 43° F RH Percent 64%



Additional Information Unit operating 7,612 MW - Following Soot.

Form Number A 1 2 2 6 1 Page 1 of 2  
 Continued on VEO Form Number A 1 2 2 6 1

Observation Date		Time Zone				Start Time	End Time
12/26/01						0945	1045
Sec	Min	0	15	30	45	Comments	
1	15	15	15	15	15		
2	15	15	15	15	15		
3	15	15	15	15	15		
4	15	15	15	15	15		
5	10	10	10	10	10		
6	10	10	10	10	10		
7	10	10	10	10	10		
8	10	10	10	10	10		
9	10	10	10	10	10		
10	10	10	5	5	5		
11	5	5	5	5	5		
12	5	5	5	10	10		
13	10	10	10	10	10		
14	10	10	10	10	10		
15	10	10	10	10	10		
16	10	10	10	10	10		
17	10	10	10	10	10		
18	10	10	10	10	10		
19	10	15	15	15	15		
20	15	15	15	15	15		
21	15	15	15	15	15		
22	15	15	15	15	15		
23	15	15	15	15	15		
24	15	10	10	15	15		
25	15	15	15	10	10		
26	10	10	10	10	10		
27	10	10	10	10	10		
28	10	10	10	10	10		
29	10	10	10	10	10		
30	10	10	10	10	10	Continues on page 2 of 2	

Observer's Name (Print) Alvaro Castro  
 Observer's Signature Alvaro Castro Date 12/26/01  
 Organization St. Johns River Power Bank  
 Certified by Eastern Technical Associate Date 12/05/01

EPA

VISIBLE EMISSION OBSERVATION FORM 1

Form Number **A 1 22 6 1** Page **2** of **2**  
 Continued on VEO Form Number

Method Used (Circle One)  
 Method **9** 203A 203B Other: \_\_\_\_\_

Company Name **St. Johns River Power Plant / JEA**  
 Facility Name **St. Johns River Power Plant**  
 Street Address **11201 New Berlin Rd.**  
 City **Wesleyville 1** State **FL** Zip **32226**

Process **Coal Fired Boiler** Unit # **1** Operating Mode **100%**  
 Control Equipment **Electrostatic Precipitator** Operating Mode **100%**

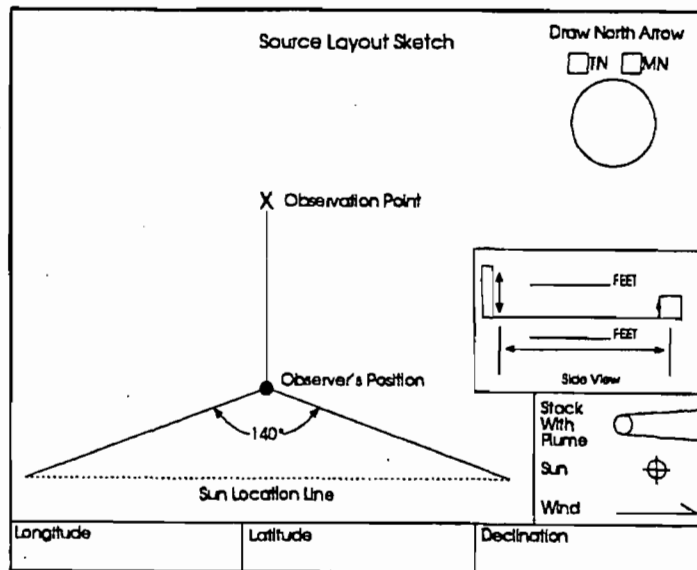
Describe Emission Point **Stack Unit #1 (left side)**

Height of Emiss. Pt. Start \_\_\_\_\_ End \_\_\_\_\_ Height of Emiss. Pt. Rel. to Observer Start \_\_\_\_\_ End \_\_\_\_\_  
 Distance to Emiss. Pt. Start \_\_\_\_\_ End \_\_\_\_\_ Direction to Emiss. Pt. (Degrees) Start \_\_\_\_\_ End \_\_\_\_\_

Vertical Angle to Obs. Pt. Start \_\_\_\_\_ End \_\_\_\_\_ Direction to Obs. Pt. (Degrees) Start \_\_\_\_\_ End \_\_\_\_\_  
 Distance and Direction to Observation Point from Emission Point Start \_\_\_\_\_ End \_\_\_\_\_

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

Describe Plume Background  
 Start \_\_\_\_\_ End \_\_\_\_\_ Background Color \_\_\_\_\_ Sky Conditions Start \_\_\_\_\_ End \_\_\_\_\_  
 Wind Speed Start \_\_\_\_\_ End \_\_\_\_\_ Wind Direction Start \_\_\_\_\_ End \_\_\_\_\_  
 Ambient Temp. Start \_\_\_\_\_ End \_\_\_\_\_ Wet Bulb Temp. \_\_\_\_\_ RH Percent \_\_\_\_\_



Observation Date	Time Zone	Start Time	End Time	Comments	
12/26/01		0945	10K5		
Sec	0	15	30	45	Comments
Min					
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	
5	10	10	10	10	
6	15	15	15	15	
7	15	15	15	15	
8	15	15	15	15	
9	15	15	10	10	
10	10	10	10	10	
11	10	10	10	10	
12	10	10	10	10	
13	10	10	10	10	
14	10	10	10	10	
15	10	10	10	10	
16	10	10	10	10	
17	15	15	15	15	
18	15	15	10	10	
19	10	10	10	10	
20	10	10	10	10	
21	10	10	10	10	
22	10	10	10	10	
23	10	10	10	10	
24	10	10	10	10	
25	10	10	10	10	
26	10	10	10	10	
27	10	10	10	10	
28	15	15	15	15	
29	15	10	10	10	
30	10	10	10	10	11.17

Observer's Name (Print) **Alvaro Castro**  
 Observer's Signature **Alvaro Castro** Date **12/26/01**  
 Organization **St. Johns River Power Plant**  
 Certified by **Eastern Technical Associates** Date **12/26/01**

EPA

VISIBLE EMISSION OBSERVATION FORM 1

Form Number **B 1 2 2 6 1** Page **1** of **2**  
 Continued on VEO Form Number **B 1 2 2 6 1**

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

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

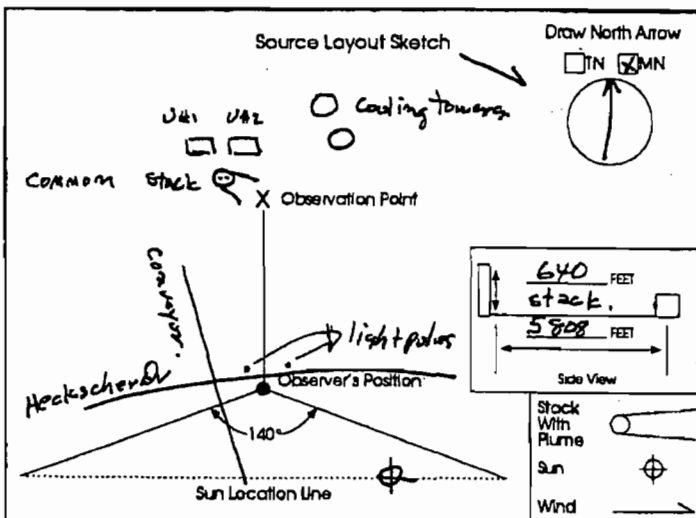
Process **Coal fired Boiler** Unit # **2** Operating Mode **100%**  
 Control Equipment **Electrostatic Precipitator** Operating Mode **100%**

Describe Emission Point  
**Stack Unit #2 (right side)**  
 Height of Emiss. Pt. Start **640'** End **640'** Height of Emiss. Pt. Rel. to Observer Start **645'** End **645'**  
 Distance to Emiss. Pt. Start **1.1 Miles** End **1.1 Miles** Direction to Emiss. Pt. (Degrees) Start **325°NW** End **325°NW**

Vertical Angle to Obs. Pt. Start **9°** End **10°** Direction to Obs. Pt. (Degrees) Start **330°NW** End **330°NW**  
 Distance and Direction to Observation Point from Emission Point Start **850'** **160°** End **1050'** **170°**

Describe Emissions  
 Start **Continuous plume** End **Continuous plume.**  
 Emission Color Start **Gray** End **Gray** Water Droplet Plume Attached  Detached  None

Describe Plume Background  
 Start **Open Sky.** End **Open Sky.**  
 Background Color Start **Blue** End **Blue** Sky Conditions Start **clear** End **clear.**  
 Wind Speed Start **8-10 mph** End **5-8 mph.** Wind Direction Start **NW** End **NW**  
 Ambient Temp. Start **48° F** End **48° F** Wet Bulb Temp. **43° F** RH Percent **64%**



Longitude **81-33-03** Latitude **30-25-52** Declination

Additional Information  
**Unit 2 operating 7:02 AM Blowing soft.**

Observation Date	Time Zone	Start Time	End Time						
12/26/01		0945	1045	Sec	0	15	30	45	Comments
1	15	15	15	15					
2	15	15	15	15					
3	15	15	15	15					
4	15	15	15	15					
5	15	15	15	15					
6	10	10	10	10					
7	10	10	10	10					
8	10	10	10	10					
9	10	10	10	10					
10	10	10	10	10					
11	5	5	5	5					
12	5	5	5	5					
13	5	5	5	5					
14	10	10	10	10					
15	10	10	10	10					
16	10	10	10	10					
17	10	10	10	10					
18	10	10	10	10					
19	10	10	10	10					
20	10	10	10	10					
21	15	15	15	10					
22	15	15	15	15					
23	15	15	15	15					
24	15	15	15	15					
25	15	15	15	15					
26	15	10	10	10					
27	10	10	10	10					
28	10	10	10	10					
29	10	10	10	10					
30	10	10	10	10	Continues on Page 2 of 2				

Observer's Name (Print) **Alvaro Castro**  
 Observer's Signature **Alvaro Castro** Date **12/26/01**  
 Organization **St. Johns River Power Park.**  
 Certified by **Eastern Technical Associates** Date **12/5/01**

EPA

VISIBLE EMISSION OBSERVATION FORM 1

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

Company Name: *St. Johns River Power Park / JEA*  
 Facility Name: *St. Johns River Power Park*  
 Street Address: *11201 New Berlin Rd.*  
 City: *Tachsonville* State: *FL* Zip: *32226*

Process: *Coal fired boiler* Unit #: *2* Operating Mode: *100%*  
 Control Equipment: *Electrostatic Precipitator* Operating Mode: *100%*

Describe Emission Point: *Stack Unit #2 (right side)*  
 Height of Emiss. Pt. Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Height of Emiss. Pt. Rel. to Observer Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Distance to Emiss. Pt. Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Direction to Emiss. Pt. (Degrees) Start: \_\_\_\_\_ End: \_\_\_\_\_

Vertical Angle to Obs. Pt. Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Direction to Obs. Pt. (Degrees) Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Distance and Direction to Observation Point from Emission Point Start: \_\_\_\_\_ End: \_\_\_\_\_

Describe Emissions  
 Emission Color Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Water Droplet Plume Attached  Detached  None

Describe Plume Background  
 Background Color Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Sky Conditions Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Wind Speed Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Wind Direction Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Ambient Temp. Start: \_\_\_\_\_ End: \_\_\_\_\_  
 Wet Bulb Temp. Start: \_\_\_\_\_ End: \_\_\_\_\_  
 RH Percent Start: \_\_\_\_\_ End: \_\_\_\_\_

Source Layout Sketch  
 Draw North Arrow  TN  MN  
  
 Longitude \_\_\_\_\_ Latitude \_\_\_\_\_ Declination \_\_\_\_\_

Additional Information

Form Number *B12261* Page *2 of 2*  
 Continued on VEO Form Number \_\_\_\_\_

Observation Date		Time Zone		Start Time	End Time
<i>12/26/01</i>				<i>DAYS</i>	<i>1045</i>
Sec	0	15	30	45	Comments
Mn					
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	
5	10	10	10	10	
6	10	10	15	10	
7	10	10	10	10	
8	10	10	10	10	
9	10	10	10	10	
10	15	15	10	10	
11	10	10	10	10	
12	10	10	10	10	
13	10	10	10	10	
14	10	10	10	10	
15	10	10	10	10	
16	10	10	10	10	
17	10	15	15	10	
18	15	15	15	10	
19	10	10	10	10	
20	10	10	10	10	
21	10	10	10	10	
22	10	10	10	10	
23	10	10	10	10	
24	10	10	10	10	
25	10	10	10	10	
26	10	10	10	10	
27	15	15	15	15	
28	15	15	10	10	
29	10	10	10	10	
30	10	10	10	10	<i>10.88</i>

Observer's Name (Print): *Alvaro Castro*  
 Observer's Signature: *Alvaro Castro* Date: *12/26/01*  
 Organization: *St. Johns River Power Park*  
 Certified by: *Eastern Technical Associates* Date: *12/5/07*

6

Grace Consulting, Inc.  
EPA Method 5  
522 Series Meter Box Calibration  
Calibration Orifice Method  
English Meter Box Units, English K' Factor

Date:	10/2/01
Model:	Apex
Serial:	4A

Barometric Pressure:	29.29	(in Hg)
Theoretical Critical Vacuum:	13.82	(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)<sup>3</sup>\*(deg R)<sup>0.5</sup>/((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)
0.61	11.45	800.50	805.50	5	64	66	48	0.3449	14	65	66	65.5
1.1	9.37	806.50	812.00	5.5	66	67	55	0.4595	14	66	66	66
1.9	12.98	812.50	822.50	10	69	72	63	0.5958	14	66	66	66
3.5	19.42	823.00	843.50	20.5	71	77	73	0.8215	14	65	66	65.5
5.4	15.22	844.00	864.00	20	77	77	81	1.0185	14	66	66	66

CORRECTED VOLUME	
DRY GAS METER Vm(std) (cu ft)	ORIFICE Vcr(std) (cu ft)
4.928	5.046
5.412	5.499
9.786	9.876
20.009	20.384
19.504	19.797

DRY GAS METER CALIBRATION FACTOR Y	
Value	Variation
1.024	0.007
1.016	-0.0006
1.009	-0.0073
1.019	0.0022
1.015	-0.0015

ORIFICE CALIBRATION FACTOR dH@	
Value (in H2O)	Variation (in H2O)
1.767	-0.032
1.797	-0.002
1.846	0.048
1.787	-0.011
1.795	-0.003

Orifice for Calc.  
3.2978

Average 1.017

Average 1.798

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: \_\_\_\_\_

Date: \_\_\_\_\_

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

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

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

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



# PITOT CALIBRATION

## Pitot Tube Assembly

Pitot # new  
Pitot Coefficient: 0.84

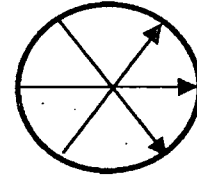
## Post Calibration

Visual Inspection OK  
Recalibrated N/A  
Adjusted Cp N/A

**Grace Consulting, Inc.**  
**Nozzle Calibration Sheet**

Date: **7/5/01**

Nozzle No.	Measurement A	Measurement B	Measurement C	Average Measurement
1	0.180	0.180	0.181	0.180
2	0.181	0.182	0.182	0.182
3	0.363	0.362	0.362	0.362
4	0.239	0.243	0.239	0.240
5	0.490	0.489	0.490	0.490
6	0.488	0.486	0.486	0.487
8	0.500	0.499	0.497	0.499
11	0.167	0.167	0.167	0.167
12	0.243	0.244	0.246	0.244
13	0.365	0.365	0.363	0.364
14	0.364	0.365	0.366	0.365
15	0.245	0.245	0.245	0.245
18	0.181	0.182	0.181	0.181
19	0.203	0.202	0.205	0.203
22	0.369	0.368	0.371	0.369
23	0.362	0.363	0.367	0.364
25	0.353	0.351	0.355	0.353
27	0.356	0.356	0.353	0.355
29	0.296	0.295	0.297	0.296
30	0.303	0.305	0.306	0.305
31	0.242	0.242	0.242	0.242
33	0.185	0.185	0.184	0.185
35	0.292	0.292	0.292	0.292
36	0.296	0.297	0.295	0.296
37	0.495	0.494	0.495	0.495
39	0.365	0.364	0.362	0.364
40	0.295	0.293	0.297	0.295
42	0.170	0.173	0.170	0.171
43	0.127	0.127	0.125	0.126
45	0.215	0.216	0.215	0.215
48	0.226	0.225	0.226	0.226
51	0.284	0.285	0.287	0.285
55	0.243	0.244	0.247	0.245
60	0.500	0.503	0.499	0.501
61	0.500	0.497	0.499	0.499
67	0.485	0.489	0.489	0.488
75	0.362	0.362	0.365	0.363
77	0.254	0.254	0.253	0.254
81	0.371	0.372	0.370	0.371
86	0.305	0.307	0.309	0.307
88	0.373	0.374	0.374	0.374
90	0.499	0.499	0.498	0.499
94	0.368	0.372	0.372	0.371
104	0.500	0.496	0.496	0.497





115	0.170	0.170	0.172	0.171
123	0.368	0.369	0.370	0.369
127	0.185	0.187	0.186	0.186
129	0.237	0.237	0.236	0.237
133	0.170	0.169	0.170	0.170
150	0.241	0.243	0.240	0.241
151	0.281	0.280	0.280	0.280
164	0.245	0.246	0.246	0.246
200	0.243	0.246	0.242	0.244
201	0.373	0.372	0.371	0.372
202	1.000	1.004	1.000	1.001
203	0.368	0.367	0.367	0.367
204	0.612	0.615	0.616	0.614
205	0.305	0.305	0.304	0.305
206	0.308	0.308	0.307	0.308
207	0.418	0.419	0.416	0.418
208	0.119	0.120	0.122	0.120
209	0.183	0.182	0.182	0.182
210	0.473	0.473	0.474	0.473
235	1.009	1.010	1.013	1.011
244	0.744	0.748	0.744	0.745
262	0.370	0.372	0.373	0.372
273	0.169	0.173	0.170	0.171
277	0.174	0.177	0.177	0.176
279	0.490	0.489	0.488	0.489
281	0.302	0.302	0.303	0.302
282	0.233	0.235	0.237	0.235
284	0.240	0.240	0.237	0.239
285	0.302	0.303	0.303	0.303
292	0.373	0.373	0.374	0.373
293	0.367	0.364	0.368	0.366
297	0.421	0.420	0.424	0.422
A1	0.180	0.184	0.184	0.183
A2	0.180	0.180	0.179	0.180
A22	0.259	0.260	0.259	0.259
A3	0.500	0.501	0.499	0.500
A41	0.355	0.354	0.357	0.355
A5	0.360	0.358	0.362	0.360
A6	0.365	0.362	0.364	0.364
A7	0.360	0.357	0.358	0.358
B2	0.561	0.562	0.564	0.562
N1	0.116	0.116	0.118	0.117
N2	0.164	0.163	0.165	0.164
N3	0.238	0.238	0.238	0.238
N4	0.294	0.296	0.297	0.296
N5	0.367	0.370	0.371	0.369
N6	0.423	0.424	0.424	0.424
N7	0.485	0.486	0.486	0.486
R3	0.510	0.512	0.511	0.511

# VISIBLE EMISSIONS EVALUATOR

This is to certify that

*Dale Vineyard*

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.

289413

Certificate Number

Akron, Ohio

Location

October 4, 2001

Date of Issue

Thomas Hore

President

Michael W. Junford

Director of Training



State of Florida  
Department of  
Environmental Protection

This is to Certify That

AL CASTRO

has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9.

This Certificate Expires

Jun 7, 2001

*M.D. Harley*  
Certificate Officer

*Al Castro*  
Bearer's Signature

Your certificate is valid for six (6) months. To keep your certification current, you must recertify on or before the expiration date on the card. Please mark your calendar accordingly.

Provided field certification is continuous the classroom certificate expires:

Dec 7, 2002

If field certification is not continuous classroom certification must be obtained prior to your next field certification attempt.

If you have any questions about your certification, please contact M.D. Harley at 850/921-9509.

# GRACE CONSULTING, INC.

## LABORATORY ANALYSIS

Company: St. Johns River Power Park

Location: Jacksonville, FL Unit 1 stack

Test Date: 12/11/2001

**RUN 1**

Filter No.	01-534
Acetone No.	2-1
Back Half No.	n/a

Acetone volume	130
Volume of Acetone blank	110
Volume of D.I. Blank	0
Total Impinger Volume	249.8

**RUN 2**

Filter No.	01-581
Acetone No.	2-2
Back Half No.	n/a

Acetone volume	160
Volume of Acetone blank	110
Volume of D.I. Blank	0
Total Impinger Volume	273.4

	Final Weight	Tare Weight	Weight Gain
Filter	0.6251	0.6220	0.0031
Acetone	115.8117	115.7733	0.0384
			0.0000
Back Half	0.0000	0.0000	0.0000

Acetone Blank:	0.0000
Back Half Blank:	0.0000
Total Method 5 Weight Gain:	0.0415
Total Back Half Weight Gain:	0.0000
Total Weight Gain:	0.0415

	Final Weight	Tare Weight	Weight Gain
Filter	0.6268	0.6224	0.0044
Acetone	82.6116	82.5769	0.0347
			0.0000
Back Half	0.0000	0.0000	0.0000

Acetone Blank:	0.0000
Back Half Blank:	0.0000
Total Method 5 Weight Gain:	0.0391
Total Back Half Weight Gain:	0.0000
Total Weight Gain:	0.0391

	Condensate	Silica Gel
	(g.)	(ml.)
Initial:	200	250
Final:	249.8	302.5
Gain:	49.8	52.5

	Condensate	Silica Gel
	(g.)	(ml.)
Initial:	200	250
Final:	273.4	316.6
Gain:	73.4	66.6

**GRACE CONSULTING, INC.**  
LABORATORY ANALYSIS

Company: St. Johns River Power Park

Location: Unit 1

Test Date: 12/11/2001

**RUN 3**

Filter No.	01-585
Acetone No.	2-3
Back Half No.	n/a

**Blank**

Filter No.	n/a
Acetone No.	100
Back Half No.	n/a

Acetone volume	145
Volume of Acetone blank	110
Volume of D.I. Blank	0
Total Impinger Volume	233.3

Acetone volume	0
Volume of Acetone blank	110
Volume of D.I. Blank	0
Total Impinger Volume	0

	Final Weight	Tare Weight	Weight Gain
Filter	0.6248	0.6201	0.0047
Acetone	80.6938	80.6672	0.0266
			0.0000
Back Half	0.0000	0.0000	0.0000
Acetone Blank:			0.0000
Back Half Blank:			0.0000
Total Method 5 Weight Gain:			0.0313
Total Back Half Weight Gain:			0.0000
Total Weight Gain:			0.0313

	Final Weight	Tare Weight	Weight Gain
Filter	0.0000	0.0000	0.0000
Acetone	98.7231	98.7231	0.0000
			0.0000
Back Half	0.0000	0.0000	0.0000
Acetone Blank:			0.0000
Back Half Blank:			0.0000
Total Method 5 Weight Gain:			0.0000
Total Back Half Weight Gain:			0.0000
Total Weight Gain:			0.0000

	Condensate (g.)	Silica Gel (ml.)
Initial:	200	250
Final:	233.3	282.7
Gain:	33.3	32.7

	Condensate (g.)	Silica Gel (ml.)
Initial:	0	0
Final:	0	0
Gain:	0	0

**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9308

SINCE 1908



Member of the SGS Group (Société Générale de Surveillance)

1908-1998 90 Years Committed To Excellence

ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 752  
HENDERSON, KY 42419  
TEL: (502) 827-1187  
FAX: (502) 826-0719

December 27, 2001

ST. JOHNS RIVER POWER PARK  
11201 NEW BERLIN RD  
JACKSONVILLE FL 32226Sample identification by  
SJRPPUnit #: ONE  
Date Collected: 12/10/01  
SJRPP Lab ID #: UNIT1-121001  
P.O. #2312Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 10, 2001

Date received December 21, 2001

Analysis Report No. 63-53281

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	10.40	XXXXX		
% Ash	7.54	8.41		
Btu/lb	12137	13546	MAF	14790
% Sulfur	1.63	1.82		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Robin D. Lawrence  
Henderson LaboratoryMEMBER  
ACIL


**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

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ADDRESS ALL CORRESPONDENCE TO:

 P.O. BOX 752  
 HENDERSON, KY 42419  
 TEL: (502) 827-1187  
 FAX: (502) 828-0719

December 27, 2001

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

 Sample identification by  
 SJRPP

 Unit #: ONE  
 Date Collected: 12/11/01  
 SJRPP Lab ID #: UNIT1-121101  
 P.O. #2312

 Kind of sample Coal  
 reported to us

Sample taken at -----

Sample taken by ---

Date sampled December 11, 2001

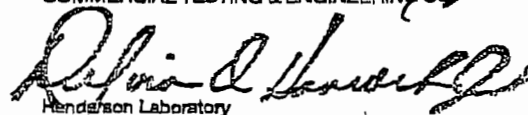
Date received December 21, 2001

Analysis Report No. 63-53282

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	11.51	XXXXX		
% Ash	5.98	6.76		
Btu/lb	12104	13678	MAP	14670
% Sulfur	1.50	1.69		

 Respectfully submitted,  
 COMMERCIAL TESTING & ENGINEERING CO.


 Henderson Laboratory

 MEMBER  
 ACIL

**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1819 SOUTH HIGHLAND AVE, SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-853-8300 FAX: 630-853-8306

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ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 752  
HENDERSON, KY 42419  
TEL: (502) 827-1187  
FAX: (502) 826-0719

December 27, 2001

ST. JOHNS RIVER POWER PARK  
11201 NEW BERLIN RD  
JACKSONVILLE FL 32226Sample identification by  
SJRPPUnit #: ONE  
Date Collected: 12/12/01  
SJRPP Lab ID #: UNIT1-121201  
P.O. #2312Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 12, 2001

Date received December 21, 2001

Analysis Report No. 63-53283

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	10.91	xxxxx		
% Ash	7.11	7.98		
Btu/lb	12018	13523	MAF	14696
% Sulfur	1.15	1.29		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Henderson LaboratoryMEMBER  
**ACIL**



**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1818 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-853-8306



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FAX: (502) 826-0719

December 27, 2001

ST. JOHNS RIVER POWER PARK  
11201 NEW BERLIN RD  
JACKSONVILLE FL 32226Sample identification by  
SJRPPUnit #: ONE  
Date Collected: 12/13/01  
SJRPP Lab ID #: UNIT1-121301  
P.O. #2312Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 13, 2001

Date received December 21, 2001

Analysis Report No. 63-53284

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	9.89	XXXXXX		
% Ash	5.12	5.68		
Btu/lb	12514	13888	MAF	14724
% Sulfur	1.59	1.76		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Henderson LaboratoryMEMBER  
**ACIL**

**GRACE CONSULTING, INC.**  
LABORATORY ANALYSIS

Company: St. Johns River Power Park

Location: Jacksonville, FL Unit 2 stack

Test Date: 12/10/2001

**RUN 1**

Filter No. 01-531  
Acetone No. 2-1  
Back Half No. n/a

Acetone volume 150  
Volume of Acetone blank 110  
Volume of D.I. Blank 0  
Total Impinger Volume 267.5

**RUN 2**

Filter No. 01-586  
Acetone No. 2-2  
Back Half No. n/a

Acetone volume 200  
Volume of Acetone blank 110  
Volume of D.I. Blank 0  
Total Impinger Volume 255.8

	Final Weight	Tare Weight	Weight Gain
Filter	0.6299	0.6226	0.0073
Acetone	64.6960	64.6847	0.0113
			0.0000
Back Half	0.0000	0.0000	0.0000
Acetone Blank:			0.0000
Back Half Blank:			0.0000
Total Method 5 Weight Gain:			0.0186
Total Back Half Weight Gain:			0.0000
Total Weight Gain:			0.0186

	Final Weight	Tare Weight	Weight Gain
Filter	0.6277	0.6220	0.0057
Acetone	72.9793	72.9661	0.0132
			0.0000
Back Half	0.0000	0.0000	0.0000
Acetone Blank:			0.0000
Back Half Blank:			0.0000
Total Method 5 Weight Gain:			0.0189
Total Back Half Weight Gain:			0.0000
Total Weight Gain:			0.0189

	Condensate (g.)	Silica Gel (ml.)
Initial:	200	250
Final:	267.5	299.6
Gain:	67.5	49.6

	Condensate (g.)	Silica Gel (ml.)
Initial:	200	250
Final:	255.8	251.6
Gain:	55.8	1.6

**GRACE CONSULTING, INC.**  
LABORATORY ANALYSIS

Company: St. Johns River Power Park

Location: Unit 2

Test Date: 12/10/2001

**RUN 3**

Filter No.	01-587
Acetone No.	37290
Back Half No.	n/a

**Blank**

Filter No.	n/a
Acetone No.	100
Back Half No.	n/a

Acetone volume	155
Volume of Acetone blank	110
Volume of D.I. Blank	0
Total Impinger Volume	226.5

Acetone volume	0
Volume of Acetone blank	110
Volume of D.I. Blank	0
Total Impinger Volume	0

	Final Weight	Tare Weight	Weight Gain
Filter	0.6221	0.6161	0.0060
Acetone	78.4348	78.4207	0.0141
			0.0000
Back Half	0.0000	0.0000	0.0000

	Final Weight	Tare Weight	Weight Gain
Filter	0.0000	0.0000	0.0000
Acetone	98.7231	98.7231	0.0000
			0.0000
Back Half	0.0000	0.0000	0.0000

Acetone Blank:	0.0000
Back Half Blank:	0.0000
Total Method 5 Weight Gain:	0.0201
Total Back Half Weight Gain:	0.0000
Total Weight Gain:	0.0201

Acetone Blank:	0.0000
Back Half Blank:	0.0000
Total Method 5 Weight Gain:	0.0000
Total Back Half Weight Gain:	0.0000
Total Weight Gain:	0.0000

	Condensate (g.)	Silica Gel (ml.)
Initial:	200	250
Final:	226.5	310.2
Gain:	26.5	60.2

	Condensate (g.)	Silica Gel (ml.)
Initial:	0	0
Final:	0	0
Gain:	0	0

**COMMERCIAL TESTING & ENGINEERING CO.**

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December 27, 2001

ST. JOHNS RIVER POWER PARK  
11201 NEW BERLIN RD  
JACKSONVILLE FL 32226Sample identification by  
SJRPPUnit #: TWO  
Date Collected: 12/10/01  
SJRPP Lab ID #: UNIT2-121001  
P.O. #2312Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 10, 2001

Date received December 21, 2001

Analysis Report No. 63-53285

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	7.38	XXXXXX		
% Ash	13.15	14.20		
Btu/lb	11902	12850	MAF	14977
% Sulfur	2.12	2.29		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Henderson LaboratoryMEMBER  
ACIL

**COMMERCIAL TESTING & ENGINEERING CO.**

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FAX: (502) 828-0719

December 27, 2001

ST. JOHNS RIVER POWER PARK  
11201 NEW BERLIN RD  
JACKSONVILLE FL 32226Sample identification by  
SJRPPUnit #: TWO  
Date Collected: 12/11/01  
SJRPP Lab ID #: UNIT2-121101  
P.O. #2312Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by -----

Date sampled December 11, 2001

Date received December 21, 2001

Analysis Report No. 63-53286

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	7.23	XXXXX		
% Ash	9.32	10.05		
Btu/lb	12434	13403	MAF	14901
% Sulfur	2.27	2.45		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Henderson LaboratoryMEMBER  
ACIL

**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60149 • TEL: 630-953-8300 FAX: 630-953-8306

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HENDERSON, KY 42419  
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FAX: (502) 826-0719

December 27, 2001

ST. JOHNS RIVER POWER PARK  
11201 NEW BERLIN RD  
JACKSONVILLE FL 32226Sample identification by  
SJRPPUnit #: TWO  
Date Collected: 12/12/01  
SJRPP Lab ID #: UNIT2-121201  
P.O. #2312Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by

Date sampled December 12, 2001

Date received December 21, 2001

Analysis Report No. 63-53287

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	8.05	xxxxx		
% Ash	7.36	8.00		
Btu/lb	12605	13708	MAF	14900
% Sulfur	2.29	2.49		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING  
Henderson LaboratoryMEMBER  
**ACIL**



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TEL: (502) 827-1187  
FAX: (502) 828-0719

December 27, 2001

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

Sample identification by  
SJRPP

Unit #: TWO  
Date Collected: 12/13/01  
SJRPP Lab ID #: UNIT2-121301  
P.O. #2312

Kind of sample Coal  
reported to us

Sample taken at -----

Sample taken by ---

Date sampled December 13, 2001

Date received December 21, 2001

Analysis Report No. 63-53288

## SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>		
% Moisture	7.24	XXXXX		
% Ash	8.87	9.56		
Btu/lb	12426	13396	MAF	14812
% Sulfur	1.93	2.08		

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

*Refino D. Lawrence*

Henderson Laboratory

MEMBER  
**ACIL**

TUN #1 Particulates

PP-1

8

Enertec NTDAS®  
Average Values Report  
Generated : 12/11/01 10:33

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

Period Start: 12/11/01 08:00  
Period End: 12/11/01 10:04  
Validation Type: 1/1 min  
Averaging Period: 1 min  
Type: Block Avg

Period Start	Average Opacity %	Average Unit Load MW
12/11/01 08:00	5.4	627.3
12/11/01 08:01	4.7	625.3
12/11/01 08:02	6.2	623.6
12/11/01 08:03	6.5	622.1
12/11/01 08:04	4.4	620.1
12/11/01 08:05	3.8	619.3
12/11/01 08:06	4.3	618.8
12/11/01 08:07	4.6	619.4
12/11/01 08:08	6.7	619.1
12/11/01 08:09	6.5	618.4
12/11/01 08:10	5.2	618.9
12/11/01 08:11	4.9	619.5
12/11/01 08:12	6.0	620.6
12/11/01 08:13	7.3	622.0
12/11/01 08:14	4.8	622.9
12/11/01 08:15	7.7	623.9
12/11/01 08:16	8.0	625.3
12/11/01 08:17	7.1	625.4
12/11/01 08:18	4.5	626.3
12/11/01 08:19	4.0	626.9
12/11/01 08:20	5.6	628.3
12/11/01 08:21	6.4	630.2
12/11/01 08:22	5.9	632.2
12/11/01 08:23	5.5	633.6
12/11/01 08:24	8.7	634.1
12/11/01 08:25	9.4	634.0
12/11/01 08:26	5.4	633.2
12/11/01 08:27	5.8	630.5
12/11/01 08:28	5.3	628.0
12/11/01 08:29	4.1	626.4
12/11/01 08:30	3.6	623.0
12/11/01 08:31	3.2	620.4
12/11/01 08:32	3.9	618.4
12/11/01 08:33	4.7	617.8
12/11/01 08:34	5.4	616.8
12/11/01 08:35	4.1	615.7
12/11/01 08:36	7.0	613.8
12/11/01 08:37	5.9	612.9
12/11/01 08:38	4.4	613.0
12/11/01 08:39	5.0	613.9
12/11/01 08:40	4.6	615.2
12/11/01 08:41	3.8	617.1
12/11/01 08:42	3.4	619.1
12/11/01 08:43	3.9	620.8
12/11/01 08:44	3.5	623.5
12/11/01 08:45	4.0	625.5
12/11/01 08:46	7.9	626.7
12/11/01 08:47	4.3	628.2



Wan-Hi Particulates

PP 2

12/11/01 08:48	5.7	629.2
12/11/01 08:49	6.7	630.5
12/11/01 08:50	6.3	630.6
12/11/01 08:51	4.0	629.8
12/11/01 08:52	6.6	629.0
12/11/01 08:53	4.8	628.0
12/11/01 08:54	3.4	627.9
12/11/01 08:55	3.1	626.9
12/11/01 08:56	3.7	625.0
12/11/01 08:57	3.8	623.2
12/11/01 08:58	4.1	621.5
12/11/01 08:59	6.2	620.7
12/11/01 09:00	4.1	620.7
12/11/01 09:01	4.6	620.3
12/11/01 09:02	11.4	620.3
12/11/01 09:03	6.6	619.4
12/11/01 09:04	3.9	619.5
12/11/01 09:05	6.5	618.7
12/11/01 09:06	3.8	618.1
12/11/01 09:07	3.3	618.0
12/11/01 09:08	4.7	618.1
12/11/01 09:09	3.2	618.6
12/11/01 09:10	4.0	619.0
12/11/01 09:11	5.1	619.8
12/11/01 09:12	5.2	620.1
12/11/01 09:13	4.0	621.8
12/11/01 09:14	4.5	624.4
12/11/01 09:15	8.2	626.0
12/11/01 09:16	6.5	627.5
12/11/01 09:17	4.6	628.1
12/11/01 09:18	5.8	627.7
12/11/01 09:19	3.7	626.6
12/11/01 09:20	3.6	626.3
12/11/01 09:21	3.8	626.4
12/11/01 09:22	3.6	626.3
12/11/01 09:23	4.0	625.0
12/11/01 09:24	4.9	625.1
12/11/01 09:25	5.4	624.4
12/11/01 09:26	5.5	623.7
12/11/01 09:27	9.5	624.0
12/11/01 09:28	7.6	623.9
12/11/01 09:29	5.2	623.4
12/11/01 09:30	6.6	623.0
12/11/01 09:31	9.4	622.8
12/11/01 09:32	3.3	620.7
12/11/01 09:33	4.2	620.7
12/11/01 09:34	5.9	621.8
12/11/01 09:35	4.7	622.8
12/11/01 09:36	4.5	624.2
12/11/01 09:37	7.0	625.7
12/11/01 09:38	5.6	627.6
12/11/01 09:39	4.3	629.2
12/11/01 09:40	6.9	631.3
12/11/01 09:41	5.7	632.3
12/11/01 09:42	5.2	633.1
12/11/01 09:43	4.5	632.4
12/11/01 09:44	4.1	633.5
12/11/01 09:45	4.1	633.8
12/11/01 09:46	4.2	633.8
12/11/01 09:47	3.1	633.6
12/11/01 09:48	3.6	633.6
12/11/01 09:49	4.9	633.8

*Run #2 Particulates* (01-1)  
 Enertec NTDAS®  
 Average Values Report  
 Generated : 12/11/01 12:40

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

Period Start: 12/11/01 10:20  
 Period End: 12/11/01 12:26  
 Validation Type: 1/1 min  
 Averaging Period: 1 min  
 Type: Block Avg

Period Start	Average Opacity %	Average Unit Load MW
12/11/01 10:20	5.1	629.0
12/11/01 10:21	4.5	627.6
12/11/01 10:22	4.6	625.6
12/11/01 10:23	4.2	623.8
12/11/01 10:24	3.9	623.2
12/11/01 10:25	3.2	623.0
12/11/01 10:26	4.2	623.0
12/11/01 10:27	4.5	623.3
12/11/01 10:28	5.6	623.8
12/11/01 10:29	5.1	623.6
12/11/01 10:30	6.5	622.6
12/11/01 10:31	7.1	622.8
12/11/01 10:32	6.5	625.9
12/11/01 10:33	7.7	630.3
12/11/01 10:34	6.5	632.3
12/11/01 10:35	3.8	631.3
12/11/01 10:36	3.4	629.8
12/11/01 10:37	4.8	630.3
12/11/01 10:38	4.8	631.6
12/11/01 10:39	5.1	632.8
12/11/01 10:40	5.1	634.5
12/11/01 10:41	4.2	636.0
12/11/01 10:42	5.3	637.5
12/11/01 10:43	7.3	638.3
12/11/01 10:44	6.6	639.0
12/11/01 10:45	5.8	638.7
12/11/01 10:46	5.1	636.6
12/11/01 10:47	3.3	636.1
12/11/01 10:48	4.2	634.6
12/11/01 10:49	4.3	632.0
12/11/01 10:50	5.3	628.5
12/11/01 10:51	6.8	624.9
12/11/01 10:52	10.6	621.8
12/11/01 10:53	9.0	619.8
12/11/01 10:54	5.2	617.5
12/11/01 10:55	6.3	617.0
12/11/01 10:56	6.7	617.3
12/11/01 10:57	7.0	618.5
12/11/01 10:58	5.3	620.3
12/11/01 10:59	4.7	621.6
12/11/01 11:00	3.7	623.6
12/11/01 11:01	3.7	626.2
12/11/01 11:02	4.3	627.8
12/11/01 11:03	5.0	629.7
12/11/01 11:04	4.6	632.3
12/11/01 11:05	5.2	634.6
12/11/01 11:06	6.8	637.1
12/11/01 11:07	6.2	638.5

## Run # 2 Particulates

8P-2

12/11/01 11:08	4.2	639.3
12/11/01 11:09	6.0	639.0
12/11/01 11:10	8.1	638.5
12/11/01 11:11	4.7	637.6
12/11/01 11:12	4.3	635.6
12/11/01 11:13	3.8	633.0
12/11/01 11:14	5.5	631.2
12/11/01 11:15	4.5	629.8
12/11/01 11:16	3.9	628.9
12/11/01 11:17	5.4	627.4
12/11/01 11:18	4.3	626.1
12/11/01 11:19	6.0	625.3
12/11/01 11:20	6.4	624.7
12/11/01 11:21	5.3	624.0
12/11/01 11:22	4.1	623.3
12/11/01 11:23	4.9	623.4
12/11/01 11:24	5.2	623.4
12/11/01 11:25	3.6	623.6
12/11/01 11:26	4.5	624.9
12/11/01 11:27	4.0	626.8
12/11/01 11:28	4.3	628.2
12/11/01 11:29	3.7	629.2
12/11/01 11:30	5.8	630.0
12/11/01 11:31	5.4	630.6
12/11/01 11:32	5.1	631.2
12/11/01 11:33	4.7	632.1
12/11/01 11:34	8.1	631.9
12/11/01 11:35	6.6	631.8
12/11/01 11:36	5.2	631.8
12/11/01 11:37	5.7	632.7
12/11/01 11:38	4.7	633.2
12/11/01 11:39	3.9	632.8
12/11/01 11:40	4.8	632.6
12/11/01 11:41	4.3	633.1
12/11/01 11:42	3.9	633.2
12/11/01 11:43	4.3	633.6
12/11/01 11:44	4.4	633.2
12/11/01 11:45	6.1	632.5
12/11/01 11:46	4.9	631.4
12/11/01 11:47	5.6	631.4
12/11/01 11:48	5.1	632.0
12/11/01 11:49	6.5	631.5
12/11/01 11:50	5.4	631.4
12/11/01 11:51	3.6	631.5
12/11/01 11:52	4.2	631.8
12/11/01 11:53	4.8	631.1
12/11/01 11:54	3.6	631.2
12/11/01 11:55	4.8	629.8
12/11/01 11:56	5.5	629.0
12/11/01 11:57	4.6	628.9
12/11/01 11:58	6.6	628.1
12/11/01 11:59	8.1	627.9
12/11/01 12:00	4.1	627.9
12/11/01 12:01	3.8	627.8
12/11/01 12:02	6.4	627.1
12/11/01 12:03	3.8	627.5
12/11/01 12:04	3.6	627.7
12/11/01 12:05	6.1	629.1
12/11/01 12:06	5.4	630.8
12/11/01 12:07	3.8	630.8
12/11/01 12:08	5.4	630.1
12/11/01 12:09	8.9	630.1

RUN#3 Particulates

OP-1

Enertec NTDAHS®

Average Values Report

Generated : 12/11/01 15:36

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

Period Start: 12/11/01 12:45  
Period End: 12/11/01 14:49  
Validation Type: 1/1 min  
Averaging Period: 1 min  
Type: Block Avg

Period Start	Average Opacity %	Average Unit Load MW
12/11/01 12:45	3.6	627.7
12/11/01 12:46	5.8	628.6
12/11/01 12:47	6.0	628.4
12/11/01 12:48	3.7	626.9
12/11/01 12:49	7.4	626.4
12/11/01 12:50	5.4	625.5
12/11/01 12:51	3.7	624.6
12/11/01 12:52	4.0	623.8
12/11/01 12:53	4.1	624.4
12/11/01 12:54	3.5	624.0
12/11/01 12:55	4.3	623.2
12/11/01 12:56	6.8	622.1
12/11/01 12:57	3.9	621.9
12/11/01 12:58	5.1	622.6
12/11/01 12:59	6.1	623.2
12/11/01 13:00	5.7	624.4
12/11/01 13:01	4.4	625.1
12/11/01 13:02	7.7	626.1
12/11/01 13:03	5.0	625.9
12/11/01 13:04	3.6	626.4
12/11/01 13:05	4.8	627.3
12/11/01 13:06	4.6	628.1
12/11/01 13:07	3.5	628.4
12/11/01 13:08	4.2	628.2
12/11/01 13:09	5.9	627.4
12/11/01 13:10	3.9	626.3
12/11/01 13:11	6.3	624.9
12/11/01 13:12	5.9	623.6
12/11/01 13:13	4.5	623.4
12/11/01 13:14	6.6	623.0
12/11/01 13:15	6.6	623.0
12/11/01 13:16	3.4	623.3
12/11/01 13:17	4.3	623.9
12/11/01 13:18	6.6	624.6
12/11/01 13:19	4.3	625.2
12/11/01 13:20	3.8	626.3
12/11/01 13:21	6.4	626.9
12/11/01 13:22	4.1	628.0
12/11/01 13:23	4.4	628.5
12/11/01 13:24	8.4	627.2
12/11/01 13:25	5.1	627.7
12/11/01 13:26	4.3	628.4
12/11/01 13:27	10.8	627.8
12/11/01 13:28	6.9	626.3
12/11/01 13:29	4.7	623.9
12/11/01 13:30	4.5	623.4
12/11/01 13:31	7.0	622.5
12/11/01 13:32	4.4	623.2

Enertec NTAHS®  
Daily Averages Report  
Generated : 12/26/01 12:18

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

Period Start: 12/26/01 00:00  
Period End: 12/26/01 12:17  
Validation Type: 6/6 min  
Averaging Period: 6 min  
Type: Block Avg

1Opacity (%)

Period Start	:00	:06	:12	:18	:24	:30	:36	:42	:48	:54	Avg.
12/26/01 00:00	3.0	3.5	3.0	3.8	3.2	3.8	3.0	3.3	3.1	7.5IC	3.3
12/26/01 01:00	11.2IC	8.8SC	3.6	3.1	2.9	3.7	3.3	3.4	2.8	2.9	3.2
12/26/01 02:00	3.3	3.0	2.9	2.9	3.2	2.8	2.9	2.7	3.0	2.6	2.9
12/26/01 03:00	4.3	2.9	3.3	3.0	4.4	2.8	3.3	2.9	3.6	3.2	3.4
12/26/01 04:00	3.0	3.0	3.1	3.5	2.9	3.4	3.1	3.4	2.7	3.6	3.2
12/26/01 05:00	2.4	2.9	2.5	3.5	2.6	3.5	2.5	4.0	2.6	4.0	3.0
12/26/01 06:00	2.6	3.2	2.8	3.0	2.8	3.1	3.0	3.4	3.4	3.5	3.1
12/26/01 07:00	3.1	3.2	3.3	3.2	3.3	2.6	4.1	2.8	3.8	2.9	3.2
12/26/01 08:00	3.9	2.7	3.4	2.8	3.3	2.8	3.0	2.9	3.3	2.9	3.1
12/26/01 09:00	3.1	3.4	2.8	3.1	3.5	3.4	3.5	3.1	3.2	3.3	3.2
12/26/01 10:00	3.2	3.4	3.5	3.8	3.6	4.1	3.9	3.2	3.2	3.5	3.5
12/26/01 11:00	3.0	3.4	2.9	3.1	2.9	4.3	4.5	3.4	3.0	3.5	3.4
12/26/01 12:00	3.4	3.1	4.4	3.6							
Final Average*	3.4										
Maximum*	4.5										
Minimum*	2.4										

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

Calibration Codes

Status Codes

IC - In calibration  
SC - Span Calibration PASS  
MC - Midrange Calibration PASS  
ZC - Zero Calibration PASS  
CF - Calibration Fail  
SF - Span Calibration Fail  
MF - Midrange Calibration Fail  
ZF - Zero Calibration Fail  
DN - Process Down

OC - Out of Control (CFR-75)  
O6 - Out of Control (CFR-60)  
OB - Out of Control (75 & 60)  
HW - Hardware fault  
IG - Ignore Data  
LF - Communication Link Failure  
ND - No Data  
DE - Data or CEMSPEAK Task Error

Enertec NTDAHS®  
Average Values Report  
Generated : 12/26/01 12:19

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

Period Start: 12/26/01 09:45  
Period End: 12/26/01 10:45  
Validation Type: 1/1 min  
Averaging Period: 1/1 min  
Type: Rolling Avg

Period Start	Average 1Stk_kscfh kscfh	Average 1Unit_Load MW
12/26/01 09:45	100362.0	651.5
12/26/01 09:46	99876.0	648.7
12/26/01 09:47	99438.0	648.0
12/26/01 09:48	99426.0	650.5
12/26/01 09:49	99408.0	653.0
12/26/01 09:50	99318.0	652.4
12/26/01 09:51	99318.0	651.5
12/26/01 09:52	99354.0	652.0
12/26/01 09:53	99408.0	651.5
12/26/01 09:54	99438.0	655.2
12/26/01 09:55	99486.0	658.4
12/26/01 09:56	99474.0	657.5
12/26/01 09:57	99900.0	657.0
12/26/01 09:58	99900.0	658.9
12/26/01 09:59	99912.0	659.6
12/26/01 10:00	100080.0	657.8
12/26/01 10:01	100254.0	653.4
12/26/01 10:02	100230.0	654.2
12/26/01 10:03	100254.0	657.4
12/26/01 10:04	100206.0	656.9
12/26/01 10:05	100188.0	653.3
12/26/01 10:06	100206.0	651.7
12/26/01 10:07	100068.0	652.4
12/26/01 10:08	99894.0	655.8
12/26/01 10:09	99912.0	654.3
12/26/01 10:10	100068.0	654.0
12/26/01 10:11	100206.0	655.6
12/26/01 10:12	100206.0	654.4
12/26/01 10:13	100176.0	650.9
12/26/01 10:14	100206.0	653.4
12/26/01 10:15	100266.0	656.0
12/26/01 10:16	100254.0	656.2
12/26/01 10:17	100332.0	656.2
12/26/01 10:18	100374.0	659.2
12/26/01 10:19	100362.0	661.9
12/26/01 10:20	100338.0	658.5
12/26/01 10:21	100284.0	656.4
12/26/01 10:22	100296.0	662.1
12/26/01 10:23	100284.0	665.0
12/26/01 10:24	100398.0	664.6
12/26/01 10:25	100728.0	661.7
12/26/01 10:26	100758.0	658.8
12/26/01 10:27	100890.0	658.9
12/26/01 10:28	101340.0	661.0
12/26/01 10:29	101316.0	663.4
12/26/01 10:30	101298.0	664.4
12/26/01 10:31	101316.0	661.3
12/26/01 10:32	101328.0	662.8

12/26/01 10:33	101304.0	665.0
12/26/01 10:34	101316.0	665.0
12/26/01 10:35	101262.0	662.6
12/26/01 10:36	101088.0	662.1
12/26/01 10:37	101100.0	661.2
12/26/01 10:38	101100.0	656.7
12/26/01 10:39	101112.0	657.9
12/26/01 10:40	101142.0	659.9
12/26/01 10:41	101130.0	659.6
12/26/01 10:42	101166.0	659.6
12/26/01 10:43	101244.0	664.7
12/26/01 10:44	101208.0	666.7
12/26/01 10:45	101220.0	666.2
<b>Final Average*</b>	<b>100389.0</b>	<b>657.7</b>
<b>Maximum*</b>	<b>101340.0</b>	<b>666.7</b>
<b>Minimum*</b>	<b>99318.0</b>	<b>648.0</b>

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

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

UNIT # 1

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		0800	0830	0900	0930	1000	1030
Steam Flow	Lb/Hr x 10 <sup>0</sup>	4.55	4.41	4.47	4.45	4.39	4.55
Air Flow	%	66	67	66	66	66	66
Generator Load (Gross)	Megawatts	666	646	661	662	653	668
Boiler Thermal Demand	Megawatts	671	652	669	671	664	678
O2 Flue gas	%	2.24	3.1	2.2	3.4	3.0	2.4
Fuel Flow	%	97	97	97.1	96.5	96.5	96.9
Coal Totalizer	Tons						
A	—	76112	76134	76148	76170	76192	76208
B	—	75754	75776	75790	75810	75832	75850
C	—	76944	76968	76980	77000	77020	77036
D	—	12065	12065	12065	12065	12065	12065
E	—	89556	89584	89600	89624	89650	89670
F	—	75880	75902	75916	75936	75958	75976
G	—	89940	89966	89982	90004	90030	90050



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

UNIT # 1

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
		DB	DB	PB	DB	DB	DB
Person Recording Data		DB	DB	PB	DB	DB	DB
Time		11:00	11:30	12:00	12:30	13:00	13:30
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.61	4.55	4.53	4.51	4.55	4.50
Air Flow	%	67	67	67	67	67	66
Generator Load (Gross)	Megawatts	673	670	662	661	665	659
Boiler Thermal Demand	Megawatts	683	681	671	674	678	671
O2 Flue gas	%	2.2	3.0	3.0	2.9	2.4	2.4
Fuel Flow	%	96.8	96.9	96.7	95.6	95.4	95.4
Coal Totalizer	Tons						
A	-	76230	76252	76268	76286	76312	76324
B	-	75872	75892	75908	75928	75956	75970
C	-	77056	77076	77090	77108	77134	77146
D	-	12065	12065	12065	12065	12065	12065
E	-	89696	89718	89738	89760	89792	89808
F	-	75998	76016	76034	76052	76080	76092
G	-	90076	90098	90118	90138	90170	90184

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

UNIT # 1

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data	—	DB	DB	DB	DB	DB	DB
Time	—	14:00	14:30	15:00	15:30	16:00	16:30
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.52	4.41	4.41	4.15	4.27	4.27
Air Flow	%	67	67	66	67	66	66
Generator Load (Gross)	Megawatts	654	647	641	626	626	626
Boiler Thermal Demand	Megawatts	656	653	649	632	634	630
O2 Flue gas	%	3.1	3.1	3.3	3.5	3.4	3.3
Fuel Flow	%	96.2	94	93.3	90.8	90.7	91.3
Coal Totalizer	Tons						
A	—	76342	76364	76378	76396	76416	76438
B	—	75988	76014	76028	76044	76064	76086
C	—	77162	77186	77198	77212	77230	77250
D	—	12065	12065	12065	12065	12065	12065
E	—	89828	89854	89870	89890	89912	89938
F	—	76110	76134	76146	76162	76182	76202
G	—	90204	90230	90246	90264	90288	90312

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

UNIT # 1

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB				
Time		17:00	17:30				
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.30					
Air Flow	%	65					
Generator Load (Gross)	Megawatts	631					
Boiler Thermal Demand	Megawatts	642					
O2 Flue gas	%	3.0					
Fuel Flow	%	91.3					
Coal Totalizer	Tons						
A	—	76454					
B	—	76102					
C	—	77266					
D	—	12065					
E	—	89956					
F	—	76218					
G	—	90330					

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

UNIT # 1

DATE: 12-11-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		0800	0830	0900	0930	10:00	10:30
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.28	4.29	4.21	4.24	4.23	4.24
Air Flow	%	64	63	64	63	64	65
Generator Load (Gross)	Megawatts	623	622	619	624	623	626
Boiler Thermal Demand	Megawatts	625	623	622	627	627	641
O2 Flue gas	%	3.3	3.3	3.3	3.3	3.2	3.2
Fuel Flow	%	92.6	92.6	92.5	93.9	93.8	94.1
Coal Totalizer	Tons						
A	—	76992	77010	77028	77044	77064	77084
B	—	76636	76656	76674	76690	76710	76728
C	—	77762	77780	77796	77812	77830	77848
D	—	12065	12065	12065	12065	12065	12065
E	—	90626	90652	90676	90696	90722	90746
F	—	76724	76742	76758	76774	76792	76810
G	—	90966	90988	91010	91030	91054	91076

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

UNIT # 1

DATE: 12-11-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	D.B.
Time		11:00	11:30	12:00	12:30	13:00	13:30
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.32	4.30	4.28	4.29	4.24	4.26
Air Flow	%	64	64	64	64	64	64
Generator Load (Gross)	Megawatts	639	632	629	632	625	623
Boiler Thermal Demand	Megawatts	647	638	632	638	631	627
O2 Flue gas	%	2.4	2.4	2.4	3.0	3.3	3.5
Fuel Flow	%	94	93.7	93.9	93.8	92.9	93.7
Coal Totalizer	Tons						
A	—	77104	77120	77136	77156	77174	77194
B	—	76748	76764	76780	76800	76816	76836
C	—	77866	77882	77896	77916	77932	77950
D	—	12065	12065	12065	12065	12065	12065
E	—	90770	90792	90812	90838	90858	90884
F	—	76828	76844	76858	76876	76892	76910
G	—	91099	91120	91138	91162	91182	91204

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

UNIT # 1

DATE: 12-11-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB		
Time		14:00	14:30	15:00	15:30	16:00	16:30
Steam Flow	Lb/Hr x 10 <sup>0</sup>	4.25	4.21	4.29	4.31		
Air Flow	%	64	64	64	64		
Generator Load (Gross)	Megawatts	623	622	630	634		
Boiler Thermal Demand	Megawatts	628	628	634	636		
O2 Flue gas	%	3.4	3.4	3.4	3.4		
Fuel Flow	%	93.9	94	93.9	93.8		
Coal Totalizer	Tons						
A	-	77210	77232	77248	77266		
B	-	76852	76872	76890	76908		
C	-	77966	77986	78002	78018		
D	-	12065	12065	12065	12065		
E	-	90906	90932	90954	90976		
F	-	76926	76944	76960	76976		
G	-	91224	91250	91270	91290		

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

UNIT # 1

DATE: 12-13-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		08:00	08:30	09:00	09:30	10:00	10:30
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.55	4.51	4.52	4.53	4.54	4.54
Air Flow	%	65	67	67	68	69	69
Generator Load (Gross)	Megawatts	668	662	664	669	660	669
Boiler Thermal Demand	Megawatts	674	674	674	674	674	674
O2 Flue gas	%	2.4	3.0	3.1	3.3	3.4	3.3
Fuel Flow	%	96.2	96.2	96.2	96.4	95.4	95.7
Coal Totalizer	Tons						
A	—	78850	78868	78886	78902	78930	78950
B	—	78178	78196	78203	78240	78258	78276
C	—	79486	79504	79522	79548	79566	79586
D	—	12065	12065	12065	12065	12065	12065
E	—	92742	92760	92778	92804	92822	92842
F	—	78354	78370	78386	78414	78432	78452
G	—	93024	93042	93058	93086	93104	93122

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

UNIT #       

DATE: 12-13-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		11:00	11:30	12:00	12:30	13:00	13:30
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.56	4.55	4.53	4.52	4.54	4.54
Air Flow	%	69	69	70	69	69	69
Generator Load (Gross)	Megawatts	663	664	663	658	663	668
Boiler Thermal Demand	Megawatts	674	674	674	674	674	674
O2 Flue gas	%	3.5	3.6	3.7	3.7	3.5	3.6
Fuel Flow	%	95.5	95	95.8	96.8	96.2	96.8
Coal Totalizer	Tons						
A	—	78970	78988	79012	79030	79050	79068
B	—	78296	78316	78340	78356	78376	78396
C	—	79606	79626	79648	79666	79686	79704
D	—	12065	12065	12065	12065	12065	12065
E	—	92862	92880	92904	92922	92942	92962
F	—	78472	78492	78514	78532	78552	78570
G	—	93142	93162	93186	93204	93224	93242



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

UNIT # 1

DATE: 12-13-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DB	DB	DB	DB	DB	DB
Time		14:00	14:30	15:00	15:30	16:00	16:30
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.55	4.54	4.59	4.58	4.54	4.54
Air Flow	%	69	69	69	69	69	68
Generator Load (Gross)	Megawatts	664	665	661	664	664	664
Boiler Thermal Demand	Megawatts	674	674	674	674	674	674
O2 Flue gas	%	3.7	3.5	3.5	3.7	3.6	3.6
Fuel Flow	%	95.0	95.9	94.4	94.3	94.3	96.1
Coal Totalizer	Tons						
A	—	79090	79110	79136	79154	79172	79190
B	—	78416	78436	78462	78480	78498	78516
C	—	79726	79746	79772	79790	79808	79826
D	—	12065	12065	12065	12065	12065	12065
E	—	92982	93002	93028	93046	93066	93082
F	—	78592	78612	78638	78654	78672	78688
G	—	93262	93284	93310	93328	93346	93364

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

UNIT # 1

DATE: 12-13-01

PARAMETER	UNITS	Readings (30 minute intervals)			
Person Recording Data		DB	DB		
Time		17:00	17:30		
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.54	4.54		
Air Flow	%	69	69		
Generator Load (Gross)	Megawatts	665	662		
Boiler Thermal Demand	Megawatts	674	674		
O2 Flue gas	%	3.7	3.7		
Fuel Flow	%	97.5	94.8		
Coal Totalizer	Tons				
A	—	79210	79226		
B	—	78536	78552		
C	—	79846	79862		
D	—	12065	12065		
E	—	93102	93120		
F	—	78708	78724		
G	—	93384	93400		

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

UNIT # 1

DATE: 12/18/01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		DS	DS	DS	DS	DS	DS
Time		0001	0030	0100	0130	0200	0230
Steam Flow	Lb/Hr x 10 <sup>3</sup>	2.92	2.95	2.95	3.02	2.93	2.97
Air Flow	%	50	51	52	52	52	52
Generator Load (Gross)	Megawatts	474	478	474	480	472	477
Boiler Thermal Demand	Megawatts	446	442	442	442	442	442
O2 Flue gas	%	3.74	3.84	4.09	4.19	4.27	4.25
Fuel Flow	%	74	70.7	69.9	68.2	69.4	70
Coal Totalizer	Tons						
A		79488	79504	79520	79540	79560	79576
B		78810	78824	78840	78860	78880	78896
C		80124	80140	80154	80174	80194	80212
D		12065	12065	12065	12065	12065	12065
E		93382	93398	93414	93434	93454	93470
F		78956	78956	78956	78956	78956	78956
G		93662	93678	93694	93714	93734	93750

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

UNIT # 1

DATE: 12/14/01

PARAMETER	UNITS	Readings (30 minute intervals)				
Person Recording Date		DS				
Time		0300				
Steam Flow	Lb/Hr x 10 <sup>6</sup>	2.92				
Air Flow	%	53				
Generator Load (Gross)	Megawatts	471				
Boiler Thermal Demand	Megawatts	442				
O2 Flue gas	%	4.30				
Fuel Flow	%	71				
Coal Totalizer	Tons					
A		79592				
B		78912				
C		80228				
D		12065				
E		93486				
F		78956				
G		93766				

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

UNIT # 1

DATE: 12/14/01

PARAMETER	UNITS	Readings (30 minute intervals)			
Person Recording Data		DS	DS	DS	DS
Time		21:30	22:00	22:30	23:00
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.60	4.62	4.62	4.61
Air Flow	%	68	69	68	68
Generator Load (Gross)	Megawatts	674	677	678	679
Boiler Thermal Demand	Megawatts	684	685	684	684
O2 Flue gas	%	3.25	3.27	3.24	3.21
Fuel Flow	%	101.0	99.6	98.2	100.9
Coal Totalizer	Tons				
A		80354	80376	80394	80414
B		79612	79632	79648	79667
C		80932	80952	80968	80988
D		12065	12065	12065	12065
E		94298	94322	94342	94364
F		79622	79644	79660	79680
G		94550	94574	94592	94612



# Actual Values At: 8:21:02 AM

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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	µA/ft²	KV/cm
1A TR-11	12.0	181	47.0	38.5	0.0	2.2	1.1	50.0	141	2.1	2.5
1A TR-21	15.0	187	63.0	37.1	0.0	2.8	1.4	50.0	113	2.8	2.4
1A TR-31	15.0	204	61.0	41.4	0.0	3.1	1.6	50.0	108	2.7	2.7
1A TR-41	20.0	198	67.0	36.2	0.0	4.0	2.0	50.0	116	3.0	2.4
1A TR-51	30.0	235	130	43.6	0.0	7.1	3.7	60.0	103	5.8	2.9
1A TR-61	35.0	251	162	43.4	0.0	8.8	4.9	70.0	100.0	7.3	2.8
1A TR-71	45.0	296	221	44.8	0.0	13.3	7.7	90.0	94.0	9.9	2.9
1A TR-12	12.0	177	43.0	37.6	0.0	2.1	1.0	50.0	116	1.9	2.5
1A TR-22	15.0	188	63.0	36.6	0.0	2.8	1.5	50.0	112	2.8	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	77.0	39.8	0.0	4.0	2.0	50.0	115	3.4	2.6
1A TR-52	30.0	238	130	44.0	0.0	7.1	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	245	156	44.7	0.0	8.6	4.7	70.0	101	7.0	2.9
1A TR-72	45.0	293	217	44.6	0.0	13.2	7.6	90.0	95.0	9.7	2.9
1A TR-13	12.0	173	45.0	40.6	0.0	2.1	1.0	50.0	115	2.0	2.7
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	206	61.0	40.6	0.0	3.1	1.7	50.0	109	2.6	2.7
1A TR-43	20.0	201	79.0	41.4	0.0	4.0	2.0	50.0	115	3.3	2.7
1A TR-53	30.0	237	130	42.9	0.0	7.1	3.8	60.0	103	5.5	2.8
1A TR-63	35.0	252	162	43.7	0.0	8.8	4.8	70.0	100.0	6.8	2.9
1A TR-73	45.0	259	217	44.0	0.0	11.6	6.5	90.0	96.0	9.2	2.9
1A TR-14	12.0	179	45.0	37.3	0.0	2.2	1.1	50.0	115	1.9	2.4
1A TR-24	15.0	205	67.0	40.5	0.0	3.1	1.7	50.0	110	2.8	2.7
1A TR-34	15.0	197	59.0	39.7	0.0	3.0	1.5	50.0	110	2.5	2.6
1A TR-44	20.0	195	79.0	39.3	0.0	3.9	1.9	50.0	116	3.3	2.6
1A TR-54	30.0	222	0.0	37.6	0.0	6.7	3.5	60.0	108	0.0	2.5
1A TR-64	35.0	222	158	40.3	0.0	7.8	4.3	70.0	105	6.7	2.6
1A TR-74	45.0	241	213	40.2	0.0	10.8	6.1	90.0	98.0	9.0	2.6
1A TR-15	12.0	178	43.0	37.5	0.0	2.1	1.0	50.0	115	1.9	2.5
1A TR-25	15.0	192	63.0	39.5	0.0	2.9	1.6	50.0	111	2.8	2.6





## Actual Values At: 8:21:53 AM

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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	13.0	182	45.0	37.2	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-31	15.0	192	59.0	38.6	0.0	0.0	0.0	2.9	1.5	1.5	50.0
1B TR-41	20.0	201	77.0	41.2	0.0	0.0	0.0	4.0	1.9	1.8	50.0
1B TR-51	31.0	233	134	43.0	0.0	0.0	0.0	7.0	3.7	1.5	60.0
1B TR-61	35.0	234	166	42.3	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-71	45.0	246	213	42.4	0.0	0.0	0.0	11.1	6.3	1.5	90.0
1B TR-12	12.0	188	45.0	40.3	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	193	63.0	38.7	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-32	15.0	204	59.0	17.2	0.0	0.0	0.0	3.0	1.6	1.6	50.0
1B TR-42	20.0	207	79.0	43.0	0.0	0.0	0.0	4.1	1.9	1.8	50.0
1B TR-52	30.0	225	126	42.3	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	238	156	43.4	0.0	0.0	0.0	8.3	4.4	1.6	70.0
1B TR-72	45.0	245	209	44.1	0.0	0.0	0.0	11.1	6.3	1.5	90.0
1B TR-13	12.0	178	43.0	37.3	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-23	15.0	188	61.0	37.5	0.0	0.0	0.0	2.8	1.4	1.7	50.0
1B TR-33	15.0	209	59.0	42.1	0.0	0.0	0.0	3.2	1.7	1.5	50.0
1B TR-43	20.0	207	83.0	42.4	0.0	0.0	0.0	4.1	2.1	1.7	50.0
1B TR-53	30.0	232	130	42.6	0.0	0.0	0.0	7.0	3.6	1.6	60.0
1B TR-63	35.0	231	154	43.6	0.0	0.0	0.0	8.1	4.3	1.6	70.0
1B TR-73	45.0	255	179	39.2	0.0	0.0	0.0	11.5	6.4	1.5	90.0
1B TR-14	12.0	183	45.0	38.7	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-24	15.0	198	61.0	39.4	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-34	15.0	202	61.0	41.3	0.0	0.0	0.0	3.1	1.6	1.6	50.0
1B TR-44	20.0	201	77.0	41.1	0.0	0.0	0.0	4.0	2.0	1.8	50.0
1B TR-54	29.0	78.0	130	9.4	0.0	0.0	30.0	1.2	0.5	2.2	60.0
1B TR-64	35.0	251	162	44.1	0.0	0.0	0.0	8.8	4.8	1.5	70.0
1B TR-74	45.0	255	213	43.9	0.0	0.0	0.0	11.5	6.4	1.5	90.0
1B TR-15	12.0	178	49.0	37.0	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	194	61.0	38.2	0.0	0.0	0.0	2.9	1.5	1.7	50.0







## Actual Values At: 9:00:01 AM

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SQ 300	Amps	Volts	mA	KV	Spk/MIn	KVA	KW	EM Limit	Deg	$\mu\text{A}/\text{ft}^2$	KV/cm
IA TR-11	12.0	187	45.0	39.8	0.0	2.2	1.1	50.0	141	2.0	2.6
IA TR-21	15.0	187	63.0	37.2	0.0	2.8	1.5	50.0	113	2.8	2.4
IA TR-31	15.0	208	63.0	41.6	0.0	3.1	1.6	50.0	108	2.8	2.7
IA TR-41	20.0	199	67.0	36.4	0.0	4.0	2.0	50.0	116	3.0	2.4
IA TR-51	30.0	235	130	43.7	0.0	7.1	3.8	60.0	103	5.8	2.9
IA TR-61	35.0	252	162	43.5	0.0	8.8	4.9	70.0	100.0	7.3	2.9
IA TR-71	45.0	297	221	44.9	0.0	13.4	7.7	90.0	94.0	9.9	2.9
IA TR-12	12.0	195	43.0	41.4	0.0	2.3	1.1	50.0	114	1.9	2.7
IA TR-22	15.0	189	61.0	36.9	0.0	2.8	1.4	50.0	112	2.7	2.4
IA TR-32	Power Off										
IA TR-42	20.0	198	77.0	39.8	0.0	4.0	2.0	50.0	115	3.4	2.6
IA TR-52	30.0	239	130	44.1	0.0	7.2	3.8	60.0	103	5.8	2.9
IA TR-62	35.0	246	154	44.8	0.0	8.6	4.7	70.0	101	6.9	2.9
IA TR-72	45.0	294	217	44.7	0.0	13.2	7.7	90.0	95.0	9.7	2.9
IA TR-13	12.0	188	45.0	44.1	0.0	2.3	1.1	50.0	115	2.0	2.9
IA TR-23	Hopper High Power Off										
IA TR-33	15.0	207	63.0	40.7	0.0	3.1	1.7	50.0	109	2.7	2.7
IA TR-43	20.0	202	83.0	41.5	0.0	4.0	2.0	50.0	115	3.5	2.7
IA TR-53	30.0	238	130	43.1	0.0	7.1	3.8	60.0	103	5.5	2.8
IA TR-63	35.0	253	158	43.7	0.0	8.8	4.9	70.0	99.0	6.7	2.9
IA TR-73	45.0	259	215	44.1	0.0	11.7	6.5	90.0	96.0	9.1	2.9
IA TR-14	12.0	182	47.0	38.0	0.0	2.2	1.1	50.0	115	2.0	2.5
IA TR-24	15.0	204	61.0	40.5	0.0	3.1	1.7	50.0	110	2.6	2.7
IA TR-34	16.0	202	59.0	39.7	0.0	2.9	1.5	50.0	109	2.5	2.6
IA TR-44	20.0	195	83.0	39.4	0.0	3.9	1.9	50.0	116	3.5	2.6
IA TR-54	30.0	221	0.0	37.6	0.0	6.6	3.5	60.0	108	0.0	2.5
IA TR-64	35.0	223	158	40.4	0.0	7.8	4.3	70.0	105	6.7	2.7
IA TR-74	45.0	239	213	40.1	0.0	10.8	6.0	90.0	98.0	9.0	2.6
IA TR-15	12.0	179	43.0	37.6	0.0	2.2	1.1	50.0	115	1.9	2.5
IA TR-25	15.0	193	63.0	39.7	0.0	2.9	1.6	50.0	111	2.8	2.6



## Actual Values At: 9:00:01 AM

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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	μA/ft²	KV/cm
1A TR-35	15.0	193	61.0	37.6	0.0	2.9	1.4	50.0	112	2.7	2.5
1A TR-45	20.0	188	83.0	38.1	0.0	3.8	1.9	50.0	116	3.7	2.5
1A TR-55	30.0	223	134	41.5	0.0	6.7	3.5	60.0	105	6.0	2.7
1A TR-65	35.0	225	158	42.4	0.0	7.9	4.2	70.0	106	7.1	2.8
1A TR-75	45.0	250	98.0	38.3	0.0	11.3	6.5	90.0	96.0	4.4	2.5
1A TR-16	12.0	180	45.0	37.4	0.0	2.1	1.0	50.0	115	2.0	2.5
1A TR-26	15.0	180	75.0	45.0	0.0	2.7	1.5	50.0	114	3.4	3.0
1A TR-36	15.0	183	61.0	36.7	0.0	2.7	1.4	50.0	113	2.7	2.4
1A TR-46	20.0	188	83.0	38.2	0.0	3.8	1.9	50.0	116	3.7	2.5
1A TR-56	30.0	221	134	41.8	0.0	6.6	3.5	60.0	107	6.0	2.7
1A TR-66	35.0	234	138	38.2	0.0	8.2	4.3	70.0	103	6.2	2.5
1A TR-76	45.0	251	213	43.8	0.0	11.3	6.3	90.0	97.0	9.5	2.9
<b>Analog</b>											
1A East	6.4	%									
1A West	5.8	%									



## Actual Values At: 9:05:01 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	179	45.0	37.2	0.0	0.0	0.0	2.2	1.0	1.7	50.0
1B TR-31	15.0	193	63.0	38.7	0.0	0.0	0.0	2.9	1.6	1.5	50.0
1B TR-41	20.0	202	77.0	41.4	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-51	30.0	228	138	43.4	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-61	35.0	235	166	42.4	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-71	45.0	247	213	42.5	0.0	0.0	0.0	11.1	6.4	1.5	90.0
1B TR-12	12.0	184	45.0	39.4	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-22	15.0	196	63.0	39.4	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-32	15.0	198	59.0	17.3	0.0	0.0	0.0	3.0	1.6	1.6	50.0
1B TR-42	20.0	207	83.0	43.1	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-52	30.0	225	126	42.3	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	238	162	43.4	0.0	0.0	0.0	8.3	4.4	1.6	70.0
1B TR-72	45.0	246	209	44.2	0.0	0.0	0.0	11.1	6.4	1.5	90.0
1B TR-13	12.0	179	43.0	36.9	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-23	15.0	191	61.0	38.0	0.0	0.0	0.0	2.9	1.4	1.7	50.0
1B TR-33	15.0	210	59.0	42.2	0.0	0.0	0.0	3.2	1.7	1.5	50.0
1B TR-43	20.0	208	83.0	42.6	0.0	0.0	0.0	4.1	2.1	1.7	50.0
1B TR-53	30.0	229	130	42.6	0.0	0.0	0.0	6.9	3.7	1.6	60.0
1B TR-63	35.0	231	154	43.7	0.0	0.0	0.0	8.1	4.3	1.6	70.0
1B TR-73	45.0	256	179	39.2	0.0	0.0	0.0	11.5	6.4	1.5	90.0
1B TR-14	12.0	181	43.0	38.3	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-24	15.0	200	61.0	39.7	0.0	0.0	0.0	3.0	1.6	1.7	50.0
1B TR-34	15.0	207	63.0	41.2	0.0	0.0	0.0	3.1	1.5	1.6	50.0
1B TR-44	20.0	202	77.0	41.2	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-54	22.0	107	75.0	20.2	0.0	0.0	28.0	2.3	1.2	2.0	60.0
1B TR-64	36.0	252	166	44.1	0.0	0.0	0.0	8.7	4.8	1.5	70.0
1B TR-74	45.0	254	209	43.7	0.0	0.0	0.0	11.4	6.4	1.5	90.0
1B TR-15	12.0	181	43.0	38.0	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	191	63.0	37.6	0.0	0.0	0.0	2.9	1.4	1.7	50.0





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SQ 300	Amps	Volts	mA	KV	Spk/MIn	KVA	KW	EM Limit	Deg	$\mu$ A/ft <sup>2</sup>	KV/cm
1A TR-11	12.0	184	45.0	39.1	0.0	2.2	1.1	50.0	141	2.0	2.6
1A TR-21	15.0	187	63.0	37.2	0.0	2.8	1.5	50.0	113	2.8	2.4
1A TR-31	15.0	206	63.0	41.5	0.0	3.1	1.6	50.0	108	2.8	2.7
1A TR-41	20.0	201	67.0	36.7	0.0	4.0	2.0	50.0	115	3.0	2.4
1A TR-51	30.0	237	130	43.9	0.0	7.1	3.8	60.0	103	5.8	2.9
1A TR-61	35.0	252	162	43.6	0.0	8.8	4.9	70.0	100.0	7.3	2.9
1A TR-71	45.0	297	219	45.0	0.0	13.4	7.7	90.0	94.0	9.8	3.0
1A TR-12	12.0	184	45.0	39.1	0.0	2.2	1.1	50.0	115	2.0	2.6
1A TR-22	15.0	190	63.0	36.9	0.0	2.8	1.4	50.0	112	2.8	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	77.0	39.8	0.0	4.0	2.0	50.0	115	3.4	2.6
1A TR-52	30.0	239	130	44.2	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	246	154	44.8	0.0	8.6	4.7	70.0	101	6.9	2.9
1A TR-72	45.0	296	217	44.8	0.0	13.3	7.7	90.0	94.0	9.7	2.9
1A TR-13	12.0	180	45.0	40.5	0.0	2.2	1.1	50.0	115	2.0	2.7
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	208	63.0	40.9	0.0	3.1	1.7	50.0	109	2.7	2.7
1A TR-43	20.0	202	83.0	41.6	0.0	4.0	2.0	50.0	115	3.5	2.7
1A TR-53	30.0	238	126	43.1	0.0	7.1	3.8	60.0	103	5.3	2.8
1A TR-63	35.0	253	162	43.9	0.0	8.9	4.9	70.0	99.0	6.8	2.9
1A TR-73	45.0	292	217	44.3	0.0	13.2	7.6	90.0	95.0	9.2	2.9
1A TR-14	12.0	180	45.0	37.6	0.0	2.2	1.1	50.0	115	1.9	2.5
1A TR-24	15.0	205	63.0	40.5	0.0	3.1	1.7	50.0	110	2.7	2.7
1A TR-34	16.0	203	59.0	39.8	0.0	3.0	1.6	50.0	110	2.5	2.6
1A TR-44	20.0	195	83.0	39.4	0.0	3.9	2.0	50.0	116	3.5	2.6
1A TR-54	30.0	223	3.0	37.9	0.0	6.7	3.6	60.0	108	0.1	2.5
1A TR-64	35.0	223	158	40.5	0.0	7.8	4.3	70.0	105	6.7	2.7
1A TR-74	45.0	242	213	40.4	0.0	10.8	6.1	90.0	98.0	9.0	2.7
1A TR-15	12.0	175	43.0	37.2	0.0	2.1	1.0	50.0	116	1.9	2.4
1A TR-25	15.0	192	61.0	39.7	0.0	2.9	1.4	50.0	111	2.7	2.6





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SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	13.0	184	45.0	37.6	0.0	0.0	0.0	2.2	1.0	1.7	50.0
1B TR-31	15.0	193	59.0	38.8	0.0	0.0	0.0	2.9	1.6	1.6	50.0
1B TR-41	20.0	202	77.0	41.4	0.0	0.0	0.0	4.0	1.9	1.8	50.0
1B TR-51	31.0	232	134	43.0	0.0	0.0	0.0	7.0	3.7	1.5	60.0
1B TR-61	35.0	235	166	42.4	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-71	45.0	247	213	42.5	0.0	0.0	0.0	11.1	6.3	1.5	90.0
1B TR-12	12.0	184	45.0	39.4	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-22	15.0	198	63.0	39.5	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1B TR-32	15.0	197	61.0	17.1	0.0	0.0	0.0	3.0	1.6	1.6	50.0
1B TR-42	20.0	207	79.0	43.1	0.0	0.0	0.0	4.1	1.9	1.8	50.0
1B TR-52	30.0	226	126	42.3	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	240	162	43.7	0.0	0.0	0.0	8.4	4.6	1.5	70.0
1B TR-72	45.0	247	209	44.2	0.0	0.0	0.0	11.1	6.4	1.5	90.0
1B TR-13	12.0	177	43.0	37.3	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-23	15.0	196	59.0	38.9	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-33	15.0	210	59.0	42.2	0.0	0.0	0.0	3.2	1.7	1.5	50.0
1B TR-43	20.0	208	83.0	42.6	0.0	0.0	0.0	4.1	2.1	1.7	50.0
1B TR-53	31.0	234	130	42.8	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-63	35.0	232	154	43.7	0.0	0.0	0.0	8.1	4.3	1.6	70.0
1B TR-73	45.0	256	181	39.3	0.0	0.0	0.0	11.6	6.5	1.5	90.0
1B TR-14	12.0	182	43.0	38.5	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-24	15.0	205	63.0	40.4	0.0	0.0	0.0	3.1	1.7	1.5	50.0
1B TR-34	16.0	209	61.0	41.4	0.0	0.0	0.0	3.1	1.6	1.6	50.0
1B TR-44	20.0	202	77.0	41.2	0.0	0.0	0.0	4.0	2.0	1.7	50.0
1B TR-54	13.0	113	59.0	17.9	0.0	0.0	32.0	1.7	0.6	2.2	60.0
1B TR-64	35.0	249	162	44.0	0.0	0.0	0.0	8.8	4.8	1.5	70.0
1B TR-74	45.0	256	213	44.1	0.0	0.0	0.0	11.5	6.4	1.5	90.0
1B TR-15	12.0	178	45.0	37.3	0.0	0.0	0.0	2.2	1.0	1.7	50.0
1B TR-25	Hopper Hlgh Power Off										
1B TR-35	15.0	195	61.0	38.4	0.0	0.0	0.0	2.9	1.5	1.7	50.0







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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	$\mu\text{A}/\text{ft}^2$	KV/cm
1A TR-11	12.0	177	47.0	37.6	0.0	2.1	1.0	50.0	141	2.1	2.5
1A TR-21	15.0	187	63.0	37.1	0.0	2.8	1.5	50.0	113	2.8	2.4
1A TR-31	15.0	204	61.0	41.4	0.0	3.1	1.7	50.0	108	2.7	2.7
1A TR-41	20.0	200	67.0	36.5	0.0	4.0	2.0	50.0	116	3.0	2.4
1A TR-51	30.0	235	130	43.6	0.0	7.1	3.7	60.0	103	5.8	2.9
1A TR-61	35.0	252	162	43.5	0.0	8.8	4.9	70.0	100.0	7.3	2.9
1A TR-71	45.0	297	217	45.0	0.0	13.4	7.7	90.0	94.0	9.7	3.0
1A TR-12	12.0	182	45.0	38.6	0.0	2.2	1.1	50.0	115	2.0	2.5
1A TR-22	15.0	189	61.0	37.0	0.0	2.9	1.4	50.0	112	2.7	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	79.0	39.8	0.0	4.0	2.0	50.0	115	3.5	2.6
1A TR-52	30.0	239	130	44.1	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	246	154	44.8	0.0	8.6	4.7	70.0	101	6.9	2.9
1A TR-72	45.0	296	217	44.8	0.0	13.3	7.7	90.0	94.0	9.7	2.9
1A TR-13	12.0	177	45.0	39.1	0.0	2.1	1.0	50.0	115	2.0	2.6
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	208	63.0	40.9	0.0	3.1	1.7	50.0	109	2.7	2.7
1A TR-43	20.0	202	83.0	41.4	0.0	4.0	2.0	50.0	115	3.5	2.7
1A TR-53	30.0	238	130	43.1	0.0	7.1	3.8	60.0	103	5.5	2.8
1A TR-63	35.0	253	158	43.9	0.0	8.8	4.8	70.0	99.0	6.7	2.9
1A TR-73	45.0	262	217	44.2	0.0	11.7	6.5	90.0	96.0	9.2	2.9
1A TR-14	12.0	178	45.0	37.1	0.0	2.1	1.0	50.0	115	1.9	2.4
1A TR-24	15.0	207	67.0	40.9	0.0	3.1	1.7	50.0	110	2.8	2.7
1A TR-34	15.0	199	59.0	39.8	0.0	3.0	1.5	50.0	110	2.5	2.6
1A TR-44	20.0	194	79.0	39.2	0.0	3.9	1.9	50.0	116	3.3	2.6
1A TR-54	30.0	223	130	37.9	0.0	6.7	3.6	60.0	108	0.0	2.5
1A TR-64	35.0	223	158	40.4	0.0	7.8	4.3	70.0	105	6.7	2.7
1A TR-74	45.0	241	217	40.3	0.0	10.8	6.2	90.0	98.0	9.2	2.6
1A TR-15	12.0	177	43.0	37.3	0.0	2.1	1.0	50.0	116	1.9	2.4
1A TR-25	15.0	194	63.0	39.8	0.0	2.9	1.6	50.0	111	2.8	2.6



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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	μA/ft²	KV/cm
1A TR-35	15.0	192	61.0	37.6	0.0	2.9	1.4	50.0	112	2.7	2.5
1A TR-45	20.0	188	83.0	38.1	0.0	3.8	1.9	50.0	116	3.7	2.5
1A TR-55	31.0	228	134	41.7	0.0	6.7	3.6	60.0	105	6.0	2.7
1A TR-65	35.0	225	156	42.5	0.0	7.9	4.2	70.0	106	7.0	2.8
1A TR-75	45.0	250	98.0	38.3	0.0	11.3	6.5	90.0	96.0	4.4	2.5
1A TR-16	12.0	178	45.0	36.9	0.0	2.1	1.0	50.0	115	2.0	2.4
1A TR-26	15.0	180	75.0	44.9	0.0	2.7	1.5	50.0	114	3.4	2.9
1A TR-36	15.0	184	63.0	36.7	0.0	2.8	1.4	50.0	113	2.8	2.4
1A TR-46	20.0	190	79.0	38.6	0.0	3.8	1.9	50.0	116	3.5	2.5
1A TR-56	30.0	222	130	41.9	0.0	6.7	3.5	60.0	107	5.8	2.7
1A TR-66	35.0	234	140	38.3	0.0	8.2	4.3	70.0	103	6.3	2.5
1A TR-76	45.0	249	213	43.7	0.0	11.3	6.3	90.0	97.0	9.5	2.9
<b>Analog</b>											
1A East	6.5	%									
1A West	6.3	%									



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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	182	47.0	38.1	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-31	15.0	194	63.0	39.0	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1B TR-41	20.0	204	77.0	41.6	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-51	31.0	232	132	43.0	0.0	0.0	0.0	6.9	3.7	1.7	60.0
1B TR-61	35.0	235	166	42.3	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-71	45.0	246	213	42.4	0.0	0.0	0.0	11.1	6.2	1.5	90.0
1B TR-12	12.0	188	45.0	40.3	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	200	63.0	40.0	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-32	15.0	197	61.0	17.0	0.0	0.0	0.0	3.0	1.6	1.7	50.0
1B TR-42	20.0	207	77.0	43.1	0.0	0.0	0.0	4.2	1.9	1.8	50.0
1B TR-52	30.0	226	126	42.5	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	238	162	43.4	0.0	0.0	0.0	8.3	4.5	1.6	70.0
1B TR-72	45.0	244	203	44.0	0.0	0.0	0.0	11.0	6.2	1.5	90.0
1B TR-13	12.0	179	43.0	37.6	0.0	0.0	0.0	2.1	1.1	1.7	50.0
1B TR-23	15.0	195	63.0	38.7	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-33	15.0	207	59.0	42.0	0.0	0.0	0.0	3.2	1.8	1.5	50.0
1B TR-43	20.0	208	83.0	42.6	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-53	31.0	232	130	42.8	0.0	0.0	0.0	6.9	3.7	1.6	60.0
1B TR-63	35.0	232	156	43.7	0.0	0.0	0.0	8.1	4.3	1.6	70.0
1B TR-73	45.0	255	179	39.2	0.0	0.0	0.0	11.5	6.4	1.5	90.0
1B TR-14	12.0	187	45.0	39.4	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-24	15.0	210	63.0	41.4	0.0	0.0	0.0	3.2	1.7	1.5	50.0
1B TR-34	15.0	205	61.0	41.6	0.0	0.0	0.0	3.1	1.6	1.6	50.0
1B TR-44	20.0	202	77.0	41.2	0.0	0.0	0.0	4.0	2.0	1.8	50.0
1B TR-54	30.0	235	126	44.7	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-64	35.0	251	162	44.1	0.0	0.0	0.0	8.8	4.8	1.5	70.0
1B TR-74	45.0	254	209	43.8	0.0	0.0	0.0	11.4	6.4	1.5	90.0
1B TR-15	12.0	181	43.0	37.9	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	198	61.0	38.8	0.0	0.0	0.0	3.0	1.5	1.7	50.0





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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	$\mu\text{A}/\text{ft}^2$	KV/cm
1A TR-11	12.0	174	45.0	37.3	0.0	2.1	1.0	50.0	142	2.0	2.4
1A TR-21	15.0	187	63.0	37.1	0.0	2.8	1.6	50.0	113	2.8	2.4
1A TR-31	15.0	204	61.0	41.4	0.0	3.1	1.6	50.0	108	2.7	2.7
1A TR-41	20.0	200	67.0	36.5	0.0	4.0	2.0	50.0	116	3.0	2.4
1A TR-51	30.0	236	130	43.8	0.0	7.1	3.8	60.0	103	5.8	2.9
1A TR-61	35.0	252	162	43.6	0.0	8.8	4.9	70.0	100.0	7.3	2.9
1A TR-71	45.0	298	219	45.1	0.0	13.4	7.7	90.0	94.0	9.8	3.0
1A TR-12	12.0	179	45.0	38.0	0.0	2.1	1.0	50.0	115	2.0	2.5
1A TR-22	15.0	190	61.0	37.0	0.0	2.9	1.5	50.0	112	2.7	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	77.0	39.9	0.0	4.0	2.0	50.0	115	3.4	2.6
1A TR-52	30.0	240	130	44.3	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	247	154	45.0	0.0	8.6	4.7	70.0	101	6.9	3.0
1A TR-72	45.0	295	217	44.8	0.0	13.3	7.7	90.0	95.0	9.7	2.9
1A TR-13	12.0	174	47.0	40.2	0.0	2.1	1.0	50.0	116	2.1	2.6
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	208	63.0	41.0	0.0	3.2	1.7	50.0	109	2.7	2.7
1A TR-43	20.0	202	83.0	41.6	0.0	4.0	2.0	50.0	115	3.5	2.7
1A TR-53	30.0	239	130	43.3	0.0	7.2	3.8	60.0	103	5.5	2.8
1A TR-63	36.0	259	162	44.1	0.0	8.9	4.9	70.0	99.0	6.8	2.9
1A TR-73	45.0	292	217	44.3	0.0	13.2	7.6	90.0	95.0	9.2	2.9
1A TR-14	12.0	174	45.0	36.5	0.0	2.1	1.0	50.0	115	1.9	2.4
1A TR-24	15.0	205	63.0	40.5	0.0	3.1	1.7	50.0	110	2.7	2.7
1A TR-34	15.0	201	59.0	39.7	0.0	3.0	1.5	50.0	110	2.5	2.6
1A TR-44	20.0	195	77.0	39.4	0.0	3.9	2.0	50.0	116	3.3	2.6
1A TR-54	30.0	224	1.0	38.0	0.0	6.7	3.6	60.0	108	0.0	2.5
1A TR-64	35.0	223	158	40.4	0.0	7.8	4.3	70.0	105	6.7	2.7
1A TR-74	45.0	241	217	40.3	0.0	10.8	6.1	90.0	98.0	9.2	2.6
1A TR-15	12.0	177	45.0	36.9	0.0	2.1	1.0	50.0	116	2.0	2.4
1A TR-25	15.0	192	63.0	39.7	0.0	2.9	1.6	50.0	111	2.8	2.6





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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	178	45.0	37.6	0.0	0.0	0.0	2.2	1.0	1.7	50.0
1B TR-31	15.0	194	59.0	39.1	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-41	20.0	204	75.0	41.9	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-51	30.0	231	134	43.4	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-61	35.0	235	162	42.6	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-71	45.0	248	213	42.6	0.0	0.0	0.0	11.2	6.3	1.5	90.0
1B TR-12	12.0	188	45.0	40.1	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	199	61.0	39.8	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-32	15.0	202	59.0	17.2	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-42	20.0	210	83.0	43.6	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-52	30.0	226	126	42.6	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	241	162	43.9	0.0	0.0	0.0	8.4	4.7	1.5	70.0
1B TR-72	45.0	247	205	44.3	0.0	0.0	0.0	11.1	6.2	1.5	90.0
1B TR-13	12.0	179	45.0	37.5	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-23	15.0	198	61.0	39.1	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-33	15.0	211	59.0	42.3	0.0	0.0	0.0	3.1	1.7	1.5	50.0
1B TR-43	20.0	208	79.0	42.8	0.0	0.0	0.0	4.2	2.0	1.7	50.0
1B TR-53	30.0	234	132	43.1	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-63	35.0	234	158	44.1	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-73	45.0	259	181	39.4	0.0	0.0	0.0	11.7	6.5	1.5	90.0
1B TR-14	12.0	187	47.0	39.1	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-24	15.0	208	63.0	41.0	0.0	0.0	0.0	3.1	1.7	1.5	50.0
1B TR-34	15.0	208	61.0	41.8	0.0	0.0	0.0	3.1	1.6	1.7	50.0
1B TR-44	20.0	205	77.0	41.6	0.0	0.0	0.0	4.1	2.1	1.7	50.0
1B TR-54	31.0	239	130	45.1	0.0	0.0	0.0	7.1	3.8	1.6	60.0
1B TR-64	35.0	253	162	44.4	0.0	0.0	0.0	8.9	4.9	1.5	70.0
1B TR-74	45.0	257	209	44.1	0.0	0.0	0.0	11.6	6.4	1.5	90.0
1B TR-15	12.0	184	43.0	38.4	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	199	63.0	39.1	0.0	0.0	0.0	3.0	1.5	1.7	50.0







## Actual Values At: 1:00:00 PM

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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	μA/ft²	KV/cm
1A TR-11	12.0	190	45.0	40.3	0.0	2.3	1.1	50.0	141	2.0	2.6
1A TR-21	15.0	187	63.0	37.2	0.0	2.8	1.6	50.0	113	2.8	2.4
1A TR-31	15.0	209	61.0	41.7	0.0	3.1	1.6	50.0	108	2.7	2.7
1A TR-41	20.0	200	67.0	36.5	0.0	4.0	2.0	50.0	116	3.0	2.4
1A TR-51	30.0	236	130	43.8	0.0	7.1	3.8	60.0	103	5.8	2.9
1A TR-61	35.0	252	162	43.6	0.0	8.8	4.9	70.0	100.0	7.3	2.9
1A TR-71	45.0	297	217	45.0	0.0	13.4	7.7	90.0	94.0	9.7	3.0
1A TR-12	12.0	181	45.0	38.6	0.0	2.2	1.1	50.0	115	2.0	2.5
1A TR-22	15.0	189	63.0	36.9	0.0	2.8	1.5	50.0	112	2.8	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	77.0	39.8	0.0	4.0	2.0	50.0	115	3.4	2.6
1A TR-52	30.0	240	130	44.2	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	247	154	45.0	0.0	8.6	4.8	70.0	101	6.9	3.0
1A TR-72	45.0	295	217	44.8	0.0	13.3	7.7	90.0	95.0	9.7	2.9
1A TR-13	12.0	180	45.0	41.3	0.0	2.2	1.1	50.0	115	2.0	2.7
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	206	63.0	40.6	0.0	3.1	1.7	50.0	109	2.7	2.7
1A TR-43	20.0	202	83.0	41.5	0.0	4.0	2.0	50.0	115	3.5	2.7
1A TR-53	30.0	239	130	43.4	0.0	7.2	3.8	60.0	103	5.5	2.8
1A TR-63	35.0	253	156	43.9	0.0	8.9	4.9	70.0	100.0	6.6	2.9
1A TR-73	45.0	293	217	44.4	0.0	13.2	7.6	90.0	95.0	9.2	2.9
1A TR-14	12.0	182	47.0	38.1	0.0	2.2	1.1	50.0	115	2.0	2.5
1A TR-24	15.0	203	61.0	40.3	0.0	3.1	1.7	50.0	111	2.6	2.6
1A TR-34	15.0	199	59.0	39.8	0.0	3.1	1.6	50.0	110	2.5	2.6
1A TR-44	20.0	195	79.0	39.5	0.0	3.9	2.0	50.0	116	3.3	2.6
1A TR-54	30.0	224	0.0	37.9	0.0	6.7	3.6	60.0	108	0.0	2.5
1A TR-64	35.0	224	158	40.5	0.0	7.8	4.3	70.0	105	6.7	2.7
1A TR-74	45.0	241	217	40.3	0.0	10.8	6.1	90.0	98.0	9.2	2.6
1A TR-15	12.0	181	43.0	38.2	0.0	2.2	1.1	50.0	115	1.9	2.5
1A TR-25	15.0	192	63.0	39.7	0.0	2.9	1.6	50.0	111	2.8	2.6



## Actual Values At: 1:00:00 PM

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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	μA/ft <sup>2</sup>	KV/cm
1A TR-35	15.0	193	61.0	37.8	0.0	2.9	1.5	50.0	112	2.7	2.5
1A TR-45	20.0	190	83.0	38.3	0.0	3.8	1.9	50.0	116	3.7	2.5
1A TR-55	30.0	229	134	41.9	0.0	6.7	3.6	60.0	104	6.0	2.7
1A TR-65	35.0	225	158	42.6	0.0	7.9	4.2	70.0	106	7.1	2.8
1A TR-75	45.0	251	98.0	38.4	0.0	11.3	6.5	90.0	96.0	4.4	2.5
1A TR-16	12.0	177	45.0	37.3	0.0	2.1	1.0	50.0	115	2.0	2.4
1A TR-26	15.0	181	75.0	45.2	0.0	2.7	1.5	50.0	114	3.4	3.0
1A TR-36	15.0	184	61.0	36.8	0.0	2.8	1.5	50.0	113	2.7	2.4
1A TR-46	20.0	189	79.0	38.4	0.0	3.8	1.9	50.0	116	3.5	2.5
1A TR-56	30.0	222	130	42.0	0.0	6.7	3.5	60.0	107	5.8	2.8
1A TR-66	35.0	234	138	38.3	0.0	8.2	4.3	70.0	103	6.2	2.5
1A TR-76	45.0	251	217	43.9	0.0	11.3	6.3	90.0	97.0	9.7	2.9
<b>Analog</b>											
1A East	6.6	%									
1A West	5.6	%									



## Actual Values At: 1:05:00 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	180	45.0	37.2	0.0	0.0	0.0	2.2	1.0	1.7	50.0
1B TR-31	15.0	195	59.0	39.2	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-41	20.0	205	75.0	41.9	0.0	0.0	0.0	4.1	1.9	1.8	50.0
1B TR-51	30.0	231	130	43.5	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-61	35.0	236	162	42.6	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-71	45.0	248	213	42.7	0.0	0.0	0.0	11.2	6.4	1.5	90.0
1B TR-12	12.0	184	45.0	39.4	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-22	15.0	199	61.0	40.0	0.0	0.0	0.0	3.0	1.6	1.7	50.0
1B TR-32	15.0	201	59.0	17.2	0.0	0.0	0.0	3.1	1.6	1.7	50.0
1B TR-42	20.0	210	79.0	43.7	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-52	30.0	228	126	42.8	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	241	162	43.9	0.0	0.0	0.0	8.4	4.7	1.5	70.0
1B TR-72	45.0	247	209	44.4	0.0	0.0	0.0	11.1	6.2	1.5	90.0
1B TR-13	12.0	175	43.0	36.9	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-23	15.0	198	63.0	39.2	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-33	15.0	209	59.0	42.3	0.0	0.0	0.0	3.1	1.7	1.5	50.0
1B TR-43	20.0	209	83.0	43.0	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-53	30.0	233	132	43.2	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-63	35.0	234	156	44.2	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-73	45.0	258	177	39.4	0.0	0.0	0.0	11.6	6.5	1.5	90.0
1B TR-14	12.0	183	43.0	38.6	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-24	15.0	210	63.0	41.4	0.0	0.0	0.0	3.2	1.8	1.5	50.0
1B TR-34	15.0	207	61.0	41.9	0.0	0.0	0.0	3.1	1.6	1.7	50.0
1B TR-44	20.0	205	77.0	41.7	0.0	0.0	0.0	4.1	2.1	1.7	50.0
1B TR-54	30.0	236	126	45.0	0.0	0.0	0.0	7.1	3.8	1.6	60.0
1B TR-64	35.0	253	162	44.4	0.0	0.0	0.0	8.9	4.9	1.5	70.0
1B TR-74	45.0	258	209	44.1	0.0	0.0	0.0	11.6	6.5	1.5	90.0
1B TR-15	12.0	178	45.0	37.3	0.0	0.0	0.0	2.1	1.0	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	199	61.0	39.1	0.0	0.0	0.0	3.0	1.5	1.7	50.0





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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	µA/ft <sup>2</sup>	KV/cm
1A TR-11	12.0	188	45.0	40.2	0.0	2.3	1.1	50.0	141	2.0	2.6
1A TR-21	15.0	188	63.0	37.3	0.0	2.8	1.4	50.0	113	2.8	2.4
1A TR-31	15.0	205	59.0	41.6	0.0	3.1	1.6	50.0	108	2.6	2.7
1A TR-41	20.0	200	67.0	36.5	0.0	4.0	2.0	50.0	116	3.0	2.4
1A TR-51	30.0	238	130	43.9	0.0	7.1	3.8	60.0	103	5.8	2.9
1A TR-61	35.0	253	162	43.7	0.0	8.9	4.9	70.0	100.0	7.3	2.9
1A TR-71	45.0	298	217	45.0	0.0	13.5	7.8	90.0	94.0	9.7	3.0
1A TR-12	12.0	189	45.0	40.1	0.0	2.3	1.1	50.0	115	2.0	2.6
1A TR-22	15.0	190	61.0	37.1	0.0	2.9	1.4	50.0	112	2.7	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	77.0	39.8	0.0	4.0	2.0	50.0	115	3.4	2.6
1A TR-52	30.0	241	130	44.4	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	249	156	45.2	0.0	8.7	4.8	70.0	100.0	7.0	3.0
1A TR-72	45.0	297	219	44.9	0.0	13.4	7.7	90.0	94.0	9.8	2.9
1A TR-13	12.0	183	45.0	41.8	0.0	2.2	1.1	50.0	115	2.0	2.7
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	208	63.0	40.9	0.0	3.1	1.7	50.0	109	2.7	2.7
1A TR-43	20.0	202	83.0	41.6	0.0	4.1	2.0	50.0	115	3.5	2.7
1A TR-53	30.0	240	130	43.4	0.0	7.2	3.8	60.0	103	5.5	2.8
1A TR-63	35.0	255	158	44.1	0.0	9.1	5.0	70.0	98.0	6.7	2.9
1A TR-73	45.0	293	217	44.4	0.0	13.2	7.6	90.0	95.0	9.2	2.9
1A TR-14	12.0	182	47.0	38.0	0.0	2.2	1.1	50.0	115	2.0	2.5
1A TR-24	15.0	205	67.0	40.5	0.0	3.1	1.7	50.0	110	2.8	2.7
1A TR-34	16.0	201	61.0	39.7	0.0	3.0	1.6	50.0	111	2.6	2.6
1A TR-44	20.0	195	79.0	39.4	0.0	3.9	1.9	50.0	116	3.3	2.6
1A TR-54	30.0	224	0.0	38.0	0.0	6.7	3.6	60.0	108	0.0	2.5
1A TR-64	35.0	224	158	40.5	0.0	7.8	4.2	70.0	105	6.7	2.7
1A TR-74	45.0	241	213	40.4	0.0	10.9	6.1	90.0	98.0	9.0	2.7
1A TR-15	12.0	180	43.0	37.6	0.0	2.2	1.1	50.0	115	1.9	2.5
1A TR-25	15.0	193	61.0	40.0	0.0	2.9	1.5	50.0	111	2.7	2.6



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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	μA/ft²	KV/cm
1A TR-35	15.0	193	61.0	37.8	0.0	2.9	1.5	50.0	112	2.7	2.5
1A TR-45	20.0	190	81.0	38.3	0.0	3.8	1.9	50.0	116	3.6	2.5
1A TR-55	30.0	225	130	41.9	0.0	6.8	3.6	60.0	104	5.8	2.7
1A TR-65	35.0	225	156	42.6	0.0	7.9	4.2	70.0	106	7.0	2.8
1A TR-75	45.0	251	98.0	38.4	0.0	11.3	6.5	90.0	96.0	4.4	2.5
1A TR-16	12.0	181	45.0	37.9	0.0	2.2	1.1	50.0	115	2.0	2.5
1A TR-26	15.0	181	75.0	45.2	0.0	2.7	1.5	50.0	114	3.4	3.0
1A TR-36	15.0	184	61.0	36.9	0.0	2.8	1.5	50.0	113	2.7	2.4
1A TR-46	20.0	190	81.0	38.7	0.0	3.8	1.9	50.0	116	3.6	2.5
1A TR-56	30.0	225	132	42.1	0.0	6.7	3.6	60.0	105	5.9	2.8
1A TR-66	35.0	234	138	38.3	0.0	8.2	4.3	70.0	103	6.2	2.5
1A TR-76	45.0	251	213	43.9	0.0	11.3	6.3	90.0	97.0	9.5	2.9
<b>Analog</b>											
1A.East	6.4	%									
1A West	5.1	%									



## Actual Values At: 2:05:00 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	181	47.0	38.1	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-31	15.0	194	61.0	39.1	0.0	0.0	0.0	2.9	1.5	1.7	50.0
1B TR-41	20.0	204	77.0	41.7	0.0	0.0	0.0	4.1	2.0	1.7	50.0
1B TR-51	30.0	229	134	43.4	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-61	35.0	235	166	42.5	0.0	0.0	0.0	8.2	4.5	1.5	70.0
1B TR-71	45.0	248	217	42.6	0.0	0.0	0.0	11.2	6.5	1.5	90.0
1B TR-12	12.0	191	47.0	40.6	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	201	63.0	40.1	0.0	0.0	0.0	3.0	1.7	1.5	50.0
1B TR-32	15.0	200	59.0	16.9	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-42	20.0	208	79.0	43.4	0.0	0.0	0.0	4.2	1.9	1.8	50.0
1B TR-52	30.0	227	126	42.6	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	241	162	43.8	0.0	0.0	0.0	8.4	4.7	1.5	70.0
1B TR-72	45.0	247	209	44.3	0.0	0.0	0.0	11.1	6.4	1.5	90.0
1B TR-13	12.0	183	45.0	38.4	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-23	15.0	198	63.0	39.2	0.0	0.0	0.0	3.0	1.5	1.6	50.0
1B TR-33	15.0	210	59.0	42.3	0.0	0.0	0.0	3.1	1.7	1.5	50.0
1B TR-43	20.0	208	83.0	42.8	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-53	31.0	237	132	43.1	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-63	35.0	235	156	44.1	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-73	45.0	259	181	39.4	0.0	0.0	0.0	11.7	6.5	1.5	90.0
1B TR-14	12.0	189	43.0	39.9	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-24	15.0	207	61.0	41.2	0.0	0.0	0.0	3.2	1.8	1.5	50.0
1B TR-34	16.0	211	63.0	41.8	0.0	0.0	0.0	3.1	1.5	1.7	50.0
1B TR-44	20.0	202	77.0	41.4	0.0	0.0	0.0	4.1	1.9	1.8	50.0
1B TR-54	31.0	238	130	44.8	0.0	0.0	0.0	7.1	3.7	1.6	60.0
1B TR-64	35.0	254	166	44.4	0.0	0.0	0.0	8.9	4.9	1.5	70.0
1B TR-74	45.0	256	209	44.1	0.0	0.0	0.0	11.6	6.4	1.5	90.0
1B TR-15	12.0	182	45.0	38.0	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	200	63.0	39.2	0.0	0.0	0.0	3.0	1.6	1.5	50.0







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SQ 300	Amps	Volts	mA	KV	Spk/Min	KVA	KW	EM Limit	Deg	$\mu\text{A}/\text{ft}^2$	KV/cm
1A TR-11	12.0	180	47.0	38.2	0.0	2.1	1.0	50.0	141	2.1	2.5
1A TR-21	15.0	188	63.0	37.3	0.0	2.8	1.5	50.0	113	2.8	2.4
1A TR-31	15.0	207	61.0	41.6	0.0	3.1	1.6	50.0	108	2.7	2.7
1A TR-41	20.0	200	67.0	36.6	0.0	4.0	2.0	50.0	116	3.0	2.4
1A TR-51	30.0	238	130	44.1	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-61	35.0	253	162	43.7	0.0	8.9	4.9	70.0	100.0	7.3	2.9
1A TR-71	45.0	298	217	45.1	0.0	13.4	7.8	90.0	94.0	9.7	3.0
1A TR-12	12.0	180	43.0	38.3	0.0	2.2	1.1	50.0	115	1.9	2.5
1A TR-22	15.0	190	61.0	37.0	0.0	2.9	1.4	50.0	112	2.7	2.4
1A TR-32	Power Off										
1A TR-42	20.0	198	75.0	40.0	0.0	4.0	2.0	50.0	115	3.4	2.6
1A TR-52	30.0	241	130	44.4	0.0	7.2	3.8	60.0	103	5.8	2.9
1A TR-62	35.0	249	156	45.2	0.0	8.7	4.8	70.0	100.0	7.0	3.0
1A TR-72	45.0	297	217	45.0	0.0	13.4	7.7	90.0	94.0	9.7	3.0
1A TR-13	12.0	178	45.0	41.2	0.0	2.1	1.0	50.0	115	2.0	2.7
1A TR-23	Hopper High Power Off										
1A TR-33	15.0	208	63.0	40.9	0.0	3.1	1.7	50.0	109	2.7	2.7
1A TR-43	20.0	204	79.0	41.9	0.0	4.1	2.0	50.0	115	3.3	2.7
1A TR-53	30.0	240	130	43.4	0.0	7.2	3.8	60.0	103	5.5	2.8
1A TR-63	35.0	254	162	44.1	0.0	9.1	5.0	70.0	99.0	6.8	2.9
1A TR-73	45.0	294	217	44.4	0.0	13.2	7.5	90.0	95.0	9.2	2.9
1A TR-14	12.0	175	47.0	36.9	0.0	2.1	1.0	50.0	115	2.0	2.4
1A TR-24	15.0	208	61.0	40.8	0.0	3.1	1.7	50.0	110	2.6	2.7
1A TR-34	16.0	202	59.0	39.8	0.0	3.0	1.5	50.0	110	2.5	2.6
1A TR-44	20.0	196	79.0	39.7	0.0	3.9	2.0	50.0	116	3.3	2.6
1A TR-54	30.0	224	0.0	38.1	0.0	6.7	3.6	60.0	108	0.0	2.5
1A TR-64	35.0	225	158	40.7	0.0	7.9	4.3	70.0	104	6.7	2.7
1A TR-74	45.0	242	213	40.4	0.0	10.9	6.1	90.0	98.0	9.0	2.7
1A TR-15	12.0	176	43.0	37.0	0.0	2.1	1.0	50.0	116	1.9	2.4
1A TR-25	15.0	194	63.0	40.0	0.0	2.9	1.6	50.0	111	2.8	2.6





## Actual Values At: 3:05:00 PM

Page: 1  
Printed At:  
12/11/01

SQ 300	Amps	Volts	mA	KV	KVmin	KVpeak	Spk/Min	KVA	KW	Fm Factor	EM Limit
1B TR-11	12.0	181	45.0	37.8	0.0	0.0	0.0	2.1	1.1	1.7	50.0
1B TR-31	15.0	194	59.0	39.1	0.0	0.0	0.0	2.9	1.5	1.6	50.0
1B TR-41	20.0	204	75.0	41.9	0.0	0.0	0.0	4.1	1.9	1.8	50.0
1B TR-51	30.0	232	132	43.6	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-61	35.0	236	166	42.6	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-71	45.0	248	213	42.6	0.0	0.0	0.0	11.2	6.2	1.5	90.0
1B TR-12	12.0	188	45.0	40.2	0.0	0.0	0.0	2.3	1.1	1.7	50.0
1B TR-22	15.0	202	61.0	40.6	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-32	16.0	208	61.0	17.2	0.0	0.0	0.0	3.0	1.5	1.6	50.0
1B TR-42	20.0	211	79.0	43.6	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-52	30.0	228	126	42.8	0.0	0.0	0.0	6.8	3.6	1.6	60.0
1B TR-62	35.0	241	162	43.8	0.0	0.0	0.0	8.4	4.7	1.5	70.0
1B TR-72	45.0	248	205	44.4	0.0	0.0	0.0	11.2	6.2	1.5	90.0
1B TR-13	12.0	180	45.0	37.8	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-23	15.0	199	63.0	39.3	0.0	0.0	0.0	3.0	1.5	1.7	50.0
1B TR-33	15.0	209	59.0	42.3	0.0	0.0	0.0	3.2	1.7	1.5	50.0
1B TR-43	20.0	209	79.0	42.9	0.0	0.0	0.0	4.2	2.1	1.7	50.0
1B TR-53	30.0	234	130	43.3	0.0	0.0	0.0	7.0	3.7	1.6	60.0
1B TR-63	35.0	234	156	44.2	0.0	0.0	0.0	8.2	4.3	1.6	70.0
1B TR-73	45.0	259	181	39.5	0.0	0.0	0.0	11.7	6.5	1.5	90.0
1B TR-14	12.0	186	45.0	39.1	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-24	15.0	208	61.0	41.0	0.0	0.0	0.0	3.1	1.7	1.5	50.0
1B TR-34	15.0	207	61.0	41.8	0.0	0.0	0.0	3.1	1.6	1.7	50.0
1B TR-44	20.0	205	77.0	41.6	0.0	0.0	0.0	4.1	2.1	1.7	50.0
1B TR-54	31.0	239	130	44.9	0.0	0.0	0.0	7.1	3.8	1.6	60.0
1B TR-64	35.0	253	162	44.4	0.0	0.0	0.0	8.9	4.9	1.5	70.0
1B TR-74	45.0	257	209	44.1	0.0	0.0	0.0	11.5	6.5	1.5	90.0
1B TR-15	12.0	184	45.0	38.4	0.0	0.0	0.0	2.2	1.1	1.7	50.0
1B TR-25	Hopper High Power Off										
1B TR-35	15.0	200	63.0	39.3	0.0	0.0	0.0	3.0	1.7	1.6	50.0



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

Date: 12/11/01  
Initials: \_\_\_\_\_

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000			
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800	5.3	5.6	O/S 
0900	5.3	5.5	
1000	5.2	5.6	
1100	5.2	5.5	
1200	5.3	5.6	
1300	5.2	5.4	
1400	5.2	5.5	
1500	5.2	5.6	
1600			
1700			
1800			
1900			
2000			
2100			
2200			
2300			

10K gals      992 START  
Daily Water System Use: 32 1024 END  
(Total Gallons) / 1440 (min/day) = \_\_\_\_\_ GPM

**COMMENTS:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

Date: 12/13/01  
Initials: \_\_\_\_\_

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000			0/5
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800	5.0	5.4	
0900	5.1	5.5	
1000	5.2	5.7	
1100	5.2	5.7	
1200	5.2	5.7	
1300	5.2	5.7	
1400	5.2	5.7	
1500	5.2	5.7	
1600	5.2	5.6	
1700	5.2	5.6	
1800	5.2	5.7	
1900	5.2	5.6	
2000	5.1	5.5	
2100	5.1	5.6	
2200	5.1	5.6	
2300	4.9	5.3	

START 1173 75  
1248

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

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

Date: 12/14/01

UNIT # ONE

Initials: \_\_\_\_\_

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000	4.2	4.6	
0100	4.3	4.6	
0200	4.3	4.6	
0300	4.2	4.6	
0400			
0500			
0600			
0700			
0800			
0900			
1000			
1100			
1200			
1300			
1400			
1500			
1600			
1700			
1800			
1900			
2000			
2100			
2200			
2300			

<sup>1248</sup>  
<sup>1262</sup>  
 Daily Water System Use: \_\_\_\_\_ (Total Gallons) / 1440 (min/day) = \_\_\_\_\_ GPM

**COMMENTS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**RUN # Particulates (PP1)**  
 Enertec NTDAHS®  
 Average Values Report  
 Generated : 12/10/01 15:34

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

Period Start: 12/10/01 12:48  
 Period End: 12/10/01 14:58  
 Validation Type: 1/1 min  
 Averaging Period: 1 min  
 Type: Block Avg

Period Start	Average 2Opacity %	Average 2Unit_Load MW
12/10/01 12:48	2.0	646.1
12/10/01 12:49	3.6	645.5
12/10/01 12:50	2.9	645.4
12/10/01 12:51	2.7	644.2
12/10/01 12:52	5.5	644.9
12/10/01 12:53	2.5	644.6
12/10/01 12:54	3.0	642.5
12/10/01 12:55	4.1	643.7
12/10/01 12:56	2.4	643.8
12/10/01 12:57	2.2	644.4
12/10/01 12:58	2.4	643.4
12/10/01 12:59	3.3	643.7
12/10/01 13:00	2.7	643.3
12/10/01 13:01	2.5	644.2
12/10/01 13:02	2.9	643.5
12/10/01 13:03	5.8	643.8
12/10/01 13:04	2.6	643.0
12/10/01 13:05	2.3	643.5
12/10/01 13:06	3.4	643.2
12/10/01 13:07	3.7	643.5
12/10/01 13:08	7.9	643.8
12/10/01 13:09	3.6	644.3
12/10/01 13:10	2.0	644.6
12/10/01 13:11	4.6	643.2
12/10/01 13:12	3.3	642.5
12/10/01 13:13	2.9	642.1
12/10/01 13:14	5.3	643.0
12/10/01 13:15	4.0	642.0
12/10/01 13:16	4.1	641.8
12/10/01 13:17	2.7	641.3
12/10/01 13:18	2.3	639.3
12/10/01 13:19	3.3	637.6
12/10/01 13:20	5.7	636.0
12/10/01 13:21	4.1	635.9
12/10/01 13:22	3.7	638.8
12/10/01 13:23	3.3	643.2
12/10/01 13:24	2.3	645.9
12/10/01 13:25	3.7	644.8
12/10/01 13:26	3.2	644.3
12/10/01 13:27	3.1	644.4
12/10/01 13:28	2.7	644.4
12/10/01 13:29	4.6	643.7
12/10/01 13:30	3.1	642.4
12/10/01 13:31	2.7	642.3
12/10/01 13:32	5.3	641.8
12/10/01 13:33	8.4	642.4
12/10/01 13:34	3.6	642.2
12/10/01 13:35	2.3	641.9

#2 Run#1 Particulates (pp2)

12/10/01 13:36	4.7	642.4
12/10/01 13:37	3.3	643.7
12/10/01 13:38	2.8	644.6
12/10/01 13:39	2.9	644.1
12/10/01 13:40	3.2	644.2
12/10/01 13:41	2.2	643.5
12/10/01 13:42	3.3	644.3
12/10/01 13:43	2.5	644.0
12/10/01 13:44	3.4	643.2
12/10/01 13:45	4.2	642.6
12/10/01 13:46	10.0	642.3
12/10/01 13:47	3.9	641.9
12/10/01 13:48	2.9	642.8
12/10/01 13:49	2.4	642.7
12/10/01 13:50	2.2	643.2
12/10/01 13:51	2.2	643.8
12/10/01 13:52	2.8	642.2
12/10/01 13:53	3.2	643.3
12/10/01 13:54	2.9	644.0
12/10/01 13:55	3.0	644.6
12/10/01 13:56	3.7	643.9
12/10/01 13:57	2.7	643.7
12/10/01 13:58	3.3	643.1
12/10/01 13:59	6.1	643.5
12/10/01 14:00	2.7	643.0
12/10/01 14:01	2.6	643.0
12/10/01 14:02	2.3	643.2
12/10/01 14:03	2.0	642.3
12/10/01 14:04	2.0	641.9
12/10/01 14:05	2.9	642.8
12/10/01 14:06	2.7	642.4
12/10/01 14:07	3.1	643.7
12/10/01 14:08	2.8	644.2
12/10/01 14:09	4.2	644.9
12/10/01 14:10	7.1	644.4
12/10/01 14:11	3.7	644.9
12/10/01 14:12	2.4	644.9
12/10/01 14:13	2.4	644.2
12/10/01 14:14	2.1	643.7
12/10/01 14:15	2.5	642.9
12/10/01 14:16	2.1	642.9
12/10/01 14:17	2.8	642.2
12/10/01 14:18	3.8	642.3
12/10/01 14:19	4.5	642.3
12/10/01 14:20	2.5	642.1
12/10/01 14:21	5.4	642.5
12/10/01 14:22	6.9	642.5
12/10/01 14:23	6.9	642.3
12/10/01 14:24	3.0	642.3
12/10/01 14:25	2.4	642.4
12/10/01 14:26	2.4	642.0
12/10/01 14:27	2.5	641.6
12/10/01 14:28	2.1	641.2
12/10/01 14:29	2.7	642.7
12/10/01 14:30	3.2	643.7
12/10/01 14:31	2.7	644.7
12/10/01 14:32	4.4	644.8
12/10/01 14:33	4.2	644.2
12/10/01 14:34	3.1	644.5
12/10/01 14:35	8.8	644.3
12/10/01 14:36	3.2	644.1
12/10/01 14:37	2.6	644.4

U#2 Run#1 Particulates (pp3)

12/10/01 14:38	2.5	644.3
12/10/01 14:39	2.2	643.0
12/10/01 14:40	2.5	643.4
12/10/01 14:41	2.8	643.6
12/10/01 14:42	2.7	643.5
12/10/01 14:43	2.8	642.1
12/10/01 14:44	3.2	642.1
12/10/01 14:45	3.2	641.6
12/10/01 14:46	3.7	641.9
12/10/01 14:47	4.4	641.5
12/10/01 14:48	7.0	639.9
12/10/01 14:49	3.6	637.6
12/10/01 14:50	3.2	636.9
12/10/01 14:51	2.4	636.6
12/10/01 14:52	2.8	637.7
12/10/01 14:53	2.1	641.4
12/10/01 14:54	3.6	644.7
12/10/01 14:55	3.5	645.4
12/10/01 14:56	2.5	644.7
12/10/01 14:57	2.7	644.7
12/10/01 14:58	3.0	644.4
<b>Final Average*</b>	<b>3.4</b>	<b>642.9</b>
<b>Maximum*</b>	<b>10.0</b>	<b>646.1</b>
<b>Minimum*</b>	<b>2.0</b>	<b>635.9</b>

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

**PUN#2 Particulates** 881  
 Enertec NTAHS®  
 Average Values Report  
 Generated : 12/10/01 17:50

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

Period Start: 12/10/01 15:25  
 Period End: 12/10/01 17:30  
 Validation Type: 1/1 min  
 Averaging Period: 1 min  
 Type: Block Avg

Period Start	Average 2Opacity %	Average 2Unit_Load MW
12/10/01 15:25	3.8	640.2
12/10/01 15:26	3.6	632.4
12/10/01 15:27	3.3	630.1
12/10/01 15:28	5.9	633.6
12/10/01 15:29	3.5	640.9
12/10/01 15:30	2.8	640.6
12/10/01 15:31	2.1	641.2
12/10/01 15:32	2.2	645.0
12/10/01 15:33	2.0	649.0
12/10/01 15:34	2.2	645.0
12/10/01 15:35	2.8	650.0
12/10/01 15:36	3.6	655.5
12/10/01 15:37	4.4	654.0
12/10/01 15:38	4.4	646.8
12/10/01 15:39	5.5	631.2
12/10/01 15:40	5.1	623.8
12/10/01 15:41	4.6	625.1
12/10/01 15:42	3.6	626.0
12/10/01 15:43	2.5	623.6
12/10/01 15:44	2.6	623.3
12/10/01 15:45	2.2	625.4
12/10/01 15:46	2.8	632.5
12/10/01 15:47	2.9	637.9
12/10/01 15:48	3.8	633.2
12/10/01 15:49	3.5	630.5
12/10/01 15:50	6.0	634.0
12/10/01 15:51	4.4	635.2
12/10/01 15:52	3.1	633.0
12/10/01 15:53	4.0	630.6
12/10/01 15:54	4.0	631.8
12/10/01 15:55	3.5	640.8
12/10/01 15:56	2.5	642.6
12/10/01 15:57	2.3	636.2
12/10/01 15:58	2.9	637.1
12/10/01 15:59	4.8	643.7
12/10/01 16:00	3.5	645.8
12/10/01 16:01	4.1	635.5
12/10/01 16:02	6.1	633.4
12/10/01 16:03	5.8	641.3
12/10/01 16:04	4.0	645.4
12/10/01 16:05	4.6	637.4
12/10/01 16:06	4.1	634.4
12/10/01 16:07	3.7	636.9
12/10/01 16:08	3.6	641.5
12/10/01 16:09	3.0	638.5
12/10/01 16:10	3.1	634.6
12/10/01 16:11	2.3	633.5
12/10/01 16:12	4.0	637.7

run #2 Particles

PP2

12/10/01 16:13	4.7	641.2
12/10/01 16:14	2.4	631.6
12/10/01 16:15	2.7	629.5
12/10/01 16:16	3.9	634.8
12/10/01 16:17	3.1	642.6
12/10/01 16:18	4.2	637.4
12/10/01 16:19	2.7	628.2
12/10/01 16:20	2.8	627.1
12/10/01 16:21	3.9	636.5
12/10/01 16:22	2.8	640.0
12/10/01 16:23	3.6	635.3
12/10/01 16:24	4.5	636.6
12/10/01 16:25	3.7	644.3
12/10/01 16:26	4.2	644.7
12/10/01 16:27	3.2	633.9
12/10/01 16:28	4.9	625.8
12/10/01 16:29	2.4	640.8
12/10/01 16:30	2.6	643.2
12/10/01 16:31	3.0	635.7
12/10/01 16:32	3.0	632.6
12/10/01 16:33	2.7	636.8
12/10/01 16:34	3.4	642.1
12/10/01 16:35	5.1	637.4
12/10/01 16:36	2.7	634.9
12/10/01 16:37	2.2	634.3
12/10/01 16:38	3.7	639.8
12/10/01 16:39	2.8	640.7
12/10/01 16:40	2.8	633.0
12/10/01 16:41	2.9	632.0
12/10/01 16:42	2.5	638.7
12/10/01 16:43	4.6	641.9
12/10/01 16:44	3.2	642.5
12/10/01 16:45	3.3	635.9
12/10/01 16:46	4.4	637.3
12/10/01 16:47	3.8	640.5
12/10/01 16:48	3.5	646.2
12/10/01 16:49	2.5	639.0
12/10/01 16:50	4.3	626.3
12/10/01 16:51	4.9	647.9
12/10/01 16:52	3.1	652.5
12/10/01 16:53	7.7	643.7
12/10/01 16:54	3.6	628.6
12/10/01 16:55	2.7	628.0
12/10/01 16:56	3.0	636.8
12/10/01 16:57	5.8	639.6
12/10/01 16:58	2.8	628.2
12/10/01 16:59	2.4	622.6
12/10/01 17:00	2.9	628.4
12/10/01 17:01	4.4	633.0
12/10/01 17:02	2.6	632.3
12/10/01 17:03	2.7	630.3
12/10/01 17:04	2.4	632.5
12/10/01 17:05	4.8	638.4
12/10/01 17:06	3.4	640.8
12/10/01 17:07	3.4	635.9
12/10/01 17:08	4.9	638.3
12/10/01 17:09	2.8	644.5
12/10/01 17:10	3.1	639.0
12/10/01 17:11	2.3	635.6
12/10/01 17:12	2.6	640.2
12/10/01 17:13	2.6	641.1
12/10/01 17:14	4.4	639.2

RUN#2 Particulates

PP-3

12/10/01 17:15	3.0	634.5
12/10/01 17:16	3.5	635.0
12/10/01 17:17	4.6	632.7
12/10/01 17:18	3.0	629.1
12/10/01 17:19	5.0	631.7
12/10/01 17:20	2.6	636.8
12/10/01 17:21	2.8	633.2
12/10/01 17:22	2.1	632.0
12/10/01 17:23	2.8	637.2
12/10/01 17:24	2.6	638.6
12/10/01 17:25	2.7	637.3
12/10/01 17:26	3.3	640.1
12/10/01 17:27	4.6	641.0
12/10/01 17:28	3.7	639.2
12/10/01 17:29	2.8	638.5
12/10/01 17:30	6.7	637.6
<b>Final Average*</b>	<b>3.5</b>	<b>636.8</b>
<b>Maximum*</b>	<b>7.7</b>	<b>655.5</b>
<b>Minimum*</b>	<b>2.0</b>	<b>622.6</b>

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

Run #3 Particulates 001  
 Enertec NTDAS®  
 Average Values Report  
 Generated : 12/10/01 20:11

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

Period Start: 12/10/01 17:50  
 Period End: 12/10/01 19:58  
 Validation Type: 1/1 min  
 Averaging Period: 1 min  
 Type: Block Avg

Period Start	Average 2Opacity %	Average 2Unit Load MW
12/10/01 17:50	3.8	641.8
12/10/01 17:51	2.5	640.0
12/10/01 17:52	4.7	639.9
12/10/01 17:53	6.2	639.1
12/10/01 17:54	3.6	635.2
12/10/01 17:55	4.4	635.1
12/10/01 17:56	2.7	639.9
12/10/01 17:57	2.4	639.6
12/10/01 17:58	3.7	633.5
12/10/01 17:59	2.3	628.0
12/10/01 18:00	2.3	630.4
12/10/01 18:01	2.7	637.6
12/10/01 18:02	2.5	641.9
12/10/01 18:03	5.4	639.3
12/10/01 18:04	4.3	635.5
12/10/01 18:05	2.7	631.8
12/10/01 18:06	3.6	634.1
12/10/01 18:07	4.2	637.8
12/10/01 18:08	5.2	640.2
12/10/01 18:09	2.7	643.3
12/10/01 18:10	2.8	644.6
12/10/01 18:11	3.5	648.3
12/10/01 18:12	2.8	644.0
12/10/01 18:13	2.0	639.2
12/10/01 18:14	2.7	640.0
12/10/01 18:15	3.6	646.7
12/10/01 18:16	3.3	642.9
12/10/01 18:17	3.0	633.9
12/10/01 18:18	3.1	632.0
12/10/01 18:19	3.9	638.8
12/10/01 18:20	5.8	641.4
12/10/01 18:21	4.4	639.2
12/10/01 18:22	2.5	634.4
12/10/01 18:23	3.9	636.2
12/10/01 18:24	2.5	644.5
12/10/01 18:25	2.3	647.7
12/10/01 18:26	3.5	642.1
12/10/01 18:27	2.4	636.0
12/10/01 18:28	2.1	635.3
12/10/01 18:29	3.2	640.0
12/10/01 18:30	3.0	643.1
12/10/01 18:31	2.6	638.9
12/10/01 18:32	3.8	635.7
12/10/01 18:33	6.3	637.4
12/10/01 18:34	3.6	640.9
12/10/01 18:35	4.0	638.1
12/10/01 18:36	4.1	633.3
12/10/01 18:37	4.7	635.9

U#2 Run #3 Particulates

(P-2)

12/10/01 18:38	2.4	641.8
12/10/01 18:39	2.1	646.5
12/10/01 18:40	2.1	644.0
12/10/01 18:41	2.4	642.4
12/10/01 18:42	3.1	641.5
12/10/01 18:43	3.5	645.9
12/10/01 18:44	2.6	645.6
12/10/01 18:45	7.0	636.0
12/10/01 18:46	5.7	635.4
12/10/01 18:47	3.3	638.8
12/10/01 18:48	5.2	638.3
12/10/01 18:49	2.8	630.7
12/10/01 18:50	2.5	630.5
12/10/01 18:51	2.0	637.2
12/10/01 18:52	2.3	643.2
12/10/01 18:53	1.9	640.4
12/10/01 18:54	2.4	637.5
12/10/01 18:55	3.5	640.7
12/10/01 18:56	5.9	641.6
12/10/01 18:57	4.0	636.8
12/10/01 18:58	3.4	636.0
12/10/01 18:59	5.6	646.0
12/10/01 19:00	4.3	645.7
12/10/01 19:01	3.5	634.5
12/10/01 19:02	2.8	630.0
12/10/01 19:03	2.0	638.3
12/10/01 19:04	2.2	642.9
12/10/01 19:05	2.0	634.8
12/10/01 19:06	2.3	629.0
12/10/01 19:07	3.4	636.5
12/10/01 19:08	4.2	644.2
12/10/01 19:09	3.4	645.3
12/10/01 19:10	7.6	635.5
12/10/01 19:11	3.6	635.6
12/10/01 19:12	3.9	643.3
12/10/01 19:13	3.5	641.2
12/10/01 19:14	3.5	635.4
12/10/01 19:15	2.1	634.2
12/10/01 19:16	2.0	638.6
12/10/01 19:17	1.8	644.3
12/10/01 19:18	2.3	641.2
12/10/01 19:19	2.5	636.8
12/10/01 19:20	2.0	636.3
12/10/01 19:21	4.3	638.5
12/10/01 19:22	4.8	637.9
12/10/01 19:23	5.5	636.5
12/10/01 19:24	2.7	639.5
12/10/01 19:25	4.2	646.9
12/10/01 19:26	3.8	646.4
12/10/01 19:27	2.5	638.2
12/10/01 19:28	2.2	640.0
12/10/01 19:29	2.1	648.4
12/10/01 19:30	2.5	648.8
12/10/01 19:31	2.1	639.1
12/10/01 19:32	3.6	633.1
12/10/01 19:33	4.1	637.9
12/10/01 19:34	2.7	641.1
12/10/01 19:35	3.5	636.8
12/10/01 19:36	3.3	631.5
12/10/01 19:37	2.4	631.9
12/10/01 19:38	4.0	635.3
12/10/01 19:39	4.0	639.8



U#2 RUN#3 Particulates

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12/10/01 19:40	3.2	637.4
12/10/01 19:41	2.7	635.1
12/10/01 19:42	2.3	634.1
12/10/01 19:43	2.9	638.1
12/10/01 19:44	3.6	641.9
12/10/01 19:45	2.9	641.2
12/10/01 19:46	3.1	632.8
12/10/01 19:47	4.5	631.6
12/10/01 19:48	9.3	640.0
12/10/01 19:49	3.1	644.1
12/10/01 19:50	3.8	645.3
12/10/01 19:51	3.3	644.8
12/10/01 19:52	4.4	641.5
12/10/01 19:53	2.7	641.0
12/10/01 19:54	2.7	640.8
12/10/01 19:55	4.0	636.8
12/10/01 19:56	2.3	633.5
12/10/01 19:57	2.0	636.1
12/10/01 19:58	3.5	635.7
<b>Final Average*</b>	<b>3.4</b>	<b>638.9</b>
<b>Maximum*</b>	<b>9.3</b>	<b>648.8</b>
<b>Minimum*</b>	<b>1.8</b>	<b>628.0</b>

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

Enertec NTDAHS®  
Daily Averages Report  
Generated : 12/26/01 12:22

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

Period Start: 12/26/01 00:00  
Period End: 12/26/01 12:20  
Validation Type: 6/6 min  
Averaging Period: 6 min  
Type: Block Avg

2Opacity (%)

Period Start	:00	:06	:12	:18	:24	:30	:36	:42	:48	:54	Avg.
12/26/01 00:00	0.8	1.0	0.7	1.7	0.5	1.2	0.1	1.8	0.6	1.6	1.0
12/26/01 01:00	N/A	N/A	0.3	0.8	1.6	0.8	0.7	0.7	0.8	0.6	0.8
12/26/01 02:00	0.6	0.9	1.2	0.8	0.5	0.5	0.8	0.4	0.5	0.8	0.7
12/26/01 03:00	0.5	0.5	1.2	0.6	0.7	0.6	0.9	0.5	1.0	0.2	0.7
12/26/01 04:00	1.0	0.6	0.6	0.5	1.0	0.7	0.6	1.0	0.8	0.6	0.7
12/26/01 05:00	0.4	0.8	0.5	3.7	0.7	1.3	0.4	0.9	0.3	1.5	1.1
12/26/01 06:00	0.7	1.3	0.4	1.4	0.3	1.0	0.3	0.9	0.7	0.6	0.8
12/26/01 07:00	0.7	0.6	0.9	0.3	0.6	0.3	1.2	0.4	1.8	0.8	0.8
12/26/01 08:00	3.3	1.4	1.6	0.8	0.9	1.3	1.0	1.4	1.0	0.8	1.3
12/26/01 09:00	1.0	1.3	0.9	0.9	1.1	1.0	0.7	0.2	0.9	0.8	0.9
12/26/01 10:00	0.8	1.3	1.0	0.5	0.7	0.6	0.8	0.8	0.4	1.1	0.8
12/26/01 11:00	0.1	1.0	0.2	1.1	0.3	1.5	0.3	0.7	0.6	0.6	0.6
12/26/01 12:00	0.7	0.3	1.3	N/A	0.8						
Final Average*	0.8										
Maximum*	3.7										
Minimum*	0.1										

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

Calibration Codes

Status Codes

IC - In calibration  
SC - Span Calibration PASS  
MC - Midrange Calibration PASS  
ZC - Zero Calibration PASS  
CF - Calibration Fail  
SF - Span Calibration Fail  
MF - Midrange Calibration Fail  
ZF - Zero Calibration Fail  
DN - Process Down

OC - Out of Control (CFR-75)  
O6 - Out of Control (CFR-60)  
OB - Out of Control (75 & 60)  
HW - Hardware fault  
IG - Ignore Data  
LF - Communication Link Failure  
ND - No Data  
DE - Data or CEMSPEAK Task Error

Enertec NTDAHS®  
Average Values Report  
Generated : 12/26/01 12:22

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

Period Start: 12/26/01 09:45  
Period End: 12/26/01 10:45  
Validation Type: 1/1 min  
Averaging Period: 1/1 min  
Type: Rolling Avg

Period Start	Average 2Stk_kscfh kscfh	Average 2Unit_Load MW
12/26/01 09:45	98286.0	668.0
12/26/01 09:46	98316.0	668.6
12/26/01 09:47	98340.0	668.1
12/26/01 09:48	98328.0	668.0
12/26/01 09:49	98316.0	667.3
12/26/01 09:50	98220.0	667.6
12/26/01 09:51	97800.0	667.1
12/26/01 09:52	97800.0	667.3
12/26/01 09:53	97692.0	667.4
12/26/01 09:54	97404.0	667.0
12/26/01 09:55	97404.0	667.3
12/26/01 09:56	97404.0	666.8
12/26/01 09:57	97296.0	666.9
12/26/01 09:58	96966.0	666.4
12/26/01 09:59	96978.0	666.3
12/26/01 10:00	97044.0	666.2
12/26/01 10:01	97242.0	667.7
12/26/01 10:02	97254.0	667.6
12/26/01 10:03	97230.0	668.5
12/26/01 10:04	97254.0	668.1
12/26/01 10:05	97374.0	668.7
12/26/01 10:06	97362.0	667.7
12/26/01 10:07	97362.0	667.7
12/26/01 10:08	97350.0	667.2
12/26/01 10:09	97320.0	667.5
12/26/01 10:10	97320.0	667.2
12/26/01 10:11	97320.0	667.5
12/26/01 10:12	97224.0	667.1
12/26/01 10:13	97176.0	668.6
12/26/01 10:14	97164.0	667.9
12/26/01 10:15	96570.0	667.7
12/26/01 10:16	96354.0	667.2
12/26/01 10:17	96366.0	668.6
12/26/01 10:18	96366.0	667.4
12/26/01 10:19	96354.0	667.8
12/26/01 10:20	96354.0	667.8
12/26/01 10:21	96366.0	667.7
12/26/01 10:22	96366.0	667.3
12/26/01 10:23	96486.0	666.6
12/26/01 10:24	96564.0	666.9
12/26/01 10:25	96558.0	666.6
12/26/01 10:26	96546.0	667.5
12/26/01 10:27	96660.0	668.1
12/26/01 10:28	96936.0	667.8
12/26/01 10:29	96924.0	667.0
12/26/01 10:30	96966.0	667.4
12/26/01 10:31	97110.0	667.6
12/26/01 10:32	97110.0	667.5

12/26/01 10:33	97086.0	666.9
12/26/01 10:34	97098.0	668.0
12/26/01 10:35	96978.0	667.9
12/26/01 10:36	96966.0	667.6
12/26/01 10:37	96978.0	668.7
12/26/01 10:38	96948.0	668.9
12/26/01 10:39	96912.0	668.0
12/26/01 10:40	96936.0	667.6
12/26/01 10:41	96924.0	668.2
12/26/01 10:42	97242.0	667.5
12/26/01 10:43	97350.0	667.7
12/26/01 10:44	97362.0	667.0
12/26/01 10:45	97494.0	667.9
<b>Final Average*</b>	<b>97160.3</b>	<b>667.6</b>
<b>Maximum*</b>	<b>98340.0</b>	<b>668.9</b>
<b>Minimum*</b>	<b>96354.0</b>	<b>666.2</b>

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

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		0800	0830	0900	0930	1000	1030
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.60	4.53	4.38	4.57	4.61	4.58
Air Flow	%	69	67	66	69	69	69
Generator Load (Gross)	Megawatts	650	631	627	646	646	646
Boiler Thermal Demand	Megawatts	657	635	620	654	658	657
O2 Flue gas	A % B	<del>2.64</del> 2.83	<del>2.66</del> 3.05	<del>2.62</del> 2.77	<del>2.69</del> 2.95	<del>2.46</del> 2.84	<del>2.73</del> 2.85
Fuel Flow	%	99.5	92.7	96.7	97.3	99.2	97.5
Coal Totalizer	Tons						
A		98384	98410	98424	98446	98470	98492
B		89774	89798	89812	89830	89852	89870
C		92906	92930	92944	92964	92984	93004
D		9398	9398	9398	9398	9398	9398
E		75316	75336	75348	75366	75384	75402
F		90856	90882	90896	90916	90940	90962
G		92716	92740	92754	92776	92798	92820

Soot-blowing F/S @ 0759 Sequence 3 IK & IR

2C IO Fan F/S @ 0848

CEM 890)

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

UNIT # Two

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		1100	1130	1200	1230	1300	1330
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.59	4.59	4.55	4.61	4.60	4.59
Air Flow	%	69	69	71	71	69	70
Generator Load (Gross)	Megawatts	647	647	621	648	647	648
Boiler Thermal Demand	Megawatts	655	649	621	672	655	658
O2 Flue gas	%	<del>2.61</del> 2.85	<del>2.89</del> 3.08	<del>4.74</del> 4.30	<del>3.25</del> 3.36	<del>3.09</del> 3.34	<del>2.77</del> 2.94
Fuel Flow	%	97.3	95.1	91.1	102.9	101.7	102.7
Coal Totalizer	Tons						
A		98514	98538	98562	98584	98606	98630
B		89890	89910	89928	89944	89964	89986
C		93024	93044	93068	93090	93112	93134
D		9398	9398	9398	9398	9398	9398
E		75418	75436	75456	75472	75490	75508
F		90982	91004	91028	91050	91072	91096
G		92842	92864	92886	92908	92930	92954

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

UNIT # Two

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
		PETerson	PETerson	PETerson	PETerson	PETerson	PETerson
Person Recording Data		PETerson	PETerson	PETerson	PETerson	PETerson	PETerson
Time		1400	1430	1500	1530	1600	1630
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.59	4.60	4.70	4.60	4.61	4.55
Air Flow	%	69	70	69	68	70	70
Generator Load (Gross)	Megawatts	646	647	646	646	637	635
Boiler Thermal Demand	Megawatts	656	664	647	649	649	649
O2 Flue gas	A % B	<del>3.14</del> 3.07	<del>2.94</del> 3.06	<del>3.22</del> 3.36	<del>2.86</del> 2.52	<del>2.09</del> 3.20	<del>2.94</del> 3.12
Fuel Flow	%	98.6	103	94	98.8	99.2	98.6
Coal Totalizer	Tons						
A		98648	98670	98692	98716	98738	98760
B		90004	90024	90046	90070	90090	90110
C		93152	93172	93194	93216	93236	93256
D		9398	9398	9398	9398	9398	9398
E		75522	75540	75558	75576	75592	75608
F		91114	91134	91156	91178	91198	91216
G		92972	92994	93016	93040	93060	93082

Blowing I&E IR SEQUENCE 3 @ 1531

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # TWD

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	TOSO	TOSO	TOSO	TOSO
Time		1700	1730	1800	1830	1900	1930
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.49	4.60	4.47	4.57	4.56	4.50
Air Flow	%	68	70	70	68	69	70
Generator Load (Gross)	Megawatts	636	641	639	640	634	640
Boiler Thermal Demand	Megawatts	649	649	649	649	649	649
O2 Flue gas	%	<del>2.97</del> 3.51	<del>3.13</del> 3.42	<del>3.03</del> 3.32	<del>3.48</del> 3.13	<del>3.16</del> 3.26	<del>2.82</del> 3.13
Fuel Flow	%	100.4	98.9	101.2	99.6	97.2	96.3
Coal Totalizer	Tons						
A		98782	98904	98826	98852	98872	98896
B		90132	90152	90174	90200	90218	90240
C		93278	93300	93322	93346	93364	93386
D		9398	9398	9398	9398	9398	9398
E		75626	75644	75660	75680	75696	75714
F		91238	91258	91278	91302	91320	91342
G		93104	93126	93148	93174	93192	93216



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

UNIT # 2

DATE: 12-10-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		T050					
Time		2000					
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.62					
Air Flow	%	69					
Generator Load (Gross)	Megawatts	639					
Boiler Thermal Demand	Megawatts	649					
O2 Flue gas	%	3.12 3.45					
Fuel Flow	%	99.4					
Coal Totalizer	Tons						
A		98920					
B		90262					
C		93410					
D		9398					
E		75732					
F		91362					
G		93238					

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-11-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		0800	0830	0900	0930	1000	1030
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.54	4.53	4.58	4.60	4.65	4.66
Air Flow	%	70	70	70	69	70	69
Generator Load (Gross)	Megawatts	639	644	649	653	653	657
Boiler Thermal Demand	Megawatts	654	655	654	654	654	654
O2 Flue gas	%	<del>2.76</del> 3.69	<del>2.49</del> 3.30	<del>2.44</del> 3.66	<del>2.53</del> 3.24	<del>2.65</del> 3.85	<del>2.26</del> 3.52
Fuel Flow	%	98.4	97.8	98.1	99.7	97.8	98.4
Coal Totalizer	Tons						
A		99454	99478	99502	99524	99548	99568
B		90774	90798	90820	90842	90866	90886
C		93924	93948	93970	93992	94016	94034
D		9398	9398	9398	9398	9398	9398
E		76134	76152	76168	76184	76202	76216
F		91844	91868	91890	91910	91934	91952
G		93734	93756	93776	93796	93818	93838

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-11-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		1100	1130	1200	1230	1300	1330
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.51	4.62	4.60	4.55	4.50	4.59
Air Flow	%	70	70	71	70	70	70
Generator Load (Gross)	Megawatts	645	652	647	642	643	642
Boiler Thermal Demand	Megawatts	654	654	654	654	654	654
O2 Flue gas	A % B	2.34 / 3.27	2.22 / 3.52	2.33 / 3.72	2.48 / 3.83	2.49 / 3.67	2.50 / 3.74
Fuel Flow	%	98.1	99.4	98.8	96.8	101	99.7
Coal Totalizer	Tons						
A		99596	99614	99638	99658	99682	99704
B		90912	90928	90952	90972	90994	91016
C		94060	94078	94102	94122	94146	94166
D		9398	9398	9398	9398	9398	9398
E		76236	76248	76266	76280	76298	76312
F		91978	91994	92018	92036	92058	92080
G		93862	93878	93902	93920	93942	93962

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-11-01

PARAMETER	UNITS	Readings (30 minute intervals)			
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON
Time		1400	1430	1500	1530
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.60	4.61	4.58	4.60
Air Flow	%	69	70	69	70
Generator Load (Gross)	Megawatts	653	645	648	649
Boiler Thermal Demand	Megawatts	654	654	654	654
O2 Flue gas	%	2.86 3.99	2.34 3.51	2.66 3.52	2.42 3.59
Fuel Flow	%	99.1	99.2	97.9	98.9
Coal Totalizer	Tons				
A		99730	99750	99770	99796
B		91042	91062	91080	91106
C		94192	94212	94232	94258
D		9398	9398	9398	9398
E		76330	76346	76360	76378
F		92104	92124	92142	92168
G		93986	94004	94022	94046

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-12-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		0800	0830	0900	0930	1000	1030
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.62	4.62	4.66	4.63	4.62	4.71
Air Flow	%	72	73	73	72	72	72
Generator Load (Gross)	Megawatts	647	651	658	654	649	657
Boiler Thermal Demand	Megawatts	664	664	664	664	664	664
O2 Flue gas	%	<del>3.21</del> 3.55	<del>3.43</del> 3.92	<del>3.57</del> 3.87	<del>3.83</del> 4.63	<del>3.50</del> 3.90	<del>3.81</del> 3.76
Fuel Flow	%	101.2	100	101.5	100.2	100.9	99.9
Coal Totalizer	Tons						
A		540.8	560	584.8	606.3	628.4	651.5
B		91838	91856	91890	91902	91924	91948
C		94992	95010	95034	95056	95078	95102
D		9398	9398	9398	9398	9398	9398
E		76904	76918	76936	76950	76966	76982
F		92884	92902	92926	92948	92970	92992
G		94748	94766	94790	94810	94832	94854

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-12-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		1100	1130	1200	1230	1300	1330
Steam Flow	Lb/Hr x 10 <sup>3</sup>	4.64	4.63	4.69	4.64	4.66	4.66
Air Flow	%	73	73	73	73	73	72
Generator Load (Gross)	Megawatts	653	650	656	655	660	655
Boiler Thermal Demand	Megawatts	664	664	664	664	664	664
O2 Flue gas	%	<del>3.45</del> 4.64	<del>3.74</del> 4.62	<del>3.62</del> 4.69	<del>3.40</del> 3.69	<del>3.44</del> 3.53	<del>3.24</del> 3.75
Fuel Flow	%	101	99.7	101.1	101.6	101.7	100.3
Coal Totalizer	Tons						
A		675	696.3	719.9	743.9	763.5	787.4
B		91970	91992	92014	92038	92058	92082
C		95124	95146	95170	95194	95212	95236
D		9398	9398	9398	9398	9398	9398
E		77000	77014	77032	77048	77062	77080
F		93014	93036	93058	93082	93102	93124
G		94876	94896	94920	94942	94962	94984

# ST. JOHNS RIVER POWER PARK BOILER CONTROL ROOM DATA

UNIT # Two

DATE: 12-12-01

PARAMETER	UNITS	Readings (30 minute intervals)					
Person Recording Data		PETERSON	PETERSON	PETERSON	PETERSON	PETERSON	PETERSON
Time		1400	1430	1500	1530	1600	1630
Steam Flow	Lb/Hr x 10 <sup>6</sup>	4.68	4.69	4.59	4.48	3.89	
Air Flow	%	72	73	74	69	62	
Generator Load (Gross)	Megawatts	657	650	654	630	566	
Boiler Thermal Demand	Megawatts	664	664	664	619	558	
O2 Flue gas	%	<del>3.45</del> 3.91	<del>3.51</del> 3.83	<del>3.19</del> 3.93	<del>4.04</del> 4.49	<del>3.54</del> 3.89	
Fuel Flow	%	101.3	98.5	99.7	96.2	87.5	
Coal Totalizer	Tons						
A		808.5	834	853	878.5	894.4	
B		92102	92128	92146	92172	92186	
C		95258	95282	95302	95326	95342	
D		9398	9398	9398	9398	9398	
E		77094	77114	77126	77144	77156	
F		93144	93170	93188	93212	93226	
G		95004	95028	95046	95070	95084	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1200  
 Date: 12/10/01  
 Initials: RAJ

A (AB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11						UNDE VOLTAGE
12	185	12	35.0	51.0	0	
13	198	12	36.2	43	0	
14	194	12	37.3	47	0	
15						High HOPER LEVEL
16	209	15	39.6	63.0	0	
21						High HOPER LEVEL
22	205	15	38.2	61.0	0	
23	202	15	38.0	67.0	0	
24	199	15	37.4	63	0	
25						H-H-LEVEL
26	192	12	37.3	51	0	
31	203	15	38.8	51	121	
32	205	15	38.5	67	0	
33	208	15	67.4	393	0	
34						H-H-LEV
35	231	15	44.1	71.0	0	
36	200	15	38.1	43	0	
41	207	20	41.1	77	0	
42	196	20	34.4	79	0	
43	208	20	41.2	79	0	
44	198	20	39.5	83	0	
45	199	20	39.8	79	0	
46	195	20	39.1	90	0	
51		100				RESPONSE
52	225	30	41.2	130	0	
53	231	30	40.9	130	0	
54	226	31	40.7	130	0	
55	234	30	42.6	130	0	
56	37	30	3.1	134	0	
61	316	35	46.6	158	0	
62	239	35	41.8	158	0	
63	239	35	36.3	162	0	
64	224	35	41.1	158	0	
65	246	35	41.1	156	0	
66	225	35	41.2	154	0	
71	330	45	47.6	217	0	
72	242	46	46.1	219	0	
73	280	45	46.8	213	0	
74	138	46	30.3	112	0	
75	265	45	43.0	217	0	
76	252	45	40.5	217	0	



ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1200  
 Date: 12/10/01  
 Initials: RAJ

B (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	302	25	44.2	122	0	
12	275	25	45.4	118	0	
13	300	25	45.6	118	0	
14	<del>209</del>	12	36.2	55	0	
15	Hopper High Level T/R %s					
16	199	12	38.3	47	0	
21	210	30	41.8	150	0	
22	245	30	40.0	154	0	
23	265	30	41.5	154	0	
24	208	15	39.1	61.0	0	
25	208	15	38.7	67.0	0	
26	202	15	10.6	7	100	
31	265	30	43.4	154	0	
32	265	30	42.3	150	0	
33	263	30	42.4	154	0	
34	192	15	36.9	61	0	
35	205	16	40.2	67	0	
36	205	15	37.6	71.0	0	
41	255	40	42.2	185	0	
42	262	40	44.7	187	0	
43	262	30	41.6	154	0	
44	175	20	36.1	75	0	
45	198	20	38.7	77	0	
46	195	20	38.3	79	0	
51	309	50	43.9	245	0	
52	314	50	43.1	245	0	
53	319	50	44.8	245	0	
54	279	30	42.2	132	0	
55	239	30	42.6	134	0	
56	37	15	5.3	59	0	
61	265	50	41.6	249	0	
62	279	54	41.2	249	0	
63	314	50	44.8	245	0	
64	233	35	40.5	166	0	
65	242	35	44.0	158	0	
66	218	28	43.7	114	0	
71	240	50	39.5	245	0	
72	251	50	39.1	245	0	
73	240	50	42.4	229	0	
74	251	45	40.3	209		
75	244	56	40.8	146		
76	Secondary Under Voltage					

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1300  
 Date: 12/10/01  
 Initials: RAH

A (AB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	—	UNDER VOLTAGE			—	
12	186	12	37.6	47	0	
13	199	12	37.5	43		
14	191	12	47.3	57		
15	—	POWER OFF			—	
16	204	12	40.1	63		
21	—	H.H. LEV			—	
22	204	25	38.1			
23	200	15	37.6			
24	197	15	37.2	63		
25	—	H.H. LEV			—	
26	192	12	37.1	51	0	
31	72	8	37.4	75	138	
32	208	14	38.7	67	0	
33	206	15	39.1	67		
34	—	H.H. LEV			—	
35	224	15	43.0	67		
36	198	15	37.8	67		
41	201	20	46.6	77		
42	195	20	34.2	79	0	
43	208	20	41.1	79	109	
44	199	20	39.4	83	0	
45	199	20	39.8	79		
46	194	20	38.7	83		
51	—	NO RESPONSE			—	
52	316	43	45	197		
53	320	43	44.5	201		
54	223	30	46.3	130		
55	232	30	42.4	130		
56	37	30	2.8	134		
61	340	42	47.8	185		
62	306	42	43.3	185		
63	268	42	37.5	187		
64	222	35	40.9	158		
65	243	35	41.0	158		
66	225	35	41.1	154		
71	328	45	47.2	217		
72	241	45	40.1	217		
73	273	45	40.7	213		
74	137	46	30.3	106		
75	262	45	42.8	217		
76	257	45	42.5	213	0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1300  
 Date: 12/10/01  
 Initials: RAH

B (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	255	25	43.3	122	0	
12	262	25	44.6	118		
13	301	25	44.2	122		
14	194	12	34.0	51		
15	—	H.H.	L.E.U.	—	—	
16	191	12	37.8	191		
21	260	30	41.7	150		
22	244	30	40.1	154		
23	267	30	41.9	154		
24	207	15	39.1	63		
25	218	16	40.9	67	0	
26	194	10	38.1	27	98	
31	265	30	43.4	150	0	
32	265	30	42.3	150		
33	265	30	42.6	154		
34	193	15	37.1	63		
35	206	15	39.2	67		
36	206	15	37.6	71		
41	254	40	42.0	185		
42	262	40	44.5	185		
43	259	40	43.6	185		
44	175	20	36.2	75		
45	199	20	39.1	79		
46	194	20	38.5	79		
51	308	50	43.7	245		
52	313	50	43.1	245		
53	319	50	45.1	245		
54	<del>252</del> 252	<del>50</del> 50	<del>42.8</del> 42.8	<del>245</del> 245		
55	<del>276</del> 276	<del>50</del> 50	<del>42.5</del> 42.5	<del>245</del> 245		
56	<del>276</del> 276	<del>50</del> 50	<del>42.5</del> 42.5	<del>245</del> 245		
61	262	50	41.6	245		
62	276	50	41.2	245		
63	315	50	45.0	245		
64	235	35	40.8	169		
65	251	35	44.1	158		
66	222	28	43.9	118		
71	239	50	39.4	245		
72	249	50	39.1	249		
73	241	50	42.4	233		
74	251	43	45	209		
75	247	36	36	166		
76	UNDER VOLTAGE				0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1400  
 Date: 12/10/01  
 Initials: RAR

A (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	—	UNDERVOLTAGE			—	
12	187	12	36.4	51	0	
13	194	12	36.0	43		
14	183	12	37.3	51		
15	—	POWER OFF			—	
16	219	12	40.8	59		
21	—	H.H. LEV			—	
22	204	15	38.1	61		
23	200	15	37.7	67		
24	198	15	37.3	63		
25	—	H.H. LEV			—	
26	194	12	37.6	51		
31	213	15	40.8	61		
32	208	15	38.5	67		
33	212	16	39.1	67		
34	—	H.H. LEV			—	
35	220	15	42.3	67		
36	201	15	38.0	67		
41	190	20	37.7	79		
42	195	20	34.2	83		
43	207	20	40.9	79		
44	198	20	39.7	83		
45	200	20	40.1	79		
46	196	20	39.0	83		
51	— No RESPONSE —					
52	225	30	41.2	130		
53	230	30	40.8	130		
54	225	31	46.4	130		
55	232	30	42.3	130		
56	36	30	3.1	134		
61	245	35	45.9	156		
62	238	35	41.7	158		
63	239	35	36.3	1102		
64	222	35	40.9	158		
65	243	35	40.9	158		
66	225	35	41.0	154		
71	329	45	47.3	217		
72	241	45	40	217		
73	275	45	40.6	27		
74	136	45	30.3	118		
75	261	45	42.8	217		
76	253	45	40.6	217	0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # B2

Time: 1400  
 Date: 12/10/01  
 Initials: RAJ

B (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS	
11	296	25	43.6	118	0		
12	265	25	44.8	122	0		
13	265	25	44.6	122	0		
14	191	12	36.4	51	0		
15	H. H. LEV						
16	188	12	33.7	184	0		
21	258	30	41.6	150	0		
22	244	30	40.0	150	2		
23	263	30	41.6	154	0		
24	207	15	38.7	63	0		
25	H. H. LEV					0	
26	63	4	29.6	29	101		
31	266	30	43.4	150	0		
32	265	30	42.3	150	0		
33	264	30	42.6	154	0		
34	194	15	37.5	63	0		
35	199	15	38.9	63	0		
36	202	15	37.8	71	0		
41	254	40	42.0	185	0		
42	260	40	44.6	185	0		
43	258	40	43.5	185	0		
44	177	20	38.4	75	0		
45	197	20	38.8	79	0		
46	194	20	36.2	79	0		
51	308	50	43.8	241	0		
52	315	50	43.1	245	0		
53	311	50	45.2	241	0		
54	231	30	42.3	130	0		
55	241	30	43.0	132	0		
56	45	15	6.7	59	0		
61	262	50	41.5	245	0		
62	280	50	41.1	245	0		
63	315	50	45	249	0		
64	235	35	40.8	169	0		
65	243	35	49.2	158	0		
66	218	28	43.7	114	0		
71	240	50	39.4	24	0		
72	251	50	39.1	249	0		
73	242	51	42.5	233	0		
74	252	46	40.4	209	0		
75	246	36	41.1	166	0		
76	Under Voltage					0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1500  
 Date: 12/10/01  
 Initials: RAH

A (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	Under Voltage			—	0	
12	192	12	37.6	51		
13	198	12	36.5	45		
14	188	12	37.9	51		
15	POWER OFF			—		
16	217	15	39.4	63		
21	H. H. LEV			—		
22	201	15	37.9	61		
23	200	15	37.9	67		
24	197	15	37.1	63		
25	H. H. LEV			—		
26	192	12	37.2	51		
31	223	15	41.6	63		
32	208	15	38.9	67		
33	211	16	39.3	67		
34	206	15	38.8	67		
35	231	15	42.3	67		
36	198	15	37.9	67		
41	192	20	38.0	79		
42	195	20	37.2	83.0		
43	208	20	40.9	75		
44	197	20	39	83		
45	199	20	39.7	79		
46	195	20	38.8	86		
51	NO RESPONSE			—		
52	275	30	41.2	138		
53	229	30	40.8	130		
54	224	31	40.3	130		
55	232	30	42.3	130		
56	36	31	2.8	134		
61	269	35	45.9	154		
62	239	35	41.8	158		
63	239	35	36.2	158		
64	222	35	40.9	154		
65	242	35	40.9	156		
66	224	35	40.9	154		
71	326	45	46.9	217		
72	241	45	40.0	217		
73	262	45	40.6	213		
74	138	45	30.3	118		
75	260	45	42.6	213		
76	253	45	40.5	217	0	

ST. JOHNS RIVER POWER PARK  
PRECIPITATOR ELECTRICAL DATA  
HOURLY INTERVALS  
UNIT # 2

Time: 1500  
Date: 12/10/01  
Initials: RAJ

B (AB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	296	25	44.1	118	0	
12	265	25	44.7	122		
13	248	25	42.5	122		
14	188	12	33.4	51		
15		14	14	LEU		
16	190	12	37.5	51		
21	258	30	41.6	150		
22	243	30	40.1	150		
23	261	30	41.6	154		
24	206	15	38.5	63		
25	212	15	39.9	63	0	
26	55	2	8.1	3	103	
31	265	30	43.4	154	0	
32	265	30	42.2	150		
33	266	30	42.2	154		
34	193	15	37.0	61		
35	201	15	38.6	67		
36	204	15	37.3	71		
41	254	40	42.0	185		
42	260	40	44.5	185		
43	259	40	43.5	185		
44	178	20	36.4	75		
45	197	20	38.8	77		
46	194	20	38.7	79		
51	308	50	43.8	245		
52	316	50	43.1	245		
53	319	50	45.2	245		
54	231	30	42.3	130		
55	239	30	42.8	134		
56	44	15	6.3	53		
61	262	50	41.5	245		
62	278	50	41.2	245		
63	315	50	45	249		
64	235	35	46.8	169		
65	243	35	44.1	158		
66	218	29	43.5	114		
71	239	50	39.4	245		
72	251	50	39.1	245		
73	241	50	42.5	23		
74	249	45	40.4	209		
75	246	36	41.0	166		
76	UNDER VOLTAGE					0

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1600  
 Date: 12/10/91  
 Initials: RAY

A (AB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11		UNDER VOLTAGE			0	
12	182	12	35.5	47		
13	195	12	38.9	45		
14	195	12	39.6	47		
15	POWER OFF					
16	209	15	40.1	63		
21	H.H. LEN					
22	205	15	38.5	59		
23	205	15	38.5	67		
24	199	15	37.3	67		
25	H.H. LEN					
26	192	12	37.0	51		
31	228	15	41.7	67		
32	207	15	38.7	67		
33	204	15	39.3	67		
34	204	15	38.9	67		
35	228	15	43.6	67		
36	204	16	38.1	67		
41	194	20	38.6	79		
42	195	20	41.1	79		
43	208	20	41.1	79		
44	204	20	38.8	83		
45	199	20	39.9	79		
46	195	20	38.9	86		
51	No Response					
52	226	30	41.2	130		
53	230	30	40.8	130		
54	223	30	40.3	130		
55	232	30	42.3	130		
56	37	30	3.1	134		
61	269	36	45.8	158		
62	236	35	41.6	154		
63	240	35	36.2	158		
64	222	35	40.8	158		
65	246	35	40.8	156		
66	224	35	40.9	154		
71	326	45	46.9	217		
72	241	45	40.1	27		
73	274	45	40.6	213		
74	137	45	30.3	118		
75	262	45	42.8	213		
76	233	45	40.5	221	0	



ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1600  
 Date: 12.10.01  
 Initials: RAJ

B (NB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	294	25	43.4	118	0	
12	263	25	44.7	123		
13	245	25	42	118		
14	194	12	34.5	51		
15	—	H.H.	LEV	—		
16	187	12	37.2	47		
21	259	30	41.7	150		
22	247	30	40.5	150		
23	262	30	41.6	154		
24	211	16	38.7	63		
25	209	15	39.1	67	0	
26	191	10	38.6	35	95	
31	263	30	43.3	150	0	
32	263	30	42.1	150		
33	266	30	42.7	154		
34	193	15	37.2	61		
35	201	15	38.7	67		
36	209	15	38.0	67		
41	233	40	42.1	185		
42	260	40	44.5	185		
43	258	40	43.5	185		
44	178	20	36.5	75		
45	199	20	39.1	77		
46	195	20	38.6	79		
51	308	50	43.7	241		
52	314	50	43.1	245		
53	319	50	45.2	245		
54	230	30	42.3	130		
55	242	30	43.1	134		
56	44	15	6.8	5.9		
61	262	50	41.5	245		
62	279	50	41.2	249		
63	316	50	45	245		
64	235	35	40.8	169		
65	248	35	44.1	158		
66	219	28	43.8	114		
71	239	50	39.4	245		
72	251	50	39.0	245		
73	241	50	42.3	229		
74	251	45	40.1	209		
75	248	36	41.2	166		
76	—	UNDER VOLTAGE	—	—	0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1700  
 Date: 12/10/01  
 Initials: RAM

A (AB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11		Under Voltage			0	
12	181	12	35.5	51		
13	194	12	36.2	43		
14		H.H. AEU -				
15		Power off				
16	206	15	39.2	63		
21		H.H. LER				
22	204	15	38.2	59		
23	201	15	37.9	71		
24	199	15	37.5	67		
25		H.H. L				
26	191	12	37.2	51		
31	212	15	39.9	63		
32	208	15	38.8	67		
33	204	15	39.3	67		
34	207	15	39.2	67		
35	222	15	40.9	67		
36	202	15	38.1	67		
41	192	20	38.1	77		
42	197	20	37.3	79		
43	209	20	41.3	79		
44	198	20	39.1	83		
45	201	20	40.1	83		
46	195	20	38.9	83		
51		No Response				
52	227	30	41.4	130		
53	231	30	40.9	130		
54	221	30	40.3	130		
55	234	30	42.3	134		
56	34	31	3.1	134		
61	265	35	45.8	154		
62	238	35	41.7	156		
63	240	35	36.2	162		
64	222	35	40.9	156		
65	242	35	40.7	156		
66	224	35	40.9	154		
71	326	45	46.9	217		
72	240	45	40.0	217		
73	270	45	40.6	213		
74	136	45	20.3	106		
75	262	45	42.8	213		
76	220	45	40.1	217	0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1700  
 Date: 12/10/01  
 Initials: RAH

B (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS	
11	320	25	46.2	118	0		
12	263	25	44.5	118			
13	252	25	43.0	118			
14	186	12	32.9	51			
15	H. H. LEV						
16	178	12	35.6	45			
21	258	30	41.6	150			
22	246	30	40.3	154			
23	266	30	41.8	150			
24	208	15	38.4	66			
25	201	15	37.5	67	0		
26	48	4	5	19	95		
31	266	30	43.4	150	0		
32	263	30	42.2	150			
33	267	30	42.7	154			
34	195	15	37.3	61			
35	204	15	39.1	65			
36	208	15	37.7	71			
41	254	40	42.1	187			
42	263	40	44.8	189			
43	259	40	43.6	185			
44	178	20	36.5	75			
45	199	<del>20</del>	39.1	79			
46	194	20	38.4	79			
51	309	50	43.9	245			
52	313	50	43.8	245			
53	319	50	43.1	245			
54	230	30	42.3	130			
55	240	30	42.9	130			
56	45	12	6.7	59			
61	262	50	41.5	245			
62	283	50	41.2	245			
63	314	50	44.8	245			
64	235	35	40.8	169			
65	245	35	44.1	158			
66	219	28	43.8	114			
71	239	50	39.4	245			
72	252	50	39.1	245			
73	270	50	42.4	229			
74	251	45	40.4	209			
75	247	36	41.1	166			
76	UNDERVOLTAGE				0		

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1800  
 Date: 2/10/01  
 Initials: RAJ

A (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	UNDER VOLTAGE				0	
12	185	12	36.1	51		
13	192	12	35.5	43		
14	191	12	38.6	51		
15	POWER OFF					
16	209	15	59.8	63.0		
21	H.H.L.					
22	202	15	38.1	61		
23	201	15	37.9	67		
24	198	15	37.2	67		
25	H.H.L.					
26	191	12	37.0	51		
31	209	15	39.1	63		
32	204	15	38.5	63		
33	205	15	39.2	67		
34	202	15	38.9	67		
35	233	15	44.6	67		
36	209	16	58.0	67		
41	192	20	38.3	79		
42	195	20	37.2	79		
43	208	20	41.1	75		
44	197	20	39.1	83		
45	199	20	39.8	79		
46	195	20	38.9	83		
51	NO RESPONSE					
52	226	30	40.9	130		
53	231	30	40.8	130		
54	219	30	40.1	130		
55	231	30	42.1	130		
56	37	30	3.1	130		
61	272	36	45.4	156		
62	238	35	41.6	158		
63	238	35	36.2	158		
64	224	35	30.1	112		
65	259	45	42.6	217		
66	250	45	40.3	217		
71	323	45	46.9	221		
72	241	45	40.0	217		
73	273	45	40.6	213		
74	136	45	30.2	106		
75	261	45	42.6	217		
76	251	45	40.3	217	0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1800  
 Date: 12/10/01  
 Initials: \_\_\_\_\_

B (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	307	25	44.8	114	0	
12	272	25	45.4	118		
13	258	25	43.7	118		
14	211	12	37.1	51		
15		H.H.L				
16	193	12	38.4	51		
21	263	30	42.2	150		
22	243	30	40.0	151		
23	266	30	41.7	154		
24	209	15	39.4	61		
25	213	15	39.1	67	0	
26	50	2	7.5	3.	86	
31	263	30	43.3	150	0	
32	263	30	42.2	150		
33	265	30	46.2	154		
34	195	15	37.3	63		
35	202	15	39.1	63		
36	210	16	37.9	67		
41	254	40	45.0	185		
42	260	40	44.7	187		
43	256	40	43.4	183		
44	179	20	36.7	75		
45	200	20	39.3	77		
46	196	20	38.7	77		
51	308	50	43.7	243		
52	315	50	43.1	249		
53	317	50	45.0	24		
54	289	32	42.4	130		
55	242	30	43.1	130		
56	35	15	4.6	59		
61	236	35	40.9	169		
62	246	35	44.2	151		
63	218	28	43.7	114		
64	251	45	40.4	209		
65	247	36	44.3	158		
66	280	28	44	114		
71	239	50	39.4	295		
72	251	50	39.0	245		
73	240	50	42.3	229		
74	252	46	40.4	209		
75	247	36	41.2	166		
76		Under Voltage			6	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1900  
 Date: 12/10/01  
 Initials: RAJ

A (AB)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11			Under voltage		0	
12	184	12	36.0	51		
13	192	12	35.1	43		
14	<del>184</del>	<del>12</del>	<del>36.0</del>	<del>51</del>		
15			POWER OFF			
16	207	15	39.1	61		
21			H.H.L			
22	205	15	38.2	59		
23	201	15	38.0	67		
24	199	15	37.3	67		
25			H.H.L			
26	191	12	37.6	51		
31	211	15	39.4	67		
32	205	15	38.3	67		
33	205	15	39.2	67		
34	208	15	39.4	67		
35	220	15	42.2	67		
36	201	15	38.0	67		
41	192	20	38.2	83		
42	194	20	34.0	79		
43	207	20	40.9	79		
44	196	20	38.8	83		
45	201	20	40.1	79		
46	195	20	38.8	83		
51			No Response			
52	220	30	41.1	130		
53	229	30	40.7	130		
54	221	30	39.9	126		
55	230	30	42.0	130		
56	36	30	3.1	134		
61	263	35	45.5	158		
62	234	35	41.1	154		
63	238	35	36.1	158		
64	222	35	40.8	156		
65	241	35	40.6	156		
66	223	35	40.7	154		
71	321	45.0	46.6	213		
72	259	45.0	40.0	217		
73	271	46	40.5	213		
74	134	46	30.0	118		
75	259	45	45	217		
76	249	45	40.3	217	0	

ST. JOHNS RIVER POWER PARK  
 PRECIPITATOR ELECTRICAL DATA  
 HOURLY INTERVALS  
 UNIT # 2

Time: 1900  
 Date: 12/10/91  
 Initials: RAS

B (A/B)

Rectifier Set	AC Volts	AC Amps	DC Kv	DC Milliamp	Sparks	COMMENTS
11	302	25	44.4	122	0	
12	265	25	44.7	122		
13	251	25	42.8	122		
14	193	12	34.1	51		
15		H.H. LEU				
16	184	12	36.7	470		
21	259	30	41.8	150		
22	247	30	40.2	152		
23	261	30	41.4	150		
24	209	15	38.9	67		
25	226	15	38.5	67	0	
26	15	10	3.9	29	96	
31	266	30	43.4	154	0	
32	266	30	42.3	150		
33	268	30	42.8	154		
34	194	15	37.2	63		
35	204	15	39.1	67		
36	207	15	38.0	67		
41	254	40	42.1	185		
42	261	40	44.7	185		
43	259	40	43.6	185		
44	178	20	36.5	75		
45	199	20	39.1	77		
46	194	20	38.6	83		
51	309	50	43.8	245		
52	315	50	43.2	245		
53	316	50	45.0	241		
54	232	30	42.5	130		
55	241	30	43.0	130		
56	35	15	4.7	59		
61	262	50	41.5	245		
62	285	50	41.2	217		
63	314	50	45.0	249		
64	235	35	40.9	167		
65	246	35	41.2	158		
66	218	28	43.9	114		
71	239	50	39.4	245		
72	252	50	38.9	245		
73	241	50	42.3	233		
74	251	45	40.5	209		
75	247	36	41.2	166		
76		Under voltage			0	

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

Date: 12/11/01

UNIT # 2

Initials: \_\_\_\_\_

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000			
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800	7.0		6.4
0900			6.2
1000			6.4
1100			6.2
1200			6.2
1300			6.3
1400			6.4
1500			6.2
1600			
1700			
1800			
1900			
2000			
2100			
2200			
2300			

*Max Working*  
↓

10kgals → 1012 START  
1640 END

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

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



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

Date: 12/12/01  
Initials: \_\_\_\_\_

HOUR	PACKING DIFFERENTIAL PRESSURE (inches H2O column)		
	A	B	C
0000			
0100			
0200			
0300			
0400			
0500			
0600			
0700	NOT WORKING	0/S	
0800	7.0		6.3
0900			6.1
1000			6.4
1100			6.4
1200			6.2
1300			6.1
1400			6.0
1500			6.4
1600			6.5
1700			
1800			
1900			
2000			
2100			
2200			
2300			

1100 START

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

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

Date: \_\_\_/\_\_\_/\_\_\_

UNIT # \_\_\_\_\_

Initials: \_\_\_\_\_

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

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

**COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Date: \_\_\_/\_\_\_/\_\_\_  
Initials: \_\_\_\_\_

UNIT # \_\_\_\_\_

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

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

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Date: \_\_\_/\_\_\_/\_\_\_  
Initials: \_\_\_\_\_

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

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

**COMMENTS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

Date: \_\_\_/\_\_\_/\_\_\_

UNIT # \_\_\_\_\_

Initials: \_\_\_\_\_

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

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

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

Date: \_\_\_/\_\_\_/\_\_\_

UNIT # \_\_\_\_\_

Initials: \_\_\_\_\_

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

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

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

Date: \_\_\_/\_\_\_/\_\_\_

UNIT # \_\_\_\_\_

Initials: \_\_\_\_\_

HOUR	PACKING DIFFERENTIAL PRESSURE (Inches H2O column)		
	A	B	C
0000			
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800			
0900			
1000			
1100			
1200			
1300			
1400			
1500			
1600			
1700			
1800			
1900			
2000			
2100			
2200			
2300			

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

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



GCI