Florida Department of Environmental Protection

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PERMITTEE

Gulf Power Company
One Energy Place
Pensacola, Florida 32520-0100

Air Permit No. 0050014-020-AC
Lansing Smith Generating Plant Boilers 1 and 2
Standard Industrial Classification Code No. 4911

Authorized Representative:
Mr. James O. Vick, Environmental Affairs Director

Expiration Date: December 31, 2016
Sulfur Dioxide Emission Standard/Control

PROJECT

This is the final air construction permit, which establishes a sulfur dioxide (SO_2) emission standard for Boilers 1 and 2, authorizes installation of dry sorbent injection (DSI) systems and authorizes physical changes to the electrostatic precipitators and plant components to facilitate installation of the DSI systems. The proposed work/change will be conducted at the existing Lansing Smith Generating Plant, which is a fossil fuel steam generating electrical production plant categorized under Standard Industrial Classification No. 4911. The existing facility is located in Bay County at 4300 County Road 2300, Southport, Florida. The UTM coordinates are Zone 16; 623.74 Kilometer (km) East and 3349.11 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); and 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 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

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for Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
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 the date indicated below to the following persons.

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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.

FACILITY DESCRIPTION

The following Emissions Unit (E.U.) summary is from the Facility Title V Operation Permit 0050014-018-AV..

E.U. No.	Brief Description
Regulated Emissions Units	
001	Boiler 1 - 1,944.8 MMBtu/hour
002	Boiler 2 - 2,246.2 MMBtu/hour
003	Combustion Turbine - 542 MMBtu/hour Peaking Unit
004	170 MW Gas Combustion Turbine with HRSG and Duct Burner
005	170 MW Gas Combustion Turbine with HRSG and Duct Burner
006	Cooling Tower
010	Portable Welding Machine
011	Diesel Emergency Sump Pump
012	Diesel Emergency Generator for units -001 and -002
Unregulated Emissions Units and Activities	
007	Material Handling of Coal and Ash
008	Fugitive PM Sources - On-site Vehicles
009	General Purpose Internal Combustion Engines

Boilers 1 and 2 are tangentially fired, dry bottom boilers that began commercial operation in 1965 and 1967, respectively. Boilers 1 and 2 have a common 199-foot stack and are each equipped with the following air pollution control and measurement equipment:

- Both hot and cold side electrostatic precipitators to control particulate matter (PM);
- Low NO_X burners and a non-selective catalytic reduction (SNCR) system to control nitrogen oxides (NO_X); and
- Continuous emissions monitoring systems (CEMS) to measure and record NO_X and SO_2 emissions and continuous opacity monitoring systems (COMS) to measure and record the opacity of the exhaust gas.

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.

PROPOSED PROJECT

The project establishes a sulfur dioxide (SO_2) emission standard of 0.74 pounds per million Btu of heat input (lb/MMBtu) on a 30-day rolling average basis for Boilers 1 and 2. The emission standard will be achieved by a combination of dry sorbent injection (DSI) upstream of one or both electrostatic precipitators located on each unit, upgrades to the electrostatic precipitators to capture the reacted sorbent, and coal sourcing consistent with the DSI system capabilities and the SO_2 standard.

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 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 DEP Northwest District Office at: 160 West Government Street, Suite 308, Pensacola, Florida 32502-5740.

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: 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. Application for Title V Permit: This permit establishes additional SO_2 emissions standards on Boilers 1 and 2. It also authorizes construction of SO_2 pollution control equipment and improvements to the electrostatic precipitators to facilitate implementation of the SO_2 emission standard. A Title V air operation permit is required for regular operation of the permitted emissions unit. An application to incorporate the conditions of this permit into the facility's Title V air operation permit shall be submitted within 180 days after completing the physical changes authorized by this permit, but no later than 90 days prior to the expiration date shown above. To apply for a Title V air operation permit, the applicant shall submit the appropriate application form 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.]

A. Boilers No. 1 & 2

This section of the permit addresses the following emissions units.

EU ID No.	Emission Unit Description
001	Boiler 1 - 1,944.8 MMBtu/hour
002	Boiler 2 - 2,246.2 MMBtu/hour

AUTHORIZED CONSTRUCTION

A.1. Previous Permits: The conditions of this section supplement all previously issued air construction permits and regulations affecting Boilers 1 and 2. Relevant provisions of these permits are incorporated in the Facility Title V Operation Permit No. 0050014-018-AV.

A.2. Sulfur Dioxide (SO_2) Control Project: For Units 1 and 2, the permittee is authorized to install a dry sorbent injection (DSI) system including pumps, metering and injection equipment to inject the sorbent (lime, milled trona or sodium bicarbonate) into the boiler duct work upstream of one or both of the existing electrostatic precipitators (ESP). The sorbent injection rate shall be adjusted as necessary to control SO_2 emissions to the standard specified in Condition A.6., below. [Application 0050014-020-AC]

A.3. Particulate Matter (PM) Control: If the permittee actually conducts the SO_2 Control Project on Boilers 1 and 2, then the permittee is required to make physical or operational changes to the existing electrostatic precipitators (ESPs) to avoid increasing PM emissions caused by use of DSI systems. The changes may include but are not limited to:

a. Relocate or make physical changes to the air preheaters to facilitate the changes to the ESPs;

b. Conversion of the hot-side ESPs to cold side ESPs to reduce actual exhaust gas flow rates and increase exhaust gas residence times;

c. Replacement or addition of wires, collection plates, transformer/rectifier sets, rappers, dust hoppers, conveyors and duct work; and

d. Installation of modern micro-processor controls.

A.4. Coal and Ash Handling Equipment: The permittee is authorized to make changes and improvements to the coal and ash handling equipment to facilitate the use of lower sulfur coal blends for the purpose of achieving the SO_2 emission standard specified in Condition A.6., below.

PERFORMANCE RESTRICTIONS

A.5. Emission Increases: This permit does not authorize major modifications or increases in capacity. [Rule 62-210.200, F.A.C. (Definitions: Major Modification, Potential-to-Emit, Actual Baseline Emissions; Projected Actual Emissions and Significant Emissions Rate)]

A.6. Sulfur Dioxide (SO_2) Emission Standard: When combusting coal in Boilers 1 and 2, the owner or operator shall not cause to be discharged into the atmosphere from either unit any gases which contain SO_2 in excess of 0.74 pounds per million of heat input (lb/MMBtu). Compliance with the emission standard shall be determined on a 30-day rolling average basis in accordance with the procedures contained in 40 Code of Federal Regulation (CFR), Part 60, Subpart Da. This condition shall become effective upon the effective date of EPA's approval of these specific requirements in the Florida Regional Haze State Implementation Plan to the extent that it applies to these units. The compliance date for the requested emission standard shall be no later than March 31, 2016.
[Application No. 0050014-020-AC]

{Note: This condition will apply in addition to other SO_2 requirements contained in Facility Title V Air Operation Permit 0050014-018-AV, its renewals and its revisions. Reference is made to certain procedures contained in 40 CFR 60, Subpart Da strictly for convenience. Boilers 1 and 2 are not affected facilities under this subpart.}

A.7. SO_2 Continuous Emissions Monitoring Systems (CEMS): The permittee shall use data collected from each of the previously installed and certified Acid Rain SO_2 CEMS to demonstrate compliance with the emissions standards specified in this permit. The SO_2 CEMS shall be operated and data recorded during all periods of operation including periods of startup, shutdown, malfunction, or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. [40 CFR 60 Appendix A; 40 CFR 75]

DESIGN DETAILS AND PROJECTED ACTUAL EMISSION UPDATE

A.8. Preliminary Design: The permittee shall as soon as practicable and no later than January 31, 2015 submit to the Department updated project details including the selection of implementation strategies including but not limited to: the capacity and location of the DSI systems and associated silos; approximate fuel sulfur specifications and potential sources; contemplated improvements to the electrostatic precipitators, reorientation of components such as the air heaters; and contemplated modifications and improvements to coal and ash handling systems.
[Rule 62-4.070, F.A.C. (Reasonable Assurance)]

A.9. Estimates of Projected Actual Emissions: The permittee shall as soon as practicable and no later than January 31, 2015 submit to the Department updated estimates of baseline actual emissions and future actual emissions of SO_2, Nitrogen oxides (NO_X), carbon monoxide (CO), PM, PM smaller than 10 microns (PM_{10}) and ($PM_{2.5}$) in accordance with the procedures specified in Rule 62-210.200, F.A.C.
[Rules 62-4.070, F.A.C. (Reasonable Assurance) and Rule 62-210.200, F.A.C. (Definitions: Potential-to-Emit, Actual Baseline Emissions; Projected Actual Emissions and Significant Emissions Rate)]