

Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

PROPOSED Permit Electronic Posting Courtesy Notification

Jacksonville Electric Authority
Kennedy Generating Station
Facility ID No.: 0310047
Duval County

Title V Air Operation Permit Revision
PROPOSED Title V Permit Revision No.: 0310047-006-AV

The electronic version of the PROPOSED permit was posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review on February 5, 2001.

USEPA's review period ends on the 45th day after the permit posting date. Day 45 is March 21, 2001. If an objection (veto) is received from USEPA, the permitting authority will provide a copy of the objection to the applicant.

Provided an objection is not received from USEPA, the PROPOSED permit will become a FINAL permit by operation of law on the 55th day after the permit posting date. Day 55 is March 31, 2001.

The web site address is <http://www2.dep.state.fl.us/air>.

STATEMENT OF BASIS

Jacksonville Electric Authority
Kennedy Generating Station
Facility ID No.: 0310047
Duval County

Title V Air Operation Permit Revision
PROPOSED Title V Permit Revision No.: 0310047-006-AV

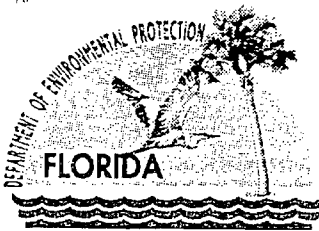
The initial Title V air operation permit went final on December 31, 1997, and effective on January 1, 1998. This Title V air operation permit with revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The subject of this permit revision is to incorporate the terms and conditions of the air construction permit, No. 0310047-002-AC, for a simple cycle combustion turbine (CT) #7 (See Section III. Subsection D.). The emissions unit has been built and the initial performance test has been conducted and compliance demonstrated. In addition, the existing boiler No. 10, whose contemporaneous emissions were used in the permitting exercise for the CT #7, has been removed from service; and, its terms and conditions contained in the initial Title V permit will be deleted (See Section III. Subsection C.).

Emissions unit number -015 is a natural gas/fuel-fired simple cycle unit that consists of a nominal 170 MW (at 59° F) combustion turbine generator equipped with Dry Low NO_x (DLN-2.6) combustors. The emissions unit was manufactured by General Electric (Model PG 7241 FA) and is designated as Combustion Turbine (CT) No. 7. The CT has (1) a maximum heat input from natural gas of 1,623 MMBtu @ 59° F and 60% relative humidity, LHV (Lower Heating Value), and (2) a maximum heat input from new No. 2 fuel oil of 1,822 MMBtu @ 59° F and 60% relative humidity, LHV (Lower Heating Value). The new No. 2 fuel oil has a maximum sulfur content of 0.05%, by weight. The existing CTs Nos. 3 thru 6 are allowed to fire new No. 2 fuel oil with a maximum sulfur content of 0.5 %, by weight, but will be firing the 0.05 %, by weight, new No. 2 fuel oil since there is only one storage tank. This CT shall be used as a peaking unit during peak demand times, during emergencies, and during controls testing. This CT replaced one existing natural gas/fuel oil-fired boiler identified by JEA as KE10 (ARMS Emission Unit -009). The project also included a 90-foot new stack.

This new emissions unit is regulated under 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C.; and, 40 CFR 60, Subpart A, adopted by reference in Rule 62-204.800(7)(d), F.A.C. CT #7 began commercial operation on April 30, 2000.

Based on the initial Title V permit application received June 14, 1996, this facility is a major source of hazardous air pollutants (HAPs).



Department of Environmental Protection

Jeb Bush
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Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

February 1, 2001

CERTIFIED MAIL – Return Receipt Requested

Mr. Walter P. Bussells
Managing Director & CEO
Jacksonville Electric Authority
21 West Church Street
Jacksonville, Florida 32202

Re: PROPOSED Title V Permit Revision No.: 0310047-006-AV
Jacksonville Electric Authority Kennedy Generating Station

Dear Mr. Bussells:

One copy of the "PROPOSED TITLE V PERMIT REVISION DETERMINATION" for the Jacksonville Electric Authority Kennedy Generating Station located at 4215 Talleyrand Avenue, Jacksonville, Duval County, is enclosed. This letter is only a courtesy to inform you that the DRAFT Title V Permit Revision has become a PROPOSED Title V Permit Revision.

An electronic version of this determination has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is <http://www.dep.state.fl.us/air>.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED Title V Permit Revision is made by the USEPA within 45 days, the PROPOSED Title V Permit Revision will become a FINAL Title V Permit Revision no later than 55 days after the date on which the PROPOSED Title V Permit Revision was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED Title V Permit Revision, the FINAL Title V Permit Revision will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact Bruce Mitchell at 850/921-9506.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/m

Enclosures

Copy furnished to:

Mr. Walter P. Bussells, Managing Director & CEO/Responsible Official, JEA
Mr. Jon P. Eckenbach, Executive Vice President/Designated Representative, JEA
Mr. Donald Dean Schultz, P.E., B&VC
Mr. Bert Gianazza, JEA, Application Contact
Mr. James L. Manning, AWQD
U.S. EPA, Region 4 (INTERNET E-mail Memorandum)

2/6/01 cc: Bruce Mitchell
Reading Site
"More Protection, Less Process"

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Received by (Please Print Clearly)	B. Date of Delivery 2-12-00
<p>1. Article Addressed to:</p> <p>Mr. Walter P. Bussells Managing Director & CEO Jacksonville Electric Authority 21 West Church Street Jacksonville, Florida 32202</p>	<p>C. Signature <i>Walter P. Bussells</i></p> <p><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>D. Is delivery address different from item #1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
<p>2. Article Number (Copy from service label)</p> <p>7000 0600 0021 2825 2296</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

PS Form 3811 July 1999

Domestic Return Receipt

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Mr. Walter P. Bussells

Postage	\$	Postmark Here
Certified Fee		
Return Receipt Fee <small>(Endorsement Required)</small>		
Restricted Delivery Fee <small>(Endorsement Required)</small>		
Total Postage & Fees	\$	

Name (Please Print Clearly) (to be completed by mailer)
Mr. Walter P. Bussells

Street, Apt. No., or PO Box No.
21 West Church Street

City, State, ZIP+4
Jacksonville, Florida 32202

PS Form 3800, July 1999 See Reverse for Instructions

7000 0600 0021 2825 2296

PROPOSED TITLE V PERMIT REVISION DETERMINATION

Jacksonville Electric Authority Kennedy Generating Station PROPOSED Title V Permit Revision No.: 0310047-006-AV

I. Public Notice.

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" to Jacksonville Electric Authority for the Kennedy Generating Station located at 4215 Talleyrand Avenue, Jacksonville, Duval County, was clerked on November 21, 2000. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" was published in the The Florida Times-Union on December 2, 2000. The DRAFT Title V Air Operation Permit Revision was available for public inspection at the City of Jacksonville Air & Water Quality Division in Jacksonville and the permitting authority's office in Tallahassee. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" was received on December 12, 2000.

II. Public Comment(s).

Comments were received and the DRAFT Title V Operation Permit Revision was changed; and, the comments were not considered significant enough to issue a Revised DRAFT Title V Operation Permit Revision and require another Public Notice. Comments were received from one respondent during the 30 (thirty) day public comment period. Listed below is each comment letter in the chronological order of receipt and a response to each comment in the order that the comment was received. The comment(s) will not be restated. Where duplicative comments exist, the original response is referenced.

Comments were received from:

- A. E-mail from Mr. Bert Gianazza received on December 20, 2000.
- B. E-mail from Mr. Bert Gianazza received on December 22, 2000.
- C. Fax from Mr. Bert Gianazza received on January 9, 2001.

- A. E-mail from Mr. Bert Gianazza received on December 20, 2000.

1. Response. The request is acceptable and the following is changed:

FROM:

D.28. CEMS in Lieu of Water to Fuel Ratio. Subject to EPA approval, the NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1997 version). Subject to EPA approval, the calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS. Upon request from DEP, the CEMS emission rates for NO_x on this CT shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

[0310047-002-AC]

TO:

D.28. CEMS in Lieu of Water to Fuel Ratio. The NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1997 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS. Upon request from DEP, the CEMS emission rates for NO_x on this CT shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.
[0310047-002-AC]

2. **Response.** Since the U.S. EPA has changed the Acid Rain ID from "15" to "7", the request is acceptable and the ID number will be changed in the table under Specific Condition A.2., Section IV., Subsection A.

B. E-mail from Mr. Bert Gianazza received on December 22, 2000.

There is no response required.

C. Fax from Mr. Bert Gianazza received on January 9, 2001.

1. **Response.** The request is considered acceptable and a {Permitting note:} will be added to Specific Condition D.24. as follows:

D.24.:

(**new:** to be added to the end of the Specific Condition's text):

{Permitting note: Attached (GE Heat Input Curves) are the manufacturer's heat input curves that are nominal values to be used to aid in defining "full load" for stack testing purposes and do not constitute a limit on heat input.}

D. The following additional documents will be listed in Section I., Subsection C., Relevant Documents., as follows:

Document(s) on file with the permitting authority:

- E-mail from Mr. Bert Gianazza received on December 20, 2000.
- E-mail from Mr. Bert Gianazza received on December 22, 2000.
- Fax from Mr. Bert Gianazza received on January 9, 2001.

III. Conclusion.

The permitting authority hereby issues the PROPOSED Title V Permit Revision, No. 0310047-006-AV, with any changes noted above.

Jacksonville Electric Authority
Kennedy Generating Station
Facility ID No.: 0310047
Duval County

Title V Air Operation Permit Revision
PROPOSED Title V Permit Revision No.: 0310047-006-AV

Permitting Authority:

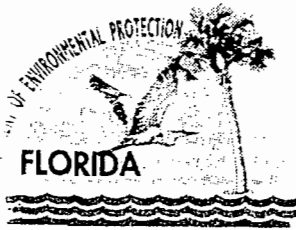
State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-1344
Fax: 850/922-6979

Compliance Authority:

City of Jacksonville
Regulatory and Environmental Services Department
Air and Water Quality Division
421 West Church Street, Suite 422
Jacksonville, Florida 32202-4111
Telephone: 904/630-3484
Fax: 904/630-3638



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

Permittee:
Jacksonville Electric Authority
21 West Church Street
Jacksonville, Florida 32202

PROPOSED Permit Revision No.: 0310047-006-AV
Facility ID No.: 0310047
SIC No.: 49; 4911
Project: Title V Air Operation Permit Revision:
Combustion Turbine No. 7

This permit revision is for the purpose of incorporating the terms and conditions of air construction permit, No. 0310047-002-AC, for a nominal 170.0 MW (at 59°F) natural gas and No. 2 fuel oil fired simple cycle combustion turbine-electrical generator (No. 7) equipped with Dry Low NO_x (DLN-2.6) combustors and located at the existing Jacksonville Electric Authority's Kennedy Generating Station. The turbine unit is a General Electric Model No. PG 7241 FA. The project also includes a 90-foot new stack. This facility is located at 4215 Talleyrand Avenue, Jacksonville, Duval County; UTM Coordinates: Zone 17, 440.065 km East and 3359.150 km North; Latitude: 30° 21' 52" North; and, Longitude: 81° 37' 25" West.

This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix U-1, List of Unregulated Emissions Units and/or Activities
Appendix I-1, List of Insignificant Emissions Units and/or Activities
APPENDIX TV-3, TITLE V CONDITIONS (version dated 04/30/99)
APPENDIX SS-1, STACK SAMPLING FACILITIES (dated 10/07/96)
TABLE 297.310-1, CALIBRATION SCHEDULE (dated 10/07/96)
Operation and Maintenance Plan
Phase II Acid Rain Applications/Compliance Plans received 12/26/95 and 6/2/99
Alternate Sampling Procedure: ASP Number 97-B-01
Appendix JEPB Rule 2
GE Heat Input Curves
Appendix 40 CFR 60 Subpart A-General Provisions

Initial Effective Date: January 1, 1998
Revision Effective Date: (issuance date)
Renewal Application Due Date: July 5, 2002
Expiration Date: December 31, 2002

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sms/bm

"More Protection, Less Process"

Printed on recycled paper.

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of two boilers, Nos. 8 and 9; four combustion turbines, Nos. 3, 4, 5 and 7; and, an auxiliary boiler, No. 1. The auxiliary boiler is allowed to operate when one of the boilers (No. 8 or No. 9) is under standby status. There are no air pollution controls associated with the boilers. Boilers Nos. 8 and 9 fire natural gas and/or No. 6 fuel oil; the combustion turbines fire only virgin No. 2 fuel oil; and, the auxiliary boiler fires No. 2 fuel oil and/or natural gas. There is a fuel oil storage tank farm associated with the boilers and turbines. Boiler No. 10 was rendered inoperative after March 5, 2000, which is the last date of operation. Also, included in this permit are miscellaneous unregulated/ insignificant emissions units and/or activities.

This facility is a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

<u>ARMS E.U. ID No.</u>	<u>Brief Description</u>
-003	Combustion Turbine No. 3
-004	Combustion Turbine No. 4
-005	Combustion Turbine No. 5
-007	Boiler No. 8
-008	Boiler No. 9
-013	Auxiliary Boiler No. 1
-015	Combustion Turbine No. 7

Unregulated Emissions Units and/or Activities

-010	Storage Tanks (tanks 1 and 4)
-011	Storage Tanks (tanks 2 and 3)
-xxx	Storage Tank (tank 13)

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1, Permit History/ID Number Changes

These documents are on file with the permitting authority:

BACT Determination dated October 15, 1984.

ORDER EXTENDING PERMIT EXPIRATION DATE dated November 8, 1997.

Initial Title V Permit (FINAL) clerked on December 31, 1997, and effective January 1, 1998.

Air Construction Permit, No. 0310047-002-AC, issued/clerked on March 8, 1999.

Title V Permit Revision application received August 28, 2000.

Verification of compliance testing received September 28, 2000, from Mr. Bert Gianazza.

Mr. N. Bert Gianazza's letter with enclosure (GE heat input curves) received August 14, 2000.

Mr. N. Bert Gianazza's letter received August 14, 2000, regarding Boiler #10's status.

E-mail from Mr. Bert Gianazza received on December 20, 2000.

E-mail from Mr. Bert Gianazza received on December 22, 2000.

Fax from Mr. Bert Gianazza received on January 9, 2001.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-3, TITLE V CONDITIONS, is a part of this permit.
{Permitting note: APPENDIX TV-3, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.; and, Jacksonville Environmental Protection Board (JEPB) Rule 2, Part IX]
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]
4. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]
5. Prevention of Accidental Releases (Section 112(r) of CAA). If required by 40 CFR 68, the permittee shall submit to the implementing agency:
 - a. a risk management plan (RMP) when, and if, such requirement becomes applicable; and,
 - b. certification forms and/or RMPs according to the promulgated rule schedule.[40 CFR 68]
6. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.
[Rule 62-213.440(1), F.A.C.]
7. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

8. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

{Permitting note: Nothing has been deemed necessary at the time of issuance of this permit.}
[Rule 62-296.320(1)(a), F.A.C.]

9. An Operation and Maintenance Plan is attached and a part of this permit pursuant to Rule 62-296.700(6), F.A.C. All activities shall be performed as scheduled and recorded data made available to the AWQD upon request.

[Rule 62-296.700(6), F.A.C.; and, AO16-180744 and AO16-214191]

10. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

11. The permittee shall submit all compliance related notifications and reports required of this permit to the AWQD and Department's Northeast District offices at the following addresses:

City of Jacksonville	Department of Environmental Protection
Regulatory and Environmental Services Department	Northeast District
Air and Water Quality Division	Air Resources
421 West Church Street, Suite 422	7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32202-4111	Jacksonville, Florida 32256-7590
Telephone: 904/630-3484	Telephone: 904/448-4310
Fax: 904/630-3638	Fax: 904/448-4363

12. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air & EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303
Telephone: 404/562-9155
Fax: 404/562-9163

13. **Not federally enforceable.** Appendix JEPB Rule 2 is incorporated by reference. The facility shall be subject to JEPB Rule 2, Parts I through VII, and Parts IX through XIII. (Permitting note: This appendix provides the applicable rules of the City of Jacksonville Environmental Protection Board (JEPB) contained in Rule 2, Air Pollution Control, and the corresponding rules of the Department that have been adopted by reference and within the SOA (Specific Operating Agreement) signed with the Department.)

14. **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].

15. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year. {See condition 51., APPENDIX TV-3, TITLE V CONDITIONS}.
[Rule 62-214.420(11), F.A.C.]

Section III. Emissions Units.

Subsection A. This section addresses the following emissions units.

<u>E.U. ID No.</u>	<u>Brief Description</u>
-007	Boiler No. 8
-008	Boiler No. 9

Fossil fuel fired steam generator No. 8 is a nominal 50.0 megawatt (electric) steam generator designated as Boiler No. 8. The emissions unit is fired on No. 6 fuel oil with a maximum heat input of 541 MMBtu per hour, or natural gas with a maximum heat input of 559 MMBtu per hour, or a blend of No. 6 fuel oil and natural gas with a maximum heat input of 541-559 MMBtu per hour. LP gas is used as the igniter fuel only when natural gas is not available. Fuel additives, typically of a magnesium oxide, hydroxide or sulfonate, or calcium nitrate origin, are used to enhance combustion and/or control acidity. There is no air pollution control device on this emissions unit. The combustion gases exhaust through a single stack of 149.9 feet. Fossil fuel fired steam generator No. 8 began commercial operation in 1955. Currently, the emissions unit is deactivated.

Fossil fuel fired steam generator No. 9 is a nominal 50.0 megawatt (electric) steam generator designated as Boiler No. 9. The emissions unit is fired on No. 6 fuel oil with a maximum heat input of 541 MMBtu per hour, or natural gas with a maximum heat input of 559 MMBtu per hour, or a blend of No. 6 fuel oil and natural gas with a maximum heat input of 541-559 MMBtu per hour. LP gas is used as the igniter fuel only when natural gas is not available. Fuel additives, typically of a magnesium oxide, hydroxide or sulfonate, or calcium nitrate origin, are used to enhance combustion and/or control acidity. There is no air pollution control device on this emissions unit. The combustion gases exhaust through a single stack of 149.9 feet. Fossil fuel fired steam generator No. 9 began commercial operation in 1958. Currently, the emissions unit is deactivated.

{Permitting note(s): These emissions units are regulated under Acid Rain, Phase II; Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input; and, Rule 62-296.702, F.A.C., Fossil Fuel Steam Generators.}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum operation heat input rates are as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
8	559	Natural Gas
	541	No. 6 Fuel Oil
	541-559	No. 6 Fuel Oil and Natural Gas
9	559	Natural Gas
	541	No. 6 Fuel Oil
	541-559	No. 6 Fuel Oil and Natural Gas

Note: When a blend of fuel oil and natural gas is fired, the heat input is prorated based on the percent heat input of each fuel.

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.; and, AO16-214193 and AO16-214194]

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition A.23.
[Rule 62-297.310(2), F.A.C.]

A.3. Methods of Operation - Fuels.

The only fuels allowed to be burned are No. 6 fuel oil, natural gas, a blend of No. 6 fuel oil and natural gas, and on-specification used oil. Used oil containing PCBs above the detectable level cannot be used for startup or shutdown. LP gas is used as the igniter fuel only when natural gas is not available.

[Rule 62-213.410, F.A.C.; AO16-214193 and AO16-214194; and, 0310047-001-AV]

A.4. Hours of Operation. The emissions units may operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.; and, AO16-214193 and AO16-214194]

Emission Limitations and Standards

A.5. Visible Emissions. Visible emissions shall not exceed 20 percent opacity, except for one six-minute period per hour during which opacity shall not exceed 27 percent. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C.

[Rules 62-296.405(1)(a) and 62-296.702(2)(b), F.A.C.; and, AO16-214193 and AO16-214194]

A.6. Visible Emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

[Rule 62-210.700(3), F.A.C.]

A.7. Particulate Matter. Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods.

[Rules 62-296.405(1)(b) and 62-296.702(2)(a), F.A.C.]

A.8. Particulate Matter - Soot Blowing and Load Change. Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

[Rule 62-210.700(3), F.A.C.]

A.9. Sulfur Dioxide. When burning liquid fuel, sulfur dioxide emissions shall not exceed 1.10 pounds per million Btu heat input, as measured by applicable compliance methods. Any calculations used to demonstrate compliance shall be based solely on the Btu value and the percent sulfur of the liquid fuel being burned.

[Rules 62-213.440 and 62-296.405(1)(c)1.b., F.A.C.]

A.10. Sulfur Dioxide - Sulfur Content. The sulfur content of the as fired No. 6 fuel oil shall not exceed 1.0 percent, by weight. See specific condition A.21.

[Rule 62-296.405(1)(e)3., F.A.C.; and, AO16-214193 and AO16-214194]

A.11. “On-Specification” Used Oil. Only “on-specification” used oil generated by the Jacksonville Electric Authority in the production and distribution of electricity shall be fired in these emissions units. The total combined quantity allowed to be fired in these emissions units shall not exceed 300,000 gallons per calendar year. “On-specification” used oil is defined as each used oil delivery that meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered “off-specification” oil and shall not be fired. See specific conditions **A.30.**, **A.34.** and **A.35.**

<u>CONSTITUENT / PROPERTY*</u>	<u>ALLOWABLE LEVEL</u>
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	100 °F minimum
PCBs	less than 50 ppm

* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

[40 CFR 279.11]

Excess Emissions

A.12. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

A.13. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

[Rule 62-210.700(2), F.A.C.]

A.14. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

A.15. Sulfur Dioxide. **The permittee elected to demonstrate compliance using fuel sampling and analysis.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. See specific conditions **A.20.** and **A.21.**

[Rule 62-296.405(1)(f)1.b., F.A.C.; and, AO16-214193 and AO16-214194]

A.16. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

A.17. Visible emissions. The test method for visible emissions shall be DEP Method 9, incorporated in Chapter 62-297, F.A.C. A transmissometer may be used and calibrated according to Rule 62-297.520, F.A.C. See specific condition A.18.

[Rule 62-296.405(1)(e)1., F.A.C.]

A.18. DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.

2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:

a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.

b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number

of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.

[Rule 62-297.401, F.A.C.]

A.19. Particulate Matter. The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 (with Orsat analysis) or 3A shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17.

[Rules 62-213.440, 62-296.405(1)(e)2., and 62-297.401, F.A.C.]

A.20. Sulfur Dioxide. The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-297, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure is incorporated into the operation permit for the emissions unit. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedences of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance or noncompliance with sulfur dioxide standards. **The permittee may use the EPA test methods, referenced above, to demonstrate compliance; however, as an alternate sampling procedure authorized by permit, the permittee elected to demonstrate compliance using fuel sampling and analysis.** See specific condition A.21.

[Rules 62-213.440, 62-296.405(1)(e)3., 62-296.405(1)(f)1.b. and 62-297.401, F.A.C.; and, AO16-214193 and AO16-214194]

A.21. For each emissions unit, the following fuel sampling and analysis protocol shall be used as an alternate sampling procedure authorized by permit to demonstrate compliance with the sulfur dioxide standard:

a. Determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition, to analyze a representative sample of the blended fuel following each fuel delivery.

b. Record hourly fuel totalizer readings with calculated hourly feed rates for each fuel fired, the density of each fuel, and the percent sulfur content, by weight, of each fuel.

c. The analyses of the No. 6 fuel oil, as received from the supplier, shall include the following:

- (1) Density (ASTM D 1298-80 or the latest edition).
- (2) Calorific heat value in Btu per pound (ASTM D 240-76 or the latest edition).

d. Utilize the above information in a., b. and c., to calculate the SO₂ emission rate to ensure compliance at all times.

[Rules 62-213.440, 62-296.405(1)(e)3., 62-296.405(1)(f)1.b. and 62-297.440, F.A.C.; and, AO16-214193 and AO16-214194]

A.22. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

A.23. Operating Rate During Testing. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

A.24. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

A.25. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

- c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- (b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
- (c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
- (d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1 (attached).
- (e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]

A.26. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.
[Rule 62-297.310(6), F.A.C.]

A.27. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

- (a) General Compliance Testing.
 2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid fuel for more than 400 hours other than during startup.
 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or

- b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.
 9. The owner or operator shall notify the AWQD, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the AWQD, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the AWQD.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; AO16-214193 and AO16-214194; and, SIP approved]
- A.28. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:
- a. only gaseous fuel(s); or
 - b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
 - c. only liquid fuel(s) for less than 400 hours per year.
- [Rule 62-297.310(7)(a)4., F.A.C.]

A.29. Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

A.30. Compliance with the "on-specification" used oil requirements will be determined from a sample collected from each batch delivered for firing. See specific conditions A.11., A.34. and A.35.

[Rules 62-4.070 and 62-213.440; and, 40 CFR 279]

Recordkeeping and Reporting Requirements

A.31. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the AWQD in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the AWQD.

[Rule 62-210.700(6), F.A.C.]

A.32. Submit to the AWQD a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.405(1), F.A.C., for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

[Rules 62-213.440 and 62-296.405(1)(g), F.A.C.]

A.33. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the AWQD on the results of each such test.
- (b) The required test report shall be filed with the AWQD as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the AWQD to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
 1. The type, location, and designation of the emissions unit tested.
 2. The facility at which the emissions unit is located.
 3. The owner or operator of the emissions unit.
 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.

7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 8. The date, starting time and duration of each sampling run.
 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 10. The number of points sampled and configuration and location of the sampling plane.
 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 12. The type, manufacturer and configuration of the sampling equipment used.
 13. Data related to the required calibration of the test equipment.
 14. Data on the identification, processing and weights of all filters used.
 15. Data on the types and amounts of any chemical solutions used.
 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
 18. All measured and calculated data required to be determined by each applicable test procedure for each run.
 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
- [Rules 62-213.440 and 62-297.310(8), F.A.C.; and, AO16-214193 and AO16-214194]

A.34. Records shall be kept of each delivery of "on-specification" used oil with a statement of the origin of the used oil and the quantity delivered/stored for firing. In addition, monthly records shall be kept of the quantity of "on-specification" used oil fired in these emissions units. The above records shall be maintained in a form suitable for inspection, retained for a minimum of five years, and be made available upon request. See specific conditions A.11., A.30. and A.35.

[Rule 62-213.440(1)(b)2.b., F.A.C.; and, 40 CFR 279.61 and 761.20(e)]

A.35. The permittee shall include in the "Annual Operating Report for Air Pollutant Emitting Facility" a summary of the "on-specification" used oil analyses for the calendar year and a statement of the total quantity of "on-specification" used oil fired in Boilers Nos. 4 and 5 during the calendar year. See specific conditions A.11., A.29. and A.33.

[Rule 62-213.440(1)(b)2.b., F.A.C.]

Miscellaneous

A.36. **Not federally enforceable.** For Boilers Nos. 8 and 9, Jacksonville Electric Authority shall notify AWQD of the intent to startup each emissions unit at least thirty (30) days in advance of reactivation.

[AO16-214193 and AO16-214194]

A.37. For Boilers Nos. 8 and 9, Jacksonville Electric Authority shall demonstrate to the Department and AWQD that reactivation of each emissions unit shall not constitute reconstruction pursuant to the provisions of 40 CFR 60.15 adopted at Rule 62-204.800(7)(d), F.A.C.

[40 CFR 60.15; and, AO16-214193 and AO16-214194]

Section III. Emissions Units.

Subsection B. This section addresses the following emissions unit.

<u>E.U. ID No.</u>	<u>Brief Description</u>
-013	Auxiliary Boiler No. 1

Auxiliary Boiler No. 1 is steam generator that is fired on natural gas, with a maximum heat input of 20.7 MMBtu per hour, or virgin No. 2 fuel oil, with a maximum heat input of 19.8 MMBtu per hour. LP gas is used as the igniter fuel only when natural gas is not available. The maximum sulfur content of the No. 2 fuel oil is 0.5 percent, by weight (BACT). Emissions from this boiler are uncontrolled. Auxiliary Boiler No. 1 began commercial operation prior to any NSPS promulgation that would affect this emissions unit.

{Permitting note(s): The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum operation heat input rate is as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
Aux. Boiler No. 1	20.7	Natural Gas
	19.8	No. 2 Fuel Oil

[AC16-86189; and, application of June 14, 1996]

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition B.17.
[Rule 62-297.310(2), F.A.C.]

B.3. Methods of Operation - Fuels.

The only fuel(s) allowed to be burned are natural gas or virgin No. 2 fuel oil. LP gas is used as the igniter fuel only when natural gas is not available.

[Rule 62-213.410, F.A.C.; and, AC16-86189]

B.4. Hours of Operation. This emissions unit may operate continuously, i.e., 8760 hours/year, but only when at least one of the main steam generating boilers (Steam Boiler No. 8, No. 9, or No. 10) is under standby condition.

[AC16-86189]

Emission Limitations and Standards

B.5. Visible Emissions. Visible emissions shall not exceed 15 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.
[AC16-86189; and, BACT dated October 15, 1984]

B.6. Visible emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.
[Rule 62-210.700(3), F.A.C.]

B.7. Particulate Matter. Particulate matter emissions shall be controlled by the firing of natural gas and/or low sulfur content liquid fuel. See specific condition B.8.
[Rule 62-296.406(2), F.A.C.; and, BACT dated October 15, 1984.]

B.8. Sulfur Dioxide - Sulfur Content. The maximum sulfur content of virgin No. 2 fuel oil sulfur content shall be limited to 0.5 percent, by weight. See specific condition B.16.
[Rule 62-296.406(3), F.A.C.; AC16-86189; and, BACT dated October 15, 1984.]

Excess Emissions

B.9. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

B.10. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.
[Rule 62-210.700(2), F.A.C.]

B.11. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

B.12. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

B.13. Visible emissions. The test method for visible emissions shall be DEP Method 9, incorporated in Chapter 62-297, F.A.C. See specific condition B.14.

[Rules 62-213.440 and 62-297.401, F.A.C.; and, AC16-86189]

B.14. DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
 - a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
 - b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.

[Rule 62-297.401, F.A.C.]

B.15. Sulfur Dioxide - Sulfur Content. The permittee shall demonstrate compliance with the liquid fuel sulfur limit by the vendor providing a fuel analysis upon each fuel delivery. See specific conditions B.8. and B.16.

[Rules 62-213.440 and 62-296.406(3), F.A.C.; and, AC16-86189]

B.16. The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition.

[Rules 62-213.440, 62-296.406(3) and 62-297.440, F.A.C.]

B.17. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.; and, AC16-86189]

B.18. Applicable Test Procedures.

(a) Required Sampling Time.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4)(a)2.c., F.A.C.]

B.19. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid fuel for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
- b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

- a. Visible emissions, if there is an applicable standard;
- b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and,
- c. Each NESHAP pollutant, if there is an applicable emission standard.

9. The owner or operator shall notify the AWQD, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the AWQD, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; AC16-86189; and, SIP approved.]

B.20. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rule 62-297.310(7)(a)4., F.A.C.]

Recordkeeping and Reporting Requirements

B.21. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the AWQD in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the AWQD.

[Rule 62-210.700(6), F.A.C.]

B.22. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the AWQD on the results of each such test.

(b) The required test report shall be filed with the AWQD as soon as practical but no later than 45 days after the last sampling run of each test is completed.

[Rule 62-297.310(8), F.A.C.]

B.23. The permittee shall submit all fuel oil analyses (every fuel oil delivery needs a fuel analysis report) and the visible emissions test, if one is required, to the AWQD annually. If fuel oil is being fired during a visible emissions test, then a sample of fuel oil shall be extracted during the test and analyzed; and, the analysis shall be submitted with the visible emissions test result to AWQD pursuant to Rule 62-297.310(8), F.A.C. See specific condition **B.22.**

[AC16-86189]

Section III. Emissions Unit(s) and Conditions.

Subsection C. This section addresses the following emissions units.

<u>E.U. ID No.</u>	<u>Brief Description</u>
-003	Combustion Turbine No. 3
-004	Combustion Turbine No. 4
-005	Combustion Turbine No. 5

Emissions units numbers 003, 004 and 005 are combustion turbines manufactured by Westinghouse (Model W501G) and are designated as Combustion Turbine No. 3, No. 4 and No. 5, respectively. Each turbine has a maximum heat input from virgin No. 2 fuel oil of 744.0 MMBtu @ 70° F, LHV (Lower Heating Value). The No. 2 fuel oil has a maximum sulfur content of 0.5%, by weight. These combustion turbines are used as peaking units during peak demand times, during emergencies, and during controls testing, to run a nominal 56.2 MW generator (each). Emissions from the combustion turbines are uncontrolled.

{Permitting notes: These emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required. These emissions units are not subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. A group of exhaust stacks serve the combustion turbines. Combustion turbines Nos. 3, 4 and 5 began commercial operation in 1973.}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. The maximum operation heat input rates are as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
3	744.0 @ 70° F, LHV	No. 2 Fuel Oil
4	744.0 @ 70° F, LHV	No. 2 Fuel Oil
5	744.0 @ 70° F, LHV	No. 2 Fuel Oil

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; AO16-173880; and, derived from data in tabular format and provided by the permittee on 10/22/97]

C.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition C.13. [Rule 62-297.310(2), F.A.C.]

C.3. Methods of Operation - Fuels. Only virgin distillate No. 2 fuel oil shall be fired in the combustion turbines. [Rule 62-213.410(1), F.A.C.; and, AO16-173880]

C.4. Hours of Operation. These emissions unit(s) may operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, AO16-173880]

Emission Limitations and Standards

C.5. Visible Emissions. Visible emissions from each turbine shall not be equal to or greater than 20 percent opacity.

[Rule 62-296.320(4)(b)1., F.A.C.; and, AO16-173880]

C.6. Sulfur Dioxide - Sulfur Content. The sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent, by weight.

[Requested in initial Title V permit application dated June 14, 1996; and, AO16-173880]

Excess Emissions

C.7. Excess emissions from these emissions units resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

C.8. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

C.9. The permittee shall demonstrate compliance with the liquid fuel sulfur limit by means of a fuel analysis provided by the vendor upon each fuel delivery. See specific conditions C.6. and C.12.

[Rule 62-213.440, F.A.C.]

C.10. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

C.11. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.

[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.]

C.12. The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or equivalent.

[Rules 62-213.440 and 62-297.440, F.A.C.]

C.13. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted, provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rule 62-297.310(2), F.A.C.]

C.14. Applicable Test Procedures.

(a) Required Sampling Time.

2. Opacity Compliance Tests. When EPA Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.

Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4)(a)2.c., F.A.C.]

C.15. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
- b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

- a. Visible emissions, if there is an applicable standard;

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; AO16-173880; and, SIP approved.]

C.16. Visible Emissions Testing - Biennial. By this permit, biennial (odd years) emissions compliance testing for visible emissions is required for each emissions unit, but is not required for those emissions units burning No. 2 fuel oil for less than 400 hours during the previous even year or the current odd year in question.

[Rules 62-297.310(7)(a)4. & 8., F.A.C.; and, AO16-173880]

Recordkeeping and Reporting Requirements

C.17. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the AWQD in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the AWQD.

[Rule 62-210.700(6), F.A.C.]

C.18. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the AWQD on the results of each such test.

(b) The required test report shall be filed with the AWQD as soon as practical but no later than 45 days after the last sampling run of each test is completed.

[Rule 62-297.310(8), F.A.C.]

C.19. Records of No. 2 fuel oil consumption shall be maintained and made available to AWQD upon request.

[Rule 62-213.440, F.A.C.; and, AO16-173880]

Section III. Emissions Unit(s) and Conditions.

Subsection D. This section addresses the following emissions unit.

<u>E.U. ID No.</u>	<u>Brief Description</u>
-015	Combustion Turbine No. 7 (CT #7)

Emissions unit number -015 is a natural gas/fuel-fired simple cycle unit that consists of a nominal 170 MW (at 59° F) combustion turbine generator equipped with Dry Low NO_x (DLN-2.6) combustors. The emissions unit was manufactured by General Electric (Model PG 7241 FA) and is designated as Combustion Turbine (CT) No. 7. The CT has (1) a maximum heat input from natural gas of 1,623 MMBtu @ 59° F and 60% relative humidity, LHV (Lower Heating Value), and (2) a maximum heat input from new No. 2 fuel oil of 1,822 MMBtu @ 59° F and 60% relative humidity, LHV (Lower Heating Value). The new No. 2 fuel oil has a maximum sulfur content of 0.05%, by weight. The existing CTs Nos. 3 thru 6 are allowed to fire new No. 2 fuel oil with a maximum sulfur content of 0.5 %, by weight, but will be firing the 0.05 %, by weight, new No. 2 fuel oil since there is only one storage tank. This CT shall be used as a peaking unit during peak demand times, during emergencies, and during controls testing. This CT replaced one existing natural gas/fuel oil-fired boiler identified by JEA as KE10 (ARMS Emission Unit -009: Boiler #10). The project also included a 90-foot new stack.

{Permitting notes: This emissions unit is regulated under 40CFR60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C.; and, 40 CFR 60, Subpart A, adopted by reference in Rule 62-204.800(7)(d), F.A.C. CT #7 began commercial operation on April 30, 2000.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

D.1. Permitted Capacity. The maximum operation heat input rates, based on the lower heating value (LHV) of the fuel at ambient conditions of 59° F, 60% relative humidity, 100% load, and 14.7 psi pressure are as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
7	1,623.0 @ 59° F, LHV	Natural Gas
	1,822.0 @ 59° F, LHV	No. 2 Fuel Oil

The maximum heat input rate will vary depending upon the turbine inlet conditions and the CT characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department within 45 days of completing the initial compliance testing.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, 0310047-002-AC]

D.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition D.24.
[Rule 62-297.310(2), F.A.C.]

D.3. Methods of Operation - Fuels. Only pipeline natural gas and virgin distillate No. 2 fuel oil, or better, shall be fired in the CT.

[Rule 62-213.410(1), F.A.C.; and, 0310047-002-AC]

D.4. Hours of Operation. The maximum allowable hours of operation in any 12-month period (MAXHROP) for this CT are 4050 hours on pipeline natural gas and 1260 on virgin distillate No. 2 fuel oil or the hours calculated pursuant to the following formula:

$$\text{MAXHROP} = 4050 - (3.215 \times \text{ACTHROPFO})$$

Where: ACTHROPFO = actual hours of operation on fuel oil.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, 0310047-002-AC]

Control Technology

D.5. Dry Low NO_x (DLN) combustor shall be installed on this stationary combustion turbine to control nitrogen oxides (NO_x) emissions.

[0310047-002-AC]

D.6. The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions and shall be maintained to minimize NO_x emissions and CO emissions.

[0310047-002-AC]

D.7. A water injection system shall be installed for use when firing No. 2 or superior grade distillate fuel oil for control of NO_x emissions.

[0310047-002-AC]

Emission Limitations and Standards

D.8. Visible Emissions (VE). In lieu of a particulate emission limit, VE emissions shall not exceed 10 percent opacity while burning natural gas. VE emissions shall not exceed 20 percent opacity and particulate emissions shall not exceed 17 lbs/hr (non-condensable only) while burning oil during initial and annual tests. The permittee may request substitution of the PM limit and test requirement by a 10 percent opacity limitation while burning oil.

[0310047-002-AC]

D.9. Sulfur Dioxide - Sulfur Content. The sulfur content of the virgin distillate No. 2 fuel oil shall not exceed 0.05 percent, by weight.

[0310047-002-AC]

D.10. The following are the emission limits for this CT assuming full load. Values for NO_x are at 15% O₂ on a dry basis. These limits or their equivalents in terms of pounds per hour, as well as the applicable averaging times, are followed by the applicable specific conditions.

NO _x	SO ₂	CO	VOC	PM/Visibility (% Opacity)	Technology and Comments
15 ppm (NG) 42 ppm (FO)	<2gr/100scf (NG) 0.05% (FO)	15 ppm (NG) 20 ppm (FO)	1.4 ppm (NG) 3.5 ppm (FO)	10	Dry Low NO _x Pipeline Natural Gas Good Combustion FO, 0.05%, by wt, Sulfur

[0310047-002-AC]

D.11. Nitrogen Oxides (NO_x) Emissions. The concentration of NO_x concentrations in the exhaust gas of this CT shall not exceed 15 ppm at 15% O₂ (on a 24-hr block average) as measured by the CEMS (maintained in accordance with 40 CFR 75) while burning natural gas. In addition, NO_x emissions calculated as NO₂ (at ISO conditions) shall exceed neither 15 ppm at 15% O₂ nor 99 lbs/hr to be demonstrated by stack test. Total annual NO_x emissions shall not exceed 200 tons on a 12-month rolling average basis (gas/oil or gas or oil).

[0310047-002-AC; and, Rule 62-212.400(2)(g), F.A.C.]

D.12. NO_x Emissions. The concentration of NO_x concentrations in the exhaust gas of this CT shall not exceed 42 ppm at 15% O₂ (on a 24-hr block average) as measured by the CEMS (maintained in accordance with 40 CFR 75) while burning fuel oil. In addition, NO_x emissions calculated as NO₂ (at ISO conditions) shall exceed neither 42 ppm at 15% O₂ nor 318 lbs/hr to be demonstrated by stack test. Total annual NO_x emissions shall not exceed 200 tons on a 12-month rolling average basis (natural gas/fuel oil or natural gas or fuel oil).

[0310047-002-AC; and, Rule 62-212.400(2)(g), F.A.C.]

D.13. Carbon Monoxide (CO) Emissions. The concentration of CO in the exhaust gas shall not exceed 15 ppmvd (natural gas) and 20 ppmvd (fuel oil) as measured by EPA Method 10. CO emissions (at ISO conditions) shall not exceed 48 lbs/hr (natural gas) and 97 lbs/hr (fuel oil) to be demonstrated by stack test.

[0310047-002-AC]

D.14. Volatile Organic Compounds (VOC) Emissions. The concentration of VOC in the exhaust gas shall not exceed 1.4 ppmvd (natural gas) and 3.5 ppmvd (fuel oil) as determined by EPA Methods 18, 25 or 25 A. VOC emissions (at ISO conditions) shall not exceed 2.9 lbs/hr (natural gas) and 19 lbs/hr (fuel oil).

[0310047-002-AC]

D.15. Sulfur Dioxide (SO₂) Emissions. SO₂ emissions (at ISO conditions) shall not exceed 9.7 lbs/hr when firing pipeline natural gas and 98 lbs/hr when firing maximum 0.05 percent, by weight, sulfur content No. 2 or superior grade distillate fuel oil. Initial tests shall be performed by applicable compliance methods described below. Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedules in Specific

Conditions **D.29.** and **D.30.** will demonstrate compliance with the applicable NSPS SO₂ emissions limitations. Confirmation by the Custom Fuel Monitoring Schedule that the actual sulfur content is less than 2 grains per 100 standard cubic feet (gas) and 0.05 %, by weight, sulfur content (fuel oil) will demonstrate compliance with the permit limits for SO₂. Emissions of SO₂ shall not exceed 62 tons per year.

[0310047-002-AC; and, Rule 62-212.400(2)(g), F.A.C.]

Excess Emissions

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of an NSPS, NESHAP, or Acid Rain program provision.}

D.16. Excess emissions from resulting from startup, shutdown or malfunction shall be permitted provided (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.; and, 0310047-002-AC]

D.17. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.; and, 0310047-002-AC]

Test Requirements and Compliance Determination

D.18. Annual compliance tests required by this permit by using the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Chapter 62-204.800, F.A.C.

[40 CFR 60.8; and, 0310047-002-AC]

D.19. Annual compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., unless otherwise indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.

- a. EPA Reference Method 5 or 17, "Determination of Particulate Emissions from Stationary Sources".
- b. EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
- c. EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources".
- d. EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40CFR60, Subpart GG.
- e. EPA Reference Method 18 or 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only.

[0310047-002-AC]

D.20. Continuous Compliance with the NO_x Emission Limits. Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average. Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by Rule 62-210.700, F.A.C. A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at least 15 minutes apart. These excess emissions periods shall be reported as required in Specific Conditions **D.35.** and **D.41.**

[0310047-002-AC; and, 40 CFR 75]

D.21. Compliance with the SO₂ and PM/PM₁₀ Emission Limits. Notwithstanding the requirements of Rule 62-297.310(7), F.A.C., the use of pipeline natural gas and a maximum 0.05 percent sulfur content, by weight, No. 2 or superior grade virgin distillate fuel oil is the method for determining compliance for SO₂ and PM₁₀. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard and the 0.05% sulfur content limit, by weight, fuel oil analysis using ASTM D2880-71 or D4294 (or equivalent) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule. The applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1997 version).

[0310047-002-AC]

D.22. Compliance with the CO Emission Limit. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual NO_x RATA testing, which is performed pursuant to 40 CFR 75.

[0310047-002-AC; and, 40 CFR 75]

D.23. Compliance with the VOC Emission Limit. After the initial compliance test, the CO emission limit will be employed as a surrogate and no annual testing is required.

[0310047-002-AC]

D.24. Testing Procedures. Testing of emissions shall be conducted with the CT operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average turbine inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. turbine inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at

higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Rule 62-204.800, F.A.C.

{Permitting note: Attached (GE Heat Input Curves) are the manufacturer's heat input curves that are nominal values to be used to aid in defining "full load" for stack testing purposes and do not constitute a limit on heat input.}

[0310047-002-AC]

D.25. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
- b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

- a. Visible emissions, if there is an applicable standard;

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

9. The owner or operator shall notify the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; 0310047-002-AC; and, SIP approved.]

D.26. Stack Testing Facilities. Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. See Appendix SS-1, Stack Sampling Facilities.
[0310047-002-AC; and, Rule 62-297.310(6), F.A.C.]

Monitoring of Operations

D.27. Continuous Monitoring System. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from this unit. Periods when NO_x emissions (ppmvd at 15% oxygen) are above the standards listed in this permit shall be provided to the DEP Bureau of Air Monitoring and Mobile Sources pursuant to 40 CFR 75.
[0310047-002-AC; and, 40 CFR 75]

D.28. CEMS in Lieu of Water to Fuel Ratio. The NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1997 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS. Upon request from DEP, the CEMS emission rates for NO_x on this CT shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.
[0310047-002-AC]

D.29. Natural Gas Monitoring Schedule. The following custom monitoring schedule for natural gas is approved in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2):

- a. The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
- b. The permittee shall submit a monitoring plan, certified by signature of the Designated Representative (DR), that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).
- c. This unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75.11 and certified by the USEPA.

This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for this unit is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[0310047-002-AC; and, 40 CFR 75]

D.30. Fuel Oil Monitoring Schedule. The following monitoring schedule for No. 2 or superior grade virgin distillate fuel oil shall be followed: For all bulk shipments of No. 2 or superior grade virgin distillate fuel oil received at the Kennedy Center Station, an analysis, which reports the sulfur content and nitrogen content of the fuel, shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d). See Specific Condition **D.21**.
[0310047-002-AC]

D.31. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.; and, 0310047-002-AC]

D.32. When NO_x monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate the specified average time.
[0310047-002-AC]

D.33. In lieu of utilizing CEMs, for NO_x, the permittee may elect to utilize the protocol specified under 40 CFR Part 75, Appendix E.

[0310047-002-AC; 40 CFR 72.2; and, 40 CFR 75, Appendix E]

D.34. Continuous Monitoring System Reports. The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications, and 40 CFR 60.7(a)(5) or 40 CFR 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F, or 40 CFR 75. Data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the Department's Northeast District and Jacksonville RESD's Air & Water Quality Division Offices for review at least 90 days prior to installation.

[0310047-002-AC; and, 40 CFR 75]

Recordkeeping and Reporting Requirements

D.35. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, the owner or operator shall notify the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices.
[Rule 62-210.700(6), F.A.C.; and, 0310047-002-AC]

D.36. CEMS Requirement for Reporting Excess Emissions. This unit shall comply with the CEM frequency data report as specified in 40 CFR 60.7(c).
[40 CFR 60.7; and, 0310047-002-AC]

D.37. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices on the results of each such test.
- (b) The required test report shall be filed with the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
1. The type, location, and designation of the emissions unit tested.
 2. The facility at which the emissions unit is located.
 3. The owner or operator of the emissions unit.
 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 8. The date, starting time and duration of each sampling run.
 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 10. The number of points sampled and configuration and location of the sampling plane.
 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 12. The type, manufacturer and configuration of the sampling equipment used.

13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.; and, 0310047-002-AC]

D.38. Records of No. 2 virgin distillate fuel oil, or better, consumption shall be maintained and made available to the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices upon request.

[Rule 62-213.440, F.A.C.]

D.39. Records. All measurements, records, and other data required to be maintained by the permittee shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request.

[0310047-002-AC]

D.40. Quarterly Reports. Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7)(c) (1997 version), shall be submitted to the DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices.

[0310047-002-AC; and, 40 CFR 60.7]

D.41. Excess Emissions Report. If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's Northeast District and Jacksonville RESD's Air & Water Quality Division offices within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in this permit.

[0310047-002-AC; and, 40 CFR 60.7 (1997 version)]

Miscellaneous

D.42. Operating Procedures. Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.

[0310047-002-AC]

D.43. The CT shall be in compliance with all applicable requirements of 40 CFR 60, Subpart A, General Provisions (see Appendix 40 CFR 60, Subpart A, General Provisions, which is incorporated by reference), including:

- 40CFR60.7, Notification and Recordkeeping
- 40CFR60.8, Performance Tests
- 40CFR60.11, Compliance with Standards and Maintenance Requirements
- 40CFR60.12, Circumvention
- 40CFR60.13, Monitoring Requirements
- 40CFR60.19, General Notification and Reporting Requirements

[0310047-002-AC; and, 40 CFR 60, Subpart A]

D.44. ARMS Emission Unit -015, Power Generation, consisting of one (nominal) 170 MW combustion turbine (simple cycle peaking operation), shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not required to demonstrate compliance with non-NSPS permit standard(s).

[0310047-002-AC]

Section IV. This section is the Acid Rain Part.

**Operated by: Jacksonville Electric Authority
 ORIS code: 0666**

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions units listed below are regulated under Acid Rain Part, Phase II.

E.U.

ID No.	Description
-007	Boiler No. 8 (nominal 50.0 MW electric steam generator; currently deactivated)
-008	Boiler No. 9 (nominal 50.0 MW electric steam generator; currently deactivated)
-009	Boiler No. 10 (nominal 149.6 MW electric steam generator; removed from service March 6, 2000 (last operated March 5, 2000))
-015	Combustion Turbine #7 (start-up April 30, 2000)

A.1. The Phase II permit application(s) submitted for this facility, as approved by the Department, are a part of this permit. The owners and operators of these Phase II acid rain units must comply with the standard requirements and special provisions set forth in the application(s) listed below:

a. DEP Form No. 62-210.900(1)(a), dated 07/01/95.
 [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO₂) allowance allocations requirements for each Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2000	2001	2002
-007	8	SO ₂ allowances, under Table 2 or 3 of 40 CFR Part 73	193	193*	193*
-008	9	SO ₂ allowances, under Table 2 or 3 of 40 CFR Part 73	547*	547*	547*
-009	10	SO ₂ allowances, under Table 2 or 3 of 40 CFR Part 73	1959** ^a	1959** ^a	1959** ^a
-015	7	SO ₂ allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*

*The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.

^aRetired March 6, 2000 (last operated March 5, 2000).

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.

2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.

3. Allowances shall be accounted for under the Federal Acid Rain Program.
[Rule 62-213.440(1)(c), F.A.C.]

A.4. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year. {See condition 5I., APPENDIX TV-3, TITLE V CONDITIONS}
[Rule 62-214.420(11), F.A.C.]

A.5. Comments, notes, and justifications: Mr. Jon P. Eckenbach, Executive Vice President, Jacksonville Electric Authority, has become the new Designated Representative for Title IV purposes.

Appendix H-1, Permit History/ID Number Changes

Jacksonville Electric Authority
Kennedy Generating Station

PROPOSED Permit Revision No.: 0310047-006-AV
Facility ID No.: 0310047

Permit History (for tracking purposes):

E.U.

<u>ID No</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issue Date</u>	<u>Expiration Date</u>	<u>Extended Date</u> ^{1,2}	<u>Revised Date(s)</u>
-001	Combustion Turbine #1 (Inactive)					
-002	Combustion Turbine #2 (Inactive)					
-003	Combustion Turbine #3	AO16-173880	03/09/90	01/31/95	08/14/96	
-004	Combustion Turbine #4	AO16-173880	03/09/90	01/31/95	08/14/96	
-005	Combustion Turbine #5	AO16-173880	03/09/90	01/31/95	08/14/96	
-006	Combustion Turbine #6 (Inactive)					
-007	#8 Steam Generator (Inactive)					
-008	#9 Steam Generator (Inactive)	AO16-214194	05/03/93	07/31/97		
-009	#10 Steam Generator (Inactive)	AO16-214195	05/03/93	07/31/97		
-010	Residual Oil Tank #1 & #4	AO16-225064	05/21/93	04/30/98		
-011	Distillate Oil Tank #2 & #3	AO16-225064	05/21/93	04/30/98		
-013	Oil/Gas Fired Auxiliary Boiler	AC16-86189	10/15/84	07/31/85		
		AO16-183586	10/09/90	07/31/95		
-015	Combustion Turbine #7	0310047-002-AC	03/08/99	12/31/2002		

(if applicable) ID Number Changes (for tracking purposes):

From: Facility ID No.: 31JAX160047

To: Facility ID No.: 0310047

Notes:

1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

3 - Inactive means that the emissions unit either no longer exists or its permit has been surrendered.

{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits that were in effect at the time of application until the Title V permit becomes effective.}

Appendix I-1, List of Insignificant Emissions Units and/or Activities.

Jacksonville Electric Authority
Kennedy Generating Station

PROPOSED Permit Revision No.: 0310047-006-AV

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities:

A. Storage Tanks.

1. JEA Tank #5	Magnesium Oxide	10,000 gallons
2. JEA Tank #6	Lube Oil - Units 9/10	9,400 gallons
3. JEA Tank #7	Lube Oil - Units 8/9	4,800 gallons
4. JEA Tank #8	Black Start Diesel	3,000 gallons
5. JEA Tank #9	Mineral Acid	5,000 gallons
6. JEA Tank #10	Caustic	5,000 gallons
7. JEA Tank #11	Hypochloride	15,228 gallons
8. JEA Tank #12	FeSO ₄	2,500 gallons
9. JEA Tanks #15	Sodium BiSulfite	2,500 gallons

B. Boilers Nos. 8, 9 and 10 (inactive emissions units).

1. Evaporation of on-site generated boiler non-hazardous cleaning chemicals (cirtosolv and ammonia). This activity occurs once every three to five years or longer.

C. Emergency Generator.

1. One at this site. The emergency generator has historically fired less than 10,000 gallons per year of diesel fuel. The emergency generator draws its fuel from a single diesel fuel oil storage tank that supports the auxiliary boiler (the fuel oil has a maximum fuel sulfur content limit of 0.5%, by weight).

D. Black-start Generators.

1. Two at this site. These generators have historically fired a total amount of less than 10,000 gallons per year. They draw their fuel from a single diesel storage tank (the fuel oil delivered is the same as that delivered for the emergency generator, i.e., with a maximum sulfur content of 0.5%, by weight).

Appendix U-1, List of Unregulated Emissions Units and/or Activities.

Jacksonville Electric Authority
Kennedy Generating Station

PROPOSED Revision Permit No.: 0310047-006-AV

Unregulated Emissions Units and/or Activities. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

<u>E.U. ID No.</u>	<u>Brief Description of Emissions Units and/or Activity</u>	
-010	Storage Tanks (tanks 1 and 4)	
-011	Storage Tanks (tanks 2 and 3)	
-xxx	Storage Tank (tank 13)	
-010	Storage Tanks.	
1. JEA Tank #1	No. 6 Fuel Oil Storage	4,578,000 gallons
2. JEA Tank #4	No. 6 Fuel Oil Storage	4,578,000 gallons
-011	Storage Tanks.	
1. JEA Tank #2	No. 2 Fuel Oil Storage	1,680,000 gallons
2. JEA Tank #3	No. 2 Fuel Oil Storage	1,680,000 gallons
	No. 2 Fuel Oil Storage	1,722,000 gallons
-xxx	Storage Tank.	
1. JEA Tank #13	No. 2 Fuel Oil Storage	1,512,000 gallons

21 West Church Street
Jacksonville, Florida 32202-3139



August 8, 2000

RECEIVED

AUG 14 2000

BUREAU OF AIR REGULATION

Mr. Rick Banks, P.E.
Environmental Manager
Air Program
Dept. of Env. Protection
N.E. District Office
7825 Baymeadows Way, Suite B-200
Jacksonville, FL 32256-7577

RE: Kennedy Generating Station Air Construction Permit No. 0310047-002-AC
Combustion Turbine # 7 (CT 7) Heat Input Rate

Dear Mr. Banks:

I am enclosing the GE heat input curves for the above referenced unit for determining the maximum heat input rate during stack testing. These curves will be submitted with our Title V operating permit application to the Tallahassee DEP office for inclusion in our Title V permit.

We believe that these curves accurately reflect the operating characteristics of this unit at this time. Should these curves require correction in the future, we will resubmit the curves with the necessary changes.

If you have any questions with regard to this matter, please call me at 665-6247.

Sincerely,

A handwritten signature in cursive script, appearing to read 'N. Bert Gianazza'.

N. Bert Gianazza, P.E.
Environmental Permitting
& Compliance Group

cc: Bruce Mitchell, P.E., DEP
Steve Pace, P.E., RESD

General Electric Model PG7241(FA) Gas Turbine Jacksonville Electric Authority

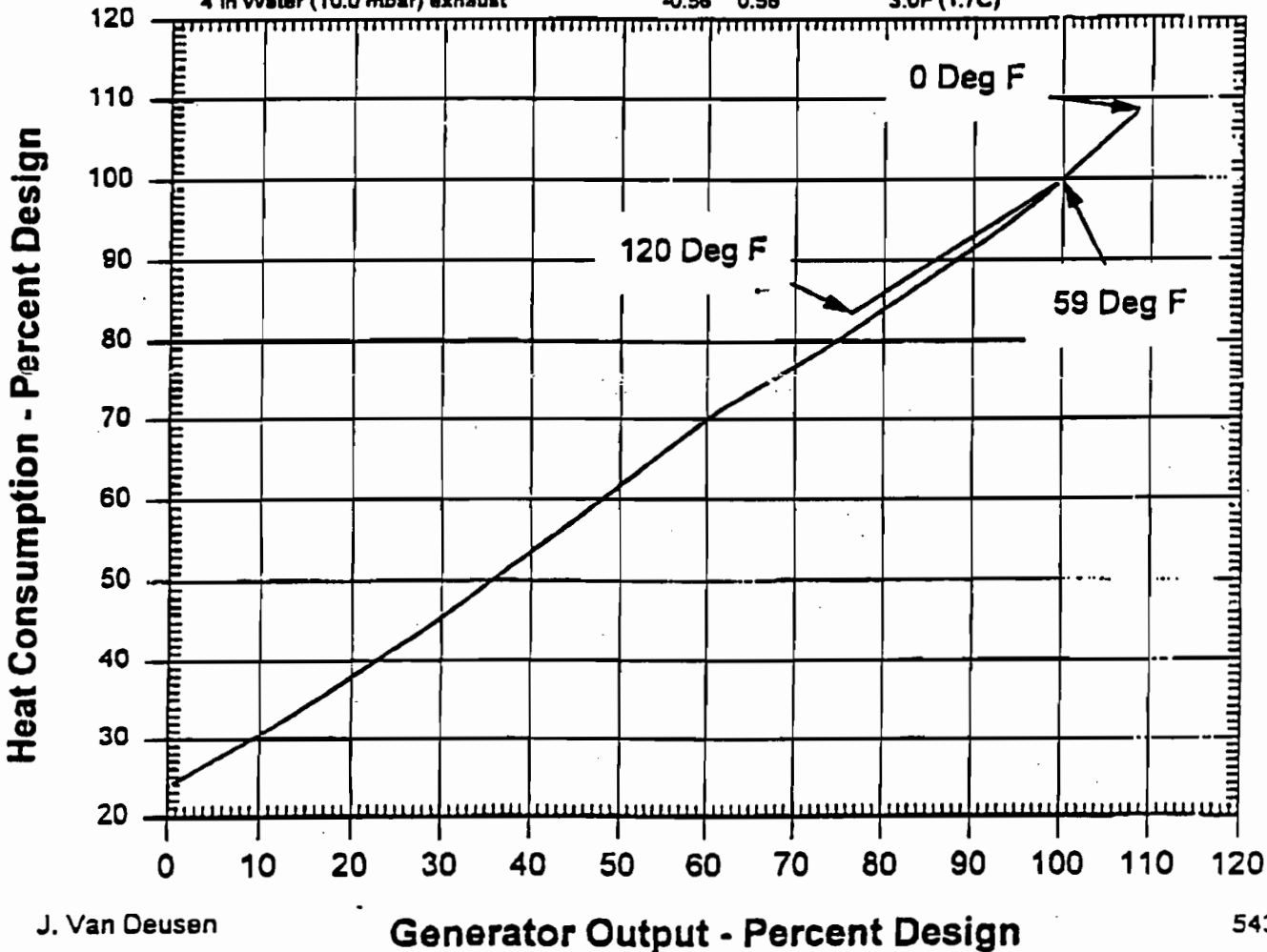
Estimated Performance - Configuration: DLN Combustor
Compressor Inlet Conditions 59 F (15 C), 60% Relative Humidity
Atmospheric Pressure 14.7 psia (1.013 bar)

Fuel:		Customer Specified Gas	
Design Output	kW	173200	
Design Heat Rate (LHV)	Btu/kWh (kJ/kWh)	9400 (9942) 9570	
Design Heat Cons (LHV)	Btu/h (kJ/h)x10 ⁶	1622.9 (1711.8)	
Design Exhaust Flow	lb/h (kg/h)x10 ³	3542.0 (1607)	
Exhaust Temperature	deg. F (deg. C)	1118 (602.2)	
Load		Base	

Notes:

- Altitude correction on curve 416HA682 Rev A.
- Ambient temperature correction on curve 543HA873 Rev 0.
- Effect of modulating IGV's on exhaust temperature and flow on curve 543HA874 Rev 0.
- Humidity effects on curve 498HA697 Rev. B - all performance calculated with 60% constant relative humidity.
- Plant Performance is measured at the generator terminals and includes allowances for the effects of excitation power, shaft driven auxiliaries, and 3.04 in H₂O (6.33 mbar) inlet and 5.5 in H₂O (13.70 mbar) exhaust pressure drops and a DLN Combustor.
- Additional inlet and exhaust pressure loss effects:

	% Effect on	Effect on
	Output Heat Rate	Exhaust Temp.
4 in Water (10.0 mbar) inlet	-1.54 0.56	3.0F (1.7C)
4 in Water (10.0 mbar) exhaust	-0.56 0.56	3.0F (1.7C)



General Electric Model PG7241(FA) Gas Turbine Jacksonville Electric Authority

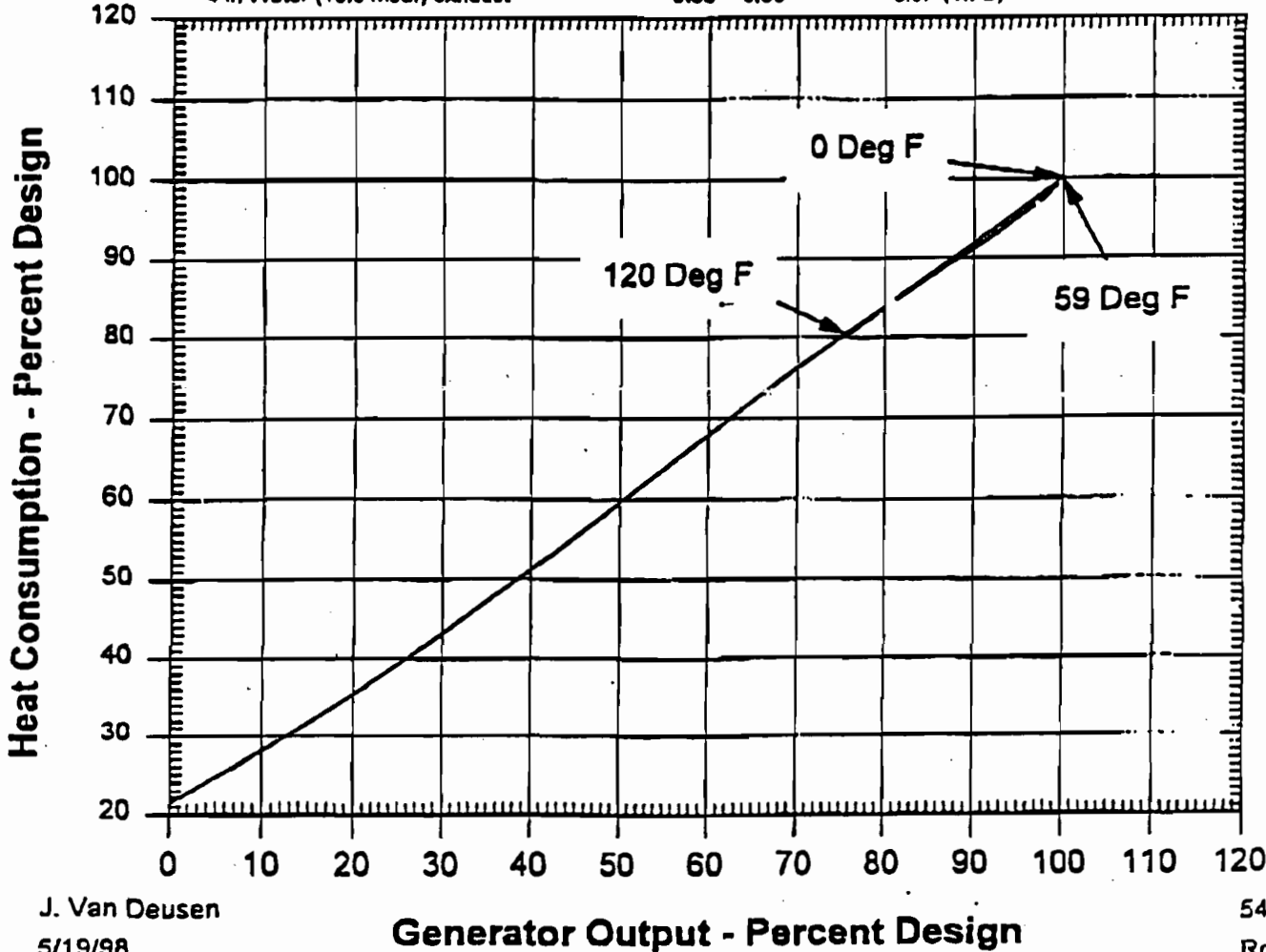
Estimated Performance - Configuration: DLN Combustor
Compressor Inlet Conditions 59 F (15 C), 60% Relative Humidity
Atmospheric Pressure 14.7 psia (1.013 bar)

Fuel:	Distillate	
Design Output	kW	182000
Design Heat Rate (LHV)	Btu/kWh (kJ/kWh)	10100 (10650)
Design Heat Cons (LHV)	Btu/h (kJ/h)x10 ⁶	1821.8 (1921.7)
Design Exhaust Flow	lb/h (kg/h)x10 ³	3683.0 (1671)
Exhaust Temperature	deg. F (deg. C)	1098 (592.2)
Design Water Flow	lb/h	119690
Load	Base	

Notes:

- Altitude correction on curve 415HA652 Rev A.
- Ambient temperature correction on curve 543HA875 Rev 0.
- Effect of modulating IGVs on exhaust temperature and flow on curve 543HA877 Rev 0.
- Humidity effects on curve 498HA697 Rev. B - all performance calculated with 60% constant relative humidity.
- Plant Performance is measured at the generator terminals and includes allowances for the effects of excitation power, shaft driven auxiliaries, and 3.04 in H2O (6.33 mbar) inlet and 5.5 in H2O (13.70 mbar) exhaust pressure drops and a DLN Combustor.
- Additional Inlet and exhaust pressure loss effects:

	% Effect on Output Heat Rate	Effect on Exhaust Temp.
4 in Water (10.0 mbar) Inlet	-1.54 0.56	3.0F (1.7C)
4 in Water (10.0 mbar) exhaust	-0.56 0.56	3.0F (1.7C)



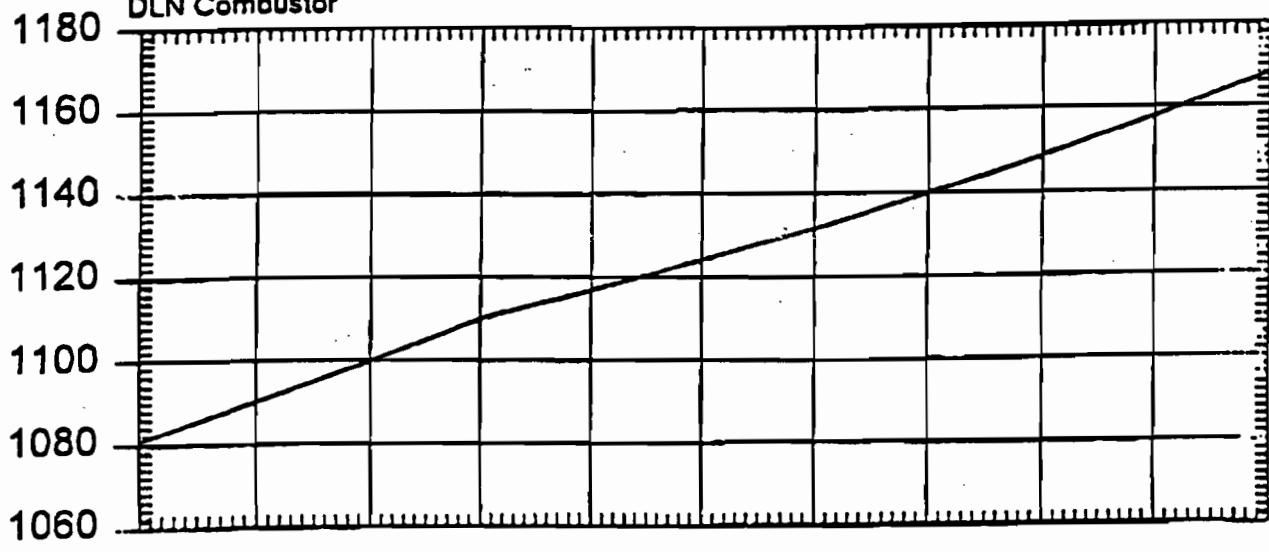
GENERAL ELECTRIC MODEL PG7241(FA) GAS TURBINE

Jacksonville Electric Authority

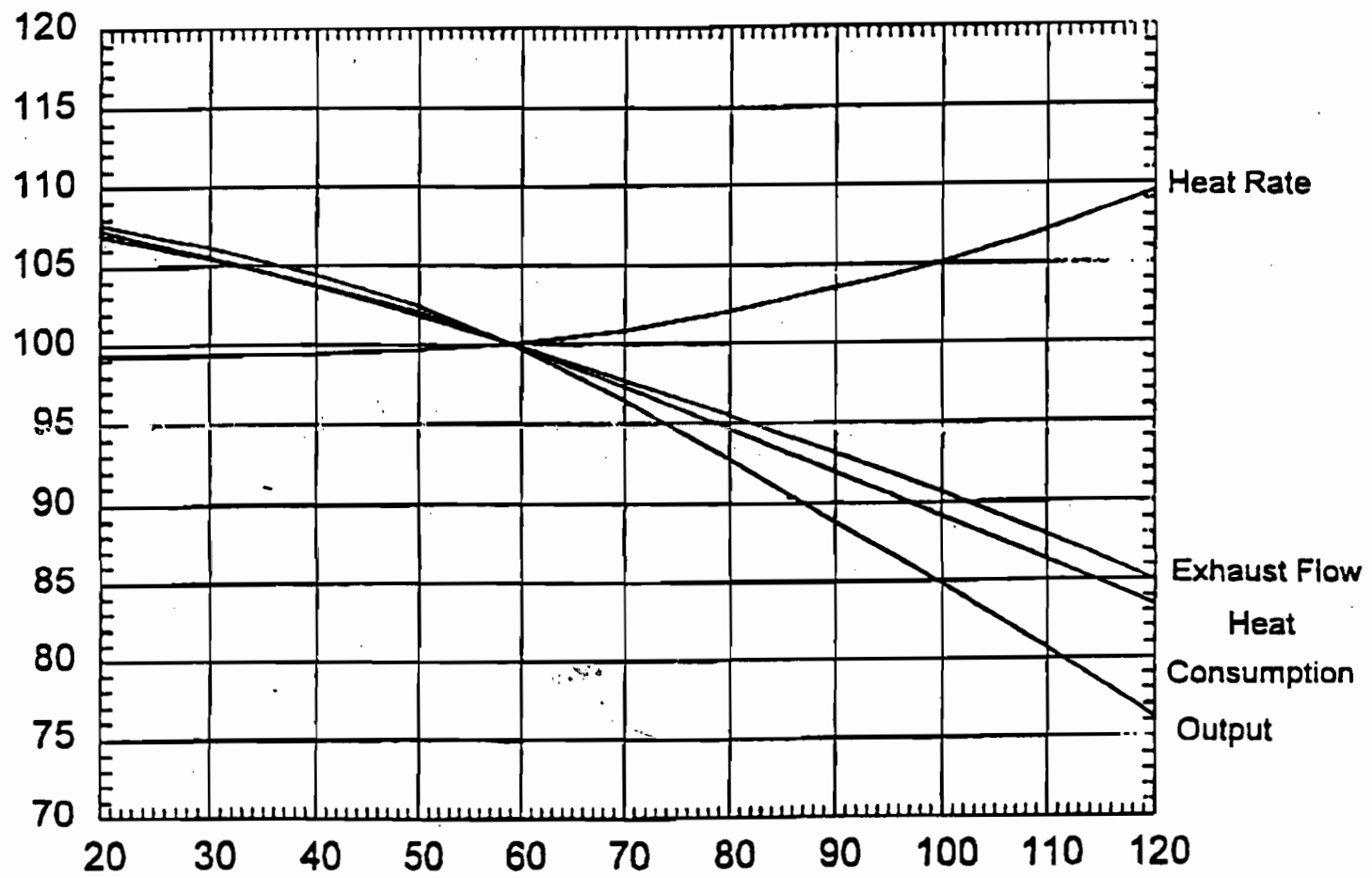
Effect of Compressor Inlet Temperature on Output, Heat Rate, Heat Consumption, Exhaust Flow And Exhaust Temperature at Baseload

Fuel: Customer Specified Gas
Design Values on Curve 543HA872 Rev 0
DLN Combustor

Exhaust Temperature (deg F)



Percent Design



GENERAL ELECTRIC MODEL PG7241(FA) GAS TURBINE

Jacksonville Electric Authority

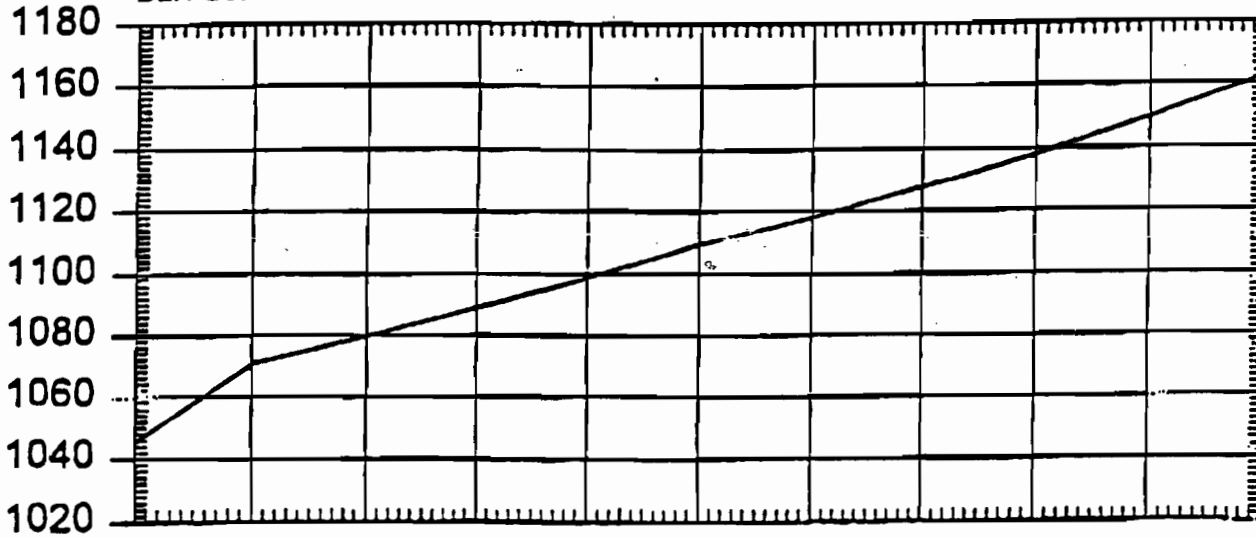
Effect of Compressor Inlet Temperature on Output, Heat Rate, Heat Consumption, Exhaust Flow And Exhaust Temperature at Baseload

Fuel: Distillate

Design Values on Curve 543HA875 Rev 0

DLN Combustor

Exhaust Temperature (deg F)



Percent Design

