Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Orlando Utilities Commission (OUC)
500 South Orange Avenue
Orlando, Florida 32802

Authorized Representative:
Mr. Chip Merriam,
Chief Legislative and Regulatory Compliance Officer

Permit No. 0950137-040-AC
Curtis H. Stanton Energy Center
SIC No. 4911
Unit 1 Installation of SCR and Scrubber Upgrades.
Units 1 and 2 Installation of DSI
Orange County, Florida
Expiration Date: December 31, 2015

PROJECT AND LOCATION

This is the final air construction permit, which authorizes the following: to install a selective catalytic reduction (SCR) system for Unit 1; to add dry sorbent injection (DSI) systems to Units 1 and 2; and, to conduct additional upgrades (Phase 2) to the existing components of the wet flue gas desulfurization (WFGD) system for Unit 1. The proposed work is being conducted at the existing OUC Curtis H. Stanton Energy Center, which is a power plant categorized under Standard Industrial Classification No. 4911. The existing facility is located at 5100 Alafaya Trail, Orlando, Orange County. The UTM coordinates are Zone 17, 483.05 kilometers East and 3150.06 kilometers 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.

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 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

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Jeffery Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

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FACILITY AND PROJECT DESCRIPTION

The existing facility consists of two 468 megawatts (MW) fossil fuel fired steam electric generating units (Units 1 and 2), and two combined cycle units: Unit A (640 MW) and Unit B (300 MW). There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash.

The project authorized by this permit is to:

1. Upgrade the WFGD system's scrubber for Unit 1with the following modifications:
   - Installation of a new distribution tray or walls rings;
   - Modifications to the spray header and nozzle arrangement; and
   - Modifications to the induced draft fan.
2. Construct/install a SCR system for Unit 1.
3. Construct/install DSI systems for Units 1 and 2.
4. This project also recognizes the installation of two new hydrated lime storage silos to be used in conjunction with the new DSI systems. These silos will be constructed with bin vent dust collectors designed to meet a collection efficiency of at least 99% and an emission rate less than or equal to 0.005 grains/dry standard cubic feet (dscf). Because the total potential particulate matter emissions from each of these silo vents are approximately 0.28 tons per year, they are exempt from the requirement to obtain an air construction permit under Rule 62-210.300(3)(b), F.A.C., Generic Exemptions. As such, the silos will be identified as new insignificant emissions units when incorporated into the Title V air operation permit. Reasonable precautions to prevent emissions of unconfined particulate matter from the delivery and handling of hydrated lime shall be followed and shall be identified in the Title V air operation permit revision application pursuant to Rule 62-296.320(4)(c), F.A.C., including a commitment to maintain and operate the bin vent filters to meet the design conditions listed above.

The present permitting action is related to the following existing boilers and the new hydrated lime silo emissions units (EU):

EU ID	Emissions Unit Description
001	Fossil Fuel Fired Steam Electric Generator No. 1
002	Fossil Fuel Fired Steam Electric Generator No. 2
N/A	Exempt DSI - Hydrated Lime Silo # 1 Bin Vent
N/A	Exempt DSI - Hydrated Lime Silo # 2 Bin Vent

REGULATORY CLASSIFICATION

The facility is a major source of hazardous air pollutants (HAP).

The facility operates existing units subject to the Acid Rain provisions of Title IV 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 (PSD-major source) in accordance with Rule 62-212.400, F.A.C.

The facility operates units subject to the Standards of Performance for New Stationary Sources pursuant to 40 CFR Part 60.

The facility does not operate electrical generating units subject to National Emissions Standards for Hazardous Air Pollutants pursuant to 40 CFR Part 63.

The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.

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RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; and the Department's Technical Evaluation and Preliminary Determination.

Documents related to this permitting action are posted under permit No. 0950137-040-AC at the following web site address: http://appprod.dep.state.fl.us/air/emission/apds/listpermits.asp.

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SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority. The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. The phone number (850) 717-9000 and the fax number is (850) 717-9097.

2. Compliance Authority. All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407) 894-7555. Fax: (407) 897-5963.

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); and, Appendix C (Common Conditions).

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. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and apply for an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. 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.]

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9. Application for Title V Permit Revision. 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 revision 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 revision, 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, F.A.C.]

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Subsection A. Fossil Fuel Fired Steam Generators

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

EU No.	Brief Description
001 **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 4,800 million British thermal units (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/PM_{10}), a wet flue gas desulfurization (WFGD) system for sulfur dioxide (SO_2) control, and low NO_X burners for nitrogen oxides (NO_X) control. Unit 2 is also equipped with a selective catalytic reduction (SCR) system for further control of NO_X emissions. The following parameters are continuously monitored on both units: NO_X, opacity, SO_2, carbon dioxide (CO_2), and stack gas flow rate.

APPLICABLE STANDARDS AND REGULATIONS

A.1. Regulations and Standards. Except as specified below, the facility remains subject to all of the rules and requirements contained in all previously issued air construction permits for this facility. These limits are consolidated in the facility's Title V permit No. 0950137-037-AV, based on applicable requirements established by prior Air Construction permits and/or Federal or State regulations. [Rule 62-4.070(3), F.A.C.]

EQUIPMENT AND CONTROL TECHNOLOGY

A.2. Scrubber Upgrades. The permittee is authorized to construct/install, operate and maintain a new distribution tray or wall rings on the Unit 1 WFGD scrubber and to modify the spray headers and nozzles and their arrangement as described in the application. [Application No. 0950137-040-AC]

A.3. Induced Draft Fan. The permittee is authorized to make modifications to and increase the speed of the Unit 1 induced draft fan to account for the additional pressure drop caused by the scrubber upgrades described in condition **A.2.** and to resolve vibration problems. [Application No. 0950137-040-AC]

A.4. SCR System. The permittee is authorized to construct/install, operate and maintain a selective catalytic reduction (SCR) system for nitrogen oxides (NO_X) control on the facility's Unit No. 1 boiler. [Application No. 0950137-040-AC]

A.5. DSI System. The permittee is authorized to construct/install, operate and maintain dry sorbent injection (DSI) systems for the facility's Unit Nos. 1 and 2 boilers. [Application No. 0950137-040-AC]

EMISSION LIMITS AND STANDARDS

{Permitting Note: OUC is proposing to reduce emissions of NO_X and SO_2 by installing air quality controls system in preparation for upcoming regulatory programs such as the Cross-State Air Pollution Rule (CSAPR) and the Mercury and Air Toxics Standards (MATS). OUC states that there are no expected emission increases as a result of the installation of the SCR and modification of the scrubber on Unit 1. }

GENERAL OPERATION REQUIREMENTS

A.6. 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 operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

A.7. Operation and Maintenance Plan. The facility equipment shall be operated and maintained in accordance with manufacturer's recommendations, operations and maintenance experience, and technical guidance taking into account protection of equipment, safety of personnel and other factors as deemed necessary to maintain compliance with the permitted limits. [Application No. 0950137-040-AC and Rule 62-4.070(3), F.A.C.].

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REPORTING AND NOTIFICATION REQUIREMENTS

A.8. Notification. Within one week of beginning construction of the Phase 2 Unit 1 scrubber upgrade and/or SCR system or DSI system project, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of construction activities and final design specifications. The permittee shall also notify the Compliance Authority of any major changes made to the final design specifications during the actual construction phase. Within one week following the end of construction, the permittee shall notify the Compliance Authority that the project was completed. [Rule 62-4.210, F.A.C.]

COMPLIANCE ASSURANCE

A.9. Compliance Assurance Monitoring (CAM). The permittee shall evaluate the applicability of CAM to Unit Nos. 1 and 2 and, if applicable, submit a CAM plan as part of the revision to the facility's current Title V air operation permit required in Condition 9. of Section 2, above. [40 CFR 64; and Rule 62-204.800, F.A.C.]

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