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PERMITTEE

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

Authorized Representative:

Mr. Glenn Waters, Special Projects and Environmental Coordinator

Air Permit No. 0330045-026-AC
Permit Expires: November 1, 2010
Crist Electric Generating Plant
Facility ID No. 0330045
Temporary Hydrated Lime
Injection System

PROJECT

This permit authorizes installation of a temporary hydrated lime injection (HLI) system to reduce sulfuric acid (SAM) emissions and mitigate a potential visible plume from the wet flue gas desulfurization (FGD) system on existing Units 4-7. The proposed work will be conducted at the existing Crist Electric Generating Plant, which is categorized under Standard Industrial Classification No. 4911. The facility is located in Escambia County at Governor's Bayou off 10 Mile Road in Pensacola, Florida. The UTM coordinates are Zone 16, 478.50 km East, and 3381.44 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

Joseph Kahn, Director
Division of Air Resource Management

9/16/09

(Date)

PERMIT

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 9/16/09 to the persons listed below.

Mr. Glenn Waters, Gulf Power Company: gdwaters@southernco.com
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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.



(Clerk)

9/16/09
(Date)

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

Gulf Power Company operates the Crist Electric Generating Plant, an existing electric generating plant, which is categorized under Standard Industrial Classification Code No. 4911. The existing facility consists of four coal-fired boilers, Units 4-7, which are designated as EU-004 – EU-007 in the Division's ARMS database. Units 4 and 5 control particulate with electrostatic precipitators (ESP) and control nitrogen oxides (NO_x) with selective non-catalytic reduction (SNCR). Unit 6 controls particulate with an ESP and controls NO_x with low-NO_x burners and a SNCR system. Unit 7 controls particulate with an ESP and controls NO_x with low-NO_x burners and a selective catalytic reduction (SCR) system.

PROPOSED PROJECT

Air Permit No. 0330045-023-AC authorized the construction of a new wet flue gas desulfurization (FGD) system for the existing coal-fired Units 4-7 to control sulfur dioxide (SO₂) emissions. To mitigate a potential visible plume related to installation of the wet FGD system for Units 4-7, this project authorizes the installation of a temporary HLI system. This system will inject powdered hydrated lime into the common duct shared by all four boilers prior to the wet FGD system to reduce sulfuric acid mist (SAM) emissions. Gulf Power plans to apply for a permanent HLI system when it adds a new SCR system on Unit 6.

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has units subject to the acid rain provisions of the Clean Air Act.
- 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, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

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 Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794.
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: 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)(a), F.A.C.]
8. Application for Title V Permit: The project is a temporary project designed to gather emissions and operational data to evaluate the effectiveness of the HLI system in support of a permanent installation. Therefore, it is not necessary to apply for a Title V air operation permit revision. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Coal-Fired Boilers, Units 4-7

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
004	Boiler No. 4 (Phase I and II Acid Rain Unit)
005	Boiler No. 5 (Phase I and II Acid Rain Unit)
006	Boiler No. 6 (Phase I Acid Rain Unit)
007	Boiler No. 7 (Phase I Acid Rain Unit)

EXISTING PERMITS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc. [Rule 62-4.070, F.A.C.]

EQUIPMENT

2. Temporary HLI System: The permittee is authorized to install a temporary HLI system consisting of a portable skid, truck un-loaders, dryers, blowers, compressors, piping, splitters, injection lances and other associated equipment. [Application No. 0330045-026-AC]

PERFORMANCE RESTRICTIONS

3. Operation: The permittee is authorized to install and operate a temporary HLI system as determined necessary by the permittee to mitigate a visible plume and evaluate the effectiveness of the equipment. [Rule 62-4.070(3), F.A.C.]

TESTING REQUIREMENTS

4. Required Performance Tests: The permittee shall conduct stack tests in accordance with EPA Method 8, or 8A or 8B to determine the SAM emissions subject to the following conditions:
 - a. To determine uncontrolled SAM emissions, the permittee shall conduct at least three, 1-hour test runs. The test may be conducted after the HLI injection point (which may be after the FGD system) with the HLI system off. The tests shall be conducted while firing only coal at the highest boiler operating rates possible for the given system demands.
 - b. To determine SAM emissions controlled by the HLI system, the permittee shall conduct at least five, 1-hour test runs. Each test run shall be conducted while firing only coal within approximately 10% of the combined heat input rate (all four units) achieved during the tests to determine uncontrolled SAM emissions. Each test run shall be conducted at a different, incremental HLI rate (e.g., 1000 lb/hour, 1100 lb/hour, 1200 lb/hour, 1300 lb/hour and 1400 lb/hour).
 - c. During each test run, the permittee shall monitor and record the following: the fuel sulfur content, coal firing rate for each unit, actual heat input rate for each unit, HLI rate and SO₂ emissions rate for each unit as determined by existing continuous emissions monitoring systems (CEMS).
 - d. For each test run that determined controlled SAM emissions, the permittee shall calculate the control efficiency for the given conditions and HLI rate.
 - e. All required tests shall be conducted within 90 days of the startup of the temporary HLI system.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Coal-Fired Boilers, Units 4-7

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

5. Additional Performance Tests: The permittee is encouraged to conduct additional emissions tests that may be needed to support a future request for permanent installation of a HLI system. [Rule 62-4.070(3), F.A.C.]
6. Test Requirements: The permittee shall provide a preliminary test schedule in writing to the Compliance Authority at least 15 days prior to conducting any tests. The permittee update this schedule as necessary. 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.]
7. 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
8, 8A, 8B	Sulfuric Acid Mist

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]

REPORTS

8. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the following: uncontrolled SAM emissions rate, measured controlled SAM emissions rate, actual HLI rate, calculated control efficiency, actual fuel sulfur content, actual coal firing rates for each unit and combined, actual heat input rates for each unit and combined, and SO₂ emissions rate as determined by CEMS. [Rule 62-297.310(8), F.A.C.]