

THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re:

Florida Power Corporation
Polk County, Florida

OGC CASE NO.: _____
FDEP Draft Permit No.: PSD-FL-330
Project No. 1050234-006-AC

NOTICE OF EXPIRATION OF ENLARGEMENT OF TIME

Florida Power Corporation (doing business as Progress Energy Florida, Inc.), by and through undersigned counsel, hereby acknowledges the expiration of its Request for Enlargement of Time to file a petition for formal administrative proceedings in accordance with Chapter 120, Florida Statutes. On March 21, 2003, Progress Energy Florida filed a Request for Enlargement of Time until April 25, 2003, in response to the "Intent to Issue PSD Permit" and accompanying "Draft Permit," (Draft Permit No. PSD-FL-330), "Technical Evaluation and Preliminary Determination" and "Draft BACT Determination" regarding construction of Power Block 3 at the existing Hines Facility, located in Polk County, Florida. Following discussions with Department representatives, Progress Energy Florida and the Department have come to agreement on the issues involved in the above-referenced PSD permit, as reflected in the attached document. Accordingly, conditioned on the Department's issuance of the Final Permit consistent with the agreement, Progress Energy Florida does not intend to renew its Request for Enlargement of Time.

RECEIVED

APR 28 2003

BUREAU OF AIR REGULATION

RESPECTFULLY SUBMITTED this 25th day of April, 2003.

By: Robert A. Manning

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Attorneys for PROGRESS ENERGY FLORIDA,
INC.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by U.S. Mail to Al Linero, Bureau of Air Regulation, Department of Environmental Protection, 2600 Blair Stone Road, MS 5505, Tallahassee, FL 32399-2400; and W. Douglas Beason, Office of the General Counsel, Department of Environmental Protection, 3900 Commonwealth Blvd., Room 353-A, Tallahassee, FL 32399-2600 this 25th day of April, 2003:

Robert A. Manning
Robert A. Manning

DRAFT PERMIT R01

PERMITTEE:

Progress Energy Florida
P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733-4042

Authorized Representative:

Roger Zirkle, Plant Manager – Hines Energy Complex

Hines Energy Complex, Power Block 3
Project No. 1050234-006-AC
Air Permit No. PSD-FL-330
SIC No. 4911

Expires: June 30, 2007

PROJECT AND LOCATION

This permit authorizes the construction of Power Block 3 at the existing Hines Energy Complex, a “2-on-1” combined cycle unit with an electrical generating capacity of approximately 530 megawatts (MW). The project will consist of two 170 MW gas turbine-electrical generator sets, two unfired heat recovery steam generator (HRSG) sets, and a single 190 MW steam turbine-electrical generator. The existing Hines Energy Complex is located in the southwest portion of Polk County, Florida, approximately 7 miles south-southwest of Bartow and 5 miles west-northwest of Fort Meade. *{Permitting Note: Throughout this permit, the electrical generating capacities represent nominal values.}*

UTM Zone 17; 414.4 km East; 3073.9 km North (Latitude: 27° 47' 19", Longitude: 81° 52' 10")

STATEMENT OF BASIS

This PSD 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.). Pursuant to Chapter 62-17, F.A.C. and Chapter 403 Part II, F.S., the project is also subject to Electrical Power Plant Siting. The project was processed in accordance with Florida’s program for the Prevention of Significant Deterioration (PSD) of Air Quality. 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.

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Howard L. Rhodes, Director
Division of Air Resources Management

(Date)

SECTION I. GENERAL INFORMATION (DRAFT)

FACILITY DESCRIPTION

The existing Hines Energy Complex currently consists of one operating electrical generating unit (Power Block 1) and another electrical generating unit currently under construction (Power Block 2). Power Block 1 is a 500 MW combined cycle power generation unit that began operation in 1999. It consists of 2 combustion turbines, 2 HRSGs, and 1 steam turbine. Power Block 2, when complete, will include 2 combustion turbines, 2 HRSGs, and 1 steam turbine in a 530 MW power generation unit. After completion of this project (Power Block 3), the plant will have a total generating capacity of approximately 1,560 MW.

NEW AND MODIFIED EMISSIONS UNITS

This permit authorizes construction and installation of the following new emissions units.

ID	Emission Unit Description
016	Power Block 3, CT 3A (170 MW gas turbine with unfired HRSG)
017	Power Block 3, CT 3B (170 MW gas turbine with unfired HRSG)

{Permitting Note: The Hines Energy Complex, Power Block 3 (Power Block 3, or "the project") consists of 2 gas turbine-electrical generator sets (Units CT 3A and CT 3B), 2 unfired HRSGs, and a single steam-turbine electrical generator.}

REGULATORY CLASSIFICATION

Title III: The existing facility is a major source of hazardous air pollutants (HAPs). This project, however, is not major for HAPs. Based on the available information, this project does not trigger the requirements for a case-by-case determination of the Maximum Available Control Technology (MACT) under Section 112(g) of the Clean Air Act (CAA, or "the Act"). This project may trigger a case-by-case MACT determination pursuant to Section 112(j) of the Act – the "MACT hammer." (See Appendix YYYY.)

Title IV: The facility operates emissions units subject to the acid rain provisions of the Act.

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), and volatile organic compounds (VOC).

PSD: The project is located in an area designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "fossil fuel fired steam electric plant of more than 250 million British thermal units (MMBtu) per hour of heat input," which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C.

Siting: The project is subject to Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

PERMITTING AUTHORITY

All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP, or "the Department") at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.

SECTION I. GENERAL INFORMATION (DRAFT)

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Southwest District Air Program, Compliance/Enforcement Section, 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix AL	Acronym List
Appendix BD	Final BACT Determinations and Emissions Standards
Appendix CF	Citation Format and Definitions
Appendix GC	General Conditions
Appendix GG	NSPS Subpart GG Requirements for Gas Turbines
Appendix SC	Standard Conditions
Appendix XS	Semiannual NSPS Excess Emissions Report
Appendix YYYY	NESHAP Subpart YYYY and 112(j) MACT Hammer

REVIEWING AND PROCESSING SCHEDULE

September 4, 2002	Received permit application and fee
November 7, 2002	Department's request for additional information (via Office of Siting Coordination's sufficiency questions)
December 19, 2002	Received response to sufficiency questions
February 19, 2003	Received report documenting commercial, residential, and industrial growth since August 7, 1977
February 19, 2003	Application complete
March 5, 2003	Distributed Notice of Intent to Issue and supporting documents
March 21, 2003	Notice of Intent to Issue published in the <i>Lakeland Ledger</i>

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application
- Department's request for additional information (Office of Siting Coordination sufficiency questions)
- Applicant's additional information
- Department's Technical Evaluation and Best Available Control Technology (BACT) Determination
- Department's Intent to Issue

SECTION II. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. General Conditions: The permittee 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.]
2. 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, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; and 40 CFR Parts 60, 72, 73, and 75, adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the 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 permittee 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.]
3. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. Approval to construct shall become invalid for any of the following reasons: construction is not commenced within 18 months after issuance of this permit; construction is discontinued for a period of 18 months or more; or 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. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of BACT for emissions units regulated by the project. 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, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]
4. 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.]
5. Modifications: 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. [Chapters 62-210 and 62-212, F.A.C.]
6. Application for Title IV Permit: 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 Department's Bureau of Air Regulation in Tallahassee and a copy to the Region 4 Office of the U.S. Environmental Protection Agency in Atlanta, Georgia. [40 CFR 72]
7. Title V Permit: This permit authorizes construction of the permitted emissions units 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 a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. 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 with a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

This section of the permit addresses the following emissions units.

Emission Units 016 and 017

Description: Emission units 016 and 017 each consist of a Siemens Westinghouse 501 FD gas turbine-electrical generator set, an automated gas turbine control system, and an unfired HRSG. In addition, the project also includes a single steam turbine-electrical generator that serves both gas turbine/HRSG systems.

Fuels: Each gas turbine fires natural gas as the primary fuel and distillate oil as a restricted alternate fuel.

Generating Capacity: Both of the gas turbine-electrical generator sets have a generating capacity of 170 MW for gas firing. Exhaust from each gas turbine passes through a separate HRSG. Steam from both HRSGs is delivered to the single steam turbine-electrical generator, which has a generating capacity of 190 MW. The total generating capacity of the "2-on-1" combined cycle unit is approximately 530 MW.

Controls: The efficient combustion of natural gas and restricted firing of low sulfur distillate oil minimizes the emissions of CO, PM/PM₁₀, SAM, SO₂ and VOC. Dry low-NO_x (DLN) combustion technology for gas firing and water injection for oil firing reduce NO_x emissions. A selective catalytic reduction (SCR) system – in combination with DLN combustion technology for gas firing and a water injection system for oil firing – reduces NO_x emissions. The HRSGs are designed and constructed such that an oxidation catalyst can be readily installed if necessary to achieve compliance with CO emission limitations.

Stack Parameters: Each HRSG has a stack that is 125 feet tall and 19 feet in diameter. The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following table summarizes the exhaust characteristics for the combined cycle systems. Heat input rate is based on the higher heating value (HHV) of the fuel, assuming 1,030 British thermal units (Btu) per standard cubic feet of natural gas and 19,892 Btu/lb of fuel oil.

Fuel	Heat Input Rate (HHV)	Compressor Inlet Temp	Exhaust Temperature	Exit Velocity	Flow Rate
Gas	1,830 MMBtu/hour	59 °F	190 °F	59.2 ft/sec	1,009,487 acfm
Oil	1,932 MMBtu/hour	59 °F	270 °F	67.0 ft/sec	1,139,394 acfm

Continuous Monitors: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_x emissions as well as flue gas oxygen or carbon dioxide content.

APPLICABLE STANDARDS AND REGULATIONS

- BACT Determinations:** Determinations of BACT were made for CO, NO_x, PM/PM₁₀, sulfuric acid mist (SAM), SO₂, and VOC. See Appendix BD of this permit for a summary of the final BACT determinations. [Rule 62-212.400(BACT), F.A.C.]
- New Source Performance Standards (NSPS):** The Department determines that compliance with the BACT emissions performance and monitoring requirements also assures compliance with the NSPS for gas turbines at 40 CFR part 60, subpart GG. See Appendix GG of this permit for a summary of the applicable NSPS requirements. [Rule 62-204.800(7), F.A.C.]

EQUIPMENT

- Gas Turbines:** The permittee is authorized to install, tune, operate, and maintain two Siemens Westinghouse Model 501 FD gas turbine-electrical generator sets each with a generating capacity of

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

170 MW. Each gas turbine shall include the Siemens TXP automated gas turbine control system and have dual-fuel capability. The gas turbines will utilize DLN combustors. [Application; Design]

4. Gas Turbine NOx Controls

- a. *DLN Combustion*: The permittee shall operate and maintain the DLN combustion system to control NOx emissions from each gas turbine when firing natural gas. Prior to the initial emissions performance tests required for each gas turbine, the DLN combustors and automated gas turbine control system shall be tuned, in conjunction with any post-combustion emissions control equipment, to achieve the permitted levels for CO and NOx emissions. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.
- b. *Water Injection*: The permittee shall install, operate, and maintain a water injection system to reduce NOx emissions from each gas turbine when firing distillate oil. Prior to the initial emissions performance tests required for each gas turbine, the water injection system shall be tuned, in conjunction with any post-combustion emissions control equipment, to achieve the permitted levels for CO and NOx emissions. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.
- c. *SCR System*: The permittee shall install, tune, operate, and maintain a SCR system to control NOx emissions from each gas turbine when firing either natural gas or distillate oil. The SCR system consists of an ammonia injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NOx emissions and ammonia slip. *{Permitting Note: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.}*

[Design; Rule 62-212.400(BACT), F.A.C.]

5. HRSGs: The permittee is authorized to install, operate, and maintain two HRSGs. Each HRSG shall be designed to recover heat energy from one of the two gas turbines (CT 3A or CT 3B) and deliver steam to the steam turbine-electrical generator through a common manifold. *{Permitting Note: The two HRSGs deliver steam to a single steam turbine-electrical generator with a generating capacity of 190 MW.}* [Application; Design]
6. CO Controls: The permittee shall design and construct the HRSGs such that an oxidation catalyst can be readily installed if necessary to achieve compliance with the CO emission limitations. The oxidation catalyst, should it be installed, shall be designed and operated to achieve a maximum outlet concentration of 3.5 ppmvd corrected to 15% oxygen when natural gas is fired and 7.0 ppmvd corrected to 15% oxygen when distillate oil is fired. [Rule 62-4.070(3), F.A.C.]

PERFORMANCE RESTRICTIONS

7. Permitted Capacity - Gas Turbines: The maximum heat input rate to each gas turbine is 1,915 MMBtu per hour when firing natural gas and 2,020 MMBtu per hour when firing distillate oil (based on a compressor inlet air temperature of 59 °F, the HHV of each fuel, and 100% load). Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate fuels, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

8. Methods of Operation: Subject to the restrictions and requirements of this permit, the gas turbines may operate under the following methods of operation.
- a. *Hours of Operation*: Subject to the other operational restrictions of this permit, the gas turbines may operate throughout the year (8,760 hours per year).
 - b. *Authorized Fuels*: Each gas turbine shall fire natural gas as the primary fuel, which shall contain no more than 1.0 grains of sulfur per 100 standard cubic feet of natural gas. As a restricted alternate fuel, each gas turbine may fire No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Distillate fuel oil consumption of both emissions units shall not exceed 19,703,000 gallons in any consecutive 12 month period. *{Permitting Note: This condition limits annual average fuel oil consumption to the equivalent of approximately 720 hours of operation per year per turbine, based on 59 °F annual average temperature. Fuel oil consumption is not limited per turbine, and the allowable fuel may be used in a single turbine.}*
 - c. *Combined Cycle Operation*: Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a “2-on-1” combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.
 - d. *Ammonia Injection*: Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer.

[Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

EMISSIONS STANDARDS

9. Emissions Standards: Emissions from each gas turbine/HRSG shall not exceed the following limits for the listed pollutants at any ambient temperature.

Pollutant	Emission Limit (ppmvd corrected to 15% oxygen)		Averaging Time
	Natural Gas	Fuel Oil	
CO ^a	10	20	24 hour block
NOx ^b	2.5	10	24 hour block
VOC ^c	2	10	3 hours
Ammonia ^d	5	5	3 hours

Pollutant	Fuel Specification and Emission Limit
PM/PM ₁₀ ^e	Fuel specifications. Visible emissions shall not exceed 10% opacity for each 6-minute block average.
SAM/SO ₂ ^f	Fuel specifications.

- a. Compliance with the CO standards shall be demonstrated based on data collected by the required CEMS. Compliance with the 24-hour CO CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. *{Permitting Note: A 24-hour compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data. The Department shall revise the CO emissions standards following any future installation of an oxidation catalyst pursuant to Condition No. 6 of this section.}*

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

- b. Compliance with the NO_x standards shall be demonstrated based on data collected by the required CEMS. NO_x mass emission rates are defined as oxides of nitrogen expressed as NO₂. Compliance with the 24-hour NO_x CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. *{Permitting Note: A 24-hour compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data.}*
- c. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as propane.
- d. Subject to the requirements of Condition No. 19 of this section, each SCR system shall be designed and operated for an initial ammonia slip target of less than 5 ppmvd corrected to 15% oxygen when firing natural gas based on the average of three test runs. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTC-027.
- e. The fuel specifications established in Condition No. 8 of this section combined with the efficient combustion design and operation of each gas turbine represents the BACT determination for PM/PM₁₀ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.
- f. The fuel sulfur specifications in Condition No. 8 of this section effectively limit the potential emissions of SAM and SO₂ from the gas turbines and represent the BACT determination for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the requirements in Condition No. 25 of this section.

{Permitting Note: The concentration limits and fuel specifications for the control of the above pollutants are equivalent to the following mass emission rates (at 20 °F):

- CO = 46 lb/hr for natural gas firing and 75 lb/hr for distillate fuel oil firing,
- NO_x = 17.9 lb/hr for natural gas firing and 76.9 lb/hr for distillate fuel oil firing,
- VOC = 5.3 lb/hr for natural gas firing and 22 lb/hr for distillate fuel oil firing,
- PM₁₀ = 8.5 lb/hr for natural gas firing and 64.8 lb/hr for distillate fuel oil firing, and
- SO₂ = 5.6 lb/hr for natural gas firing and 105.6 lb/hr for distillate fuel oil firing.

SAM emissions are estimated to be less than 10% of the SO₂ emissions. [Rule 62-212.400(BACT), F.A.C.]

STARTUP, SHUTDOWN, AND MALFUNCTION EMISSIONS

10. Operating Procedures: The BACT determinations established by this permit rely on “good operating practices” to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
11. Excess Emissions Prohibited: 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

12. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]
13. CEMS Data Exclusion: As provided in this paragraph, NOx and CO emissions data recorded during periods of startup, shutdown, oil-to-gas fuel switches, and documented malfunctions may be excluded from the block average calculated to demonstrate compliance with the emission limits of Condition No. 9 of this section.
- a. Periods of data excluded for startup shall not exceed two hours in any 24-hour block except for cold startups. A “cold startup” is defined as a startup following a complete shutdown lasting a minimum of 48 hours. Periods of data excluded for cold startup shall not exceed four hours in any 24-hour block period.
 - b. Periods of data excluded for shutdown shall not exceed two hours in any 24-hour block.
 - c. Periods of data excluded for oil-to-gas fuel switches shall not exceed two hours in any 24-hour block.
 - d. Periods of data excluded for documented malfunctions shall not exceed two hours in any 24-hour block. A “documented malfunction” means a malfunction that meets the notification requirements specified in Condition No. 26 of this section.
 - e. All periods of data excluded for any startup, shutdown, oil-to-gas fuel switch, or documented malfunction shall be consecutive for each episode. Periods of data excluded for all startups, shutdowns, oil-to-gas fuel switches, or documented malfunctions shall not exceed six hours in any 24-hour block period during which a cold startup occurred. For all other 24-hour block periods, periods of data excluded for all startups, shutdowns, oil-to-gas fuel switches, or documented malfunctions shall not exceed four hours.
 - f. The permittee shall minimize the duration of data excluded to the extent practicable. Data shall not be excluded if the startup, shutdown, or documented malfunction was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably have been prevented. Best operating practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown, oil-to-gas fuel switching, or documented malfunction.

[Rules 62-212.400(BACT) and 62-210.700, F.A.C.]

14. CEMS Data Exclusion – DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer’s specifications. A “major tuning session” would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

15. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027	<i>Procedure for Collection and Analysis of Ammonia in Stationary Sources</i> This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

Method	Description of Method and Comments
7E	<i>Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)</i>
9	<i>Visual Determination of the Opacity of Emissions from Stationary Sources</i> The test shall be conducted for a minimum of 30 minutes.
10	<i>Determination of Carbon Monoxide Emissions from Stationary Sources</i> This method shall be based on a continuous sampling train.
18	<i>Measurement of Gaseous Organic Compound Emissions by Gas Chromatography</i> (Optional) EPA Method 18 may be used concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.
20	<i>Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines</i>
25A	<i>Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer</i>

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at <http://www.epa.gov/ttn/emc/ctm.html>. The other methods are described in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

16. **Initial Compliance Determinations:** Each gas turbine shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Each unit shall be tested when firing natural gas and when firing distillate fuel oil. CEMS data collected during the required Relative Accuracy Test Assessments (RATA) may be used to demonstrate compliance with the initial CO and NO_x standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1., F.A.C. and 40 CFR 60.8]
17. **Continuous Compliance:** The permittee shall demonstrate continuous compliance with the CO and NO_x emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. *{Permitting Note: Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion, which reduces emissions of PM/PM₁₀ and VOC.}* [Rule 62-212.400 (BACT), F.A.C.]
18. **Annual Compliance Tests:** During each federal fiscal year (October 1st to September 30th), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions and ammonia.
 - a. **Visible Emissions.** Each unit shall be tested for visible emissions when firing natural gas and when firing distillate fuel oil. Annual emissions testing while firing fuel oil is not required during any federal fiscal year in which less than 5,473,000 gallons of distillate fuel oil is fired in both emission units combined. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period. *{Permitting Note: The fuel limitation for waiving testing while firing distillate fuel oil corresponds to the equivalent of approximately 200 hours of operation per year per turbine.}*
 - b. **Ammonia.** Annual testing to determine the ammonia slip shall be conducted while firing natural gas. NO_x emissions recorded by the CEMS shall be reported for each ammonia slip test run.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

{Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions.} [Rules 62-212.400 (BACT) and 62-297.310(7)(a)4., F.A.C.]

19. **Additional Ammonia Slip Testing:** If the tested ammonia slip rate for a gas turbine exceeds 5 ppmvd corrected to 15% oxygen when firing natural gas during the annual test, the permittee shall:
- a. Begin testing and reporting the ammonia slip for each subsequent calendar quarter;
 - b. Before the ammonia slip exceeds 7 ppmvd corrected to 15% oxygen, take corrective actions that result in lowering the ammonia slip to less than 5 ppmvd corrected to 15% oxygen; and
 - c. Test and demonstrate that the ammonia slip is no more than 5 ppmvd corrected to 15% oxygen within 15 days after completing the corrective actions.

Corrective actions may include, but are not limited to, adding catalyst, replacing catalyst, or other SCR system maintenance or repair. After demonstrating that the ammonia slip level is no more than 5 ppmvd corrected to 15% oxygen, testing and reporting shall resume on an annual basis. [Rules 62-4.070(3) and 62-297.310(7)(b), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

20. **CEMS:** The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of CO and NO_x from the combined cycle gas turbine. The CEMS shall be used to demonstrate continuous compliance with the CEMS emission standards specified in this permit. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.
- a. **CO Monitors.** The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of Section 10.1 may be used in lieu of the silica gel and ascarite traps. The CO monitor shall be a dual range monitor. The span for the lower range shall not be greater than 50 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.
 - b. **NO_x Monitors.** The NO_x monitor shall be certified pursuant to 40 CFR 75, and shall be operated and maintained in accordance with the applicable requirements of 40 CFR 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR 75, Subparts F and G. The RATA tests required for the NO_x monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60. The NO_x monitor shall be a dual range monitor. The span for the lower range shall not be greater than 10 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.
 - c. **Diluent Monitors.** The oxygen or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NO_x are monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

- d. *Moisture Correction.* Final results of the CEMS shall be expressed as ppm vd corrected to 15% oxygen. If the CEMS measures concentration on a wet basis, the CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the permittee may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). If the CEMS measures concentration on a wet basis and the diluent monitor measures CO₂ on a wet basis, then the permittee may develop an algorithm to enable correction of the CEMS results to a dry basis (0% moisture) without determining the corresponding moisture content.
- e. *1-Hour Block Averages.* Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour.
- f. *24-hour Block Averages:* A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. *{Permitting Note: There may be more than one 24-hour compliance demonstration required for CO and NOx emissions depending on the use of alternate fuels.}* [R rule 62-212.400(BACT), F.A.C.]
- g. *Data Exclusion.* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches, and DLN tuning. CEMS emissions data recorded during some of these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 13 and 14 of this section.
- h. *Availability.* Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly permit excess emissions report shall be used to demonstrate monitor availability. 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, except as otherwise authorized by the Department's Compliance Authority.

{Permitting Note: Compliance with these requirements assures compliance with the other applicable CEM system requirements such as: NSPS Subpart GG; Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR 60, Appendix B - Performance Specifications; and 40 CFR 60, Appendix F - Quality Assurance Procedures.} [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

21. Water Injection Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a monitoring system to continuously measure and record the water-to-fuel ratio when firing distillate oil. The permittee shall document the water-to-fuel ratio required to meet permitted emissions levels over the range of load conditions allowed by this permit. The NOx CEMS is used to demonstrate compliance with the NOx emissions standards. During NOx CEMS downtimes or malfunctions, the permittee shall monitor the water-to-fuel ratio and operate at a level that is consistent with the documented flow rate for the gas turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
22. Ammonia Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The permittee shall document the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing NOx emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During NOx monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate that is consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

RECORDS AND REPORTS

23. Monitoring of Operation: To demonstrate compliance with the fuel consumption and sulfur content limits of Condition No. 8 of this section, the permittee shall monitor and record the rates of consumption and sulfur content of each of the allowable fuels in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]
24. Frequency of Recordkeeping: Condition No. 20 of this section requires the calculation of one or more 24-hour block average emission rates for each operating day. Within 24 hours of the conclusion of each operating day, the permittee shall complete the calculations and record the results for that operating day. [Rule 62-4.070(3), F.A.C.]
25. Fuel Sulfur Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.
- Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or more recent versions.
 - Compliance with the distillate oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM D129-91, ASTM D1552-90, ASTM D2622-94, or ASTM D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall either (1) maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor, or (2) take and analyze a sample according to the above procedures and maintain a permanent file of the results of the analysis. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

26. Malfunction Notification: Within one working day of a malfunction for which CEMS data is excluded pursuant to Condition No. 13 of this section, the permittee shall notify the Compliance Authority by telephone, facsimile transmittal, or electronic mail. The notification shall include a preliminary report of: the nature, extent, and duration of the emissions; the probable cause of the emissions; and the actions taken to correct the problem. If requested by the Compliance Authority, the permittee shall submit written quarterly reports summarizing the malfunctions in lieu of the individual malfunction notifications otherwise required. [Rule 62-210.700, F.A.C.]
27. Semiannual NSPS Excess Emissions Report: In accordance with 40 CFR 60.7(c), the permittee shall semiannually submit a report to the Compliance Authority summarizing any emissions in excess of the NSPS standards. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the information specified in 40 CFR 60.7(c)(1) through (c)(4). For purposes of reporting emissions in excess of NSPS Subpart GG, excess emissions from the gas turbine are defined as: any CEMS hourly average value exceeding the NSPS NO_x emission standard identified in Appendix GG (i.e., 112.5 ppmvd corrected to 15% oxygen for both natural gas and fuel oil); and any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG (i.e., sulfur in excess of 0.8% by weight). An example of an acceptable report format is provided in Appendix XS. [40 CFR 60.7(c)]
28. Quarterly Data Exclusion and Monitor Availability Report: The permittee shall quarterly submit a report to the Compliance Authority summarizing all periods of valid hourly CO and NO_x emissions data excluded from the 24-hour block average compliance determinations pursuant to Condition Nos. 13 and 14 of this section. In addition, the quarterly report shall summarize the CEMS availability for the previous quarter. All reports shall be postmarked by the 30th day following the end of each calendar quarter. An example of an acceptable report format for monitoring systems availability is provided in Appendix XS. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C.; and 40 CFR 60.7(c) and (d)]



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 17 2003

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APR 21 2003

BUREAU OF AIR REGULATION

4 APT-APB

A. A. Linero, P.E.
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

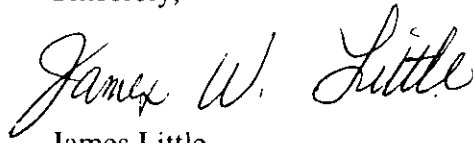
Dear Mr. Linero:

Thank you for sending the preliminary determination and draft prevention of significant deterioration (PSD) permit for the FPC - Hines facility dated March 5, 2003. The preliminary determination is for the proposed construction and operation of two combined cycle combustion turbines (CTs) with a total nominal generating capacity of 530 MW to be located near Bartow, FL. The combustion turbines proposed for the facility are Siemens Westinghouse 501FD units and will be coupled with unfired heat recovery steam generating units. The CTs will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, the CTs will be allowed to fire natural gas up to 8,760 hours per year and fire No. 2 fuel oil a maximum of 720 hours per year. Total net emissions increases from the proposed project are above the thresholds requiring PSD review for nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (PM/PM₁₀) and volatile organic compounds (VOC).

We have reviewed the PSD permit application, preliminary determination and draft PSD permit for the Power Block 3 project described above. On June 7, 2001, the Florida Department of Environmental Protection (FDEP) issued a final PSD permit to FPC Hines for an identical combined cycle combustion project referred to as Power Block 2. It is our understanding that the Power Block 2 project is still under construction. Additionally, the Power Block 3 PSD permit application was submitted to FDEP in September 2002, less than 15 months from the issuance of the Power Block 2 project. Given the short period of time between the two projects and since the Power Block 2 project has not yet begun operation, FDEP should consider evaluating these two projects together with regards to PSD applicability.

If you have any questions regarding this comment, please direct them to Katy Forney at 404-562-9130.

Sincerely,



James Little
Acting Section Chief,
Air Permits Section

cc: G. O'Connell
O. Nelson
B. O'Brien, DEP
Q. Kessel, S21D
P. Kasky, Boulder
Q. Beatty, NPS



Progress Energy

April 8, 2003

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

RECEIVED

APR 09 2003

BUREAU OF AIR REGULATION

Dear Mr. Linero:

Re: Hines Energy Complex – Power Block 3
Project No. 1050234-006-AC
Draft Permit No. PSD-FL-330
Comments on Draft Permit

Please find below Florida Power Corporation's (now doing business as Progress Energy Florida) comments on the above referenced draft permit. A copy of the draft permit, with the requested changes (in ~~strikethrough~~ and underline format) outlined in the comments below, is enclosed for reference.

Comments:

- Please change the name where referenced from "Florida Power" to "Progress Energy Florida."
- Please change the Authorized Representative from Bruce Baldwin to Roger Zirkle, who is the Title V Responsible Official for this facility.
- For clarification, please remove the words "for the given operating conditions" from the Permitting Note located under the PROJECT AND LOCATION section on page 1, since the operating conditions are not specified.
- Based on the May 27, 1999 PSD permit modification for Power Block 1, the nominal MW reference should be 500, not 485. This should be corrected in the FACILITY DESCRIPTION section (page 2), as well as the total MW description for Power Blocks 1-3.
- Correct the reference under the REGULATORY CLASSIFICATION section (page 2) from Appendix YY to Appendix YYYY.

Progress Energy Florida, Inc.
P.O. Box 14042
St. Petersburg, FL 33733

Mr. Al Linero

April 8, 2003

Page 2

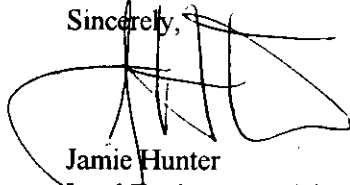
- Add language to Condition 4 (page 6) to clarify that DLN and water injection tuning are performed “in conjunction with any post-combustion emissions control equipment” to achieve permitted emissions levels.
- Add language to Condition 6 (page 6) to specify separate emission target levels for natural gas and oil firing. The oil firing emission level should be twice that of the natural gas level to retain the same ratio as the uncontrolled levels.
- The ammonia emission limit for fuel oil (Condition 9, page 7) should be changed from 5 to 9. This reflects the need to inject higher levels of ammonia during oil firing, as the NO_x emission levels are higher at the SCR inlet when firing oil.
- Add clarifying language to Condition 9.a. (page 7) to reflect requirements of Condition 6 and allow for a period of time that the CO emission limits are allowed to be exceeded while additional CO emission controls are installed and tested.
- Add clarifying language to Condition 9.d. (page 8) to reflect that the 5 ppmvd target level is based on firing natural gas.
- Modify heading prior to Condition 10 (page 8) for clarification.
- Modify language in Condition 13.d. (page 9) to be consistent with the intent of Condition 26. Also, note that Condition 26 is modified to be consistent with intent in Condition 13.d.
- Strike the first sentence in Condition 13.e. (page 9). Periods of data exclusion are already limited sufficiently; therefore, there is no reason to further limit them.
- Add language to Condition 13.e. (page 9) to allow for the additional time required for “cold” start-ups, as outlined in Condition 13.a.
- The reference to “15% oxygen” in Condition 20.a. and 20.b. (page 11) should be removed, as the monitor spans are based on actual stack concentrations, not corrected values.
- The upper range span for the NO_x monitor referenced in Condition 20.b. (page 11) should be changed from 30 to 200. This will allow emission during start-up/shutdown/malfunctions to be monitored. Also, note that the CO monitor referenced in Condition 20.a. will likely be a dual range monitor with an upper span of 1200 ppm for this same reason.
- Modify language in Condition 20.g. (page 11) to remove reference to “steam blows”, as this is not applicable to this permit. Also, remove the language after the first two sentences, as this is redundant of language already included in Condition 13.

Mr. Al Linero
April 8, 2003
Page 3

- Clarify language in Condition 26 (page 14) to remove reference to Condition 14, as malfunctions are not addressed by Condition 14. Also, clarify acceptable means of notification (language moved from Condition 13.d.).

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Jamie Hunter', written over the word 'Sincerely,'.

Jamie Hunter
Lead Environmental Specialist
Environmental Services
Progress Energy Florida

jjh/JJH062

Enclosure

c(w/enc): Greg DeAngelo, FDEP - Tallahassee

DRAFT PERMIT

PERMITTEE:

Progress Energy Florida ~~Florida Power~~
P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733-4042

Authorized Representative:

~~Bruce Baldwin, Vice President – Combustion Turbine Operations~~
Roger Zirkle, Plant Manager – Hines Energy Complex

Hines Energy Complex, Power Block 3
Project No. 1050234-006-AC
Air Permit No. PSD-FL-330
SIC No. 4911

Expires: June 30, 2007

PROJECT AND LOCATION

This permit authorizes the construction of Power Block 3 at the existing Hines Energy Complex, a “2-on-1” combined cycle unit with an electrical generating capacity of approximately 530 megawatts (MW). The project will consist of two 170 MW gas turbine-electrical generator sets, two unfired heat recovery steam generator (HRSG) sets, and a single 190 MW steam turbine-electrical generator. The existing Hines Energy Complex is located in the southwest portion of Polk County, Florida, approximately 7 miles south-southwest of Bartow and 5 miles west-northwest of Fort Meade. *{Permitting Note: Throughout this permit, the electrical generating capacities represent nominal values for the given operating conditions.}*

UTM Zone 17; 414.4 km East; 3073.9 km North (Latitude: 27° 47' 19", Longitude: 81° 52' 10")

STATEMENT OF BASIS

This PSD 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.). Pursuant to Chapter 62-17, F.A.C. and Chapter 403 Part II, F.S., the project is also subject to Electrical Power Plant Siting. The project was processed in accordance with Florida's program for the Prevention of Significant Deterioration (PSD) of Air Quality. 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.

CONTENTS

- Section I. General Information
- Section II. Administrative Requirements
- Section III. Emissions Units Specific Conditions
- Section IV. Appendices

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Howard L. Rhodes, Director
Division of Air Resources Management

(Date)

SECTION I. GENERAL INFORMATION (DRAFT)

FACILITY DESCRIPTION

The existing Hines Energy Complex currently consists of one operating electrical generating unit (Power Block 1) and another electrical generating unit currently under construction (Power Block 2). Power Block 1 is a ~~485~~ 500 MW combined cycle power generation unit that began operation in 1999. It consists of 2 combustion turbines, 2 HRSGs, and 1 steam turbine. Power Block 2, when complete, will include 2 combustion turbines, 2 HRSGs, and 1 steam turbine in a 530 MW power generation unit. After completion of this project (Power Block 3), the plant will have a total generating capacity of approximately ~~1,545~~ 1,560 MW.

NEW AND MODIFIED EMISSIONS UNITS

This permit authorizes construction and installation of the following new emissions units.

ID	Emission Unit Description
016	Power Block 3, CT 3A (170 MW gas turbine with unfired HRSG)
017	Power Block 3, CT 3B (170 MW gas turbine with unfired HRSG)

{Permitting Note: ~~Florida Power~~ The Hines Energy Complex Power Block 3 (Power Block 3, or "the project") consists of 2 gas turbine-electrical generator sets (Units CT 3A and CT 3B), 2 unfired HRSGs, and a single steam-turbine electrical generator.}

REGULATORY CLASSIFICATION

Title III: The existing facility is a major source of hazardous air pollutants (HAPs). This project, however, is not major for HAPs. Based on the available information, this project does not trigger the requirements for a case-by-case determination of the Maximum Available Control Technology (MACT) under Section 112(g) of the Clean Air Act (CAA, or "the Act"). This project may trigger a case-by-case MACT determination pursuant to Section 112(j) of the Act – the "MACT hammer." (See Appendix ~~YY~~ YYYY.)

Title IV: The facility operates emissions units subject to the acid rain provisions of the Act.

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), and volatile organic compounds (VOC).

PSD: The project is located in an area designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "fossil fuel fired steam electric plant of more than 250 million British thermal units (MMBtu) per hour of heat input," which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C.

Siting: The project is subject to Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

PERMITTING AUTHORITY

All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP, or "the Department") at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.

SECTION I. GENERAL INFORMATION (DRAFT)

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Southwest District Air Program, Compliance/Enforcement Section, 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix AL	Acronym List
Appendix BD	Final BACT Determinations and Emissions Standards
Appendix CF	Citation Format and Definitions
Appendix GC	General Conditions
Appendix GG	NSPS Subpart GG Requirements for Gas Turbines
Appendix SC	Standard Conditions
Appendix XS	Semiannual NSPS Excess Emissions Report
Appendix YYYY	NESHAP Subpart YYYY and 112(j) MACT Hammer

REVIEWING AND PROCESSING SCHEDULE

September 4, 2002	Received permit application and fee
November 7, 2002	Department's request for additional information (via Office of Siting Coordination's sufficiency questions)
December 19, 2002	Received response to sufficiency questions
February 19, 2003	Received report documenting commercial, residential, and industrial growth since August 7, 1977
February 19, 2003	Application complete
^ DRAFT	Distributed Notice of Intent to Issue and supporting documents
^ DRAFT	Notice of Intent to Issue published in ^ DRAFT

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application
- Department's request for additional information (Office of Siting Coordination sufficiency questions)
- Applicant's additional information
- Department's Technical Evaluation and Best Available Control Technology (BACT) Determination
- Department's Intent to Issue

SECTION II. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. **General Conditions:** The permittee 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.]
2. **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, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; and 40 CFR Parts 60, 72, 73, and 75, adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the 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 permittee 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.]
3. **Construction and Expiration:** The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. Approval to construct shall become invalid for any of the following reasons: construction is not commenced within 18 months after issuance of this permit; construction is discontinued for a period of 18 months or more; or 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. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of BACT for emissions units regulated by the project. 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, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]
4. **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.]
5. **Modifications:** 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. [Chapters 62-210 and 62-212, F.A.C.]
6. **Application for Title IV Permit:** 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 Department's Bureau of Air Regulation in Tallahassee and a copy to the Region 4 Office of the U.S. Environmental Protection Agency in Atlanta, Georgia. [40 CFR 72]
7. **Title V Permit:** This permit authorizes construction of the permitted emissions units 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 a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. 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 with a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

This section of the permit addresses the following emissions units.

Emission Units 016 and 017

Description: Emission units 016 and 017 each consist of a Siemens Westinghouse 501 FD gas turbine-electrical generator set, an automated gas turbine control system, and an unfired HRSG. In addition, the project also includes a single steam turbine-electrical generator that serves both gas turbine/HRSG systems.

Fuels: Each gas turbine fires natural gas as the primary fuel and distillate oil as a restricted alternate fuel.

Generating Capacity: Both of the gas turbine-electrical generator sets have a generating capacity of 170 MW for gas firing. Exhaust from each gas turbine passes through a separate HRSG. Steam from both HRSGs is delivered to the single steam turbine-electrical generator, which has a generating capacity of 190 MW. The total generating capacity of the "2-on-1" combined cycle unit is approximately 530 MW.

Controls: The efficient combustion of natural gas and restricted firing of low sulfur distillate oil minimizes the emissions of CO, PM/PM₁₀, SAM, SO₂ and VOC. Dry low-NO_x (DLN) combustion technology for gas firing and water injection for oil firing reduce NO_x emissions. A selective catalytic reduction (SCR) system – in combination with DLN combustion technology for gas firing and a water injection system for oil firing – reduces NO_x emissions. The HRSGs are designed and constructed such that an oxidation catalyst can be readily installed if necessary to achieve compliance with CO emission limitations.

Stack Parameters: Each HRSG has a stack that is 125 feet tall and 19 feet in diameter. The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following table summarizes the exhaust characteristics for the combined cycle systems. Heat input rate is based on the higher heating value (HHV) of the fuel, assuming 1,030 British thermal units (Btu) per standard cubic feet of natural gas and 19,892 Btu/lb of fuel oil.

Fuel	Heat Input Rate (HHV)	Compressor Inlet Temp	Exhaust Temperature	Exit Velocity	Flow Rate
Gas	1,830 MMBtu/hour	59 °F	190 °F	59.2 ft/sec	1,009,487 acfm
Oil	1,932 MMBtu/hour	59 °F	270 °F	67.0 ft/sec	1,139,394 acfm

Continuous Monitors: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_x emissions as well as flue gas oxygen or carbon dioxide content.

APPLICABLE STANDARDS AND REGULATIONS

- BACT Determinations:** Determinations of BACT were made for CO, NO_x, PM/PM₁₀, sulfuric acid mist (SAM), SO₂, and VOC. See Appendix BD of this permit for a summary of the final BACT determinations. [Rule 62-212.400(BACT), F.A.C.]
- New Source Performance Standards (NSPS):** The Department determines that compliance with the BACT emissions performance and monitoring requirements also assures compliance with the NSPS for gas turbines at 40 CFR part 60, subpart GG. See Appendix GG of this permit for a summary of the applicable NSPS requirements. [Rule 62-204.800(7), F.A.C.]

EQUIPMENT

- Gas Turbines:** The permittee is authorized to install, tune, operate, and maintain two Siemens Westinghouse Model 501 FD gas turbine-electrical generator sets each with a generating capacity of

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

170 MW. Each gas turbine shall include the Siemens TXP automated gas turbine control system and have dual-fuel capability. The gas turbines will utilize DLN combustors. [Application; Design]

4. Gas Turbine NOx Controls

- a. *DLN Combustion*: The permittee shall operate and maintain the DLN combustion system to control NOx emissions from each gas turbine when firing natural gas. Prior to the initial emissions performance tests required for each gas turbine, the DLN combustors and automated gas turbine control system shall be tuned, in conjunction with any post-combustion emissions control equipment, to achieve the permitted levels for CO and NOx emissions. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.
- b. *Water Injection*: The permittee shall install, operate, and maintain a water injection system to reduce NOx emissions from each gas turbine when firing distillate oil. Prior to the initial emissions performance tests required for each gas turbine, the water injection system shall be tuned, in conjunction with any post-combustion emissions control equipment, to achieve the permitted levels for CO and NOx emissions. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.
- c. *SCR System*: The permittee shall install, tune, operate, and maintain a SCR system to control NOx emissions from each gas turbine when firing either natural gas or distillate oil. The SCR system consists of an ammonia injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NOx emissions and ammonia slip. *{Permitting Note: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.}*

[Design; Rule 62-212.400(BACT), F.A.C.]

5. HRSGs: The permittee is authorized to install, operate, and maintain two HRSGs. Each HRSG shall be designed to recover heat energy from one of the two gas turbines (CT 3A or CT 3B) and deliver steam to the steam turbine-electrical generator through a common manifold. *{Permitting Note: The two HRSGs deliver steam to a single steam turbine-electrical generator with a generating capacity of 190 MW.}* [Application; Design]
6. CO Controls: The permittee shall design and construct the HRSGs such that an oxidation catalyst can be readily installed if necessary to achieve compliance with the CO emission limitations. The oxidation catalyst, should it be installed, shall be designed and operated to achieve a maximum outlet concentration of 3.5 ppmvd corrected to 15% oxygen when natural gas is fired and 7 ppmvd corrected to 15% oxygen when oil is fired.

PERFORMANCE RESTRICTIONS

7. Permitted Capacity - Gas Turbines: The maximum heat input rate to each gas turbine is 1,915 MMBtu per hour when firing natural gas and 2,020 MMBtu per hour when firing distillate oil (based on a compressor inlet air temperature of 59 °F, the HHV of each fuel, and 100% load). Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate fuels, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)
POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

8. **Methods of Operation:** Subject to the restrictions and requirements of this permit, the gas turbines may operate under the following methods of operation.
- a. **Hours of Operation:** Subject to the other operational restrictions of this permit, the gas turbines may operate throughout the year (8,760 hours per year).
 - b. **Authorized Fuels:** Each gas turbine shall fire natural gas as the primary fuel, which shall contain no more than 1.0 grains of sulfur per 100 standard cubic feet of natural gas. As a restricted alternate fuel, each gas turbine may fire No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Distillate fuel oil consumption of both emissions units shall not exceed 19,703,000 gallons in any consecutive 12 month period. *{Permitting Note: This condition limits annual average fuel oil consumption to the equivalent of approximately 720 hours of operation per year per turbine, based on 59 °F annual average temperature. Fuel oil consumption is not limited per turbine, and the allowable fuel may be used in a single turbine.}*
 - c. **Combined Cycle Operation:** Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a "2-on-1" combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.
 - d. **Ammonia Injection:** Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer.

[Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

EMISSIONS STANDARDS

9. **Emissions Standards:** Emissions from each gas turbine/HRSG shall not exceed the following limits for the listed pollutants at any ambient temperature.

Pollutant	Emission Limit (ppmvd corrected to 15% oxygen)		Averaging Time
	Natural Gas	Fuel Oil	
CO ^a	10	20	24 hour block
NOx ^b	2.5	10	24 hour block
VOC ^c	2	10	3 hours
Ammonia ^d	5	5	3 hours

Pollutant	Fuel Specification and Emission Limit
PM/PM ₁₀ ^e	Fuel specifications. Visible emissions shall not exceed 10% opacity for each 6-minute block average.
SAM/SO ₂ ^f	Fuel specifications.

- a. Compliance with the CO standards shall be demonstrated based on data collected by the required CEMS. Compliance with the 24-hour CO CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. Should the permittee be unable to meet these emission limits, the provisions of Condition 6 will apply. The permittee is allowed to exceed these emission limits until the CO catalyst has been installed and tested. After installation of the CO catalyst, these emission limits are revised to those referenced in Condition 6. *{Permitting Note: A 24-hour*

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data.}

- b. Compliance with the NO_x standards shall be demonstrated based on data collected by the required CEMS. NO_x mass emission rates are defined as oxides of nitrogen expressed as NO₂. Compliance with the 24-hour NO_x CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. *{Permitting Note: A 24-hour compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data.}*
- c. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as propane.
- d. Subject to the requirements of Condition No. 19 of this section, each SCR system shall be designed and operated for an initial ammonia slip target of less than 5 ppmvd corrected to 15% oxygen when firing natural gas based on the average of three test runs. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTC-027.
- e. The fuel specifications established in Condition No. 8 of this section combined with the efficient combustion design and operation of each gas turbine represents the BACT determination for PM/PM₁₀ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.
- f. The fuel sulfur specifications in Condition No. 8 of this section effectively limit the potential emissions of SAM and SO₂ from the gas turbines and represent the BACT determination for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the requirements in Condition No. 25 of this section.

{Permitting Note: The concentration limits and fuel specifications for the control of the above pollutants are equivalent to the following mass emission rates (at 20 °F):

- CO = 46 lb/hr for natural gas firing and 75 lb/hr for distillate fuel oil firing,
- NO_x = 17.9 lb/hr for natural gas firing and 76.9 lb/hr for distillate fuel oil firing,
- VOC = 5.3 lb/hr for natural gas firing and 22 lb/hr for distillate fuel oil firing,
- PM₁₀ = 8.5 lb/hr for natural gas firing and 64.8 lb/hr for distillate fuel oil firing, and
- SO₂ = 5.6 lb/hr for natural gas firing and 105.6 lb/hr for distillate fuel oil firing.

SAM emissions are estimated to be less than 10% of the SO₂ emissions.} [Rule 62-212.400(BACT), F.A.C.]

EXCESS STARTUP/SHUTDOWN AND MALFUNCTION EMISSIONS

10. **Operating Procedures:** The BACT determinations established by this permit rely on “good operating practices” to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
11. **Excess Emissions Prohibited:** 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,

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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shutdown or malfunction shall be prohibited. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

- 12. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]
- 13. CEMS Data Exclusion: As provided in this paragraph, NOx and CO emissions data recorded during periods of startup, shutdown, oil-to-gas fuel switches, and documented malfunctions may be excluded from the block average calculated to demonstrate compliance with the emission limits of Condition No. 9 of this section.
 - a. Periods of data excluded for startup shall not exceed two hours in any 24-hour block except for cold startups. A "cold startup" is defined as a startup following a complete shutdown lasting a minimum of 48 hours. Periods of data excluded for cold startup shall not exceed four hours in any 24-hour block period.
 - b. Periods of data excluded for shutdown shall not exceed two hours in any 24-hour block.
 - c. Periods of data excluded for oil-to-gas fuel switches shall not exceed two hours in any 24-hour block.
 - d. Periods of data excluded for documented malfunctions shall not exceed two hours in any 24-hour block. A "documented malfunction" means a malfunction that meets the "malfunction notification" requirements outlined in Condition No. 26. ~~is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.~~
 - e. ~~All periods of data excluded for any startup, shutdown, oil to gas fuel switches, or documented malfunction shall be consecutive for each episode.~~ Periods of data excluded for all startup, shutdown, oil-to-gas fuel switches, or documented malfunctions shall not exceed four hours in any 24-hour block (or six hours when the 24-hour block period includes a cold startup).
 - f. The permittee shall minimize the duration of data excluded to the extent practicable. Data shall not be excluded if the startup, shutdown, or documented malfunction was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably have been prevented.

[Rules 62-212.400(BACT) and 62-210.700, F.A.C.]

- 14. CEMS Data Exclusion – DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer’s specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

- 15. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027	<i>Procedure for Collection and Analysis of Ammonia in Stationary Sources</i> This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.

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Method	Description of Method and Comments
7E	<i>Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)</i>
9	<i>Visual Determination of the Opacity of Emissions from Stationary Sources</i> The test shall be conducted for a minimum of 30 minutes.
10	<i>Determination of Carbon Monoxide Emissions from Stationary Sources</i> This method shall be based on a continuous sampling train.
18	<i>Measurement of Gaseous Organic Compound Emissions by Gas Chromatography</i> (Optional) EPA Method 18 may be used concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.
20	<i>Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines</i>
25A	<i>Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer</i>

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at <http://www.epa.gov/ttn/emc/ctm.html>. The other methods are described in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

16. **Initial Compliance Determinations:** Each gas turbine shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Each unit shall be tested when firing natural gas and when firing distillate fuel oil. CEMS data collected during the required Relative Accuracy Test Assessments (RATA) may be used to demonstrate compliance with the initial CO and NO_x standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1., F.A.C. and 40 CFR 60.8]
17. **Continuous Compliance:** The permittee shall demonstrate continuous compliance with the CO and NO_x emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. *{Permitting Note: Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion, which reduces emissions of PM/PM₁₀ and VOC.}* [Rule 62-212.400 (BACT), F.A.C.]
18. **Annual Compliance Tests:** During each federal fiscal year (October 1st to September 30th), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions and ammonia.
 - a. **Visible Emissions.** Each unit shall be tested for visible emissions when firing natural gas and when firing distillate fuel oil. Annual emissions testing while firing fuel oil is not required during any federal fiscal year in which less than 5,473,000 gallons of distillate fuel oil is fired in both emission units combined. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period. *{Permitting Note: The fuel limitation for waiving testing while firing distillate fuel oil corresponds to the equivalent of approximately 200 hours of operation per year per turbine.}*
 - b. **Ammonia.** Annual testing to determine the ammonia slip shall be conducted while firing natural gas. NO_x emissions recorded by the CEMS shall be reported for each ammonia slip test run.

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{Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions.} [Rules 62-212.400 (BACT) and 62-297.310(7)(a)4., F.A.C.]

19. Additional Ammonia Slip Testing: If the tested ammonia slip rate for a gas turbine exceeds 5 ppmvd corrected to 15% oxygen when firing natural gas during the annual test, the permittee shall:
- Begin testing and reporting the ammonia slip for each subsequent calendar quarter;
 - Before the ammonia slip exceeds 7 ppmvd corrected to 15% oxygen, take corrective actions that result in lowering the ammonia slip to less than 5 ppmvd corrected to 15% oxygen; and
 - Test and demonstrate that the ammonia slip is no more than 5 ppmvd corrected to 15% oxygen within 15 days after completing the corrective actions.

Corrective actions may include, but are not limited to, adding catalyst, replacing catalyst, or other SCR system maintenance or repair. After demonstrating that the ammonia slip level is no more than 5 ppmvd corrected to 15% oxygen, testing and reporting shall resume on an annual basis. [Rules 62-4.070(3) and 62-297.310(7)(b), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

20. CEMS: The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of CO and NOx from the combined cycle gas turbine. The CEMS shall be used to demonstrate continuous compliance with the CEMS emission standards specified in this permit. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NOx standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.
- CO Monitors. The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of Section 10.1 may be used in lieu of the silica gel and ascarite traps. The span for the CO monitor shall not be greater than 50 ppm, ~~as corrected to 15% oxygen.~~
 - NOx Monitors. The NOx monitor shall be certified pursuant to 40 CFR 75, and shall be operated and maintained in accordance with the applicable requirements of 40 CFR 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR 75, Subparts F and G. The RATA tests required for the NOx monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60. The NOx monitor shall be a dual range monitor. The span for the lower range shall not be greater than 10 ppm, and the span for the upper range shall not be greater than ~~30~~ 200 ppm, ~~as corrected to 15% oxygen.~~
 - Diluent Monitors. The oxygen or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NOx are monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

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- d. *Moisture Correction.* Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. If the CEMS measures concentration on a wet basis, the CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the permittee may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). If the CEMS measures concentration on a wet basis and the diluent monitor measures CO₂ on a wet basis, then the permittee may develop an algorithm to enable correction of the CEMS results to a dry basis (0% moisture) without determining the corresponding moisture content.
- e. *1-Hour Block Averages.* Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour.
- f. *24-hour Block Averages:* A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. *{Permitting Note: There may be more than one 24-hour compliance demonstration required for CO and NOx emissions depending on the use of alternate fuels}.* [Rule 62-212.400(BACT), F.A.C.]
- g. *Data Exclusion.* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches, and DLN tuning, and steam blows. CEMS emissions data recorded during some of these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 13 and 14 of this section. All periods of data excluded shall be consecutive for each such episode. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable. Data recorded during such episodes 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 such episodes. 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.
- h. *Availability.* Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly permit excess emissions report shall be used to demonstrate monitor availability. 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, except as otherwise authorized by the Department's Compliance Authority.

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POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

{Permitting Note: Compliance with these requirements assures compliance with the other applicable CEM system requirements such as: NSPS Subpart GG; Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR 60, Appendix B - Performance Specifications; and 40 CFR 60, Appendix F - Quality Assurance Procedures.} [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

21. Water Injection Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a monitoring system to continuously measure and record the water-to-fuel ratio when firing distillate oil. The permittee shall document the water-to-fuel ratio required to meet permitted emissions levels over the range of load conditions allowed by this permit. The NOx CEMS is used to demonstrate compliance with the NOx emissions standards. During NOx CEMS downtimes or malfunctions, the permittee shall monitor the water-to-fuel ratio and operate at a level that is consistent with the documented flow rate for the gas turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
22. Ammonia Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The permittee shall document the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing NOx emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During NOx monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate that is consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

RECORDS AND REPORTS

23. Monitoring of Operation: To demonstrate compliance with the fuel consumption and sulfur content limits of Condition No. 8 of this section, the permittee shall monitor and record the rates of consumption and sulfur content of each of the allowable fuels in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]
24. Frequency of Recordkeeping: Condition No. 20 of this section requires the calculation of one or more 24-hour block average emission rates for each operating day. Within 24 hours of the conclusion of each operating day, the permittee shall complete the calculations and record the results for that operating day. [Rule 62-4.070(3), F.A.C.]
25. Fuel Sulfur Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.
 - a. Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or more recent versions.
 - b. Compliance with the distillate oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM D129-91, ASTM D1552-90, ASTM D2622-94, or ASTM D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall either (1) maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor, or (2) take and analyze a sample according to the above procedures and maintain a permanent file of the results of the analysis. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

POWER BLOCK 3 COMBINED CYCLE GAS TURBINES (EUs 016 AND 017)

The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

26. Malfunction Notification: Within one working day of a malfunction for which CEMS data is excluded pursuant to Conditions Nos. 13 ~~or 14~~ of this section, the permittee shall notify the Compliance Authority by telephone, facsimile transmittal, or electronic mail. The notification shall include a preliminary report of: the nature, extent, and duration of the emissions; the probable cause of the emissions; and the actions taken to correct the problem. If requested by the Compliance Authority, the permittee shall submit written quarterly reports summarizing the malfunctions in lieu of the individual malfunction notifications otherwise required. [Rule 62-210.700, F.A.C.]
27. Semiannual NSPS Excess Emissions Report: In accordance with 40 CFR 60.7(c), the permittee shall semiannually submit a report to the Compliance Authority summarizing any emissions in excess of the NSPS standards. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the information specified in 40 CFR 60.7(c)(1) through (c)(4). For purposes of reporting emissions in excess of NSPS Subpart GG, excess emissions from the gas turbine are defined as: any CEMS hourly average value exceeding the NSPS NO_x emission standard identified in Appendix GG (i.e., 112.5 ppmvd corrected to 15% oxygen for both natural gas and fuel oil); and any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG (i.e., sulfur in excess of 0.8% by weight). An example of an acceptable report format is provided in Appendix XS. [40 CFR 60.7(c)]
28. Quarterly Data Exclusion and Monitor Availability Report: The permittee shall quarterly submit a report to the Compliance Authority summarizing all periods of valid hourly CO and NO_x emissions data excluded from the 24-hour block average compliance determinations pursuant to Condition Nos. 13 and 14 of this section. In addition, the quarterly report shall summarize the CEMS availability for the previous quarter. All reports shall be postmarked by the 30th day following the end of each calendar quarter. An example of an acceptable report format for monitoring systems availability is provided in Appendix XS. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C.; and 40 CFR 60.7(c) and (d)]



March 27, 2003

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: Hines Energy Complex – Power Block 3
Project No. 1050234-006-AC
Draft Permit No. PSD-FL-330
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 in the Lakeland Ledger on March 21, 2003.

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

Sincerely,

Jamie Hunter
Lead Environmental Specialist
Environmental Services

jjh/JJH059

Enclosure

c(w/enc): Greg DeAngelo, FDEP - Tallahassee

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MAR 28 2003

BUREAU OF AIR REGULATION

AFFIDAVIT OF PUBLICATION
THE LEDGER
Lakeland, Polk County, Florida

RECEIVED
MAR 28 2003
BUREAU OF AIR REGULATION

Case No

Attach Notice Here

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Sandra Heath, who on oath says that she is Assistant Classified Advertising Manager of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a

..... Notice Of Intent

.....
in the matter of..... Permit No. PSD-FL-330

.....
in the

.....
Court, was published in said newspaper in the issues of.....

..... 3-21, 2003

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that 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.

Signed *Sandra Heath*

Sandra Heath
Assistant Classified Advertising Manager
Who is personally known to me.

Sworn to and subscribed before me this *21st*

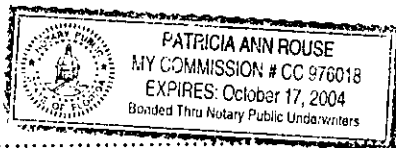
day of *March*, A.D. 20*03*

Patricia Ann Rouse

Notary Public
PATRICIA ANN ROUSE

(Seal)

My Commission Expires.....



PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft permit No. PSD-FL-330

Florida Power Hines Energy Complex, New Combined Cycle Power Block 3
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit under the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality to Florida Power. The permit is one of several authorizations needed to construct a nominal 530 megawatt (MW) combined cycle gas project at the Florida Power Hines Energy Complex, which is located approximately 7 miles south-southwest of Bartow and 5 miles west-northwest of Fort Meade, Polk County, Florida, in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). Best Available Control Technology (BACT) determinations were required for emissions of carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM10), sulfur dioxide (SO2), sulfuric acid mist (SAM), and volatile organic compounds (VOC). The applicant's authorized representative is Mr. Bruce Baldwin, Vice President - Combustion Turbine Operations. The applicant's address is Florida Power, P.O. Box 140442 - MAC 881A, St. Petersburg, FL 33733-4042.

The applicant proposes to construct a "2-on-1" combined cycle Power Block 3 consisting of the following new equipment: two 170 MW gas turbine-electrical generator sets (CT 3A and CT 3B), two unfired heat recovery steam generators, and a common steam-electrical generator (190 MW). The gas turbines will be fired primarily with natural gas, with up to the equivalent of 720 hours per year per turbine of very low sulfur distillate oil allowed as a restricted alternate fuel. The gas turbines will only be operated in combined cycle mode. Additional equipment includes two 125-foot stacks.

During operation, a selective catalytic reduction (SCR) system with ammonia injection will be used in conjunction with dry low-NOx combustion (gas firing) and wet injection (oil firing) to further reduce NOx emissions. Emissions of CO, PM/PM10, SAM, SO2, and VOC will be minimized by the efficient, high-temperature combustion of very low sulfur fuels (natural gas and distillate oil). Emissions of CO and NOx will be continuously monitored to demonstrate compliance with the conditions of the permit. When the turbines are firing natural gas, the permit will limit emissions of CO to 10 parts per million by volume on a dry basis (ppmv) and emissions of NOx to 2.5 ppmvd, both as corrected to 15 percent oxygen. The Department determines that these control techniques and equipment represent BACT in accordance with Rule 62-212.400, F.A.C. Emissions standards for oil firing, VOC emissions, and ammonia slip are presented in the draft permit on file with the Department.

Based on the the initial application, the maximum potential annual emissions from the combined cycle gas turbines that comprise new Power Block 3 are summarized in the following table. It is noted that some of the annual emissions estimates will be less because of lower standards specified in the DRAFT permit.

Pollutant	Maximum Tons Per Year	PSD Significant Emission Rate Tons Per Year	PSD Review Required?
CO	744	100	Yes
Lead (Pb)	0.02	0.6	No
NOx	267	40	Yes
PM/PM10	121/121	15/25	Yes
SO2	137	40	Yes
SAM	21	7	Yes
VOC	57	40	Yes

According to the applicant, maximum predicted air quality impacts due to emissions from the proposed new project are less than the applicable PSD Class II significant impact levels. Therefore, multi-source modeling was not required. The predicted impacts in the Chassahowitzka National Wilderness Area are less than the applicable PSD Class I significant impact levels; therefore, multi-source Class I PSD increment modeling was not required.

Based on the required analysis, the Department has reasonable assurance that the proposed project will not cause or significantly contribute to a violation of any ambient air quality standard or PSD increment. The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit, 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 a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of this Public Notice of Intent to Issue PSD Permit. Written comments or 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 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 of the Florida Statutes (F.S.) before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. This PSD permitting action is being coordinated with a certification under the Power Plant Siting Act (Sections 403.501-519, F.S.). If a petition for an administrative hearing on the Department's intent to issue is filed by a substantially affected person, that hearing shall be consolidated with the certification hearing, as provided under Section 403.507(3), F.S. 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 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 days of publication of the public notice or within fourteen 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 the 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:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
(Mailing Address: 2600 Blair Stone Road, MS #5505)
Tallahassee, Florida 32399-2400
Telephone: (850)488-0114
Fax: (850)922-6979

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8318
Telephone: (813)744-6100
Fax: (813)744-6084

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the authorized representative, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator of the New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call (850)488-0114 for additional information. The draft permit, technical evaluation and preliminary BACT determination can be accessed at www.dep.state.fl.us/air/permitting/construct.htm.

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