DRAFT PERMIT

PERMITTEE

City of Gainesville, Gainesville Regional Utilities (GRU)
Post Office Box 147117 (A 132)
Gainesville, Florida 32614-7117

Authorized Representative:
Mr. John W. Stanton, Assistant General Manager
Energy Supply

Air Permit No. 0010006-014-AC
Permit Expires: March 14, 2012
Minor Air Construction Permit

Deerhaven Generating Station
Low-NOx Burners for Unit 2

PROJECT

This is the final air construction permit, which authorizes the replacement of the existing Unit 2 coal burners with a low-NOx burner system and a modified over-fire air system. The proposed work will be conducted at the existing Deerhaven Generating Station, which is an electrical generating plant categorized under Standard Industrial Classification Code No. 4911. The existing facility is located in Alachua County at 10001 NW 13th Street in Gainesville, Florida. The UTM coordinates of the existing facility are Zone 17, 365.7 km East, and 3292.6 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

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

Executed in Tallahassee, Florida

(DRAFT)

_____ _____

Trina Vielhauer, Acting Director (Date)
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on _____(DRAFT)_____ to the persons listed below.

Mr. John W. Stanton, GRU (stantonjw@gru.com)
Mr. Robert W. Klemans, GRU (klemansrw@gru.com)
Mr. Christopher Kirts, DEP NE District (christopher.kirts@dep.state.fl.us)
Mr. Mike Halpin, DEP Siting Office (mike.halpin@dep.state.fl.us)
Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Ms. Ana M. Oquendo, EPA Region 4 (oquendo.ana@epa.gov)
Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

Clerk Stamp

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

(DRAFT)

_____ _____
(Clerk) (Date)

FACILITY DESCRIPTION

The existing facility consists of the following emissions units.

Facility ID No. 0010006	
ID No.	**Emission Unit Description**
Regulated Emissions Units	
003	Unit 1(75 megawatt (MW))
005	Unit 2 (251 MW)
006	Combustion Turbine No 3 (74 MW)
007	Coal Handling and Storage Activities
Unregulated Emissions Units and Activities	
001	Combustion Turbine No. 1 (20 MW)
002	Combustion Turbine No. 2 (20 MW)
008	Fly ash and bottom ash, soda ash, salt brine, urea, and lime storage and handling, and water and wastewater treatment systems
009	Stationary Reciprocating Internal Combustion Engine (1,100 hp)

PROPOSED PROJECT

This permit authorizes replacement of the existing Unit 2 coal burners with a low-NOx burner (LNB) system and modified over-fire air system. The LNB project consists of 18 Opti-Flow fuel injectors, secondary air nozzles, windbox compartment modifications, igniters, burner panels, over-fire air modifications, auxiliary air port modifications and coal piping.

This project will modify the following emissions unit.

Facility ID No. 0010006	
ID No.	**Emission Unit Description**
005	Unit 2 (251 MW)

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- Units 1 and 2 are subject to the Clean Air Interstate Rule (CAIR).
- Unit 2 is subject to New Source Performance Standards (NSPS) of Subpart D in Title 40, Part 60 of the Code of Federal Regulations.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's Northeast District Office at 7825 Baymeadows Way, Suite 200 B, Jacksonville, Florida 32256-7590.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions 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 Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. 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.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air 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 appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213.420, F.A.C.]

9. Actual Emissions Reporting: This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for emissions of carbon monoxide and nitrogen oxides. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

   a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

   b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

      1) The name, address and telephone number of the owner or operator of the major stationary source;

      2) The annual emissions calculations pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

      3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

      4) Any other information that the owner or operator wishes to include in the report.

   c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

   For this project, the permit requires the annual reporting of actual carbon monoxide and nitrogen oxides emissions for Deerhaven Unit 2.

   [Application 0010006-014-AC; and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

A. EU 005

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
005	Unit 2 is a 251 MW fossil fuel fired steam boiler and is capable of burning coal, natural gas or distillate fuel oil (Nos. 1 or 2) with emissions exhausted through a 350 foot stack with an exit diameter of 18.5 feet. The actual volumetric flow rate is 766,500 actual cubic feet per minute. The exit temperature is 352° F. Particulate matter emissions are controlled by a baghouse. Sulfur dioxide (SO_2) emissions are controlled by using a circulating dry scrubber. Nitrogen oxides (NOx) emissions are controlled by a selective catalytic reduction. There are continuous emissions monitoring systems (CEMS) for SO_2 and NOx emissions and a continuous opacity monitoring system (COMS) for stack opacity.

EQUIPMENT

1. LNB Project: The permittee is authorized to replace the existing Unit 2 coal burners with a LNB system and modified over-fire air system. The LNB project consists of 18 Opti-Flow fuel injectors, secondary air nozzles, windbox compartment modifications, igniters, burner panels, over-fire air modifications, auxiliary air port modifications and coal piping. *{Permitting Note: The burner vendor expects a 22% to 30% reduction in nitrogen oxides emissions from the boiler furnace prior to the SCR system.}* [Application No. 0010006-014-AC]

PERFORMANCE RESTRICTIONS

2. Permitted Capacity: The maximum heat input rate to this unit is 2700 MMBtu per hour based on a 4-hour block average as determined by data collected from the Acid Rain monitoring system. On a calendar year basis, no more than ten, 4-hour block averages shall be greater than the specified maximum heat input rate. *{Permitting Note: The purpose of this specification is to define the maximum expected equipment capacity and thereby the potential to emit. The equipment may be physically capable of infrequent, but brief episodes that exceed the maximum capacity during periods of high demand.}* [Rule 62-210.200(PTE), F.A.C.]

TESTING REQUIREMENTS

3. Initial Compliance Tests: Unit 2 shall be tested to demonstrate initial compliance with the emissions standards for particulate matter specified in the Title V air operation permit. The initial tests shall be conducted within 60 days after completing construction on the LNB project and achieving permitted capacity, but not later than 180 days after initial operation of the unit. The results of this test may be used for purposes of demonstrating annual compliance with the standard for particulate matter. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

4. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

5. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5 or 17	Method for Determining Particulate Matter Emissions

The above methods are described in Appendix A of 40 CFR 60 and are 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 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

MONITORING REQUIREMENTS

6. EmissionsMonitoring:

   a. *CO Process Monitor*: The permittee shall refurbish and recalibrate the existing CO process monitoring system to measure and record carbon monoxide emissions from the boiler furnace. CO emissions measured by the process monitoring system shall be used in the annual report to determine whether the LNB project caused a PSD-significant increase in emissions (100 tons/year or more).

   b. *NOx CEMS*: NOx emissions measured by the existing Acid Rain CEMS shall be used in the annual report to determine whether the LNB project caused a PSD-significant increase in emissions (40 tons/year or more).

   [Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

7. Stack Test Report: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Compliance Authority on the results of each such test. For each required stack test, the permittee shall submit a written report that summarizes the results with 45 days of completing such test. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report shall provide the following information:

   a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

   b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

   c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information.

      (1) The type, location, and designation of the emissions unit tested.

      (2) The facility at which the emissions unit is located.

      (3) The owner or operator of the emissions unit.

      (4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.

      (5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.

      (6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.

      (7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.

      (8) The date, starting time and duration of each sampling run.

      (9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-

297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.

(10) The number of points sampled and configuration and location of the sampling plane.

(11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.

(12) The type, manufacturer and configuration of the sampling equipment used.

(13) Data related to the required calibration of the test equipment.

(14) Data on the identification, processing and weights of all filters used.

(15) Data on the types and amounts of any chemical solutions used.

(16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.

(17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.

(18) All measured and calculated data required to be determined by each applicable test procedure for each run.

(19) The detailed calculations for one run that relate the collected data to the calculated emission rate.

(20) The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.

(21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

In addition to the above, the permittee shall submit records of the following for each test run: SO_2 emissions (CEMS); NOx emissions (CEMS); CO emissions (process monitor); stack opacity (COMS); and heat input rate (Acid Rain CEMS).

[Rule 62-297.310(8), F.A.C.]