


## MEMORANDUM

TO: Michael G. Cooke

FROM: Trina L. Vielhauer 

DATE: <sup>11/10</sup> November 7, 2003

SUBJECT: FINAL Permit Revision No. **0970043-010-AV**  
Kissimmee Utility Authority  
**Cane Island Power Park**

This is a Title V Air Operation Permit Revision for the subject facility.

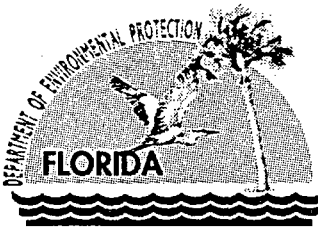
This facility consists of three fossil fuel-fired combustion turbine electric generating units, and three distillate oil storage tanks.

*This permit revision adds a 250 MW combined-cycle plant to the facility.* It includes a 167 MW stationary gas combustion turbine-electrical generator burning natural gas with fuel oil as backup; a supplemental gas-fired heat recovery steam generator to raise sufficient steam to achieve 250 MW in combined-cycle operation; an 80-90 MW steam electric generator; a 44 mmBtu/hr heat input duct burner; a selective catalytic reduction unit and ancillary equipment; ammonia storage; a 130-foot stack; and a 100-foot bypass stack for simple-cycle operation.

Comments were received from the applicant, and all issues were resolved concerning the DRAFT Title V Permit. *No comments* were received from U.S. EPA, Region 4, concerning the PROPOSED Title V Permit that was posted on the Department's web site on September 8, 2003.

I recommend your signature.

Attachment



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

## NOTICE OF FINAL PERMIT REVISION

In the Matter of an  
Application for Permit Revision by:

Mr. A. K. Ben Sharma, P.E.  
Vice President of Power Supply  
Kissimmee Utility Authority  
P.O. Box 423219  
Kissimmee, FL 34742-3219

FINAL Permit Revision No. **0970043-010-AV**  
**Cane Island Power Park**

Enclosed is FINAL Title V Permit Revision Number **0970043-010-AV** for the operation of the Cane Island Power Park, located at 6075 Old Tampa Highway, Intercession City, Osceola County, issued pursuant to Chapter 403, Florida Statutes (F.S.).

An electronic version of this permit revision has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (U.S. EPA) Region 4 office's review. The web site address is:

<http://www.dep.state.fl.us/air/permitting/airpermits>

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the permitting authority.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief  
Bureau of Air Regulation

"More Protection, Less Process"

Printed on recycled paper.

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT REVISION (including the FINAL permit revision) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 11/18/03 to the person(s) listed or as otherwise noted:

- Mr. A. K. Ben Sharma, P.E.\*
- Mr. Mark A. Wiitanen, P.E., Black & Veatch
- Mr. Len Kozlov, Central District Office
- U.S.EPA, Region 4 (INTERNET E-mail Memorandum)

11/18/03 cc: *Yon Cascio*  
*Reading File*  
*Chinab File*

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

*Paulina J. Sunday* 11/18/03  
(Clerk) (Date)

**FINAL PERMIT REVISION DETERMINATION**

**I. Comment(s).**

No comments were received from Region 4, U.S.EPA, concerning the PROPOSED Title V Permit Revision that was posted on the Department's web-site on September 8, 2003.

**II. Conclusion.**

The permitting authority hereby issues the FINAL Title V Permit Revision.

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature <input checked="" type="checkbox"/> Agent  <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to:  Mr. A.K. Ben Sharma, P.E.  Vice President of Power Supply  Kissimmee Utility Authority  P.O. Box 423219  Kissimmee, Florida 34742-3219</p>	<p>3. Service Type  <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail  <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article (Tra)  PS Fo</p>	<p>102595-02-M-1540</p>

7001 1140 0002 1577 9731

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Mr. A.K. Ben Sharma, Vice President

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<b>Total Postage &amp; Fees</b>	<b>\$</b>	

**Sent To**  
Mr. A.K. Ben Sharma, Vice President  
Street, Apt. No.; or PO Box No. P.O. Box 423219  
City, State, ZIP+4  
Kissimmee, Florida 34742-3219

PS Form 3800, January 2001 See Reverse for Instructions

## STATEMENT OF BASIS

Kissimmee Utility Authority  
**Cane Island Power Park**  
Osceola County

Facility ID No. **0970043**

Project No. **0970043-010-AV**

Title V Permit Revision

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

This facility consists of three fossil fuel-fired combustion turbine electric generating units and three distillate oil storage tanks. Emissions Unit 001 is a 40 MW General Electric Model LM-6000PA simple-cycle combustion turbine with an electrical generator set. Emission Unit 002 is a General Electric Model PG7111(EA) combustion turbine with electrical generator set and an unfired heat recovery steam generator (HRSG) with a steam-electric generator. Unit 002 produces 80 MW during simple-cycle operation and 120 MW during in combined-cycle operation. Each combustion turbine fires natural gas as the primary fuel with very low sulfur distillate oil ( $\leq 0.05\%$  sulfur by weight) as a backup fuel. Both units have simple-cycle stacks. Unit 002 also has a separate HRSG stack for combined-cycle operation.

*This permit revision adds Unit 003, a nominal 250 MW combined-cycle plant, to the facility.* It includes a nominal 167 MW stationary gas combustion turbine-electrical generator burning natural gas with fuel oil as backup; a supplemental gas-fired heat recovery steam generator to raise sufficient steam to achieve 250 MW in combined-cycle operation; an 80-90 MW steam electric generator; a 44 mmBtu/hr heat input duct burner; a selective catalytic reduction unit and ancillary equipment; ammonia storage; a 130-foot stack; and a 100-foot bypass stack for simple-cycle operation. Support facilities for Unit 003 include a cooling tower, water and wastewater facilities, water storage tanks, storm water detention pond, 230 KV transmission line, and a 1.0 million gallon storage tank for back-up distillate fuel oil.

Emissions from Unit 003 are controlled by Dry Low NO<sub>x</sub> (DLN) combustors and wet injection under simple-cycle operation. Emissions are controlled by DLN and wet injection and selective catalytic reduction (SCR) when operating in combined-cycle mode. Inherently clean fuels and good combustion practices are employed to control all pollutants. Because a continuous emissions monitoring system (CEMS) is used to demonstrate compliance for NO<sub>x</sub>, a compliance assurance monitoring (CAM) plan is not required for the SCR system.

Site Certification for the KUA Cane Island Facility Unit 003 was approved on November 22, 1999.

Based on the Title V Air Permit Revision Application received on October 17, 2001, this facility is a major source of hazardous air pollutants (HAPs). It holds ORIS code **7238** under the federal Acid Rain Program.

Kissimmee Utility Authority  
**Cane Island Power Park**  
Facility ID No. **0970043**  
Osceola County

Title V Air Operation Permit Revision

FINAL Permit No. **0970043-010-AV**

Permitting Authority:

State of Florida  
Department of Environmental Protection  
Division of Air Resource 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 Revision  
FINAL Permit No. 0970043-010-AV

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# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

**Permittee:**

Kissimmee Utility Authority  
1701 West Carroll Street  
Kissimmee, FL 34742

**FINAL Permit No.** 0970043-010-AV

**Facility ID No.** 0970043

**SIC No.:** 49

**Project:** Title V Air Operation Permit Revision

This permit revision is for the operation of the Kissimmee Utility Authority's Cane Island Power Park. This facility is located at 6075 Old Tampa Highway, Intercession City, Osceola County. The UTM coordinates are Zone 17, 449.8 East, and 3127.9 North. The Latitude is 28° 16' 40" North and the Longitude is 81° 31' 01" West.

*This revision adds a new Combined-Cycle Combustion Turbine Unit 3 to the facility.*

This Title V air operation permit 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 and operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit. The facility holds ORIS code 7238 under Phase II of the federal Acid Rain Program.

**Referenced attachments made a part of this permit:**

Appendix U-1, List of Unregulated Emissions Units and/or Activities  
Appendix I-1, List of Insignificant Emissions Units and/or Activities  
Table 1-1, Summary of Air Pollutant Standards and Terms  
Table 2-1, Summary of Compliance Requirements  
Appendix TV-4, Title V Conditions (version dated 02/12/02)  
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)  
Table 297.310-1, Calibration Schedule (version dated 10/07/96)  
Figure 1 - Summary Report-Gaseous And Opacity Excess Emission And Monitoring System  
Performance Report (version dated 7/96)  
Alternate Sampling Procedure, ASP No. 97-B-01  
BACT Determination dated April 7, 1993  
Order extending permits dated March 18, 1999

**Effective Date:** January 1, 2000

**Revised Date:** November 2, 2003

**Renewal Application Due Date:** July 5, 2004

**Expiration Date:** December 31, 2004

Michael G. Cooke, Director  
Division of Air Resource  
Management

**Section I. Facility Information.**

**Subsection A. Facility Description.**

This facility is an electric power generating plant and consists of:

Simple-Cycle Combustion Turbine Unit 1 (Emissions Unit 001), rated at 40 MW,

Combined-Cycle Combustion Turbine Unit 2 (Emissions Unit 002), rated at 120 MW, and

Combined-Cycle Combustion Turbine Unit 3 (Emissions Unit 003), rated at 250 MW, with duct burner (Emissions Unit 005).

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V permit revision application received on October 17, 2001, this facility is a major source of hazardous air pollutants (HAPs).

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

<b>E.U. ID No.</b>	<b>Brief Description</b>
001	Simple-Cycle Combustion Turbine (Unit 001), rated at 40 MW, 367 mmBtu/hr for natural gas and 372 mmBtu/hr for number 2 fuel oil, capable of burning natural gas and number 2 fuel oil, with emissions exhausted through a 65 ft. stack .
002	Combined-Cycle Combustion Turbine (Unit 002), rated at 120 MW, 869 mmBtu/hr for natural gas and 928 mmBtu/hr for number 2 fuel oil, capable of burning natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack .
003 005	Combined-Cycle Combustion Turbine (Unit 003), with duct burner (Unit 005).
004	Fuel Storage Tank (one million gallon)(Unit 004).

<b>Unregulated Emissions Units and/or Activities</b>	
007	Distillate Fuel Oil Tank No. 2 (700,000 gal. capacity)
008	Distillate Fuel Oil Tank No. 1 (300,000 gal. capacity)
006	Cooling Tower

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

**Subsection C. Relevant Documents.**

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

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

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

Appendix H-1, Permit History/ID Number Changes

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

Table 2-1, Summary of Compliance Requirements

These documents are on file with the permitting authority:

Initial Title V Permit Application received June 14, 1996.

Acid Rain Phase II Part Application received on January 14, 1998.

Acid Rain Phase II Part Application Revision signed by the Designated Representative on June 7, 1999.

Title V Permit Revision Application received October 17, 2001.

DRAFT Title V Permit Revision clerked on July 2, 2003.

PROPOSED Title V Permit Revision posted on the Internet for EPA review on September 8, 2003.

**Section II. Facility-wide Conditions.**

**The following conditions apply facility-wide:**

1. APPENDIX TV-4, TITLE V CONDITIONS, 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 a 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. **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.]

4. **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]

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. **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.]

7. [Reserved.]

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

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

9. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility shall include the following activities. The following conditions are not federally enforceable.

- a. Maintenance of paved areas shall be performed as needed.
- b. Worker and site vehicle movements shall be conducted on paved roads.
- c. Delivery vehicle movements shall be conducted on paved roads.
- d. Fuel oil delivery by truck shall be conducted on paved roads.

[Rule 62-296.320(4)(c)2., F.A.C.; and proposed by applicant in the initial Title V permit application received June 14, 1996.]

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

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

11. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.

[Rules 62-213.440(3) and 62-213.900, F.A.C.]

12. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Central District office:

Central District Office  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Telephone: 407/894-7555  
Fax: 407/897-2966

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

United States Environmental Protection Agency, Region 4  
Air Pesticides & Toxics Management Division  
Air & EPCRA Enforcement Branch  
Air Enforcement Section  
61 Forsyth Street  
Atlanta, Georgia 30303-8960

Telephone: 404/562-9155  
Fax: 404/562-9163 or 404/562-9164

14. 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 Unit(s) and Conditions.**

**Subsection A. This section addresses the following emissions unit.**

E.U. ID No.	Brief Description
001	Simple-Cycle Combustion Turbine (Unit 001), rated at 40 MW, 367 mmBtu/hr for natural gas and 372 mmBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 65 ft. stack .

{Permitting note(s): This emissions unit is regulated under Acid Rain, Phase II; Rule 62-210.300, F.A.C., Permits Required; and is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The affected facility to which this subpart applies is the simple-cycle gas turbine, Unit 001. This unit underwent a BACT Determination dated April 7, 1993. BACT Limits were incorporated into the subsequent air construction/PSD permits including AC 49-205703 (PSD-FL-182). Exhaust is vented through a 65 ft. stack. NO<sub>x</sub> emissions are controlled by low-NO<sub>x</sub> combustors, and by water injection, whereas SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions are controlled by firing .05%S oil, for only limited time periods. Fossil fuel fired combustion turbine Unit 001 began commercial operation in 1994.}

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

**Essential Potential to Emit (PTE) Parameters**

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

Unit No.	mmBtu/hr Heat Input	Fuel Type
001	367*	Natural Gas
	372*	Fuel Oil

\*Based on 101.3 kilopascals pressure, 288 Kelvin and 60% relative humidity (ISO standard day conditions), and lower heating value of the fuel fired.

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each emission unit for the purposes of confirming that emissions testing is conducted within 95 to 100 percent of the emission unit's rated capacity (or to limit future operation to 105 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability}

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; AC 49-205703 (PSD-FL-182); 0970043-007-AC (modification of PSD-FL-182A)]

**A.2. Emissions Unit Operating Rate Limitation After Testing.** See Specific Condition C.8.

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

**A.3. Methods of Operation - Fuels.** The only fuels allowed to be fired are pipeline-quality natural gas and low sulfur No. 2 distillate oil. The sulfur content of the No. 2 distillate oil shall not exceed 0.05% sulfur by weight. Operation of Unit No. 1 shall not exceed 5000 hours during any consecutive 12 months. Of the total allowable hours of operation, Unit No. 1 shall fire distillate oil for no more than:

- a. 800 hours during any consecutive 12 months if natural gas is available, or
- b. 1000 during any consecutive 12 months if natural gas is unavailable.

{Permitting Note: The limitations of specific conditions A.3 and A.6 are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334} [Rule 62-213.410, F.A.C., AC 49-205703 (PSD-FL-182); 0970043-007-AC (PSD-FL-182A); 0970043-009-AV, Revised on 10/13/00]

**Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging times for Specific Conditions A.4. through A.5. are based on the specified averaging time of the applicable test method.}

**A.4. Visible Emissions.** Visible emissions shall not exceed 10 percent opacity, except for during startup, shutdown or periods of part load operation, at which time visible emissions shall not exceed 20 percent opacity.

[AC 49-205703 (PSD-FL-182)]

**A.5.** The maximum allowable emissions from Unit 001 shall not exceed the emission limitations listed below.

Pollutant	Emission Limits			Basis
	Gas	Number 2 Fuel Oil	Equivalent Emissions Tons/Year <sup>a, b</sup>	
NO <sub>x</sub> <sup>c</sup>	25 ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	105.5 <sup>c</sup>	BACT
SO <sub>2</sub>	nil	20 lb/hr	10.0	BACT
PM	0.0245lb/mmBtu	0.0323 lb/mmBtu	24.0	BACT
H <sub>2</sub> SO <sub>4</sub>	nil	2.2 lb/hr	1.1	BACT
VOC	1.4 lb/hr	3 lb/hr	4.3	BACT
CO	30 ppmvd	63 ppmvd	118.0	BACT
Opacity	10% (see A.4.)	10% (see A.4.)		BACT
Be <sup>d</sup>	nil	2.5 E-6 lb/MMBtu	< 1	BACT
As <sup>d</sup>	nil	4.2 E-6 lb/MMBtu	< 1	AC 49-205703
Hg <sup>d</sup>	nil	3.1 E-6 lb/MMBtu	< 1	AC 49-205703
Pb <sup>d</sup>	nil	2.8 E-5 lb/MMBtu	< 1	AC 49-205703

- a. Tons per year based on 4000 hrs/yr for natural gas firing, 1000 hrs/yr for number 2 fuel oil firing.
- b. Based on 372 mmBtu/hr for number 2 fuel oil and 367 mmBtu/hr for natural gas.
- c. Original permit PSD-FL-182 limited NO<sub>x</sub> emissions to 25 ppmvd for gas firing to be reduced to 15 ppmvd. Project No. 0970043-007-AC (12/21/99) modified the PSD permit establishing the final NO<sub>x</sub> emission limit as 25 ppmvd when firing natural gas with a corresponding reduction in hours of operation (5000 hours per year) and a combined NO<sub>x</sub> emissions cap (366.1 TPY) with Unit No. 2.
- d. Limits based upon an approved emission factor, which is subject to change in the future.

[AC49-205703 (PSD-FL-182); 0970043-007-AC; 0970043-009-AV, Revised on 10/13/00]



### Test Methods and Procedures

**A.6. Annual Compliance Tests.** Emission testing for visible emissions and NO<sub>x</sub> shall be performed annually, in accordance with specific condition **A.8.**, with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using the following EPA reference methods in accordance with 40 CFR 60, Appendix A:

- a. Method 9 for VE;
- b. Method 20 for NO<sub>x</sub>.

Annual compliance with the NO<sub>x</sub> standard may be determined by using data collected as part of the annual Relative Accuracy Test Audit (RATA) testing as described in 40 CFR 60 Appendix B. Performance Specification 2. Section 7.1.2. instead of performing Methods 7E and 20 as separate tests. EPA Method 10 will be conducted simultaneously with the NO<sub>x</sub>/ O<sub>2</sub> RATA tests. The 20-30 minute tests conducted for the RATA testing will be strung together in a manner that fulfills additional requirements of EPA Methods 10 and 20 as to test run time (3 one hour runs) and O<sub>2</sub> stratification investigation. The collected data will be bias corrected to comply with the RATA test requirements, but will not be bias corrected for compliance with NSPS so as to meet the requirements of methods 10 and 20 (the NSPS test methods). No less than eight test points will be used for the RATA testing which will comply with both the RATA test requirements and the NSPS test requirements. The NO<sub>x</sub> span for methods 20 and 7E should not exceed 50 ppm instead of a span of 300 ppm as required by Subpart GG. Mass emissions of NO<sub>x</sub> and CO shall be determined pursuant to the procedures in 40 CFR 60, Appendix A. Method 19 or 40 CFR 75, Appendix F. If the unit is not operating because of scheduled maintenance outages and emergency repairs, it will be tested within thirty days of returning to service.

Note: Measured NO<sub>x</sub> emissions will be ISO corrected for comparison with NSPS, but will not be ISO corrected for comparison with the BACT standard.

[Rules 62-297.401 and 62-213.440, F.A.C., and AC 49-205703 (PSD-FL-182)]

**A.7. Testing for PM, CO, VOC.** Particulate matter tests shall be conducted using EPA test methods 5 or 17. Alternatively, the opacity emissions test may be used unless the 10% opacity limit is exceeded. Carbon monoxide tests shall be conducted using EPA test method 10. VOC tests shall be conducted using EPA test method 25A.

[Rule 62-297.401, F.A.C., and AC 49-205703 (PSD-FL-182).]

**A.8. Additional Test Requirements.** Test results shall be the average of three valid runs. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 95-100 percent of the maximum heat input rate allowed by this permit, achievable for the average ambient air temperature during the test. If it is impracticable to test at permitted capacity, the emissions unit may be tested at less than permitted capacity. In such cases, subsequent operation is limited by adjusting downward the entire heat input vs. inlet temperature curve by the increment equal to the difference between the maximum permitted heat input value and 105 percent of the value reached during the test. 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. 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.

[AC 49-205703 (PSD-FL-182).]

**A.9. Sulfur Dioxide - Sulfur Content.** **The permittee elected to use fuel sampling and analysis in lieu of installing a continuous monitoring system for SO<sub>2</sub> as required by the NSPS.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization

device. The permittee shall demonstrate compliance with the SO<sub>2</sub> limit by EPA test method 8 or fuel sampling and analysis. The permittee shall demonstrate compliance with the gaseous fuel sulfur limit via record keeping. Excess emissions shall be reported if the fuel being fired in the gas turbine exceeds 0.05% sulfur, by weight.

[AC 49-205703 (PSD-FL-182).]

**A.10. Fuel Sampling & Analysis - Sulfur/Nitrogen and Lower Heating Value.** The following fuel sampling and analysis program shall be used to demonstrate compliance with the sulfur dioxide standard:

- a. Determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest editions, to analyze a representative sample of the blended fuel following each fuel delivery. ASTM D3246-81, or its latest edition, shall be used for sulfur content of gaseous fuel.
- b. Record daily the amount of each fuel fired, density of each fuel, heating value, nitrogen content and the percent sulfur content by weight of fuel oil as specified in 40 CFR 60.334.

[Rule 62-213.440, F.A.C.; and AC 49-205703 (PSD-FL-182).]

### **Monitoring of Operations**

**A.11. Continuous Monitoring Required.** A continuous monitoring system shall be maintained to record fuel consumption. A continuous monitoring system shall be maintained to record emissions of nitrogen oxides in accordance with the requirements of 40 CFR 75. Data collected from this system shall be used for periodic monitoring purposes. While water injection is being utilized for NO<sub>x</sub> control, water to fuel ratio and fuel bound nitrogen is not required to be continuously monitored as long as the permittee will report excess emissions using the data collected by the continuous monitoring system in accordance with the following conditions:

1. Each NO<sub>x</sub> CEMS must be capable of calculating NO<sub>x</sub> emissions concentrations corrected to 15% O<sub>2</sub> and ISO conditions.
2. Monitor data availability shall be no less than 95 percent on a quarterly basis.
3. NO<sub>x</sub> CEMS should provide at least 4 data points for each hour and calculate a one-hour average.

To implement condition 1, Kissimmee Utility Authority (KUA) shall use ambient data (temperature, relative humidity, pressure) to correct excess emissions data to ISO conditions if requested by the Department. If monitor availability drops below 95% on a quarterly basis as prescribed in condition 2, KUA shall use water to fuel ratio and fuel-bound nitrogen data to monitor excess emissions in subsequent quarters until the minimum CEMS monitor availability is above 95%. The use of CEMS to monitor excess emissions is more stringent than the surrogate parameter monitoring in 40 CFR 60.334 since the CEMS directly measures NO<sub>x</sub> emissions. The CEMS also provides monitoring when no water injection is used to control NO<sub>x</sub> emissions (i.e., when firing natural gas, dry low NO<sub>x</sub> burners are used).

[AC 49-205703 (PSD-FL-182).]

**A.12. Excess Emissions by CEMS.** The CEMS shall be used to determine periods of excess emissions as per 40 CFR 60.334. Excess emissions are defined for this emissions unit as any 60-minute period during which the average emissions exceed the emission limits of specific condition A.5. of this permit. Periods of startup, shutdown and malfunction shall be monitored, recorded and reported with excess emissions following the format and requirements of 40 CFR 60.7.

[AC 49-205703 (PSD-FL-182).]

**Recordkeeping and Reporting Requirements**

**A.13. Excess Emission Reports.** Semi-annual excess emission reports shall be submitted to the DEP's Central District Office. These reports shall be postmarked by the 30th day following the end of each calendar half. Each excess emission report shall include the information required in 40 CFR 60.7(c) and 60.334.

[AC 49-205703 (PSD-FL-182)]

**A.14. Natural Gas Sulfur Content Records Required.** The owner or operator shall receive and maintain records of sulfur content of natural gas provided by the natural gas supplier, as per 40 CFR 60.334. The records shall report total sulfur content in terms of grains of sulfur per hundred cubic feet (standard conditions).

[AC 49-205703 (PSD-FL-182)]

**A.15. Additional Reports Required.** The owner or operator shall report the following with the Annual Operating Report (AOR) by March 1 of each calendar year: sulfur and nitrogen contents, by weight, and lower heating value of the fuel oil being fired, annual fuel consumption of number 2 fuel oil and natural gas, hours of operation per fuel usage and air emission limits. As it may become available, the permittee shall also provide the Department with information regarding documented enhancements to the LM6000PA, dual-fuel class, combustion turbine machine, which have demonstrated in the field the ability to achieve a continuous NO<sub>x</sub> emission rate of 15 ppmvd while firing natural gas.

[Rule 62-210.370(3), F.A.C.; and AC49-205703 (PSD-FL-182); 0970043-007-AC; 0970043-009-AV, Revised on 10/13/00]

**Other Specific Conditions**

**A.16. Maintain Capability to install an SCR.** This emissions unit is permitted for maximum NO<sub>x</sub> emission levels of 15 (gas)/42 (oil) ppmv. The Department will revise permitted emission levels for NO<sub>x</sub> if the manufacturer achieves an even lower NO<sub>x</sub> emission, pursuant to F.A.C. Rule 62-4.080. The permittee shall maintain capability for future installation of a selective catalytic reduction (SCR) system. This is required in the event that the permittee is unable to comply with the permitted NO<sub>x</sub> levels and the Department requires an SCR to be installed. In the event an SCR system is required to be installed, the emission limitations shall be established at the time of installation by stack test results and through a revised determination of BACT.

[AC 49-205703 (PSD-FL-182)]

**A.17.** This emissions unit is also subject to conditions C.1. through C.13., contained in **Subsection C., Common Conditions.**

**A.18.** This emissions unit is also subject to conditions D.1. through D.6., contained in **Subsection D., NSPS Common Conditions.**

**Subsection B. This section addresses the following emissions unit.**

E.U. ID No.	Brief Description
002	Combined-Cycle Combustion Turbine (Unit 002), rated at 120 MW, 869 mmBtu/hr for natural gas and 928 mmBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack.

{Permitting Notes: This emissions unit is regulated under Acid Rain, Phase II; Rule 62-210.300, F.A.C., Permits Required; and, is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The affected facility to which this subpart applies is the combined-cycle gas turbine, Unit 2. This unit underwent a BACT Determination dated April 7, 1993. BACT Limits were incorporated into the subsequent air construction/PSD permits including AC 49-205703 (PSD-FL-182). Exhaust is vented through the heat recovery steam generator that is not equipped with duct burners and then through a 75 ft. stack. NO<sub>x</sub> emissions are controlled by low-NO<sub>x</sub> combustors, and by water injection, whereas SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions are controlled by firing 0.05%, by weight, sulfur oil for only limited time periods. The turbine exhaust may also be vented through a bypass stack for simple-cycle operation when the HRSG or steam turbine is down for maintenance and/or repair. The turbine began commercial operation in 1995.}

**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:

Unit No.	mmBtu/hr Heat Input	Fuel Type
002	869*	Natural Gas
	928*	No. 2 Fuel Oil

\* Based on 101.3 kilopascals pressure, 288 Kelvin and 60% relative humidity (ISO standard day conditions), and lower heating value of the fuel fired.

{Permitting Note: The heat input limitations have been placed in each permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted within 95 to 100 percent of the emission unit's rated capacity (or to limit future operation to 105 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability.}

[Rules 62-4.160(2), 62-210.200(PTE), F.A.C.; and AC 49-205703 (PSD-FL-182)]

**B.2. Emissions Unit Operating Rate Limitation After Testing.** See Specific Condition C.8.

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

**B.3. Methods of Operation.**

a. Fuels: The only fuel(s) allowed to be burned are natural gas and number 2 fuel oil (0.05%), except that firing of number 2 fuel oil is limited to no more than 1000 hours per year if natural gas is unavailable, or no more than 800 hours per year if gas is available. The sulfur content of the fuel oil shall not exceed 0.05%, by weight. {Permitting Note: The limitations of specific conditions A.3 and A.6 are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334}

b. Inlet Air Fogging: The permittee is authorized to install and operate a high pressure, direct water spray fogging system. The proposed equipment will inject up to 26 gpm from spray nozzles to provide evaporative cooling of the compressor inlet air to Unit 2. Based on an inlet air mass flow rate of 2,077,077 pounds per hour, the inlet air fogging system shall be designed to achieve a 25° F cooling reduction from an ambient temperature of 95° F to cooled compressor inlet air

temperature of 70° F. {Permitting Note: The inlet air fogging system will typically operate during periods of peak power demand and high ambient temperatures. Fogging provides evaporative cooling of the inlet air to the compressor, which allows a higher mass flow rate with a corresponding increase in power production of up to 8 MW depending on initial ambient conditions. The increased power production is realized by firing additional fuel, which results in increased actual emissions. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows performance of the combustion turbine at a lower temperature than the existing ambient conditions.}

[Rule 62-213.410, F.A.C.; AC 49-205703 (PSD-FL-182); 0970043-008-AC (PSD-FL-182I); and 0970043-009-AV, Revised on 10/13/00]

**Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging times for Specific Conditions B.4. through B.5. are based on the specified averaging time of the applicable test method.}

**B.4. Visible Emissions.** Visible emissions shall not exceed 10 percent opacity, except for during startup, shutdown or periods of part load operation, at which time visible emissions shall not exceed 20 percent opacity.

[AC 49-205703 (PSD-FL-182)]

**B.5.** The maximum allowable emissions from Unit 2 shall not exceed the emission limitations listed below.

Pollutant	Emission Limits			Basis
	Gas	Number 2 Fuel Oil	Equivalent Emissions Tons/Year <sup>a, b</sup>	
NO <sub>x</sub> <sup>c</sup>	15 ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	290.6	BACT
SO <sub>2</sub>	nil	52 lb/hr	26	BACT
PM	0.010 lb/mmBtu	0.0162 lb/mmBtu	41.2	BACT
H <sub>2</sub> SO <sub>4</sub>	nil	5.72 lb/hr	2.86	BACT
VOC	2 lb/hr	5 lb/hr	10.26	BACT
CO	20 ppmvd	20 ppmvd	242	BACT
Opacity	10% (see B.4.)	10% (see B.4.)		BACT
Be <sup>d</sup>	nil	2.5e-6 lb/mmBtu	< 1	BACT
As <sup>d</sup>	nil	4.2e-6 lb/mmBtu	< 1	AC 49-205703
Hg <sup>d</sup>	nil	3.0e-6 lb/mmBtu	< 1	AC 49-205703
Pb <sup>d</sup>	nil	2.8e-5 lb/mmBtu	< 1	AC 49-205703

- a. Tons per year based on 7760 hrs/yr for natural gas firing, 1000 hrs/yr for number 2 fuel oil firing.
- b. Based on 928 mmBtu/hr for number 2 fuel oil and 869 mmBtu/hr for natural gas.
- c. NO<sub>x</sub> emission limits were permitted to be 25 ppmvd while firing natural gas until 1/1/98 via original application.
- d. Limits based upon an approved emission factor, which is subject to change in the future.

**B.6. Annual Compliance Tests.** Emission testing for visible emissions and NO<sub>x</sub> shall be performed annually, in accordance with specific condition **B.8.**, with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using the following EPA reference methods in accordance with 40 CFR 60, Appendix A:

- a. Method 9 for VE;
- b. Method 20 for NO<sub>x</sub>.

Annual compliance with the NO<sub>x</sub> standard may be determined by using data collected as part of the annual Relative Accuracy Test Audit (RATA) testing as described in 40 CFR 60 Appendix B. Performance Specification 2. Section 7.1.2. instead of performing Methods 7E and 20 as separate tests. EPA Method 10 will be conducted simultaneously with the NO<sub>x</sub>/ O<sub>2</sub> RATA tests. The 20-30 minute tests conducted for the RATA testing will be strung together in a manner that fulfills additional requirements of EPA Methods 10 and 20 as to test run time (3 one hour runs) and O<sub>2</sub> stratification investigation. The collected data will be bias corrected to comply with the RATA test requirements, but will not be bias corrected for compliance with NSPS so as to meet the requirements of methods 10 and 20 (the NSPS test methods). No less than eight test points will be used for the RATA testing which will comply with both the RATA test requirements and the NSPS test requirements. The NO<sub>x</sub> span for methods 20 and 7E should not exceed 50 ppm instead of a span of 300 ppm as required by Subpart GG. Mass emissions of NO<sub>x</sub> and CO shall be determined pursuant to the procedures in 40 CFR 60, Appendix A. Method 19 or 40 CFR 75, Appendix F. If the unit is not operating because of scheduled maintenance outages and emergency repairs, it will be tested within thirty days of returning to service.

Note: Measured NO<sub>x</sub> emissions will be ISO corrected for comparison with NSPS, but will not be ISO corrected for comparison with the BACT standard.

[Rules 62-297.401 and 62-213.440, F.A.C.; and AC 49-205703 (PSD-FL-182)]

**B.7. Testing for PM, CO, VOC.** Particulate matter tests shall be conducted using EPA test methods 5 or 17. Alternatively, the opacity emissions test may be used unless the 10% opacity limit is exceeded. Carbon monoxide tests shall be conducted using EPA test method 10. VOC tests shall be conducted using EPA test method 25A.

[Rule 62-297.401, F.A.C.; and AC 49-205703 (PSD-FL-182)]

**B.8. Additional Test Requirements.** Test results shall be the average of three valid runs. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 95-100 percent of the maximum heat input rate allowed by this permit, achievable for the average ambient air temperature during the test.. If it is impracticable to test at permitted capacity, the emissions unit may be tested at less than permitted capacity. In such cases, subsequent operation is limited by adjusting downward the entire heat input vs. inlet temperature curve by the increment equal to the difference between the maximum permitted heat input value and 105 percent of the value reached during the test. 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. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Dept. with the compliance test report.

[AC 49-205703 (PSD-FL-182)]

**B.9. Sulfur Dioxide - Sulfur Content.** **The permittee elected to use fuel sampling and analysis in lieu of installing a continuous monitoring system for SO<sub>2</sub> as required by the NSPS.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. The permittee shall demonstrate compliance with the SO<sub>2</sub> limit by EPA test method 8 or fuel sampling and analysis. The permittee shall demonstrate compliance with the gaseous fuel

sulfur limit via record keeping. Excess emissions shall be reported if the fuel being fired in the gas turbine exceeds 0.05% sulfur by weight.

[AC 49-205703 (PSD-FL-182)]

**B.10. Fuel Sampling & Analysis - Sulfur/Nitrogen and Lower Heating Value.** The following fuel sampling and analysis program shall be used to demonstrate compliance with the sulfur dioxide standard:

a. Determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest editions, to analyze a representative sample of the blended fuel following each fuel delivery. ASTM D3246-81, or its latest edition, shall be used for sulfur content of gaseous fuel.

b. Record daily the amount of each fuel fired, density of each fuel, heating value, nitrogen content and the percent sulfur content by weight of fuel oil as specified in 40 CFR 60.334.

[Rule 62-213.440, F.A.C.; and AC 49-205703 (PSD-FL-182)]

### **Monitoring of Operations**

**B.11 Continuous Monitoring Required.** A continuous monitoring system shall be maintained to record fuel consumption. A continuous monitoring system shall be maintained to record emissions of nitrogen oxides in accordance with the requirements of 40 CFR 75. Data collected from this system shall be used for periodic monitoring purposes. While water injection is being utilized for NO<sub>x</sub> control, water to fuel ratio and fuel bound nitrogen is not required to be continuously monitored as long as the permittee will report excess emissions using the data collected by the continuous monitoring system in accordance with the following conditions:

1. Each NO<sub>x</sub> CEMS must be capable of calculating NO<sub>x</sub> emissions concentrations corrected to 15% O<sub>2</sub> and ISO conditions.
2. Monitor data availability shall be no less than 95 percent on a quarterly basis.
3. NO<sub>x</sub> CEMS should provide at least 4 data points for each hour and calculate a one-hour average.

To implement condition 1, KUA shall use ambient data (temperature, relative humidity, pressure) to correct excess emissions data to ISO conditions if requested by the Department. If monitor availability drops below 95% on a quarterly basis as prescribed in condition 2, KUA shall use water to fuel ratio and fuel-bound nitrogen data to monitor excess emissions in subsequent quarters until the minimum CEMS monitor availability is above 95%. The use of CEMS to monitor excess emissions is more stringent than the surrogate parameter monitoring in 40 CFR 60.334 since the CEMS directly measures NO<sub>x</sub> emissions. The CEMS also provides monitoring when no water injection is used to control NO<sub>x</sub> emissions (i.e., when firing natural gas, dry low NO<sub>x</sub> burners are used).

[AC 49-205703 (PSD-FL-182)]

**B.12. Excess Emissions by CEMS.** The CEMS shall be used to determine periods of excess emissions as per 40 CFR 60.334. Excess emissions are defined for this emissions unit as any 60-minute period during which the average emissions exceed the emission limits of specific condition **B.5.** of this permit. Excess emissions from the combustion turbine caused entirely or in part by the operation of the inlet air fogging system shall also be prohibited. Periods of startup, shutdown and malfunction shall be monitored, recorded and reported with excess emissions following the format and requirements of 40 CFR 60.7.

[AC49-205703 (PSD-FL-182); 0970043-008-AC (PSD-FL-182I); and 0970043-009-AV, Revised on 10/13/00]

**Recordkeeping and Reporting Requirements**

**B.13. Excess Emission Reports.** Semi-annual excess emission reports shall be submitted to the DEP's Central District Office. These reports shall be postmarked by the 30th day following the last day of June and the last day of December. Each excess emission report shall include the information required in 40 CFR 60.7(c) and 60.334.  
[AC 49-205703 (PSD-FL-182)]

**B.14. Natural Gas Sulfur Content Records Required.** The owner or operator shall receive and maintain records of sulfur content of natural gas provided by the natural gas supplier, as per 40 CFR 60.334. The records shall report total sulfur content in terms of grains of sulfur per hundred cubic feet (standard conditions).  
[AC 49-205703 (PSD-FL-182)]

**B.15. Additional Reports Required.** The owner or operator shall report the following with the Annual Operating Report (AOR) by March 1 of each calendar year: sulfur and nitrogen contents, by weight, and lower heating value of the fuel oil being fired, annual fuel consumption of number 2 fuel oil and natural gas, hours of operation per fuel usage and air emission limits.  
[Rule 62-210.370(3), F.A.C.; and AC 49-205703 (PSD-FL-182)]

**Other Conditions**

**B.16. Maintain Capability to install an SCR.** This emissions unit is permitted for maximum NO<sub>x</sub> emission levels of 15 (gas)/42 (oil) ppmv. The Department will revise permitted emission levels for NO<sub>x</sub> if the manufacturer achieves an even lower NO<sub>x</sub> emission, pursuant to F.A.C. Rule 62-4.080. The permittee shall maintain capability for future installation of a selective catalytic reduction (SCR) system. This is required in the event that the permittee is unable to comply with the permitted NO<sub>x</sub> levels and the Department requires an SCR to be installed. In the event an SCR system is required to be installed, the emission limitations shall be established at the time of installation by stack test results and through a revised determination of BACT.  
[AC 49-205703 (PSD-FL-182)]

**B.17.** This emissions unit is also subject to conditions **C.1.** through **C.13**, contained in **Subsection C., Common Conditions.**

**B.18.** This emissions unit is also subject to conditions **D.1.** through **D.6.**, contained in **Subsection D., NSPS Common Conditions.**



**Subsection C. Common Conditions.**

E.U. ID No.	Brief Description
001	Simple-Cycle Combustion Turbine (Unit 001), rated at 40 MW, 367 mmBtu/hr for natural gas and 372 mmBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 65 ft. stack .
002	Combined-Cycle Combustion Turbine (Unit 002), rated at 120 MW, 869 mmBtu/hr for natural gas and 928 mmBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack .
003 005	Combined-Cycle Combustion Turbine (Unit 003), with duct burner (Unit 005), rated at 250 MW, 1696 mmBtu/hr for natural gas and 1910 mmBtu/hr for number 2 fuel oil, and capable of burning any combination of natural gas and number 2 fuel oil. Emissions are exhausted through a 100 ft. stack for simple-cycle operation, and a 130 ft. stack for combined-cycle operation.

**The following conditions apply to the emissions unit(s) listed above:**

**Essential Potential to Emit (PTE) Parameters**

**C.1. Restricted Operation.** Unit No. 1 shall operate no more than 5000 hours during any consecutive 12 months. Operation of Unit No. 2 is not restricted (8,760 hours/year). In addition, the combined NOx emissions of Unit Nos. 1 and 2 shall not exceed 366.1 tons during any consecutive 12 months. Compliance with this requirement shall be demonstrated each month with NOx emissions data collected from the installed CEMS. Records shall be maintained on site demonstrating compliance with this cap for each consecutive 12-month period. Additionally, the annual submittal of each Annual Operating Report shall include such data and calculations. {Permitting Note: Revised by Project No. 0970043-009-AV on 10/13/00 to incorporate previous Project No. 0970043-007-AC that modified original permit PSD-FL-182. This action set a final NOx limit for Unit No. 1 of 25 ppmvd with a corresponding reduction in annual hours of operation from 8760 to 5000 and established the NOx emissions cap.} [Rule 62-210.200(PTE), F.A.C.; 0970043-007-AC (PSD-FL-182A); 0970043-009-AV, Revised on 10/13/00.]

**Emission Limitations and Standards**

{Permitting note: 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.}

**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.}

**C.2. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing:**

- (1) best operational practices to minimize emissions are adhered to and
- (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

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

**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.; and PSD-FL-254, Specific Condition 50.]

**C.5. Visible Emissions.** The test method for visible emissions for emissions units 001 (Unit 1), 002 (Unit 2), and 003 (Unit 3) 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 and 62-297.401, F.A.C.]

**C.6. 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.7. 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.8. Operating Rate During Testing.** Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 95 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 105 percent of the test load until a new

test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

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

**C.9. 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.

**(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.10. 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.]

**Recordkeeping and Reporting Requirements**

**C.11. Excess Emissions - Notification.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Central District Air Section in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a semi-annual report, if requested by the Central District Air Section.

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

**C.12. Excess Emissions - Report.** Submit to the Central District Air Section a written report of emissions in excess of emission limiting standards as set forth in this permit, for each semi-annual period. 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.

[Rule 62-213.440, F.A.C.; and AC 49-205703 (PSD-FL-182)]

**C.13. Test Reports.**

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

(b) The required test report shall be filed with the Central District Air Section 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 Central District Air Section 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.]

**C.14. 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;
- b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
- c. Each NESHAP pollutant, if there is an applicable emission standard.

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.

9. The owner or operator shall notify the Central District 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 DEP, 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 DEP.

**(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

**(d)** 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.]

**C.15.** By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

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

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

**Subsection D. NSPS Common Conditions.**

E.U. ID No.	Brief Description
001	Simple-Cycle Combustion Turbine Unit 1, rated at 40 MW, 367 mmBtu/hr for natural gas and 372 mmBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 65 ft. stack .
002	Combined-Cycle Combustion Turbine Unit 2, rated at 120 MW, 869 mmBtu/hr for natural gas and 928 mmBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack .
003 005	Combined-Cycle Combustion Turbine Unit 003 with duct burner (Unit 005), rated at 250 MW, 1696 mmBtu/hr for natural gas and 1910 mmBtu/hr for number 2 fuel oil, and capable of burning any combination of natural gas and number 2 fuel oil. Emissions are exhausted through a 100 ft. stack for simple-cycle operation, and a 130 ft. stack for combined-cycle operation.

{Permitting Note: The emissions units above are subject to the following conditions from 40 CFR 60 Subpart A, General Provisions. The affected units to which this subpart applies are the simple-cycle combustion turbine, Unit 001, the combined-cycle combustion turbine, Unit 002, and the combined-cycle combustion turbine, Unit 003.}

**The following conditions apply to the NSPS emissions units listed above:**

**D.1. Pursuant to 40 CFR 60.7 Notification And Record Keeping.**

(a) Any owner or operator subject to the provisions of this part 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.

(b) The owner or operator subject to the provisions of this part 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.

(c) 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 (excess emissions are defined in applicable subparts) 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 semi-annual 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.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 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.

*[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]*

(f) The owner or operator subject to the provisions of this part 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 this part recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.

[40 CFR 60.7 and Rule 62-213.440(1)(b)2.b., F.A.C.]

#### **D.2. Pursuant to 40 CFR 60.8 Performance Tests.**

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart.

(c) 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.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining



compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8]

**D.3. Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements.**

(a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) 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.

(e)(5) The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

[40 CFR 60.11]

**D.4. Pursuant to 40 CFR 60.12 Circumvention.**

No owner or operator subject to the provisions of this part 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]

**D.5. Pursuant to 40 CFR 60.13 Monitoring Requirements.**

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d)(1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an

upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.

(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorder during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non-reduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

[40 CFR 60.13]

#### **D.6. Pursuant to 40 CFR 60.17 Incorporations by Reference.**

The materials listed below are incorporated by reference in the corresponding sections noted.

[Note: The remainder of this section has not been reproduced in this permit for brevity. See 40 CFR 60.17 for materials incorporated by reference.]

[40 CFR 60.17]

**Subsection E. This section addresses the following emissions units.**

<b>E.U. ID Nos.</b>	<b>Brief Description</b>
003 005	These units are comprised of a combined-cycle combustion turbine plant that includes (a) a stationary gas turbine (Unit 003), (b) a supplementary gas-fired heat recovery steam generator (HRSG) with duct burner (Unit 005), and (c) a steam turbine. The plant is rated at 250 MW, 1696 mmBtu/hr for natural gas and 1910 mmBtu/hr for number 2 fuel oil, and capable of burning any combination of natural gas and number 2 fuel oil. Emissions are exhausted through a 100 ft. stack for simple-cycle operation, and a 130 ft. stack for combined-cycle operation.

{Permitting Notes: The combustion turbine is regulated under Phase II of the federal Acid Rain Program; Rule 62-210.300, F.A.C., Permits Required; and, is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The HRSG equipped with a natural gas fired 44 mmBTU/hr duct burner (HHV) and 80-90 MW steam electrical generator shall comply with all applicable provisions of 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial Commercial-Institutional Steam Generating Units Which Construction is Commenced After September June 9, 1989, adopted by reference in Rule 62-204.800(7), F.A.C.}

*Simple-cycle control technology* includes (a) dry low nitrogen oxides (NOx) (DLN) combustors to control NOx emissions during periods of natural gas use, and (b) a water injection system to control NOx emissions during periods of distillate fuel oil use.

*Combined-cycle control technology* includes (a) a selective catalytic reduction system (SCR) to control NOx emissions, (b) DLN combustors to control NOx emissions during periods of natural gas use, and (c) a water injection system to control NOx emissions during periods of distillate fuel oil use. Because a continuous emissions monitoring system (CEMS) is used to demonstrate compliance for NO<sub>x</sub>, a compliance assurance monitoring (CAM) plan is not required for the SCR system.

The turbine began commercial operation in 2001.

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

**Essential Potential to Emit (PTE) Parameters**

**E.1. Combustion Turbine Capacity.** The maximum heat input rates, based on the lower heating value (LHV) of each fuel to this Unit at ambient conditions of 19°F temperature, 55% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,696 million Btu per hour (mmBtu/hr) when firing natural gas, and not exceed 1,910 mmBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions were required to be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing by the permittee.

[Rule 62-210.200, F.A.C. (Definitions - Potential Emissions); and PSD-FL-254, Specific Condition 10.]

**E.2. Heat Recovery Steam Generator equipped with Duct Burner.** The maximum heat input rate of the natural gas fired duct burner shall not exceed 44 mmBtu/hour (HHV).

[Rule 62-210.200, F.A.C. (Definitions - Potential Emissions); and PSD-FL-254, Specific Condition 11.]

{Permitting Note: The heat input limitations have been placed in each permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the emission unit's rated capacity (or to limit future operation to 105 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability.}

[Rules 62-4.160(2), 62-210.200(PTE), F.A.C.; and PSD-FL-254.]

**E.3. Emissions Unit Operating Rate Limitation After Testing.** See Specific Condition C.8.  
[Rule 62-297.310(2), F.A.C.]

### **Methods of Operation**

**E.4. Operating Procedures.** Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.

[Rule 62-4.070(3), F.A.C.; and PSD-FL-254, Specific Condition 14.]

**E.5. Circumvention.** The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly.  
[Rule 62-210.650, F.A.C.; and PSD-FL-254, Specific Condition 15.]

**E.5.1. Maximum allowable hours** of operation for the 250 MW Combined-Cycle Unit are 8760 hours per year while firing natural gas. Fuel oil firing of the combustion turbine is permitted for a maximum of 720 hours per year.

[Rule 62-210.200, F.A.C. (Definitions - Potential Emissions); PSD-FL-254, Specific condition 16.]

**E.5.2. Simple-Cycle Operation.** The plant may be operated in simple-cycle mode. Different limits apply depending upon whether simple-cycle operation is of an intermittent nature (e.g., caused by maintenance of equipment following the combustion turbine, or temporary electrical demand fluctuations), or long-term electrical demand situations.

[PSD-FL-254, Specific Condition 17.]

**E.6. Fuels.** Only pipeline natural gas or a maximum of 0.05 percent, by weight, sulfur fuel oil (No. 2 or superior grade of distillate fuel oil) shall be fired in this unit.

[Rule 62-210.200, F.A.C. (Definitions - Potential Emissions); and PSD-FL-254, Specific Condition 9.]

### **Control Technology**

**E.7. Dry Low NO<sub>x</sub> (DLN) combustors** are installed on the stationary combustion turbine to comply with the simple-cycle NO<sub>x</sub> emissions limits listed in Specific Condition **E.13**.

[Rules 62-4.070 and 62-212.400, F.A.C.; and PSD-FL-254, Specific Condition 18.]

**E.8.** A water injection system is installed for use when firing No. 2 or superior grade distillate fuel oil for control of NO<sub>x</sub> emissions.  
[Rules 62-4.070 and 62-212.400, F.A.C.; and PSD-FL-254, Specific Condition 19.]

**E.9.** A selective catalytic reduction (SCR) system is installed to comply with the combined-cycle NO<sub>x</sub> limit listed in Specific Condition **E.13**.  
[PSD-FL-254, Specific Condition 20.]

**E.10.** These units are designed to accommodate adequate testing and sampling locations for compliance with the applicable emission limits (per each unit) listed in Specific Conditions **E.13** through **E.17**.  
[Rules 62-4.070 and 62-204.800, F.A.C.; 40 CFR60.40a(b); and PSD-FL-254, Specific Condition 21.]

**E.11.** The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN and wet injection systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions and shall be maintained to minimize simple-cycle NO<sub>x</sub> emissions and CO emissions.  
[Rules 62-4.070 and 62-210.650 F.A.C.; and PSD-FL-254, Specific Condition 22.]

**E.12.** Drift eliminators are installed on the cooling tower to reduce PM/PM<sub>10</sub> emissions.  
[PSD-FL-254, Specific Condition 23.]

### **Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging times for Specific Conditions **E.13** through **E.17** are based on the specified averaging time of the applicable test method.}

#### **E.13. Nitrogen Oxides.**

##### ***A. Combined-Cycle Operation***

- The concentration of NO<sub>x</sub> in the stack exhaust gas, with the combustion turbine operating on gas (fuel oil) and the duct burner on or off, shall not exceed 3.5 (15) ppmvd @15% O<sub>2</sub> on a 3-hr block average. Compliance shall be determined by the continuous emission monitor (CEMS). Emissions of NO<sub>x</sub> calculated as NO<sub>2</sub> in the stack exhaust gas (at ISO conditions) with the combustion turbine operating shall not exceed 26 (108) pounds per hour (lb/hr) with the duct burner on or off to be demonstrated by *initial* stack test.
- The concentration of ammonia in the exhaust gas from each combustion turbine shall not exceed 5 ppmvd @15% O<sub>2</sub>. The compliance procedures are described in Specific Condition **E.21**. [Rules 62-212.400 and 62-4.070, F.A.C.]
- When NO<sub>x</sub> monitoring data are not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time.

##### ***B. Intermittent Simple-Cycle Operation***

The concentration of NO<sub>x</sub> in the stack exhaust gas, with the combustion turbine operating on gas (fuel oil) shall not exceed 12 (42) ppmvd at 15% O<sub>2</sub> (24-hr block average). Emissions of NO<sub>x</sub> in the stack exhaust gas (at ISO conditions) with the combustion turbine operating shall not exceed 86 (310) pounds per hour (lb/hr). [Rule 62-212.400, F.A.C.]

- Notwithstanding the applicable NO<sub>x</sub> limit during simple-cycle operation, reasonable measures shall be implemented to maintain the concentration of NO<sub>x</sub> in the exhaust gas at 9 ppmvd at 15% O<sub>2</sub> or lower. Any tuning of the combustors for Dry Low NO<sub>x</sub> operation while firing gas shall result in initial subsequent NO<sub>x</sub> concentrations of 9 ppmvd @15% O<sub>2</sub> or lower.  
[Rules 62-212.400 and 62-4.070, F.A.C.]
- When NO<sub>x</sub> monitoring data are not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time.

C. *Continuous Simple-Cycle Operation*

- The concentration of NO<sub>x</sub> in the stack exhaust gas, with the combustion turbine operating on gas (fuel oil) shall not exceed 9 (42) ppmvd at 15% O<sub>2</sub> (24-hr block average). Emissions of NO<sub>x</sub> in the stack exhaust gas (at ISO conditions) with the combustion turbine operating shall not exceed 65 (310) pounds per hour (lb/hr). [Rules 62-212.400, F.A.C.]
- Notwithstanding the applicable NO<sub>x</sub> limit during simple-cycle operation, reasonable measures shall be implemented to maintain the concentration of NO<sub>x</sub> in the exhaust gas at 9 ppmvd at 15% O<sub>2</sub> or lower. Any tuning of the combustors for Dry Low NO<sub>x</sub> operation while firing gas shall result in initial subsequent NO<sub>x</sub> concentrations of 9 ppmvd @15% O<sub>2</sub> or lower. [Rules 62-212.400 and 62-4.070, F.A.C.]
- When NO<sub>x</sub> monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time.  
[PSD-FL-254, Specific Condition 24.]

**E.14. Carbon Monoxide.** Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas (fuel oil) shall neither exceed 12 (20) ppm, nor exceed 43 (71) lb/hr, with the duct burner off, and neither exceed 20 (30) ppm, nor exceed 71 (108) lb/hr, with the duct burner on, to be demonstrated by stack test using EPA Method 10.  
[Rule 62-212.400, F.A.C.; and PSD-FL-254, Specific Condition 25.]

**E.15. Volatile Organic Compounds.** Emissions of VOC in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas (fuel oil) shall neither exceed 1.4 (10) ppm, nor exceed 3 (21.4) lb/hr, with the duct burner off, and neither exceed 4 (10) ppm, nor exceed 8.5 (21.4) lb/hr, with the duct burner on, to be demonstrated by *initial* stack test using EPA Method 18, 25 or 25A. No annual testing is required.  
[Rule 62-212.400, F.A.C.; and PSD-FL-254, Specific Condition 26.]

**E.16. Sulfur Dioxide.** SO<sub>2</sub> emissions shall be limited by firing pipeline natural gas (sulfur content less than 20 grains per 100 standard cubic foot), or by firing No. 2 or superior grade distillate fuel oil with a maximum 0.05 percent sulfur, by weight, for 720 hours per year. Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Conditions **E.32.** and **E.33.** will demonstrate compliance with the applicable NSPS SO<sub>2</sub> emissions limitations from the duct burner or the combustion turbine. Emissions of SO<sub>2</sub> shall not exceed 38.1 tons per year.  
[40 CFR 60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C. to avoid PSD Review; and PSD-FL-254, Specific Condition 27.]

**E.17. Visible Emissions.** VE emissions shall serve as a surrogate for PM/PM<sub>10</sub> emissions from the combustion turbine operating with or without the duct burner, and shall not exceed 10 percent opacity from the stack in use.

[Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.; and PSD-FL-254, Specific Condition 28.]

### **Excess Emissions**

**E.18.** Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period. During any calendar day in which a start-up or shutdown occurs with natural gas as the exclusively fired fuel, an alternative NO<sub>x</sub> limit of 86 lb/hr (310 lb/hr if fuel oil is fired during the calendar day) on the basis of a 24-hour average shall apply.

[Rule 62-210.700, F.A.C.; and PSD-FL-254, Specific Condition 29., as modified on November 26, 2002.]

**E.19. Excess emissions** entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C. These emissions shall be included in the 24-hr average for NO<sub>x</sub>.

[PSD-FL-254, Specific Condition 30.]

**E.20. Excess Emissions Report.** If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's Central District office within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Condition E.13.

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C.; 40 CFR 60.7 (1998 version); and PSD-FL-254, Specific Condition 31.]

### **Compliance Determination**

**E.21. Selective Catalytic Reduction System (SCR) Compliance Procedures.**

- An *initial* stack emission test for nitrogen oxides and ammonia from the CGT/HRGS pair was conducted: 1) for natural gas firing, and 2) for distillate fuel oil firing. The ammonia injection rate necessary to comply with the NO<sub>x</sub> standard was established during the initial performance tests.
- The SCR equipment shall operate at all times that the combustion turbine is operating in combined-cycle operation mode. The permittee shall, whenever possible, operate the facility in a manner so as to optimize the effectiveness of the SCR unit, while minimizing ammonia slip to below the emission limit.
- The permittee shall operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system of the CGT/HRSG



set. It shall be maintained and calibrated according to the manufacture's specifications. During the stack test, the permittee at each load condition shall determine the minimum ammonia flow rate required to meet the emissions limitations. During NO<sub>x</sub> CEM downtimes or malfunctions, the permittee shall operate at greater or equal to 100% of the ammonia injection rate determined during the stack test.

[PSD-FL-254, Specific Condition 52.]

**E.22.** Compliance with the allowable emission limiting standards shall be determined annually as indicated in this permit, by using the following reference methods as described in 40 CFR 60, Appendix A (1998 version), and adopted by reference in Chapter 62-204.800, F.A.C.  
[PSD-FL-254, Specific Condition 32.]

**E.23.** Annual compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on these units as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.

- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
- EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources".
- EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Tests must be conducted with the duct burner on and with the duct burner off.
- EPA Method 26A (modified) for ammonia sample collection.
- EPA Draft Method 206 for ion chromatographic analysis for ammonia.

[PSD-FL-254, Specific Condition 33.]

**E.24.** Continuous compliance with the NO<sub>x</sub> emission limits. Continuous compliance with the NO<sub>x</sub> emission limits shall be demonstrated with the CEM system on a 3-hr average basis (a 24-hour block average shall be used to demonstrate compliance with the NO<sub>x</sub> limits when operating under Intermittent Simple-Cycle Operation or Continuous Simple-Cycle Operation). Based on CEMS data, a separate compliance determination is conducted at the end of each 3-hr period and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous 3-hr period. Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by 62-210.700, F.A.C. A valid hourly emission rate shall be calculated for each hour in which at least two NO<sub>x</sub> concentrations are obtained at least 15 minutes apart. These excess emissions periods shall be reported as required in Specific Condition **E.20**.

[Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75; and PSD-FL-254, Specific Condition 34.]

**E.25.** Compliance with the SO<sub>2</sub> and PM/PM<sub>10</sub> emission limits. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas, is the method for determining compliance for SO<sub>2</sub> and PM<sub>10</sub>. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO<sub>2</sub> standard, ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur

content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. 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) (1998 version).

[PSD-FL-254, Specific Condition 35.]

**E.26. Compliance with CO emission limit.** An *initial* test for CO, was conducted concurrently with the initial NO<sub>x</sub> test, as required. The initial NO<sub>x</sub> and CO test results shall be the average of three valid one-hour runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual RATA testing for the NO<sub>x</sub> CEMS required pursuant to 40 CFR 75. As an alternative to annual testing in a given year, periodic tuning data shall be provided to demonstrate compliance in the year the tuning is conducted.

[PSD-FL-254, Specific Condition 36.]

**E.26.1 Compliance with the VOC emission limit.** An *initial* test was required to demonstrate compliance with the VOC emission limit. Subsequently, the CO emission limit and periodic tuning data shall be employed as surrogate and no annual testing is required.

[PSD-FL-254, Specific Condition 37.]

**E.27. Testing procedures.** Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

[PSD-FL-254, Specific Condition 38.]

### **Monitoring of Operations**

**E.28. Continuous Monitoring System.** The permittee shall calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the NO<sub>x</sub> from these units. Periods when NO<sub>x</sub> emissions (ppmvd @ 15% oxygen) are above the permitted limits, listed in Specific Condition E.13. (other than those allowed for in Specific Condition E.18.) shall be reported to the DEP Central District Office within one working day (verbally) followed up by a written explanation not later than three (3) working days (alternatively by facsimile within one working day).

[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C.; 40 CFR 60.7 (1998 version); and PSD-FL-254, Specific Condition 44., as modified on November 26, 2002.]

**E.29. CEMS for reporting excess emissions.** The NO<sub>x</sub> CEMS shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). Upon request from DEP, the CEMS emission rates for NO<sub>x</sub> on the CT shall be corrected to ISO conditions to demonstrate compliance with the NO<sub>x</sub> standard established in 40 CFR 60.332.

[EPA approval letter dated February 10, 1999; and PSD-FL-254, Specific Condition 45.]

**E.30. CEMS in lieu of Water to Fuel Ratio.** The NO<sub>x</sub> CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). Subject to EPA approval, the calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NO<sub>x</sub> CEMS. Upon request from DEP, the CEMS emission rates for NO<sub>x</sub> on this Unit shall be corrected to ISO conditions to demonstrate compliance with the NO<sub>x</sub> standard established in 40 CFR 60.332.

[EPA Approval dated February 10, 1999; and PSD-FL-254, Specific Condition 46.]

**E.31. Continuous Monitoring System Reports.** The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.

[PSD-FL-254, Specific Condition 47.]

**E.32. Natural Gas Monitoring Schedule.** A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:

- The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).
- Each unit shall be monitored for SO<sub>2</sub> emissions using methods consistent with the requirements of 40 CFR 75, and certified by the USEPA.

This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO<sub>2</sub> emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[PSD-FL-254, Specific Condition 48.]

**E.33. Fuel Oil Monitoring Schedule.** The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

[PSD-FL-254, Specific Condition 49.]

**Recordkeeping and Reporting Requirements**

**E.34. Semi-Annual Reports.** Semi-annual excess emission reports, in accordance with 40 CFR 60.7(a)(7)(c), shall be submitted to the DEP's Central District Office.  
[PSD-FL-254, Specific Condition 14., in Section II.]

**E.35. Test Notification.** The DEP's Central District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance test(s).  
[PSD-FL-254, Specific Condition 39.]

**E.36. Special Compliance Tests.** The DEP may request a special compliance test pursuant to Rule 62-297.310(7), 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-254, Specific Condition 40.]

**E.37. Test Results.** Compliance test results shall be submitted to the DEP's Central District office no later than 45 days after completion of the last test run.  
[Rule 62-297.310(8), F.A.C.; and PSD-FL-254, Specific Condition 41.]

**E.38. Records.** All measurements, records, and other data required to be maintained by KUA shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request.  
[PSD-FL-254, Specific Condition 42.]

**E.39. Compliance Test Reports.** The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.  
[PSD-FL-254, Specific Condition 43.]

**E.40. Subpart Dc Requirements.** The permittee shall comply with all applicable requirements of 40 CFR 60, Subpart Dc.  
[PSD-FL-254, Specific Condition 51.]

**Other Specific Conditions**

**E.41.** This emissions unit is also subject to conditions **C.1.** through **C.13.**, contained in **Subsection C., Common Conditions.**

**E.42.** This emissions unit is also subject to conditions **D.1.** through **D.6.**, contained in **Subsection D., NSPS Common Conditions.**

**Subsection F. This section addresses the following emissions unit.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
004	Fuel Storage Tank

This fuel storage unit, consisting of a 1.0 million gallon distillate fuel oil storage tank (Unit 004), shall comply with all applicable provisions of 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, adopted by reference in Rule 62-204.800, F.A.C. [PSD-FL-254, Specific Condition 5.]

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

**Essential Potential to Emit (PTE) Parameters**

F.1. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.

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

**Recordkeeping Requirements**

F.2. The permittee shall maintain records on site for storage vessel identification number 004 to include the date of construction, the material storage capacity, and type of material stored for the life of this storage vessel.

[40 CFR 60.116b(b).]

**Section IV. This section is the Acid Rain Part.**

**Operated by:** Kissimmee Utility Authority  
**ORIS code:** 7238

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

The emissions units listed below are regulated under Phase II of the federal Acid Rain Program.

<b>E.U. ID No.</b>	<b>Brief Description</b>
001	Simple-Cycle Combustion Turbine (Unit 001)
002	Combined-Cycle Combustion Turbine (Unit 002)
003	Combined-Cycle Combustion Turbine (Unit 003)

**A.1.** The Phase II Part Application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) 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). signed by the Designated Representative on June 7, 1999. [Chapter 62-213, F.A.C., and Rule 62-214.320, F.A.C.]

**A.2.** Sulfur dioxide (SO<sub>2</sub>) allowance allocations for each Acid Rain unit are as follows:

<b>E.U. ID No.</b>	<b>EPA ID</b>	<b>Year</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
001	1	SO <sub>2</sub> allowances to be determined by USEPA	0*	0*	0*	0*	0*
002	2	SO <sub>2</sub> allowances to be determined by USEPA	0*	0*	0*	0*	0*
003	3	SO <sub>2</sub> allowances to be determined by USEPA	N/A	N/A	N/A	0*	0*

\* The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by USEPA.

**A.3.** 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, F.A.C., Fast-Track Revisions of Acid Rain Parts.

[Rules 62-213.413 and 62-214.370(4), F.A.C.]

**A.4.** Comments, notes, and justifications. None.

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

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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 ‘exempt emissions units’.

<b>E.U. ID No.</b>	<b>Brief Description of Emissions Units and/or Activity</b>
007	Distillate Fuel Oil Tank No. 2 (700,000 gal. capacity)
008	Distillate Fuel Oil Tank No. 1 (300,000 gal. capacity)
006	Cooling Tower

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

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 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 Rules 62-210.300(3)(a) and (b)1., 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 Rules 62-210.300(3)(a) and (b)1., 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.

<b>Brief Description of Emissions Units and/or Activities</b>
Natural Gas Fuel Gas Heater.



**Appendix H-1, Permit History/ID Number Changes**

**Permit History (for tracking purposes):**

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Extended Date <sup>1,2</sup>	Revised Date(s)
Unit 1	Simple-Cycle Comb. Turbine, Unit 1	AC49-205703 PSD-FL-182	4/9/93	11/1/96	9/16/94, 5/8/95	
		0970043-004-AC				5/19/97
		970043-003-AC				8/15/97
	Extension of time to lower NOx limit from 25 to 15 ppmvd	0970043-005-AC				12/17/98
	Set NOx limit for Unit 1 at 25 ppmvd, reduce Unit 1 to 5000 hr/yr, establish NOx cap for Units 1 and 2	0970043-007-AC				12/21/99
Unit 2	Combined-Cycle Gas Turbine, Unit 2	AC49-205703 PSD-FL-182	4/9/93	11/1/96	9/16/94, 5/8/95	
		0970043-004-AC				5/19/97
		0970043-003-AC				8/15/97
	Set NOx limit for Unit 1 at 25 ppmvd, reduce Unit 1 to 5000 hr/yr, establish NOx cap for Units 1 and 2	0970043-007-AC				12/21/99
	Added inlet air fogging for Unit 2	0970043-008-AC (PSD-FL-182I)				10/13/00
	Added inlet air fogging for Unit 2 in initial Title V permit	0970043-009-AV	10/13/00	12/31/04		10/13/00
Unit 3	Combined-Cycle Gas Turbine, Unit 3	PSD-FL-254 PA 98-38 0970043-011-AC 0970043-012-AV	11/22/99 11/27/02 Withdrawn	12/31/02		

**ID Number Changes (for tracking purposes):**

From: **Facility ID No.:** 30ORL490043

To: **Facility ID No.:** 0970043

Notes:

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

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

{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

{Permitting Note: Revised by Project No. 0970043-009-AV on 10/13/00.}

**Table 1-1, Summary of Air Pollutant Emission Standards**

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		Brief Description								
001		Simple-Cycle Gas Turbine, Unit 1, rated at 40 MW.								
Pollutant	Fuel(s)	Hours	Allowable Emissions <sup>a</sup>			Equivalent		Regulatory	See Permit	
			Standard(s)	lb/hr	TPY	lb/hr	TPY			
VE	No 2 Oil Nat Gas	5000	10 % opacity					AC 49-205703	A.4.	
SO <sub>2</sub>	No 2 Oil Nat Gas	1000	0.05% S by weight, fuel oil	20			10	AC 49-205703	A.9., A.10., A.13.	
NO <sub>x</sub> **	No. 2 Fuel Oil	1000	42 ppmvd at 15% oxygen on a dry	63			31.5	AC 49-205703	A.5., C.1	
NO <sub>x</sub> **	Natural Gas	5000	25 ppmvd at 15% oxygen dry basis	37			74.0	AC 49-205703	A.5., C.1	
PM	No. 2 Fuel Oil	1000	0.0323 lb/MMBtu				12.0	6.0	AC 49-205703	A.5., A.7.
PM	Natural Gas	5000	0.0245 lb/MMBtu				9	18.0	AC 49-205703	A.5., A.7.
VOC	No. 2 Fuel Oil	1000	3 lb/hour	3				1.5	AC 49-205703	A.5., A.7.
VOC	Natural Gas	5000	1.4 lb/hour	1.4				2.8	AC 49-205703	A.5., A.7.
CO	No. 2 Fuel Oil	1000	63 ppmvd at 15% oxygen on a dry	76				38	AC 49-205703	A.5., A.7.
CO	Natural Gas	5000	30 ppmvd at 15% oxygen on a dry	40				80.0	AC 49-205703	A.5., A.7.
Hg	No. 2 Fuel Oil	1000	3.1 E-6 lb/mmBtu				<1	<1	AC 49-205703	A.5.
As	No. 2 Fuel Oil	1000	4.2 E-6 lb/mmBtu				<1	<1	AC 49-205703	A.5.
Be	No. 2 Fuel Oil	1000	2.5 E-6 lb/mmBtu				<1	<1	AC 49-205703	A.5.
Pb	No. 2 Fuel Oil	1000	2.8 E-5 lb/mmBtu				<1	<1	AC 49-205703	A.5.

Notes for EU 001:

a No. 2 fuel oil firing is limited to 1000 hours per year. Total operation is limited to 5000 hours per year.

<sup>1</sup> The "Equivalent Emissions" listed are for informational purposes only. They are based upon 4000 hours per year of gas operation and 1000 hours per year of #2 oil operation. [Rule 62-213.205, F.A.C.]

\* Firing of number 2 fuel oil is limited to no more than 1000 hours per year to the unit for any reason.

\*\*{Permitting Note: Emissions Units 001 and 002 have a combined NOx emissions cap of 366.1 during any consecutive 12 months. Last revised by Project No. 0970043-009-AV on 10/13/00.}

E.U. ID	Brief Description
002	Combined-Cycle Gas Turbine, Unit 2, rated at 120 MW.

Pollutant	Fuel(s)	Hours	Allowable Emissions <sup>a</sup>			Equivalent		Regulatory	See Permit
			Standard(s)	lb/hr	TPY	lb/hr	TPY		
VE	No 2 Oil Nat Gas	8760	10 % opacity					AC 49-205703	A.4.
SO <sub>2</sub>	No 2 Oil Nat Gas	1000	0.05% S by weight, fuel oil	52			26	AC 49-205703	A.9., A.10., A.13.
NO <sub>x</sub>	No. 2 Fuel Oil	1000	42 ppmvd at 15% oxygen on a dry	170			85.0	AC 49-205703	A.15.
NO <sub>x</sub>	Natural Gas	8760	15 ppmvd at 15% oxygen on a dry	53			205.6	AC 49-205703	A.15.
PM	No. 2 Fuel Oil	1000	0.0162 lb/MMBtu				15.0	AC 49-205703	A.5., A.7.
PM	Natural Gas	8760	0.0100 lb/MMBtu				8.7	AC 49-205703	A.5., A.7.
VOC	No. 2 Fuel Oil	1000	5.0 lb/hour	5			2.5	AC 49-205703	A.5., A.7.
VOC	Natural Gas	8760	2.0 lb/hour	2			7.76	AC 49-205703	A.5., A.7.
CO	No. 2 Fuel Oil	1000	20 ppmvd at 15% oxygen on a dry	65			32.5	AC 49-205703	A.5., A.7.
CO	Natural Gas	8760	20 ppmvd at 15% oxygen on a dry	54			209.5	AC 49-205703	A.5., A.7.
Hg	No. 2 Fuel Oil	1000	3.0e-6 lb/mmBtu				<1	AC 49-205703	A.5.
As	No. 2 Fuel Oil	1000	4.2e-6 lb/mmBtu				<1	AC 49-205703	A.5.
Be	No. 2 Fuel Oil	1000	2.5e-6 lb/mmBtu				<1	AC 49-205703	A.5.
Pb	No. 2 Fuel Oil	1000	2.8e-5 lb/mmBtu				<1	AC 49-205703	A.5.

Notes for EU 002:

a lb/hour and TPY values based on using number 2 fuel oil for 1000 hours per year; for natural gas using 7760 hours per year.

<sup>1</sup> The "Equivalent Emissions" listed are for informational purposes only. They are based upon 7760 hours per year of gas operation and 1000 hours per year of #2 oil operation. [Rule 62-213.205, F.A.C.]

\* Firing of number 2 fuel oil is limited to no more than 1000 hours per year to the unit for any reason.

{Permitting Note: Emissions Units 001 and 002 have a combined NO<sub>x</sub> emissions cap of 366.1 during any consecutive 12 months. Last revised by Project No. 0970043-009-AV on 10/13/00.}

E.U. ID	Brief Description
003	Combined-Cycle Gas Turbine, Unit 3, with HRSG and duct burner, rated at 250 MW.

Pollutant	Fuel(s)	Hours	Allowable Emissions			Equivalent		Regulatory	See Permit
			Standard(s)	lb/hr	TPY	lb/hr	TPY		
<b>VE</b>	No 2 Oil or Nat Gas		< 10 percent opacity					PSD-FL-254	<b>E.17.</b>
<b>SO<sub>2</sub></b>	No. 2 Fuel Oil	720	Maximum .0005 sulfur by weight		38.1				<b>E.16.</b>
	Natural Gas	8760	20 grains per 100 scf						
<b>NO<sub>x</sub></b>	No. 2 Fuel Oil	720	15 ppmvd	108					<b>E.13.</b>
	Natural Gas		3.5 ppmvd	26					
<b>VOC</b>	No. 2 Fuel Oil	720							
	(duct burner off)		10 ppm	21.4					<b>E.15.</b>
	(duct burner on)		10 ppm	21.4					<b>E.15.</b>
<b>VOC</b>	Natural Gas								
	(duct burner off)		1.4 ppm	3					<b>E.15.</b>
	(duct burner on)		4 ppm	8.5					<b>E.15.</b>
<b>CO</b>	No. 2 Fuel Oil	720							
	(duct burner off)		20 ppm	71					<b>E.14.</b>
	(duct burner on)		30 ppm	108					<b>E.14.</b>
<b>CO</b>	Natural Gas								
	(duct burner off)		12 ppm	43					<b>E.14.</b>
	(duct burner on)		20 ppm	71					<b>E.14.</b>

Emissions Unit	Brief Description
002	Combined-Cycle Combustion Turbine, Unit 2, rated at 120 MW.

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
<b>VE</b>	No 2 Fuel Oil, Nat. Gas	EPA Method 9	Annual	August 1st	1 hour	No	B.6.
<b>SO<sub>2</sub></b>	"	Method 8 for Fuel oil firing only; Fuel Sampling & Analysis	As Fired			Yes*	B.9, B.10.
<b>NO<sub>x</sub></b>	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	B.6.
<b>PM</b>	"	EPA Test Methods 5 or 17	Only if 10% Opacity is exceeded		3 hours	No	B.7.
<b>VOC</b>	"	EPA Test Method 25A	Initial Compliance			No	B.7.
<b>CO</b>	"	EPA Test Method 10	Annual			No	B.7.
<b>Hg</b>	No.2 oil	EPA Method 101 or fuel sampling	Initial Compliance			No	B.5.
<b>As</b>	No.2 oil	Fuel sampling	Initial Compliance			No	B.5.
<b>Be</b>	No.2 oil	EPA Method 104 or fuel sampling	Initial Compliance			No	B.5.
<b>Pb</b>	No.2 oil	Fuel sampling	Initial Compliance			No	B.5.

Notes for EU 002:

\* Continuous monitoring of fuel consumption required.

<sup>1</sup> Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

<sup>2</sup> CMS = continuous monitoring system

See also Section F for general testing requirements.

{Permitting Note: Emissions Units 001 and 002 have a combined NO<sub>x</sub> emissions cap of 366.1 during any consecutive 12 months. Compliance must be demonstrated monthly by CEMS data. Last revised by Project No. 0970043-009-AV on 10/13/00.}

Emissions Unit	Brief Description
003	Combined-Cycle Combustion Turbine, Unit 3, rated at 250 MW.

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS	See Permit Condition(s)
VE	No 2 Fuel Oil, Nat. Gas	EPA Method 9	Annual	August 1st	1 hour		E.23.
SO <sub>2</sub>	"	Fuel Sampling & Analysis	Daily				E.16., E.25, E.32., E.33.
NO <sub>x</sub>	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	E.23.
CO	"	EPA Test Method 10	Annual				E.23.

**Table 2-1, Summary of Compliance Requirements**

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

Emissions Unit	Brief Description
001	Simple-Cycle Combustion Turbine, Unit 1, rated at 40 MW.

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
<b>VE</b>	No 2 Fuel Oil, Nat. Gas	EPA Method 9	Annual	August 1st	1 hour	No	A.6.
<b>SO<sub>2</sub></b>	"	Method 8 for Fuel oil firing only; Fuel Sampling & Analysis	As Fired			Yes*	A.9, A.10.
<b>NO<sub>x</sub></b>	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	A.6.
<b>PM</b>	"	EPA Test Methods 5 or 17	Only if 10% Opacity is exceeded		3 hours	No	A.7.
<b>VOC</b>	"	EPA Test Method 25A	Initial Compliance			No	A.7.
<b>CO</b>	"	EPA Test Method 10	Annual			No	A.7.
<b>Hg</b>	No.2 oil	EPA Method 101 or fuel sampling	Initial Compliance			No	A.5.
<b>As</b>	No.2 oil	Fuel sampling	Initial Compliance			No	A.5.
<b>Be</b>	No.2 oil	EPA Method 104 or fuel sampling	Initial Compliance			No	A.5.
<b>Pb</b>	No.2 oil	Fuel sampling	Initial Compliance			No	A.5.

Notes for EU 001:

\* Continuous monitoring of fuel consumption required.

<sup>1</sup> Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

<sup>2</sup> CMS = continuous monitoring system

See also Section C for general testing requirements

{Permitting Note: Emissions Units 001 and 002 have a combined NO<sub>x</sub> emissions cap of 366.1 during any consecutive 12 months. Compliance must be demonstrated monthly by CEMS data. Last revised by Project No. 0970043-009-AV on 10/13/00.}

Best Available Control Technology (BACT) Determination  
 Kissimmee Utility Authority  
 Osceola County  
 PSD-FL-182

The applicant proposes to install two combustion turbine generators at their facility near Intercession City, Osceola County. These generator systems will consist of: 1) one nominal 80 megawatt (MW) General Electric PG7111EA combined cycle combustion turbine (CCCT), with exhaust through a heat recovery steam generator (HRSG), which will be used to power a nominal 40 MW steam turbine and 2) a 40 MW General Electric LM6000 simple cycle combustion turbine (SCCT).

The PG7111EA combustion turbine will be capable of operating on a combined and a simple cycle mode. The LM6000 will operate on a simple cycle mode. The applicant has requested to burn natural gas or fuel oil No. 2, with a 0.05 percent sulfur content, on a continuous basis (8,760 hrs/year). The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity factor, ISO conditions, and type of fuel fired to be as follows:

Pollutant	Emissions (TPY)				PSD Significant Emission Rate (TPY)
	Oil		Gas		
	PG7111EA	LM6000	PG7111EA	LM6000	
NO <sub>x</sub>	744.6	275.9	429.2	157.7	40
SO <sub>2</sub>	227.8	87.6	nil	nil	40
PM/PM <sub>10</sub>	65.7	52.6	30.7	39.4	25/15
CO	284.7	332.9	236.5	175.2	100
VOC	21.9	13.1	8.8	6.1	40
H <sub>2</sub> SO <sub>4</sub>	25.1	9.6	nil	nil	7
Be	0.0099	0.0035	---	---	0.0004
Hg	0.012	0.005	---	---	0.1
Pb	0.044	0.141	---	---	0.6

Florida Administrative Code (F.A.C.) Rule 17-2.500(2) (f) (3) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

June 2, 1992

BACT Determination Requested by the Applicant

<u>Pollutant</u>	<u>Proposed Limits</u>
NO <sub>x</sub>	25 ppmvd @ 15% O <sub>2</sub> (natural gas burning) 42 ppmvd @ 15% O <sub>2</sub> (for oil firing) PG7111(EA) Control Technology: Low NO <sub>x</sub> Burners GE LM6000 Control Technology: Water Injection



SO<sub>2</sub>                    0.3% sulfur by weight (but limited to 0.05% sulfur  
                          for modeling purposes)

CO, VOC                Combustion Control

PM/PM<sub>10</sub>              Combustion Control

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-296, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, than the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from combined cycle power plants can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- o Combustion Products (e.g., particulates). Controlled generally by good combustion of clean fuels.
- o Products of Incomplete Combustion (e.g., CO). Control is largely achieved by proper combustion techniques.
- o Acid Gases (e.g., NO<sub>x</sub>). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc.), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

#### BACT POLLUTANT ANALYSIS

##### COMBUSTION PRODUCTS

##### Particulate Matter (PM/PM<sub>10</sub>)

The design of this system ensures that particulate emissions will be minimized by combustion control and the use of clean fuels. The particulate emissions from the combustion turbines when burning natural gas and fuel oil will not exceed 15 lbs/hr (oil) and 7 lbs/hr (gas) for the PG7111 and 12 lbs/hr (oil) and 9 lbs/hr (gas) for the LM6000. The Department accepts the applicant's proposed control for particulate matter and heavy metals.

##### Lead, Mercury, Beryllium (Pb, Hg, Be)

The Department agrees with the applicant's rationale that there are no feasible methods to control lead, mercury, and beryllium; except by limiting the inherent quality of the fuel.

Although the emissions of these toxic pollutants could be controlled by particulate control devices, such as a baghouse or scrubber, the amount of emission reductions would not warrant the added expense. As this is the case, the Department does not believe that the BACT determination would be affected by the emissions of these pollutants.

PRODUCTS OF INCOMPLETE COMBUSTION

**Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)**

The emissions of carbon monoxide exceed the PSD significant emission rate of 100 TPY. The applicant has indicated that the carbon monoxide emissions from the proposed combined cycle turbine with a "quiet combustor" are 10 ppmv for natural gas firing and 20 ppmv for fuel oil firing. However, for a dry low NO<sub>x</sub> combustor, the emission limit is 20 ppmvd for both oil and gas. For the simple cycle CT, the CO emissions for firing natural gas and fuel oil are 30 ppmv and 63 ppmv, respectively.

The majority of BACT emissions limitations have been based on combustion controls for carbon monoxide and volatile organic compounds minimization, however, additional control is achievable through the use of catalytic oxidation. Catalytic oxidation is a postcombustion control that has been employed in CO nonattainment areas where regulations have required CO emission levels to be less than those associated with wet injection. These installations have been required to use LAER technology and typically have CO limits in the 10-ppm range (corrected to dry conditions).

In an oxidation catalyst control system, CO emissions are reduced by allowing unburned CO to react with oxygen at the surface of a precious metal catalyst such as platinum. Combustion of CO starts at about 300°F, with efficiencies above 90 percent occurring at temperatures above 600°F. Catalytic oxidation occurs at temperatures 50 percent lower than that of thermal oxidation, which reduces the amount of thermal energy required. For CT/HRSG combinations, the oxidation catalyst can be located directly after the CT or in the HRSG. Catalyst size depends upon the exhaust flow, temperature, and desired efficiency.

Due to the oxidation of sulfur compounds and excessive formation of H<sub>2</sub>SO<sub>4</sub> mist emissions, oxidation catalysts are not considered to be technically feasible for gas turbines fired with fuel oil. Catalytic oxidation has not been demonstrated on a continuous basis when using fuel oil.

Use of oxidation catalyst technology would be feasible for a natural gas-fired unit; however, the cost effectiveness of \$4,437 per ton for the LM6000 and \$10,560 per ton for the PG7110EA of CO/VOC removed will have an economic impact on this project.

The Department is in agreement with the applicant's proposal of combustor design and good operating practices as BACT for CO and VOCs for this cogeneration project.

## ACID GASES

### Nitrogen Oxides (NO<sub>x</sub>)

The emissions of nitrogen oxides represent a significant proportion of the total emissions generated by this project, and need to be controlled if deemed appropriate. As such, the applicant presented an extensive analysis of the different available technologies for NO<sub>x</sub> control.

The applicant has stated that BACT for nitrogen oxides will be met by using water injection and advanced combustor design to limit emissions to 25 ppmvd (corrected to 15% O<sub>2</sub>) when burning natural gas and 42 ppmvd (corrected to 15% O<sub>2</sub>) when burning fuel oil.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NO<sub>x</sub> emission limit established to date for a combustion turbine is 4.5 ppmvd at 15% oxygen. This level of control was accomplished through the use of water injection and a selective catalytic reduction (SCR) system.

Selective catalytic reduction is a post-combustion method for control of NO<sub>x</sub> emissions. The SCR process combines vaporized ammonia with NO<sub>x</sub> in the presence of a catalyst to form nitrogen and water. The vaporized ammonia is injected into the exhaust gases prior to passage through the catalyst bed. The SCR process can achieve up to 90% reduction of NO<sub>x</sub> with a new catalyst. As the catalyst ages, the maximum NO<sub>x</sub> reduction will decrease to approximately 86 percent.

The effect of exhaust gas temperature on NO<sub>x</sub> reduction depends on the specific catalyst formulation and reactor design. Generally, SCR units can be designed to achieve effective NO<sub>x</sub> control over a 100-300°F operating window within the bounds of 450-800°F, although recently developed zeolite-based catalysts are claimed to be capable of operating at temperatures as high as 950°.

Most commercial SCR systems operate over a temperature range of about 600-750°F. At levels above and below this window, the specific catalyst formulation will not be effective and NO<sub>x</sub> reduction will decrease. Operating at high temperatures can permanently damage the catalyst through sintering of surfaces.

Increased water vapor content in the exhaust gas (as would result from water or steam injection in the gas turbine combustor) can shift the operating temperature window of the SCR reactor to slightly higher levels.

As stated by the applicant, the exhaust temperatures of the proposed simple cycle CTs for this site are between 600°F to 800°F.

At temperatures of 1,000°F and above, the zeolite catalyst (reported to operate within 600°F to 950°F) will be irreparably damaged. In this case, application of an SCR system using a zeolite catalyst on a simple-cycle operation appears to be technically feasible.

However, the applicant has rejected using SCR on the simple cycle CT because of economic and environmental impacts.

Although technically feasible, the applicant has also rejected using SCR on the combined cycle because of economic, energy, and environmental impacts. The applicant has identified the following limitations:

- a) Reduced power output.
- b) Emissions of unreacted ammonia (slip).
- c) Disposal of hazardous waste generated (spend catalyst).
- d) Ammonium bisulfate and ammonium sulfate particulate emissions (ammonium salts) due to the reaction of  $\text{NH}_3$  with  $\text{SO}_3$  present in the exhaust gases.
- e) Cost effectiveness for the application of SCR technology to the Kissimmee Utility project was considered to be \$9,879 per ton of  $\text{NO}_x$  removed for the PG7111EA and \$13,700 per ton of  $\text{NO}_x$  removed for the LM6000 when burning natural gas.

Since SCR has been determined to be BACT for several combined cycle facilities, the EPA has clearly stated that there must be unique circumstances to consider the rejection of such control on the basis of economics.

In a recent letter from EPA Region IV to the Department regarding the permitting of a combined cycle facility (Tropicana Products, Inc.), the following statement was made:

"In order to reject a control option on the basis of economic considerations, the applicant must show why the costs associated with the control are significantly higher for this specific project than for other similar projects that have installed this control system or in general for controlling the pollutant."

For fuel oil firing, the cost associated with controlling  $\text{NO}_x$  emissions must take into account the potential operating problems that can occur with using SCR in the oil firing mode.

A concern associated with the use of SCR on combined cycle projects is the formation of ammonium bisulfate. For the SCR process, ammonium bisulfate can be formed due to the reaction of sulfur in the fuel and the ammonia injected. The ammonium bisulfate formed has a tendency to plug the tubes of the heat recovery steam generator leading to operational problems. As this is the case,

SCR has been judged to be technically infeasible for oil firing in some previous BACT determinations.

The latest information available now indicates that SCR can be used for oil firing provided that adjustments are made in the ammonia to NO<sub>x</sub> injection ratio. For natural gas firing operation, NO<sub>x</sub> emissions can be controlled with up to a 90 percent efficiency using a 1 to 1 or greater ammonia injection ratio. By lowering the injection ratio for oil firing, testing has indicated that NO<sub>x</sub> can be controlled with efficiencies ranging from 60 to 80 percent. When the injection ratio is lowered there is not a problem with ammonium bisulfate formation since essentially all of the ammonia is able to react with the nitrogen oxides present in the combustion gases. Based on this strategy SCR has been both proposed and established as BACT for oil fired combined cycle facilities with NO<sub>x</sub> emission limits ranging from 11.7 to 25 ppmvd depending on the efficiency of control established.

The applicant has indicated that the total levelized annual operating cost to install SCR for this project at 100 percent capacity factor and burning natural gas is \$2,944,000 for the PG7111EA and \$1,589,000 for the LM6000. Taking into consideration the total annual cost, a cost/benefit analysis of using SCR can now be developed.

For the PG7111EA combined cycle combustion turbine, based on the information supplied by the applicant, it is estimated that the maximum annual NO<sub>x</sub> emissions using low NO<sub>x</sub> burner will be 372 tons/year (natural gas) and 700 tons/year (oil firing). Assuming that SCR would reduce the NO<sub>x</sub> emissions by 80%, about 74 tons of NO<sub>x</sub> (natural gas) and 140 tons of NO<sub>x</sub> (oil) would be emitted annually. When this reduction (298 TPY natural gas and 560 TPY oil) is taken into consideration with the total levelized annual operating cost of \$2,944,000 (natural gas) and \$3,424,000 (oil firing); the cost per ton of controlling NO<sub>x</sub> is \$9,879 (natural gas) and \$6,114 (oil), respectively. These calculated costs are higher than has previously been approved as BACT.

For the simple cycle combustion turbine, based on the information supplied by the applicant, it is estimated that the maximum annual NO<sub>x</sub> emissions using water injection will be 145 tons/year (natural gas) and 250 tons/year (oil firing). Assuming that SCR would reduce the NO<sub>x</sub> emissions by 80%, about 29 tons of NO<sub>x</sub> (natural gas) and 50 tons of NO<sub>x</sub> (oil firing) would be emitted annually. When this reduction (116 TPY natural gas and 200 TPY oil) is taken into consideration with the total levelized annual operating cost of \$1,589,000 (natural gas) and \$1,840,000 (oil firing); the cost per ton of controlling NO<sub>x</sub> is \$13,700 (natural gas) and \$9,200 (oil), respectively. These calculated costs are higher than has previously been approved as BACT.

A review of the latest DER BACT determinations show limits of 15 ppmvd (natural gas) using low-NO<sub>x</sub> burn technology for combined cycle turbines. General Electric is currently developing programs using both steam/water injection and dry low NO<sub>x</sub> combustor to achieve NO<sub>x</sub> emission control level of 9 ppm when firing natural gas. Therefore, since this technology will be available by 1997, the Department has accepted the water injection (LM6000), low NO<sub>x</sub> burner design (PG7111EA), and the 25 ppmvd (natural gas)/42 ppmvd (oil) at 15% O<sub>2</sub> as BACT for a limited time (up to 1/1/98).

#### Sulfur Dioxide(SO<sub>2</sub>) and Sulfuric Acid Mist (H<sub>2</sub>SO<sub>4</sub>)

The applicant has stated that sulfur dioxide (SO<sub>2</sub>) and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) emissions when firing fuel oil will be controlled by using fuel oil with a maximum sulfur content of 0.05 % by weight. This will result in an annual emission rate of 18 tons SO<sub>2</sub> per year and 2 tons H<sub>2</sub>SO<sub>4</sub> mist per year (operating at 500 hours per year).

In accordance with the "top down" BACT review approach, only two alternatives exist that would result in more stringent SO<sub>2</sub> emissions. These include the use of a lower sulfur content fuel oil or the use of wet lime or limestone-based scrubbers, otherwise known as flue gas desulfurization (FGD).

In developing the NSPS for stationary gas turbines, EPA recognized that FGD technology was inappropriate to apply to these combustion units. EPA acknowledged in the preamble of the proposed NSPS that "Due to the high volumes of exhaust gases, the cost of flue gas desulfurization (FGD) to control SO<sub>2</sub> emissions from stationary gas turbines is considered unreasonable."(23). EPA reinforced this point when, later on in the preamble, they stated that "FGD... would cost about two to three times as much as the gas turbine."(23). The economic impact of applying FGD today would be no different.

Furthermore, the application of FGD would have negative environmental and energy impacts. Sludge would be generated that would have to be disposed of properly, and there would be increased utility (electricity and water) costs associated with the operation of a FGD system. Finally, there is no information in the open literature to indicate that FGD has ever been applied to stationary gas turbines burning distillate oil.

The elimination of flue gas control as a BACT option then leaves the use of low sulfur fuel oil as the next option to be investigated. Kissimmee Utility Authority, as stated above, has

proposed the use of No. 2 fuel oil with a 0.05% sulfur by weight as BACT for this project. The Department accepts their proposal as BACT for this project.

#### BACT Determination by DER

##### NO<sub>x</sub> Control

The information that the applicant presented and Department calculations indicates that the cost per ton of controlling NO<sub>x</sub> for these turbines [\$9,879 (gas) PG7111EA, \$6,114 (oil) PG7111EA, \$13,700 (gas) LM6000, and \$9,200 (oil) LM6000] is high compared to other BACT determinations which require SCR. Based on the information presented by the applicant, the Department believes that the use of SCR for NO<sub>x</sub> control is not justifiable as BACT at this time.

A review of the permitting activities for combined cycle proposals across the nation indicates that SCR has been required and most recently proposed for installations with a variety of operating conditions (i.e., natural gas, fuel oil, and various capacity factors). Although, the cost and other concerns expressed by the applicant are valid, the Department, in this case, is willing to accept water injection and low NO<sub>x</sub> burner design as BACT for this project for a limited time (up to 12/31/97).

It is the Department's understanding that General Electric is developing programs for the PG7111EA and the LM6000, using either steam/water injection or dry low NO<sub>x</sub> combustor technology to achieve a NO<sub>x</sub> emission control level of 9 ppm when firing natural gas. Therefore, the Department has determined that the following BACT will apply by 1/1/98.

- a) For the combined cycle unit (PG7111EA), if the 15 (gas)/42 (oil) ppmv emission rates cannot be met by 1/1/98, SCR will be installed. Hence, the permittee shall install a duct module suitable for future installation of SCR equipment.
- b) For the simple cycle unit (LM6000), the manufacturer will attempt to achieve a maximum NO<sub>x</sub> emission level of 15 (gas)/42 (oil) ppmv by 1/1/98. Should this level of control not be achieved, the permittee must notify the Department of the expected compliance date by 1/1/97.
- c) For both turbines (PG7111EA and LM6000), when the manufacturer achieves an even lower NO<sub>x</sub> emission level than 15 (gas)/42 (oil) ppmv, this level may become a condition of this permit.

##### SO<sub>2</sub> Control

BACT for sulfur dioxide is the burning of fuel oil No. 2 with 0.05% sulfur content by weight.



VOC and CO Control

Combustion control will be considered as BACT for CO and VOC when firing natural gas.

Other Emissions Control

The emission limitations for PM and PM<sub>10</sub>, Be, Pb, and Hg are based on previous BACT determinations for similar facilities.

The emission limits for Kissimmee Utility Authority project are thereby established as follows:

120 MW COMBINED CYCLE COMBUSTION TURBINE

Pollutant	Emission Standards/Limitations.		Method of Control
	Oil(a)	Gas(b)	
NO <sub>x</sub>	42 ppmv	25 ppmv(c) 15 ppmv	Water Injection/ Quiet Combustor or Dry Low NO <sub>x</sub> Combustor Water Injection/Dry Low NO <sub>x</sub> Combustor
CO	65 lbs/hr	54 lbs/hr	Combustion
PM & PM <sub>10</sub>	15 lbs/hr	7 lbs/hr	Combustion
SO <sub>2</sub>	52 lbs/hr	nil	No. 2 Fuel Oil (0.05% S)
H <sub>2</sub> SO <sub>4</sub>	5.7 lbs/hr	nil	No. 2 Fuel Oil (0.05% S)
VOC	5 lbs/hr	2 lbs/hr	Combustion
Hg	3.0 x 10 <sup>-6</sup> lb/MMBtu		Fuel Quality
Pb	2.8 x 10 <sup>-5</sup> lb/MMBtu		Fuel Quality
Be	2.5 x 10 <sup>-6</sup> lb/MMBtu		Fuel Quality

- (a) No. 2 fuel oil with a maximum of 0.05% sulfur by weight.  
 (b) Natural gas/fuel oil 8260/500 hours per year. Natural gas/fuel oil 7760/1000 hours per year. Continuous burning of No. 2 fuel oil (8760 hrs/yr) is not allowed unless natural gas is not available.  
 (c) Initial NO<sub>x</sub> emission rates for natural gas firing shall not exceed 25 ppmvd at 15% oxygen on a dry basis. The permittee shall achieve NO<sub>x</sub> emissions of 15 ppmvd at 15% oxygen at the earliest achievable date based on dry low NO<sub>x</sub> combustor.

injection technology or any other technology available, but no later than 1/1/98. Should this level of control not be achieved, the permittee shall install SCR.

40 MW SIMPLE CYCLE COMBUSTION TURBINE

Pollutant	Emission Standards/Limitations		Method of Control
	Oil (a)	Gas (b)	
NO <sub>x</sub>	42 ppmv	25 ppmv (c) 15 ppmv	Water Injection Dry Low NO <sub>x</sub> Combustor
CO	76 lbs/hr	40 lbs/hr	Combustion
PM & PM10	12 lbs/hr	9 lbs/hr	Combustion
SO <sub>2</sub>	20 lbs/hr	nil	No. 2 Fuel Oil (0.05% S)
H <sub>2</sub> SO <sub>4</sub>	2.2 lbs/hr	nil	No. 2 Fuel Oil (0.05% S)
VOC	3 lbs/hr	1.4 lbs/hr	Combustion
Hg	3.0 x 10 <sup>-6</sup> lb/MMBtu		Fuel Quality
Pb	2.8 x 10 <sup>-5</sup> lb/MMBtu		Fuel Quality
Be	2.5 x 10 <sup>-6</sup> lb/MMBtu		Fuel Quality

- (a) No. 2 fuel oil with a maximum of 0.05% sulfur by weight.
- (b) Natural gas/fuel oil 8260/500 hours per year. Natural gas/fuel oil 7760/1000 hours per year. Continuous firing of fuel oil (8760 hrs/yr) is not allowed unless natural gas is not available.
- (c) Initial NO<sub>x</sub> emission rates for natural gas firing shall not exceed 25 ppmvd at 15% oxygen on a dry basis. The permittee shall achieve NO<sub>x</sub> emissions of 15 ppmvd at 15% oxygen at the earliest achievable date based on dry low NO<sub>x</sub> combustor technology or any other technology available, but no later than 1/1/98. Should this level of control not be achieved when the compliance demonstration stack tests are performed, the permittee must provide the Department with the expected compliance dates which will be updated annually. After 1/1/98, if the compliance schedule has not been met, the Department may require SCR be installed since the exhaust temperature has an acceptable range for SCR installation.

Details of the Analysis May be Obtained by Contacting:

Preston Lewis, BACT Coordinator  
Department of Environmental Regulation  
Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Recommended by:

C. H. Fancy

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

April 1, 1993  
Date

Approved by:

Virginia B. Wetherell

Virginia B. Wetherell, Secretary  
Dept. of Environmental Regulation

April 7, 1993  
Date



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. A.K. Sharma  
Director of Power Supply  
Kissimmee Utility Authority  
1701 West Carroll Street  
Kissimmee, Florida 34741

### ORDER EXTENDING PERMIT EXPIRATION DATE Cane Island Power Park, Facility ID No.: 0970043

Section 403.0872(2)(b), Florida Statutes (F.S.), specifies that any facility which submits to the Department of Environmental Protection (Department) a timely and complete application for a Title V permit "is entitled to operate in compliance with its existing air permit pending the conclusion of proceedings associated with its application."

Section 403.0872(6), F.S., provides that a proposed Title V permit which is not objected to by the United States Environmental Protection Agency (EPA) "must become final no later than fifty-five (55) days after the date on which the proposed permit was mailed" to the EPA.

Pursuant to the Federal Acid Rain Program as defined in Rule 62-210.200, Florida Administrative Code (F.A.C.), all Acid Rain permitting must become effective on January 1 of a given year.

This facility, which will be permitted pursuant to Section 403.0872, F.S., (Title V permit) will be required to have a permit effective date subsequent to the final processing date of the facility's Title V permit.

To prevent misunderstanding and to assure that the above identified facility continues to comply with existing permit terms and conditions until its Title V permit becomes effective, it is necessary to extend the expiration date(s) of its existing valid permit(s) until the effective date of its Title V permit. Therefore, under the authority granted to the Department by Section 403.061(8), F.S., **IT IS ORDERED:**

1. The expiration date(s) of the existing valid permit(s) under which the above identified facility is currently operating is (are) hereby extended until the effective date of its permit issued pursuant to Section 403.0872, F.S., (Title V permit);
2. The facility shall comply with all terms and conditions of its existing valid permit(s) until the effective date of its Title V permit;
3. The facility will continue to comply with the requirements of Chapter 62-214, F.A.C., and the Federal Acid Rain Program, as defined in Rule 62-210.200, F.A.C., pending final issuance of its Title V permit.

### PETITION FOR ADMINISTRATIVE REVIEW

The Department will take the action described in this Order unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S.

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/488-9730; Fax: 850/487-4938). Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 days of receipt of this Order. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the public notice or within 14 days of receipt of this Order, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the permitting authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the permitting authority's action is based must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of how and when each petitioner received notice of the agency action or proposed action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and,
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and,
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this Order. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation will not be available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this Order.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. The petition must specify the following information:

- (a) The name, address, and telephone number of the petitioner;
- (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;
- (c) Each rule or portion of a rule from which a variance or waiver is requested;
- (d) The citation to the statute underlying (implemented by) the rule identified in (c) above;
- (e) The type of action requested;
- (f) The specific facts that would justify a variance or waiver for the petitioner;
- (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and,
- (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs.

#### RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, MS35, Tallahassee, Florida 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Agency Action is filed with the Clerk of the Department.

DONE AND ORDERED this 18<sup>th</sup> day of March, 1999, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



HOWARD L. RHODES, Director  
Division of Air Resources Management  
Twin Towers Office Building  
Mail Station 5500  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
850/488-0114

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this order and all copies were sent by certified mail before the close of business on 3/18/99 to the person(s) listed:

Mr. D. D. Schultz, P.E., Black & Veatch  
Mr. Timothy M. Hillman, Black & Veatch  
Mr. Len Kozlov, CD

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

Barbara J. Powell 3/18/99  
(Clerk) (Date)