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December 2, 2002

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E., Administrator Florida Department of Environmental Protection Bureau of Air Regulation 2600 Blair Stone Road Tallahassee, FL 32399-2400

Re:

SUBMITTAL OF TITLE V PERMIT APPLICATION UNIVERSITY OF FLORIDA COGENERATION PLANT

PERMIT #: 0010001-001-AV

Wilm B. / file

Dear Mr. Linero:

Enclosed for your review is an original copy of the Title V application for Florida Power's University of Florida Cogeneration Plant. A copy has been sent to the FDEP's Northeast District Office as required by the current Title V Permit.

If you have any question regarding any of the information contained in this application, please do not hesitate to contact Matthew Lydon at (727) 826-4152, Scott Osbourn (ENSR) at (727) 898-9591, or Mike Kennedy at (727) 826-4334.

Sincerely,

Wilson B. Hicks Plant Manager

cc. Chris Kirts Matt Lydon

Enclosures

#### PERMITTEE:

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Florida Power Corporation/UF Cogen Plant Mowry Road, Building 82 University of Florida Gainesville, Florida 32611-2295

Gainesville, Florida 32611-2295

Authorized Representative:

Kris Edmondson - Plant Manager

#### PROJECT AND LOCATION:

This Air Construction Permit is pursuant to the requirements for the installation of a nominal 48 megawatt (MW) combustion turbine (GE LM6000-PC-ESPRINT) to replace the existing 43 MW combustion turbine (GE LM6000-PA) that has been operated at the permittee's facility since 1994. The new model will utilize spray intercooling to maximize throughput thus reducing supplemental firing in the duct burner for meeting steam and power requirements. This unit will be located at the University of Florida Cogen Plant, Mowry Road, Building 82, UF, Gainesville, Alachua County. UTM coordinates are: Zone 17; 369.4 km E; 3,279.3 km N.

#### STATEMENT OF BASIS:

This Air 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.). The above named permittee is authorized to modify the facility 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 of Environmental Protection (Department).

Attached Appendices and Tables made a part of this permit:

Appendix GC - Construction Permit General Conditions Appendix GG - NSPS Subpart GG Requirements

> Howard L. Rhodes, Director Division of Air Resources Management

Permit No.

File No.

SIC No.

Expires:

0010001-003-AC

0010001-003-AC

December 31, 2002

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#### SECTION 1 – FACILITY INFORMATION

#### FACILITY DESCRIPTION

This existing University of Florida Cogen Plant consists of a single combustion turbine (CT), heat recovery steam generator (HRSG), duct burners (DB) located between the CT and the HRSG, and Boilers Nos. 4 and 5 utilized for backup only. This facility was permitted originally in 1992 to provide power and steam for the University of Florida. That project (PSD-FL-181) involved the construction of the cogen facility along with the permanent shutdown of Boilers Nos. 1, 2 and 3. This project is for the replacement of the original 43 Megawatt CT with a more efficient model that is moderately higher in capacity (48 MW).

#### **EMISSIONS UNITS**

This permit addresses the following emissions units:

E.U. No.	EMISSION UNIT DESCRIPTION
001	GE LM6000-PC-ESPRINT Combustion Turbine
002	Duct Burner System/HRSG
003	No. 4 Boiler
004	No. 5 Boiler

#### REGULATORY CLASSIFICATION

The facility is classified as a Major or Title V Source of Air Pollution as defined in Rule 62-210.200. It is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. and is a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

PSD review and a Best Available Control Technology (BACT) determination are not required for this project since the net emissions increases are less than PSD-significant levels for all pollutants. The new CT is subject to the New Source Performance Standard for Stationary Gas Turbines at 40CFR60, Subpart GG.

This facility is also subject to certain Acid Rain provisions of Title IV of the Clean Air Act.

#### PERMIT SCHEDULE/RELEVANT DOCUMENTS:

The documents listed below provide the basis of the permit. They are specifically related to this permitting action, but not all are incorporated into this permit. All documents are on file with the Department.

- Application received January 29, 2001
- Department's letter to the applicant dated February 9, 2001
- Applicant's response letter dated March 5, 2001
- Public Notice Package including Technical Evaluation and Preliminary Determination, April 18, 2001
- Department's Final Determination and BACT Determination issued May 18, 2001.

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#### **SECTION II – ADMINISTRATIVE REQUIREMENTS**

#### GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. <u>Permitting Authority:</u> All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114.

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 Compliance Authority: All documents related to reports, tests, and notifications should be submitted to the DEP Northeast District Office, 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590, phone 904/448-4300 and Northeast District Branch Office, 101 NW 75<sup>th</sup> Street, Suite 3, Gainesville, Florida, phone 352/333-2850.

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3. <u>General Conditions</u>: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

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- 4. <u>Terminology</u>: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
- 5. Forms and Application Procedures: 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. [Rule 62-210.900, F.A.C.]

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6. Modifications: The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

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7. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., 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.]

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8. <u>Completion of Construction</u>: The permit expiration date is December 31, 2002. Physical construction shall be complete by September 30, 2002. The additional time provides for testing, submittal of results, and submittal of the Title V permit to the Department.

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9. <u>Permit Expiration Date Extension</u>: The permittee, for good cause, may request that this PSD permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.080, F.A.C.).

#### SECTION II – ADMINISTRATIVE REQUIREMENTS (CONT'D)

- 10. <u>BACT Determination</u>: In conjunction with extension of the 18 month periods to commence or continue construction, the extension of the permit expiration date, or any increases in MW generated by steam, heat input limits, hours of operation, oil firing, low or baseload operation, short-term or annual emission limits, annual fuel heat input limits or similar changes; the permittee may be required to demonstrate the adequacy of any previous determination of best available control technology for the source. [Note: Pursuant to PSD-FL-181, the permittee requested and received a 39.7 TPY net increase in NO<sub>X</sub> emissions. Therefore, any net increase in NO<sub>X</sub> emissions of 0.3 TPY above the allowable limitation established in PSD-FL-181 will initiate preconstruction review requirements pursuant to Rule 62-212.400(5), F.A.C., for NO<sub>X</sub> as if construction of these emissions units had not yet begun. [Rules 62-212.400(2)(g) and 62-212.400(5), F.A.C.]
- 11. <u>Application for Title IV Permit</u>: An application for a Title IV Acid Rain Permit must be submitted to the U.S. Environmental Protection Agency Region IV office in Atlanta, Georgia and a copy to the Department's Bureau of Air Regulation in Tallahassee at least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW. [40 CFR 72]
- 12. Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Bureau of Air Regulation, and a copy to the Department's Southeast District Office [Chapter 62-213, F.A.C.]

#### OPERATIONAL REQUIREMENTS

- 13. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
- 14. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All plant operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]
- 15. <u>Circumvention</u>: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without the applicable air control device operating properly. [Rule 62-210.650, F.A.C.]
- 16. <u>Unconfined Particulate Matter Emissions</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

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#### **SECTION II – ADMINISTRATIVE REQUIREMENTS (CONT'D)**

#### **TESTING REQUIREMENTS**

- 17. <u>Test Notification</u>: The permittee shall notify each Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and conducting the test. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]
- 18. <u>Calculation of Emission Rate</u>: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

#### 19. Applicable Test Procedures

- (a) Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]
- (b) *Minimum Sample Volume*. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
- (c) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

#### 20. Determination of Process Variables

- (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. [Rule 62-297.310(5)(a), F.A.C.]
- (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5)(b), F.A.C.]
- 21. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

#### SECTION II – ADMINISTRATIVE REQUIREMENTS (CONT'D)

- 22. <u>Stack Testing Facilities</u>: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rule 62-297.310]
- 23. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2)(b), F.A.C.]

#### **RECORDS**

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

#### REPORTS

- 25. Emissions Performance Test Results Reports: A report indicating the results of any required emissions performance test shall be submitted to each Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 26. <u>Annual Operating Reports</u>: The permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the Department's Northeast District Office by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

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#### SECTION III – EMISSIONS UNITS SPECIFIC CONDITIONS

#### APPLICABLE STANDARDS AND REGULATIONS

- 1. <u>Regulations:</u> Unless otherwise indicated in this permit, the construction and operation of the subject emission units 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. and Florida Administrative Code Chapters 62-4, 62-17, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Parts 52, 60, 72, 73, and 75.
- 2. Applicable Requirements: Issuance of a permit does not relieve the owner or operator of an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law, notwithstanding that these applicable requirements are not explicitly stated in this permit. In cases where there is an ambiguity or conflict in the specific conditions of this permit with any of the above-mentioned regulations, the more stringent local, state, or federal requirement applies. [Rules 62-204.800 and Rules 62-210.300 and 62-4.070 (3) F.A.C.]
- 3. NSPS Requirements: The combustion turbine (EU 001) shall comply with the applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The duct burner (EU 002) shall comply with the applicable provisions of 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Emissions units subject to a specific NSPS subpart shall also comply with the applicable requirements of 40 CFR 60, Subpart A, General Provisions including:
  - 40CFR60.7 Notification and Record Keeping
  - 40CFR60.8 Performance Tests
  - 40CFR60.11 Compliance with Standards and Maintenance Requirements
  - 40CFR60.12 Circumvention
  - 40CFR60.13 Monitoring Requirements
  - 40CFR60.19 General Notification and Reporting requirements

#### **GENERAL OPERATION REQUIREMENTS**

- 4. Authorized Fuels: The combustion turbine shall fire only pipeline-quality natural gas or No. 2 distillate oil (or a superior grade) containing no more than 0.5% sulfur by weight. The permittee shall monitor sulfur content and nitrogen content of No. 2 fuel oil. The frequency of determinations of these values shall be as follows: (a) If the emissions unit is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source (b) If the emissions unit is supplied its fuel oil without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom fuel monitoring schedule requests shall be substantiated with data and submitted to the Department. The Department will submit the request to the Administrator, who must approve the custom fuel monitoring schedule before it can be used to comply with 40 CFR 60.334(b). [40 CFR 60.334(b)(1) and (2)]
- 5. <u>Combustion Turbine/Duct Burner Capacity</u>: The heat input to the combustion turbine shall not exceed 392 million Btu per hour (mmBtu/hr) when firing natural gas and 384 mmBtu/hr when firing

#### SECTION III – EMISSIONS UNITS SPECIFIC CONDITIONS (CONT'D)

fuel oil. The heat input to the duct burner system shall not exceed 188 MMBtu/hr on natural gas (no oil firing). The maximum heat input limits are based on the lower heating value (LHV) of each fuel, 100% load, and ambient conditions of 59°F temperature, 60% relative humidity, and 14.7 psia. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department within 45 days of completing the initial compliance testing. [Rule 62-210.200, F.A.C. (Potential to Emit), Permit 0010001-001-AV]

6. Hours of Operation/Fuel Usage Limitations: Combustion turbine/duct burner operation at maximum firing rates shall be limited to 7,211 hours per year (to prevent retroactive PSD applicability for NOx under PSD-FL-181, pursuant to Rule 62-212.400(5), F.A.C., by reaching the 40 tons per year PSD applicability threshold). The turbine/duct burner may operate at lower than maximum rates for more hours per year provided that the annual fuel consumption limitations are not exceeded and that facility-wide NOx emissions do not exceed 194.3 TPY. The total annual fuel usage for the combustion turbine and the duct burner combined shall not exceed 3.48 trillion BTU (includes up to 635,100 gallons No. 2 fuel oil fired in the turbine). The annual fuel usage by the duct burner is limited to 519.5 million ft<sup>3</sup> natural gas.

EU 003 and 004 (Boilers Nos. 4 and 5) shall be allowed to operate as required for backup only as long as the facility-wide NOx cap of 194.3 TPY is not exceeded for any calendar year. Emission factors pursuant to condition C.14 of the facility's Title V permit shall be applied to the fuel consumed by Boilers Nos. 4 and 5 to determine compliance with the facility cap. The NOx emissions calculations shall be submitted to the Compliance Authority with the Annual Operating Report. The permittee shall install and operate a continuous monitoring system to monitor and record fuel consumption as required by 40 CFR 60.334. [Applicant Request, Rules 62-210.200 (Definitions), 62-212.400(5), F.A.C., 40 CFR 60 Subpart GG]

#### CONTROL TECHNOLOGY

- 7. Wet Injection: A wet injection system shall be installed to reduce NO<sub>X</sub> emissions from the combustion turbine exhaust. The permittee shall install and operate a continuous monitoring system to monitor and record the ratio of water to fuel being fired in the combustion turbine. [Rule 62-212.400, F.A.C., 40 CFR 60, Subpart GG]
- 8. <u>Nitrogen Oxides (NOx)</u>: [The NOx emissions limits include oxides of nitrogen consisting of both Nitric Oxide (NO) and Nitrogen Dioxide (NO<sub>2</sub>). By convention, total NOx on a mass basis is expressed as equivalent NO<sub>2</sub>. NOx concentration (ppm) is measured as NO by EPA stack sampling methods 7E and 20 and as NO<sub>2</sub> by the CEM analyzer. The NOx concentration is converted to mass emissions by applying the molecular weight of NO<sub>2</sub> to the total flow rate.]
  - a. Combustion Turbine (EU 001):
  - 1. When firing natural gas,  $NO_X$  emissions from the combustion turbine shall not exceed any of the following: 25 ppmvd (corrected to 15% oxygen), 39.6 pounds per hour, 141\* tons per year. [Applicant Request\*, Rule 62-212.400, F.A.C., Permit 0010001-001-AV]
  - 2. When firing distillate oil, NO<sub>X</sub> emissions from the combustion turbine shall not exceed any of the following: 42.0 ppmvd corrected to 15% oxygen, 66.3 pounds per hour, 7.3 tons per year. The nitrogen content of the fuel oil shall be monitored in accordance with 40 CFR 60.334(b). [40 CFR 60 Subpart GG, Rule 62-212.400, F.A.C., Permit 0010001-001-AV]

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#### **SECTION III – EMISSIONS UNITS SPECIFIC CONDITIONS (CONT'D)**

- 3. The performance test shall be determined in accordance with EPA Method 7E or EPA Method 20. Ongoing and annual compliance thereafter shall be determined by the existing NOx CEM system using hourly heat input rates applied to actual operating hours according to the procedures outlined in the facility's current Title V permit. [40 CFR 60, Subpart GG, Permit 0010001-001-AV]
- b. Duct Burner (EU 002):
- 1.  $NO_X$  emissions from firing natural gas in the duct burner shall not exceed any of the following: 0.1 lb/MMBtu, 18.7 pounds per hour, 24.6 tons per year. [Rule 62-212.400, F.A.C., Permit 0010001-001-AV]
- 2. The initial performance test and annual compliance tests shall be conducted as required in Specific Condition 8.a.3. above for EU 001 [40CFR60, Subpart GG]
- c. CEM System (EU 001):
- 1. When firing natural gas,  $NO_X$  emissions from the combustion turbine shall not exceed 25.0 ppmvd corrected to 15% oxygen. [40CFR60, Subpart GG]
- 2. When firing distillate oil, NO<sub>X</sub> emissions from the combustion turbine shall not exceed 42.0 ppmvd corrected to 15% oxygen. [40CFR60, Subpart GG]
- 3. Ongoing and annual compliance for EU 001 and shall be determined by the existing NOx CEM system on a 30-day rolling average basis and reported as required by the current Title V permit, except for the following addition/revision: To verify facility-wide compliance with the 194.3 TPY cap for NOx emissions including EU 003 and 004 (Boilers Nos. 4 and 5), and to provide reasonable assurance that NOx emissions will not be PSD-significant, CEM records along with cumulative fuel consumption records for EU 003 and 004 shall be kept and maintained by the permittee. Total NOx emissions for the calendar year shall be reported in the facility's annual operating report. [PSD-FL-181, Rule 62-212.400, F.A.C., Permit 0010001-001-AV]

#### 9. Carbon Monoxide (CO) Emissions:

- a. Combustion Turbine (EU 001):
- 1. When firing natural gas, CO emissions from the combustion turbine shall not exceed any of the following: 36 ppmvd (corrected to 15% oxygen), 35.8 pounds per hour, 127.5 tons per year. [Applicant Request, Rule 62-212.400, F.A.C.]
- 2. When firing distillate oil, CO emissions from the combustion turbine shall not exceed any of the following: 75.0 ppmvd (corrected to 15% oxygen), 70.5 pounds per hour, 7.7 tons per year. [Rule 62-212.400, F.A.C.]
- 3. Performance and annual compliance shall be determined in accordance with EPA Method 10. [40CFR60, Subpart GG and Appendix A]
- b. Duct Burner (EU 002):
- 1. When firing natural gas, CO emissions from the duct burner shall not exceed any of the following: 0.15 lb/MMBtu, 28.1 pounds per hour, 36.9 tons per year. [Rule 62-212.400, Permit 0010001-001-AV]
- 2. Performance and annual compliance with the above limits shall be determined in accordance with EPA Method 10. [40CFR60, Subpart GG and Appendix A]

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#### SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS (CONT'D)

#### 10. Sulfur Dioxide (SO<sub>2</sub>) Emissions:

- a. SO<sub>2</sub> emissions from the combustion turbine shall not exceed 0.015 percent by volume at 15 percent oxygen and on a dry basis. [40 CFR 60.333(a), Subpart GG]
- b. The SO<sub>2</sub> performance test shall be conducted using EPA Method 20 in accordance with 40 CFR 60.335. [40 CFR 60, Subpart GG]
- c. In lieu of an annual compliance test for SO<sub>2</sub>, the fuels fired in the combustion turbine and/or duct burner shall have the following sulfur limits:

Natural Gas – 1.0 grain sulfur per 100 standard cubic feet

Fuel Oil – 0.5 percent (wt.) sulfur [PSD-FL-181], 0.8 percent (wt.) sulfur [40 CFR 60.333, Subpart GG]

d. Ongoing compliance with the fuel sulfur limit for natural gas and fuel oil shall be demonstrated by the fuel supplier's analysis reports containing the sulfur content of the fuel being supplied. Methods for determining the sulfur content of natural gas shall be ASTM methods D4084-82, D3246-81 or more recent versions. Ongoing compliance with the fuel oil sulfur limits shall be demonstrated by fuel analyses certified according to the provisions of 40 CFR 75 Appendix D by the fuel supplier. At the request of the Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content. [40 CFR 60, Subpart Db, Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

#### 11. Visible Emissions (VE):

- a. When firing natural gas in the combustion turbine (EU 001) and/or duct burner (EU 002), visible emissions shall not exceed 10 percent opacity as determined by EPA Method 9. [Permit 0010001-001-AV, Rule 62-212.400, F.A.C.]
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- b. When firing fuel oil in the combustion turbine (EU 001), visible emissions shall not exceed 20 percent opacity as determined by EPA Method 9. [Permit 0010001-001-AV, Rule 62-212.400, F.A.C.]
- c. Ongoing compliance with the above visible emissions limits shall be determined in accordance with EPA Method 9. [40 CFR 60, Appendix A]
- 12. Performance Tests: The combustion turbine and duct burner shall be stack-tested as required above when firing each authorized fuel to demonstrate compliance with the emission standards for NOx, SO<sub>2</sub>, CO and visible emissions. The tests must be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the emissions units. Tests for NOx, SO<sub>2</sub> and CO shall be conducted concurrently. [Rule 62-297.310(7)(a)1., F.A.C.; 40 CFR 60.335]
- 13. <u>Annual Compliance Tests</u>: During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), the combustion turbine/duct burner shall be tested when firing natural gas to demonstrate compliance with the emission limits for NOx, CO and visible emissions. If the combustion turbine fires fuel oil more than 400 hours during the federal fiscal year, it shall also be tested for visible emissions when firing oil. [Rule 62-212.400, F.A.C.; Permit 0010001-001-AC]

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#### SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS (CONT'D)

#### **EXCESS EMISSIONS**

- 14. 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 are prohibited. These emissions shall be included in the 24-hour compliance averages for NO<sub>X</sub> and for CO emissions. [Rule 62-210.700(4), F.A.C.]
- 15. Excess Emissions Defined: During startup, shutdown, and documented unavoidable malfunction of the combined cycle gas turbine, the following permit conditions allow excess emissions or the exclusion of monitoring data for specifically defined periods of operation. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of excess emissions during such incidents. If a CEM system reports emissions in excess of the standard, the permittee shall notify the Compliance Authority within (1) working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

  [Turbine Manufacturer Data; Rule 62-210.700, F.A.C.]
- 16. <u>Best operational practices</u>: Best operational practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. [Rule 62-210.700, F.A.C.]

#### MONITORING REQUIREMENTS

- 17. Continuous Emission Monitoring System: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the stack to measure and record the emissions of NOx from these emissions units in a manner sufficient to demonstrate compliance with the CEM emission limits of this permit. The oxygen content or the carbon dioxide (CO<sub>2</sub>) content of the flue gas shall also be monitored at the location where NOx is monitored to correct the measured NOx emissions rates to 15% oxygen. [Rule 62-210.700, F.A.C., 40 CFR 60, Subpart GG]
- 18. Fuel Consumption Monitoring of Operations: To demonstrate compliance with the fuel consumption limits, the permittee shall monitor and record the rates of consumption of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. To demonstrate compliance with the turbine capacity requirements, the permittee shall monitor and record the operating rate of the combustion turbine on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown and malfunction). Such monitoring shall be made using a monitoring component of the CEM system required above, or by monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
- 19. Fuel Consumption Rates Monthly Monitoring: By the fifth calendar day of each month, the permittee shall record the monthly fuel consumption and hours of operation for the combustion turbine. The information shall be recorded in a verifiable manner and shall summarize the previous month of operation and the previous 12 months of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department or the Compliance Authority. [Rule 62-4.070(3), F.A.C.]

# SECTION III – EMISSIONS UNITS SPECIFIC CONDITIONS (CONT'D) NOTIFICATION, REPORTING, AND RECORDKEEPING

- 20. Records: All measurements, records, and other data required to be maintained shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available upon request. [Rules 62-4.160 and 62-213.440, F.A.C]
- 21. NSPS Notifications: All applicable notifications and reports required by 40 CFR 60, Subpart A shall be submitted to the Compliance Authority. [40 CFR 60, Subpart A]
- 22. <u>Semi-Annual Reports</u>: Semi-annual excess emission reports, in accordance with 40 CFR 60.7 (a)(7)(c) (2000 version), shall be submitted to each Compliance Authority. [40 CFR 60.7]
- 23. <u>Addresses</u>: The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Northeast District Office and Branch Office: Department of Environmental Protection, Northeast District Office, 825 Baymeadows Way, Suite 200-B, Jacksonville, FL 32256-7590, Telephone: 904/448-4300, Fax: 904/448-4363, and Department of Environmental Protection, Northeast District Branch Office, 5700 Southwest 34<sup>th</sup> Street, Suite 1204, Gainesville, FL 32608, Telephone: 352/955-2095, Fax: 352/377-5671.

#### TITLE V EMISSION LIMITS

(Summary of Emission Limits in Current Title V Permit 0010001-001-AV)

			CT/DB	
Pollutant	Fuel Type	Basis of Limit (CT/DB)	lbs/hr	TPY
NO <sub>X</sub> <sup>1</sup>	Natural Gas	25 ppmvd/0.1 lb per MMBtu	39.6/18.73	142.7/24.61,2
	No.2 Fuel Oil	42 ppmvd/Not Applicable	66.3 <sup>3</sup> /Not Applicable	7.31,2/Not Applicable
SO <sub>2</sub>	No.2 Fuel Oil	BACT	0.5% (wt.) Sulfur	
CO	Natural Gas	42 ppmvd/0.15 lb per MMBtu	38.8/28.1	158.0/36.9
	No.2 Fuel Oil	75 ppmvd/Not Applicable	70.5/Not Applicable	7.7/Not Applicable
VE	Natural Gas		10% opaci	ty <sup>4</sup>
VE	No. 2 Fuel Oil		20% opacity, except period per hour of no opacity <sup>4</sup>	

The NO<sub>x</sub> limit was accepted by the applicant to escape PSD New Source Review.

- <sup>3</sup> 30-day rolling average, compliance timeframe. (See Specific Condition A.6.)
- Since the CT and DB are in series, the opacity standard is applicable when the CT or the CT and DB are in operation, except when the CT is firing No. 2 distillate fuel oil, at which time the CT's opacity standard for fuel oil will be in effect. See Specific Condition B.4.

The permittee has elected to demonstrate compliance with the NO<sub>X</sub> emissions limits using a continuous emissions monitor system (CEMS). Since the CT and DB are in series, the allowable emissions for both emissions units shall be combined for ongoing compliance demonstration purposes. For the purpose of demonstrating ongoing compliance with the applicable combined emissions limits for both the CT and DB, using the stack CEMS, compliance is considered to occur when the NO<sub>X</sub> emissions are less than or equal to (1) 39.6 lbs/hr or 66.3 lbs/hr when only the CT is operating and firing natural gas or No. 2 distillate fuel oil, respectively; (2) 58.3 lbs/hr when both the CT and DB are operating and firing natural gas; or, (3) 85.0 lbs/hr when both the CT and DB are operating and the DB is firing natural gas. The daily rolling average compliance value shall be calculated based on the proportion of hours operated in a day (midnight to midnight) that the CT or both the CT and DB are operating. Any portion of an hour that the DB operates shall be recognized as an hour-period on the daily operation. For example, in a given daily timeframe, with 20 hours of CT operation only while firing natural gas and 4 hours of CT-DB operation while firing natural gas:

Calculated Daily NO<sub>x</sub> Emissions Value =

[(39.6 lbs/hr x 20-hrs) + (58.3 lbs/hr x 4-hrs)]/24-hrs =

42.72 lbs/day NO<sub>X</sub> emissions value

For the 30-day rolling average, this daily calculated emissions value will then be added to the previous 29-day period of daily calculated emission values and divided by 30 (days) to establish the 30-day average emissions value for comparing to the CEMS data over the same 30-day period.

Calculated 30-Day Average NO<sub>X</sub> Emissions Value =

[42.72 lbs/day + "previous 29-daily emission values (lbs/day) summation"]/30-days =

# lbs/30-day average NO<sub>X</sub> emissions value

Compliance with the permitted  $NO_X$  emission limitation is considered satisfied as long as the  $NO_X$  emissions value from the stack CEMS is less than or equal to the calculated  $NO_X$  emissions value, averaged over the same 30-day period. [AC 01-204652/PSD-FL-181/PSD-FL-181(A); 40 CFR 60.44b(i); and, Rule 62-212.400(2)(g), F.A.C.]

Any net increase in NO<sub>X</sub> emissions of 0.3 TPY above the combined allowable limits of the CT and DB (174.6 TPY; and, see Specific Conditions B.4. and D.2.b.) will initiate preconstruction review requirements pursuant to Rule 62-212.400(5), F.A.C., for NO<sub>X</sub> for the CT and DB as if construction of these emissions units had not yet begun.

UF Cogen Plant Combined Cycle Power Plant

FLORIDA POWER CORPORATION University of Florida Cogen Plant Gainesville, Alachua County

# 48 MW GE LM6000-PC-ESPRINT TURBINE REPLACEMENT

Facility I.D. No. 0010001 Permit No. 0010001-003-AC

Department of Environmental Protection Division of Air Resources Management Bureau of Air Regulation

#### **APPLICATION INFORMATION**

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

Florida Power Corporation University of Florida Cogen Plant Mowry Road, Bldg. 82 University of Florida Gainesville, Florida 32611-2295

Authorized Representative: Kris Edmondson - Plant Manager

#### **Reviewing and Process Schedule**

Date of receipt of application: 01-29-01
BAR incompleteness letter: 02-09-01
Received response to incompleteness letter: 03-08-01
Application deemed complete: 03-08-01

#### **FACILITY INFORMATION**

#### **Facility Location**

Florida Power Corporation's University of Florida Cogen Plant is located at Mowry Road, Bldg. 82 near the university's medical school in Gainesville, Alachua County. This site is approximately 100 kilometers (km) south of Okeefenokee National Wildlife Refuge (NWR), a PSD Class I Area and approximately 100 km northeast of the Chassahowitzka NWR Class I PSD Area. The UTM coordinates of this facility are Zone 17; 369.4.0 km E; 3,279.3 km N.

#### Standard Industrial Classification Codes (SIC)

Industry Group No.	49	Electric, Gas, and Sanitary Services
Industry No.	4911	Electric Services

#### **Facility Category**

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>X</sub>), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 TPY. The facility is within an industry included in the list of the 28 Major Facility Categories per Table 212.400-1, F.A.C. Since present emissions are greater than 100 TPY for NO<sub>X</sub>, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

As a Major Facility, project emissions greater than the significant emission rates given in Table 212.400-2 (100 TPY of CO; 40 TPY of NO<sub>X</sub>, SO<sub>2</sub>, or VOC, 25/15 TPY of PM/PM<sub>10</sub>) require review per the PSD rules and a determination of Best Available Control Technology (BACT). This facility underwent PSD review and a BACT determination in 1994 (PSD-FL-181). This facility is also subject to the Title IV Acid Rain Program, 40 CFR 72.

#### PROJECT DESCRIPTION

The applicant proposes to install a 48 megawatt (MW) combustion turbine (GE LM6000-PC-ESPRINT) to replace an existing 43 MW combustion turbine (GE LM6000-PA) that has been operated continuously at the facility since 1994. The existing turbine is in need of a significant amount of repair/maintenance. General Electric does not support the older "PA" model. FPC determined that the economics of the new engine vs. repair of the existing unit are favorable, and concluded that the replacement with the updated "PC ESPRINT" model is the best alternative.

This emissions unit (EU001) is indicated in the table below listing each emissions unit at the facility. The new model will utilize spray intercooling to maximize throughput thus reducing supplementary firing in the duct burner for meeting steam and power requirements.

E.U. No.	EMISSION UNIT DESCRIPTION
001	GE LM6000-PC-ESPRINT Combustion Turbine
002	Duct Burner System/HRSG
003	No. 4 Boiler
004	No. 5 Boiler

According to information available from General Electric, the LM6000-PC-ESPRINT replacement turbine is a more fuel-efficient version of the existing GE LM6000 turbine presently installed. The GE SPRINT <sup>(R)</sup> technology selected for this project is based on an atomized water spray injected through spray nozzles located between the high-pressure and low-pressure compressors. Water is atomized using high-pressure air taken off of eighth-stage bleed. The water-flow rate is metered, using the appropriate engine control schedules. On high-pressure ratio gas turbines, such as the LM6000, the compressor discharge temperature is controlled because compressed air is used to cool the hot section components. By injecting an atomized water spray in front of the LM6000 high-pressure compressor, the compressor inlet temperature is significantly reduced. Utilizing the same compressor discharge temperature control limit, the compressor is able to pump more air, achieving a higher-pressure ratio. The result is higher output and better efficiency. It is estimated that GE SPRINT technology will increase the maximum power output at ISO conditions from the current 43 MW to about 48 MW.

#### CURRENT COMBUSTION TURBINE/DUCT BURNER EMISSION LIMITS (TITLE V PERMIT)

			CT/DB	
Pollutant	Fuel Type	Basis of Limit (CT/DB)	lbs/hr	TPY
NO <sub>X</sub> I	Natural Gas	25 ppmvd/0.1 lb per MMBtu	39.6/18.7	142.7/24.6
-	No.2 Fuel Oil	42 ppmvd/Not Applicable	66.3 <sup>3</sup> /Not Applicable	7.3 <sup>1,2</sup> /Not Applicable
SO <sub>2</sub>	No.2 Fuel Oil	BACT	0.5% (wt.) Sulfur	
CO	Natural Gas	42 ppmvd/0.15 lb per MMBtu	38.8/28.1	158.0/36.9
	No.2 Fuel Oil	75 ppmvd/Not Applicable	70.5/Not Applicable	7.7/Not Applicable
VE	Natural Gas		10% opa	city
VE	No. 2 Fuel Oil		20% opacity, except for one 6-min. period per hour of not more than 27% opacity	

#### **AIR POLLUTION EMISSIONS AND CONTROL TECHNIQUES**

Regulated air pollutants of most concern that are emitted from natural gas-fired turbines include nitrogen oxides (NOx) and carbon monoxide (CO), while particulate matter (PM/PM10), sulfur dioxide (SO<sub>2</sub>) and volatile organic compounds (VOC) are typically emitted in less significant amounts. As described below, water injection is the method used to control NOx emissions. Emissions of other pollutants are limited through combustion design and proper operation and maintenance, and by limiting hours of operation.

#### NITROGEN OXIDES (NOX) EMISSIONS

Oxides of nitrogen (NO and NO<sub>2</sub>) are formed in the high temperature environment of the turbine combustion zone due to oxidation of molecular nitrogen in the combustion air. About 90-95% of the NOx is formed as nitric oxide (NO). Although some of the NO is subsequently oxidized in the exhaust environment and the atmosphere to nitrogen dioxide (NO<sub>2</sub>), the residence time in the combustion zone is too short for significant amounts of NO to be oxidized to NO<sub>2</sub>. An alternate source of nitrogen is the chemically bound nitrogen in the fuel. Thermal NOx forms in the high temperature area of the combustion zone, and increases exponentially with increasing flame temperature and linearly with increasing residence time. Flame temperature is dependent upon the ratio of fuel to air in the combustion zone. Prompt NOx forms near the flame front as an intermediate combustion product and is a relatively small fraction of the NOx formed under near-stoichiometric conditions. Fuel NOx is formed from the nitrogen content in the fuel and is not a significant contributor to total NOx when combusting natural gas or distillate fuel oil which contain little fixed nitrogen.

Actual emissions of NOx will vary with operating load and ambient (inlet) air conditions. Increasing the operating load increases the fuel requirement, so mass emissions will increase as operation increases. Because of the increased density of colder air, higher mass throughput can be achieved which requires more fuel resulting in higher emissions. Ambient humidity will also affect mass flow, fuel requirements and emissions, but to a lesser extent.

This type of combustion turbine is designed to control NOx emissions through the injection of water into the combustion zone. The injected water, through consumption of heat for vaporization, reduces the temperature in the combustion zone, thus controlling thermal NOx. There is a practical limit to the amount of water that may be injected before flame instability or poor combustion conditions result. The monitoring of the water injection and fuel consumption rates is required in order to properly maintain the water to fuel ratio at a constant level. The system is operated so that as more fuel is fired at higher loads or cooler ambient conditions, more water is injected to maintain NOx emissions at a constant exhaust concentration.

The turbine is designed to maintain an exhaust gas concentration of 25 ppmvd NOx while firing gas, or 42 ppmvd while firing oil (corrected to 15% oxygen at ISO conditions). This is equivalent to 39.6 lb/hr while burning gas and 66.3 lb/hr while burning oil. While NOx concentration is maintained at a near-constant level, mass emissions will vary with load and ambient temperature as discussed previously.

The permit will require that compliance be demonstrated annually with the total NOx emissions from the combustion turbine (EU001), duct burner (EU002), and the two boilers used for backup only (EU003 and EU004), being limited to 194.3 tons per year. Also required is that the water-to-fuel ratio be maintained at a level necessary to demonstrate compliance with the concentration standard during the latest annual compliance test (40 CFR 60, Subpart GG). Annual operation and compliance will be effected through the use of a NOx continuous emission monitor (CEMS).

#### CARBON MONOXIDE (CO) & VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS

CO and VOC emissions are formed in the combustion process as a result of incomplete fuel combustion. In general, CO emissions are inversely proportional to NOx emissions for turbines. The water injection system used to control NOx could, if not properly operated and maintained, increase CO emissions if combustion temperatures are quenched so that cold spots form in the combustion zone. Combustion design and proper operation and maintenance are the air pollution control techniques. The permit requires that facility staff are trained in proper operation and maintenance of the turbines, so that emissions are kept to a minimum. The permit requires that compliance be demonstrated annually with the maximum CO emission rate of 36 ppmvd @ 15% O<sub>2</sub>, and 35.8 pounds per hour, and 127.5 tons per year. VOC emissions vary similarly with CO, although potential emissions of VOC are considerably lower than CO.

#### PARTICULATE MATTER (PM/PM<sub>10</sub>) EMISSIONS

Particulate matter is generated by various physical and chemical processes during combustion and will be affected by the fuel type and the design and operation of the combustion system. The fuel fired will be primarily natural gas with distillate fuel oil used for backup (maximum sulfur content of 0.5%, by weight). Since natural gas is a very clean-burning fuel, it generates very little particulate matter. Likewise, distillate fuel oil with its low ash and sulfur content generates very low quantities of particulate matter. According to worst case estimates by the applicant, PM/PM<sub>10</sub> emissions will be less than 10 tons per year.

#### SULFUR DIOXIDE (SO2) & SULFURIC ACID MIST EMISSIONS

Emissions of sulfur dioxide and sulfuric acid mist vary with the sulfur content of the fuel. Fuel sulfur is oxidized during combustion to sulfur dioxide. Through further reaction with oxygen and the water vapor in the inlet air, some of the  $SO_2$  is further oxidized to sulfur trioxide ( $SO_3$ ) and the exhaust gas leads to the formation of sulfuric acid. Limiting the hours of operation on fuel oil and the sulfur content of the fuel are the most effective control measures. The sulfur content of the fuel oil is limited by this permit as well as the applicant's Title V permit to 0.5 % (wt.). Since annual emissions will not increase as a result of this project and therefore PSD does not apply, the current BACT limit of 0.05% sulfur for distillate fuel oil fired in gas turbines will not be required.

#### **RULE APPLICABILITY**

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The Department determined that the Rules for the Prevention of Significant Deterioration of Air Quality (PSD) do not apply to this project because the modification will not result in emissions increases greater than the significant emission rates given in Table 212.400-2, F.A.C. Additionally, annual facility emissions after replacement of the turbine will be capped at currently permitted levels. These caps, in addition to other conditions, were imposed during the permitting of the original combustion turbine to avoid PSD applicability.

The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the following applicable requirements of the rules and regulations of the Florida Administrative Code as follows:

Chapter 62-4	Permitting Requirements
Chapter 62-204	Ambient Air Quality Protection and Standards, PSD Increments, and
-	Federal Regulations Adopted by Reference
Chapter 62-210	Required Permits, Public Notice and Comments, Reports, Stack Height
-	Policy, Circumvention, Excess Emissions, Forms and Instructions
Chapter 62-212	Preconstruction Review, PSD Requirements, BACT Determinations
Chapter 62-213	Operation Permits for Major Sources of Air Pollution
Chapter 62-214	Acid Rain Program Requirements
Chapter 62-296	Emission Limiting Standards
Chapter 62-297	Test Requirements, Test Methods, Supplementary Test Procedures, Capture
•	Efficiency Test Procedures, Continuous Emissions Monitoring Specification
	and Alternate Sampling Procedures

The project is also subject to federal air pollution control rules including the applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The duct burner (EU 002) shall comply with the applicable provisions of 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Emissions Units subject to a specific NSPS subpart shall also comply with the applicable requirements of 40 CFR 60, Subpart A, General Provisions including:

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

#### **SOURCE IMPACT ANALYSIS**

An impact analysis was not required for this project because it is not subject to the requirements of PSD.

#### **CONCLUSION**

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations.

#### **DEPARTMENT CONTACT FOR ADDITIONAL INFORMATION**

John Reynolds, Permit Engineer New Source Review Section Bureau of Air Regulation, MS 5505 2600 Blair Stone Road Tallahassee, Florida 32399-2400

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