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BUREAU OF AIR REGULATION

Ms. Trina L. Vielhauer
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road, MS-5505
Tallahassee, Florida 32399-2400

Re: Permit No.: 0950137-⁰²⁵~~011~~-AC

Dear Ms. Vielhauer:

On January 10, 2007 Orlando Utilities Commission ("OUC") received the final permit for the installation of a dibasic acid additive and neural network system for Stanton Energy Centers Unit 1 and 2. These projects are identified by DEP File No. 0950137-⁰²⁵~~011~~-AC.

In review of this permit OUC has identified several conditions applicable to the formerly approved IGCC unit. During the permitting process for the IGCC unit, OUC netted out of PSD requirements for NOx, with a cap to NOx emissions for Units 1 and 2. Due to OUC and the Southern Power Company's decision not to construct the IGCC unit, the recent modification of Unit B to a 1X1 natural gas combined cycle unit was approved July 24, 2008. During the modification review for Unit B, a BACT determination was performed for NOx.

Pursuant to approval of this modification for Unit B, emission requirements #4 (a) and (b) and reporting requirement #6 of this permit which specifically address the NOx emission cap for the IGCC plant are no longer applicable. OUC therefore requests an amendment to this permit by the Department to remove the emissions requirements of #4 (a), (b) and #6. We also ask that the last sentence of the Facility Description on page 2 and the Permitting Note on Page 6 be deleted.

Thank you for your consideration in this matter.

Sincerely,

Denise M. Stalls, Vice President
Environmental Affairs

Providing innovative, friendly, dependable service.

DMS:rc
Attachment



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary - Designee

PERMITTEE:

Orlando Utilities Commission
500 South Orange Avenue
Orlando, Florida 32802

Authorized Representative:

Frederick Haddad, Jr.
V.P., Power Resources Business Unit

DEP File No. 0950137-011-AC
Curtis H. Stanton Energy Center
Dibasic Acid Additive System
Neural Network Systems
Stanton Units 1 and 2
Orange County, Florida

PROJECT AND LOCATION

This permit authorizes the addition of a dibasic acid additive delivery system to the existing wet flue gas desulfurization systems, and a neural network-based combustion optimization system to Units 1 and 2 at the Curtis H. Stanton Energy Center. The facility is located at 5100 Alafaya Trail, Orlando, Orange County.

STATEMENT OF BASIS

This 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 perform the proposed work 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). This permit supplements all other air construction and operation permits for the affected emissions units and does not alter any requirements from such previously issued air permits.

The attached Appendices are made a part of this permit:

Appendix GC Construction Permit General Conditions



Joseph Kahn, Director
Division of Air Resource Management

SECTION I. GENERAL INFORMATION

FACILITY DESCRIPTION

The existing facility consists of two 468 MW fossil fuel fired steam electric generating stations (Units 1 and 2), and one 640 MW combined cycle unit. There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash. A draft PSD permit was recently issued for the construction of a nominal 285 MW integrated gasification combined cycle unit (Unit B) planned to be operational by 2012.

PROJECT DESCRIPTION

The projects under this permit include installation of a dibasic acid (DBA) additive system on the existing wet scrubber flue gas desulfurization (WFGD) systems for Units 1 and 2, and a neural network-based combustion optimization system on Units 1 and 2.

The DBA system includes: three metering pumps; one DBA storage tank; associated piping, valves, and components; and instrumentation and controls. This project will accomplish further SO₂ reductions beyond the existing systems that may suffice for reductions pursuant to the Clean Air Interstate Rule.

Installation of the neural network-based combustion optimization system is the first measure identified by OUC towards meeting the requirements pursuant to the IGCC Unit B permit (PSD-FL-373) and is consistent with efforts pursuant to CAIR. The system will run on its own dedicated server pc, and will communicate directly with the plant distributed control system.

EMISSIONS UNITS

This permit addresses the following emissions units:

EU ID	Emissions Unit Description
001	Fossil Fuel Fired Steam Electric Generator No. 1
002	Fossil Fuel Fired Steam Electric Generator No. 2

REGULATORY CLASSIFICATION

Title I, Part C, Clean Air Act (CAA): The facility is a PSD-major facility pursuant to Rule 62-212, F.A.C.

Title I, Section 111, CAA: Units 1 and 2 are subject to the New Source Performance Standards of 40 CFR 60, Subpart Da (Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978).

Title I, Section 112, CAA: The facility is a "Major Source" of hazardous air pollutants (HAPs).

Title IV, CAA: The facility operates units subject to the Acid Rain provisions of the Clean Air Act.

Title V, CAA: The facility is a Title V or "Major Source of air pollution" in accordance with Chapter 62-213, F.A.C.

CAIR: As an electric generating unit, Units 1 and 2 may be subject to the Clean Air Interstate Rule pending finalization of DEP rules.

Siting: The facility was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

SECTION I. GENERAL INFORMATION

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) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department of Environmental Protection Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767.

RELEVANT DOCUMENTS

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

- Application for installation of DBA and neural network systems received September 7, 2006.
- Department's Technical Evaluation and Preliminary Determination issued November 22, 2006.
- Department's Final Determination issued concurrently with this Final Permit.

SECTION II. ADMINISTRATIVE REQUIREMENTS

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 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, 60, and 63 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the 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: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [Rules 62-4.070(4), 62-4.080, 62-210.300(1), 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. 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.]
6. 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.]
7. Title V Permit: This permit authorizes construction or modification 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 units. 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 Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

Units 1 and 2 Fossil Fuel Fired Steam Generators (EU 001 and 002)

This section of the permit addresses the following existing emissions units.

Emissions Unit 001 and 002

Fossil Fuel Fired Steam Generators 1 and 2 are wall-fired, dry bottom boilers, firing pulverized coal as the primary fuel and No. 6 fuel oil for purposes of startup and flame stabilization. Each unit has a maximum heat input rate of 4,286 mmBtu per hour with a nominal generating capacity of 468 MW. Each unit is equipped with an electrostatic precipitator (ESP) for control of particulate matter (PM/PM₁₀), and a WFGD system for sulfur dioxide (SO₂) control. Unit 2 is also equipped with low NO_x burners and a selective catalytic reduction (SCR) system for control of nitrogen oxide (NO_x) emissions. The following parameters are continuously monitored on both units: NO_x, opacity, SO₂, CO₂, and stack gas flow rate.

ADMINISTRATIVE REQUIREMENTS

1. Relation to Other Permits: The conditions of this permit are in addition to those of any other air construction or operation permits for these units. [Rule 62-4.030, 62-4.210, and 62-210.300(1)(b), F.A.C.]

EQUIPMENT AND CONTROL TECHNOLOGY

2. Dibasic Acid Additive System: The permittee is authorized to install and maintain a dibasic acid (DBA) additive system associated with the existing WFGD systems on Units 1 and 2 for the purpose of improving SO₂ removal efficiencies and enhancing overall scrubber performance. The additive system consists of the following components:

- Three skid-mounted DBA metering pumps with associated valves and equipment;
- DBA storage tank;
- DBA addition piping and valves from storage tank to pump skid and from pump skid to the existing scrubber additive storage tanks; and
- Instrumentation and controls.

[Applicant Request, and Rule 62-210.300 (Permits Required), F.A.C.]

3. Neural Network Combustion Optimization System: The permittee is authorized to install and maintain a neural network-based combustion optimization system to interface with the existing plant distributed control system for the purpose of optimizing boiler operations.

[Applicant Request, and Rule 62-210.300 (Permits Required), F.A.C.]

EMISSIONS REQUIREMENTS

4. NO_x Emissions Cap: Units 1 and 2 will meet the following NO_x emissions limits.
 - a. *Existing Units 1 and 2*: The combined NO_x emissions from existing coal fired boiler steam electric generating Stanton Unit 1 and Stanton Unit 2 shall not exceed 8,300 tons per year on a 12-month rolling total. Total NO_x emissions shall be based on data collected from the Unit 1 and Unit 2 NO_x CEMS. Compliance shall be determined after each calendar month by calculating the total emissions from that calendar month and the last 11 calendar months beginning the first month of first fire of IGCC Unit B and thereafter.
 - b. If the combined NO_x emissions from Units 1 and 2 exceed 8,300 tons during any 12-month period, and/or the total NO_x emissions from Unit B exceeds 1,006 tons during any 12-month period, Unit B shall be subject to PSD preconstruction review at that time, and a determination of BACT for NO_x shall be made.

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

Units 1 and 2 Fossil Fuel Fired Steam Generators (EU 001 and 002)

- c. For purposes of meeting the NO_x emissions caps, annual emission of NO_x from existing Units 1 and 2, and Unit B shall be calculated with no allowable data exclusions. All valid hours of data (including startup and shutdown) must be included in the rolling 12-month totals. Also, the data substitution procedures of Part 75 for missing data shall not be used in these calculations.

[62-210.200 (net emissions increase), 62-210.370 (emissions computation), and 62-212.400(12) (Source Obligation), F.A.C.]

{Permitting Note: IGCC Unit B did not trigger PSD for NO_x due to a NO_x emissions cap taken on existing coal fired boiler steam electric generating Unit 1 and Unit 2. The above conditions establish the requirements for meeting the NO_x emissions limitations for purposes of avoiding PSD preconstruction review by Unit B. These requirements in no way supersede any federal requirement of the applicable NSPS or NESHAP provisions.}

REPORTING AND NOTIFICATION REQUIREMENTS

5. **Notification:** Within one week of beginning construction of the DBA additive system, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of construction activities. Within one week following the end of construction, the permittee shall notify the Compliance Authority that the project was completed. Within one week of completing installation of the neural network-based combustion optimization system, the permittee shall notify the Compliance Authority that the project was completed. [Rule 62-4.210, F.A.C.]
6. **SIP Quarterly Report:** In addition to, and included in, the SIP quarterly excess emissions report required for Unit B the permittee shall submit a report to the Compliance Authority summarizing the previous three 12-month totals of NO_x emissions from Units 1 and 2. The quarterly report is due within 30 days following the end of each calendar-quarter. [Rule 62-4.070, F.A.C.]

Appendix GC - Construction Permit General Conditions

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

Appendix GC - Construction Permit General Conditions

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

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly