



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

City of Tallahassee
Sam O. Purdom Generating Station
Facility ID No.: 1290001
Wakulla County

Title V Air Operation Permit Renewal
PROPOSED Permit No.: 1290001-007-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 November 4, 2002.

USEPA's review period ends on the 45th day after the permit posting date. Day 45 is December 18, 2002. 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 December 28, 2002.

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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

November 4, 2002

Mr. Robert E. McGarrah
Production Superintendent
City of Tallahassee, Electric Utilities
2602 Jackson Bluff Road
Tallahassee, Florida 32304

Re: Title V Air Operation Permit Renewal
PROPOSED Permit Project No.: 1290001-007-AV
Renewal of Title V Air Operation Permit No.: 1290001-001-AV
Sam O. Purdom Generating Station

Dear Mr. McGarrah:

One copy of the "PROPOSED PERMIT DETERMINATION" for the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, is enclosed. This letter is only a courtesy to inform you that the DRAFT permit has become a PROPOSED permit.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.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 Jonathan Holtom, P.E., at 850/921-9531.

Sincerely,

Trina Vielhauer
Chief
Bureau of Air Regulation

TV/h
Enclosures

E-mail Copy furnished to:
Ms. Jennette Curtis, City of Tallahassee
Mr. Karl Bauer, P.E., City of Tallahassee
Mr. Hamilton Oven, DEP-SCO
Mr. Kevin White, P.E., DEP-NWD
Mr. Gerry Neubauer, DEP-NWD Tallahassee Branch
U.S. EPA, Region 4 (INTERNET E-mail Memorandum)

Posted on 11/4/02.
Mailed on 11/5/02.
cc: 11/5 - Jonathan Holtom

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STATEMENT OF BASIS

City of Tallahassee
Sam O. Purdom Generating Station
Facility ID No.: 1290001
Wakulla County

Title V Air Operation Permit Renewal
PROPOSED Permit No.: 1290001-007-AV
Renewal of Title V Air Operation Permit No.: 1290001-001-AV

The initial Title V Air Operation Permit, No. 1290001-001-AV, was issued/effective on January 1, 1998. An Administrative Permit Correction, No. 1290001-004-AV, was issued on January 2, 1998. A Permit Revision, No. 1290001-006-AV, will be effective on October 17, 2002. This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to 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 is for the renewal of Title V Air Operation Permit, No. 1290001-001-AV.

This facility consists of a fossil fuel-fired steam generator, two simple cycle combustion turbines, one auxiliary boiler, and a combined cycle gas turbine. Units 7 and 8 are Acid Rain Phase II Units. The total combined electrical generating capacity from the facility is a nominal 318.6 megawatts (MW), of which a nominal 134 megawatts are provided by the steam generators and a nominal 184.6 megawatts are provided by the combustion turbines. The fuels used at this facility are natural gas, fuel oil and on-specification used oil. The auxiliary boiler is only used as a source of steam for plant operations when either Unit 7 or 8 is not operating. The facility-wide emissions of nitrogen oxides and sulfur dioxide are capped at 467 and 80 tons per year, respectively. Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Emissions unit number -007 is a Riley Stoker Corporation model RX-33 steam generator designated as "Boiler Number 7". It is rated at a maximum heat input of 621 MMBtu/hour while being fueled with natural gas and/or No. 2 through No. 6 fuel oil. It nominally produces 500,000 pounds of steam per hour to run a nominal 44 MW turbine-generator. This emissions unit is regulated under Acid Rain, Phase II, pre-dates PSD regulations, but is regulated under Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators With More Than 250 Million BTU per Hour Heat Input. Boiler Number 7 began commercial operation in 1966.

Emissions unit numbers -008 and -009 are simple cycle combustion turbines manufactured by Westinghouse (model number W171G) and are designated as "Combustion Turbine Number 1" and "Combustion Turbine Number 2", respectively. They are each rated at a maximum heat input of 228 million Btu per hour (MMBtu/hour) while being fueled by natural gas and/or No. 2 fuel oil. Each of these combustion turbines run a nominal 12.3 MW generator. Emissions from the combustion turbines are uncontrolled. These units are not subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. Combustion Turbine Number 1 began commercial operation in 1963. Combustion Turbine Number 2 began commercial operation in 1963.

PROPOSED PERMIT DETERMINATION

City of Tallahassee
Sam O. Purdom Generating Station
Proposed Permit No.: 1290001-007-AV

I. Public Notice.

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" to City of Tallahassee, Electric Utilities, for the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County was clerked on September 25, 2002. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was published in The Tallahassee Democrat on October 3, 2002. The DRAFT Title V Air Operation Permit was available for public inspection at the permitting authority's office in Tallahassee. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was received on October 10, 2002.

II. Public Comment(s).

No Public Comments were received during the 30 (thirty)-day public comment period, however, comments were received from the Permittee. The comments were not considered significant enough to reissue the DRAFT Title V Permit and require another Public Notice, therefore, the DRAFT Title V Operation Permit was changed. Those comments, and minor administrative corrections, are addressed below.

A. Letter from Mr. Rob McGarrah dated October 21, 2002, and received on October 21, 2002.

1. Comment:

Comments were submitted in the form of a marked-up copy of the DRAFT Title V permit. All of the requested changes (that were hi-lighted in red) were evaluated, however, not all resulted in a change to the PROPOSED permit. As a result of our review of the submitted comments, the following changes have been made to the DRAFT permit:

1. The County name was corrected on the permit cover page.
2. Subsection A. Facility Description. The allowable fuels sentence was re-worded to read: "The fuels used at this facility are natural gas, fuel oil and on-specification used oil."
3. Subsection B. Summary of Emissions Unit ID Nos. Unit -010 Fugitive VOC Sources was removed from the list of regulated emissions units as it is an unregulated emissions unit.
4. Subsection D. Miscellaneous. The use of Permitting Notes language has been removed.
5. Section II. Facility-wide Condition #8.d. Has been changed to: "Aggregate storage piles occur on a temporary basis associated with miscellaneous construction activities. Water is applied on an as-needed basis to control unconfined emissions from the handling and storage of the aggregate materials where practical."
6. Subsection III. Emissions Units and Conditions. The following Permitting Note has been inserted subsequent to conditions B.1., D.1., E.2. & F.5.:
{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine

Emissions unit number -011 is a Kewanee model H3S-400-G steam generator (auxiliary boiler) rated at a maximum heat input of 16.74 MMBtu/hour while being fueled with natural gas. This emissions unit is regulated under 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. However, since it is only permitted to combust natural gas, the standards, the monitoring and the associated reporting requirements contained in Subpart Dc do not apply, with the exception that the reporting requirements pertaining to "start-up", as referenced in 40 CFR 60.7, do apply. Except for compliance testing, this boiler may only operate when Unit 7 or Unit 8 is not operating. Emissions from this boiler are uncontrolled.

Emissions unit -014 is a combined cycle combustion turbine (CT) system designated as Unit 8. It consists of a 160 MW (nominal rating) GE Series 7FA combustion turbine with DLN-2.6 (or later version) dry low NO_x (gas) and water injection (diesel) burners and a non-fired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The turbine can be fired either by natural gas or No. 2 fuel oil. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using the generator and a static start system. Unit 8 also includes a cooling tower. This emissions unit is regulated under NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (1997 version), adopted and incorporated by reference in Rule 62-204.800(7)(b)38., F.A.C.; PSD-FL-239, Prevention of Significant Deterioration (PSD), in Rule 62-212.400, F.A.C.; Best Available Control Technology (BACT), in Rule 62-212.410, F.A.C.

CAM does not apply.

Based on the Title V permit renewal application received July 1, 2002, this facility is a major source of hazardous air pollutants (HAPs).

City of Tallahassee
Sam O. Purdom Generating Station
Facility ID No. 1290001
Wakulla County

Title V Air Operation Permit Renewal

PROPOSED Permit No.: 1290001-007-AV

Renewal of Title V Air Operation Permit No.: 1290001-001-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: 850/488-0114
Fax: 850/922-6979

Title V Air Operation Permit Renewal

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Permittee:

City of Tallahassee, Electric Utilities
300 South Adams Street
Tallahassee, Florida 32301

PROPOSED Permit No.: 1290001-007-AV**Facility ID No.:** 1290001**SIC Nos. 49, 4911****Project:** Title V Operation Permit Renewal

This permit is for the operation of the Sam O. Purdom Generating Station. This is a renewal of Title V Air Operation Permit No. 1290001-001-AV. This existing facility is located at 667 Port Leon Drive, St. Marks, Wakulla County.

This Title V Air Operation Permit Renewal 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. This is a renewal of the initial Title V permit, permit number 1290001-001-AV.

Referenced attachments made a part of this permit:

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

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

Phase II Acid Rain Permit Application/Compliance Plan received July 1, 2002

Appendix SS-1, Stack Sampling Facilities (version dated 10/7/96)

Appendix TV-4, Title V Conditions (version dated 2/12/02)

ASP Number 97-B-01

Scrivener's Order Correcting ASP Number 97-B-01 (dated July 9, 1997)

Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring
System Performance (40 CFR 60, July, 1996)**Effective Date:** January 1, 2003**Renewal Application Due Date:** July 5, 2007**Expiration Date:** December 31, 2007**(DRAFT)**

Howard L. Rhodes, Director
Division of Air Resource Management

HLR/SMS/jh

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of a fossil fuel-fired steam generator, two simple cycle combustion turbines, one auxiliary boiler, and a combined cycle gas turbine. Units 7 and 8 are Acid Rain Phase II Units. The total combined electrical generating capacity from the facility is a nominal 318.6 megawatts (MW), of which a nominal 134 megawatts are provided by the steam generators and a nominal 184.6 megawatts are provided by the combustion turbines. The fuels used at this facility are natural gas, fuel oil and on-specification used oil. The auxiliary boiler is only used as a source of steam for plant operations when either Unit 7 or 8 is not operating. Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

The facility-wide emissions of nitrogen oxides and sulfur dioxide are capped at 467 and 80 tons per year, respectively.

Based on the Title V Air Operation Permit renewal application received July 1, 2002, this facility is a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID Nos. and Brief Descriptions.

Regulated Emissions Units:

E.U. ID

<u>No.</u>	<u>Brief Description</u>
-007	Boiler Number 7 - 621 MMBtu/hour (Acid Rain, Phase II Unit)
-008	Combustion Turbine Number 1 - 228 MMBtu/hour
-009	Combustion Turbine Number 2 - 228 MMBtu/hour
-011	Auxiliary Boiler - 16.74 MMBtu/hour
-014	Combustion Turbine Number 8 - 1897 MMBtu/hour (Acid Rain, Phase II Unit)

Unregulated emissions Units and/or Activities (See Appendix U-1):

E.U. ID

<u>No.</u>	<u>Brief Description</u>
-010	Fugitive VOC Sources - Painting Operations
-012	General Purpose Engines
-013	Emergency Generators
-015	Cooling Tower

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

Subsection C. Relevant Documents.

The following documents are part of this permit:

Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix U-1, List of Unregulated Emissions Units and/or Activities
Phase II Acid Rain Permit Application/Compliance Plan received July 1, 2002
Appendix SS-1, Stack Sampling Facilities (version dated 10/7/96)
Appendix TV-4, Title V Conditions (version dated 2/12/02)
ASP Number 97-B-01
Scrivener's Order Correcting ASP Number 97-B-01 (dated July 9, 1997)
Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring System
Performance (40 CFR 60, July, 1996)

{Permitting Note: 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:

Appendix H-1, Permit History / ID Number Changes
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers (version dated 2/5/97)
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Statement of Basis

These documents are on file with the permitting authority:

Initial Title V Air Operation Permit issued October 9, 1997 (effective January 1, 1998)
Title V Air Operation Permit Administrative Correction issued January 2, 1998
Title V Air Operation Permit Revision issued September 11, 1998
Title V Air Operation Permit Revision request received November 14, 2001
Title V Air Operation Permit Renewal Application Received July 1, 2002
City of Tallahassee Letter Dated July 26, 2002
City of Tallahassee Letter Dated September 20, 2002

Subsection D. Miscellaneous.

Items labeled “(Reserved)” are a reflection of conditions that were in the initial Title V Air Operation Permit, but that have not been included in this Renewal Title V Air Operation Permit due to their obsolete nature. This has been done in order to preserve the original numbering of the specific conditions.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. Appendix TV-4, Title V Conditions (version dated 2/12/02), is a part of this permit.

{Permitting note: Appendix TV-4, Title V Conditions, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}

2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not 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.]

3. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

4. 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.]

5. 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.]

6. 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: No vapor emission control devices or systems are deemed necessary nor ordered by the Department as of the issuance date of this permit.}

[Rule 62-296.320(1)(a), F.A.C.]

7. 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.]

8. Not federally enforceable. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. The portable concrete mixer shall be operated on an as-needed basis. Reasonable precautions include enclosing the activity where practical.
- b. Abrasive blasting activities that are associated with normal maintenance and corrosion control activities shall be enclosed where practical.
- c. Unconfined emissions associated with the limited on-site traffic shall be controlled by limiting vehicle speeds and unnecessary traffic within the plant grounds.
- d. Aggregate storage piles occur on a temporary basis associated with miscellaneous construction activities. Water is applied on an as-needed basis to control unconfined emissions from the handling and storage of the aggregate materials where practical.
- e. Spray applications of surface coatings are associated with normal maintenance and corrosion activities. The activities are enclosed whenever practicable.

[Rule 62-296.320(4)(c)2., F.A.C.; and, proposed by applicant in Title V Air Operation Permit renewal application received July 1, 2002.]

{Permitting Note: Condition No. 8 implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C., (see Condition No. 57. of Appendix TV-4).}

9. 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.]

10. The Department's Northwest District Branch Office (Tallahassee) telephone number for reporting problems, malfunctions or exceedances under this permit is 850/488-3704, day or night, and for emergencies involving a significant threat to human health or the environment is 850/413-9911. The Department's Northwest District Office (Pensacola) telephone number for routine business, including compliance test notifications, is 850/444-8364 during normal working hours.

11. The permittee shall submit all compliance-related notifications and reports required of this permit (other than Acid Rain Program Information) to the Department's Northwest District office:

Department of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501-5794
Telephone: 850/444-8364
Fax: 850/444-8417

Acid Rain Program Information shall be submitted, as necessary, to:

Department of Environmental Protection
2600 Blair Stone Road
Mail Station #5510
Tallahassee, Florida 32399-2400
Telephone: 850/488-0114
Fax: 850/922-6979

12. Any reports, data, notifications, certifications, and requests (other than Acid Rain Program Information) 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 and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

Emission Limitations and Standards

13. **Sulfur Dioxide.** Annual emissions of SO₂ shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods.

[PSD-FL-239/PA97-36; and, Applicant request.]

14. Compliance with the annual facility-wide SO₂ cap shall be determined by adding the annual SO₂ emissions (in tons per year) determined by the methods required by 40 CFR 75 for Units 7 & 8 to the annual SO₂ emissions calculated for units GT1, GT2 and the auxiliary boiler, as determined by the following formulas:

$$\text{GT 1 \& GT 2 SO}_2 \text{ Emissions (natural gas) =} \\ \text{(Fuel Usage) x (Heating Value of Natural Gas) x (0.0006 lb/MMBtu) x (units conversion factors)}$$

-Fuel usage shall be measured by a fuel meter, recorded daily, when the units are operated

-Heating Value of Natural Gas shall be determined from fuel supplier data

-Sulfur Content default of NADB = 0.0006 lb-SO₂/MMBtu

GT 1 & GT 2 SO₂ Emissions (fuel oil) = (Fuel Usage) x (Fraction Sulfur in the fuel oil) x
(Molecular weight SO₂ / Molecular weight of S) x (Conversion factor) x (units conversion factors)

-Fuel usage shall be measured by a fuel meter, recorded daily when units are operated

-% Sulfur will be determined from fuel oil analysis each time fuel is delivered

(i.e., 0.05% S = 0.0005 in above formula)

-Molecular weight of SO₂ = 64

-Molecular weight of S = 32

-Conversion factor of 95% = 0.95

Aux. Boiler SO₂ Emissions (natural gas) =

(Fuel Usage) x (Heating Value of Natural Gas) x (0.0006 lb/MMBtu) x (units conversion factors)

-Fuel usage shall be measured by a fuel meter, recorded daily, when the unit is operated

-Heating Value of Natural Gas shall be determined from fuel supplier data

-Sulfur Content default of NADB = 0.0006 lb/MMBtu

[PSD-FL-239/PA97-36; and, Applicant request.]

15. Nitrogen Oxides. Annual emissions of NO_x shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods.

[PSD-FL-239/PA97-36; and, Applicant request.]

16. Compliance with the annual facility-wide NO_x cap shall be determined by adding the annual NO_x emissions (in tons per year) determined by the CEMS required by 40 CFR 75 for Units 7 & 8 to the annual NO_x emissions calculated for units GT1, GT2 and the auxiliary boiler, as determined by the following formulas:

GT 1 & GT 2 NO_x (natural gas) =

(Fuel Usage) x (Heating Value of Natural Gas) x (0.44 lb/MMBtu) x (units conversion factors)

-Fuel usage shall be measured by a fuel meter, recorded daily, when the units are operated

-Heating Value of Natural Gas will be determined from fuel supplier data

0.44 lb/MMBtu = AP-42 emission factor

GT 1 & GT 2 NO_x (fuel oil) =

(Fuel Usage) x (Heating Value of Fuel Oil) x (0.698 lb/MMBtu) x (units conversion factors)

-Fuel usage shall be measured by a fuel meter, recorded daily, when the units are operated

-Heating Value of Fuel Oil will be determined from fuel supplier data

-0.698 lb/MMBtu = AP-42 emission factor

Aux. Boiler NO_x (natural gas) = (Fuel Usage) x (140 lb/MMCF) x (units conversion factors)

-Fuel usage shall be measured by a flow meter, recorded daily, when the unit is operated
-140 lb/MMCF = AP-42 emission factor
[PSD-FL-239/PA97-36; and, Applicant request.]

Reporting Requirements

17. 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 No. 51., Appendix TV-4, Title V Conditions.}
[Rule 62-214.420(11), F.A.C.]

18. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.
[Rule 62-213.420(4), F.A.C.]

Section III. Emissions Units.

Subsection A. This section addresses the following emissions units.

(Reserved)

Section III. Emissions Units.

Subsection B. This section addresses the following emissions unit.

E.U. ID No. Brief Description

-007 Boiler Number 7, (Phase II Acid Rain Unit)

This is a Riley Stoker Corporation model RX-33 steam generator designated as "Boiler Number 7". It is rated at a maximum heat input of 621 MMBtu/hour while being fueled with natural gas and/or No. 2 through No. 6 fuel oil. It nominally produces 500,000 pounds of steam per hour to run a nominal 44 MW turbine-generator.

{Permitting notes: This emissions unit is regulated under Acid Rain, Phase II. This unit pre-dates PSD regulations, but is regulated under Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators With More Than 250 Million BTU per Hour Heat Input. Boiler Number 7 began commercial operation in 1966. Stack height = 180 feet, exit diameter = 9.0 feet, exit temperature = 300 °F, actual volumetric flow rate = 180,798 acfm. Emissions from this boiler are uncontrolled.}

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 rates are as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
7	621	Natural Gas
	621	No. 2 through No. 6 Fuel Oil; On-Specification Used Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.; and, Applicant's request.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition C.11.
[Rule 62-297.310(2), F.A.C.]

B.3. Methods of Operation.

- a. Fuels. The fuels that are allowed to be burned in this boiler are natural gas and/or new No. 2 through No. 6 fuel oil and/or on-specification used oil (see specific condition **B.24.**)
- b. Other. Fuel additives typically of a magnesium oxide, hydroxide, sulfonate, or calcium nitrate origin may be used when burning fuel oil.

[Rule 62-213.410, F.A.C.; and, Applicant's request in Title V Air Operation Permit renewal application dated July 1, 2002.]

B.4. Hours of Operation. This emissions unit may operate continuously, i.e. 8760 hours/year. The permittee shall maintain an operation log available for Department inspection that documents the total hours of annual operation, including a detailed account of the hours operated on each of the allowable fuels.

[Rule 62-210.200(PTE), F.A.C.; and, AO65-242831, Specific Condition #3.]

Emission Limitations and Standards

{Permitting Note: The attached Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

[Note: This emissions unit is subject to the facility-wide emissions caps for SO₂ and NO_x.]

{Permitting note: Unless otherwise specified, the averaging times for conditions B.5. – B.10. are based on the specified averaging time of the applicable test method.}

B.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.

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

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 not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods.

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

B.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.]

B.9. Sulfur Dioxide. Sulfur dioxide emissions shall not exceed 1.87 pounds per million Btu heat input, as measured by applicable compliance methods.

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

B.10. Sulfur Dioxide – Fuel Oil Sulfur Content. The No. 2 through No. 6 fuel oil sulfur content shall not exceed 1.70 percent, by weight. See specific condition **B.17.** and common condition **C.9.**

[Rule 62-296.405(1)(e)3., F.A.C.; and, requested by applicant in a letter dated April 16, 1997.]

B.11. This emissions unit is also subject to the conditions contained in **Subsection C. Common Conditions**, as specified below.

Excess Emissions

B.12. See common conditions **C.1. - C.3.**

Monitoring of Operations

{Permitting Note: In accordance with the Acid Rain Phase II requirements, the following continuous monitors are installed on this unit: Gas Fuel Flow, Oil Fuel Flow, NO_x and CO₂.}

B.13. Sulfur Dioxide. **The permittee elected to demonstrate compliance by accepting a liquid fuel sulfur limit that will be verified with a fuel analysis provided by the vendor upon each fuel delivery.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. See specific conditions **B.10., C.8. and C.9.**

[Rule 62-296.405(1)(f)1.b., F.A.C.; and, requested by applicant in a letter dated April 16, 1997.]

B.14. Determination of Process Variables. See common condition **C.4.**

Test Methods and Procedures

{Permitting Note: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.15. Visible Emissions. See common conditions **C.5., C.6. and C.16.**

B.16. Particulate Matter. See common conditions **C.7., C.17. and C.21.**

B.17. Sulfur Dioxide. See specific condition **B.13** and common conditions **C.8. and C.9.**

- B.18. Operating Rate During Testing. See common condition C.11.
- B.19. Calculation of Emission Rate. See common condition C.12.
- B.20. Applicable Test Procedures. See common condition C.13.
- B.21. Required Stack Sampling Facilities. See common condition C.14.
- B.22. Frequency of Compliance Tests. See common condition C.15.

Recordkeeping and Reporting Requirements

- B.23. See common conditions C.18. - C.20.

Miscellaneous Conditions

B.24. Used Oil. Burning of on-specification used oil is allowed in this emissions unit in accordance with all other conditions of this permit and the following conditions:

- a. On-specification Used Oil Emissions Limitations: This emissions unit is permitted to burn on-specification used oil, which contains a PCB concentration of less than 50 ppm. On-specification used oil is defined as used oil that meets the specifications of 40 CFR 279 - Standards for the Management of Used Oil, listed below. "Off-specification" used oil shall not be burned. Used oil which fails to comply with any of these specification levels is considered "off-specification" used oil.

CONSTITUENT/PROPERTY	ALLOWABLE LEVEL
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash point	100 degrees F minimum

- b. Quantity Limitation: This emissions unit is permitted to burn "on-specification" used oil that is generated by the City of Tallahassee in the production and distribution of electricity, not to exceed 10,000 gallons during any calendar year.
- c. PCB Limitation: Used oil containing a PCB concentration of 50 or more ppm shall not be burned at this facility. Used oil shall not be blended to meet this requirement.
- d. Operational Requirements: On-specification used oil with a PCB concentration of 2 to less than 50 ppm shall be burned only at normal source operating temperatures. On-specification used oil with a PCB concentration of 2 to less than 50 ppm shall not be burned during periods of startup or shutdown.

- e. Testing Requirements: For each batch of used oil to be burned, the owner or operator must be able to demonstrate that the used oil qualifies as on-specification used oil and that the PCB content is less than 50 ppm.

The requirements of this demonstration are governed by the following federal regulations:

Analysis of used oil fuel. A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of Sec. 279.11 by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.
[40 CFR 279.72(a)]

Testing of used oil fuel. Used oil to be burned for energy recovery is presumed to contain quantifiable levels (2 ppm) of PCB unless the marketer obtains analyses (testing) or other information that the used oil fuel does not contain quantifiable levels of PCBs.

- (i) The person who first claims that a used oil fuel does not contain quantifiable level (2 ppm) PCB must obtain analyses or other information to support that claim.
- (ii) Testing to determine the PCB concentration in used oil may be conducted on individual samples, or in accordance with the testing procedures described in Sec. 761.60(g)(2). However, for purposes of this part, if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part.
- (iii) Other information documenting that the used oil fuel does not contain quantifiable levels (2 ppm) of PCBs may consist of either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

[40 CFR 761.20(e)(2)]

When testing is required, the owner or operator shall sample and analyze each batch of used oil to be burned for the following parameters:

Arsenic, cadmium, chromium, lead, total halogens, flash point and PCBs.

Testing (sampling, extraction and analysis) shall be performed using approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

In addition to the above requirements, the owner or operator shall sample and analyze each batch of used oil to be burned for the sulfur content (by weight), density and heat content in accordance with approved test methods.

- f. Record Keeping Requirements: The owner or operator shall obtain, make, and keep the following records related to the use of used oil in a form suitable for inspection at the facility by the Department:

- (1) The gallons of on-specification used oil placed into inventory to be burned and the gallons of on-specification used oil burned each month.
- (2) Results of the analyses of each deposit of used oil, as required by the above conditions.
- (3) Other information, besides testing, used to make a claim that the used oil meets the requirements of on-specification used oil or that the used oil contains less than 50 ppm of PCBs.

[40 CFR 279.72(b), 40 CFR 279.74(b) and 40 CFR 761.20(e)]

- g. Reporting Requirements: The owner or operator shall submit, with the Annual Operation Report form, the analytical results required above and the total amount of on-specification used oil placed into inventory to be burned and the total amount of on-specification used oil burned during the previous calendar year.

[Rules 62-4.070(3) and 62-213.440, F.A.C.; and, 40 CFR 279 and 40 CFR 761, unless otherwise noted.]

B.25. Sufficient records shall be maintained to ensure that the total facility-wide SO₂ emissions do not exceed 80 tons per year (see facility-wide conditions **13. & 14.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

B.26. Sufficient records shall be maintained to ensure that the total facility-wide NO_x emissions do not exceed 467 tons per year (see facility-wide conditions **15. & 16.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

Section III. Emissions Units.

Subsection C. Common Conditions.

{Permitting Note: The following conditions are common to Boiler No. 7, as specified in Subsection B; Combustion Turbines 1 & 2, as specified in Subsection D; and, to the auxiliary boiler as specified in Subsection E. They are placed here as a convenience and to avoid duplication.}

Excess Emissions

C.1. 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.]

C.2. 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.]

C.3. 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.4. 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.5. 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 C.6.
[Rule 62-296.405(1)(e)1., F.A.C.]

C.6. 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.]

C.7. 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 or 3A with Orsat analysis 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 62-296.405(1)(e)2. and 62-297.401, F.A.C.]

C.8. 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 by accepting a liquid fuel sulfur limit that will be verified with a fuel analysis provided by the vendor upon each fuel delivery.** See specific conditions **B.10. and C.9.**

[Rules 62-213.440, 62-296.405(1)(e)3. and 62-297.401, F.A.C.; and, AO65-242831.]

C.9. 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 editions.

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

Compliance Test Requirements

C.10. 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.]

C.11. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operating 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 (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.

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

C.12. 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.]

C.13. 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.

TABLE 297.310-1

CALIBRATION SCHEDULE

<u>ITEM</u>	<u>MINIMUM CALIBRATION FREQUENCY</u>	<u>REFERENCE INSTRUMENT</u>	<u>TOLERANCE</u>
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent, or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/-0.001" mean of at least three readings Max. deviation between readings .004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, When 5% change observed, Annually 2. One Point: Semiannually 3. Check after each test series	Spirometer or calibrated wet test or dry gas test meter	2%
		Comparison check	5%

(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.]

C.14. 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.]

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.

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 (see specific condition **C.16.**);
 - 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 (see specific condition **C.17.**).
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.; AO65-242831, Specific Condition #5 (frequency); and, SIP approved.]

C.16. Visible Emissions Testing - Annual. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

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

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

C.17. Particulate Matter testing - Annual and Permit Renewal. Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

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

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

Recordkeeping and Reporting Requirements

{Permitting Note: The reports that are required by the following conditions are to be sent to the Department of Environmental Protection's Northwest District Office, 160 Governmental Center, Pensacola, Florida 322501-5794}

C.18. In the case of excess emissions resulting from malfunctions, the owner or operator shall notify the Department 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 Department.

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

C.19. Quarterly Reports. The owner or operator shall submit to the Department 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.]

C.20. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department 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 Department 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.]

Miscellaneous Conditions

C.21. If particulate matter and visible emissions tests are required, the tests shall be conducted concurrently and shall be performed using the maximum fuel oil/natural gas ratio that can be fired while meeting the standards.

[Rule 62-4.070(3), F.A.C.; and, Applicant request dated April 25, 1997.]

Section III. Emissions Units.

Subsection D. This section addresses the following emissions units.

E.U. ID No. Brief Description

-008	Combustion Turbine Number 1
-009	Combustion Turbine Number 2

These emissions units are simple cycle combustion turbines manufactured by Westinghouse (model number W171G) and are designated as "Combustion Turbine Number 1" and "Combustion Turbine Number 2". They are each rated at a maximum heat input of 228 million Btu per hour (MMBtu/hour) while being fueled by natural gas and/or No. 2 fuel oil. Each of these combustion turbines run a nominal 12.3 MW generator. 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 units are not subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. Combustion Turbine Number 1 began commercial operation in 1963. Combustion Turbine Number 2 began commercial operation in 1963. Each combustion turbine has its own stack. Stack height = 38 feet, exit diameter = 10 feet, exit temperature = 880 °F, actual volumetric flow rate = 395,080 acfm.}

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

Essential Potential to Emit (PTE) Parameters

D.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	228 (LHV @ 80 degrees Fahrenheit)	Natural Gas
	228 (LHV @ 80 degrees Fahrenheit)	No. 2 Fuel Oil
9	228 (LHV @ 80 degrees Fahrenheit)	Natural Gas
	228 (LHV @ 80 degrees Fahrenheit)	No. 2 Fuel Oil

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

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop

measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

D.2. Emissions Unit Operating Rate Limitation After Testing. See specific conditions **C.11. & D.13.**
[Rule 62-297.310(2), F.A.C.]

{Permitting Note: Based on the information submitted with the Title V Air Operation Permit renewal application received on July 1, 2002, the operating capacities of CT-1 and CT 2 are limited to 216.7 and 184.8 MMBtu/hr, respectively, until such time that future tests are conducted to regain the authority to operate at the permitted capacity. Pursuant to Rule 62-297.310(2), F.A.C., 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.}

D.3. Methods of Operation.

- a. Fuels. Only natural gas and/or new No. 2 fuel oil shall be fired in these turbines.
- b. Other. Fuel additives typically of a magnesium oxide, hydroxide, sulfonate, or calcium nitrate origin may be used when burning fuel oil.

[Rule 62-213.410, F.A.C.; and, Applicant's request in Title V Air Operation Permit renewal application dated July 1, 2002.]

D.4. Hours of Operation. The hours of operation are not limited, but these units are subject to the NO_x and SO₂ facility-wide emissions caps (see specific conditions **D.19. & D.20.**). The permittee shall maintain an operation log available for Department inspection that documents the total hours of annual operation, including a detailed account of the hours operated on each of the allowable fuels.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-239/PA97-36.]

Emission Limitations and Standards

{Permitting Note: The attached Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

[Note: These emissions units are subject to the facility-wide emissions caps for SO₂ and NO_x.]

{Permitting note: Unless otherwise specified, the averaging times for conditions D.5. & D.6. are based on the specified averaging time of the applicable test method.}

D.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, AO65-242827.]

D.6. Sulfur Dioxide – Fuel Oil Sulfur Content. The sulfur content of the No. 2 fuel oil shall not exceed 0.05%, by weight. See specific condition **D.12.**
[AO65-242827; applicant request on initial Title V application received June 14, 1996; PSD-FL-239/PA97-36; and, BACT.]

Excess Emissions

D.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.]

D.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

D.9. Sulfur Dioxide. 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 **D.6.** & **D.12.**

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

D.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

{Permitting Note: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.11. Visible emissions. The test method for visible emissions shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced 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.]

D.12. Sulfur Content. 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 editions.

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

D.13. Operating Rate During Testing. Testing of emissions shall be conducted with each emissions unit operating at permitted capacity, which is defined as 90-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 110 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report.

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

D.14. 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., F.A.C.]

D.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 (see specific condition **D.16.**);
 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.

[Rule 62-297.310(7), F.A.C.; AO65-242827, Specific Condition #5 (frequency); and, SIP approved.]

D.16. Visible Emissions Testing - Annual. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

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

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

Recordkeeping and Reporting Requirements

{Permitting Note: The reports that are required by the following conditions are to be sent to the Department of Environmental Protection's Northwest District Office, 160 Governmental Center, Pensacola, Florida 322501-5794}

D.17. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department 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 Department.

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

D.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 Department on the results of each such test.
- (b) The required test report shall be filed with the Department 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.]

D.19. These emissions units are subject to the facility-wide SO₂ emissions cap listed in facility-wide condition **13**. Sufficient records shall be maintained to ensure that the total facility-wide SO₂ emissions do not exceed 80 tons per year (see **facility-wide conditions 13. & 14.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

D.20. These emissions units are subject to the facility-wide NO_x emissions cap listed in facility-wide condition **15**. Sufficient records shall be maintained to ensure that the total facility-wide NO_x emissions do not exceed 467 tons per year (see **facility-wide conditions 15. & 16.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

Section III. Emissions Units.

Subsection E. This section addresses the following emissions units.

E.U. ID

<u>No.</u>	<u>Brief Description</u>
-011	Auxiliary Boiler

This is a Kewanee model H3S-400-G steam generator rated at a maximum heat input of 16.74 MMBtu/hour while being fueled with natural gas.

{Permitting notes: This emissions unit is regulated under 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. However, since it is only permitted to combust natural gas, the standards, the monitoring and the associated reporting requirements contained in Subpart Dc do not apply, with the exception that the reporting requirements pertaining to "start-up", as referenced in 40 CFR 60.7, do apply. Except for compliance testing, this boiler may only operate when Unit 7 or Unit 8 is not operating; therefore, there will be no significant increase in emissions for PSD purposes. Stack height = 30 feet, exit diameter = 2.0 feet, exit temperature = 420 °F, actual volumetric flow rate = 4,000 acfm (exit temperature and flow rate estimated by manufacturer service representative). Emissions from this boiler are uncontrolled.}

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

E.1. *(Reserved)*

Essential Potential to Emit (PTE) Parameters

E.2. 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>
11	16.74	Natural Gas

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

E.3. Emissions Unit Operating Rate Limitation After Testing. See common condition **C.11.**
[Rule 62-297.310(2), F.A.C.]

E.4. Methods of Operation - Fuels. Only natural gas shall be fired in this boiler.
[Rules 62-4.160(2) and 62-213.440(1), F.A.C.]

E.5. Hours of Operation. This emissions unit may operate 2,000 hours/year as an auxiliary source of steam; however, except for compliance testing, it may only operate when either Unit 7 or Unit 8 is not operating. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation and fuel consumption annually.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; 1290001-002-AC & 1290001-005-AC.]

Emission Limitations and Standards

{Permitting Note: The attached Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

[Note: This emissions unit is subject to the facility-wide emissions caps for SO₂ and NO_x.]

{Permitting note: Unless otherwise specified, the averaging times for conditions E.6. – E.8. are based on the specified averaging time of the applicable test method.}

E.6. 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.
[Rule 62-296.406(1), F.A.C.]

E.7. Particulate Matter. Particulate matter emissions shall be controlled by the firing of natural gas.
[Rule 62-296.406(2), F.A.C.; and, BACT determination dated October 8, 1996.]

E.8. Sulfur Dioxide. Sulfur dioxide emissions shall be controlled by the firing of natural gas.
[Rule 62-296.406(3), F.A.C.; and, BACT determination dated October 8, 1996.]

Excess Emissions

{Permitting Note: The excess emissions rule at 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

E.9. Excess emissions 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.]

E.10. 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

E.11. 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.]

E.12. This emissions unit is also subject to the conditions contained in **Subsection C. Common Conditions**, as specified below.

Test Methods and Procedures

{Permitting Note: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

- E.13.** Visible Emissions. See common conditions **C.5. & C.6.**
- E.14.** Operating Rate During Testing. See common condition **C.11.**
- E.15.** Applicable Test Procedures. See common condition **C.13.(a)2.**
- E.16.** Frequency of Compliance Tests. See common condition **C.15. except (a)5. & 8.**
- E.17.** Visible Emissions - Annual. By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit.
[Rules 62-297.310(7)(a)4., F.A.C.]

Recordkeeping and Reporting Requirements

E.18. The permittee shall record and maintain records of the amount of natural gas combusted during each day the auxiliary boiler is operated.
[40 CFR 60.48c(g)]

E.19. See common conditions **C.18.** and **C.20.(a) & (b).**

E.20. Sufficient records shall be maintained to ensure that the total facility-wide SO₂ emissions do not exceed 80 tons per year (see **facility-wide conditions 13. & 14.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

E.21. Sufficient records shall be maintained to ensure that the total facility-wide NO_x emissions do not exceed 467 tons per year (see **facility-wide conditions 15. & 16.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

Section III. Emissions Units.

Subsection F. This section addresses the following emissions unit.

E.U. ID No. Brief Description

-014 Combustion Turbine - Unit Number 8

This emissions unit is a combined cycle combustion turbine (CT) system designated as Unit 8. It consists of a 160 MW (nominal rating) GE Series 7FA combustion turbine with DLN-2.6 (or later version) dry low NO_x (gas) and water injection (diesel) burners and a non-fired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The turbine can be fired either by natural gas or No. 2 fuel oil. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using the generator and a static start system. Unit 8 also includes a new cooling tower.

{Permitting notes: The emissions unit is regulated under NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (1997 version), adopted and incorporated by reference in Rule 62-204.800(7)(b)38., F.A.C.; PSD-FL-239, Prevention of Significant Deterioration (PSD), in Rule 62-212.400, F.A.C.; Best Available Control Technology (BACT), in Rule 62-212.410, F.A.C. Stack height = 200 feet; exit diameter = 16.5 feet; exit temperature = 171°F - 203°F, depending upon fuel, compressor conditions and load; actual volumetric flow rate = 622,306 – 1,119,935 acfm depending upon fuel, compressor inlet temperature and load (exit temperatures and flows based on manufacturer data).}

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

Essential Potential to Emit (PTE) Parameters

F.1. *(Reserved)*

General

F.2. Definitions. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.

[40 CFR 60.2; and, Rule 62-204.800(7)(a), F.A.C.]

F.3. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12.]

F.4. Modifications. The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change.
[40 CFR 60.14; and, PSD-FL-239/PA97-36.]

Essential Potential to Emit (PTE) Parameters

F.5. 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	1696	Natural Gas
	(LHV @ 59 degrees Fahrenheit, 60% Relative Humidity, and 14.7 psi)	
	1897	No. 2 Fuel Oil
	(LHV @ 59 degrees Fahrenheit, 60% Relative Humidity, and 14.7 psi)	

These maximum heat input rates will vary depending upon compressor inlet conditions and the combustion turbine characteristics. Manufacturer's curves or equations for correction to other compressor inlet conditions shall have been provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing and shall be resubmitted at any time that they are changed as the result of new testing. These curves or equations shall be used to establish the maximum allowable heat inputs at other compressor inlet conditions for compliance determinations.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; 40 CFR 60.332(b); and, PSD-FL-239/PA97-36.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

F.6. Emissions Unit Operating Rate Limitation After Testing. See specific condition **F.34**.
[Rule 62-297.310(2), F.A.C.]

F.7. Methods of Operation - Fuels. Only natural gas and/or new No. 2 distillate fuel oil shall be fired in this turbine. The burning of other fuels requires review, public notice, and approval through the pre-construction process (Chapters 62-210 and 62-212, F.A.C.).

- a. Dry low NO_x combustors shall be used on Unit 8 when firing natural gas. The dry low NO_x burner system shall be maintained to minimize NO_x and CO emissions. While firing natural gas, operation of the unit when the dry low NO_x burner system is in the diffusion mode shall be minimized.
- b. Water injection shall be used when firing No. 2 fuel oil for control of NO_x emissions.
 [Rule 62-213.410, F.A.C.; PSD-FL-239 and BACT.]

F.8. Hours of Operation. This emissions unit may operate 8,760 hours/year.
 [Rule 62-210.200(PTE), F.A.C.; and, PSD-FL-239.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms (attached), summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit. The following table is a summary of the BACT determination by the Department, it is only included here for reference. For NO_x and SO₂, meeting the BACT limits assures compliance with the NSPS limits.

Table 1. Emission Limits (from BACT)

Pollutant	Fuel	BACT Standard
NO _x	Gas	12 ppmvd @ 15 % O ₂ (a) (d)
	Oil	42 ppmvd @ 15 % O ₂ (a) (b) (d)
SO ₂	Gas	Good combustion
	Oil	Good combustion of low sulfur fuel oil (0.05%, <i>by weight</i>)
PM/PM ₁₀	Gas	Good combustion
	Oil	Good combustion of low sulfur fuel oil (0.05%, <i>by weight</i>)
Visible Emissions	Gas	10 percent opacity
	Oil	10 percent opacity
CO	Gas	25 ppmvd (c)
	Oil	90 ppmvd (c)
(a) 30-day rolling average excluding startup, shutdown, malfunction, major DLN tuning sessions, and fuel switching. (b) Plus an allowance for fuel bound nitrogen using the formula provided in Condition B.4. (of PSD-FL-239) (c) By testing concurrent to RATA testing or by 3 one-hour runs of Method 10. (d) Not corrected to ISO conditions.		

(End of Permitting Note).}

{Permitting note: Unless otherwise specified, the averaging times for conditions F.9. – F.14. are based on the specified averaging time of the applicable test method.}

F.9. Visible Emissions. Visible emissions shall not exceed 10 percent opacity when firing either natural gas or No. 2 fuel oil. Drift eliminators shall be installed on the cooling tower to reduce PM/PM₁₀ emissions.
[PSD-FL-239/PA97-36; and, BACT.]

F.10. Sulfur Dioxide – Fuel Oil Sulfur Content. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. See specific condition **F.25**.
[PSD-FL-239/PA97-36; and, BACT.]

F.11. Nitrogen Oxides. Nitrogen Oxides emissions when firing natural gas shall not exceed 12 ppmvd at 15% O₂, not corrected to ISO conditions, on a 30-day rolling average basis (except during authorized periods of startup, shutdown, malfunction, major DLN tuning sessions or fuel switching), as measured by continuous emissions monitoring systems (CEMS). When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) for calculation of the 30-day rolling average.
[PSD-FL-239/PA97-36; 1290001-005-AC; and, BACT.]

F.12. Nitrogen Oxides. Nitrogen Oxides emissions when firing No. 2 fuel oil shall not exceed 42 ppmvd at 15% O₂, not corrected to ISO conditions, on a 30-day rolling average basis (except during authorized periods of startup, shutdown, malfunction or fuel switching), as measured by CEMS, when fuel bound nitrogen values are less than or equal to 0.015 percent. For fuel bound nitrogen values up to 0.03 percent, the allowance (and the adjusted standard) shall be determined, recorded, and maintained upon each new fuel delivery by the following formula:

$$STD = 0.0042 + F$$

where:

STD = allowable NO_x emissions (percent by volume at 15 percent O₂ and on a dry basis).

F = NO_x emission allowance for fuel-bound nitrogen defined by the following table:

<u>Fuel-Bound Nitrogen</u> <u>(% by Weight)</u>	<u>F (NO_x % by Volume)</u>
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0 < N ≤ 0.015	0
0.015 < N ≤ 0.03	0.04 (N-0.015)

where: N = the nitrogen content of the fuel (% by weight)

Note: 0.0042 percent = 42 ppm

[40 CFR 60.332(a)(1); PSD-FL-239/PA97-36; 1290001-005-AC; and, BACT.]

F.13. Carbon Monoxide. Carbon monoxide emissions when firing natural gas shall not exceed 25 ppmvd as measured by applicable compliance methods (see specific condition **F.26**).
[PSD-FL-239/PA97-36; and, BACT.]

F.14. Carbon Monoxide. Carbon monoxide emissions when firing No. 2 fuel oil shall not exceed 90 ppmvd as measured by applicable compliance methods (see specific condition **F.26**).
[PSD-FL-239/PA97-36; and, BACT.]

Excess Emissions

{Permitting note: The excess Emissions Rule at Rule 62-210.700, F.A.C., can not vary any requirement of an NSPS or NESHAP provision.}

F.15. Excess emissions resulting from startup, shutdown, malfunction, or fuel switching shall be permitted providing best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed the following in any 24-hour period: a total of six hours during any day including a cold startup; a total of four hours during any day that includes a hot startup; and a total of two hours during days not including a hot or cold startup. A cold startup is startup after the combined cycle unit has been down for more than 48 hours. A hot startup is startup after the combined cycle unit has been down for 48 hours or less. A documented malfunction is a malfunction that is documented within one working day of detection by contacting the Department's Northwest District Office by telephone, facsimile transmittal, or electronic mail.

In addition, excess emissions resulting from a major DLN tuning session shall be permitted provided the tuning session is performed in accordance with the manufacturer's specifications and in no case shall exceed 72 hours in any calendar year. A "major tuning session" would occur after a combustor change-out, a major repair to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be made by telephone, facsimile transmittal, or electronic mail.

All quality-assured hourly NO_x emissions data shall be used when demonstrating compliance with the emissions cap. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75).

[Rule 62-210.700(1) & (5), F.A.C.; 1290001-005-AC; and, PSD-FL-239/PA97-36.]

F.16. 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.]

F.17. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

Monitoring of Operations

F.18. The permittee shall have installed and shall calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from Unit 8. Thirty-day rolling average periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards

(12/42 ppmvd for gas/oil) shall be reported to the Department's Northwest District Office pursuant to Rule 62-4.160(8), F.A.C. The continuous emissions monitoring systems must comply with the certification and quality assurance, and other applicable requirements from 40 CFR 75. Periods of startup, shutdown, malfunction, major DLN tuning sessions, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards in specific conditions **F.11** & **F.12**, following the format of 40 CFR 60.7 (2001 version). The NO_x CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen monitoring required for reporting excess emissions in accordance with 40 CFR 60.334(c)(1) (2001 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (2001 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 Unit 8 shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

[PSD-FL-239/PA97-36; 1290001-005-AC; and, BACT.]

F.19. The following monitoring schedule for No. 2 fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at the Purdom Station, an analysis which reports the sulfur content and fuel bound nitrogen content of the fuel shall be provided by the fuel vendor or other sources which follow the appropriate fuel test methods listed in specific condition **F.25**. 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).

[PSD-FL-239/PA97-36; and, BACT.]

F.20. 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. Monitoring of natural gas nitrogen content shall not be required.
- b. Analysis of the sulfur content of natural gas shall be conducted using one of the EPA-approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. Monitoring of the sulfur content of the natural gas shall be conducted semi-annually.
- c. Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City shall notify the Department of such excess emissions and the customized fuel monitoring schedule shall be reexamined. The sulfur content of the natural gas will be monitored weekly during the interim period while the monitoring schedule is being reexamined.
- d. The City shall notify the Department of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 cubic foot of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined.
- e. Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of five years, and shall be made available for inspection by the appropriate regulatory personnel.
- f. The City may obtain the sulfur content of the natural gas from the fuel supplier provided the test methods listed in specific condition **F.37**, are used.

[PSD-FL-239/PA97-36.]

F.21. 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.]

Continuous Monitoring Requirements

F.22. Nitrogen Oxides. Determination of Oxides of Nitrogen emissions will be by a Continuous Emissions Monitoring System (CEMS). A CEMS operated and maintained in accordance with 40 CFR 75 may be used. Compliance with the NO_x emissions standards in specific conditions **F.11.** & **F.12.** shall be demonstrated with this CEMS system based on a 30-day rolling average. Based on CEMS data at the end of each operating day, a new 30-day average emission rate is calculated from the arithmetic average of all valid hourly emission rates during the previous 30 operating days.

Note: No other methods may be used for compliance testing unless prior DEP approval is received in writing. The DEP may request a special compliance test pursuant to Rule 62-297.340(2), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.
[PSD-FL-239/PA97-36; 1290001-005-AC; and, BACT.]

Required Tests, Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

F.23. Annual Tests Required. Except as provide for in specific condition F.38., Unit 8 must be tested annually for visible emissions and carbon monoxide in accordance with the requirements listed below.
[Rule 62-213.440, F.A.C.]

F.24. Visible emissions. The test method for visible emissions shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C., and 40 CFR 60, Appendix A, shall be used to determine compliance with the visible emissions standard in specific condition **F.9.**
[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.; 40 CFR 60, Appendix A; PSD-FL-239/PA97-36; and, BACT.]

F.25. Sulfur Dioxide and Particulate Matter. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the exclusive use of fuel oil with a maximum sulfur content limit of 0.05% or less, by weight, 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% S limit, fuel oil analysis using ASTM D2880-71 or D4294 (or latest edition) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or latest edition) for sulfur content of gaseous fuel shall be utilized in accordance with the custom fuel monitoring schedule in specific condition **F.20**. However, the permittee 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). For the purposes of demonstrating compliance with the emissions caps, natural gas and fuel oil supplier data for sulfur content may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized.

[PSD-FL-239/PA97-36; and, BACT.]

F.26. Carbon Monoxide. The test method for carbon monoxide emissions shall be EPA Method 10, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. Testing may be conducted at less than capacity. Annual compliance testing may be conducted concurrent with the annual RATA testing required pursuant to 40 CFR 75 (gas only). See specific conditions **F.13.** & **F.14.**

[Rules 62-204.800 and 62-297.401, F.A.C.; PSD-FL-239/PA97-36; and, BACT.]

F.27. Nitrogen Oxides. To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Department to determine the nitrogen content of the fuel being fired.

[40 CFR 60.335(a).]

F.28. Nitrogen and Sulfur Contents. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) of 40 CFR 60.335 to determine the nitrogen and sulfur contents of the fuel being burned. The 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.

[40 CFR 60.335(e).]

F.29. General. Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

[40 CFR 60.11(a).]

F.30. Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be

considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c).]

F.31. The owner or operator shall provide, or cause to be provided, stack sampling and performance testing facilities as follows:

- (1) Sampling ports adequate for test methods applicable to such facilities.
- (2) Safe sampling platform(s).
- (3) Safe access to sampling platform(s).
- (4) Utilities for sampling and testing equipment.

[40 CFR 60.8(e)(1), (2), (3) & (4).]

F.32. 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.]

F.33. 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.]

F.34. Operating Rate During Testing. Except for carbon monoxide emissions testing, testing of emissions shall be conducted with each emissions unit operating at permitted capacity, which is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. compressor inlet conditions). 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. compressor inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for compressor inlet conditions) and 110 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. Compliance test results shall be submitted to the Department's Northwest District office no later than 45 days after completion of the last test run.

[Rules 62-297.310(2), F.A.C.; PSD-FL-239/PA97-36; and, BACT.]

F.35. 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.]

F.36. 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 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.

(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).

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

F.37. 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 (see specific condition **F.38.**);

- 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.
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.; and, SIP approved.]

F.38. Visible Emissions Testing - Annual. By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit 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

F.39. To determine compliance with the oil firing heat input limitation, the permittee shall maintain daily records of fuel oil consumption and hourly usage for the turbine and the heating value for each fuel. All records shall be maintained for a minimum of five (5) years after the date of each record and shall be made available to representatives of the Department upon request.

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

F.40. The owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

- (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

[40 CFR 60.7(a)(4).]

F.41. The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or, any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 CFR 60.7(b).]

F.42. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[40 CFR 60.7(c)(1), (2), (3), and (4).]

F.43. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

- (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be

submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

- (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[40 CFR 60.7(d)(1) and (2).]

{See attached Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance}

F.44. Notification.

- (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:
 - (i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;
 - (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and,
 - (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).
- (2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.
- (3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the

owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).
[40 CFR 60.7(e)(1).]

F.45. The owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and, all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least **5 (five)** years following the date of such measurements, maintenance, reports, and records.
[40 CFR 60.7(f); and, Rule 62-213.440(1)(b)2.b., F.A.C.]

F.46. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department 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 Department.
[Rule 62-210.700(6), F.A.C.]

F.47. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department 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 Department 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 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.]

F.48. In each compliance test report, submit the maximum input/production rate at which each emissions unit was operated since the most recent compliance test.

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

F.49. Sufficient records shall be maintained to ensure that the total facility-wide SO₂ emissions do not exceed 80 tons per year (see **facility-wide conditions 13. & 14.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

F.50. Sufficient records shall be maintained to ensure that the total facility-wide NO_x emissions do not exceed 467 tons per year (see **facility-wide conditions 15. & 16.**).

[Rule 62-213.440, F.A.C.; PSD-FL-239/PA97-36; and, Applicant request.]

F.51. Quarterly NO_x Monitoring Report. Within 30 days following each calendar quarter, the permittee shall submit a report to the Department's Northwest District Office that summarizes the following information for the quarter.

- a. Identify the hours of NO_x emission data excluded from the compliance determination due to each of the following: startups, shutdowns, documented malfunctions, major tuning sessions, and fuel switches.
- b. For each malfunction, identify the: date; approximate time range; duration (hours) of the malfunction; NO_x emission levels during the malfunction; problem and cause of the problem (if known); and corrective action taken (if any).
- c. Identify the hours of NO_x monitoring system down time due to each of the following: monitor malfunctions; non-monitor malfunctions; quality assurance calibrations; other known causes; and

unknown causes. Identify the monitor availability.

- d. Monitor availability shall not be less than 95% in any calendar quarter. In the event that 95% availability is not achieved, the permittee shall include a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-4.070(3), 62-4.130, 62-4.160(14)(b), 62-210.700(6) & 62-212.400(BACT), F.A.C.; and, 1290001-005-AC.]

Section IV. Acid Rain Part.

Operated by: City of Tallahassee
ORIS Code: 689

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

<u>No.</u>	<u>Description</u>
-007	Boiler Number 7 - 621 MMBtu/hour
-014	Combustion Turbine Number 8 - 1897 MMBtu/hour

A.1. The Phase II permit application submitted for this facility, as approved by the Department, is a part of this permit (included as an Attachment). 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 listed below:

a. DEP Form No. 62-210.900(1)(a), dated 07/01/02.
 [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

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

E.U. ID No.	EPA ID	Year	2003	2004	2005	2006	2007
-007	7	SO₂ allowances, under Table 2 or 3 of 40 CFR 73	443*	443*	443*	443*	443*
-014	12	SO₂ allowances, under Table 2 or 3 of 40 CFR 73	0*	0*	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 U.S. EPA under Table 2 or 3 of 40 CFR 73.

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)1., 2. & 3., 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 No. 51., Appendix TV-4, Title V Conditions.}
[Rule 62-214.420(11), F.A.C.]

A.5. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62- 214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, Fast-Track Revisions of Acid Rain Parts.
[Rules 62-213.413 and 62-214.370(4), F.A.C.]

A.6. Comments, notes, and justifications: None.

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

City of Tallahassee, Electric Utilities
Sam O. Purdom Generating Station

PROPOSED Permit No.: 1290001-007-AV
Facility ID No.: 1290001

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:

Emissions Related to Combustion Turbine No. 1

1. Oil Vapor Extractor
2. Fuel Oil Piping
3. Lube Oil Tank

Emissions Related to Combustion Turbine No. 2

4. Oil Vapor Extractor
5. Fuel Oil Piping
6. Lube Oil Tank

Emissions Related to Steam Generator No. 7

7. Fuel Oil Piping
8. Hydrogen Gas Vents
9. Deareator Tank Vents
10. Oil Vapor Extractors
11. Lube Oil Tank (storage)
12. Lube/Fuel Oil Drip Pans
13. Noncondensable Gas Extractor
14. Natural Gas Vents
15. CO₂ Vents

Fuel Farm

16. Fuel Oil Tank No. 1
17. Fuel Oil Tank No. 3
18. Waste Water Tank
19. Waste Oil Tank
20. No.2 Fuel Oil Tank
21. Diesel Tank (300 Gallons)
22. Gasoline Tank
23. Diesel Tank Associated with Hydrant Main

Appendix I-1, Continued.

Fuel Dispensing Operations

24. Truck Loading/Unloading for No. 2 Fuel Oil
25. Truck Loading/Unloading for Distillate Oil Tank
26. Truck Loading/Unloading for Gasoline Tank
27. Fuel Dispensing Operations for Diesel Oil Tank
28. Barge Unloading Station
29. Truck Loading/Unloading Rack 1
30. Truck Loading/Unloading Rack 2

Fugitive VOC Emissions

31. (1-15) Parts Washers - Nonhalogenated Solvents

Space Heaters

32. (1-7) Space Heaters

Fugitive PM₁₀ Emissions

33. Paved Roads
34. Unpaved Roads
35. Heavy Construction Activities
36. Aggregate Handling & Storage

Laboratory

37. Laboratory Equipment
38. Chemical Usage
39. Vacuum Pumps
40. Laboratory Fume Hoods

41. Central Vacuum System

Maintenance Activities

42. Welding - Exempt per Rule 62-210.300(3)(a)16., F.A.C.
43. High Temperature Metal Cutting

Plant Operations

44. Lube Oil Storage Tanks
45. Propane Storage Tanks
46. Sulfuric Acid Tank Vent
47. Sodium Hydroxide Tank Vents
48. Demineralizer Degasifier
49. G/C Natural Gas Vent
50. Natural Gas Blowdown

Exempt Emissions Related to the Auxiliary Boiler

51. Hydrogen Gas Vents
52. Deaerator Tank Vents
53. Noncondensable Gas Extractor

Appendix I-1, Continued.

Exempt Emissions Related to the Combined Cycle Combustion Turbine (Unit 8)

54. Oil Vapor Extractor
55. Fuel Oil Piping
56. Organic Liquid Storage
57. Hydrogen Gas Vents
58. Deaerator Tank Vents
59. Lube/Fuel Oil Drip Pans
60. Noncondensable Gas Extractor
61. Natural Gas Blowdown/Vent
62. CO₂ Purge Vent

Water Treatment

63. Zero Discharge Facility

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

City of Tallahassee, Electric Utilities
Sam O. Purdom Generating Station

PROPOSED Permit No.: 1290001-007-AV
Facility ID No.: 1290001

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.

The below listed emissions units and/or activities are neither ‘regulated emissions units’ nor ‘insignificant emissions units’.

E.U. ID No. Brief Description of Emissions Units and/or Activity

- 010 Fugitive VOC Sources - Painting Operations
- 012 General Purpose Internal Combustion Engines
- 013 Emergency Generators
- 015 Cooling Tower

- 010 Fugitive VOC Emissions.
Fugitive VOC emissions are generated from the painting operations associated with normal plant maintenance.

- 012 General-purpose internal combustion engines.
Located for use at this source are (2) Welding Generators and a single Fire Pump.

- 013 Emergency generators.
Located for use at this source are (4) Emergency Generators.

- 015 Cooling Tower.
Cooling tower associated with Unit 8. Drift eliminators have been installed to reduce particulate matter emissions.

Appendix H-1, Permit History

City of Tallahassee
Sam O. Purdom Generating Station

PROPOSED Permit No.: 1290001-007-AV
Facility ID No.: 1290001

Permit History (for tracking purposes):

E.U.

<u>ID No</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issue / Effective Date</u>	<u>Expiration Date</u>	<u>Extended Date^{1,2}</u>	<u>Revised Date(s)</u>
-007	Boiler #7	AO65-242831	3/8/94	3/1/99		
-008	Combustion Turbine #1	AO65-242827	3/8/94	3/1/99		6/10/94, 6/24/94
-009	Combustion Turbine #2	AO65-242827	3/8/94	3/1/99		6/10/94, 6/24/94
-011	Auxiliary Boiler	1290001-002-AC	12/5/96	12/31/97		8/9/02
-014	Combustion Turbine #8	PSD-FL-239/PA97-36	5/28/98	5/15/03	(BACT) (Includes BACT)	10/8/96 8/9/02
All	Initial Title V Permit	1290001-001-AV	10/09/97 / 1/1/98	12/31/02		
All	Admin Correction To Update Appendix TV-1 to TV-2	1290001-004-AV	01/02/98	12/31/02		
All	Title V Revision to Include New Combustion Turbine #8	1290001-003-AV	9/11/98	12/31/02		
All	PSD Revision, Changes To Auxiliary Boiler and CT # 8	1290001-005-AC	8/9/02	8/9/02		
All	Title V Revision To Incorporate 1290001-005-AC	1290001-006-AV	10/17/02	12/31/02		
All	Title V Permit Renewal	1290001-007-AV	01/01/03	12/31/07		

Referenced Attachments

Phase II Acid Rain Application/Compliance Plan

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

Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)

Appendix TV-4, Title V Conditions (version dated 2/12/02)

ASP Number 97-B-01 **(With Scrivener's Order Dated July 9, 1997)**

Figure 1: Summary Report- **Gaseous and Opacity Excess Emission and Monitoring System Performance**

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

Table 2-1, Summary of Compliance Requirements

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

City of Tallahassee, Electric Utilities Department
Sam O. Purdom Generating Station

PROPOSED Permit No.: 1290001-007-AV
Facility ID No.: 1290001

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of the permit.

E. U. ID No.	Brief Description	Pollutant Name	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See Permit Condition(s)
					Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
	Facility Wide Conditions	SO ₂	(See Respective Sections)		N/A	N/A	80	N/A	80.0	PSD-FL-239, BACT	13
		NO _x	(See Respective Sections)		N/A	N/A	467	N/A	467.0	PSD-FL-239, BACT	15
-007	Boiler #7 (621 MMBtu/hour)	VE	No. 6 - No. 2 F.O.	8760	20%; 27% - 1 six min. period/hr.			N/A	N/A	62-296.405(1)(a)	B.5.
			Natural Gas	8760	20%; 27% - 1 six min. period/hr.			N/A	N/A	62-296.405(1)(a)	B.5.
	Acid Rain Phase II Unit	PM	No. 6 - No. 2 F.O.	8760	0.1 lb/MMBtu	N/A	N/A	62.1	272.0	62-296.405(1)(b)	B.7.
			Natural Gas	8760	0.1 lb/MMBtu	N/A	N/A	62.1	272.0	62-296.405(1)(b)	B.7.
	(44 MW Turbine-generator)	PM - SB**	No. 6 - No. 2 F.O.	3 hr/day	0.3 lb/MMBtu	N/A	N/A	186.3	340.0	62-210.700(3)	B.8.
			Natural Gas	3 hr/day	0.3 lb/MMBtu	N/A	N/A	186.3	340.0	62-210.700(3)	B.8.
	SO ₂	No. 6 - No. 2 F.O.	8760	1.87 lbs/MMBtu	N/A	N/A	1,161.3	80.0	62-296.405(1)(c)1.h	B.9.	
		Natural Gas	8760	N/A	N/A	N/A	N/A	80.0	62-296.405(1)(c)	B.9.	
	% Sulfur	No. 6 - No. 2 F.O.	8760	max. sulfur content 1.70%, by wt.			1,161.3	80.0	Applicant Request	B.10.	
-008	Combustion Turbine No. 1 (228 MMBtu/hour)	VE	No. 2 F.O.	6993	Less than 20%	N/A	N/A	N/A	N/A	62-296.320(4)(b)	D.5.
			Natural Gas	6993	Less than 20%	N/A	N/A	N/A	N/A	62-296.320(4)(b)	D.5.
-009	Combustion Turbine No. 2 (228 MMBtu/hour)	SO ₂	No. 2 F.O.	6993	0.4% sulfur	N/A	N/A	97.4	80.0	AO65-242827	D.6.
			Natural Gas	6993	N/A	N/A	N/A	N/A	80.0	N/A	N/A
-011	Auxiliary Boiler	VE	Natural Gas	2000	20%; 27% - 1 six min. period/hr.			N/A	N/A	62-296.406(1)	E.6.
		PM	Natural Gas	2000	N/A	N/A	N/A	N/A	N/A	62-296.406(2)	E.7.
		SO ₂	Natural Gas	2000	N/A	N/A	N/A	N/A	80.0	62-296.406(3)	E.8.
-014	Combustion Turbine #8 (1,696 MMBtu/hr - N.G.) (1,897 MMBtu/hr - F.O.)	VE	No. 2 F.O.	8760	10%	N/A	N/A	N/A	N/A	BACT	F.9.
			Natural Gas	8760	10%	N/A	N/A	N/A	N/A	BACT	F.9.
	Acid Rain Phase II Unit	PM/PM ₁₀	No. 2 F.O.	8760	max. sulfur content 0.05%, by wt.			N/A	N/A	BACT	BACT
			Natural Gas	8760	Good Combustion			N/A	N/A	BACT	BACT
		SO ₂	No. 2 F.O.	8760	max. sulfur content 0.05%, by wt.			N/A	80.0	BACT	F.10., F.25
			Natural Gas	8760	N/A	N/A	N/A	N/A	80.0	BACT	N/A
		NO _x	No. 2 F.O.	8760	42 ppmvd @ 15 % O ₂			N/A	467.0	BACT	F.12.
			Natural Gas	8760	12 ppmvd @ 15 % O ₂			N/A	467.0	BACT	F.11.
	CO	No. 2 F.O.	8760	90 ppmvd			N/A	193.0	BACT	F.14.	
		Natural Gas	8760	25 ppmvd			N/A	193.0	BACT	F.13.	

Notes:

* The "Equivalent Emissions" listed are for informational purposes.

** PM - SB refers to "soot blowing" and "load change".

Table 2-1, Summary of Compliance Requirements

City of Tallahassee, Electric Utilities
Sam O. Purdom Generating Station

PROPOSED Permit No.: 1290001-007-AV
Facility ID No.: 1290001

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E. U. ID No.	Brief Description	Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date ²	Min. Compliance Test Duration	CMS ¹	See Permit Condition(s)
	Facility Wide Conditions	SO ₂ NO _x	No. 2 F.O. Natural Gas	(See Respective Sections) (See Respective Sections)				Yes Yes	Facility Condition 14. Facility Condition 16.
-007	Boiler No. 7 (Phase II, Acid Rain)	VE	No. 6 - No. 2 F.O. Natural Gas	DEP method 9 DEP method 9	Annually ³ N/A	7/1 - 9/30 7/1 - 9/30	60 Minutes 60 Minutes	No No	C.5., C.6., C.11., C.13., C.16.
		PM	No. 6 - No. 2 F.O. Natural Gas	17, 5, 5B or 5F 17, 5, 5B or 5F	Annually ³ Annually ³	7/1 - 9/30 7/1 - 9/30	1 Hour 1 Hour	No No	C.7., C.10. - 15., C.17.
		SO ₂	No. 6 - No. 2 F.O.	Fuel Sampling & Analysis Provided by Vendor and per Acid Rain Phase II Commitment				No	C.8. & C.9. and Acid Rain Part
-008 -009	Combustion Turbine No. 1 Combustion Turbine No. 2	VE	No. 2 F.O. Natural Gas	EPA Method 9 EPA Method 9	Annually ⁴ Annually ⁴	7/1 - 9/30 7/1 - 9/30	30 Minutes 30 Minutes	No No	D.13. - D.16.
		SO ₂	No. 2 F.O.	Fuel Sampling & Analysis Provided by Vendor				No	D.9. & D.12.
-011	Auxiliary Boiler	VE	Natural Gas	EPA Method 9	Renewal		60 Minutes	No	E.15. - E.19.
		PM	Natural Gas	N/A	N/A	N/A	N/A	No	N/A
		SO ₂	Natural Gas	N/A	N/A	N/A	N/A	No	N/A
-014	Combustion Turbine #8 (1,467.7 MMBtu/hr - N.G.) (1,659.5 MMBtu/hr - F.O.) Acid Rain Phase II Unit	VE	No. 2 F.O. Natural Gas	EPA Method 9 EPA Method 9	Annually ³ Annually ³	7/1 - 9/30 7/1 - 9/30	60 Minutes 60 Minutes	No No	F.23., 24., 29., 30., 34., 36.-38. F.23., 24., 29., 30., 34., 36.-38.
		PM/PM ₁₀	No. 2 F.O. Natural Gas	Max. sulfur content 0.05%, by wt. Good Combustion Practices				No No	F.25.
		SO ₂	No. 2 F.O. Natural Gas	< 0.05% S., by wt. Good Combustion	N/A N/A	N/A N/A	N/A N/A	Yes Yes	13., 14.; F.19., 20., 25., 28., 29., 35., 49.
		NO _x	No. 2 F.O. Natural Gas	EPA Method 20 EPA Method 20	Initial Initial	N/A N/A	N/A N/A	Yes Yes	15., 16.; F.18. - 20., 22., 27., 28., 41. - 46., 50.
		CO	No. 2 F.O. Natural Gas	EPA Method 10 EPA Method 10	N/A Annually	N/A 7/1 - 9/30	N/A 1 - hr.	No No	F.21., 23., 26., 29. - 37., 47., 48.

Notes:

¹ CMS [=] continuous monitoring system.

² Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

³ Test not required in years that fuel oil is fired less than 400 hours.

⁴ If a combustion turbine is operated less than 400 hours per year, test is only required once every 5 years, during the year prior to permit renewal.