Bruce Mitchell

JACKSONVILLE ELECTRIC AUTHORITY

21 WEST CHURCH STREET • JACKSONVILLE, FL 32202-3139

October 21, 1997

Mr. Bruce Mitchell
Environmental Administrator
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Kennedy Generating Station Combustion Turbines 3, 4, and 5
Title V Permit Application - Supplemental Information

Dear Mr. Mitchell:

Enclosed please find a heat input curve (in tabular form) for the above referenced Combustion Turbines at the Kennedy Generating Station. This is a regression curve based on empirical data and will vary slightly from unit to unit and day to day. Since no manufacturer curve is available for these old units, this is the best data available to describe the relationship between load and temperature for these units.

Also enclosed is the Florida Publishing Company affidavit for the Northside Generating Station and St. Johns River Power Park attesting to the October 4, 1997 publication in the Florida Times Union of the "Public Notice of Intent to Issue Title V Operating Permit".

If you have any questions with regard to this matter please contact Bert Gianazza of my staff at (904) 632-6247.

Sincerely,

Bert Gianazza, P.E.
Environmental
Health and Safety Group

NBG

cc: Ron Roberson, RESD
Emerson Raulerson, FDEP, Northeast District

KENNEDY STATION COMBUSTION TURBINES
BASE LOAD MW vs TEMPERATURE

#	AMBIENT TEMP *F	GROSS MW (X)	HEAT CONSUMED MBTU/HR	AMBIENT TEMP *F	GROSS MW (X)	HEAT CONSUMED MBTU/HR
1	20	70.90	871	60	59.30	769
2	21	70.61	868	61	59.01	766
3	22	70.32	866	62	58.72	764
4	23	70.03	863	63	58.43	761
5	24	69.74	860	64	58.14	758
6	25	69.45	858	65	57.85	756
7	26	69.16	855	66	57.56	753
8	27	68.87	853	67	57.27	751
9	28	68.58	850	68	56.98	748
10	29	68.29	848	69	56.69	746
11	30	68.00	845	70	56.40	743
12	31	67.71	843	71	56.11	741
13	32	67.42	840	72	55.82	738
14	33	67.13	837	73	55.53	736
15	34	66.84	835	74	55.24	733
16	35	66.55	832	75	54.95	731
17	36	66.26	830	76	54.66	728
18	37	65.97	827	77	54.37	726
19	38	65.68	825	78	54.08	723
20	39	65.39	822	79	53.79	720
21	40	65.10	820	80	53.50	718
22	41	64.81	817	81	53.21	715
23	42	64.52	814	82	52.92	713
24	43	64.23	812	83	52.63	710
25	44	63.94	809	84	52.34	708
26	45	63.65	807	85	52.05	705
27	46	63.36	804	86	51.76	703
28	47	63.07	802	87	51.47	700
29	48	62.78	799	88	51.18	698
30	49	62.49	797	89	50.89	695
31	50	62.20	794	90	50.60	693
32	51	61.91	792	91	50.31	690
33	52	61.62	789	92	50.02	688
34	53	61.33	786	93	49.73	685
35	54	61.04	784	94	49.44	683
36	55	60.75	781	95	49.15	680
37	56	60.46	779	96	48.86	677
38	57	60.17	776	97	48.57	675
39	58	59.88	774	98	48.28	672
40	59	59.59	771	99	47.99	670
41	60	59.30	769	100	47.70	667

KSCT	
Y INTE	76.700
SLOPE	0.2900

DISPATCH HEAT RATE CURVES

A =	2.57955E+02
B =	8.61082E+00
C =	-6.18610E-04
D =	2.11490E-05
AA =	2.50025E-01
BB =	9.99997E-01
CC =	4.45030E-08
DATE:	10/01/91

Appendix JEPB Rule 2

JACKSONVILLE ENVIRONMENTAL PROTECTION BOARD

RULE 2
AIR POLLUTION CONTROL

Effective	03/18/85
Amended	12/15/85
Amended	06/18/86
Amended	06/15/86
Amended	10/27/88
Amended	12/20/88
Amended	07/09/90
Amended	10/22/92
Repealed, renumbered and readopted	01/10/93
Amended	12/19/94, Effective 01/11/95
Amended	09/11/95, Effective 10/05/95
Amended	11/12/96, Effective 12/16/96

PART IX - AIR POLLUTION EPISODES

2.901 Air Pollution Episodes - Local Rules

PART X - STATIONARY SOURCES EMISSION STANDARDS

2.1001 Adopts 62-296 FAC by reference

PART XI - STATIONARY SOURCES - EMISSIONS MONITORING

2.1101 Adopts 62-297 FAC by reference

PART XII - AIR POLLUTION NUISANCE RULES

2.1201 General Standard for Volatile Organic Compounds
2.1202 Emissions from Ships and Locomotives
2.1203 Air Pollution Nuisances

PART XIII - PERMITS - GENERAL PROVISIONS

2.1301 Adopts 62-4 FAC by reference
2.1302 Adopts 120.57 FS and 62 103.150 FAC by reference

Bruce

Equal Opportunity/Affirmative Action Employer

REGULATORY & ENVIRONMENTAL SERVICES DEPARTMENT
Air & Water Quality Division

September 3, 1997

RECEIVED
SEP 19 1997
BUREAU OF
AIR REGULATION

Mr. Scott M. Sheplak, P.E.
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

RE: Draft Title V Operation Permit
Jacksonville Electric Authority - Kennedy Generating Station
Title V Operation Permit No.: 0310047-001-AV

Dear Mr. Sheplak:

The City of Jacksonville, Regulatory and Environmental Services Department, Air and Water Quality Division (AWQD) has reviewed the above referenced Draft Title V Permit and submit the following comments.

1. The Jacksonville Environmental Protection Board (JEPB) Rule 2, Air Pollution Control, attached, was amended effective December 16, 1996. All references to JEPB Rule 2, should be corrected to the current citations.

2. Section II. Facility-wide Conditions should be corrected as follows:

From: 3. **Not federally enforceable.** Odor Nuisance. Pursuant to Jacksonville Ordinance Code (JOC) Chapter 376.110, any facility that causes or contributes to the emission of objectionable odors which results in the City of Jacksonville Air and Water Quality Division (AWQD) receiving and validating complaints from five (5) or more different households within a 90 day period and can be cited for objectionable odors.
[JOC Chapter 376.100]

To: 3. **Not federally enforceable.** Odor Nuisance. Pursuant to Jacksonville Ordinance Code (JOC) Chapter 376, any facility that causes or contributes to the emission of objectionable odors which results in the City of Jacksonville Air and Water Quality Division (AWQD) receiving and validating complaints from five (5) or more different households within a 90 day period can be cited for objectionable odors.
[JOC Chapter 376]

421 West Church Street - Suite 422
Jacksonville, Florida 32202-4111

Air Quality	**630-3484**
Water Quality	**630-3461**
Ground Water	**630-4900**
Hazardous Materials	**630-3404**

Add: 11. **Not federally enforceable.** The facility shall be subject to the City of Jacksonville Ordinance Code, Title X, Chapter 360 [Environmental Regulation], Chapter 362 [Air and Water Pollution], Chapter 376 [Odor Control], and JEPB Rule 85-1 [Final Rules with Respect to Organization, Procedures, and Practice].

Add: 12. **Not federally enforceable.** The facility shall be subject to JEPB Rule 2, Parts I through VII, and Parts IX through XIII.

3. Section III. Emission Units., Subsection A, Specific Condition A.3. - This condition prohibits the use of used oil containing PCBs above the detectable level for startup or shutdown. AWQD requests clarification of detectable level. Is there a specific test method with a specified detectable limit or range? Or, does this Specific Condition prohibit the use of any PCB containing oil for the purpose of startup or shutdown? If the latter is correct, the Specific Condition should read: Used oil containing any PCBs shall not be used for startup or shutdown.

Please address any comments to Mr. Ronald L. Roberson at (904) 630-3484.

Very truly yours,

Richard L. Robinson, P.E., Manager
Air Pollution Permitting Section

RLR/RR/ecr

Attachment

c: Mr. Burce Mitchell, FDEP/Talla.
Mr. Chris Kirts, P.E., FDEP/NED
AWQD File 1670 - A
AWQD Permitting File

JACKSONVILLE ELECTRIC AUTHORITY
21 WEST CHURCH STREET • JACKSONVILLE, FL 32202-3139

August 12, 1997

RECEIVED
AUG 13 1997
BUREAU OF
AIR REGULATION

Mr. Bruce Mitchell
Environmental Administrator
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Southside Generating Station
Kennedy Generating Station
Title V Permit Applications - Supplemental Information

Dear Mr. Mitchell:

Attached please find the propane Fuel Segments, revised O&M plans, and Designated Representative Certificates of Representation for the above referenced facilities.

As a clarification, the magnesium based fuel additives referred to in the original applications are typically in the form of magnesium oxide or hydroxide. Other constituents that may be present include sulfonates, sulfates, nitrates, and/or other non-HAP compounds.

Also, the Southside Generating Station currently has no emergency generators while the Kennedy Generating Station has two black-start generators and one emergency generator. These generators operate very infrequently and qualify for the insignificant activity exemption.

Finally, please change the opacity election under 62-296.405(1)(a) for KGS units 8, 9, and 10; and SGS units 4 and 5 from one 2-minute average at 40% per hour to one 6-minute average at 27% per hour.

If you have any questions with regard to this matter please contact Bert Gianazza of my staff at (904) 632-6247.

Sincerely,

Richard Breitmoser, P.E.
Vice President, Environmental
Health and Safety Group

RB/NBG

bc: G. Connell (w/o Atta.)
R. Kappelmann (")
S. Stokes (")
B. Gianazza
Files 4.2.1
4.4.1

TVADDIT

JACKSONVILLE ELECTRIC AUTHORITY

OPERATION AND MAINTENANCE PLAN

Following is a list of activities to be accomplished for the control of particulate missions from units in or impacting the Duval County non-attainment area. These schedules apply to each on-line units.

Daily as needed:

1. Clean one deck of burners (renew tips as necessary).
2. Conduct one complete soot-blowing cycle (or as needed).
3. Maintain optimum fuel oil temperature and pressure.

Weekly as needed:

1. Clean fuel oil strainers (more frequently if required).

Annually as needed:

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

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 every four hours:

1. Steam flow;
2. Number of burners in service;
3. Burner oil pressure;
4. 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 two years.

Allowance Tracking System Report

Date: 06/18/97
Page: 1

AUTHORIZED ACCOUNT REPRESENTATIVE INFORMATION

AAR Number	000833
AAR Name	Jon P. Eckenbach
Firm Name	Jacksonville Electric Authority
Address 1	21 W. Church St.
Address 2	
City/State/Zip	Jacksonville, FL 32202
Phone	904-632-6315
Fax	904-632-7366

Account Num	Plant/Account Name	AAR/Alternate	AAR Start Date
000207000001	St Johns River Power	AAR	06/17/97
000207000002	St Johns River Power	AAR	06/17/97
000666000008	J D Kennedy	AAR	06/17/97
000666000009	J D Kennedy	AAR	06/17/97
000666000010	J D Kennedy	AAR	06/17/97
000667000001	Northside	AAR	06/17/97
000667000002	Northside	AAR	06/17/97
000667000003	Northside	AAR	06/17/97
000668000001	Southside	AAR	06/17/97
000668000002	Southside	AAR	06/17/97
000668000003	Southside	AAR	06/17/97
000668000004	Southside	AAR	06/17/97
000668000005	Southside	AAR	06/17/97
999900000189	Jacksonville Electric Auth.	AAR	06/17/97

Please review the information shown above and report any errors, along with supporting documentation, to the address listed below, or call the Acid Rain Hotline.

ACID RAIN PROGRAM

Acid Rain Hotline: (202) 233-9620

U.S. Environmental Protection Agency
Acid Rain Division
401 M Street, SW
Mail Code 6204J
Washington, DC 20460

Emissions Unit Information Section _____ of _____

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Propane used as ignitor fuel	
2. Source Classification Code (SCC): 1-01-011-02	
3. SCC Units: kgal	
4. Maximum Hourly Rate: N/A	5. Maximum Annual Rate: N/A
6. Estimated Annual Activity Factor: N/A	
7. Maximum Percent Sulfur: N/A	8. Maximum Percent Ash: N/A
9. Million Btu per SCC Unit: 84	
10. Segment Comment (limit to 200 characters):	

JACKSONVILLE ELECTRIC AUTHORITY

OPERATION AND MAINTENANCE PLAN

In compliance with Section 17-2.650(2)(g)4. of the Florida Administrative Code, the Jacksonville Electric Authority submits its "Operation and Maintenance Plan", to be appended where appropriate to unit operating permits.

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 non-attainment area. These schedules apply to each on-line unit.

Daily:

1. Clean one deck of burners (renew tips as necessary).
2. Conduct one complete soot-blowing cycle (or as needed).
3. Maintain optimum fuel oil temperature and pressure.

Weekly:

1. Clean fuel oil strainers (more frequently if required).

Annually:

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

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. Number of burners in service.
3. Burner oil pressure.
4. 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 two years.

Best Available Control Technology (BACT) Determination
Jacksonville Electric Authority (JEA)
Duval County

The JEA plans to install one auxiliary boiler at their Southside generating station and one auxiliary boiler at their Kennedy generating station. Both units will be fossil-fuel-fired and have a design heat input of 20 million Btu/hour. The fuel will be natural gas or No. 2 distillate oil.

JEA is currently modifying the local electrical in-town distribution network and anticipate that the existing stabilizing generator located at the two generating stations will be placed on cold standby. The auxiliary boilers will be used to supply the station steam requirements to allow the stabilizing generators to respond to above normal network power demands.

Both boilers will be located within the area of influence of the Jacksonville particulate nonattainment area (Rule 17-2.410(2)2.).

Particulate emissions are nil when firing natural gas and less than one pound per hour when firing distillate fuel oil. The amount of particulate emissions will not have a significant impact within the nonattainment area, and therefore the two sources are exempt from Rule 17-2.510 New Source Review for Nonattainment Areas. Each source will be subject to a BACT determination as set forth in Rule 17-2.600(6) - Emission Limiting and Performance Standards.

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
Particulates	0.3 lb/hr maximum
SO_2	10.5 lb/hr maximum
NOx	3.0 lb/hr maximum

Date of Receipt of a BACT application:

May 14, 1984

Date of Publication in the Florida Administrative Weekly:

June 1, 1984

Review Group Members:

The determination was based upon comments received from the New Source Review Section and Jacksonville Division of Bio-Environmental Services.

BACT Determined by DER:

The amount of particulate and sulfur dioxide emissions emitted from this source are to be controlled by the firing of natural gas or No. 2 new (1) distillate oil having a sulfur content not to exceed 0.50 percent.

Visible Emissions	Not to exceed 15% opacity. 40% opacity is permitted for not more than two minutes in any one hour.

DER Method 9 (17-2.700(6)(a)9. FAC) will be used to determine compliance.

(1) The term "new" means an oil which has been refined from crude oil and has not been used, and which may or may not contain additives.

BACT Determination Rationale:

Sulfur in fuel oil is a primary air pollution concern, in that most of the fuel sulfur becomes SO_2. The emission factors for SO_2 and particulate emissions from oil burning are related to the sulfur content. The department agrees with the applicant's proposal that the firing of No. 2 distillate oil, containing less than 0.5% sulfur or natural gas is BACT for the two auxiliary boilers.

The term "new oil" disallows the use of re-refined or waste oil or any non-fossil fuels, emissions from which were not considered in this BACT analysis.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended By:

C. H. Fancy, Deputy Bureau Chief — Date: 10/15/84

Approved:

Victoria J. Tschinkel, Secretary — Date: 10/15/84

JACKSONVILLE ELECTRIC AUTHORITY
21 WEST CHURCH STREET • JACKSONVILLE, FL 32202-3139

January 8, 1997

Mr. Jonathan Holtom
Engineer IV
Title V Section, Mail Station 5505
Florida Dept. of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399

Dear Mr. Holtom:

RE: Northside Generating Station/St. Johns River Power Park
Kennedy Generating Station
Southside Generating Station
Title V Permit Applications -- Supplemental Information

Attached please find revised lists of exempt and trivial activities for the above referenced facilities. The trivial activities list is standardized for all three JEA facilities.

Please note that the changes to the "trivial" activities list are shown as overstrikes, and the exempt activities are limited to emergency generators and, in the case of Northside Generating Station, a small lime silo.

If you have any questions with regard to this matter, please contact Bert Gianazza of my staff at (904) 632-6247.

Sincerely,

Richard Breitmoser, P.E.
Vice-President, Environmental
Health & Safety Group

RB/NBG

Document ID #6

trivial List of Exempt Activities

Indoor sand blasting and abrasive grit blasting where temporary enclosures are used to contain particulates

Coal pile runoff ponds

Open stockpiling or material

Plant grounds maintenance

Routine maintenance/repair activities such as cleaning, welding, non-asbestos insulation removal, hand held tools/equip., meter repair/maintenance, on-line/off-line cleaning of equip.

Main steam pressure/relief valves; steam from boiler operations

Non-halogenated solvent cleaning operations

Indoor fugitives such as vacuum cleaning, solvent storage, office supplies/equipment

Testing equipment such as CEMs, stack sampling calibration gases, oxygen detector

Internal combustion engines which drive compressors, generators, water pumps, or other auxiliary equipment

HVAC (heating, ventilation, and air conditioning systems)

Vent/exhaust systems for:

- Print room storage cabinets
- Transformer vaults/bldg.
- Maint./welding bldgs.
- Operating equipment vents
- Degasifier/dearators/decarbonators
- Air blowers/evacuators/air locks
- Feedwater heater vents

Transformers, switches, and switchgear processing (including cleaning and changing) and venting

Use of nitrogen cap during boiler shut-down

Generator venting

Vent/exhaust from kitchen and breakrooms

Vents/stacks for sewer lines or enclosed areas req. for safety or by code

Electrically heated equipment used for heat treating, tracing, drying, soaking, case hardening or surface conditioning

Sewage treatment fac./equip. ranging in size from porta-john to sewage treatment plants

Stack washing (water, soot)

Cleaning and dewatering of ash basins (heavy equipment/pumps)

Engine rebuilding

Lube oil changes

Receiving fuel oil (truck & pipeline)

Aerosol can use (cleaners, etc.)

Boiler chemical cleaning (cirtosolv & ammonia)

~~Sootblowing~~

Liming the boilers (CaOH)

Turbine washing

Boiler gun cleaning (guns dipped into vats of solvent)

Vehicle servicing (oil changes, antifreeze changes, etc.)

Soldering of electrical components (silver, tine solder)

Portable epuipment and tools, including electric and gasoline powered

Electro plating

Welding, grinding and cutting activities (metal fumes)

Machining metal parts (cutting oil, metal fumes)

Cleaning condensers (water vapor, "snoop")

Oil spills (#6, #2, turbine lube oil)

Oil-filled electrical equipment vents

Storage and use of boiler chemicals (phosphates, ammonia, hydrazine, magnesium oxide, sodium tripolyphosphate, soda ash, di- and tri-sodium phosphate)

Fume hood in laboratory

Laboratory equipment

Space heaters

Fire and safety equipment

Steam releases

Storage and use of chemicals solely for water/waste water treatment

Neutralization basins/ponds, ash pits/ponds, TETF/ENU, percolation, equalization

Transfer sumps

Firefighting training facilities

Turbine vapor extractor

Lawn maintenance equipment/activities

Application of fungicide, herbicide, pesticide

Air compressors and centrifuges used for compressing air

Handling and removal of clinkers, slag and bottom ash

Recovered materials recycling systems including: bulb crushers, aerosol can puncturing

Waste accumulation/consolidation

Compressed air system

Storage tanks less than 550 gallons

Storage of products in sealed containers

Nuclear gauges used for the purpose of process monitoring

Hydrogen and acid venting from battery rooms vacuum vents for gypsum dewatering bldg

Flue gas desulfurization system absorber feed tank mist eliminator/spray header vent

Renovation/demolition of asbestos

Fires

Chemical spills, leaks & transfers

Oil spills, leaks & change out

Insulating activities

Asphalt or concrete sealing

High pressure water blasting

Excavations for construction activities

Chemical cleaning
- boiler
- turbine
- heat exchanger
- misc. plant machinery
- solvent cleaning (parts & circuit boards)

Cleaning furnace bottoms or slag removal

Welding all types

Cutting all types
- milling & machining

Sanding or grinding - all types

Emission from portable equipment
- welding machines (diesel or gas)
- pumps (diesel or gas)

Sweeping

Pipe line repairs
- fly ash
- bottom ash
- slurry or sludge transfer
- fuel line
- process water (cooling water, ash water or condensate)
- refuse transport line
- Miscellaneous other process lines -

Bag house repairs

Filter change out (oil & air)

Air conditioner repairs

Battery maintenance

Coal feeder maintenance

Refuse feeder maintenance

Other miscellaneous maintenence

Bottom ash removal (from boilers)

Fuel oil storage tank cleaning

Small parts washing using parts washer

A/C servicing by licensed contractor

Searching for condenser leaks using helium

~~Emergency generators~~

mercury containing equipment such as manometers

non-chlorinated solvent degreasing equipment

vacuum pumps in laboratory operations

equipment use for steam cleaning

Document ID #6A

Southside Generating Station

List of Exempt Activities

Emergency Generators

Document ID #6A

Kennedy Generating Station

List of Exempt Activities

Emergency Generators

Document ID #6A

Northside Generating Station/St. Johns River Power Park

List of Exempt Activities

Emergency Generators

Lime Silo