



Jeb Bush
Governor

Department of Environmental Protection

DEP06-0002

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

Colleen M. Castille
Secretary

January 9, 2006

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Mr. Benjamin M. H. Borsch, P.E.
Manager, Safety Health & Environment
Calpine Corporation
2701 N. Rocky Point, Suite 1200
Tampa, Florida 33607

RE: Osprey Energy Center
Modification to Conditions of Certification
DEP Case Number PA 00-41A
OGC Case Number 00-0740

ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Mr. Borsch:

On June 18, 2004, May 16, 2005, and July 5, 2005, the Department issued modifications to the federal air construction permit No. PSD-FL-287 for the Osprey Energy Center (permit attached). Pursuant to Rule 62-17.211(4), Florida Administrative Code ("F.A.C."), the Department is required to modify the Conditions of Certification for this facility to conform them to the PSD permit.

On November 2, 2005, all parties to the certification proceeding were provided with notice by certified mail of the Department's intent to modify the Conditions of Certification for this facility, along with a copy of the proposed Order Modifying Conditions of Certification. Additionally, on {date}, notice of the Department's intent to modify the Conditions of Certification for this facility was on the Department's internet home page at <http://www.dep.state.fl.us/> under the link or button titled "Official Notices." Those notices specified that pursuant to Section 403.516, Florida Statutes ("F.S."), and Rule 62-17.211, F.A.C., all parties to the certification proceeding have 45 days from the issuance of the notice by mail to such party's last address of record in which file a written objection to the modification; that any person who is not already a party to the certification proceeding and whose substantial interests will be affected by the requested modification has 30 days from the date of publication of the public notice in the FAW to object in writing; that failure to act within the time frame constitutes a waiver of the right to become a party; and that the Department will issue a Final Order

Modifying the Conditions of Certification for this facility if no written objections are received by the Department.

No objections to the modification have been received by the Department. The Conditions of Certification for the Osprey Energy Center are hereby modified as follows:

I. through XII. No change.

XIII. AIR RESOURCES MANAGEMENT

A. Air Construction Permit Number PSD-FL-287, which is attached as Appendix A, is incorporated by reference herein as part of this Certification. The provisions of Air Construction Permit Number PSD-FL-287 shall be conditions of this certification. The licensee shall comply with the substantive provisions and limitations set forth in Air Construction Permit Number PSD-FL-287 as part of these Conditions of Certification, and as those provisions may be modified in the future by the Department. Such provisions shall be fully enforceable as conditions of this certification. Any violation of such provisions shall be a violation of these Conditions of Certification.

B. The use or storage of Orimulsion® or other emulsion type fuels is specifically prohibited.

A. PSD Permit

~~The Permittee shall comply with all limitations, restrictions, and conditions contained in PSD permit number PSD-FL-287. The PSD permit, as attached to these Conditions of Certification, is included in and made part of these Conditions of Certification.~~

B. Emissions Units

Emissions Unit	System	Emissions Unit Description
001	Power Generation	One nominal 170 Megawatt Gas Combustion Turbine-Electrical Generator
002	Power Generation	One nominal 170 Megawatt Gas Combustion Turbine-Electrical Generator
003	Steam Generation	One 250 MMBtu/hr Duct Burner configured as a Supplementary Fired Heat Recovery Steam Generator
004	Steam Generation	One 250 MMBtu/hr Duct Burner configured as a Supplementary Fired Heat Recovery Steam Generator
005	Water Cooling	Cooling Tower
xxx	Miscellaneous	Emergency Generator and Diesel Fire Pump

~~C. General Operations Requirements~~

- ~~1. Fuel~~
 - ~~a. Only pipeline natural gas shall be fired in these units.~~
 - ~~b. The use or storage of Orimulsion or other emulsion type fuels is specifically prohibited.~~
- ~~2. The maximum heat input rates, based on the lower heating value (LHV) of the fuel to this Unit at ISO conditions shall not exceed 1,669 million Btu per hour (MMBtu/hr) when firing natural gas without power augmentation. This maximum heat input rate 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 of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.~~
- ~~3. The maximum heat input rate of each natural gas fired duct burner shall not exceed 250 MMBtu/hour (LHV).~~
- ~~4. 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.~~
- ~~5. If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the DEP Southwest District office as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.~~
- ~~6. Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.~~
- ~~7. The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly.~~
- ~~8. Maximum allowable hours of operation for the 527 MW Combined Cycle Plant are 8760 hours per year while firing natural gas. Fuel oil firing of the combustion turbine is not permitted.~~

~~9. The plant may not be operated without the use of the selective catalytic reduction (SCR) system except during periods of startup and shutdown.~~

~~D. Control Technology~~

~~1. Dry Low NO_x (DLN) combustors shall be installed on each stationary combustion turbine.~~

~~2. The Permittee shall install a selective catalytic reduction system to comply with the NO_x and ammonia limits listed in Condition XIII.E.1.~~

~~3. Drift eliminators shall be installed on the cooling tower to reduce PM/PM₁₀ emissions. A certification following installation (and prior to startup) shall be submitted to the Department's Division of Air Resources Management that drift eliminators were installed and that the installation is capable of meeting 0.002 gallons/100 gallons recirculation water flowrate.~~

~~E. Emissions Limits~~

~~(The procedures and frequency for determining compliance with the following emissions limits are set forth in the PSD permit no. PSD-FL-287.)~~

~~1. Nitrogen Oxides (NO_x) Emissions~~

~~a. The concentration of NO_x in the stack exhaust gas, with the combustion turbine operating, the duct burner on or off, shall not exceed 3.5 ppmvd @15% O₂ on a 24 hr block average. This limit shall apply whether or not the unit is operating with duct burner on and/or in power augmentation mode. Compliance shall be determined by a continuous emission monitor (CEMS).~~

~~b. The emissions of NO_x shall not exceed 27.5 lb/hr (at 95°F ambient temperature) while operating in the power augmentation mode with the duct burner on, to be demonstrated by annual stack test.~~

~~c. Emissions of NO_x from the duct burner shall not exceed 0.1 lb/MMBtu.~~

~~d. The concentration of ammonia in the exhaust gas from each CT/HRSG shall not exceed 9.0 ppmvd @15% O₂.~~

2. ~~Carbon Monoxide (CO) Emissions~~

~~a. Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas shall not exceed:~~

~~(1) 10 ppm_{dv} @15% O₂ on a 24-hr block average to be demonstrated by CEMS for those days when no valid hour includes the use of duct burner firing, power augmentation or 60-70% operation; nor~~

~~(2) otherwise exceed 17 ppm_{dv} @15% O₂ on a 24-hr block average to be demonstrated by CEMS.~~

~~b. Emissions of CO in the stack exhaust gas (at ISO conditions) with the duct burner off and no power augmentation, shall exceed neither 10 ppm_{dv} @15% O₂ nor 45 lb/hr per unit at 100% output.~~

3. ~~Volatile Organic Compounds (VOC) Emissions~~

~~a. Emissions of VOC in the stack exhaust gas (baseload at ISO conditions) with the combustion turbine operating on gas shall not exceed 2.3 ppm_{dv} @15% O₂ nor 5.8 lb/hr per unit with the duct burner off.~~

~~b. Emissions of VOC in the stack exhaust gas (baseload at ISO conditions) with the combustion turbine operating on gas shall not exceed 4.6 ppm_{dv} @15% O₂ nor 12.4 lb/hr per unit with the duct burner on and operating in the power augmentation mode.~~

4. ~~Sulfur Dioxide (SO₂) Emissions~~

~~SO₂ emissions shall be limited by firing pipeline natural gas with a sulfur content not greater than 2 grains per 100 standard cubic feet.~~

5. ~~PM/PM₁₀ and Visible emissions (VE)~~

~~a. PM/PM₁₀ emissions from each combustion turbine and HRSG train shall not exceed 24.1 lb/hr at 100% output with the duct burner on and operating in the power augmentation mode.~~

~~b. VE emissions shall not exceed 10 percent opacity from the stack in use.~~

6. ~~Ammonia Emissions~~

~~a. Ammonia emissions shall be calculated continuously using inlet and outlet NOx concentrations from the SCR system and ammonia flow supplied to the SCR system. The calculation procedure shall be provided with the CEM monitoring plan. The following calculation represents one acceptable method by which the permittee may demonstrate compliance with this condition:~~

~~Ammonia slip @ 15% O₂ = [A - (B x C x 10⁻⁶)] x [(D x 10⁻⁶) / B]~~

~~where:~~

~~A = ammonia injection rate (lb/hr) / 17 (lb/lb.mol)~~

~~B = dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)~~

~~C = change in measured NOx (ppmdv @15%O₂) across catalyst~~

~~D = correction factor, derived annually during compliance testing by comparing actual to tested ammonia slip~~

~~The calculation along with each newly determined correction factor shall be submitted with each annual compliance test. Calibration data ("as found" and "as left") shall be provided for each measurement device utilized to make the ammonia emission measurement and submitted with each annual compliance test.~~

~~b. The Permittee shall notify the Department's Southwest District Office within 2 business days if the calculated ammonia emissions exceed 9.0 ppmdv corrected to 15% O₂ over a 3 hour block average. The notification shall include a corrective action plan to reduce ammonia emissions below 9 ppmdv corrected to 15% O₂ over a 3 hour block average.~~

XIV. through XXI. No change.

Executed in Tallahassee, Florida.

Hamilton S. Oven

Hamilton S. Oven, P.E.

Administrator, Siting Coordination Office

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

Linda Korakos
Clerk

1/9/06
Date

CC by U.S. mail:

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