st. johns river POWER PARK

FAX COVER SHEET

ST. JOHNS RIVER POWER PARK
11201 NEW BERLIN ROAD
JACKSONVILLE, FLORIDA 32226

FAX NO. (904) 665-8719

PLEASE DELIVER THE FOLLOWING PAGES TO:

COMPANY FDEP

CONTACT Bruce Mitchell

FAX NO. (850) 922-6979

VOICE NO.

FROM Jay Worley

VOICE NO. (904) 665-8729

DATE 9/30/98 TIME 3:15 pm

NUMBER OF PAGES INCLUDING COVER 7

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COMMENTS: Bruce, Please refer to I.C.S. of this document to compare to D.S.I of Title I. Thanks, Jay

original ⇒ JEA
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BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re: Jacksonville Electric Authority St. Johns River Power Park Modification of Conditions of of Certification Duval County, Florida	)	DER CASE NO.PA 81-13H OGC NO. 85-0353

CORRECTED FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

On June 29, 1982, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the Jacksonville Electric Authority and Florida Power & Light Company (JEA/FPL) St. Johns River Power Park electrical power plant site. That certification order approved the construction and operation of a 1200 MW, coal-fired power plant and associated facilities located in Duval County, Florida.

On August 7, 1995, October 2, 1995, and March 1, 1996, Jacksonville Electric Authority (JEA) filed requests to amend the conditions of certification pursuant to Section 403.516(1)(b), Florida Statutes (F.S.). JEA requested that the conditions be modified to allow the burning of petroleum coke as a supplementary fuel.

Copies of JEA's proposed modifications were made available for public review. On October 27, 1995, a Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. As of October 24, 1995, all parties to the original proceeding had received copies of the intent to modify. The notice specified that a hearing would be held if a party to the original certification hearing objects within 45 days from receipt of the proposed modifications or if

a person whose substantial interests will be affected by the proposed modifications objects in writing within 30 days after issuance of the public notice. No timely objection to the proposed modifications has been received by the Department. Accordingly, in the absence of any timely objection,

IT IS ORDERED:

The proposed changes to the JEA/FPL St. Johns River Power Park power plant as described in the August 7, 1995, October 5, 1995, and March 1, 1996, requests for modification are APPROVED. Pursuant to Section 403.516(1)(b), F.S., the conditions of certification for the JEA/FPL St. Johns River Power Park, are MODIFIED as follows:

I.A. Emission Limitations

1. Based on a maximum heat input of 6,144 million BTU per hour, stack emissions from SJRPP Units 1 & 2 shall not exceed the following when burning coal only:

a. - d. No change.

2. When Unit 1 or Unit 2 are burning a mixture of coal and petroleum coke, the following limitations shall apply:

a. When blends of petroleum coke and coal with a sulfur content of up to 2 percent are fired in Units 1 & 2, the SO_2 emissions shall not exceed 0.55 pound per million British Thermal Units (lb/MMBtu) and a minimum of 76 percent reduction shall be achieved in the flue gas desulfurization system.

b. When co-firing petroleum coke with coals having a sulfur content between 2.00 and 3.63 percent, the emission limitation shall be based on the following formula:

SO_2 emission limit (lb/MMBtu) = (0.2 x C/100) + 4

Where C = percent of coal fired on a heat input basis.

c. When coals with a sulfur content greater than 3.63 percent are co-fired with petroleum coke, the SO_2 emission limitation shall be established by the following formula:

$$SO_2 \text{ (lb/MMBtu)} = (0.1653 \times C \times S - 0.4 \times C + 40) \times 1/100$$

where: C = percent of coal co-fired on a heat input basis

S = weight percent sulfur in the coal

d. The maximum SO_2 emission rate when firing petroleum coke and coal shall not exceed 0.676 lb/MMBtu.

e. Compliance with the SO_2 emissions limit shall be based on a 30-day rolling average for those days when petroleum coke is fired. Any use of petroleum coke during a 24-hour period shall be considered one day of the 30-day rolling average. The 30-day rolling average shall be calculated according to the New Source Performance Standards (NSPS) codified in 40 CFR 60 Subpart Da, except as noted above.

f. The petroleum coke blends shall be limited to a maximum of 20 percent petroleum coke by weight. The maximum weight of petroleum coke burned shall not exceed 100,000 lb/hr. The maximum sulfur content of the petroleum coke-coal blend shall not exceed 4.00 percent by weight.

g. The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit is initially fired with petroleum coke, information demonstrating in accordance with 40 CFR 52.21(b)(21)(v) and 40 CFR 52.21(b)(33) that operational changes did not result in emissions increases of nitrogen oxides and particulate matter.

h. The permittee shall maintain and submit to the Department on a semiannual basis for a period of two years from the date the unit is initially co-fired with petroleum coke, and then

on an annual basis (if the first two years of data show no significant increase in carbon monoxide emissions) for an additional three years. information demonstrating that the operational changes did not result in a significant emissions increase of carbon monoxide. The carbon monoxide emissions shall be based on test results using EPA Method 10. Additionally quarterly continuous emission monitoring data for carbon monoxide emissions shall be submitted to the Department for a period of two years to show the range of emissions experienced during each quarter.

j. The permittee shall maintain and submit to the Department on a semiannual basis for a period of two years from the date a unit is initially co-fired with petroleum coke, information demonstrating that the operational changes did not result in significant increases of sulfuric acid mist. The sulfuric acid mist emissions shall be based on test results using EPA Method 8. ~~The height of the boiler exhaust stack for SJRPP Unit 1 & 2 shall not be less than 640 feet above grade.~~

C. Stack Testing

1. No change

2. Performance tests shall be conducted and data reduced in accordance with methods and procedures outlined in Section 62-297, ~~17-2.700~~ F.A.C.

3. - 4. No change

5. Stack test for particulates, ~~NO_x and SO_2~~ and visible emissions shall be performed annually in accordance with conditions C. 2, 3, and 4 above.

Any party to this Notice has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules

of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date that the Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this 28th day of October, 1996 in Tallahassee, Florida.

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

for VIRGINIA B. WETHERELL
SECRETARY
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 10/29/96 Date

Certificate of Service

I hereby certify that a true and correct copy was sent to the following parties by United States mail on the 29th day of October, 1996.

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Attorney for Department

Jacksonville Electric Authority

Operation and Maintenance Plan

Operation and Maintenance

Following is a list of activities to be accomplished for the control of particulate emissions from units in or impacting the Duval County maintenance areas. These schedules apply to each on-line unit.

Daily:

1. Check and clean burners (renew tips as necessary) daily.
2. Conduct one complete soot-blowing cycle (or as needed).
3. Maintain optimum fuel oil temperature and pressure at all times.

Weekly:

1. Clean low pressure fuel oil strainers (more frequently if required).
2. Clean other fuel oil strainers as needed by monitoring the pressure drop.

Annually:

1. Clean the boiler and inspect baffles.
2. Inspect the:
   (a) wind box;
   (b) registers;
   (c) diffusers;
   (d) refractory throat;
   (e) scanners;
   (f) ignitors.
3. Adjust the air registers for optimum flame pattern with assistance from Engineering Services.
4. Replace burner tips (more frequently if required).

As Needed:

1. Wash furnace and air heaters.

Major Outages:

1.	Overhaul the:	(a)	turbine/generator
		(b)	boiler and auxiliary equipment.
2.	Calibrate the:	(a)	flow meters including sensing line checks;
		(b)	pneumatic controls;
		c)	temperature gauges.

Performance Parameters

The following operational parameters are to be recorded on a bi-hourly basis.

1. Steam flow.
2. Burner oil pressure.
3. Burner oil temperature.

Fuel Type: Number 6 residual oil unless otherwise stated.

Records

Records of all operating data and maintenance procedures listed herein shall be retained at the Generating Station for review, upon request, for a period of five (5) years.

Attachment NGS: CT Heat Input Nominal Values

NORTHSIDE STATION COMBUSTION TURBINES
BASE LOAD MW vs TEMPERATURE

#	AMBIENT TEMP °F	GROSS MW (X)	x Coeff. Net MW	HEAT CONSUMED MBTU/HR	AMBIENT TEMP °F	GROSS MW (X)	x Coeff. Net MW	HEAT CONSUMED MBTU/HR
1	20	67.97	67.63	868	60	58.77	58.43	747
2	21	67.74	67.40	865	61	58.54	58.20	744
3	22	67.51	67.17	861	62	58.31	57.97	741
4	23	67.28	66.94	858	63	58.08	57.74	738
5	24	67.05	66.71	855	64	57.85	57.51	735
6	25	66.82	66.48	852	65	57.62	57.28	733
7	26	66.59	66.25	849	66	57.39	57.05	730
8	27	66.36	66.02	846	67	57.16	56.82	727
9	28	66.13	65.79	842	68	56.93	56.59	724
10	29	65.90	65.56	839	69	56.70	56.36	721
11	30	65.67	65.33	836	70	56.47	56.13	719
12	31	65.44	65.10	833	71	56.24	55.90	716
13	32	65.21	64.87	830	72	56.01	55.67	713
14	33	64.98	64.64	827	73	55.78	55.44	710
15	34	64.75	64.41	824	74	55.55	55.21	708
16	35	64.52	64.18	821	75	55.32	54.98	705
17	36	64.29	63.95	818	76	55.09	54.75	702
18	37	64.06	63.72	815	77	54.86	54.52	699
19	38	63.83	63.49	812	78	54.63	54.29	697
20	39	63.60	63.26	809	79	54.40	54.06	694
21	40	63.37	63.03	806	80	54.17	53.83	691
22	41	63.14	62.80	802	81	53.94	53.60	689
23	42	62.91	62.57	799	82	53.71	53.37	686
24	43	62.68	62.34	796	83	53.48	53.14	683
25	44	62.45	62.11	793	84	53.25	52.91	681
26	45	62.22	61.88	791	85	53.02	52.68	678
27	46	61.99	61.65	788	86	52.79	52.45	675
28	47	61.76	61.42	785	87	52.56	52.22	673
29	48	61.53	61.19	782	88	52.33	51.99	670
30	49	61.30	60.96	779	89	52.10	51.76	667
31	50	61.07	60.73	776	90	51.87	51.53	665
32	51	60.84	60.50	773	91	51.64	51.30	662
33	52	60.61	60.27	770	92	51.41	51.07	660
34	53	60.38	60.04	767	93	51.18	50.84	657
35	54	60.15	59.81	764	94	50.95	50.61	654
36	55	59.92	59.58	761	95	50.72	50.38	652
37	56	59.69	59.35	758	96	50.49	50.15	649
38	57	59.46	59.12	755	97	50.26	49.92	647
39	58	59.23	58.89	753	98	50.03	49.69	644
40	59	59.00	58.66	750	99	49.80	49.46	641
41	60	58.77	58.43	747	100	49.57	49.23	639

KSCT	
Y INTERCEPT	72.576
SLOPE	0.2301

DISPATCH HEAT RATE CURVES

A =	1.78910E+02
B =	8.82453E+00
C =	-1.50705E-02
D =	5.20028E-04
AA =	3.40192E-01
BB =	9.99987E-01
CC =	1.79499E-07
DATE:	05/21/93

Attachment SJRPP: Material Handling Transfer Points

SJRPP Material Handling Transfer Points for Permitting

Limestone		Points
1)	Limestone receiving bin with 3 Unloading hoppers	1
2)	Unloading hoppers to FLD-1 Belt	3
3)	FLD-1 to L0	1
4)	L0 to L1	1
5)	L1 to L2	1
6)	L2 to Storage Pile	1
7)	Reclaim hopper	1
8)	Hopper to 9LC-02	1
9)	9LC-02 to Silos(2)	2
10)	Silos to 1LC-01,2LC-01 (to ball mills)	2
	Total	14

Coal-Yard		
1)	Receiving bin with 4 Unloading hoppers	1
2)	4 Unloading hoppers to FCD-1,2,3,4	4
3)	FCD-1,2,3,4 to C0	4
4)	C0 to C1	1
5)	C1 to C2	1
	C1 to emergency stackout	1
6)	C2 to C4	1
7)	C4 to C5	1
	C4 to CT6	1
8)	C5 to C6	1
9)	C6 to storage pile	1
	Reclaim to C6 (grab and dump)	2
	C6 to C4	1
10)	Surge Bins	
	C2 to Surge Bin	1
	C3 to Surge Bin	1
	C4 to Surge Bin	1
	Surge Bin to FCR-A,B	2
11)	FCR-A,B to Crushers (2)	2
	Crushers (2)	2
	Crushers to C7,8	2
12)	C7,8 to C9,10	2
13)	C9,10 to 14 Coal Storage Silos	14
	Total	47

Coal-Shipunloader		Points
14)	Bucket to Hopper (grab & dump)	2
15)	Hopper to Belt	1
16)	Hopper Belt to CT1	1
17)	CT1 to CT2	1
18)	CT2 to CT3	1
19)	CT3 to CT4	1
20)	Reclaimer to CT4 (grab, dump,dump)	3
21)	CT4 to CT5	1
	CT4 to S1 traveling conveyor	1
	S1 Traveling conv. to S2 boom conv.	1
	S2 boom conv to storage pile	1
22)	CT5 to C2	1
23)	CT6 to CT4	1
	Total	16

Coal-Petcoke Feeder System		
24)	Hopper	1
	Hopper to SPC-1	1
	SPC-1 to PC-1	1
	PC-1 to C4	1
	Total	4

Fly & Bottom Ash Handling System		
25)	Flyash	
	U#1-A&B Saleable silo Baghouse (2) & roof vents (2)	4
	U#1-1 Non-saleable Silo Baghouse & roof vent	2
	U#1-A loadout Silo discharge (2) & roof vent (1)	3
	U#1-B loadout Silo discharge (2) & roof vent (1)	3
	U#2-A&B Saleable silo Baghouse (2) & roof vents (2)	4
	U#2-A Non-saleable Silo Baghouse & roof vent	2
	U#2-A loadout Silo discharge (2) & roof vent (1)	3
	U#2-B loadout Silo discharge (2) & roof vent (1)	3
26)	Bottom Ash	
	U#1-A&B Silo to conveyor belt	2
	Conveyor belt to truck	1
	U#2-A&B Silo to conveyor belt	2
	Conveyor belt to truck	1
	Total	30
	Grand Total	111

Table 6. Allowable Emission Limits (Revised: From PSD Permit)

Emission Unit	SO_2	NO_x (lb/hour: lb/MMBtu)	PM (Revised Original)	Opacity (Percent)
1. Steam Generating Boiler No.1 (6,144 MMBtu/hr maximum heat input)	4,669.: 0.76 (30-day rolling average)	3.686: 0.6	184 0.03	20
2. Steam Generatinq Boller No. 2 (6,144 MMBtu/hr maximum heat input)	4,669: 0.76 (30-day rolling average)	3,686: 0.6	184.: 0.03	20
3. Auxiliary ooilers (254 MMBtu/hr maximum heat input total)	203: 0.8		25.0: 0.1	20
4. Ship Unloading (2 Grab Buckets)			1.O	10
5. Feeders to Conveyor A (2 Wet Suppre~sion points)*			0.13	10
6. Conveyor Transfers 1 & 2 (2 points)*			0.57	10
7. Conveyor Transfer 3, 4, 5 & D to D by-pass (4 points)*			2.6	10
8. Conveyor Transfers 6 & 7 (2 points)*			1.0	10
9. Traveling Stacker (3 points)*			0.8	10
10. Bucket Wheel Reclaimer (2 points)*			0.6	10
11. Ship unloading facility coal storage pile			1.6	10
12. Coal handling transfer points ship unloading facility coal pile (8 points)*			1.8	10
13. Rail car unloading (Rotary Dumper)			5	10
14. Coal handling transfer points (6 wet suppression points)			5(each)	10
15. Coal handling transfer points (11 dry colleccion)			0.1(each)	10
16. Coal storage at plant. (10 acres active)			0.5	10
17. Coal storage at plant* (2 to 13-acre inactive piles)			0.02	10
18. Limestone unloading (rail dumper)			0.1	10
19. Limestone transfer points			0.4(each)	10
20. Cooling towers			67(Each tower)	N/A

* Revised emission unit, May 1986.