PERMITTEE

Gulf Power Company
One Energy Place
Pensacola, FL 32520

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Air Permit No. 0330045-049-AC
Minor Air Construction Permit
Crist Electric Generating Plant

This permit authorizes the temporary trial of hydrated lime injection at the air preheater inlet of Boiler Nos. 6 and 7 and the use of Fourier-transform infrared spectroscopy (FTIR) to determine sulfuric acid mist (SAM) emissions.

NOTICE AND PUBLICATION

The Department distributed a draft minor air construction permit package on June 12, 2108. The applicant published the Public Notice in the Pensacola News Journal on June 14, 2018. The Department received the proof of publication on June 18, 2018. No requests for administrative hearings or requests for extensions of time to file a petition for administrative hearing were received.

COMMENTS

No comments on the draft permit were received by EPA Region 4 Office. Comments were received from the applicant and the public (Sierra Club). These comments are summarized below along with the Department's response. Note a version of the final permit incorporating all changes made to the draft permit based on the submitted comments is included in Attachment-A.

Applicant Comments

Because the Department has determined to authorize only the temporary trial of hydrated lime injection (HLI) at the air preheater (APH) inlet of Boiler Nos. 6 and 7 along with emissions testing, the applicant's comments related to a permanent installation are no longer relevant. Two comments remain. The first dealt with the applicant's request that the requirement (Specific Condition 3.10 in the Draft Permit) for a submittal of a test protocol at least 60 days before conducting the SAM performance tests be removed from the draft permit. The Department believes that this is an important requirement and no change was made. The second request was to change Specific Condition 3.5 as shown below. The Department granted this request.

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

Sierra Club Comments

Comment I. Background

The commenter requests a history of the existing HLI system, the basis for the applicant's request, and an evaluation of the project as a relaxation of a limit intended to keep an otherwise major modification for SAM out of PSD permitting requirements. The commenter suggests that the applicant is changing to a higher sulfur coal and believes that the HLI project should be aggregated with the previous project to add lime to coal exempted in May 4, 2018. Finally, the commenter suggests that the permit allows for the replacement of existing continuous

opacity monitoring system (COMS) with the particulate matter continuous emissions monitoring systems (PM CEMS).

Response: In the attachment to the application, "Hydrated Lime Injection", the applicant provides a brief history of the existing HLI system and states the basis for the project as possibly being more effective SAM control and to reduce air preheater fouling on Units 6 and 7. The applicant has not requested any relaxation of a limit. In fact, the only specific SAM limit is an emissions cap on all four coal-fired units (see Title V permit condition A.15). For this project, the applicant has not indicated a change to a higher sulfur coal. Also, the COMS requirement was previously removed in May 2016 (Permit No. 0330045-041-AC) after the PM CEMS was installed for compliance with the federal Mercury Air Toxics Standards (MATS).

The intent of the draft permit was to gather the information necessary to ensure comparable control and evaluate PSD applicability before installation of any permanent equipment or changes. To clarify this, the final permit authorizes only the temporary trial project. A separate permit application will be necessary for the installation of permanent equipment, a PSD applicability analysis, specification of optional methods of operation, and integration of the requirements for HLI system w/inlets at the APHs with the permit conditions (Permit No. 0330045-028-AC, as amended) for the existing HLI system with inlets before the FGD scrubber.

Comment II. The commenter believes the Department failed to properly conduct an emission increase analysis under the PSD permitting program for the changed configuration of the HLI system at Crist Power Plant.

- The commenter believes that the Department did not conduct a Step 1 PSD applicability analysis for the HLI Project (a comparison of projected actual emissions to baseline actual emissions).
- The commenter believes that the Department did not properly evaluate the net emissions increase from the HLI Project.
- The commenter questions the applicant's assumptions of SAM control under the "old system" of HLI and under the "new system" of HLI.
- The commenter believes that the applicant inadequate justification for the assumed level of PM increase with the new configuration of the HLI system.

The commenter also indicated that the assumption that the wet FGD system at Crist could achieve 90% removal of SAM from Boiler Nos. 4 and 5 without any HLI is unfounded and unsupported, and the SAM removal efficiency across the scrubber is likely to be significantly lower.

Response: As indicated above, the final permit authorizes only the temporary project to ensure comparable control and evaluate PSD applicability before installation of any permanent equipment or changes. A separate permit application will be necessary for the installation of permanent equipment. SAM emissions will be tested for each operational configuration under consideration. The PM CEMS will be used to evaluate PM emissions. Also, initial SAM testing after installation of the wet FGD system suggested 90% control for SAM emissions based on initial uncontrolled data.

Comment III. The draft permit's conditions for granting the permanent change in HLI configuration fail to properly address PSD permitting requirements for SAM and fail to address potential PM emission increases at all.

The commenter requests that the Department revise the permit to only allow temporary authorization so the test data can be evaluated prior to a permanent change in HLI configuration. Several comments are focused on SAM control efficiency rather than SAM emissions.

Response: As indicated above, the final permit authorizes only the temporary project to ensure comparable control and evaluate PSD applicability before installation of any permanent equipment or changes. A separate permit application will be necessary for the installation of permanent equipment. SAM emissions will be tested

on the wet FGD stack (or within ductwork after the wet FGD scrubber) for each operational configuration under consideration. Similarly, the PM CEMS will be used to evaluate PM emissions.

Comment: IV. The draft permit must include additional testing requirements and a proper evaluation of PSD applicability prior to allowing the changed HLI configuration to become permanent.

Response: As indicated above, the final permit authorizes only the temporary project to ensure comparable control and evaluate PSD applicability before installation of any permanent equipment or changes. A separate permit application will be necessary for the installation of permanent equipment. SAM emissions will be tested on the wet FGD stack (or within ductwork after the wet FGD scrubber) for each operational configuration under consideration. Similarly, the PM CEMS will be used to evaluate PM emissions.

Comment: Conclusion.

The Department should only grant temporary authorization to test the new configuration of the HLI system and its impact on SAM and PM emissions.

Response: As indicated above, the final permit authorizes only the temporary project to ensure comparable control and evaluate PSD applicability before installation of any permanent equipment or changes. A separate permit application will be necessary for the installation of permanent equipment. SAM emissions will be tested on the wet FGD stack (or within ductwork after the wet FGD scrubber) for each operational configuration under consideration. Similarly, the PM CEMS will be used to evaluate PM emissions.

CONCLUSION

The final action of the Department is to issue the permit with the changes, corrections and clarifications as described above.

The markup of the draft permit begins on the next page.

Florida Department of Environmental Protection

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

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

PERMITTEE

Gulf Power Company
One Energy Place
Pensacola, FL 32520

Authorized Representative:
Richard Markey, Director of Environmental Affairs

Air Permit No. 03300045-049-AC
Permit Expires: July 1, 2020
Minor Air Construction Permit
Crist Electric Generating Plant
HLI Construction and FTIR Authorization

PROJECT

This is the final air construction permit, which authorizes the temporary use of hydrated lime injection at the air preheater inlet and the use of FTIR, ~~as well as revisions to existing testing provisions~~. The proposed work will be conducted at the existing Crist Electric Generating Plant, which is a power plant categorized under Standard Industrial Classification No. 4911. The existing facility is in Escambia County at 11999 Pate Street in Pensacola, Florida. The UTM coordinates are Zone 16, 478.5 kilometers (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); 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

For:
Syed Arif, P.E., 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 Construction Permit package 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.

Mr. Richard Markey, Gulf Power Company: RMMARKEY@southernco.com
Mr. C. Ryan Cowart, Gulf Power Company: crcowart@southernco.com
Mr. Gregory Terry, Gulf Power Company: GNTERRY@southernco.com
Mr. Charles Harp, DEP Southwest District: Charles.harp@dep.state.fl.us
DEP Southwest District Office: epost_nwdwasteair@dep.state.fl.us
Ms. Alisa Coe, Earth Justice: acoe@earthjustice.org
Ms. Lynn Scearce, DEP OPC: lynn.scearce@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.

FACILITY DESCRIPTION

Crist Electric Generating Plant primarily consists of Boiler Nos. 4 through 7. Boiler Nos. 4 and 5 are Phase I Acid Rain units with maximum heat input rates of 1,096.7 million British thermal units per hour (MMBtu/hr). Boiler Nos. 5 and 6 are Phase II Acid Rain units with maximum heat input rates of 3,704.8 and 6,406.4 MMBtu/hr, respectively. Boiler Nos. 4 and 5 are each coupled to a steam turbine-electrical generator (STEG) with a nameplate rating of 93 megawatts (MW). Boiler Nos. 6 and 7 are coupled to STEGs with nameplate ratings of 369 and 578 MW, respectively. Each boiler can burn coal, natural gas, No. 2 fuel oil and on-specification used oil. Boiler Nos. 4 and 5 can burn biomass as a limited auxiliary fuel. Nitrogen oxide (NO_X) emissions from Boiler Nos. 4 and 5 are controlled by selective noncatalytic reduction (SNCR) systems. NO_X emissions from Boiler Nos. 6 and 7 are controlled by selective catalytic reduction (SCR) systems. Particulate matter (PM) emissions are controlled by electrostatic precipitators (ESPs) on each boiler. Exhaust from each boiler is vented to a common flue gas desulfurization (FGD) scrubber with hydrated lime injection (HLI) system at the inlet to the scrubber. Sulfur dioxide (SO_2) and sulfuric acid mist (SAM) emissions are controlled by the FGD scrubber and HLI system, respectively. A limestone handling system receives, stores and sluices powdered limestone. Powdered limestone is mixed in two slurry mix tanks before being fed into the HLI system. PM emissions from two limestone silos are controlled by baghouses. Fly ash from the boilers and ash from the SCR systems are collected in three silos, where the ash is stored until it can be transported offsite or to the facility's landfill via truck. PM emissions from each silo are controlled by a baghouse.

Boiler No. 7 also utilizes a mechanical draft cooling tower comprised of 14 cells. This cooling tower uses brackish water to condense steam that exhausts from the turbine coupled to Boiler No. 7. The condensed steam is recirculated back into the boiler where it is reheated and fed into the steam turbine. Ancillary equipment includes several emergency engines coupled to electrical generators and fire pumps.

The existing facility consists of the following regulated emissions units (EU).

EU No.	Emission Unit Description
004	Boiler Number 4 – 1,096.7 MMBtu/hour (Substitution Acid Rain Phase I)
005	Boiler Number 5 – 1,096.7 MMBtu/hour (Substitution for Acid Rain Phase I)
006	Boiler Number 6 – 3,704.8 MMBtu/hour (Acid Rain)
007	Boiler Number 7 – 6,406.4 MMBtu/hour (Acid Rain)
008	Fly Ash Silos (3)
014	Unit 007, Mechanical Draft Cooling Tower with a maximum circulation rate of 190,000 GPM
015	Limestone Handling Equipment, Including 2 Silos
017	General Purpose Emergency RICE Units, Subject to 40 CFR 60, Subpart IIII
018	General Purpose Emergency RICE Units, Subject to 40 CFR 63, Subpart ZZZZ

Also included in this facility are miscellaneous insignificant and unregulated emissions units and/or activities.

PROPOSED PROJECT

The existing facility operates a hydrated lime injection (HLI) system at the inlet of the FGD scrubber for SAM control. The applicant proposes to test HLI systems at the air preheater (APH) inlets of Boiler Nos. 6 and 7, which may improve SAM control efficiency and reduce air preheater fouling on EU Nos 006 and 007. ~~If testing shows that SAM control efficiency at the APH inlets is equal to or greater than the SAM control efficiency at the FGD inlet, the applicant may construct permanent HLI systems at the APH inlets~~. The applicant also proposes to utilize Fourier Transform Infrared (FTIR) spectroscopy in combination with Conventional Test Method (CTM)-013B to measure SAM emissions from the FGD scrubber stack.

This project will modify the following emissions units.

EU No.	Emission Unit Description
004	Boiler Number 4 – 1,096.7 MMBtu/hour (Substitution Acid Rain Phase I)
005	Boiler Number 5 – 1,096.7 MMBtu/hour (Substitution for Acid Rain Phase I)
006	Boiler Number 6 – 3,704.8 MMBtu/hour (Acid Rain)
007	Boiler Number 7 – 6,406.4 MMBtu/hour (Acid Rain)

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.
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, 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.
- The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.
- The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

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 at: 160 W. Government Street, Suite 308, Pensacola, Florida 32502.

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. Construction and Expiration: The expiration date shown on the first page of this permit provides time to install temporary equipment and conduct SAM emissions tests while monitoring operational parameters~~complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain 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 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(3) & (4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Application for Title V Permit: This permit authorizes the installation and limited operation of a temporary HLI system to conduct a series of SAM emissions tests while gathering operational data. Depending on the results of the tests, the permittee may request the installation of a permanent HLI system by applying for an air construction permit, which may be submitted concurrently with an application for a Title V revision. ~~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 and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Emissions Units 004, 005, 006 and 007

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
004	Boiler Number 4 – 1,096.7 MMBtu/hour (Substitution Acid Rain Phase I)
005	Boiler Number 5 – 1,096.7 MMBtu/hour (Substitution for Acid Rain Phase I)
006	Boiler Number 6 – 3,704.8 MMBtu/hour (Acid Rain)
007	Boiler Number 7 – 6,406.4 MMBtu/hour (Acid Rain)

Boiler Nos. 4 and 5 have maximum heat input rates of 1,096.7 MMBtu/hr. Boiler Nos. 5 and 6 have maximum heat input rates of 3,704.8 and 6,406.4 MMBtu/hr, respectively. Boiler Nos. 4 and 5 are each coupled to a STEG with a nameplate rating of 93W. Boiler Nos. 6 and 7 are coupled to STEG with nameplate ratings of 369 and 578 MW, respectively. Each boiler can burn coal, natural gas, No. 2 fuel oil and on-specification used oil. Boiler Nos. 4 and 5 can burn biomass as a limited auxiliary fuel. NO_X and emissions from Boiler Nos. 4 and 5 are controlled by SNCR systems. NO_X emissions from Boiler Nos. 6 and 7 are controlled by SCR systems. PM emissions are controlled by ESPs on each boiler. Exhaust from each boiler is vented to a common FGD scrubber with a HLI system at the scrubber inlet. SO_2 and SAM emissions are controlled by the FGD scrubber and HLI system, respectively. A limestone handling system receives, stores and sluices powdered limestone.

~~**PREVIOUS PERMIT MODIFICATIONS**~~

~~*{Permitting Note: All modifications of conditions in previous permits are revised as indicated. Strikethrough is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight.}*~~

~~**Permit Being Modified: Permit No. 0330045-029-AC**~~

~~Affected Emissions Units: EU No. 004 – 007~~

~~*Section III., Subsection A., Specific Condition 8.*~~

~~8. Data Collected for SAM Performance Tests: The operator shall use best efforts to maintain the designated heat input rate throughout each SAM performance test run. During each test run, the following information shall be recorded: fuel firing rate of each unit; heat input rate of each unit; hydrated lime injection rate; controlled SO_2 emission rate based on CEMS; opacity based on COMS PM emission rate based on CEMS; uncontrolled SO_2 emission rate in lb/MMBtu based on the process CEMS at the inlet to the FGD system (or a fuel-based calculation if the CEMS is down); ammonia injection rates for SCR on Units 6 and 7; and ammonia injection urea injection rates for SNCR on Units 4 and 5. [Rule 62-4.070(3), F.A.C.]~~

PREVIOUSLY APPLICABLE PERMITS

1. Other Permits: Unless otherwise specified, the conditions of this permit supplement all previously issued air construction and operation permits for EU Nos. 004, 005, 006 and 007. ~~Previously established conditions revised by this permit shall be replaced by these revisions.~~ [Rule 62-4.070(3), F.A.C.; and, Application No. 0330045-049-AC]

EQUIPMENT

~~2.~~ Temporary HLI Systems at APH Inlets: The permittee is authorized to install a temporary ~~and a permanent~~ HLI system~~s~~ to control SAM emissions at the inlets to the APHs for Boiler Nos. 6 and 7.~~:~~

~~a. *Temporary Construction.*~~ . Thise ~~T~~temporary construction ~~is authorized and~~ may include, but is not limited to, a bulk pneumatic tanker, a box trailer containing four 25 horsepower blowers, a compressed air system, a programmable logic controller and an operation area. The injection trailer would be vented back to a negative pressure duct to prevent fugitive emissions. The permittee shall notify the Department upon completion of construction.

~~b. *Permanent Construction*. If testing (performed pursuant to **Specific Condition 6**) demonstrates that the SAM control efficiency of the HLI systems at the APH inlets is equal to or greater than the SAM control efficiency of the HLI system at the FGD system inlet, the permittee may take additional construction measures to permanently install the HLI systems at the APH inlets. Permanent construction may include, but is not limited to, replacement of the temporary system with modification of the existing hydrated lime supply system or an additional permanent silo, blowers, feed system and integrated control system.~~

[Application No. 0330045-049-AC]

CONTROL TECHNOLOGY

~~3.~~2. HLI Systems: The permittee may simultaneously operate the HLI system at the FGD inlet and the HLI systems at the APH inlets of EU Nos. 006 and 007 (installed pursuant to Specific Condition **2**). [Rules 62-4.070(3), F.A.C.]

~~4.~~3. ~~FGD Inlet HLI System Shutdown or Continued Use~~Permanent HLI System: If the test date shows that the ~~permanent HLI systems at the APH inlets have been constructed (in accordance with **paragraph b** of **Specific Condition 2**), and these permanent~~ temporary HLI system~~s~~ at the APH inlets offers comparable control of SAM emissions (or some combination of the HLI systems), the permittee may request~~ed~~ through an air construction permit application to ~~remove the existing HLI system at the FGD inlet and~~ permanently install the HLI system at the APH inlets of Boiler Nos. 6 and 7.~~-~~ In addition, as part of this new air construction permit application, the applicant shall include: a list of permanent equipment required; lime injection locations; an updated process flow diagram; requested operating scenarios; a PSD applicability analysis; and recommendations for modifications of Air Construction Permit No. 0330045-029-AC, which originally authorized the HLI system at the FGD inlet, needed to integrate requirements for permanent installation of the HLI system at the APH inlet locations with the permit conditions for the existing HLI system ~~after notifying the Department (see **Specific Condition 11**) and receiving Department approval or the permittee may elect to continue to use the existing HLI system, as needed~~. [Rules 62-4.070(3) & 62-210.650, F.A.C.]

TESTING REQUIREMENTS

~~5.~~4. Test Methods: Required tests shall be performed in accordance with at least one of the following reference methods.

Method	Description of Method and Comments
320	Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive FTIR Spectroscopy
CTM-013B	Determination of Sulfuric Acid and Sulfur Dioxide Emissions from Combination Boilers, Recovery Furnaces, and Thermal Oxidizers - Isokinetic Method

The above methods are described in Appendix A of 40 CFR 63 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, F.A.C.; and Appendix A of 40 CFR 63]

~~6.~~5. ~~Initial~~ SAM Performance Tests: The permittee shall conduct performance tests at the FGD scrubber stack (or in the ductwork after the FGD system) to determine SAM emissions within the following load ranges: 40 to 50% and greater than 90% while EU Nos. 004, 005, 006 and 007 are online. Within each range, the permittee shall conduct at least 2 test runs to determine SAM emissions as follows:

a. One test run shall be with the HLI system at the APH inlet on and the HLI system at the FGD inlet off;

b. One test run shall be with the HLI system at the APH inlet off and the HLI system at the FGD inlet on; and

c. The permittee may perform additional tests~~one optional test run~~ with various combinations of injection rates for the HLI system at the APH inlet on and the HLI system at the FGD inlet as well as at a reduced load ranges~~rate~~;

d. If necessary, a test run may be performed with the HLI systems at both locations turned off for the purpose of evaluation of relative SAM control performance.

The ~~initial~~ tests shall be conducted within 60 operational days after completion of the temporary HLI system~~construction~~ performed pursuant to **Specific Condition 2**. The permittee may use EPA Methods 8, 320 or Conventional Test Method (CTM)-013B to measure SAM emissions. [Rules 62-4.070(3) and 62-297.310(8)(b)1, F.A.C.; and, Application No. 0330045-049-AC]

~~7.~~6. 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(9), F.A.C.]

MONITORING REQUIREMENTS

7. HLI Rate Monitoring and Adjustment: The permittee may use real-time FTIR data and/or data from CTM-013B gathered during stack tests to adjust HLI parameters for the injection systems at the APH inlet for EU Nos. 006 and 007 and the FGD inlet. [Rule 62-4.070(3), F.A.C.]

8. Data Collected for SAM Performance Tests: The operator shall use best efforts to maintain the designated heat input rate throughout each SAM performance test run. During each test run, the following information shall be recorded: fuel firing rate of each unit; heat input rate of each unit; hydrated lime injection rate for each system; controlled SO_2 emission rate based on CEMS; PM emission rate based on CEMS; sulfur content of the coal fuel blend; uncontrolled SO_2 emission rate in lb/MMBtu based on the process CEMS at the inlet to the FGD system (or a fuel-based calculation if the CEMS is down); ammonia injection rates for SCR on Units 6 and 7; and urea injection rates for SNCR on Units 4 and 5. [Rule 62-4.070(3), F.A.C.]

9. SAM Control Parametric Monitoring: The permittee shall demonstrate reasonable assurance of compliance with the Crist multi-unit sulfuric acid mist emissions cap established in Permit No. 0330045-029-AC by establishing a parametric model using FGD scrubber and HLI rates (for all HLI systems) to correlate the acid mist reduction efficiency. The injection rates established during the initial testing shall become the basis for the Compliance Assurance Monitoring (CAM) plan proposal that will be required to be submitted with Title V permit revision application and shall establish the indicator ranges that will be specified in the CAM plan that will be included in the revised Title V permit. A sufficient number of test runs shall be performed in order to establish a reasonable correlation between the injection rates and the actual SAM emission rates. [40 CFR 64 and Rule 62-4.070(3), F.A.C.]

RECORDS, NOTIFICATIONS AND REPORTS

10. SAM Performance Test Protocol: At least 60 days before conducting the SAM performance tests, the permittee shall submit a draft protocol for conducting the initial SAM performance tests (see **Specific Condition 6**) to the Permitting and Compliance Authorities for approval. Each draft protocol shall address: the preliminary schedule for conducting the tests; the proposed test methods and a description of the sampling and analysis; the points to be tested; the proposed operating rates for testing; the proposed HLI rates for the HLI systems at the APH and FGD inlets; the ammonia/urea injection rates for NO_X controls (SCR and SNCR); the proposed sulfur content of the coal fuel blend; identification of critical operating parameters; identification of potential interferences; and identification of potential physical problems with sampling. [Rule 62-4.070(3), F.A.C.]

11. ~~FGD Inlet HLI System Shutdown Notification: If the permittee decides to remove the HLI system at the FGD inlet, the Permitting Authority must be notified within 15 days of the proposed HLI system removal. Test data demonstrating equivalent SAM control efficiency (see **Specific Condition 4**) must be submitted with this~~

~~notification. [Rule 62-4.070(3), F.A.C.]~~Notification: Within ten days of completing the temporary trial, the permittee shall notify the Department that the temporary trial is complete. [Rule 62-4.070(3), F.A.C.]

12. 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 identify the data specified in Condition 9 as well as~~also indicate the heat input rate during the time of the test in lb/MMBtu, the HLI rate in lb/hr and~~ the estimated control efficiency of each HLI system. [Rule 62-297.310(10), F.A.C.]