# BEST AVAILABLE COPY STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

#### NOTICE OF FINAL PERMIT

In the Matter of an Application for Permit by:

Florida Power Corporation P.O. Box 368 Intercession City, FL 33848 Authorized Representative:

Mr. Martin J. Drango, Plant Manager

Project No. 0970014-006-AC PSD Permit No. PSD-FL-268A Florida Power Intercession City Plant Minor Modifications (Units P12-P14)

Enclosed is final air permit No. PSD-FL-268A, which: increases the maximum heat inputs and nominal power production for both gas and oil firing; revises the NOx compliance averaging period; clarifies the NOx CEMS data exclusion; and corrects the minimum observation period for a compliance visible emissions test. The existing facility is located in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. As noted in the Final Determination (attached), only minor changes were made to correct typographical errors. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

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

### **CERTIFICATE OF SERVICE**

Mr. Martin J. Drango, Florida Power Corp.\*

Mr. Jamie Hunter, Florida Power Corp.

Mr. Scott Osbourn, ENSR

Mr. Len Kozlov, CD

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to \$120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

January 30, 2000

## FINAL DETERMINATION

#### **PERMITTEE**

Florida Power Corporation P.O. Box 368 Intercession City, FL 33848

## PERMITTING AUTHORITY

Florida Department of Environmental Protection Division of Air Resources Management Bureau of Air Regulation New Source Review Section 2600 Blair Stone Road, MS #5505 Tallahassee, Florida, 32399-2400

#### **PROJECT**

Project No. 0970014-006-AC Air Permit No. PSD-FL-268A

The final permit modifies original air permit No. PSD-FL-268 to: increase the maximum heat inputs and nominal power production for both gas and oil firing; revise the NOx compliance averaging period from a 3-hour rolling average to a 24-hour block average of actual operating hours; clarify the permit conditions regarding data exclusion for the NOx continuous emissions monitoring system; and correct the minimum observation period for a compliance visible emissions test. The existing facility, Florida Power's Intercession City Plant, is located in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The permittee is authorized to perform the minor upgrades on each existing gas turbine (P12-P14) to achieve the capacity increases. No other construction or modification is authorized.

## NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on December 19, 2001. The applicant published the "Public Notice of Intent to Issue" in The Osceola News-Gazette on December 22, 2001. The Department received proof of publication on January 16, 2002. No requests for administrative hearings were filed.

#### **COMMENTS/CHANGES**

No comments on the Draft Permit were received from the public, the Department's Central District Office, or the applicant. On the first page of the permit, the Department revised the description in the Statement of Basis to clarify that this action was a modification. The footers in the final permit and Appendices were revised to clarify the project and permit numbers. Other minor revisions included the correction of typographical errors.

#### CONCLUSION

The final action of the Department is to issue the permit with the changes described above.



## Department of Environmental Protection

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

David B. Struhs Secretary

#### PERMITTEE:

Florida Power Corporation P.O. Box 368 Intercession City, FL 33848

Authorized Representative:

Mr. Martin J. Drango, Plant Manager

Project No. 0970014-006-AC PSD Permit No. PSD-FL-268A Facility ID No. 0970014

SIC No. 4911

Expires: December 1, 2002

#### PROJECT AND LOCATION

This revised permit is issued pursuant to the requirements for the Prevention of Significant Deterioration of Air Quality (PSD Permit). This existing facility is an electric power generating plant with a nominal capacity of 1170 MW. The proposed project will add three simple cycle, dual-fuel, General Electric Model 7EA combustion turbines with electrical generator sets each having a maximum capacity of 91 MW.

The project will be located at the existing FPC Intercession City Plant in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The UTM coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51".

#### STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and 40 CFR 52.21. The permittee is authorized to operate the equipment in accordance with the conditions of this revised permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

#### **APPENDICES**

The following Appendices are attached as part of this permit.

Appendix A - Terminology

Appendix BD - Department's BACT Determination
Appendix GC - Construction Permit General Conditions

Appendix GG - NSPS Subpart GG Requirements for Gas Turbines

Appendix XS - CEMS Excess Emissions Report

Howard L. Rhodes, Director

Division of Air Resources Management

Effective Date:

"More Protection, Less Process"

Printed on recycled paper.

#### FACILITY DESCRIPTION

The existing facility is an electric power generating plant consisting of fourteen combustion turbine peaking units (P1-P14). Units P1-P6 each consist of two gas turbines having a combined capacity of 56.7 MW and firing No. 2 distillate oil. Units P7-P10 each consist of a General Electric Model 7EA gas turbine having a capacity of 96.3 MW and firing natural gas or distillate oil. Unit P11 is a Siemens Model V84.3 having a capacity of 171 MW and firing distillate oil. Units P12-P14 each consist of a General Electric Model 7EA gas turbine with a nominal generating capacity of 91 MW when firing natural gas or distillate oil

#### PROPOSED PROJECT

The proposed project affects the following newly constructed emissions units.

ARMS ID No.	EMISSION UNIT DESCRIPTION	
	Peaking Units P12, P13, and P14: Each peaking unit consists of a General Electric Model No.	
018	PG7121 7EA dual-fuel simple cycle combustion turbine with electrical generator set having a	
019	nominal power production output of 91 MW. The units may employ an evaporative cooling	
020	system. Dry low-NOx (DLN) combustion technology will be used to control nitrogen oxide	
	emissions when firing the primary fuel of pipeline natural gas. Water injection will be used to	
	control nitrogen oxide emissions when firing the backup fuel of low sulfur distillate oil.	

The proposed project modifies original air permit No. PSD-FL-268 to: increase the maximum heat inputs and nominal power production for both gas and oil firing; revise the NOx compliance averaging period from a 3-hour rolling average to a 24-hour block average of actual operating hours; clarify the permit conditions regarding data exclusion for the NOx continuous emissions monitoring system; and correct the minimum observation period for a compliance visible emissions test. The permittee is allowed to perform the minor upgrades on each existing gas turbine (P12-P14) to achieve the capacity increases. No other construction or modification is authorized.

#### REGULATORY CLASSIFICATION

The facility is a "major facility" with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD) of Air Quality because emissions of at least one pollutant exceed 250 tons per year. Therefore, each modification to this facility resulting in emissions increases greater than the Significant Emissions Rates specified in Table 62-212.400-2 also requires a PSD review and Best Available Control Technology (BACT) determination. For this project, emissions of CO, NOx, PM/PM10, and SAM/SO2 are significant and this permit establishes the Best Available Control Technology (BACT) for each pollutant.

The facility is not believed to be a Title III major source of hazardous air pollutants. The facility and project are subject to the applicable Title IV acid rain provisions. The facility is classified as a Title V "major" source of air pollution because emissions of at least one regulated air pollutant, such as CO, NOx, PM/PM10, SO2, and/or VOC exceeds 100 tons per year.

This project is subject to regulation under the New Source Performance Standards (NSPS), 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines.

#### RELEVANT DOCUMENTS

- Application received 11/26/01 and all related correspondence.
- Original air permit No. PSD-FL-268 issued 12/9/99.

#### SECTION II. ADMINISTRATIVE REQUIREMENTS

#### GENERAL AND ADMINISTRATIVE REQUIREMENTS

- 1. <u>Permitting Authority</u>: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114.
- 2. <u>Compliance Authority</u>: All documents related compliance activities such as reports, tests, and notifications should be submitted to the Central District Office, Florida Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The phone number is 407/894-7555 and the fax number is 407/897-2966.
- 3. <u>Terminology</u>: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. *Appendix A* lists frequently used abbreviations and explains the format used to cite rules and regulations in this permit.
- 4. <u>General Conditions</u>: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- 5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions, of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-17, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 52, 60, 72, 73, and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
- 6. <u>PSD Expiration</u>: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]
- 7. <u>Permit Expiration</u>: For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]
- 8. <u>BACT Determination</u>: In conjunction with extension of the 18-month period to commence or continue construction, phasing of the project, or an extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [Rule 62-212.400(6)(b), F.A.C. and 40 CFR 52.166(j)(4)]
- 9. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 10. <u>Modifications</u>: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

## SECTION II. ADMINISTRATIVE REQUIREMENTS

- 11. <u>Application for Title IV Permit</u>: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Region 4 office of the U.S. Environmental Protection Agency in Atlanta, Georgia and a copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]
- 12. <u>Title V Permit</u>: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for and receive a Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This permit addresses the following new emissions units.

ARMS EU ID No.	EMISSION UNIT DESCRIPTION
018 019 020	Peaking Units P12, P13, and P14: This permit authorizes the installation of three new peaking gas turbines. Each gas turbine consists of a General Electric Model No. PG7121 (7EA) dual-fuel, simple-cycle combustion turbine with electrical generator set. Each unit has a nominal power production capacity of 91 MW. The new units may employ an evaporative cooling system and will use the existing infrastructure including natural gas connections, oil storage and auxiliary equipment. Dry low-NOx (DLN) combustion technology will control nitrogen oxide emissions when firing the primary fuel of pipeline natural gas. Water injection will control NOx emissions when firing low sulfur distillate oil as a backup fuel. Combustion design and clean fuels will minimize emissions of CO, PM/PM10, SAM, SO2, and VOC. Exhaust gases from each combustion turbine will exit a 56 feet high stack at approximately 1000°F with a volumetric flow rate of 1,436,000 acfm.

#### APPLICABLE STANDARDS AND REGULATIONS

- 1. <u>BACT Determinations</u>: This emissions unit is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM10), sulfuric acid mist (SAM), and sulfur dioxide (SO<sub>2</sub>). [Rule 62-212.400(BACT), F.A.C.]
- 2. <u>NSPS Requirements</u>: Each combustion turbine shall comply with all applicable requirements of 40 CFR 60, adopted by reference in Rule 62-204.800(7)(b), F.A.C.
  - (a) Subpart A, General Provisions, including:
    - 40 CFR 60.7, Notification and Record Keeping
    - 40 CFR 60.8, Performance Tests
    - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
    - 40 CFR 60.12, Circumvention
    - 40 CFR 60.13, Monitoring Requirements
    - 40 CFR 60.19, General Notification and Reporting Requirements
  - (b) Subpart GG, Standards of Performance for Stationary Gas Turbines, identified in Appendix GG of this permit. These provisions include a requirement to correct test data to ISO conditions; however, such correction is not used for compliance determinations with the BACT standards.

#### PERFORMANCE RESTRICTIONS

3. Permitted Capacity: Each combustion turbine shall operate only in simple-cycle mode and generate a nominal 91 MW of electrical power. Operation of each unit shall not exceed 905 mmBTU per hour of heat input from firing natural gas or 978 mmBTU per hour of heat input from firing low sulfur distillate oil. Excluding startup and shutdown, operation below 50% base load is prohibited. The maximum heat inputs are based on the lower heating value (LHV) of each fuel, an inlet air temperature of 59°F, a relative humidity of 60%, an ambient air pressure of 14.7 psi, and 100% of base load. Therefore, heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Compliance shall be determined by data compiled from the Speedtronic<sup>TM</sup> Control System adjusted for these parameters. Manufacturer's performance curves, corrected for site conditions or equations for correction to other ambient conditions, shall be provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Initial compliance with this requirement

- may be demonstrated by compiling data during the initial NSPS tests performed at various load. conditions. [Design, Rule 62-210.200(PTE), F.A.C.]
- 4. <u>Simple Cycle Operation Only</u>: The combustion turbines shall operate only in simple cycle mode. This requirement is based on the permittee's request, which formed the basis of the NOx BACT determination and resulted in the emission standards specified in this permit. Specifically, the NOx BACT determination eliminated several control alternatives based on technical considerations and costs due to the elevated temperatures of the exhaust gas. Any request to convert these units to combined cycle operation by installing a new heat recovery steam generator or connecting to an existing heat recovery steam generator shall require the permittee to perform a new, current NOx BACT analysis and the approval of the Department through a permit modification. The results of this analysis may validate the initial BACT determination or result in the submittal of a full PSD permit application, new control equipment, and new emissions standards. [Rule 62-212.400(6)(b), F.A.C.]
- 5. Allowable Fuels: Each combustion turbine shall be fired by pipeline natural gas containing no more than 1 grain of sulfur per 100 dry standard cubic feet of gas. As a backup fuel, each combustion turbine may be fired with No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Each unit shall be capable of firing natural gas. Compliance with the limits on fuel sulfur content shall be demonstrated by the record keeping requirements and/or the conditions of the Alternate Monitoring Plan specified in this permit. It is noted that these limitations are much more stringent than the NSPS sulfur dioxide limitation and assure compliance with 40 CFR 60.333 and 60.334. [Applicant Request, Rule 62-210.200(PTE), F.A.C.]
- 6. Hours of Operation: The following limits apply to this group of three combustion turbines.
  - (a) Installation of One Gas Turbine: When one gas turbine is installed, the total turbine operating hours shall not exceed 3390 hours during any consecutive 12 months.
  - (b) Installation of Two Gas Turbines: When two gas turbines are installed, the total turbine operating hours shall not exceed 6780 hours during any consecutive 12 months.
  - (c) Installation of Three Gas Turbines: When all three gas turbines are installed, the total turbine operating hours shall not exceed 10,170 hours during any consecutive 12 months.
  - (d) Oil Firing: Each gas turbine is limited to no more than 1000 turbine operating hours of oil firing during any consecutive 12 months. In addition, the group of three gas turbines is limited to no more than 2500 turbine operating hours of oil firing during any consecutive 12 months.

Total turbine operating hours are the sum of operating hours when firing gas and operating hours when firing oil. The permittee shall install, calibrate, operate and maintain meters to measure and accumulate the amount of each fuel fired and hours of operation for each combustion turbine. [Applicant Request; Rules 62-212.400(BACT) and 62-210.200(PTE), F.A.C.]

- 7. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good operating practices" to minimize emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the combustion turbines and pollution control devices in accordance with the guidelines and procedures established by each equipment manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Applicant Request; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 8. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Compliance Authority as soon as possible, but at least within one (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the

#### SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

#### **EMISSIONS CONTROLS**

- 9. <u>Automated Control System</u>: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, tune, operate, and maintain the General Electric Speedtronic<sup>TM</sup> Gas Turbine Control System for each unit. Each system shall be designed and operated to monitor and control the gas turbine combustion process and operating parameters including, but not limited to: fuel distribution and staging, turbine speed, load conditions, combustion temperatures, water injection, and fully automated startup, shutdown, and cool-down. [Design; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 10. <u>Combustion Controls</u>: The permittee shall employ "good operating practices" in accordance with the manufacturer's recommended operating procedures to control CO, NOx, and VOC emissions. Prior to the initial emissions performance tests, the dry low-NOx (DLN) combustors and Speedtronic<sup>TM</sup> control system on each gas turbine shall be tuned to optimize the reduction of CO, NOx, and VOC emissions. Thereafter, these systems shall be maintained and tuned, as necessary, to minimize pollutant emissions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 11. <u>DLN Combustion Technology</u>: To control NOx emissions when firing natural gas, the permittee shall install, tune, operate and maintain a dry low-NOx (DLN) combustion system for each combustion turbine in accordance with the manufacturer's recommendations. The permittee shall provide manufacturer's emissions performance versus load diagrams for the specific DLN system as part of the Title V permit application. Compliance with this requirement may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 12. Water Injection: To control NOx emissions when firing low sulfur distillate oil, the permittee shall install, calibrate and operate an automated water injection system for each combustion turbine in accordance with the manufacturer's recommendations. Each water injection system shall be maintained and adjusted to minimize NOx emissions. The permittee shall provide manufacturer's emissions performance versus load diagrams for the specific water injection system as part of the Title V permit application. Compliance with this requirement may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 13. <u>Circumvention</u>: The permittee 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.]
- 14. <u>Unconfined Particulate Emissions</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

#### **EMISSIONS STANDARDS**

15. <u>Emissions Standards Summary</u>: The following table summarizes the emissions standards specified in this permit.

EU-018, 019, and 020: GE Model 7EA Combustion Turbines (P12, P13, and P14)			
Pollutant	Fuels and Controls <sup>a</sup>	Emission Standards <sup>b</sup>	
СО	Gas Firing W/DLN	20.0 ppmvd @ 15% O2, 3-hour test avg. 43.0 pounds per hour, 3-hour test avg.	
	Oil Firing W/Wet Injection	20.0 ppmvd @ 15% O2, 3-hour test avg. 44.0 pounds per hour, 3-hour test avg.	
NOx	Gas Firing W/DLN Compliance by Annual Testing at Base Load	9.0 ppmvd @ 15% O2, 3-hour test avg. 33.0 pounds per hour, 3-hour test avg.	
	Continuous Compliance by CEM	10.0 ppmvd @ 15% O2, 24-hour avg.	
	Oil Firing W/Wet Injection  Compliance by Annual Testing at Base Load	42.0 ppmvd @ 15% O2, 3-hour test avg. 169.0 pounds per hour, 3-hour test avg.	
	Continuous Compliance by CEM	42.0 ppmvd @ 15% O2, 24-hour avg.	
PM/PM10	Fuel Sulfur Specifications and Combustion Design	Visible emissions ≤ 10% opacity (PM estimated at 0.002 grains/dscf)	
SAM/SO2	Natural Gas Sulfur Specification	≤ I grain per 100 SCF of gas	
	Low Sulfur Distillate Oil Sulfur Specification	0.05% sulfur by weight	
VOC	Gas Firing W/Combustion Design	2.0 ppmvw as methane 2.0 pounds per hour	
	Oil Firing W/Combustion Design	4.0 ppmvw as methane 5.0 pounds per hour	

Oil firing is limited to 1000 hours per year per gas turbine and 2500 hours per year for all three gas turbines combined. DLN means dry low-NOx controls.

## 16. Carbon Monoxide (CO)

- (a) Gas Firing: When firing natural gas in a combustion turbine, CO emissions shall not exceed 43.0 pounds per hour nor 20.0 ppmvd corrected to 15% oxygen based on a 3-hour test average.
- (b) **Oil Firing**: When firing low sulfur distillate oil in a combustion turbine, CO emissions shall not exceed 44.0 pounds per hour nor 20.0 ppmvd based on a 3-hour test average.

The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Method 10 and the performance testing requirements of this permit. [Design; Rule 62-212.400(BACT), F.A.C.]

The mass emission limits (pounds per hour) were based on 100% base load, 59° F, and 60% relative humidity. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

## 17. Nitrogen Oxides (NOx)

- (a) Gas Firing: When firing natural gas in a combustion turbine, NOx emissions shall not exceed 33.0 pounds per hour nor 9.0 ppmvd corrected to 15% oxygen based on an annual 3-hour compliance test average. In addition, NOx emissions shall not exceed 10.0 ppmvd corrected to 15% oxygen based on a 24-hour block average of all valid data collected from the continuous NOx emissions monitor during actual operation.
- (b) Oil Firing: When firing low sulfur distillate oil in a combustion turbine, NOx emissions shall not exceed 169.0 pounds per hour nor 42.0 ppmvd corrected to 15% oxygen based on an annual 3-hour compliance test average. In addition, NOx emissions shall not exceed 42.0 ppmvd corrected to 15% oxygen based on a 24-hour block average of all valid data collected from the continuous NOx emissions monitor during actual operation. The permittee shall set up the automated control system for water injection to reduce NOx emissions below 42.0 ppmvd corrected to 15% oxygen.

NOx emissions are defined as emissions of oxides of nitrogen measured as NO2. The permittee shall demonstrate compliance by conducting tests in accordance with EPA Methods 7E, 20 and the performance testing requirements of this permit. Compliance with the 24-hour block averages shall be demonstrated by collecting and reporting data in accordance with the conditions for the NOx continuous emissions monitor specified by this permit. [Rule 62-212.400(BACT), F.A.C.]

## 18. Particulate Matter (PM/PM10), Sulfuric Acid Mist (SAM) and Sulfur Dioxides (SO2)

- (a) Fuel Specifications: Emissions of PM, PM10, SAM, and SO2 shall be limited by the good combustion techniques and the fuel sulfur limitations specified in this permit. The permittee shall demonstrate compliance with the fuel sulfur limits by maintaining records of the sampling and analysis required by this permit and/or as specified in the provisions of the Alternate Monitoring Plan. [Rule 62-212.400(BACT), F.A.C.]
- (b) VE Standard: As a surrogate for PM/PM10 emissions, visible emissions from the operation of a combustion turbine shall not exceed 10% opacity, based on a 6-minute average. The permittee shall demonstrate compliance with this standard by conducting tests in accordance with EPA Method 9 and the performance testing requirements of this permit. [Rule 62-212.400(BACT), F.A.C.]

## 19. Volatile Organic Compounds (VOC)

- (a) Gas Firing: When firing natural gas in a combustion turbine, VOC emissions shall not exceed 2.0 pounds per hour nor 2.0 ppmvd based on a 3-hour test average.
- (b) Oil Firing: When firing low sulfur distillate oil in a combustion turbine, VOC emissions shall not exceed 5.0 pounds per hour nor 4.0 ppmvd based on a 3-hour test average.

The VOC emissions shall be measured and reported as methane. The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Methods 18, 25, and/or 25A and the performance testing requirements of this permit. [Application; Design; Rule 62-4.070(3), F.A.C.]

## STARTUP, SHUTDOWN, AND MALFUNCTION

20. <u>Excess Emissions Prohibited</u>: Excess emissions caused 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. Such preventable emissions shall be included in the

- calculation of the 24-hour averages compiled by the continuous NOx emissions monitor. [Rule 62-210.700, F.A.C.]
- 21. <u>Alternate Standards and NOx CEMS Data Exclusion</u>: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes.
  - (a) Opacity: During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for up to 2.0 hours in any 24-hour period.
  - (b) NOx CEMS Data Exclusion: For the following identified operational periods, I-hour NOx emissions rate values may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.
    - (1) Startup, Shutdown, and Malfunction: No more than 1 hourly emission rate value due to startup shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel-switch is not considered "startup".
    - (2) Tuning: If the permittee provides at least five days advance notice prior to a major tuning session performed by the manufacturer's representative, hourly NOx emissions rate values during tuning may be excluded from the 24-hour block compliance averages. Data excluded due to tuning shall not count towards the limit on total excluded data in a 24-hour period. {Permitting Note: As an example, a major tuning session would occur after a combustor change-out. A tuning session may take a several hours each day over a few days. No more than two major tuning sessions would be expected during any year. Major tuning sessions are intended to return the unit to manufacturer's specifications for efficient operation and should result in lower actual emissions.}

As provided by the authority in Rule 62-210.700(5), F.A.C., the above requirements are established in lieu of the provisions of Rule 62-210.700(1), F.A.C. [Design; Rules 62-210.700(5), 62-4.130, and Rule 62-212.400(BACT), F.A.C.]

### **EMISSIONS PERFORMANCE TESTING**

22. Combustion Turbine Testing Capacity: 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 air inlet air temperature during the test (with 100 percent represented by a curve depicting heat input vs. air inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. air inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Emissions performance tests shall meet all applicable requirements of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]

23. <u>Calculation of Emission Rate</u>: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

## 24. 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. [Rule 62-297.310(4)(a)1, F.A.C.]
  - 2. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)2, F.A.C.]
- (b) Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
- (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, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

## 25. 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. [Rule 62-297.310(5)(a), F.A.C.]
- (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)(b), F.A.C.]
- 26. <u>Sampling Facilities</u>: The permittee shall design the combustion turbine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. Permanent stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rules 62-4.070 and 62-204.800, F.A.C., and 40 CFR 60.40a(b)]
- 27. <u>Performance Test Methods</u>: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.
  - (a) EPA Method 7E, "Determination of Nitrogen Oxide Emissions from Stationary Sources".
  - (b) EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
  - (c) **EPA Method 10**, "Determination of Carbon Monoxide Emissions from Stationary Sources". All CO tests shall be conducted concurrently with NOx emissions tests.
  - (d) EPA Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines."

- (e) EPA Methods 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations."
- No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Emissions Monitoring Section Administrator in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.
- 28. <u>Test Notification</u>: The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and 60.8]
- 29. <u>Initial Tests Required</u>: Initial compliance with the allowable emission standards specified in this permit shall be determined within 60 days after achieving the maximum permitted capacity, but not later than 180 days after initial operation of the emissions unit. Initial tests for emissions from the combustion turbine shall be conducted for CO, NOx, VOC, and visible emissions individually for firing natural gas and for firing low sulfur distillate oil. Initial NOx performance test data shall also be converted into the units of the corresponding NSPS Subpart GG emissions standards to demonstrate compliance (see Appendix GG). {Permitting Note: These initial tests are required after completing the minor upgrade to achieve increased heat inputs and power generation.} [Rule 62-297.310(7)(a)1, F.A.C.]
- 30. Annual Performance Tests: Annual emissions performance tests for CO, NOx, and visible emissions from each combustion turbine shall be conducted when firing natural gas. If conducted at permitted capacity, the annual NOx continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the annual compliance stack test. An annual performance test for VOC emissions is not required as long as the unit remains in compliance with the CO and visible emissions limits specified by this permit.
  - If a combustion turbine operates more than 200 hours of oil firing during any federal fiscal year, the permittee shall schedule and conduct annual emissions performance tests for CO, NOx, and visible emissions when firing low sulfur distillate oil. For oil firing, compliance with the NOx standards may be determined by the continuous monitor data collected during the required CO test. An annual performance test for VOC emissions is not required as long as the unit remains in compliance with the CO and visible emissions limits specified by this permit for oil firing.
  - Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). [Rule 62-297.310(7)(a)4, F.A.C.]
- 31. <u>Tests Prior to Permit Renewal</u>: Prior to renewing the air operation permit, the permittee shall also conduct emissions performance tests for CO, NOx, VOC, and visible emissions when firing natural gas and when firing low sulfur distillate oil. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision. [Rule 62-297.310(7)(a)3, F.A.C.]
- 32. <u>Tests After Substantial Modifications</u>: All performance tests required for initial startup shall also be conducted after any substantial modification and appropriate shakedown period of air pollution control equipment including the replacement of dry low-NOx combustors. Shakedown periods shall not exceed 100 days after re-starting the combustion turbine. [Rule 62-297.310(7)(a)4, F.A.C.]
- 33. <u>VE Tests After Shutdown</u>: Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions (VE) compliance test once per each five-year period, coinciding with the term of its air operation permit. [Rule 62-297.310(7)(a)8, F.A.C.]

34. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

## **CONTINUOUS MONITORING REQUIREMENTS**

- NOx CEMS Requirements: For each gas turbine, the permittee shall install, calibrate, maintain, and operate continuous emissions monitors (CEMS) to measure and record emissions of nitrogen oxides (NOx) and oxygen (O2) in a manner sufficient to demonstrate compliance with the standards of this permit. A monitor for carbon dioxide (CO2) may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.
  - (a) Performance Specifications. Each monitor shall be installed in a location that will provide emissions measurements representative of actual stack emissions. Each CEMS shall comply with the corresponding performance specifications that identify location, installation, design, performance, and reporting requirements.
    - (1) Each NOx monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NOx monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60. The NOx monitor shall have dual span capability with a low span (gas) no greater than 30 ppmvd corrected to 15% O2 and a high span (oil) no greater than 200 ppmvd corrected to 15% O2.
    - (2) Each O<sub>2</sub> (or CO<sub>2</sub>) CEMS shall comply with Performance Specification 3 in Appendix B of 40 CFR 60. The O<sub>2</sub> reference method for the annual RATA shall be EPA Method 3A Appendix A of 40 CFR 60.
  - (b) Data Collection. Each CEMS shall be designed and operated to sample, analyze, and record emissions data evenly spaced over a 1-hour period during all periods of operation. Each 1-hour average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. If the NOx CEMS measures concentration on a wet basis, the permittee shall use approved methods for correction of measured emissions to a dry basis (0% moisture). The O2 (or CO2) CEMS shall express the 1-hour emission rate values in terms of "percent oxygen by volume". The NOx CEMS shall express the 1-hour emission averages in terms of "ppmvd corrected to 15% oxygen".
  - (c) Compliance Averages. Compliance with the 24-hour block NOx emissions standards shall be based on data collected by each required CEMS. The 24-hour block shall start at midnight of each operating day and consist of 24 consecutive 1-hour blocks. For purposes of determining compliance with the emission standards of this permit, missing data shall not be substituted. Instead the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. If a unit operates continuously throughout the day, the 24-hour block average shall be the average of 24 consecutive 1-hour emission averages. If a unit operates less than 24

hours during the day, the 24-hour block average shall be the average of the available valid 1-hour emission averages collected during actual operation If monitoring data is authorized for exclusion (due to startup, shutdown, malfunction, or tuning), the 24-hour block average shall be the average of the remaining valid 1-hour emission averages collected during actual operation. In cases of reduced operation or data exclusion, the compliance average will be based on less than 24, 1-hour emission averages. Upon completion of each 24-hour block, the permittee shall determine separate compliance averages for gas firing and oil firing. A 1-hour emissions average that includes any amount of oil firing shall only be included in the compliance average for oil firing. Upon a request from the Department, the NOx emission rate shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.

- (d) Data Exclusion. Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall record emissions data at all times including episodes of startup, shutdown, and malfunction. Emissions data recorded during periods of startup, shutdown, or malfunction may only be excluded from the compliance averages in accordance with the requirements previously specified in this permit. To the extent practicable, the permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions data shall be summarized in the required quarterly report.
- (e) Reporting: If a CEMS reports NOx emissions in excess of a standard, the permittee shall notify the Compliance Authority within one working day with a preliminary report 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 Compliance Authority may request a written summary report of the incident.
- (f) Monitor Availability. Monitor availability shall not be less than 95% in any calendar quarter. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C.; 40 CFR 60.7]

## **COMPLIANCE DEMONSTRATIONS**

36. Records: Unless otherwise specified, all measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to DEP representatives upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

## 37. Fuel Records

- (a) Natural Gas: The permittee shall demonstrate compliance with the SO2 standards of this permit and in 40 CFR 60.333 by complying with the requirements in 40 CFR 75 Appendix D.
- (b) Low Sulfur Distillate Oil: For all bulk shipments of low sulfur distillate oil received at this facility, the permittee shall obtain an analysis identifying the sulfur content. An analysis provided by the fuel vendor is acceptable. Methods for determining the sulfur content of the distillate oil shall be ASTM D129-91, D2622-94, or D4294-90 or equivalent methods. Records shall specify the test method used and shall comply with the requirements of 40 CFR 60.335(d).

[Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

- 38. <u>Alternate Monitoring Plan</u>: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance.
  - (a) The NOx CEM data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG. Subject to EPA approval, the calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS.
  - (b) The NOx CEM data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG.
  - (c) When requested by the Department, the CEMS emission rates for NOx on this unit shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.
  - (d) 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 conditions are met.
    - (1) The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
    - (2) The permittee shall submit a monitoring plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 1 grain of sulfur per 100 SCF of gas pursuant to 40 CFR 75.11(d)(2);
    - (3) 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 U.S. EPA.

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).

[40 CFR 60, Subpart GG; Applicant Request]

39. Monthly Operations Summary: By the fifth calendar day of each month, the owner or operator shall record the following information in a written or electronic log summarizing the previous month of operation and the previous 12 months of operation: hours of gas firing; million cubic feet of gas fired; hours of oil firing; and gallons of oil fired. The information shall be recorded for each gas turbine and for the group of three gas turbines. Information may be recorded and stored as an electronic file, but

#### SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

must be available for inspection and/or printing at the request of the Compliance Authority. [Rule 62-4.160(15), F.A.C.]

#### REPORTS

- 40. <u>Emissions Performance Test Reports</u>: A report indicating the results of the required emissions performance tests shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. 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)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 41. Quarterly Excess Emissions Reports: If excess emissions occur due to malfunction, the owner or operator shall notify the Compliance Authority 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. Following the NSPS format (40 CFR 60.7, Subpart A) periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards specified in this permit. Within thirty (30) days following each calendar quarter, the permittee shall submit a report on any periods of excess emissions that occurred during the previous calendar quarter to the Compliance Authority. This quarterly report shall follow the format provided in Appendix XS of this permit and summarize periods of excluded NOx emissions data. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7]
- 42. <u>Annual Operating Report</u>: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

#### APPENDIX A - TERMINOLOGY

#### ABBREVIATIONS AND ACRONYMS

٥F

- Degrees Fahrenheit

DEP

- State of Florida, Department of Environmental Protection

DARM

- Division of Air Resource Management

**EPA** 

- United States Environmental Protection Agency

F.A.C.

- Florida Administrative Code

F.S.

- Florida Statute

SOA UTM Specific Operating AgreementUniversal Transverse Mercator

CT

- Combustion Turbine

 $\mathbf{DB}$ 

- Duct Burner

HRSG

- Heat Recovery Steam Generator

DLN

- Dry Low-NOx Combustion Technology

SCR

- Selective Catalytic Reduction

OC

- Oxidation Catalyst Technology for CO Control

#### RULE CITATIONS

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

#### Florida Administrative Code (F.A.C.) Rules:

Example:

[Rule 62-213.205, F.A.C.]

Where:

62 - refers to T

62-213

- refers to Title 62 of the Florida Administrative Code (F.A.C.)

02-213

- refers to Chapter 62-213, F.A.C.

62-213.205 - refers to Rule 62-213.205, F.A.C.

#### Facility Identification (ID) Number:

Example:

Facility ID No. 099-0001

Where:

099

- 3 digit number indicates that the facility is located in Palm Beach County

0221

- 4 digit number assigned by state database identifies specific facility

## New Permit Numbers:

Example:

Permit No. 099-2222-001-AC or 099-2222-001-AV

Where:

AC

- identifies permit as an Air Construction Permit

ΑV

- identifies permit as a Title V Major Source Air Operation Permit

099

- 3 digit number indicates that the facility is located in Palm Beach County

2222

- 4 digit number identifies a specific facility

001

- 3 digit sequential number identifies a specific permit project

#### Old Permit Numbers:

Example:

Permit No. AC50-123456 or AO50-123456

Where:

 $\mathsf{AC}$ 

- identifies permit as an Air Construction Permit

AO

- identifies permit as an Air Operation Permit

123456

- 6 digit sequential number identifies a specific permit project

#### APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
  - (a) Have access to and copy and records that must be kept under the conditions of the permit;
  - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
  - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - (a) A description of and cause of non-compliance; and
  - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by

## APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS

- Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
  - (a) Determination of Best Available Control Technology (X, initial permit);
  - (b) Determination of Prevention of Significant Deterioration (X, initial permit); and
  - (c) Compliance with New Source Performance Standards (X, initial permit).
- G.14 The permittee shall comply with the following:
  - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - (c) Records of monitoring information shall include:
    - 1. The date, exact place, and time of sampling or measurements;
    - 2. The person responsible for performing the sampling or measurements;
    - 3. The dates analyses were performed;
    - 4. The person responsible for performing the analyses;
    - 5. The analytical techniques or methods used; and
    - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

#### APPENDIX BD - FINAL BACT DETERMINATION

#### **Final BACT Determinations**

In accordance with Rule 62-212.400, F.A.C., the Department determined that the following standards represent the Best Available Control Technology (BACT) for the simple cycle gas turbines. The Department's technical review and rationale for the BACT determinations are presented in Technical Evaluation and Preliminary Determination issued concurrently with the draft permit for the original air construction permit (PSD-FL-268).

Pollutant	BACT Controls <sup>b</sup>	BACT Standard
· CO	Gas Firing W/DLN Combustion	20.0 ppmvd @ 15% oxygen and 43.0 pounds per hour
	Oil Firing W/Combustion Design	20.0 ppmvd @ 15% oxygen and 44.0 pounds per hour
NOx	Gas Firing W/DLN Combustion	9.0 ppmvd @ 15% oxygen and 33.0 pounds per hour 10.0 ppmvd @ 15% oxygen by CEM
	Oil Firing W/Wet Injection	42.0 ppmvd @ 15% oxygen and 169.0 pounds per hour 42.0 ppmvd @ 15% oxygen by CEM
PM/PM10	Fuel Sulfur Specifications and Combustion Design	Visible emissions ≤ 10% opacity
SAM³/SO2	Natural Gas Sulfur Specification	1 grain per 100 SCF of gas
	Low Sulfur Distillate Oil Sulfur Specification	0.05% sulfur by weight
VOCª	Gas Firing W/Combustion Design	2.0 ppmvd as methane <sup>a</sup> 2.0 pounds per hour <sup>a</sup>
	Distillate Oil Firing W/Combustion Design	4.0 ppmvd as methane <sup>a</sup> 5.0 pounds per hour <sup>a</sup>

<sup>&</sup>lt;sup>a</sup> The VOC standards are synthetic PSD-minor limits and not BACT limits.

## **Revisions and Comments**

The original PSD air construction permit was issued on December 9, 1999 and made the above final BACT determinations. In January of 2002, the Department issued a minor revision to the PSD permit that included a slight increase in the heat input rates for both gas and oil firing. This resulted in the following revisions to the NOx mass emissions standards: from 32.0 to 33.0 lb/hour for gas firing, and from 167.0 to 169.0 lb/hour for oil firing. In addition, the averaging period for the CEMS-based NOx emissions standards were revised from a 3-hour rolling average to a 24-hour block average of the actual operating hours to accommodate the multiple startups and fuel switching that occur at this plant. The BACT controls continue to be DLN combustion for gas firing and wet injection for oil firing. It is also noted that the original PSD air construction permit included a slightly higher CO limit for gas firing that applied during the initial CO performance tests and for the subsequent 12 months of operation. This higher standard was removed during the revision because it was no longer applicable.

b DLN means dry low-NOx combustion design.

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

#### 40 CFR 60, SUBPART A - NSPS GENERAL PROVISIONS

This emissions unit is subject to the applicable portions of 40 CFR 60, Subpart A, General Provisions, including:

- 40 CFR 60.7, Notification and Record Keeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

For copies of these requirements, please contact the Department's New Source Review Section.

## 40 CFR 60, SUBPART GG - STATIONARY GAS TURBINES

This emissions unit is subject to 40 CFGR 60, Subpart GG for stationary gas turbines adopted by reference in Rule 62-204.800(7)(b), F.A.C. The following conditions follow the original NSPS rule language and numbering scheme. Regulations that are not applicable were omitted for clarity. Because this emissions units is subject to an NSPS, it is also subject to the following federal provisions: 40 CFR 60, Subpart A, General Provisions for sources subject to an NSPS, adopted by reference in Rule 62-204.800(7)(d), F.A.C.; 40 CFR 60, Appendix A - Test Methods, Appendix B - Performance Specifications, Appendix C - Determination of Emission Rate Change, Appendix D - Required Emissions Inventory Information, Appendix F - Quality Assurance Procedures, adopted by reference in Rule 62-204.800(7)(e).

## 40 CFR 60.330 APPLICABILITY AND DESIGNATION OF AFFECTED FACILITY.

(a) The provisions of this subpart are applicable to all stationary gas turbines with a heat input at peak load equal to or greater than 10 million BTU per hour, based on the lower heating value of the fuel fired.

#### 40 CFR 60.331 DEFINITIONS.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

- (a) <u>Stationary gas turbine</u> means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.
- (b) Simple cycle gas turbine means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- (d) <u>Combined cycle gas turbine</u> means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.
- (f) Ice fog means an atmospheric suspension of highly reflective ice crystals.
- (g) <u>ISO standard day conditions</u> means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
- (h) <u>Efficiency</u> means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

- (i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) <u>Base load</u> means the load level at which a gas turbine is normally operated.
- (p) Gas turbine model means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.
- (q) <u>Electric utility stationary gas turbine</u> means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

#### 60.332 STANDARD FOR NITROGEN OXIDES.

- (a) On and after the date of the performance test required by Sec. 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b) of this section shall comply with one of the following, except as provided in paragraphs (e) of this section.
  - (1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

STD = 
$$(0.0075) \frac{(14.4)}{Y} + F$$

Where:

- STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).
- Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.
- F = NO emission allowance for fuel-bound nitrogen as defined in the following table:
- (3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-Bound Nitrogen	"F"
(Percent By Weight)	(NOx Percent By Volume)
N < 0.015	0
0.015 < N < 0.1	0.04(N)
0.1 < N < 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

Where, N = the nitrogen content of the fuel (percent by weight).

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 100 million Btu per hour based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

(f) Stationary gas turbines using water or steam injection for control of NOx emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

#### 40 CFR 60.333 STANDARD FOR SULFUR DIOXIDE.

On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

#### 40 CFR 60.334 MONITORING OF OPERATIONS.

- (a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOx emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within +/- 5.0 percent and shall be approved by the Administrator.
- (b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:
  - (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.
- (c) For the purpose of reports required under Sec. 60.7(c), periods of excess emissions that shall be reported are defined as follows:
  - (1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with Sec. 60.332 by the performance test required in Sec. 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in Sec. 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under Sec. 60.335(a).
  - (2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
  - (3) Ice fog. Each period during which an exemption provided in Sec. 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

#### 40 CFR 60.335 TEST METHODS AND PROCEDURES.

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in Sec. 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in Sec. 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in Secs. 60.332 and 60.333(a) as follows:
  - (1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

 $NOx = (NOxO) (Pr/P_0)^{0.5} (e^{-19 (H_0 - 0.00633)}) (288°K/T_a)^{1.53}$ 

Where

NOx = emission rate of NOx at 15 percent oxygen and ISO standard ambient conditions, volume percent.

NOxo = observed NOx concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

Ho = observed humidity of ambient air, g H2O/g air.

E = transcendental constant, 2.718.

 $T_a = ambient temperature, °K.$ 

- (2) The monitoring device of Sec. 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with Sec. 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.
- (d) The owner or operator shall determine compliance with the sulfur content standard in Sec. 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of Sec. 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

## APPENDIX XS - CEMS EXCESS EMISSIONS REPORT

## FIGURE 1. NSPS SUMMARY REPORT: GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions	
Pollutant (Circle One): SO <sub>2</sub> NOx TRS H <sub>2</sub> S CO	
Reporting period dates: From	to
Company:	
Emission Limitation:	
Address:	
Monitor Manufacturer and Model No.:	
Date of Latest CMS Certification or Audit:	
Process Unit(s) Description:	
Total source operating time in reporting period 1:	
Emission data summary	CMS performance summary 1
1. Duration of excess emissions in reporting period due to:  a. Startup/shutdown	emissions is 1 percent or greater of the total or greater of the total operating time, both the
Note: On a separate page, describe any changes since lossymmarize the periods of data excluded from the complication.	ast quarter in CMS, process or controls. Also,
I <u>certify</u> that the information contained in this report is tr	ue, accurate, and complete.
Name:	<u> </u>
Signature:	
Title:	
Date:	

## Florida Department of **Environmental Protection**

TO:

Howard Rhodes

THRU:

Clair Fancy

Al Linero all 1/25 for CHF

FROM:

DATE:

January 23, 2002

SUBJECT:

Project No. 0970014-006-AC

Air Permit No. PSD-FL-268A

Florida Power Intercession City Plant Minor Modifications for Units P12 to P14

The final permit is attached for your approval and signature. The permit authorizes minor modifications to Units P12 through P14 (simple cycle gas turbines) at Florida Power's Intercession City Plant, including: increases to the maximum heat inputs and nominal power production for both gas and oil firing; revision of the NOx compliance averaging period; clarification of NOx CEMS data exclusion; and correction of the minimum observation period for a compliance visible emissions test. The existing facility is located in Osceola County approximately 3.5 miles west of Intercession City.

The Department distributed an "Intent to Issue Permit" package on December 19, 2001. The applicant published the "Public Notice of Intent to Issue" in The Osceola News-Gazette on December 22, 2001. The Department received proof of publication on January 16, 2002. No requests for administrative hearings were

Day #90 is April 5, 2002. I recommend your approval of the attached Final Permit for this project.

Attachments

HLR/CHF/AAL/jfk



RECLIVED

JAN 31 2002

January 2, 2002

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E., Administrator New Source Review Section Division of Air Resources Management Florida Department of Environmental Protection 2600 Blair Stone Road, MS 5505 Tallahassee, Florida 32399-2400

Dear Mr. Linero:

Re:

Intercession City Units P12 – P14
Project No. 0970014-006-AC
Draft Permit No. PSD-FL-268A

Public Notice – Proof of Publication

Please find enclosed the "proof of publication" for the public notice of the above referenced draft permit. The notice was published on December 22, 2001.

Please contact me if you have any questions or need additional information.

Sincerely,

Jamie Hunter

Project Technical Specialist Environmental Services

jjh/JJH021

Enclosure

c(w/enc):

Jeff Koerner, FDEP - Tallahassee

Martin Drango, IC44

## **BEST AVAILABLE COPY**

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION Florida Power Corporation intercession City Power Flant Project No. 0970014-008-AC

Intercession City Power Flant
Project No. 0970014-008-AC
Draft Permit: PSD-FL-268A

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to the Florida Power Corporation to make minor modifications to the original PSD air construction permit for three simple cycle gas turbines installed at the Intercession City Power Plant. This plant is located in Osceola County approximatelt 3.5 miles west of Intercession City. The address is 5525 Osceola Polk County Line Road, Intercession City, Florida 33848. The applicant's authorized representative is Mr. Martin J. Drango, the Plant Manager. The applicant's mailing addresses is: P.O. Box 368, Intercession City, Florida 33348.

The original PSD permit authorized installation of three new simple cycle gas turbines at the Intercession city plant. The applicant requested changes to the original permit, primarily for a slight increase in the heat input rates and to clarify NOx compliance monitoring requirements. The heat input rates and NOx mass emission rates would increase by less than 3% of the current values. The draft permit authorizes those increases as well as the following changes: Revises the averaging period of CEMS-based NOx standards from a 3-hour rolling average to a 24-hour block average to accommodate multiple startups and fuel switching at this plant; clarify the continuous NOx monitoring conditions including the allowance for data exclusion; reduce the minimum observation period for compliance visible emissions test from 60 to 30 minutes; and clarify that the plant may provide the analysis of the fuel sulfur contest for distillate oil shipments in addition to an analysis from the fuel vendor.

Because the existing plant is a PSD-major source of air pollution, new projects are subject to the preconstruction review requirements for the Prevention of Significant Deterioration (PSD) of Air Quality in Rule 62-212.400, F.A.C. The proposed changes result in increased annual emissions of 6 ther pollutan

rates defined in Table 62-212,400, F.A.C. Therefore, the project is not subject to PSD.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station # 5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable another Public Notice

the Department shall revise the proposed permit and require, if appli-cable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, Florida Statues, before the deadline for filing a petition. The procedures for petitioning for a hearing are set

forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120,569 and 120,57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station # 35, Tallahassee, Florida 2339-3000, Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this Notice of Intent. Petitions filed by any persons other than those entitled to written notice under Section 120,60 (3), F.S., must be filed within fourteen (14) days of publication of the Public Notice or within entitled to written notice under Section 120.60 (3), F.S., must be filed within fourteen (14) days of publication of the Public Notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for Notice of Agency action may file a petition within fourteen 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 option within the appropriate time period shall consist to son 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 interventions 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 Department'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 ber of the petitioner, the name, address and talephone 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 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 utilimate facts alleged including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (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 petitionmer 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

agency's proposed action.

A petition that does not dispute the material facts upon which the Department'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 notice. 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.

A complete project file is available for public inspection during normal business hours, 8:00 A.M. to 5:00 P.M., Monday through Friday, except legal holidays at:

mal business inuits, outexcept legal holidays at:
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Air Regulation
New Source Review Section New Source Heview Section
111 S. Magnolia Drive, Suite 4
Tallahassee, FL 32301
Telephone: (850) 488-0114
Fax #: (850) 922-6979
DEPARTMENT OF ENVIRONMENTAL PROTECTION Central District Office
Air Resource Section
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: (407) 894-7555
Fax #: (407) 897-2966

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit and the information licals postage matter at the post submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call (650) 488-0114, for additional information. December 22, 2001

OF OF PUBLICATION

EOLA

undersigned authority, personally lutrey, who on oath says that he is of the Osceola News-Gazette, a spaper published at Kissimmee, in lorida; that the attached copy of the s published weekly in the regular of said newspaper in the issues of:

ser. 22, 2001

evs that the Osceola News-Gazette published in Kissimmee, in said lorida, and that the said newspaper en continuously published in said Florida, each week and has been e, in said Osceola County, Florida, year next preceding the first publined copy of advertisement; and affiat he has neither paid nor promised

any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me by Dan L. Autrey,

Carol L. Gorrell (N.P. Seal)

OFFICIAL NOTANY SEAL **LIBRECOLLOGRAD** COMMISSION NUMBER 0.0970428

MY COMMISSION EXPIRES QCT, 24,2004



## Department of Environmental Protection

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

David B. Struhs Secretary

December 18, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Martin J. Drango, Plant Manager Florida Power Corporation P.O. Box 368 Intercession City, FL 33848

Re:

Project No. 0970014-006-AC Draft Permit No. PSD-FL-268A

Draft PSD Permit Modification for the Intercession City Plant

Dear Mr. Drango:

Enclosed is one copy of the Draft Permit to revise conditions in the original PSD air construction permit for gas turbine Units P12-P14 at the Intercession City Plant located in Osceola County, Florida. Minor revisions were made to the heat input rates, NOx mass emission limits, NOx averaging period, data exclusion conditions, and CEMS requirements as well as other miscellaneous changes. The Department's "Technical Evaluation and Preliminary Determination", "Intent to Issue Permit", and the "Public Notice of Intent to Issue Permit" are also included.

The "Public Notice of Intent to Issue Permit" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to the Administrator of the New Source Review Section, A. A. Linero, at the above letterhead address. If you have any other questions, please contact Jeff Koerner at 850/921-9536.

Sincerely,

<sup>1</sup>C. H. Fancy, Chief Bureau of Air Regulation

CHF/AAL/jfk

Enclosures

In the Matter of an Application for Air Permit by:

Florida Power Corporation P.O. Box 368 Intercession City, FL 33848

Authorized Representative:

11

Mr. Martin J. Drango, Plant Manager

Project No. 0970014-006-AC Draft Permit No. PSD-FL-268A Intercession City Plant Hillsborough County, Florida

## INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of Draft Permit attached) for the proposed project as detailed in the application and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below. The applicant, Florida Power Corporation, applied on November 26, 2001 to the Department for a permit to revise conditions in the original PSD air construction permit for three simple cycle gas turbines located at the Intercession City Plant is Osceola County. The changes are not subject to PSD.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to perform proposed work. The Department intends to issue this air construction permit based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114 / Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) and (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of the <u>Public Notice of Intent to Issue Air Permit</u>. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under 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 at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit

Florida Power Corporation Project No. 0970014-006-AC Draft Permit PSD-FL-268A Page 2 of 3

applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (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 Department'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 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, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (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 Department'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 notice. 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.

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. Mediation is not available in this proceeding. 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 notice of intent.

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.

Florida Power Corporation Project No. 0970014-006-AC Draft Permit PSD-FL-268A Page 3 of 3

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 the 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.

Executed in Tallahassee, Florida.

Bureau of Air Regulation

#### CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit package (including the Public Notice of Intent to Issue Air Construction Permit, Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 12/19/01 to the persons listed:

Mr. Martin J. Drango, Florida Power Corp.\*

Mr. Janie Hunter, Florida Power Corp.

Mr. Scott Osbourn, ENSR

Mr. Len Kozlov, DEP - Central District Office

Mr. Gregg Worley, EPA Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

## PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Florida Power Corporation Intercession City Power Plant Project No. 0970014-006-AC Draft Permit PSD-FL-268A

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to the Florida Power Corporation to make minor modifications to the original PSD air construction permit for three simple cycle gas turbines installed at the Intercession City Power Plant. This plant is located in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The applicant's authorized representative is Mr. Martin J. Drango, the Plant Manager. The applicant's mailing address is P.O. Box 368, Intercession City, FL 33848.

The original PSD permit authorized installation of three new simple cycle gas turbines at the Intercession city plant. The applicant requested changes to the original permit, primarily for a slight increase in the heat input rates and to clarify NOx compliance monitoring requirements. The heat input rates and NOx mass emission rates would increase by less than 3% of the current values. The draft permit authorizes these increases as well as the following changes: Revises the averaging period for CEMS-based NOx standards from a 3-hour rolling average to a 24-hour block average to accommodate multiple startups and fuel switching at this plant; clarify the continuous NOx monitoring conditions including the allowance for data exclusion; reduce the minimum observation period for compliance visible emissions test from 60 to 30 minutes; and clarify that the plant may provide the analysis of the fuel sulfur content for distillate oil shipments in addition to an analysis from the fuel vendor.

Because the existing plant is a PSD-major source of air pollution, new projects are subject to the preconstruction review requirements for the Prevention of Significant Deterioration (PSD) of Air Quality in Rule 62-212.400, F.A.C. The proposed changes result in increased annual emissions of 6 tons of NOx per year and 2 tons of SO2 per year. Annual emissions of other pollutants are not predicted to increase. These levels are well below the PSD significant emission rates defined in Table 62-212.400, F.A.C. Therefore, the project is not subject to PSD.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under 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 at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen 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 Department'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 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, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (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 Department'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 notice. 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.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection Bureau of Air Regulation New Source Review Section 111 S. Magnolia Drive, Suite 4

Tallahassee, FL 32301 Telephone: 850/488-0114

Fax: 850/922-6979

Department of Environmental Protection

Central District Office Air Resource Section

3319 Maguire Boulevard, Suite 232 Orlando, Florida 32803-3767 Telephone: 407/894-7555

Fax: 407/897-2966

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

# TECHNICAL EVALUATION & PRELIMINARY DETERMINATION

#### **PROJECT**

Project No. 0970014-006-AC Draft Air Permit No. PSD-FL-268A

Minor Modifications of Heat Input Increase and CEMS Requirements (Emissions Unit No. 018, 019, and 020)

#### **COUNTY**

Osceola County

#### **APPLICANT**

Florida Power Intercession City Plant ARMS Facility ID No. 0970014

# PERMITTING AUTHORITY

Florida Department of Environmental Protection Division of Air Resources Management Bureau of Air Regulation New Source Review Section



December 18, 2001

{Filename: 268A TEPD.doc}

#### 1. GENERAL PROJECT INFORMATION

#### **Applicant Name and Address**

Florida Power Corporation
P.O. Box 368
Intercession City, FL 33848
Authorized Representative:
Mr. Martin J. Drango, Plant Manager

#### **Processing Schedule**

11-26-01 Received the application for a minor modification to the original PSD air construction permit; complete.

#### **Facility Description and Location**

The applicant operates an electric power plant (SIC No. 4922) located at Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The UTM coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51". This is an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS).

#### **Regulatory Categories**

<u>Title III</u>: Based on the Title V permit, the facility is not a major source of hazardous air pollutants (HAP).

<u>Title IV</u>: The facility operates units subject to the acid rain provisions of the Clean Air Act.

<u>Title V</u>: The facility is a Title V major source of air pollution.

<u>PSD</u>: The facility is a PSD major source of air pollution.

NSPS: The facility operates units subject to the federal New Source Performance Standards in 40 CFR 60.

#### **Project Description**

The applicant, Florida Power Corporation, operates an 1170 MW electric power plant in Intercession City. In 2000/2001, three new 91 MW simple cycle gas turbines (Units P12-P14) were added to the facility under air construction Permit No. PSD-FL-268. Because of the intermittent use of the peaking units, natural gas supply is contracted on an interruptible or "as available" basis. When operation exceeds the natural gas supply available for these units, the operators must switch fuels. Because multiple startups and fuel switches can occur within the same day, the applicant requests the following changes and clarifications to the original PSD permit:

- ➤ Change the CEMS-based 3-hour NOx emissions standard from a "rolling average" to a "block average".
- Allow up to 3 hours of NOx data exclusion per cycle per unit due to startups and shutdowns. Allow up to 2 cycles per 24-hour period. A fuel switch would be considered a startup.
- Allow up to 2 hours of NOx data exclusion due to malfunctions during any 24-hour period.

The applicant also plans on a combustion system upgrade for Units P-12-P14 to be scheduled during routine maintenance of the gas turbines. The upgrade involves minor changes to the combustion hardware and associated hot gas path components, which will increase the firing temperature from 2035° F to 2055° F. In addition, several seals will be upgraded to reduce leakage. The project is intended to increase the heat input, increase power generation, and optimize efficiency of the units. The applicant requests an increase in the heat input rates from 885 to 905 MMBtu for gas firing and from 954 to 978 MMBtu for oil firing. Due to the increased heat inputs, the applicant also requests a revision of the NOx mass emissions standards from 32.0 to 33.0 lb/hour for gas firing and from 167.0 to 169.0 lb/hour for oil firing.

The applicant also requests the following miscellaneous changes to the permit.

- ➤ Revise the minimum observation period for a compliance visible emissions test from 60 minutes to 30 minutes.
- Clarify that an oil fuel analysis could also be provided by the facility in addition to the fuel vendor.
- ➤ Remove condition requiring that each unit be capable of accommodating either gas or oil.

#### 2. APPLICABLE REGULATIONS

#### **State Regulations**

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code.

<u>Chapter</u>	Description
62-4	Permitting Requirements
62-204	Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference
62-210	Required Permits, Public Notice and Comments, Reports, Stack Height Policy, Circumvention, Excess Emissions, Forms and Instructions,
62-212	General Preconstruction Review
62-296	Emission Limiting Standards
62-297	Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures

#### **Federal Regulations**

This project is also subject to the applicable federal provisions regarding air quality as established by the EPA in the following sections of the Code of Federal Regulations (CFR).

Title 40, CFR	Description
Part 60	Subpart A - General Provisions for NSPS Sources
	NSPS Subpart GG - Stationary Gas Turbines
	Applicable Appendices

#### **Potential Emissions**

The following table summarizes the project emissions based on the requested increase in maximum heat input.

Table 2A. Potential Emissions

Pollutant	Gas Firing		Oil Firing		Emissions	PSD Significant	Subject
	lb/hour, old	lb/hour, new	lb/hour, old	lb/hour, new	TPY	Emissions Rate, TPY	to PSD?
NOx	32:0	33.0	167.0	169.0	6.3	40	No
SO <sub>2</sub>	3.0	3.07	56.4	57.9	2.1	40	No

a The mass emission rates are predicted to increase only for NOx and SO2. Annual emissions are based on the following permit limits for the three units combined: 2500 hours per year of oil firing and 7670 hours per year of gas firing.

Because this project was just recently constructed and does not have two years of representative emissions data, the Department is evaluating the emissions increases due only to the small increase in heat input. This evaluation is specific for this project and the details involved. The project is minor with respect to PSD.

#### 3. PROJECT REVIEW

#### Request for Increase in Heat Input

The applicant requests increases of the heat input rates for Units P12-P14 from 885 to 905 MMBtu for gas firing and from 954 to 978 MMBtu for oil firing. This represents less than a 3% increase in the permitted capacity of the units. The applicant claims the upgrades will optimize unit efficiency and increase power generation. The minor changes do not trigger additional PSD review. The draft permit revises the heat input rates as requested.

#### Request for Change NOx Emissions Standards

Due to the slightly high heat input rates, the applicant requests increases in the NOx emissions standards from 32.0 to 33.0 lb/hour for gas firing and from 167.0 to 169.0 lb/hour for oil firing. Again these changes are minimal and do not trigger additional PSD review. The draft permit includes these revised standards as well as the following changes:

- ➤ The CEMS-based NOx standards were revised from a 3-hour rolling average to a 24-hour average of actual operating hours. This is consistent with similar permits recently issued for simple cycle gas turbine projects and simplifies the compliance determination for days with multiple startups and fuel switches.
- A 1-hour emissions average that includes any amount of oil firing shall only be included in the compliance average for oil firing. This clarifies the existing condition and simplifies the compliance determination.
- > Specific CEMS requirements for performance specifications, data collection, compliance averages, data exclusions, reporting, and monitor availability were revised and clarified.

#### Request for Revised NOx Emissions Data Exclusion

As previously mentioned, the applicant requested clarified conditions regarding excluded NOx CEMS emissions data and provided excess emissions reports and supporting emissions data. Based on a review of the data, the draft permit includes the following changes:

- No more than 1 hourly emission rate value due to startup shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel-switch is not considered "startup".
- ➤ Hourly emissions data during major tuning sessions may be excluded from the compliance determinations. Data excluded due to tuning shall not count towards the limit on total excluded data in a 24-hour period. As an example, a major tuning session would occur after a combustor change-out. A tuning session may take a several hours each day over a few days. No more than two major tuning sessions would be expected during any year. Major tuning sessions are intended to return the unit to manufacturer's specifications for efficient operation and should result in lower actual emissions.
- Excluded data must be summarized in the quarterly reports.

#### Other Requests

The draft permit also includes the following minor changes:

- The current permit includes the following condition: "Operation below 50% of base load shall be limited to two (2) hours during any 24-hour period (day)." The draft permit revises this to, "Excluding startup and shutdown, operation below 50% base load is prohibited." The revision achieves the original intent, which was to limit low load operation.
- The current permit includes the following condition, "Each unit shall be capable of accommodating either fuel." The draft permit revises this to, "Each unit shall be capable of firing natural gas." The revision achieves the original intent, which was to encourage use of the lowest emitting fuel.

#### TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- The draft permit removes the "initial CO limit" that was specified for the first 12 months of operation. This period is over and the condition is no longer applicable.
- The minimum observation period for a compliance visible emissions tests was revised from 60 to 30 minutes. This is consistent with Rule 62-297.310(4)(a)2, F.A.C., which only requires a 60 minute test for emissions units that emit more than 100 tons per year of particulate matter, have a multiple opacity standard, or are required to test by rule.
- ➤ The draft permit requires the permittee to conduct initial tests after completing the upgrade.
- The draft permit was clarified to allow the facility to provide an oil analyses to demonstrate compliance with the fuel sulfur limit in addition to the fuel vendor.
- The monitoring requirements for compliance with the natural gas fuel specification were simplified to acid rain requirements in 40 CFR 75 Appendix D.

#### 4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the specific conditions of the draft permit. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

#### DRAFT PERMIT

#### PERMITTEE:

Florida Power Corporation P.O. Box 368 Intercession City, FL 33848

Authorized Representative:

Mr. Martin J. Drango, Plant Manager

Project No. 0970014-006-AC PSD Permit No. PSD-FL-268A Facility ID No. 0970014 SIC No. 4911

Expires: December 1, 2002

#### PROJECT AND LOCATION

This permit is issued pursuant to the requirements for the Prevention of Significant Deterioration of Air Quality (PSD Permit). This existing facility is an electric power generating plant with a nominal capacity of 1170 MW. The proposed project will add three simple cycle, dual-fuel, General Electric Model 7EA combustion turbines with electrical generator sets each having a maximum capacity of 91 MW.

The project will be located at the existing FPC Intercession City Plant in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The UTM coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51".

#### STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and 40 CFR 52.21. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

#### **APPENDICES**

The following Appendices are attached as part of this permit.

Appendix A - Terminology

Appendix BD - Department's BACT Determination
Appendix GC - Construction Permit General Conditions

Appendix GG - NSPS Subpart GG Requirements for Gas Turbines

Appendix XS - CEMS Excess Emissions Report

(DRAFT)	
Howard L. Rhodes, Director Division of Air Resources Management	
Date:	

#### DRAFT PERMIT

#### PERMITTEE:

Florida Power Corporation P.O. Box 368 Intercession City, FL 33848

Authorized Representative:

Mr. Martin J. Drango, Plant Manager

Project No. 0970014-006-AC PSD Permit No. PSD-FL-268A Facility ID No. 0970014 SIC No. 4911

Expires: December 1, 2002

#### PROJECT AND LOCATION

This permit is issued pursuant to the requirements for the Prevention of Significant Deterioration of Air Quality (PSD Permit). This existing facility is an electric power generating plant with a nominal capacity of 1170 MW. The proposed project will add three simple cycle, dual-fuel, General Electric Model 7EA combustion turbines with electrical generator sets each having a maximum capacity of 91 MW.

The project will be located at the existing FPC Intercession City Plant in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The UTM coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51".

#### STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and 40 CFR 52.21. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

#### **APPENDICES**

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Appendix XS - CEMS Excess Emissions Report

(DRAFT)
Howard L. Rhodes, Director Division of Air Resources Management
Date:

#### **FACILITY DESCRIPTION**

The existing facility is an electric power generating plant consisting of <u>fourteen</u> combustion turbine peaking units (P1-P14). Units P1-P6 each consist of two gas turbines having a combined capacity of 56.7 MW and firing No. 2 distillate oil. Units P7-P10 each consist of a General Electric Model 7EA gas turbine having an capacity of 96.3 MW and firing natural gas or distillate oil. Unit P11 is a Siemens Model V84.3 having an capacity of 171 MW and firing distillate oil. <u>Units P12-P14 each consist of a General Electric Model 7EA gas turbine with a nominal generating capacity of 91 MW when firing natural gas or distillate oil</u>

#### PROPOSED PROJECT

The proposed project affects the following newly constructed emissions units.

ARMS ID No.	EMISSION UNIT DESCRIPTION
	Peaking Units P12, P13, and P14: Each peaking unit consists of a General Electric Model No.
018	PG7121 7EA dual-fuel simple cycle combustion turbine with electrical generator set having a
019	nominal power production output of 91 MW. The units may employ an evaporative cooling
020	system. Dry low-NOx (DLN) combustion technology will be used to control nitrogen oxide
	emissions when firing the primary fuel of pipeline natural gas. Water injection will be used to
	control nitrogen oxide emissions when firing the backup fuel of low sulfur distillate oil.

The proposed project modifies original air permit No. PSD-FL-268 to: increase the maximum heat inputs and nominal power production for both gas and oil firing; revise the NOx compliance averaging period from a 3-hour rolling average to a 24-hour block average of actual operating hours; clarify the permit conditions regarding data exclusion for the NOx continuous emissions monitoring system; and correct the minimum observation period for a compliance visible emissions test. The permittee is allowed to perform the minor upgrades on each existing gas turbine (P12-P14) to achieve the capacity increases. No other construction or modification is authorized.

#### REGULATORY CLASSIFICATION

The facility is a "major facility" with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD) of Air Quality because emissions of at least one pollutant exceed 250 tons per year. Therefore, each modification to this facility resulting in emissions increases greater than the Significant Emissions Rates specified in Table 62-212.400-2 also requires a PSD review and Best Available Control Technology (BACT) determination. For this project, emissions of CO, NOx, PM/PM10, and SAM/SO2 are significant and this permit establishes the Best Available Control Technology (BACT) for each pollutant.

The facility is not believed to be a Title III major source of hazardous air pollutants. The facility and project are subject to the applicable Title IV acid rain provisions. The facility is classified as a Title V "major" source of air pollution because emissions of at least one regulated air pollutant, such as CO, NOx, PM/PM10, SO2, and/or VOC exceeds 100 tons per year.

This project is subject to regulation under the New Source Performance Standards (NSPS), 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines.

#### RELEVANT DOCUMENTS

- Application received 11/26/01 and all related correspondence.
- Original air permit No. PSD-FL-268 issued 12/9/99.

#### SECTION II. ADMINISTRATIVE REQUIREMENTS (DRAFT)

#### GENERAL AND ADMINISTRATIVE REQUIREMENTS

- 1. Permitting Authority: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114.
- 2. <u>Compliance Authority</u>: All documents related compliance activities such as reports, tests, and notifications should be submitted to the Central District Office, Florida Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The phone number is 407/894-7555 and the fax number is 407/897-2966.
- 3. <u>Terminology</u>: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. *Appendix A* lists frequently used abbreviations and explains the format used to cite rules and regulations in this permit.
- 4. <u>General Conditions</u>: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- 5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-17, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 52, 60, 72, 73, and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
- 6. <u>PSD Expiration</u>: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]
- 7. <u>Permit Expiration</u>: For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]
- 8. <u>BACT Determination</u>: In conjunction with extension of the 18-month period to commence or continue construction, phasing of the project, or an extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [Rule 62-212.400(6)(b), F.A.C. and 40 CFR 52.166(j)(4)]
- 9. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 10. <u>Modifications</u>: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

#### SECTION II. ADMINISTRATIVE REQUIREMENTS (DRAFT)

- 11. <u>Application for Title IV Permit</u>: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Region 4 office of the U.S. Environmental Protection Agency in Atlanta, Georgia and a copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]
- 12. <u>Title V Permit</u>: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for and receive a Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This permit addresses the following new emissions units.

ARMS EU ID No.	EMISSION UNIT DESCRIPTION
018	Peaking Units P12, P13, and P14: This permit authorizes the installation of three new
019	peaking gas turbines. Each gas turbine consists of a General Electric Model No. PG7121
020	(7EA) dual-fuel, simple-cycle combustion turbine with electrical generator set. Each unit has a nominal power production capacity of 91 MW. The new units may employ an evaporative cooling system and will use the existing infrastructure including natural gas connections, oil storage and auxiliary equipment. Dry low-NOx (DLN) combustion technology will control nitrogen oxide emissions when firing the primary fuel of pipeline natural gas. Water injection will control NOx emissions when firing low sulfur distillate oil as a backup fuel. Combustion design and clean fuels will minimize emissions of CO, PM/PM10, SAM, SO2, and VOC. Exhaust gases from each combustion turbine will exit a 56 feet high stack at approximately 1000°F with a volumetric flow rate of 1,436,000 acfm.

#### APPLICABLE STANDARDS AND REGULATIONS

- 1. <u>BACT Determinations</u>: This emissions unit is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM10), sulfuric acid mist (SAM), and sulfur dioxide (SO<sub>2</sub>). [Rule 62-212.400(BACT), F.A.C.]
- 2. <u>NSPS Requirements</u>: Each combustion turbine shall comply with all applicable requirements of 40 CFR 60, adopted by reference in Rule 62-204.800(7)(b), F.A.C.
  - (a) Subpart A, General Provisions, including:
    - 40 CFR 60.7, Notification and Record Keeping
    - 40 CFR 60.8, Performance Tests
    - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
    - 40 CFR 60.12, Circumvention
    - 40 CFR 60.13, Monitoring Requirements
    - 40 CFR 60.19, General Notification and Reporting Requirements
  - (b) Subpart GG, Standards of Performance for Stationary Gas Turbines, identified in Appendix GG of this permit. These provisions include a requirement to correct test data to ISO conditions; however, such correction is not used for compliance determinations with the BACT standards.

#### PERFORMANCE RESTRICTIONS

3. Permitted Capacity: Each combustion turbine shall operate only in simple-cycle mode and generate a nominal 91 MW of electrical power. Operation of each unit shall not exceed 905 mmBTU per hour of heat input from firing natural gas or 978 mmBTU per hour of heat input from firing low sulfur distillate oil. Excluding startup and shutdown, operation below 50% base load is prohibited. The maximum heat inputs are based on the lower heating value (LHV) of each fuel, an inlet air temperature of 59°F, a relative humidity of 60%, an ambient air pressure of 14.7 psi, and 100% of base load. Therefore, heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Compliance shall be determined by data compiled from the Speedtronic™ Control System adjusted for these parameters. Manufacturer's performance curves, corrected for site conditions or equations for correction to other ambient conditions, shall be provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Initial compliance with this requirement

- may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rule 62-210.200(PTE), F.A.C.]
- 4. <u>Simple Cycle Operation Only</u>: The combustion turbines shall operate only in simple cycle mode. This requirement is based on the permittee's request, which formed the basis of the NOx BACT determination and resulted in the emission standards specified in this permit. Specifically, the NOx BACT determination eliminated several control alternatives based on technical considerations and costs due to the elevated temperatures of the exhaust gas. Any request to convert these units to combined cycle operation by installing a new heat recovery steam generator or connecting to an existing heat recovery steam generator shall require the permittee to perform a new, current NOx BACT analysis and the approval of the Department through a permit modification. The results of this analysis may validate the initial BACT determination or result in the submittal of a full PSD permit application, new control equipment, and new emissions standards. [Rule 62-212.400(6)(b), F.A.C.]
- 5. Allowable Fuels: Each combustion turbine shall be fired by pipeline natural gas containing no more than 1 grain of sulfur per 100 dry standard cubic feet of gas. As a backup fuel, each combustion turbine may be fired with No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Each unit shall be capable of firing natural gas. Compliance with the limits on fuel sulfur content shall be demonstrated by the record keeping requirements and/or the conditions of the Alternate Monitoring Plan specified in this permit. It is noted that these limitations are much more stringent than the NSPS sulfur dioxide limitation and assure compliance with 40 CFR 60.333 and 60.334. [Applicant Request, Rule 62-210.200(PTE), F.A.C.]
- 6. Hours of Operation: The following limits apply to this group of three combustion turbines.
  - (a) **Installation of One Gas Turbine**: When one gas turbine is installed, the total turbine operating hours shall not exceed 3390 hours during any consecutive 12 months.
  - (b) Installation of Two Gas Turbines: When two gas turbines are installed, the total turbine operating hours shall not exceed 6780 hours during any consecutive 12 months.
  - (c) **Installation of Three Gas Turbines**: When all three gas turbines are installed, the total turbine operating hours shall not exceed 10,170 hours during any consecutive 12 months.
  - (d) **Oil Firing**: Each gas turbine is limited to no more than 1000 turbine operating hours of oil firing during any consecutive 12 months. In addition, the group of three gas turbines is limited to no more than 2500 turbine operating hours of oil firing during any consecutive 12 months.

Total turbine operating hours are the sum of operating hours when firing gas and operating hours when firing oil. The permittee shall install, calibrate, operate and maintain meters to measure and accumulate the amount of each fuel fired and hours of operation for each combustion turbine. [Applicant Request; Rules 62-212.400(BACT) and 62-210.200(PTE), F.A.C.]

- 7. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good operating practices" to minimize emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the combustion turbines and pollution control devices in accordance with the guidelines and procedures established by each equipment manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Applicant Request; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 8. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Compliance Authority as soon as possible, but at least within one (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the

#### SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

#### **EMISSIONS CONTROLS**

- 9. <u>Automated Control System</u>: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, tune, operate, and maintain the General Electric Speedtronic<sup>™</sup> Gas Turbine Control System for each unit. Each system shall be designed and operated to monitor and control the gas turbine combustion process and operating parameters including, but not limited to: fuel distribution and staging, turbine speed, load conditions, combustion temperatures, water injection, and fully automated startup, shutdown, and cool-down. [Design; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 10. Combustion Controls: The permittee shall employ "good operating practices" in accordance with the manufacturer's recommended operating procedures to control CO, NOx, and VOC emissions. Prior to the initial emissions performance tests, the dry low-NOx (DLN) combustors and Speedtronic™ control system on each gas turbine shall be tuned to optimize the reduction of CO, NOx, and VOC emissions. Thereafter, these systems shall be maintained and tuned, as necessary, to minimize pollutant emissions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 11. <u>DLN Combustion Technology</u>: To control NOx emissions when firing natural gas, the permittee shall install, tune, operate and maintain a dry low-NOx (DLN) combustion system for each combustion turbine in accordance with the manufacturer's recommendations. The permittee shall provide manufacturer's emissions performance versus load diagrams for the specific DLN system as part of the Title V permit application. Compliance with this requirement may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 12. Water Injection: To control NOx emissions when firing low sulfur distillate oil, the permittee shall install, calibrate and operate an automated water injection system for each combustion turbine in accordance with the manufacturer's recommendations. Each water injection system shall be maintained and adjusted to minimize NOx emissions. The permittee shall provide manufacturer's emissions performance versus load diagrams for the specific water injection system as part of the Title V permit application. Compliance with this requirement may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 13. <u>Circumvention</u>: The permittee 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.]
- 14. <u>Unconfined Particulate Emissions</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

#### **EMISSIONS STANDARDS**

15. <u>Emissions Standards Summary</u>: The following table summarizes the emissions standards specified in this permit.

Pollutant	Fuels and Controls <sup>a</sup>	Emission Standards <sup>b</sup>
СО	Gas Firing W/DLN	20.0 ppmvd @ 15% O2, 3-hour test avg. 43.0 pounds per hour, 3-hour test avg.
	Oil Firing W/Wet Injection	20.0 ppmvd @ 15% O2, 3-hour test avg. 44.0 pounds per hour, 3-hour test avg.
NOx	Gas Firing W/DLN Compliance by Annual Testing at Base Load	9.0 ppmvd @ 15% O2, 3-hour test avg. 33.0 pounds per hour, 3-hour test avg.
	Continuous Compliance by CEM	10.0 ppmvd @ 15% O2, <u>24</u> -hour avg.
	Oil Firing W/Wet Injection Compliance by Annual Testing at Base Load	42.0 ppmvd @ 15% O2, 3-hour test avg. 169.0 pounds per hour, 3-hour test avg.
	Continuous Compliance by CEM	42.0 ppmvd @ 15% O2, <u>24</u> -hour avg.
PM/PM10	Fuel Sulfur Specifications and Combustion Design	Visible emissions ≤ 10% opacity (PM estimated at 0.002 grains/dscf)
SAM/SO <sub>2</sub>	Natural Gas Sulfur Specification	≤ 1 grain per 100 SCF of gas
	Low Sulfur Distillate Oil Sulfur Specification	0.05% sulfur by weight
VOC	Gas Firing W/Combustion Design	2.0 ppmvw as methane 2.0 pounds per hour
	Oil Firing W/Combustion Design	4.0 ppmvw as methane 5.0 pounds per hour

Oil firing is limited to 1000 hours per year per gas turbine and 2500 hours per year for all three gas turbines combined. DLN means dry low-NOx controls.

#### 16. Carbon Monoxide (CO)

- (a) Gas Firing: When firing natural gas in a combustion turbine, CO emissions shall not exceed 43.0 pounds per hour nor 20.0 ppmvd corrected to 15% oxygen based on a 3-hour test average.
- (b) Oil Firing: When firing low sulfur distillate oil in a combustion turbine, CO emissions shall not exceed 44.0 pounds per hour nor 20.0 ppmvd based on a 3-hour test average.

The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Method 10 and the performance testing requirements of this permit. [Design; Rule 62-212.400(BACT), F.A.C.]

The mass emission limits (pounds per hour) were based on 100% base load, 59° F, and 60% relative humidity. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

### 17. Nitrogen Oxides (NOx)

- (a) Gas Firing: When firing natural gas in a combustion turbine, NOx emissions shall not exceed 33.0 pounds per hour nor 9.0 ppmvd corrected to 15% oxygen based on an annual 3-hour compliance test average. In addition, NOx emissions shall not exceed 10.0 ppmvd corrected to 15% oxygen based on a 24-hour block average of all valid data collected from the continuous NOx emissions monitor during actual operation.
- (b) Oil Firing: When firing low sulfur distillate oil in a combustion turbine, NOx emissions shall not exceed 169.0 pounds per hour nor 42.0 ppmvd corrected to 15% oxygen based on an annual 3-hour compliance test average. In addition, NOx emissions shall not exceed 42.0 ppmvd corrected to 15% oxygen based on a 24-hour block average of all valid data collected from the continuous NOx emissions monitor during actual operation. The permittee shall set up the automated control system for water injection to reduce NOx emissions below 42.0 ppmvd corrected to 15% oxygen.

NOx emissions are defined as emissions of oxides of nitrogen measured as NO2. The permittee shall demonstrate compliance by conducting tests in accordance with EPA Methods 7E, 20 and the performance testing requirements of this permit. Compliance with the <u>24</u>-hour block averages shall be demonstrated by collecting and reporting data in accordance with the conditions for the NOx continuous emissions monitor specified by this permit. [Rule 62-212.400(BACT), F.A.C.]

#### 18. Particulate Matter (PM/PM10), Sulfuric Acid Mist (SAM) and Sulfur Dioxides (SO2)

- (a) Fuel Specifications: Emissions of PM, PM10, SAM, and SO2 shall be limited by the good combustion techniques and the fuel sulfur limitations specified in this permit. The permittee shall demonstrate compliance with the fuel sulfur limits by maintaining records of the sampling and analysis required by this permit and/or as specified in the provisions of the Alternate Monitoring Plan. [Rule 62-212.400(BACT), F.A.C.]
- (b) VE Standard: As a surrogate for PM/PM10 emissions, visible emissions from the operation of a combustion turbine shall not exceed 10% opacity, based on a 6-minute average. The permittee shall demonstrate compliance with this standard by conducting tests in accordance with EPA Method 9 and the performance testing requirements of this permit. [Rule 62-212.400(BACT), F.A.C.]

#### 19. Volatile Organic Compounds (VOC)

- (a) Gas Firing: When firing natural gas in a combustion turbine, VOC emissions shall not exceed 2.0 pounds per hour nor 2.0 ppmvd based on a 3-hour test average.
- (b) Oil Firing: When firing low sulfur distillate oil in a combustion turbine, VOC emissions shall not exceed 5.0 pounds per hour nor 4.0 ppmvd based on a 3-hour test average.

The VOC emissions shall be measured and reported as methane. The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Methods 18, 25, and/or 25A and the performance testing requirements of this permit. [Application; Design; Rule 62-4.070(3), F.A.C.]

#### STARTUP, SHUTDOWN, AND MALFUNCTION

20. <u>Excess Emissions Prohibited</u>: Excess emissions caused 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. Such preventable emissions shall be included in the

#### SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

- calculation of the 24-hour averages compiled by the continuous NOx emissions monitor. [Rule 62-210.700, F.A.C.]
- 21. Alternate Standards and NOx CEMS Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes.
  - (a) Opacity: During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for up to 2.0 hours in any 24-hour period.
  - (b) NOx CEMS Data Exclusion: For the following identified operational periods, 1-hour NOx emissions rate values may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.
    - (1) Startup, Shutdown, and Malfunction: No more than 1 hourly emission rate value due to startup shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel-switch is not considered "startup".
    - (2) Tuning: If the permittee provides at least five days advance notice prior to a major tuning session performed by the manufacturer's representative, hourly NOx emissions rate values during tuning may be excluded from the 24-hour block compliance averages. Data excluded due to tuning shall not count towards the limit on total excluded data in a 24-hour period. {Permitting Note: As an example, a major tuning session would occur after a combustor change-out. A tuning session may take a several hours each day over a few days. No more than two major tuning sessions would be expected during any year. Major tuning sessions are intended to return the unit to manufacturer's specifications for efficient operation and should result in lower actual emissions.}

As provided by the authority in Rule 62-210,700(5), F.A.C., the above requirements are established in lieu of the provisions of Rule 62-210,700(1), F.A.C. [Design; Rules 62-210,700(5), 62-4,130, and Rule 62-212,400(BACT), F.A.C.]

#### **EMISSIONS PERFORMANCE TESTING**

22. Combustion Turbine Testing Capacity: 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 air inlet air temperature during the test (with 100 percent represented by a curve depicting heat input vs. air inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. air inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Emissions performance tests shall meet all applicable requirements of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]

23. <u>Calculation of Emission Rate</u>: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

#### 24. 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. [Rule 62-297.310(4)(a)1, F.A.C.]
  - 2. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)2, F.A.C.]
- (b) Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
- (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, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

# 25. <u>Determination of Process Variables</u>

- (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. [Rule 62-297.310(5)(a), F.A.C.]
- (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)(b), F.A.C.]
- 26. <u>Sampling Facilities</u>: The permittee shall design the combustion turbine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. Permanent stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rules 62-4.070 and 62-204.800, F.A.C., and 40 CFR 60.40a(b)]
- 27. <u>Performance Test Methods</u>: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.
  - (a) EPA Method 7E, "Determination of Nitrogen Oxide Emissions from Stationary Sources".
  - (b) EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
  - (c) **EPA Method 10**, "Determination of Carbon Monoxide Emissions from Stationary Sources". All CO tests shall be conducted concurrently with NOx emissions tests.
  - (d) **EPA Method 20**, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines."

- (e) EPA Methods 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations."
- No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Emissions Monitoring Section Administrator in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.
- 28. <u>Test Notification</u>: The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and 60.8]
- 29. <u>Initial Tests Required</u>: Initial compliance with the allowable emission standards specified in this permit shall be determined within 60 days after achieving the maximum permitted capacity, but not later than 180 days after initial operation of the emissions unit. Initial tests for emissions from the combustion turbine shall be conducted for CO, NOx, VOC, and visible emissions individually for firing natural gas and for firing low sulfur distillate oil. Initial NOx performance test data shall also be converted into the units of the corresponding NSPS Subpart GG emissions standards to demonstrate compliance (see Appendix GG). {Permitting Note: These initial tests are required after completing the minor upgrade to achieve increased heat inputs and power generation.} [Rule 62-297.310(7)(a)1, F.A.C.]
- 30. Annual Performance Tests: Annual emissions performance tests for CO, NOx, and visible emissions from each combustion turbine shall be conducted when firing natural gas. If conducted at permitted capacity, the annual NOx continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the annual compliance stack test. An annual performance test for VOC emissions is not required as long as the unit remains in compliance with the CO and visible emissions limits specified by this permit.
  - If a combustion turbine operates more than 200 hours of oil firing during any federal fiscal year, the permittee shall schedule and conduct annual emissions performance tests for CO, NOx, and visible emissions when firing low sulfur distillate oil. For oil firing, compliance with the NOx standards may be determined by the continuous monitor data collected during the required CO test. An annual performance test for VOC emissions is not required as long as the unit remains in compliance with the CO and visible emissions limits specified by this permit for oil firing.
  - Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>). [Rule 62-297.310(7)(a)4, F.A.C.]
- 31. Tests Prior to Permit Renewal: Prior to renewing the air operation permit, the permittee shall also conduct emissions performance tests for CO, NOx, VOC, and visible emissions when firing natural gas and when firing low sulfur distillate oil. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision. [Rule 62-297.310(7)(a)3, F.A.C.]
- 32. <u>Tests After Substantial Modifications</u>: All performance tests required for initial startup shall also be conducted after any substantial modification and appropriate shakedown period of air pollution control equipment including the replacement of dry low-NOx combustors. Shakedown periods shall not exceed 100 days after re-starting the combustion turbine. [Rule 62-297.310(7)(a)4, F.A.C.]
- 33. <u>VE Tests After Shutdown</u>: Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions (VE) compliance test once per each five-year period, coinciding with the term of its air operation permit. [Rule 62-297.310(7)(a)8, F.A.C.]

#### SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

34. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

#### **CONTINUOUS MONITORING REQUIREMENTS**

- 35. NOx CEMS Requirements: For each gas turbine, the permittee shall install, calibrate, maintain, and operate continuous emissions monitors (CEMS) to measure and record emissions of nitrogen oxides (NOx) and oxygen (O2) in a manner sufficient to demonstrate compliance with the standards of this permit. A monitor for carbon dioxide (CO2) may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.
  - (a) Performance Specifications. Each monitor shall be installed in a location that will provide emissions measurements representative of actual stack emissions. Each CEMS shall comply with the corresponding performance specifications that identify location, installation, design, performance, and reporting requirements.
    - (1) Each NOx monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NOx monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60. The NOx monitor shall have dual span capability with a low span (gas) no greater than 30 ppmvd corrected to 15% O2 and a high span (oil) no greater than 200 ppmvd corrected to 15% O2.
    - (2) Each O2 (or CO2) CEMS shall comply with Performance Specification 3 in Appendix
      B of 40 CFR 60. The O2 reference method for the annual RATA shall be EPA Method
      3A Appendix A of 40 CFR 60.
  - (b) Data Collection. Each CEMS shall be designed and operated to sample, analyze, and record emissions data evenly spaced over a 1-hour period during all periods of operation. Each 1-hour average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. If the NOx CEMS measures concentration on a wet basis, the permittee shall use approved methods for correction of measured emissions to a dry basis (0% moisture). The O2 (or CO2) CEMS shall express the 1-hour emission rate values in terms of "percent oxygen by volume". The NOx CEMS shall express the 1-hour emission averages in terms of "ppmvd corrected to 15% oxygen".
  - (c) Compliance Averages. Compliance with the 24-hour block NOx emissions standards shall be based on data collected by each required CEMS. The 24-hour block shall start at midnight of each operating day and consist of 24 consecutive 1-hour blocks. For purposes of determining compliance with the emission standards of this permit, missing data shall not be substituted. Instead the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. If a unit operates continuously throughout the day, the 24-hour block average shall be the average of 24 consecutive 1-hour emission averages. If a unit operates less than 24

hours during the day, the 24-hour block average shall be the average of the available valid 1-hour emission averages collected during actual operation If monitoring data is authorized for exclusion (due to startup, shutdown, malfunction, or tuning), the 24-hour block average shall be the average of the remaining valid 1-hour emission averages collected during actual operation. In cases of reduced operation or data exclusion, the compliance average will be based on less than 24, 1-hour emission averages. Upon completion of each 24-hour block, the permittee shall determine separate compliance averages for gas firing and oil firing. A 1-hour emissions average that includes any amount of oil firing shall only be included in the compliance average for oil firing. Upon a request from the Department, the NOx emission rate shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.

- (d) Data Exclusion. Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall record emissions data at all times including episodes of startup, shutdown, and malfunction. Emissions data recorded during periods of startup, shutdown, or malfunction may only be excluded from the compliance averages in accordance with the requirements previously specified in this permit. To the extent practicable, the permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions data shall be summarized in the required quarterly report.
- (e) Reporting: If a CEMS reports NOx emissions in excess of a standard, the permittee shall notify the Compliance Authority within one working day with a preliminary report 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 Compliance Authority may request a written summary report of the incident.
- In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C.; 40 CFR 60.7]

#### **COMPLIANCE DEMONSTRATIONS**

36. Records: Unless otherwise specified, all measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to DEP representatives upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

#### 37. Fuel Records

- (a) Natural Gas: The permittee shall demonstrate compliance with the SO<sub>2</sub> standard in 40 CFR 60.333 by complying with the requirements in 40 CFR 75 Appendix D.
- (b) Low Sulfur Distillate Oil: For all bulk shipments of low sulfur distillate oil received at this facility, the permittee shall obtain an analysis identifying the sulfur content. An analysis provided by the fuel vendor is acceptable. Methods for determining the sulfur content of the distillate oil shall be ASTM D129-91, D2622-94, or D4294-90 or equivalent methods. Records shall specify the test method used and shall comply with the requirements of 40 CFR 60.335(d).

[Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

- 38. <u>Alternate Monitoring Plan</u>: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance.
  - (a) The NOx CEM data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG. Subject to EPA approval, the calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS.
  - (b) The NOx CEM data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG.
  - (c) When requested by the Department, the CEMS emission rates for NOx on this unit shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.
  - (d) 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 conditions are met.
    - (1) The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
    - (2) The permittee shall submit a monitoring plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 1 grain of sulfur per 100 SCF of gas pursuant to 40 CFR 75.11(d)(2);
    - (3) 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 U.S. EPA.

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).

[40 CFR 60, Subpart GG; Applicant Request]

39. Monthly Operations Summary: By the fifth calendar day of each month, the owner or operator shall record the following information in a written or electronic log summarizing the previous month of operation and the previous 12 months of operation: hours of gas firing; million cubic feet of gas fired; hours of oil firing; and gallons of oil fired. The information shall be recorded for each gas turbine and for the group of three gas turbines. Information may be recorded and stored as an electronic file, but

#### SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

must be available for inspection and/or printing at the request of the Compliance Authority. [Rule 62-4.160(15), F.A.C.]

#### REPORTS

- 40. Emissions Performance Test Reports: A report indicating the results of the required emissions performance tests shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. 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)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 41. Quarterly Excess Emissions Reports: If excess emissions occur due to malfunction, the owner or operator shall notify the Compliance Authority 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. Following the NSPS format (40 CFR 60.7, Subpart A) periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards specified in this permit. Within thirty (30) days following each calendar quarter, the permittee shall submit a report on any periods of excess emissions that occurred during the previous calendar quarter to the Compliance Authority. This quarterly report shall follow the format provided in Appendix XS of this permit and summarize periods of excluded NOx emissions data. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7]
- 42. <u>Annual Operating Report</u>: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

#### APPENDIX A - TERMINOLOGY

#### ABBREVIATIONS AND ACRONYMS

°F - Degrees Fahrenheit

**DEP** - State of Florida, Department of Environmental Protection

**DARM** - Division of Air Resource Management

**EPA** - United States Environmental Protection Agency

**F.A.C.** - Florida Administrative Code

**F.S.** - Florida Statute

SOA - Specific Operating Agreement
UTM - Universal Transverse Mercator

**CT** - Combustion Turbine

**DB** - Duct Burner

HRSG - Heat Recovery Steam Generator

**DLN** - Dry Low-NOx Combustion Technology

SCR - Selective Catalytic Reduction

OC - Oxidation Catalyst Technology for CO Control

#### **RULE CITATIONS**

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

#### Florida Administrative Code (F.A.C.) Rules:

Example: [Rule 62-213.205, F.A.C.]

Where: 62 - refers to Title 62 of the Florida Administrative Code (F.A.C.)

62-213 - refers to Chapter 62-213, F.A.C. 62-213.205 - refers to Rule 62-213.205, F.A.C.

#### Facility Identification (ID) Number:

Example: Facility ID No. 099-0001

Where: 099 - 3 digit number indicates that the facility is located in Palm Beach County

- 4 digit number assigned by state database identifies specific facility

#### New Permit Numbers:

Example: Permit No. 099-2222-001-AC or 099-2222-001-AV

Where: AC - identifies permit as an Air Construction Permit

AV - identifies permit as a Title V Major Source Air Operation Permit

- 3 digit number indicates that the facility is located in Palm Beach County

2222 - 4 digit number identifies a specific facility

- 3 digit sequential number identifies a specific permit project

#### Old Permit Numbers:

Example: Permit No. AC50-123456 or AO50-123456

Where: AC - identifies permit as an Air Construction Permit

AO - identifies permit as an Air Operation Permit

123456 - 6 digit sequential number identifies a specific permit project

#### APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
  - (a) Have access to and copy and records that must be kept under the conditions of the permit;
  - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
  - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - (a) A description of and cause of non-compliance; and
  - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by

#### APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS

- Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
  - (a) Determination of Best Available Control Technology (X, previous);
  - (b) Determination of Prevention of Significant Deterioration (X, previous); and
  - (c) Compliance with New Source Performance Standards (X, previous).
- G.14 The permittee shall comply with the following:
  - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - (c) Records of monitoring information shall include:
    - 1. The date, exact place, and time of sampling or measurements;
    - 2. The person responsible for performing the sampling or measurements;
    - 3. The dates analyses were performed;
    - 4. The person responsible for performing the analyses;
    - 5. The analytical techniques or methods used; and
    - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

#### APPENDIX BD - FINAL BACT DETERMINATION

#### **Final BACT Determinations**

In accordance with Rule 62-212.400, F.A.C., the Department determined that the following standards represent the Best Available Control Technology (BACT) for the simple cycle gas turbines. The Department's technical review and rationale for the BACT determinations are presented in Technical Evaluation and Preliminary Determination issued concurrently with the draft permit for the original air construction permit (PSD-FL-268).

EU-018, 019	EU-018, 019, and 020: GE Model 7EA Combustion Turbines (P12, P13, and P14)				
Pollutant	BACT Controls <sup>b</sup>	BACT Standard			
<u>CO</u>	Gas Firing W/DLN Combustion	20.0 ppmvd @ 15% oxygen and 43.0 pounds per hour			
	Oil Firing W/Combustion Design	20.0 ppmvd @ 15% oxygen and 44.0 pounds per hour			
<u>NOx</u>	Gas Firing W/DLN Combustion	9.0 ppmvd @ 15% oxygen and 33.0 pounds per hour 10.0 ppmvd @ 15% oxygen by CEM			
	Oil Firing W/Wet Injection	42.0 ppmvd @ 15% oxygen and 169.0 pounds per hour 42.0 ppmvd @ 15% oxygen by CEM			
PM/PM10	Fuel Sulfur Specifications and Combustion Design	<u>Visible emissions ≤ 10% opacity</u>			
SAM³/SO2	Natural Gas Sulfur Specification	1 grain per 100 SCF of gas			
	Low Sulfur Distillate Oil Sulfur Specification	0.05% sulfur by weight			
VOCª	Gas Firing W/Combustion Design	2.0 ppmvd as methane <sup>a</sup> 2.0 pounds per hour <sup>a</sup>			
	Distillate Oil Firing W/Combustion Design	4.0 ppmvd as methane <sup>a</sup> 5.0 pounds per hour <sup>a</sup>			

<sup>&</sup>lt;sup>a</sup> The VOC standards are synthetic PSD-minor limits and not BACT limits.

#### **Revisions and Comments**

The original PSD air construction permit was issued on December 9, 1999 and made the above final BACT determinations. In January of 2002, the Department issued a minor revision to the PSD permit that included a slight increase in the heat input rates for both gas and oil firing. This resulted in the following revisions to the NOx mass emissions standards: from 32.0 to 33.0 lb/hour for gas firing, and from 167.0 to 169.0 lb/hour for oil firing. In addition, the averaging period for the CEMS-based NOx emissions standards were revised from a 3-hour rolling average to a 24-hour block average of the actual operating hours to accommodate the multiple startups and fuel switching that occur at this plant. The BACT controls continue to be DLN combustion for gas firing and wet injection for oil firing. It is also noted that the original PSD air construction permit included a slightly higher CO limit for gas firing that applied during the initial CO performance tests and for the subsequent 12 months of operation. This higher standard was removed during the revision because it was no longer applicable.

b DLN means dry low-NOx combustion design.

#### APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

#### 40 CFR 60, SUBPART A - NSPS GENERAL PROVISIONS

This emissions unit is subject to the applicable portions of 40 CFR 60, Subpart A, General Provisions, including:

- 40 CFR 60.7, Notification and Record Keeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

For copies of these requirements, please contact the Department's New Source Review Section.

#### 40 CFR 60, SUBPART GG - STATIONARY GAS TURBINES

This emissions unit is subject to 40 CFGR 60, Subpart GG for stationary gas turbines adopted by reference in Rule 62-204.800(7)(b), F.A.C. The following conditions follow the original NSPS rule language and numbering scheme. Regulations that are not applicable were omitted for clarity. Because this emissions units is subject to an NSPS, it is also subject to the following federal provisions: 40 CFR 60, Subpart A, General Provisions for sources subject to an NSPS, adopted by reference in Rule 62-204.800(7)(d), F.A.C.; 40 CFR 60, Appendix A - Test Methods, Appendix B - Performance Specifications, Appendix C - Determination of Emission Rate Change, Appendix D - Required Emissions Inventory Information, Appendix F - Quality Assurance Procedures, adopted by reference in Rule 62-204.800(7)(e).

#### 40 CFR 60.330 APPLICABILITY AND DESIGNATION OF AFFECTED FACILITY.

(a) The provisions of this subpart are applicable to all stationary gas turbines with a heat input at peak load equal to or greater than 10 million BTU per hour, based on the lower heating value of the fuel fired.

#### 40 CFR 60.331 DEFINITIONS.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

- (a) <u>Stationary gas turbine</u> means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.
- (b) <u>Simple cycle gas turbine</u> means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- (d) <u>Combined cycle gas turbine</u> means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.
- (f) Ice fog means an atmospheric suspension of highly reflective ice crystals.
- (g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
- (h) Efficiency means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

- (i) <u>Peak load</u> means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) Base load means the load level at which a gas turbine is normally operated.
- (p) Gas turbine model means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.
- (q) <u>Electric utility stationary gas turbine</u> means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

#### 60.332 STANDARD FOR NITROGEN OXIDES.

- (a) On and after the date of the performance test required by Sec. 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b) of this section shall comply with one of the following, except as provided in paragraphs (e) of this section.
  - (1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

STD = 
$$(0.0075) \frac{(14.4)}{Y} + F$$

Where:

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

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO emission allowance for fuel-bound nitrogen as defined in the following table:

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-Bound Nitrogen	"F"
(Percent By Weight)	(NOx Percent By Volume)
N < 0.015	. 0
0.015 < N < 0.1	0.04(N)
0.1 < N < 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

Where, N = the nitrogen content of the fuel (percent by weight).

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 100 million Btu per hour based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

#### APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

(f) Stationary gas turbines using water or steam injection for control of NOx emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

#### 40 CFR 60.333 STANDARD FOR SULFUR DIOXIDE.

On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

#### 40 CFR 60.334 MONITORING OF OPERATIONS.

- (a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOx emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within +/- 5.0 percent and shall be approved by the Administrator.
- (b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:
  - (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.
- (c) For the purpose of reports required under Sec. 60.7(c), periods of excess emissions that shall be reported are defined as follows:
  - (1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with Sec. 60.332 by the performance test required in Sec. 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in Sec. 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under Sec. 60.335(a).
  - (2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
  - (3) Ice fog. Each period during which an exemption provided in Sec. 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was

## APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

#### 40 CFR 60.335 TEST METHODS AND PROCEDURES.

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in Sec. 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in Sec. 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in Secs. 60.332 and 60.333(a) as follows:
  - (1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

 $NOx = (NOxO) (P_r/P_0)^{0.5} (e^{-19 (H_0 - 0.00653)}) (288°K/T_a)^{1.53}$ 

Where

NOx = emission rate of NOx at 15 percent oxygen and ISO standard ambient conditions, volume percent.

NOxo = observed NOx concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

Ho = observed humidity of ambient air, g H<sub>2</sub>O/g air.

E = transcendental constant, 2.718.

T<sub>a</sub> = ambient temperature, °K.

- (2) The monitoring device of Sec. 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with Sec. 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.
- (d) The owner or operator shall determine compliance with the sulfur content standard in Sec. 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some

#### APPENDIX GG - FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS)

- fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
- (e) To meet the requirements of Sec. 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

# APPENDIX XS - CEMS EXCESS EMISSIONS REPORT

# FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions	<u> </u>
Pollutant (Circle One): $SO_2$ NOx TRS $H_2S$ CO	
Reporting period dates: From	
Company:	
Emission Limitation:	
Address:	
Monitor Manufacturer and Model No.:	
Date of Latest CMS Certification or Audit:	
Process Unit(s) Description:	
Total source operating time in reporting period 1:	
Emission data summary <sup>1</sup>	CMS performance summary 1
1. Duration of excess emissions in reporting period due to:  a. Startup/shutdown	1. CMS downtime in reporting period due to:  a. Monitor equipment malfunctions
For opacity, record all times in minutes. For gases, rec	ord all times in hours.
For the reporting period: If the total duration of excess operating time or the total CMS downtime is 5 percent summary report form and the excess emission report d	or greater of the total operating time, both the
Note: On a separate page, describe any changes since lossummarize the periods of data excluded from the complication.	
I certify that the information contained in this report is tr	rue, accurate, and complete.
Name:	
Signature:	
Title:	
Date:	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
■ Complete items 1, 2, and 3. Also complete items 4 if Restricted Delivery is desired.  ■ Print your name and address on the reverse so that we can return the card to you.  ■ Attach this card to the back of the mailpiece, or on the front if space permits.	A Received by (Please Print Clearly)  A DULSTON  B. Date of Delivery  C. Signature  X Janton  Addressee  D. Is delivery address different from item 12 Yes
Article Addressed to:	D. Is delivery address different from item 1? ☐ Yes  If YES, enter delivery address below: ☐ No
Mr. Martin J. Drango Plant Manager Florida Power Corporation	
P. O. Box 368 Intercession City, FL 33848	3. Service Type  ▼A Certified Mail
·	4. Restricted Delivery? (Extra Fee) ☐ Yes
2. Article Number <i>(Copy from service label)</i> 7000 2870 0000 7028 3017	
PS Form 3811, July 1999 Domestic Retu	rm Receipt 102595-99-M-1789

	U.S. Postal Servi CERTIFIED M (Domestic Mail	IAIL RE			e Covera	age P	rovid	ed)	
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3017	OFF		E. C.	2- i	d Nase		2		
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702	Certified Fee								
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0000	Restricted Delivery Fee (Endorsement Required)								
2	Total Postage & Fees	\$							
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7000	Street, Apt. No.; or PO Box No. PO Box 368								
70	City, State, ZIP+ 4 Intercess PS Form 3800, May 2	sion C	itv.		33848				1

# APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

# I. APPLICATION INFORMATION

# **Identification of Facility**

1.	Facility Owner/Company Name:				
	Florida Power				
2.	Site Name:				
	Intercession City Plant				
3.	Facility Identification Number: 09	70014		[	] Unknown
4.	Facility Location:				
	Intercession City				
	•				
	Street Address or Other Locator: 6	525 Os	ceola Polk Co. Li	ine Rd.	
	City: Intercession City Co	ounty: (	Osceola	Zip Co	de: 33848
5.	Relocatable Facility?		6. Existing Per	mitted Fac	cility?
	[ ] Yes [X] No		[X] Yes		_
<u>Ar</u>	oplication Contact				
1.	Name and Title of Application Conta	ct: Jam	ie Hunter, Projec	t Technica	al Specialist
	11		,		
					,
2.	Application Contact Mailing Address	s:			
	Organization/Firm: Florida Power				•••
	Street Address: 263 13th Avenue South, MAC BB1A				
	City: St. Petersburg	Sta	ate: FL	Zip Co	de: 33707-5511
3.	Application Contact Telephone Nun	nbers:			
	Telephone: (727) 826-4363		Fax: (727)	826	-4216
Application Processing Information (DEP Use)					
1.	Date of Receipt of Application:	11=7	6-01		
2.	Permit Number:	097	10014-006-1	7 C	
3.	PSD Number (if applicable):	PS	<u> 10014 - 006-1</u> D-FL - 2 68	A	· · · · · · ·
4.	Siting Number (if applicable):				

Effective: 2/11/99

# **Purpose of Application**

# Air Operation Permit Application

Thi	S	Application for Air Permit is submitted to obtain: (Check one)
]	]	Initial Title V air operation permit for an existing facility which is classified as a Title V source.
[	]	Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.
		Current construction permit number:
[ ]	]	Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.
		Current construction permit number:
		Operation permit number to be revised:
[	]	Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)
		Operation permit number to be revised/corrected:
[	]	Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision, e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.
		Operation permit number to be revised:
		Reason for revision:
Aiı	r (	Construction Permit Application
Th	is	Application for Air Permit is submitted to obtain: (Check one)
[X	A	air construction permit to construct or modify one or more emissions units.
[	]	Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
[	]	Air construction permit for one or more existing, but unpermitted, emissions units.

Effective: 2/11/99

# Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

Name: M. J. Drango Title: Plant Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: Florida Power Corporation

Street Address: PO Box 368: 6525 Osceola/Polk Line Road

City: Intercession City

State: FL

Zip Code: 33848

Zip Code: 33701

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

Telephone: (407) 396-2111

Fax: (863)678-4453

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative\*(check here [ ], if so) or the responsible official (check here M, if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.

Signature

Date

# Professional Engineer Certification

1. Professional Engineer Name: Scott Osbourn

Registration Number: 57557

City: St. Petersburg

2. Professional Engineer Mailing Address:

Organization/Firm: ENSR International

Street Address: 150 Second Ave. N., Suite 1500

State: FL

3. Professional Engineer Telephone Numbers:

Telephone: (727)898-9591 Fax: (727)-898-9582

DEP Form No. 62-210.900(1) - Instructions

<sup>\*</sup> Attach letter of authorization if not currently on file.

# 4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:* 

- (1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and
- (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [V], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature Signature

Date

(seal)

DEP Form No. 62-210.900(1) - Form

<sup>\*</sup> Attach any exception to certification statement.

# **Scope of Application**

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
018	GE Frame 7EA CT Peaking Unit Number 12	AC1A	
019	GE Frame 7EA CT Peaking Unit Number 13	AC1A	
020	GE Frame 7EA CT Peaking Unit Number 14	AC1A	

# **Application Processing Fee**

Check one: [	]	Attached - Amount: \$_	[x]	Not	Applicable
--------------	---	------------------------	-----	-----	------------

#### **Construction/Modification Information**

# 1. Description of Proposed Project or Alterations:

Currently, peaking units P12, P13 and P14 (GE 7EA CTs) each have a nominal hourly power production capacity of 87 MW and maximum heat input ratings of 885 MMBtu/hr on natural gas and 954 MMBtu/hr while firing low sulfur distillate oil. These maximum heat input ratings are based on the lower heating value (LHV) of each fuel, an inlet air temperature of 59F, a relative humidity of 60 percent, an ambient air pressure of 14.7 psi, and 100 percent of base load. Florida Power proposes to incorporate an upgrade to these units in conjunction with routine warranty work that is planned. This upgrade results in an increase in the firing temperature of these peaking units in order to maximize output and optimize efficiency. The proposed change in operation will result in an increase in the heat input ratings on oil and gas, and a corresponding increase in potential emissions of NOx, VOC, SO<sub>2</sub> and SAM. The proposed allowable heat input ratings for the units on natural gas and distillate oil will be 905 MMBtu/hr and 978 MMBtu/hr, respectively (using the same assumptions and reference conditions indicated above). The nominal rating of output will increase to approximately 87.8 MW for gas firing and 90.9 MW for oil firing, under ISO conditions. This is expected to result in a slight increase in NOx hourly emission rates (1 lb/hr increase on gas; 2 lb/hr increase on oil: see Attachment 1). This increase in annual emissions (TPY) is less than any applicable significant increase threshold levels that would trigger PSD review.

In addition, during the short period of time that units P12-P14 have been in operation, it's become apparent that permit language regarding compliance with the NOx CEM standards is, in some respects, unclear. As a result of the issues discussed at the meeting among Florida Power, the DEP Bureau of Air Regulation and the DEP Central District held on August 28, 2001, FPC is submitting this application to modify the current language regarding compliance with the NOx CEMS standards. Additional information regarding this issue is provided directly below in the "Application Comment" section and the most recent quarterly excess emissions report is included with application (see Attachment 2).

- 2. Projected or Actual Date of Commencement of Construction: March 1, 2002
- 3. Projected Date of Completion of Construction: June 1, 2002

DEP Form No. 62-210.900(1) - Instructions

## **Application Comment**

The current permit language states that "during startup, shutdown, and malfunction, the NOx CEM shall monitor and record NOx emissions. However, up to 2 hours of monitoring data during any 24 hour period may be excluded from the continuous NOx compliance demonstration as a result of startup, shutdown and documented malfunctions."

During certain operating scenarios, FPC has difficulty demonstrating compliance with the above language. Units P12-P14 at the Intercession City facility routinely see multiple startup cycles, as well as fuel switches during the same day. This creates difficulties when determining compliance with the 3-hour averaging period specified in the permit. For example, if a unit commences startup, is required to fuel switch, and then initiates shutdown within a 24-hour period, it's conceivable that as many as 3 hours of excess emissions will be recorded. This would be in excess of the 2 hours allowed.

FPC requests the following language: "NOx emissions shall be continuously recorded by the CEMS during all episodes of startup (SU), shutdown (SD) and malfunction. Individual hourly NOx emission rate values recorded during these episodes may be excluded from the continuous NOx compliance determination. No more than 3 hourly average emission rate values per operating cycle (maximum of 2 cycles or 6 hours) shall be excluded in any 24-hour block period (calendar day) due to unit SU/SDs. A fuel switch is characterized as a SU/SD in this context, as the unit is physically shutting down on one fuel and starting up on another. In addition, no more than 2 hourly average emission rate values shall be excluded in any 24-hour block period (calendar day) due to unavoidable malfunctions. If an hourly average emission rate value is excluded, the next valid hourly emission rate value shall be used to complete the 3-hour block average."

DEP Form No. 62-210.900(1) - Instructions

## II. FACILITY INFORMATION

# A. GENERAL FACILITY INFORMATION

# **Facility Location and Type**

1.	Facility UTM Coor	dinates:		
	Zone: 17	East (km)	: 446.30	North (km): 3126.00
2.	Facility Latitude/Lo Latitude (DD/MM/	•	Longitude (D	D/MM/SS): 81/32/51
3.	Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC C 49	

7. Facility Comment (limit to 500 characters):

Project currently consists of 3 nominal 87.2 MW (at 59 deg. F) dual fuel, Frame 7EA combustion turbines that will use dry low-NOx (DLN) combustion technology when firing natural gas and water injection for NOx control when firing fuel oil. Total CT operation is limited to an average of 3,390 hr/yr/CT. Fuel oil use is limited to 1,000 hr/yr/CT and no more than 2,500 hours combined.

# **Facility Contact**

1. Name and Title of Facility Contact:

M. J. Drango Plant Manager

2. Facility Contact Mailing Address:

Organization/Firm: Florida Power

Street Address: 6525 Osceola Polk Co. Line Rd.

City: Intercession City State: FL Zip Code: 33848

3. Facility Contact Telephone Numbers:

Telephone: (407)-396-2111 Fax: (863)-678-4453

DEP Form No. 62-210.900(1) - Instructions

# **ATTACHMENT 1**

**Estimated Performance / Emissions Information** 

#### ESTIMATED PERFORMANCE PG7121(EA)

Load Condition		BASE	139%	123%	105%
Exhaust Pressure Loss	in H2O	5.5	5.5	5.5	5.5
Ambient Temperature	deg F	110.	20.	59.	100.
Fuel Type		Cust Gas	Cust Gas	Cust Gas	Cust Gas
Fuel LHV	Btu/lb	20,832	20,832	20,832	20,832
Fuel Temperature	deg F	60	60	60	60
Output	kW	71,290.	99,340.	87,780.	75,030.
Heat Rate (LHV)	Btu/kWh	11,000.	10,030.	10,310.	10,820.
Heat Cons. (LHV)	MBtu/hr	784.2	996.4	905.	811.8
Exhaust Flow x10^3	lb/hr	2076.	2595.	2377.	2138.
Exhaust Temperature	deg F	1031.	973.	1000.	1029.
Exhaust Energy	MBtu/hr	501.4	627.1	571.3	516.9
EMISSIONS		•			
NOx	ppmvd @ 15% O2	9.	9.	9.	9.
NOx AS NO2	lb/hr	28.	36.	33.	29.
CO	ppmvd	25.	25.	25.	25.
CO .	lb/hr	46.	60.	54.	48.
UHC	ppmvw	7.	7.	7.	7.
UHC	lb/hr	8.	10.	9.	8.
Particulates	lb/hr	5.0	5.0	5.0	5.0
(PM10 Front-half Filterable	Only)				
Particulates (PM/PM10)	lb/hr	10.0	10.0	10.0	10.0
EXHAUST ANALYSIS %	% VOL.				
Argon		0.86	0.91	0.89	0.87
Nitrogen		71.82	75.49	74.93	72.80
Oxygen		13.24	13.92	13.87	13.43
Carbon Dioxide		3.11	3.27	3.21	3.15
Water		10.98	6.42	7.10	9.76
SITE CONDITIONS					

#### SITE CONDITIONS

ft	74	4.0
psia	14	1.66
in H	2O 3.	5 .
in H	20 5.	5 @ ISO Conditions
. %	60	)
	A	ir-Cooled Generator
	. 9/	42 DLN Combustor
	psia in Hi in Hi	psia 14 in H2O 3. in H2O 5. % 60

Emission information based on GE recommended measurement methods. NOx emissions are corrected to 15% O2 without heat rate correction and are not corrected to ISO reference condition per 40CFR 60.335(c)(1). NOx levels shown will be controlled by algorithms within the SPEEDTRONIC control system.

IPS- Version Code - 3.1.1/29D0/2.2.8/PG7121-0696 TEEMERST 11/13/2001 12:08 G43594Q8\_final\_gas.dat

General Electric Proprietary Information

# ESTIMATED PERFORMANCE PG7121(EA)

Load Condition Exhaust Pressure Loss Ambient Temperature Fuel Type Fuel LHV	in H2O deg F Btu/lb	BASE 5.5 110. Distillate 18,300	BASE 5.5 20. Distillate 18,300	BASE 5.5 59. Distillate 18,300	BASE 5.5 100. Distillate 18,300
Fuel Temperature	deg F	80	80	80	80
Liquid Fuel H/C Ratio		1.8	1.8	1.8	1.8
Output	kW	73,270.	102,800.	90,850.	76,910.
Heat Rate (LHV)	Btu/kWh	11,200.	10,570.	10,760.	11,090.
Heat Cons. (LHV)	MBtu/hr	820.6	1,086.6	977.5	852.9
Exhaust Flow x10 <sup>3</sup>	lb/hr	2107.	2657.	2430.	2174.
Exhaust Temperature	deg F	1035.	968.	996.	1026.
Exhaust Energy	MBtu/hr	510.3	641.6	583.6	524.2
Water Flow	lb/hr	25,120.	52,620.	44,740.	<b>30,3</b> 10.
EMISSIONS					
NOx	ppmvd @ 15% O2	42.	42.	42.	42.
NOx AS NO2	lb/hr	142.	188.	169.	147.
CO	ppmvd	20.	20.	20.	20.
CO	lb/hr	37.	48.	44.	39.
UHC	ppmvw	7.	7.	7.	7.
UHC	lb/hr	8.	10.	10.	9.
Particulates	lb/hr	10.0	10.0	10.0	10.0
(PM10 Front-half Filterable C	Only)				
Particulates (PM/PM10)	lb/hr	20.0	20.0	20.0	20.0
EXHAUST ANALYSIS %	VOL.				
Argon		0.85	0.88	0.87	0.87
Nitrogen		71.20	73.87	73.48	71.94
Oxygen		12.86	13.17	13.19	12.98
Carbon Dioxide		4.33	4.61	4.53	4.38
Water		10.76	7.47	7.93	9.84
CITE CONDITIONS					

#### SITE CONDITIONS

Elevation	ft	74.0
Site Pressure	psia	14.66
Inlet Loss	in H2O	3.5
Exhaust Loss	in H2O	5.5 @ ISO Conditions
Relative Humidity	%	60
Application		Air-Cooled Generator
Combustion System	•	9/42 DLN Combustor
-		

Emission information based on GE recommended measurement methods. NOx emissions are corrected to 15% O2 without heat rate correction and are not corrected to ISO reference condition per 40CFR 60.335(c)(1). NOx levels shown will be controlled by algorithms within the SPEEDTRONIC control system.

Distillate Fuel is assumed to have 0.015% Fuel-Bound Nitrogen, or less. FBN amounts greater than 0.015% will add to the reported NOx value.

IPS- Version Code - 3.1.1/29D0/2.2.8/PG7121-0696 KALVLI 11/13/2001 17:07 gtp\_pg7121\_0696\_oil\_2055.dat

General Electric Proprietary Information

# **ATTACHMENT 2**

Excess Emissions Report Quarter III, 2001



October 25, 2001

Mr. Garry Kuberski Florida Department of Environmental Protection Central District 3319 Maguire Boulevard, Suite 232 Orlando, FL 32803-3767

Dear Mr. Kuberski:

Re: Intercession City Facility

Combustion Turbine Units P7 - P14 Quarterly Excess Emissions Report

Florida Power submits the enclosed excess emission report for the third quarter of 2001 for the above-referenced units. This report is based on the water to fuel ratio data for Units 7 through 11. A comparison set of excess emissions data based on CEM readings for Units 7 through 10 has been sent under separate cover.

Please contact Jamie Hunter at (727) 826-4363 if you have any questions.

Sincerely,

Martin J. Drangd Plant Manager

Enclosure

# GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Pollutant (circle one - SO2 / NOX ) TRS / H2S / CO / (	Opacity )			
Reporting Period dates: From: 7/	/1/01	To: <u>9/30/01</u>	•	
Company: Florida Power Corporation		Emission Limit:	182 lbs/hr	
Address: P. O. Box 14042 St. Petersburg, FL 33733	· · · · · · · · · · · · · · · · · · ·	Monitor Manufacturer and Model No.:	N / A	
Process unit Description:  Intercession City Facility		Date of latest CMS Certification or Audit:	N / A	
Combustion Turbine Unit P - 7 Osceola County Permit No: 0970014-001-AV		Total source operating time in reporting period:	541	(1)
Emission Data Summary (1)		CMS Performance Summ	nary (1)	
Duration of excess emissions     in reporting period due to:		CMS downtime in report due to:	ing period	
a. Startup/shutdown	0	a. Monitor equipment malfunctions		0
b. Control equipment Problems	3_	b. Non-Monitor equipme malfunctions	nt	0
c. Process problems  d. Other known causes	<u> </u>	c. Quality assurance calibration		· 0
e. Unknown causes	0_	d. Other known causes		
Total duration of excess emissions:	3_	e. Unknown causes		
3. Total duration of excess emissions X (100) =	0.55% (2)	<ol> <li>Total CMS downtime</li> <li>[total CMS downtime] X</li> </ol>	(100) =	0.00% (2)
[Total source operating time]	3.33 /6 (2)	[Total source operating ti	<del></del>	0.00 /0 (2/
On a separate page, describe any changes since last quality				
I certify that the information contained in this report is  Martin J. Drango  Martin J. Drango	true, accurate	e, and complete to the best of my  Plant Manager	knowledge.	120/21
NAME: SIG	SNA BRE:	TITLE:		DATE:

(1) For opacity, record all times in minutes. For gases, record all times in hours.

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

,					
Company:	Florida Power Corporation	<u> </u>	Emission Limit:	222 Lbs / Hr.	<u> </u>
Address:	P. O. Box 14042		Monitor Manufacturer		
	St. Petersburg, FL 33733	<u>-</u>	and Model No.:	N / A	
Process unit D	escription:		Date of latest CMS		
	Intercession City Facility	<u> </u>	Certification or Audit:	N / A	<u> </u>
	Combustion Turbine Unit Osceola County	P - 7	Total source operating		
	Permit No: 0970014-001	-AV	time in reporting period:	541	(1)
Emission	n Data Summary (1)		CMS Performance Su	ımmary (1)	
. Duration	of excess emissions		CMS downtime in rep	porting period	
in report	ing period due to:		due to:		
a. Start	up/shutdown	0	a. Monitor equipmen malfunctions	t	 O
b. Cont	rol equipment		Than direction is		
Prob	plems	0	b. Non-Monitor equip	oment	
· c Proce	ess problems	0	malfunctions		0
0, 1,000	oo problems		c. Quality assurance		
d. Other	r known causes	0	calibration	,	0
e. Unkn	own causes	0	d. Other known caus	es	0
. Total du	ration of		e. Unknown causes		o_
excess e	emissions:	0		•	
. Total dur	ration of		2. Total CMS downtime	•	0
	missions X (100) =	0.00% (2)	3. [total CMS downtime	] X (100) =	0.00% (2)
	urce operating time]		[Total source operation		
n a separate p	page, describe any changes sin	ce last quarter in CMS	S, process or controls.		
certify that th	e information contained in this	report is true, accurat	e, and complete to the best of	my knowledge.	· · ·
lartin J. Drang	no Martin	1 Dones	Plant Manager	101	26/01
NAME:	7	SIGNATURE.	TITLE:	<del></del>	DATE:

(1) For opacity, record all times in minutes. For gases, record all times in hours.

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Reporting Peri	iod dates.	From: 7/1/01	To: <u>9/30/01</u>		
Company: Florida Power Corporation		Emission Limit:	182 lbs/hr		
Address:	P. O. Box 14042 St. Petersburg, Fl	_ 33733	Monitor Manufacturer and Model No.:	N / A	
Process unit C	Intercession City Combustion Turbi Osceola County	ne Unit P - 8	Date of latest CMS Certification or Audit: Total source operating	N / A	
	Permit No: 0970	014-001-AV	time in reporting period:	596_	(1)
Emissio	n Data Summary (1)		CMS Performance Su	ummary (1)	
	n of excess emissions ting period due to:		CMS downtime in reducto:	porting period	
	tup/shutdown		a. Monitor equipmen malfunctions	nt ·	0
Pro	blems ess problems	0	b. Non-Monitor equipmalfunctions	pment	0
	er known causes		c. Quality assurance calibration		0
e. Unkr	nown causes	0_	d. Other known caus	ses	0
	ration of emissions:	· · · · · · · · · · · · · · · · · · ·	e. Unknown causes		0
	tration of	0.00%	Total CMS downtime     Total CMS downtime		0.00% (2)
	emissions X (100) = ource operating time]		[Total source operation		0.00 /8 (2)
	,	nges since last quarter in (			
certify that the	N	d in this report is true, acc	Plant Manager	my knowledge.	10/76/1

For opacity, record all times in minutes. For gases, record all times in hours.

# GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Reporting Peri	iod dates:	From: <u>7/1/01</u>	To: <u>9/30/01</u>		
Company:	Florida Power Corpor	ation	Emission Limit:	222 Lbs / Hr.	_
Address:	P. O. Box 14042 St. Petersburg, FL 3	3733	Monitor Manufacturer and Model No.:	N / A	
Process unit C	Description: Intercession City Fac	ility	Date of latest CMS Certification or Audit:	N / A	
	Osceola County Permit No: 0970014		Total source operating time in reporting period:	596	(1)
Emissio	n Data Summary (1)		CMS Performance Sur	mmary (1)	
	n of excess emissions ting period due to:		CMS downtime in rep due to:	orting period	
	tup/shutdown	0	a. Monitor equipment malfunctions	: .	0
	trol equipment blems		b. Non-Monitor equip malfunctions	ment	0
	er known causes		c. Quality assurance calibration		0
e. Unkr	nown causes	o_	d. Other known caus	es	0
	uration of emissions:		e. Unknown causes  2. Total CMS downtime		0
excess	aration of emissions X (100) = ource operating time]	0.00% (2)	3. [total CMS downtime] [Total source operating		0.00% (2)
	page, describe any change		IS, process or controls.	my knowledge	·
Martin J. Dran	M L	1/ names	Plant Manager TITLE:	10/4	26/01

(1) For opacity, record all times in minutes. For gases, record all times in hours.

# GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Poliut	tant (circle or	ie - 502 / NO.	X) 185 / H25 /	CO / Opacity )				
Repo	rting Period d	ates:	Fro	m: <u>7/1/01</u>	To:	9/30/01		
Comp	pany:	Florida Powe	r Corporation		Emiss	on Limit:	182 lbs/hr	<del></del>
Addre	ess:	P. O. Box 14 St. Petersbu	1042 rg, FL 33733	<u></u> ·		or Manufacturer odel No.:	N / A	·
Proce	ess unit Desc	ription:			Date o	f latest CMS		
		Intercession			Certifi	cation or Audit:	N / A	
		Osceola Cou	Turbine Unit P	. 9	Total	ource operating		
			0970014-001-	V .		reporting period:	554	(1)
	Emission Da	ita Summary (	1)	· · · · · · · · · · · · · · · · · · ·		CMS Performance Sun	nmary (1)	
1.		excess emissi period due to:			1.	CMS downtime in repo	orting period	
	a. Startup/s	shutdown		0		a. Monitor equipment malfunctions		0
	b. Control e							
	Problem	S		0		<ul> <li>b. Non-Monitor equipment</li> <li>malfunctions</li> </ul>	nent	0 .
	c. Process	problems		0		c. Quality assurance		
	d. Other kn	own causes		0		calibration		0
	e. Unknowi	n causes		0		d. Other known cause	s	0
2.	Total duration	n of				e. Unknown causes		0
3.	excess emis			<u> </u>	2.	Total CMS downtime		0
3.	,	sions X (100)	==	0.00% (2)	3.	[total CMS downtime]	X (100) =	0.00% (2)
		e operating tin				[Total source operating		
				last quarter in CMS		ss or controls.	ny knowledge.	
	J. Drango		Martin	11 man		Plant Manager	10	126/61
	NAME:		,	SIGNATURE:	1	TITLE:		DATE:

(1) For opacity, record all times in minutes. For gases, record all times in hours.

# GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Pollutant (circle one - SO2 / NOX / TRS / H2S / CO / Opacity )			•		
Reporting Period dates: From: 7/1/01	To: 9/30/01				
Company: Florida Power Corporation	Emission Limit:	222 Lbs / Hr.	_		
Address: P. O. Box 14042 St. Petersburg, FL 33733	Monitor Manufacturer and Model No.:	N / A			
Process unit Description:  Intercession City Facility  Combustion Turbine Unit P - 9  Osceola County  Permit No: 0970014-001-AV	Date of latest CMS Certification or Audit:  Total source operating time in reporting period:	N / A 554			
Emission Data Summary (1)	CMS Performance Summ	ary (1)			
1. Duration of excess emissions in reporting period due to:         a. Startup/shutdown       0         b. Control equipment Problems       0         c. Process problems       0         d. Other known causes       0         e. Unknown causes       0         2. Total duration of excess emissions:       0	1. CMS downtime in reporting due to:  a. Monitor equipment malfunctions  b. Non-Monitor equipment malfunctions  c. Quality assurance calibration  d. Other known causes  e. Unknown causes		0 0 0		
3. Total duration of excess emissions X (100) = 0.00% (2)  [Total source operating time]	Total CMS downtime     [total CMS downtime] X     [Total source operating times.]		0.00% (2)		
On a separate page, describe any changes since last quarter in CMS  I certify that the information contained in this report is true, accurate		knowledge.			
Martin J. Drango  NAME:  NAME:  NAME:  NAME:	Plant Manager TITLE:	16/	DATE:		
(1) For opacity, record all times in minutes. For gases, record all times	mae in houre				

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

# GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Reporting Peri	od dates:	From: 7/1/01	. To:	9/30/01		
Company:	Florida Power Corpo	ration	Emiss	ion Limit:	182 ibs/hr	
Address:	. P. O. Box 14042		Monit	or Manufacturer		
,	St. Petersburg, FL 3	33733	and M	lodel No.:	N/A	
Process unit D	Description:		Date o	of latest CMS		
	Intercession City Fac	cility	Certifi	cation or Audit:	N / A	
	Combustion Turbine	Unit P - 10				
	Osceola County		Total	source operating		
	Permit No: 0970014	4-001-AV	time in	reporting period:	541	(1)
Emissio	n Data Summary (1)			CMS Performance Su	ımmary (1)	
. Duration	n of excess emissions		1.	CMS downtime in rep	porting period	
	ting period due to:			due to:		
	<b>.</b> F			.:		. •
a. Start	tup/shutdown	0		a. Monitor equipmen	t	
				malfunctions		0_
b. Cont	rol equipment		J	•		
Prol	blems	0		b. Non-Monitor equip	oment	
				malfunctions		. 0
c. Proce	ess problems	0				
				<ul> <li>c. Quality assurance</li> </ul>		
d. Othe	r known causes	0		calibration		0
e. Unkn	nown causes	0		d. Other known caus	ses	0
. Total du	ration of		}	e. Unknown causes		. 0
excess	emissions:	0				
			2.	Total CMS downtime		0
. Total du	ration of					
excess	emissions X (100) =	0.00%	(2) 3.	[total CMS downtime	) X (100) =	0.00% (2)
[Total so	ource operating time]			[Total source operation	ng time]	
n a senarate	page, describe any change	es since last quarter in	CMS proce	es or controls		
a coparato	bago, account any change		O.0.0, p.000	of controls.		
certify that th	ne information contained in	this report is true, acc	urate, and o	complete to the best of	my knowledge.	
lartin J. Drang	. ///	ate 11	Conc 1	Plant Manager	12/1/1	21
NAME:		SIGNATORE	· V	TITLE:	1-1 20/1	DATE:
		1/	U			

# GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

	utant (circle orting Period			7/1/01	To:	9/30/01		
Kep	orting Period	dates:	rrom:	7/1/01		9/30/01		
Com	ipany:	Florida Power Co	rporation		Emissi	on Limit:	222 Lbs / Hr.	<u>-</u>
Add	ress:	P. O. Box 14042			Monito	r Manufacturer		
		St. Petersburg, F	L 33733		and M	odel No.:	N / A	
Proc	ess unit Des	scription:			Date o	f latest CMS		
		Intercession City			Certific	ation or Audit:	N/A	-
		Combustion Turb	ne Unit P - 10	<u> </u>		·		
		Osceola County			Total s	ource operating		
		Permit No: 0970	014-001-AV		, time in	reporting period:	541	(1)
	Emission I	Data Summary (1)				CMS Performance Sun	nmary (1)	
1.	Duration o	of excess emissions			1.	CMS downtime in repo	orting period	•
		g period due to:				due to:	<b>.</b>	
	a. Startup	o/shutdown		 		a. Monitor equipment		
					,	malfunctions		
	b. Contro Proble	l equipment		0		b. Non-Monitor equipm	nent	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					malfunctions		0
	c. Proces	s problems		<u> </u>		a. Quality appurance		
	d, Other l	known causes		0	,	c. Quality assurance calibration		0
	e. Unknov	wh causes				d. Other known cause	ıs	0
2.	Total dura	tion of				e. Unkņown çauses		0
	excess em	nissions:		0	İ	•		
				•	2.	Total CMS downtime		0
3.	Total dura	tion of			1			•
		issions X (100) =	_	0.00% (2)	3.	[total CMS downtime]		0.00%(2)
	(Total sour	rce operating time]				[Total source operating	time]	
On a	separate pa	ige, describe any cha	nges since las	st quarter in CMS	5, proces	s or controls.		
cert	ify that the	information containe	d in this repor	t is true, accurat	e, and c	omplete to the best of m	ny knowledge.	<i>t</i> .
Marti	n J. Drango	///	utin 1	/ Hanes		Plant Manager	10/2	6/01
	NAME:			SIGNATURE		TITLE:	<del></del>	DATE.

<sup>(1)</sup> For opacity, record all times in minutes. For gases, record all times in hours.

<sup>(2)</sup> For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time, or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report and the excess emission report described in sec. 60.7(c) shall be submitted.

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Pollutant (circle one - SO2 /NOX) TRS / H2S / CO / Opacity	)
Reporting Period dates: From: 7/1/01	To: <u>9/30/01</u>
Company: Florida Power Corporation	Emission Limit: 334 lbs/hr
Address: P. O. Box 14042 St. Petersburg, FL 33733	Monitor Manufacturer and Model No.:  N / A
Process unit Description:  Intercession City Facility  Combustion Turbine Unit P - 11  Osceola County  Permit No: 0970014-001-AV	Date of latest CMS  Certification or Audit:  Total source operating time in reporting period:  43 (1)
Emission Data Summary (1)	CMS Performance Summary (1)
1. Duration of excess emissions in reporting period due to:  a. Startup/shutdown 0  b. Control equipment Problems 0  c. Process problems 0  d. Other known causes 0  e. Unknown causes 0	c. Quality assurance calibration 0  d. Other known causes 0
excess emissions: 0	e. Unknown causes0  2. Total CMS downtime0
3. Total duration of  excess emissions X (100) = 0.00%  [Total source operating time]	(2) 3. [total CMS downtime] X (100) = 0.00% (2) [Total source operating time]
On a separate page, describe any changes since last quarter in I certify that the information contained in this report is true, again	
Martin J. Drango  NAME:  Martin J. Drango  NAME:  SGNATORI	Plant Manager 10/26/01 E: TITLE: DATE:
(1) For opacity, record all times in minutes. For gases, record a	all times in hours

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Pollutant (circle one (502)/ NOX / TRS / H2S / CO /	Opacity )			
Reporting Period dates: From: 7/	/1/01	To: <u>9/30/01</u>		
Company: Florida Power Corporation	E	mission Limit:	-	
Address: P. O. Box 14042 St. Petersburg, FL 33733		Nonitor Manufacturer nd Model No.:	N / A	
Process unit Description: Intercession City Facility Combustion Turbine Unit P - 11 Osceola County Permit No: 0970014-001-AV	C	Pate of latest CMS Pertification or Audit:  Otal source operating The in reporting period:	N / A 43	(1)
Emission Data Summary (1)		CMS Performance Summ	ary (1)	
Duration of excess emissions     in reporting period due to:		CMS downtime in reporti due to:	ng period	
a. Startup/shutdown	0	<ul> <li>a. Monitor equipment malfunctions</li> </ul>		, O_
b. Control equipment Problems	<u> </u>	bNon-Monitor equipmen malfunctions	nt	0
c. Process problems d. Other known causes	0	c. Quality assurance calibration		0
e. Unknown causes	0	d. Other known causes		<u> </u>
Total duration of excess emissions:	<u> </u>	e. Unknown causes  2. Total CMS downtime		<u> </u>
3. Total duration of  excess emissions X (100) = (Total source operating time)		[total CMS downtime] X     [Total source operating times		0.00% (2)
On a separate page, describe any changes since last q			knowledge	
Martin J. Drango Martin 1	Jango	Plant Manager	10/2	401
NAME:	SNATURE:	TITLE:		DATE:

- (1) For opacity, record all times in minutes. For gases, record all times in hours.
- (2) For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time, or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report and the excess emission report described in sec. 60.7(c) shall be submitted.

# Intercession City Units P12 – P14 3-Hour Rolling Average NOx Limit Summary Report Quarter III, 2001

•	•		
DATE	HOURS	3-HOUR AVERAGE	3-HOUR LIMIT
08-14-2001	14,15 & 16	20.87	20.67
Unit P13			
DATE	HOURS	3-HOUR AVERAGE	3-HOUR LIMIT
NONE			•
Unit P14			
DATE	HOURS	3-HOUR AVERAGE	3-HOUR LIMIT
08-06-2001	15,16 & 17	44.57	42.0

## Intercession City - Unit P12 3-Hour Rolling Average Calculation 08/14/2001

Date	Hour	MID EIE II	Day Novon	DDV Nevere				BOILER	Hourly Average	Hour Removed		Remaining Hourly Average	Gas/Oil 3-Hour	3-Hour Rolling Ave	3-Hour Rolling Avg.	3-Hour Limit
08/14/2001	HOU	FALSE	DKT_NOXOIL	DRY_NOXGAS	SRC_CO2	SRC_NOX	BOILER_ON	Quarter Hours	NOx Value	from Calculation	Reason	NOx Value	NOx LIMIT	NOx Value		EXCEEDANCE
08/14/2001	1	FALSE	0	0	!	1	FALSE	0	0			0	0	0	0	EACEEDANCE
08/14/2001	2	FALSE	0	Ü	1	1	FALSE	0	0			0	o o	Õ	ñ	
08/14/2001		FALSE	Ü	Ů	1	1	FALSE	0	0.			0	Õ	Õ	Ô	
08/14/2001			Ü	U	1	1	FALSE	0	0			0	o o	0	Ô	
08/14/2001		FALSE	Ü	0	1	1	FALSE	0	0			0	o o	. 0	Õ	
08/14/2001		FALSE	Ü	0	1	1	FALSE	0	0			0 .	0	ň	0	
08/14/2001		FALSE	0	0	1 '	1	FALSE	0	0 ,			0	0		0	
		FALSE	G	O .	1	1	FALSE	. 0	0			0	0	0	0	
08/14/2001		FALSE	0	0	1	1	FALSE	0	. 0			Õ	0	0	0	
08/14/2001		FALSE	0	0	1	1	FALSE	0	0			n	0	0	0	
08/14/2001		FALSE	0	0	1	1	FALSE	0	0			0	٥	٥	0	
08/14/2001		FALSE	. 0	21.3	1 .	1	TRUE	. 3	21.3	yes	Startup/Shutdown	0	0	ū		
08/14/2001		FALSE	0	6.3	1	1	TRUE	4	6.3	,	outrapronutation.	· 6.3		0	Ü	
08/14/2001		FALSE	0	7	1	1	TRUE	4	7			7	10	0	. '0	
08/14/2001		FALSE	0.	7.4	1	1	TRUE	4	7.4			7.4	10	0.00	0	
08/14/2001		FALSE	0	7.7	1	1	TRUE	. 4	7.7			7.7	10	6.90	10.00	
08/14/2001		TRUE	47.5	36.7	1	1	TRUE	4	47.5			47.5	10	7.37	10.00	
08/14/2001		FALSE	68.9	0	1	1	TRUE	2	68.9	yes	Startup/Shutdown		42	20.87	20.67	YES
08/14/2001	18	FALSE	0	0	1	1	FALSE	ō	0	,03	Startupronutiown	0	0	0.00	0.00	
08/14/2001		FALSE	0	0	1	1	FALSE	Ô	. 0				0	٥	0	
08/14/2001		FALSE	0	٥	1	1	FALSE	. 0	0			Ü.	0	0	0	
08/14/2001		FALSE	0	0 .	1	1	FALSE	o o	0			ů	0	0	0	
08/14/2001		FALSE	0	٥	1	1	FALSE	Õ	. 0			0	0	0	0	
08/14/2001	23	FALSE	0	٥	1	1	FALSE	Ô	. 0			0 .	0	0	0	
								-	U			0	0	0	0	

#### Intercession City - Unit P14 3-Hour Rolling Average Calculation 08/06/2001

								501155	Hourly			Remaining Hourly	Gas/Oil	3-Hour	J-Hour	
Date	Hour	MILL FUEL O	LUBY NOYOU	DRY_NOXGAS	enc cos	EBC NOV	BOILED ON	BOILER	Average	Hour Removed		Average	3-Hour			3-Hour Limit
08/06/2001	0	FALSE	DITT_NOXULE	DITTIONONG	300_002	SHC_NOX		cinsus uone	NOx Value	from Calculation	Reason	NOx Value	NO <sub>k</sub> LIMIT	NOx Value	NOx Limit	EXCEEDANCE
08/06/2001	1	FALSE	0	0	- ;	;	FALSE	U	0			ο .	0	0	0	
08/06/2001	,	FALSE	0	0	- :	:	FALSE	0	0			0	. 0	0	٥	
08/06/2001		FALSE	0	0			FALSE	Ü	0			0	0	0	0	
08/06/2001	4	FALSE	0	0	!		FALSE	Ü	0			0	0	0	0	
08/06/2001	7		Ü	U	!	1	FALSE	0	0			0	0	0	0	
08/06/2001		FALSE	U	0	1	1.	FALSE	0	. 0	•		0	0	0	٥	
	9	FALSE	Ų	D	. 1	1 .	FALSE	0	0			0	0	0	. 0	
08/06/2001	,	FALSE	0	0	1	1	FALSE	0	0			0 .	Ġ	0	0	
08/06/2001		FALSE	0	0	1	1	FALSE	0	. 0			0	0	. 0	ō	
08/06/2001		FALSE	0	0	1	1	FALSE	0	0			0	o	O	Ō	
08/06/2001		FALSE	0	0	1 .	1 .	FALSE	0	0	*		0	ū	0	0	
08/06/2001		FALSE	0	19	1	1	TRUE	4	19	yes	Startup/Shutdown	0 .	ū	0	0	
08/06/2001		FALSE	0	5.9	1	1	TRUE	4	5.9	,		5,9	. 10	n	0	
08/06/2001		FALSE	0	6.3	1	1	TRUE	4	6.3			6.3	10	0	.0	
08/06/2001		TRUE	47.3	36.5	1	1	TRUE	4	47.3	yes	Startup/Shutdown		n.	0.00	0.00	
08/06/2001		FALSE	43.9	0	1	1	TRUE	4	43.9	7	· ·	43.9	42	18.70		
08/06/2001		FALSE	41.9	0	1	.1	TRUE	4	41.9			41.9	42	30.70	20.67	
08/06/2001		FALSE	47.9	0	1	1	TRUE	2	47.9			47.9	42		31.33	1450
08/06/2001	18	FALSE	0	0	1	1	FALSE	. 0	0		·	77.5	42	44.57	42.00	YES
08/06/2001	19	FALSE	0	0	1	1	FALSE	0	0			0	Ü	U	0	
08/06/2001	20	FALSE	. 0	0	1	1	FALSE	0 .	0			Ü	U	0	0	
08/06/2001	21	FALSE	0	Ó	1	i .	FALSE	0	0			Ü	0	0	0	
08/06/2001	22	FALSE	Ō	ó	. i	i	FALSE	0	0			0	0	0	0	
08/06/2001		FALSE	ō	ő		i	FALSE	0	0			0	0	0	0	
	_•		•			'	LYTZE	U	0 .			0	0	0	0	

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Poll	utant (circle o	ne - SO2 (NOX) TRS /	H2S / CO / Opacity )							
Rep	orting Period	dates:	From: <u>07/01/2001</u>	To: 09/30/2001						
Соп	npany:	Florida Power Corpora	ation	Emission Limit:	10 ppmvd @	15%02				
Add	ress:	P. O. Box 14042 St. Petersburg, FL 33	3733	Monitor Manufacturer and Model No.:	TECO 42	· .				
Proc	ess unit Desc	ription:		Date of latest CMS						
		Intercassion City Facil	ility	Cartification or Audit:	2/1/01					
		Combustion Turbine U	Jnit P - 12							
		Oscoola County		Total source operating						
				time in reporting period:	680	(1)				
_	Emission Da	ata Summary (1)		CMS Performance Summa	iry (1)					
1.		excess emissions		CMS downtime in reporting period						
	in reporting	period due to:		due to:						
	a. Startup/s	shutdawn	107	a. Monitor equipment malfunctions		· · · · · · · · · · · · · · · · · · ·				
	b. Control e	aguinment		manunctions						
	Problem	• •	0	b. Non-Monitor equipment malfunctions		Q				
	c. Process	problems	1	c. Quality assurance						
	d. Other kn	sezuso nwo		calibration		26				
	e. Unknow	ı-causes	0	d. Other known causes						
2.	Total duration	on of		e. Unknown causes		0				
	excess emis	sions:	108	[						
			<del></del>	2. Total CMS downtime		26				
3.	Total duration									
		sions X (100) -	15.88% (2)	3. [total CMS downtime] X (1		3.82% (2)				
	[ I otal source	e operating time]		Total source operating tim	8Į					
			since last quarter in CMS, pr	( rocess or controls. and complete to the best of my know	vladae.					
		M	to 1/2		/=	12//				
Mart	in J. Drango	1/61	m 4/5h	Manager	_/0/	46/6/				
	NAME:		SIGNATURE:	U IIILE:		UAIE:				

(1) For opacity, record all times in minutes. For gases, record all times in hours.

========

Quarterly Excess Emissions Report Florida Power Corp Unit P12 Orlando, Florida

=======

Today's Date: 10/10/2001

Reporting Perio

d

Time: 10:27:07

07/01/2001 - 09

/30/2001

Date/ NOx Fuel ID Reason

Time ppmvd

Hourly Exceedance 07/04/2001

130000 22.2 Gas CT6NOXG STARTUP

Hourly Exceedance

07/04/2001

170000 19.1 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

07/07/2001

110000 23.0 Gas CT6NOXG STARTUP

Hourly Exceedance

07/08/2001

110000 19.1 Gas CT6NOXG STARTUP

Hourly Exceedance

07/09/2001

130000 31.2 Gas CT6NOXG STARTUP

Hourly Exceedance

07/09/2001

190000 14.4 Gas CT6NOXG SHUTDOWN

Page 1

Hourly Exceedance 07/10/2001

90000 21.7 Gas . CT6NOXG STARTUP

Hourly Exceedance 07/12/2001

100000 37.0 Gas CT6NOXG STARTUP

Hourly Exceedance

07/14/2001

110000 30.7 Gas CT6NOXG STARTUP

Hourly Exceedance

07/14/2001

140000 CT6NOXG SHUTDOWN 11.1 Gas

Hourly Exceedance

07/16/2001

180000 10.5 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

07/17/2001

170000 11.4 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

07/18/2001

90000 14.8 Gas CT6NOXG STARTUP

Hourly Exceedance

07/18/2001

200000 12.1 Gas CT 6NOXG SHUTDOWN

Hourly Exceedance

07/19/2001

80000 14.4 Gas CT6NOXG STARTUP

Hourly Exceedance

07/19/2001

Q3 ic p12 excess jjh.txt 210000 13.6 Gas CT6NOXG SHUTDOWN Hourly Exceedance 07/20/2001 80000 27.8 Gas CT6NOXG STARTUP Hourly Exceedance 07/20/2001 170000 10.5 Gas CT6NOXG SHUTDOWN Hourly Exceedance 07/21/2001 80000 25.4 Gas CT6NOXG STARTUP Hourly Exceedance 07/21/2001 170000 17.8 Gas CT6NOXG SHUTDOWN Hourly Exceedance 07/22/2001 90000 28.3 Gas CT6NOXG STARTUP Hourly Exceedance 07/22/2001 180000 19.1 Gas CT6NOXG SHUTDOWN Hourly Exceedance 07/24/2001 110000 24.6 Gas CT6NOXG STARTUP Hourly Exceedance 07/24/2001 200000 13.5 Gas CT6NOXG SHUTDOWN Hourly Exceedance 07/25/2001

80000 19.1 Gas CT6NOXG STARTUP

Hourly Exceedance

07/26/2001

90000 24.2 Gas CT6NOXG STARTUP

Hourly Exceedance

07/26/2001

180000 12.2 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

07/27/2001

80000 42.2 Gas CT6NOXG STARTUP

Hourly Exceedance

07/27/2001

160000 12.3 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

07/28/2001

80000 24.5 Gas CT6NOXG STARTUP

Hourly Exceedance

07/30/2001

70000 15.7 Gas CT6NOXG STARTUP

Hourly Exceedance

07/30/2001

210000 11.9 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

07/31/2001

50000 75.7 Oil CT6NOXO MONITOR MALFUNCTION

Hourly Exceedance

07/31/2001 ...

180000 12.2 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/01/2001

90000 24.7 Gas CT6NOXG STARTUP

Page. 4

Hourly Exceedance

08/01/2001

170000 12.8 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/06/2001

110000 36.4 Gas CT6NOXG STARTUP

Hourly Exceedance

08/06/2001

170000 48.7 Oil CT6NOXO SHUTDOWN

Hourly Exceedance

08/07/2001

110000 15.0 Gas CT6NOXG STARTUP

Hourly Exceedance

08/07/2001

120000 13.3 Gas CT6NOXG STARTUP

Hourly Exceedance

08/08/2001

90000 38.0 Gas CT6NOXG STARTUP

Hourly Exceedance

08/08/2001

210000 44.3 Oil CT6NOXO SHUTDOWN

Hourly Exceedance

08/09/2001

90000 17.4 Gas CT6NOXG STARTUP

Hourly Exceedance

08/10/2001

90000 39.1 Gas CT6NOXG STARTUP

Hourly Exceedance

08/10/2001

190000 21.8 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/11/2001

90000 25.0 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/11/2001

180000 12.1 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/12/2001

200000 43.3 Oil/Gas CT6NOXO SHUTDOWN

Hourly Exceedance

08/13/2001

80000 32.5 Gas CT6NOXG STARTUP

Hourly Exceedance

08/14/2001

110000 21.2 Gas CT6NOXG STARTUP

Hourly Exceedance

08/14/2001

160000 47.4 Oil/Gas CT6NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance

08/14/2001

170000 68.8 Oil CT6NOXO SHUTDOWN

Hourly Exceedance

08/15/2001

140000 18.3 Gas CT6NOXG STARTUP

Hourly Exceedance

08/15/2001

180000 10.3 Gas CT6NOXG SHUTDOWN

Hourly Exceedance 08/16/2001

90000 24.0 Gas CT6NOXG STARTUP

Hourly Exceedance . 08/16/2001

120000 12.0 Gas CT6NOXG SHUTDOWN gave unit a start before breaker opened to restore

Hourly Exceedance 08/16/2001

200000 21.6 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/17/2001

110000 56.8 Gas CT6NOXG STARTUP

Hourly Exceedance

08/18/2001

90000 16.4 Gas CT6NOXG STARTUP

Hourly Exceedance

08/18/2001

180000 11.2 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/19/2001

90000 42.5 Gas CT6NOXG STARTUP

Hourly Exceedance

08/19/2001

200000 12.9 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/20/2001

80000 23.8 Gas CT6NOXG STARTUP

Hourly Exceedance 08/21/2001

100000 31.5 Gas CT6NOXG STARTUP

Hourly Exceedance

08/22/2001

110000 12.9 Gas CT6NOXG STARTUP

Hourly Exceedance

08/22/2001

200000 12.0 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/23/2001

90000 40.2 Gas CT6NOXG STARTUP

Hourly Exceedance

08/23/2001

200000 12.7 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/24/2001

100000 19.2 Gas CT6NOXG STARTUP

Hourly Exceedance

08/24/2001

200000 12.0 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/25/2001

100000 36.0 Gas CT6NOXG STARTUP

Hourly Exceedance

08/25/2001

190000 10.5 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/26/2001

110000 24.4 Gas CT6NOXG STARTUP

Hourly Exceedance

08/26/2001

200000 12.5 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/27/2001

110000 29.0 Gas

CT6NOXG STARTUP

Hourly Exceedance

08/27/2001

200000 11.5 Gas

CT 6NOXG SHUTDOWN

Hourly Exceedance

08/28/2001

90000 20.8 Gas

CT 6NOXG STARTUP

Hourly Exceedance

08/28/2001

110000 19.6 Gas CT6NOXG

Unit Tripped

Hourly Exceedance

08/28/2001

190000 11.1 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

08/29/2001

90000 55.0 Gas CT6NOXG STARTUP

Hourly Exceedance

08/29/2001

200000 27.6 Gas CT 6NOXG SHUTDOWN

Hourly Exceedance

08/30/2001

80000 21.2 Gas CT6NOXG STARTUP

Hourly Exceedance

08/31/2001

200000 10.6 Gas CT6NOXG SHUTDOWN

Page 9

Hourly Exceedance

09/01/2001

80000 19.6 Gas

CT6NOXG STARTUP

Hourly Exceedance

09/02/2001

120000 16.7 Gas

CT6NOXG STARTUP

Hourly Exceedance

09/02/2001

170000 15.2 Gas

CT6NOXG SHUTDOWN

Hourly Exceedance

09/03/2001

110000 17.5 Gas CT6NOXG STARTUP

Hourly Exceedance

09/04/2001

90000 22.1 Gas CT6NOXG STARTUP

Hourly Exceedance

09/04/2001

190000 17.6 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

09/05/2001

90000 49.9 Gas CT6NOXG STARTUP

Hourly Exceedance

09/06/2001

100000 17.9 Gas CT6NOXG STARTUP

Hourly Exceedance

09/06/2001

190000 13.6 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

09/07/2001

100000 55.3 Gas CT6NOXG PROCESS EQUIPMENT MALFUNCTION

Hourly Exceedance

09/08/2001

120000 24.4 Gas CT6NOXG STARTUP

Hourly Exceedance

09/11/2001

160000 10.8 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

09/16/2001

130000 28.0 Gas CT6NOXG STARTUP

Hourly Exceedance

09/17/2001

120000 54.1 Oil CT6NOXO STARTUP

Hourly Exceedance

09/17/2001

130000 47.4 Oil/Gas CT6NOXO FUEL SWITCH (OIL TO GAS)

Hourly Exceedance

09/17/2001

190000 13.0 Gas CT6NOXG SHUTDOWN

Hourly Exceedance

09/18/2001

110000 26.3 Gas CT6NOXG STARTUP

Hourly Exceedance

09/19/2001

120000 18.8 Gas CT6NOXG STARTUP

Hourly Exceedance

09/20/2001

110000 21.5 Gas CT6NOXG STARTUP

Hourly Exceedance 09/20/2001 170000 17.6 Gas CT6NOXG SHUTDOWN Hourly Exceedance 09/21/2001 110000 26.4 Gas CT6NOXG STARTUP Hourly Exceedance 09/22/2001 90000 16.1 Gas CT6NOXG STARTUP Hourly Exceedance 09/22/2001 170000 46.2 Oil CT6NOXO SHUTDOWN Hourly Exceedance 09/23/2001 90000 30.8 Gas CT6NOXG STARTUP Hourly Exceedance 09/24/2001 80000 33.1 Gas CT6NOXG STARTUP Hourly Exceedance 09/24/2001

180000 17.0 Gas

CT6NOXG SHUTDOWN

#### SUMMARY REPORT

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Poli	utant (circle one - SO2 (NOX )TRS /	H25 / CU / Opacity /		٠		
Rep	orting Period dates:	From: <u>07/01/2001</u>	To: 09/30/2001			
Company: Florida Power Corporation		ation	Emission Limit:	10 ppmvd @ 15%02		
Add	ress: P. O. Box 14042		Monitor Manufacturer			
	St. Petersburg, FL 33	3733	and Model No.:	TECO 42		
Proc	ess unit Description:		Date of latest CMS			
	Intercession City Faci	lity	Certification or Audit:	2/1/01	·	
	Combustion Turbine L	Init P - 13				
	Osceola County		Total source operating time in reporting period:	714	(1)	
_	Emission Data Summary (1)		CMS Performance Summa	ry (1)		
1.	Duration of excess emissions			g period		
	in reporting period due to:		due to:			
	a. Startup/shutdown	103	a. Monitor equipment malfunctions		. 0	
	b. Control equipment		illations and			
	Problems	0_	b. Non-Monitor equipment malfunctions		0	
	c. Process problems	. 3	c. Quality assurance			
	d. Other known causes	0	calibration		13_	
	e. Unknown causes	0	d. Other known causes		0	
2.	Total duration of		e. Unknown causes		0	
	excess emissions:		2. Total CMS downtime		13	
3.	Total duration of		2. Tutal CNIS downthins	•	- 13	
	excess emissions X (100) -	14.85% (2)	3. [total CMS downtime] X (1	00) -	1.82% (2)	
	[Total source operating time]		Total source operating tim	e]		
	separate page, describe any changes					
l cert	tify that the information contained in	this report is true, accurate, a	and complete to the best of my knowl	edge.	, ,	
Mart	in J. Drango	in A / scory	Plant Manager	10/0	26/01	
	NAME: /	SIGNATURE:	TITLE:		DATE:	

(1) For opacity, record all times in minutes. For gases, record all times in hours.

(2) For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time, or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report and the excess emission report described in sec. 60.7(c) shall be submitted.

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Quarterly Excess Emissions Report Florida Power Corp Unit P13 Orlando, Florida

=======

Today's Date: 10/10/2001

Reporting Perio

d

Time: 15:27:19

07/01/2001 - 09

/30/2001

Date/ NO

NOx Fuel ID Reason

Time ppmvd

.

Hourly Exceedance

07/01/2001

120000 13.6 Gas CT7NOXG STARTUP

Hourly Exceedance

07/02/2001

120000 21.2 Gas CT7NOXG STARTUP

Hourly Exceedance

07/03/2001

90000 19.1 Gas CT7NOXG STARTUP

Hourly Exceedance

07/03/2001

200000 16.3 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/04/2001

100000 30.3 Gas CT7NOXG STARTUP

Hourly Exceedance

07/05/2001

90000 28.6 Gas CT7NOXG STARTUP

Hourly Exceedance 07/06/2001

120000 10.5 Gas CT7NOXG STARTUP

Hourly Exceedance

07/06/2001

180000 11.7 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/07/2001

80000 27.9 Gas CT7NOXG STARTUP

Hourly Exceedance

07/08/2001

110000 30.6 Gas CT7NOXG STARTUP

Hourly Exceedance

07/08/2001

160000 10.5 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/09/2001

130000 29.7 Gas CT7NOXG STARTUP

Hourly Exceedance

07/10/2001

90000 18.3 Gas CT7NOXG STARTUP

Hourly Exceedance

07/10/2001

140000 17.5 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/11/2001

140000 16.9 Gas CT7NOXG STARTUP

Hourly Exceedance

07/11/2001

170000 11.7 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/12/2001

100000 23.6 Gas CT7NOXG STARTUP

Hourly Exceedance

07/12/2001

140000 58.2 Oil/Gas CT7NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance

07/14/2001

110000 26.1 Gas CT7NOXG STARTUP

Hourly Exceedance

07/14/2001

140000 16.5 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/16/2001

150000 26.4 Gas CT7NOXG STARTUP

Hourly Exceedance

07/17/2001

100000 16.4 Gas CT7NOXG STARTUP

Hourly Exceedance

07/18/2001

90000 10.5 Gas CT7NOXG STARTUP

Hourly Exceedance

07/19/2001

80000 11.2 Gas CT7NOXG STARTUP

Hourly Exceedance

07/20/2001

80000 12.6 Gas CT7NOXG STARTUP

Hourly Exceedance

07/21/2001

80000 25.2 Gas CT7NOXG STARTUP

Hourly Exceedance

07/21/2001

170000 17.2 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/22/2001

80000 25.8 Gas CT7NOXG STARTUP

Hourly Exceedance

07/22/2001

180000 11.2 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/24/2001

110000 26.9 Gas CT7NOXG STARTUP

Hourly Exceedance

07/25/2001

80000 11.3 Gas CT7NOXG STARTUP

Hourly Exceedance

07/26/2001

90000 19.7 Gas CT7NOXG STARTUP

Hourly Exceedance

07/28/2001

80000 21.6 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

07/29/2001

80000 24.8 Gas CT7NOXG STARTUP

Hourly Exceedance

07/30/2001

50000 13.8 Gas CT7NOXG STARTUP

Page 4

Hourly Exceedance

07/31/2001

. 50000 48.5 Oil CT7NOXO STARTUP

Hourly Exceedance

08/01/2001

70000 24.0 Gas CT7NOXG STARTUP

Hourly Exceedance

08/01/2001

170000 10.1 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/02/2001

130000 11.2 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/06/2001

110000 24.1 Gas CT7NOXG STARTUP

Hourly Exceedance

08/07/2001

110000 26.0 Gas CT7NOXG STARTUP

Hourly Exceedance

08/09/2001

90000 10.7 Gas CT7NOXG STARTUP

Hourly Exceedance

08/10/2001

90000 17.1 Gas CT7NOXG STARTUP

Hourly Exceedance

08/11/2001

90000 13.0 Gas CT7NOXG STARTUP

Hourly Exceedance

08/11/2001

180000 10.9 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/13/2001

80000 23.5 Gas CT7NOXG STARTUP

Hourly Exceedance

08/14/2001

110000 16.1 Gas CT7NOXG STARTUP

Hourly Exceedance

08/14/2001

200000 48.8 Oil CT7NOXO SHUTDOWN

Hourly Exceedance

08/15/2001

130000 23.9 Gas CT7NOXG STARTUP

Hourly Exceedance

08/17/2001

90000 15.9 Gas CT7NOXG STARTUP

Hourly Exceedance

08/17/2001

190000 10.1 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/18/2001

140000 13.9 Gas CT7NOXG STARTUP

Hourly Exceedance

08/19/2001

100000 27.3 Gas CT7NOXG STARTUP

Hourly Exceedance

08/19/2001

200000 10.9 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/20/2001

80000 28.3 Gas CT7NOXG STARTUP

Hourly Exceedance

08/20/2001

190000 47.8 Oil/Gas CT7NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance

08/20/2001

200000 43.3 Oil CT7NOXO SHUTDOWN

Hourly Exceedance

08/21/2001

120000 10.8 Gas CT7NOXG STARTUP

Hourly Exceedance

08/22/2001

110000 26.4 Gas CT7NOXG STARTUP

Hourly Exceedance

08/23/2001

90000 28.3 Gas CT7NOXG STARTUP

Hourly Exceedance

08/23/2001

120000 76.1 Oil/Gas CT7NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance

08/23/2001

200000 14.4 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/24/2001

100000 26.6 Gas CT7NOXG STARTUP

Hourly Exceedance

08/24/2001

Q3 ic p13 excess jjh.txt 120000 15.9 Gas CT7NOXG PROCESS EQUIPMENT MALFUNCTION

lowered load to 30 MW to get lean-lean positive, then base

Hourly Exceedance

08/25/2001

100000 29.0 Gas CT7NOXG STARTUP

Hourly Exceedance

08/26/2001

110000 29.8 Gas CT7NOXG STARTUP

Hourly Exceedance

08/26/2001

200000 13.1 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/27/2001

110000 14.1 Gas CT7NOXG STARTUP

Hourly Exceedance

08/28/2001

90000 20.3 Gas CT7NOXG STARTUP

Hourly Exceedance

08/29/2001

110000 11.5 Gas CT7NOXG STARTUP

Hourly Exceedance

08/29/2001

200000 23.3 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

08/30/2001

80000 25.1 Gas CT7NOXG STARTUP

Hourly Exceedance

08/30/2001

110000 38.0 Gas CT7NOXG PROCESS EQUIPMENT MALFUNCTION

Hourly Exceedance

08/30/2001

200000 10.9 Gas

CT7NOXG SHUTDOWN

Hourly Exceedance

08/31/2001

90000 17.4 Gas CT7NOXG STARTUP

Hourly Exceedance

09/01/2001.

90000 25.1 Gas CT7NOXG STARTUP

Hourly Exceedance

09/01/2001

180000 14.6 Gas

CT7NOXG SHUTDOWN

Hourly Exceedance

09/02/2001

120000 11.9 Gas CT7NOXG STARTUP

Hourly Exceedance

. 09/03/2001

110000 28.3 Gas

CT7NOXG STARTUP

Hourly Exceedance

09/03/2001

180000 12.1 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/04/2001

90000 25.2 Gas

CT7NOXG STARTUP

Hourly Exceedance

09/04/2001

180000 14.2 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/05/2001

90000 23.7 Gas CT7NOXG STARTUP

Page 9

Hourly Exceedance

09/05/2001

120000 50.1 Oil/Gas CT7NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance

09/06/2001

90000 25.7 Gas CT7NOXG STARTUP

Hourly Exceedance

09/07/2001

200000 18.9 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/08/2001

120000 11.0 Gas CT7NOXG STARTUP

Hourly Exceedance

09/09/2001

130000 25.9 Gas CT7NOXG STARTUP

Hourly Exceedance

09/09/2001

170000 11.7 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/11/2001

100000 24.0 Gas CT7NOXG STARTUP

Hourly Exceedance

09/12/2001

120000 26.1 Gas CT7NOXG STARTUP

Hourly Exceedance

09/12/2001

170000 15.4 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/16/2001

130000 24.2 Gas CT7NOXG STARTUP

Hourly Exceedance

09/16/2001

180000 10.2 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/17/2001

120000 52.3 Oil CT7NOXO STARTUP

Hourly Exceedance

09/17/2001

170000 43.9 Oil CT7NOXO SHUTDOWN

Hourly Exceedance

09/18/2001

100000 24.7 Gas CT7NOXG STARTUP

Hourly Exceedance

09/19/2001

100000 24.4 Gas CT7NOXG STARTUP

Hourly Exceedance

09/19/2001

200000 10.2 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/20/2001

110000 24.2 Gas CT7NOXG STARTUP

Hourly Exceedance

09/21/2001

110000 18.4 Gas CT7NOXG STARTUP

Hourly Exceedance

09/21/2001

130000 28.9 Gas CT7NOXG PROCESS EQUIPMENT MALFUNCTION

Hourly Exceedance 09/22/2001

90000 15.8 Gas CT7NOXG STARTUP

Hourly Exceedance

09/22/2001

180000 16.8 Gas CT7NOXG SHUTDOWN

Hourly Exceedance

09/23/2001

100000 12.0 Gas CT7NOXG STARTUP

Hourly Exceedance

09/25/2001

140000 15.9 Gas CT7NOXG STARTUP

#### SUMMARY REPORT

#### GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Poll	utant (circle o	ne - SO2 NOX) TRS /	H2S / CO / Opacity )				
Rep	orting Period d	iates:	From: <u>07/01/2001</u>	To:	09/30/2001		
Corr	ipany:	Florida Power Corpora	ation	Emissi	ion Limit:	10 ppmvd @	15%02
Add	ress:	P. O. Box 14042 St. Petersburg, FL 33	3733		or Manufacturer odel No.:	TECO 42	<del>.</del>
Prod	ess unit Desci	ription: Intercession City Faci Combustion Turbine U	<del></del>		of latest CMS cation or Audit:	2/1/01	
		Oscaola County	Jul. ( * 17		source operating reporting period:	678	(1)
	Emission Oa	ta Summary (1)		1	CMS Performance Summ	nary (1)	
1.		excess emissions period due to:		1.	CMS downtime in report due to:	ting period	
	a. Startup/s		102_		a. Monitor equipment malfunctions	·	0
	b. Control e Problem	s	0		b. Non-Monitor equipme malfunctions	ont	0
	c. Process p		2		c. Quality assurance calibration		20
	e. Unknown	causes	0		d. Other known causes		0
2.			104		e. Unknown causes		0
3.			15.34% (2)			(100) ~	
		-	•			owledge.	
	NAME:		SIGNATURE:	0	HILE:		TAIL!

(1) For opacity, record all times in minutes. For gases, record all times in hours.

(2) For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time, or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report and the excess emission report described in sec. 60.7(c) shall be submitted.

========

Quarterly Excess Emissions Report Florida Power Corp Unit P14 Orlando, Florida

\_\_\_\_\_\_

=======

Today's Date: 10/10/2001

Reporting Perio

Time: 15:28:44

07/01/2001 - 09

/30/2001

Date/ NOx Fuel ID Reason

Time ppmvd

\_\_\_\_\_\_

Hourly Exceedance

07/03/2001

90000 18.8 Gas CT8NOXG STARTUP

Hourly Exceedance

07/03/2001

200000 17.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

07/04/2001

100000 26.9 Gas CT8NOXG STARTUP

Hourly Exceedance

07/04/2001

170000 11.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

07/05/2001

90000 31.6 Gas CT8NOXG STARTUP

Hourly Exceedance

07/05/2001

140000 10.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance 07/06/2001

120000 12.3 Gas CT8NOXG STARTUP

Hourly Exceedance

07/06/2001

180000 16.4 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

07/08/2001

110000 17.3 Gas CT8NOXG STARTUP

Hourly Exceedance

07/10/2001

100000 15.9 Gas CT8NOXG STARTUP

Hourly Exceedance

07/10/2001

140000 14.7 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

07/11/2001

130000 29.8 Gas CT8NOXG STARTUP

Hourly Exceedance

07/12/2001

100000 24.4 Gas CT8NOXG STARTUP

Hourly Exceedance

07/14/2001

110000 24.2 Gas CT8NOXG STARTUP

Hourly Exceedance

07/16/2001

110000 26.7 Gas CT8NOXG STARTUP

Hourly Exceedance

07/17/2001

Q3 ic p14 excess jjh.txt 100000 18.0 Gas CT8NOXG STARTUP

Hourly Exceedance 07/18/2001

70000 23.7 Gas CT8NOXG STARTUP

Hourly Exceedance 07/19/2001

180000 10.8 Gas CT8NOXG SHUTDOWN

Hourly Exceedance 07/20/2001

70000 13.5 Gas CT8NOXG STARTUP

Hourly Exceedance 07/20/2001

80000 13.5 Gas CT8NOXG STARTUP

Hourly Exceedance 07/21/2001

80000 28.3 Gas CT8NOXG STARTUP

Hourly Exceedance

07/21/2001

170000 22.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

07/22/2001

80000 26.2 Gas CT8NOXG STARTUP

Hourly Exceedance

07/23/2001

80000 28.3 Gas CT8NOXG STARTUP

Hourly Exceedance

07/25/2001

110000 26.4 Gas CT8NOXG STARTUP

Hourly Exceedance 07/26/2001

90000 19.1 Gas

CT8NOXG STARTUP

Hourly Exceedance

07/26/2001

200000 16.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

07/27/2:001

160000 12.1 Gas

CT8NOXG SHUTDOWN

Hourly Exceedance

07/28/2001

80000 23.9 Gas

CT8NOXG STARTUP

Hourly Exceedance

07/28/2001

210000 11.2 Gas

CT8NOXG SHUTDOWN

Hourly Exceedance

07/29/2001

80000 29.3 Gas

CT8NOXG STARTUP

Hourly Exceedance

07/30/2001

50000 16.2 Gas

CT8NOXG STARTUP

Hourly Exceedance

07/31/2001

50000 52.7 Oil CT8NOXO STARTUP

Hourly Exceedance

07/31/2001

180000 10.4 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/01/2001

90000 26.9 Gas CT8NOXG STARTUP

Page 4

Hourly Exceedance

08/03/2001

80000 52.0 Oil CT8NOXO STARTUP

Hourly Exceedance

08/06/2001

110000 19.0 Gas CT8NOXG STARTUP

Hourly Exceedance

08/06/2001

140000 47.2 Oil/Gas CT8NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance

08/06/2001

150000 43.9 Oil CT8NOXO PROCESS EQUIPMENT MALFUNCTION

Hourly Exceedance

08/06/2001

170000 47.8 Oil CT8NOXO SHUTDOWN

Hourly Exceedance

08/07/2001

110000 29.8 Gas CT8NOXG STARTUP

Hourly Exceedance

08/07/2001

180000 10.1 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/08/2001

210000 45.2 Oil CT8NOXO SHUTDOWN

Hourly Exceedance

08/09/2001

90000 12.4 Gas CT8NOXG STARTUP

Hourly Exceedance

08/09/2001

180000 12.4 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/10/2001

90000 15.4 Gas CT8NOXG STARTUP

Hourly Exceedance

08/11/2001

90000 14.1 Gas CT8NOXG STARTUP

Hourly Exceedance

08/12/2001

100000 30.5 Gas CT8NOXG STARTUP

Hourly Exceedance

08/12/2001

200000 44.6 Oil/Gas CT8NOXO SHUTDOWN

Hourly Exceedance

08/13/2001

190000 12.5 Gas CT8NOXG SHATDOWN

Hourly Exceedance

08/14/2001

110000 17.3 Gas CT8NOXG STARTUP

Hourly Exceedance

08/15/2001

130000 20.2 Gas CT8NOXG STARTUP

Hourly Exceedance

08/16/2001

90000 12.3 Gas CT8NOXG STARTUP

Hourly Exceedance

08/16/2001

200000 10.6 Gas CT8NOXG SHUTDOWN

Hourly Exceedance 08/17/2001

90000. 15.0 Gas CT8NOXG STARTUP

Hourly Exceedance

08/17/2001

200000 34.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/19/2001

90000 26.7 Gas CT8NOXG STARTUP

Hourly Exceedance

08/20/2001

80000 28.7 Gas CT8NOXG STARTUP

Hourly Exceedance

08/21/2001

100000 26.6 Gas CT8NOXG STARTUP

. Hourly Exceedance

08/21/2001

180000 13.4 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/22/2001

110000 17.4 Gas CT8NOXG STARTUP.

Hourly Exceedance

08/22/2001

210000 13.1 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/23/2001

100000 28.1 Gas CT8NOXG STARTUP

Hourly Exceedance

08/23/2001

## Q3 ic p14 excess jjh.txt 120000 64.6 Oil/Gas CT8NOXO FUEL SWITCH (GAS TO OIL)

Hourly Exceedance 08/23/2001

200000 14.9 Gas CT8NOXG SHUTDOWN

Hourly Exceedance 08/24/2001

90000 19.1 Gas CT8NOXG STARTUP

Hourly Exceedance 08/24/2001

200000 23.3 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/25/2001

90000 28.0 Gas CT8NOXG STARTUP

Hourly Exceedance

08/25/2001

200000 31.3 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/26/2001

110000 22.7 Gas CT8NOXG STARTUP

Hourly Exceedance

08/26/2001

200000 18.9 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/29/2001

90000 27.3 Gas CT8NOXG STARTUP

Hourly Exceedance

08/29/2001

200000 17.3 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

08/30/2001

80000 21.6 Gas

CT8NOXG STARTUP

Hourly Exceedance

08/31/2001

90000 15.5 Gas

CT8NOXG STARTUP

Hourly Exceedance

08/31/2001

200000 11.8 Gas

CT8NOXG SHUTDOWN

Hourly Exceedance

09/01/2001

80000 17.5 Gas

CT8NOXG STARTUP

Hourly Exceedance

09/01/2001

190000 27.7 Gas

CT8NOXG SHUTDOWN

Hourly Exceedance

09/02/2001

120000 12.8 Gas

CT8NOXG STARTUP

Hourly Exceedance

09/02/2001

170000 11.5 Gas

CT8NOXG SHUTDOWN

Hourly Exceedance

09/03/2001

110000 29.9 Gas CT8NOXG STARTUP

Hourly Exceedance

09/04/2001

90000 27.3 Gas CT8NOXG STARTUP

Hourly Exceedance

09/04/2001

160000 38.1 Gas

CT8NOXG PROCESS EQUIPMENT MALFUNCTION

Page 9

Hourly Exceedance

09/06/2001

200000 18.7 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/07/2001

100000 19.5 Gas CT8NOXG STARTUP

Hourly Exceedance

09/09/2001

170000 11.6 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/10/2001

110000 10.0 Gas CT8NOXG STARTUP

Hourly Exceedance

09/10/2001

200000 22.5 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/11/2001

100000 23.5 Gas CT8NOXG STARTUP

Hourly Exceedance

09/11/2001

180000 16.2 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/12/2001

120000 23.2 Gas CT8NOXG STARTUP

Hourly Exceedance

09/16/2001

130000 22.4 Gas CT8NOXG STARTUP

Hourly Exceedance

09/16/2001

180000 17.3 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/17/2001

120000 51.8 Oil CT8NOXO STARTUP

Hourly Exceedance

09/17/2001

180000 13.0 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/19/2001

100000 27.3 Gas CT8NOXG STARTUP

Hourly Exceedance

09/19/2001

200000 10.5 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/20/2001

110000 29.9 Gas CT8NOXG STARTUP

Hourly Exceedance

09/20/2001

170000 14.7 Gas CT8NOXG SHUTDOWN

Hourly Exceedance

09/21/2001

110000 18.6 Gas CT8NOXG STARTUP

Hourly Exceedance

09/22/2001

90000 11.9 Gas CT8NOXG STARTUP

Hourly Exceedance

09/22/2001

170000 46.6 Oil CT8NOXO SHUTDOWN

Hourly Exceedance 09/23/2001

90000 28.9 Gas CT8NOXG STARTUP

Hourly Exceedance 09/24/2001 80000 24.2 Gas CT8NOXG STARTUP



# RECEIVED

NOV 26 2001

November 21, 2001

**BUREAU OF AIR REGULATION** 

Mr. Al Linero, P.E., Administrator New Source Review Section Division of Air Resources Management Florida Department of Environmental Protection 2600 Blair Stone Road, MS 5505 Tallahassee, Florida 32399-2400

Dear Mr. Linero:

Re: Intercession City Units P12 – P14

Application to Modify Permit 097001-003-AC/PSD-FL-268

0970014-000

Please find enclosed four copies of an application to modify the Intercession City PSD air permit. The main focus of this request is to incorporate an upgrade to these units in conjunction with routine warranty work that is planned. This upgrade results in an increase in the firing temperature of these peaking units in order to maximize output and optimize efficiency. In addition, modifications to the current permit language are requested to address concerns related to the NOx excess emissions requirements. The requested changes are necessary to address the somewhat unique operating scenarios demonstrated by these units, as well as clarify the interpretation of the NOx compliance demonstration methodology and associated reporting requirements.

Although the two issues above are the primary focus of this modification, there are also several minor issues that Florida Power would like to address at this time. These include a request to reduce the annual visible emissions test period from 60 minutes to 30 minutes, clarification that required fuel oil analysis may be provided by either the facility or the fuel vendor, and removal of language requiring that each of these units to be capable of accommodating both oil and gas fuels.

Please contact Jamie Hunter at (727) 826-4363 or me if you have any questions or need additional information.

Sincerely.

Martin Drango/

Plant Manager/Responsible Official

Intercession City Plant

jjh/JJH019

**Enclosures** 

c: Jeff Koerner, FDEP - Tallahassee

Scott Osbourn, ENSR - St. Petersburg

Lastur, CD

PLANT OFFICE: 6525,Osceola Polk Line Road \* P.O. Box 368 \* Intercession City \* Florida 33848 \* 407-396-2111

A Progress Energy Company

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1. Article Addressed to:	If YES, enter delivery address below:   No
Mr. Martin J. Drango Plant Manager Florida Power Corporation	· · · · · · · · · · · · · · · · · · ·
P. O. Box 368 Intercession City, FL 33848	3. Service Type  ■ Service Type  ■ Express Mail ■ Registered ■ Return Receipt for Merchandise ■ Insured Mail
	4. Restricted Delivery? (Extra Fee)
2. Article Number (Copy from service label) 7000 2870 0000 7028 3017	
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