



# Florida Department of Environmental Protection

## Memorandum

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To: Trina Vielhauer, Bureau of Air Regulation  
Through: Jeff Koerner, New Source Review Section   
From: Christy DeVore, New Source Review Section   
Date: April 12, 2010  
Subject: Draft Minor Source Air Construction Permit  
Project No. 0330045-029-AC  
Gulf Power Company, Crist Electric Generating Plant  
Higher Sulfur Coal Project

Attached for your review is a draft minor air construction permit package for the existing Crist Electric Generating Plant, which is located in Escambia County at 11999 Pate Street in Pensacola, Florida. The purpose of this project is to authorize: a higher sulfur coal blend for Units 4 – 7; an upgrade of the existing Unit 6 steam turbine; a sulfuric acid mist emissions cap; and additional boiler additives for Units 4-7 contingent on successful use and testing on Unit 7. The projects will be completed during the next regularly scheduled outage in 2012. The attached Technical Evaluation and Preliminary Determination provides a detailed description of the project and the rationale for permit issuance. The project is not considered a new source review reform project. Day 90 of the permitting time clock is May 2, 2010. I recommend your approval of the attached draft permit package.

Attachments

TLV/jfk/scd

**P.E. CERTIFICATION STATEMENT**

**PERMITTEE**

Gulf Power Company  
One Energy Place, BIN 0328  
Pensacola, FL 32520

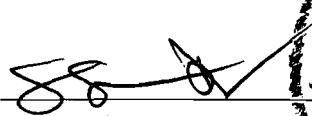
Draft Permit No. 0330045-029-AC  
Crist Electric Generating Plant  
Higher Sulfur Coal Project  
Escambia County, Florida

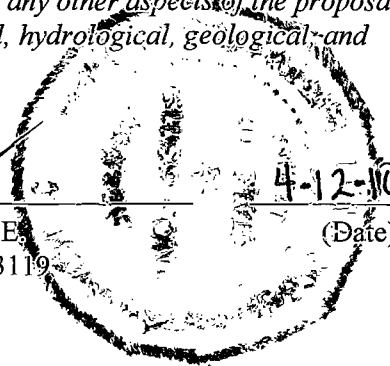
**PROJECT DESCRIPTION**

The purpose of this project is to authorize: a higher sulfur coal blend for Units 4 – 7; an upgrade of the existing Unit 6 steam turbine; a sulfuric acid mist emissions cap; and additional boiler additives for Units 4-7 contingent on successful use and testing on Unit 7.

This project is subject to the general preconstruction review requirements in Rule 62-212.300, Florida Administrative Code (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. The Department's full review of the project and rationale for issuing the draft permit is provided in the Technical Evaluation and Preliminary Determination.

*I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify any other aspects of the proposal (including, but not limited to, the electrical, civil, mechanical, structural, hydrological, geological and meteorological features).*

  
\_\_\_\_\_  
S. Christine DeVore, P.E. (Date) 4-12-10  
Registration Number 63119





# 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

James Vick, Environmental Affairs Director  
Gulf Power Company  
One Energy Place, BIN 0328  
Pensacola, FL 32520

Re: Project No. 0330045-029-AC  
Gulf Power Company, Crist Electric Generating Plant  
Higher Sulfur Coal Project

Dear Mr. Vick:

On December 14, 2009, you submitted an application requesting authorization to: use a higher sulfur coal blend for Units 4 – 7; upgrade the existing Unit 6 steam turbine; establish a sulfuric acid mist emissions cap; and use additional boiler additives for Units 4-7 contingent on successful use and testing on Unit 7. The existing facility is located in Escambia County at 11999 Pate Street in Pensacola, Florida. Enclosed are the following documents: the Written Notice of Intent to Issue Air Permit; the Public Notice of Intent to Issue Air Permit; the Technical Evaluation and Preliminary Determination; and the Draft Permit with Appendices. The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. If you have any questions, please contact the project engineer, Christy DeVore at 850/921-8968.

Sincerely,

Trina Vielhauer, Chief  
Bureau of Air Regulation

(Date)

Enclosures

TLV/jfk/scd

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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*In the Matter of an  
Application for Air Permit by:*

Gulf Power Company  
One Energy Place, BIN 0328  
Pensacola, FL 32520

Project No. 0330045-029-AC  
Crist Electric Generating Plant  
Higher Sulfur Coal Project  
Minor Air Construction Permit  
Escambia County, Florida

*Authorized Representative:*

James Vick, Environmental Affairs Director

**Facility Location:** Gulf Power Company operates the existing Crist Electric Generating Plant, which is located in Escambia County at 11999 Pate Street in Pensacola, Florida.

**Project:** The applicant submitted an application requesting authorization to: use a higher sulfur coal blend for Units 4 – 7; upgrade the existing Unit 6 steam turbine; establish a sulfuric acid mist emissions cap; and use additional boiler additives for Units 4-7 contingent on successful use and testing on Unit 7. Pursuant to Rule 62-212.400, F.A.C., Gulf Power Company provided information to show that the project will not exceed the significant emissions rates that require preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Project File:** A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

**Notice of Intent to Issue Permit:** The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**Public Notice:** Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

**Comments:** The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available in this proceeding.

**WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT**

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Executed in Tallahassee, Florida.



Trina Vielhauer, Chief  
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination and the Draft 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 4/13/10 to the persons listed below.

- Mr. James Vick, Gulf Power Company ([jovick@southernco.com](mailto:jovick@southernco.com))
- Mr. Glenn Waters, Gulf Power Company ([gdwaters@southernco.com](mailto:gdwaters@southernco.com))
- Mr. Gregory Terry, Gulf Power Company ([gnterry@southernco.com](mailto:gnterry@southernco.com))
- Mr. John Dominey, Gulf Power Company ([jmdominey@southernco.com](mailto:jmdominey@southernco.com))
- Mr. Kevin White, Gulf Power Company ([kwhite@southernco.com](mailto:kwhite@southernco.com))
- Mr. Rick Bradburn, DEP-NWD: ([rick.bradburn@dep.state.fl.us](mailto:rick.bradburn@dep.state.fl.us))
- Mr. Mike Halpin, DEP Siting Office ([mike.halpin@dep.state.fl.us](mailto:mike.halpin@dep.state.fl.us))
- Ms. Kathleen Forney, EPA Region 4 ([forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov))
- Ms. Ana M. Oquendo, EPA Region 4 ([oquendo.ana@epa.gov](mailto:oquendo.ana@epa.gov))
- Ms Heather Abrams, EPA Region 4 ([abrams.heather@epa.gov](mailto:abrams.heather@epa.gov))
- Ms. Vickie Gibson, DEP BAR Reading File ([victoria.gibson@dep.state.fl.us](mailto:victoria.gibson@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.

  
(Clerk)

4/13/10  
(Date)

## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection  
Division of Air Resource Management, Bureau of Air Regulation  
Draft Air Construction Permit  
Project No. 0330045-029-AC  
Gulf Power Company, Crist Electric Generating Plant  
Escambia County, Florida

**Applicant:** The applicant for this project is Gulf Power Company. The applicant's authorized representative and mailing address is: James Vick, Environmental Affairs Director, Gulf Power Company, Crist Electric Generating Plant, One Energy Place, BIN 0328, Pensacola, Florida 32520.

**Facility Location:** Gulf Power Company operates the existing Crist Electric Generating Plant, which is located in Escambia County at 11999 Pate Street in Pensacola, Florida.

**Project:** The applicant requests authority to: use a higher sulfur coal blend for Units 4 – 7; upgrade the existing Unit 6 steam turbine; and use additional boiler additives for Units 4-7 contingent on successful use and testing on Unit 7. The increase in fuel sulfur has the potential to increase emissions of sulfur dioxide, sulfuric acid mist (SAM) and particulate matter. However, the plant recently commenced commercial operation of a new flue gas desulfurization system, which will substantially reduce emissions from all four units. In addition, the plant is installing a permanent hydrated lime injection system to further reduce SAM emissions. The applicant requested a SAM emissions cap on the four units to ensure that the project is not subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Permitting Authority responsible for making a permit determination for this project is the Bureau of Air Regulation in the Department of Environmental Protection's Division of Air Resource Management. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Project File:** A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the physical address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application and information submitted by the applicant (exclusive of confidential records under Section 403.111, F.S.). Interested persons may contact the Permitting Authority's project engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site by entering draft permit number:  
<http://www.dep.state.fl.us/air/emission/apds/default.asp>.

**Notice of Intent to Issue Air Permit:** The Permitting Authority gives notice of its intent to issue an air construction permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**Comments:** The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of this Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the

(Public Notice to be Published in the Newspaper)

Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available for this proceeding.





**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**APPLICANT**

Gulf Power Company  
One Energy Place, BIN 0328  
Pensacola, FL 32520

Crist Electric Generating Plant  
Facility ID No. 0330045

**PROJECT**

Project No. 0330045-029-AC  
Application for Minor Source Air Construction Permit  
Higher Sulfur Coal Project

**COUNTY**

Escambia County, Florida

**PERMITTING AUTHORITY**

Florida Department of Environmental Protection  
Division of Air Resource Management  
Bureau of Air Regulation  
New Source Review Section  
2600 Blair Stone Road, MS#5505  
Tallahassee, Florida 32399-2400

April 12, 2010

## 1. GENERAL PROJECT INFORMATION

### Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

This project uses numerous acronyms and abbreviations, which are defined in Appendix A of the permit package.

### Facility Description and Location

The Gulf Power Company operates the existing Crist Electric Generating Plant, which is categorized under Standard Industrial Classification Code No. 4911. The facility is located in Escambia County at Governor's Bayou off 10 Mile Road in Pensacola, Florida. The UTM coordinates of the existing facility are Zone 16, 478.5 km east, and 3381.44 km north. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS). The plant includes four coal-fired boilers, Units 4 - 7, with the following configurations.

- Units 4 and 5 (EU-004 and EU-005) are tangentially-fired, dry-bottom electric utility boilers manufactured by Combustion Engineering with a nominal generating capacity of 93 megawatt (MW) per unit. Units 4 and 5 control particulate matter with electrostatic precipitators (ESP) and control nitrogen oxides (NO<sub>x</sub>) with selective non-catalytic reduction (SNCR). After control by the ESP and SNCR, there is a common stack bypass stack for Units 4 and 5 that allows operation while bypassing the flue gas desulfurization (FGD) system.
- Unit 6 (EU-006) is a front wall-fired, dry-bottom electric utility boiler manufactured by Foster Wheeler with a nominal generating capacity of 369 MW. Unit 6 controls particulate matter with an ESP and currently controls NO<sub>x</sub> with low-NO<sub>x</sub> burners and a SNCR system. After control by the ESP and SNCR, there is a common stack bypass stack for Units 6 and 7 that allows operation while bypassing the FGD system.
- Unit 7 is a rear wall-fired, dry-bottom electric utility boiler manufactured by Foster Wheeler with a nominal generating capacity of 578 MW. Unit 7 controls particulate matter with an ESP and controls NO<sub>x</sub> with low-NO<sub>x</sub> burners and a selective catalytic reduction (SCR) system. After control by the ESP and SCR, there is a common stack bypass stack for Units 6 and 7 that allows operation while bypassing the FGD system.
- Units 4 - 7 control sulfur dioxide (SO<sub>2</sub>) emissions with a common FGD system. In addition, Units 4 - 7 continuously monitor and record opacity, SO<sub>2</sub> and NO<sub>x</sub> emissions.

The primary fuel for all four units is pulverized coal. Supplemental fuels include natural gas, fuel oil and on-specification used oil. For Units 6 and 7, fuel oil is only used for startup and as needed for flame stabilization. In addition, Units 4 and 5 may fire carbonaceous fuel (biomass to include wood, switch grass, sawdust and sander dust). Finally, on-site generated "oil contaminated soil" is periodically combusted for energy recovery purposes.

### Facility Regulatory Categories

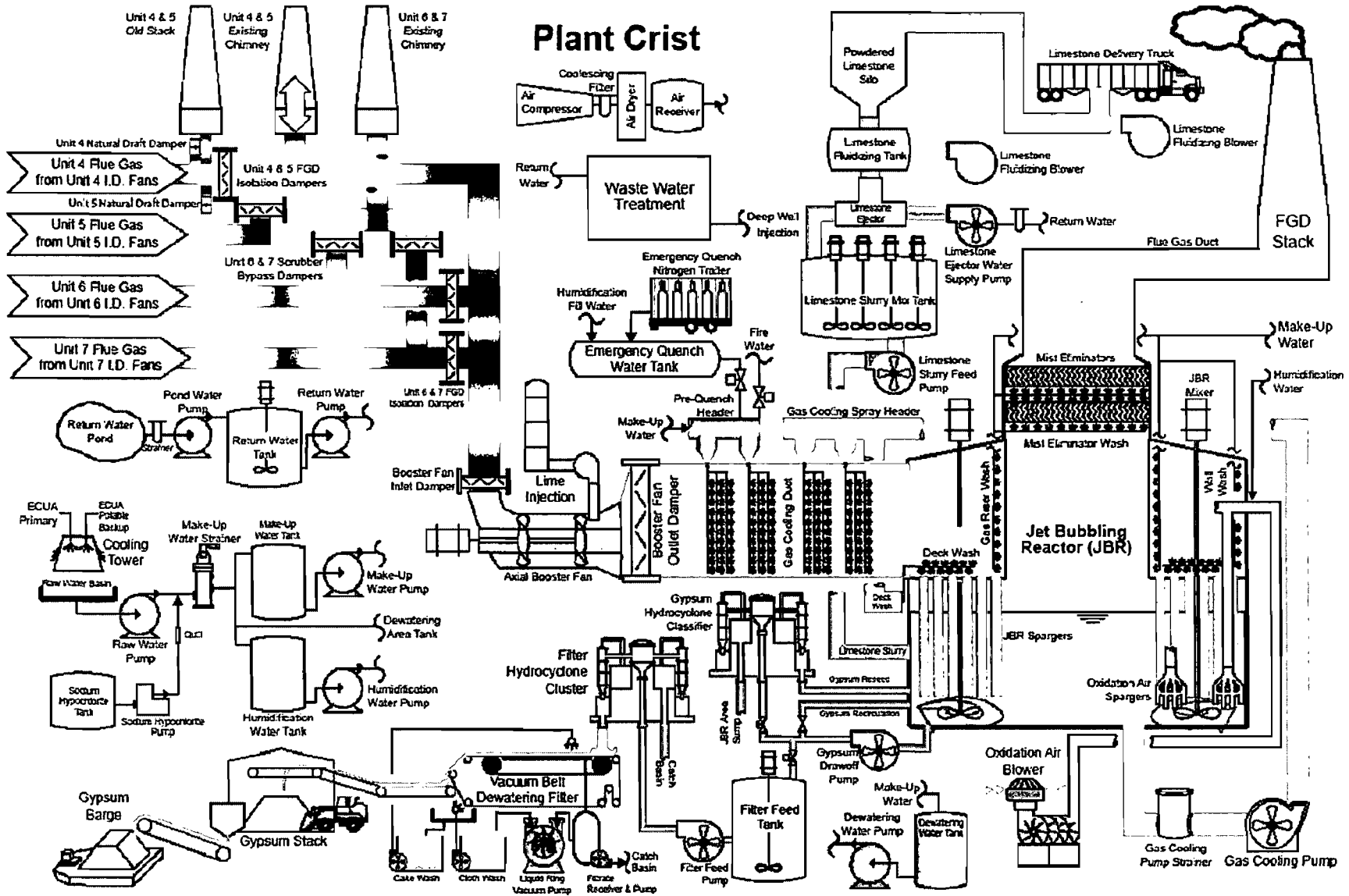
- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act.
- The facility operates units subject to the Clean Air Interstate Rule (CAIR).
- The facility is a Title V major source of air pollution in accordance 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.

### Background Information

On August 28, 2002, Gulf Power Company and the Florida Department of Environmental Protection entered into an agreement titled, "Agreement for the Purpose of Ensuring Compliance with the Ozone Ambient Air Quality Standards" (Ozone Agreement). The following air construction permits authorized the installation of new equipment or are otherwise relevant to this permitting action.

- Air Permit No. 0330045-005-AC: In accordance with the Ozone Agreement, this permit authorized the installation of a new SCR system on Unit 7 to reduce NO<sub>x</sub> emissions and a new ESP to reduce particulate matter emissions.
- Air Permit No. 0330045-012-AC: In accordance with the Ozone Agreement, this permit authorized the installation of SNCR for Unit 6 to reduce NO<sub>x</sub> emissions.
- Air Permit No. 0330045-013-AC: In accordance with the Ozone Agreement, this permit authorized the installation of SNCR on Units 4 and 5 to reduce NO<sub>x</sub> emissions.
- Air Permit No. 0330045-015-AC: To provide flexibility with CAIR, this permit authorized the construction of a common wet FGD system (Model CT-121, licensed by Southern Company from Chiyoda Corporation) to reduce SO<sub>2</sub> emissions from all four units. Construction of the wet FGD system was completed in December of 2009. A schematic of the wet FGD system is presented on the next page.
- Air Permit No. 0330045-018-AC: This permit authorized upgrades to the existing ESP for Units 4 and 5 to reduce particulate matter emissions.
- Air Permit No. 0330045-026-AC: This permit authorized installation of a temporary hydrated lime injection system to reduce sulfuric acid (SAM) emissions and mitigate a potential visible plume from the wet FGD system on existing Units 4-7.
- Air Permit No. 0330045-027-AC: This permit authorized upgrades to the high-pressure (HP), intermediate-pressure (IP) and the low-pressure (LP) steam turbine sections of Unit 7 for an expected additional 21 MW of electrical generation.
- Draft Air Permit No. 0330045-028-AC: This pending draft permit authorizes the construction of a new SCR system for Unit 6, which will be installed by 2012. The SCR project will greatly reduce NO<sub>x</sub> emissions and not affect carbon monoxide (CO), volatile organic compounds (VOC) or particulate matter. However, the new SCR catalyst will convert additional uncontrolled SO<sub>2</sub> emissions to SO<sub>3</sub> and H<sub>2</sub>SO<sub>4</sub> (SAM) and potentially increase SAM emissions above the PSD significant emissions rate of 7 tons per year. Therefore, the permit also requires the installation and operation of a permanent hydrated lime injection (HLI) system to replace the temporary HLI system to control SAM emissions. Since the HLI system is designed to inject hydrated lime in a common duct prior to the wet FGD system, SAM emissions will be controlled from all four units. For this reason, the draft permit includes a cap on SAM emissions from all four units to ensure that the project does not trigger PSD preconstruction review. The HLI system will be operable when the SCR catalyst is placed in operation for Unit 6 SCR in 2012.

Wet FGD System Diagram



### Processing Schedule

12/14/09 Received the application for a minor source air pollution construction permit.

01/12/10 Requested additional information.

02/01/10 Received additional information; application complete.

### Project Description

#### Unit 6 Steam Turbine Upgrade

The applicant proposes to upgrade the existing Unit 6 steam turbine to improve efficiency and produce an additional 7 MW using the same amount of fuel to generate the same amount of steam flow. The new steam turbine upgrade includes the latest technological improvements to remove losses associated with the existing multiple leakage paths in the intermediate pressure section of the steam turbine and allow for optimal blade heights and higher stage counts, which results in more efficient blade paths. The steam turbine upgrade will significantly improve performance, eliminate reliability issues, minimize installation and maintenance scope, increase operational flexibility and reduce startup durations.

The steam turbine upgrade is scheduled to be installed in the spring of 2012. The steam turbine project is not intended to regain lost capacity and will not result in any increase in the boiler heat input rate or fuel consumption and will not significantly increase regulated emissions. There are no known defects or deficiencies currently restricting operation. Records indicate that Unit 6 is currently capable of operating at permitted capacity.

#### Higher Sulfur Coal

To take full advantage of the newly installed wet FGD system, the plant proposes to fire a higher sulfur coal blend (equivalent to 3.30 lb of SO<sub>2</sub>/MMBtu) with a lower cost. Although the higher sulfur coal will increase uncontrolled SO<sub>2</sub> emissions, the new wet FGD system is designed to remove more than 95% of the SO<sub>2</sub> emissions. Therefore, there will be a reduction in actual SO<sub>2</sub> emissions from baseline emissions before installation of the FGD system. Considering the recent improvements in NO<sub>x</sub> controls (SNCR and SCR) and particulate matter controls (ESP), the applicant predicts actual emissions increases to be less than the PSD significant emission rates for all pollutants. The higher sulfur coal will not be fired until the permanent HLI system is installed and fully functional.

#### HLI System

SAM is created during the combustion process and is also generated when SO<sub>2</sub> is converted to SO<sub>3</sub> across the SCR catalyst and then to SAM in the presence of water. SAM emissions are removed to varying degrees by the air pre-heater, ESP and FGD system. Increasing the coal blend sulfur content will generate additional SAM emissions from combustion. Also, additional uncontrolled SO<sub>2</sub> emissions will be converted by the SCR catalyst to SO<sub>3</sub> causing increased SAM emissions.

The applicant proposes to reduce SAM emissions by installing and operating a permanent HLI system that will inject powdered hydrated lime into the flue gas exhaust at the discharge of the booster fans and upstream of the wet/dry interface at the FGD system. The injection point is in the ductwork common to Units 4-7, so SAM emissions from all four units will be reduced. Therefore, the applicant requests a SAM emissions cap (165.5 tons per year) to ensure that the projects will not result in a PSD significant emissions increase.

The air pre-heaters are predicted to reduce SAM emissions by approximately 10%. Based on the preliminary design of the HLI system, the maximum estimated hydrated lime injection rate will be 1400 pounds per hour and the predicted SAM control efficiency is 66.7% from the combination HLI/ESP system. The applicant also estimates an additional 25% reduction from the wet FGD system. Overall, the applicant estimates a reduction in total SAM emissions of 75% from all of the controls. With regard to particulate matter, the applicant estimates there may be a slight increase with the injection of hydrated lime (3.1 tons per year).

### Boiler Additives

The applicant is currently authorized to inject "GAM 60", which is a boiler additive designed to inhibit slag formation. The applicant requests authorization for targeted in-furnace injection (TIFI) technology in Unit 7 using two new boiler additives manufactured by Fuel Tech: TIFI MG (magnesium hydroxide) and TIFI XP (aluminum hydroxide). This technology utilizes computational fluid dynamic (CFD) modeling to determine problem areas of the boiler, the appropriate injection points and the trajectory and droplet size of the chemical additive needed to ensure complete coverage of the area. The proposed boiler additives will be delivered by truck in slurry form and transferred to separate 5000 gallon tanks. When used, the chemicals will be mixed with water and pumped to the injection port determined by the CFD modeling and then atomized with air according to the droplet size needed. Through crystal morphology, slag formation is inhibited and the slag that does form is more easily controlled through normal boiler cleaning operations such as soot-blowing.

The additives will be used as needed and may be used separately or in combination. TIFI XP is used in conjunction with TIFI MG to mitigate slag from some coal when needed. The TIFI XP material is used to mitigate hard, tenacious slag formed by coal with higher concentrations of iron and sulfur. Coals not containing high iron and sulfur concentrations usually require only the TIFI MG material. TIFI MG alone would not be as effective as the combination of TIFI MG and TIFI XP in handling slag from higher iron and sulfur concentration coals.

The expected maximum injection rates are 12 gallons per hour of TIFI MG and 22 gallons per hour of TIFI XP. There are no expected increases in emissions from the TIFI boiler additive process. Particulate matter remains controlled by the ESP and FGD system. In a technical report by Fuel Tech titled, "Controlling SO<sub>3</sub>, Slag and Fouling Resulting in Improved Heat Rates, Better Efficiency and Allowing for Fuel Flexibility – Santee Cooper, Cross Station Case Study", the injection of TIFI MG demonstrated impressive results for the coal-fired boilers. Within 60 days of initial injection of the new additives, the applicant will conduct testing for particulate matter to demonstrate compliance with the particulate matter standard. If an initial trial shows the boiler additives are viable and do not increase emissions, the applicant will request incorporation of the TIFI MG and TIFI XP boiler additives into the Title V air operation permit as a new mode of operation for all four units.

### Bypass of the Wet FGD System

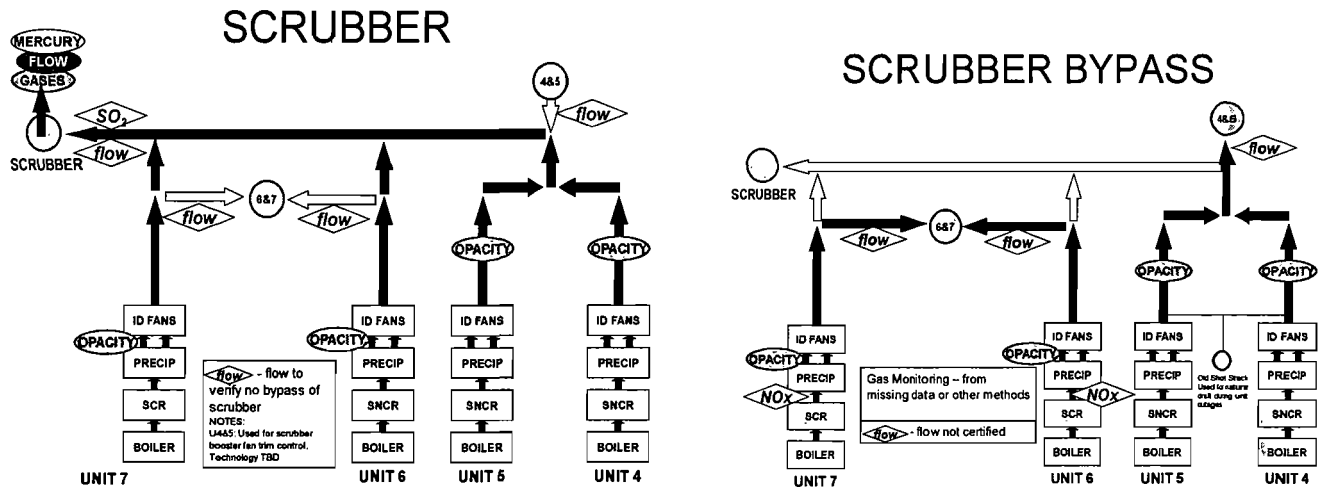
Currently, exhaust from Units 4-7 enters a common wet FGD system and exits a single stack that is 490 feet tall with a diameter of 35 feet and combined volumetric flow rate of 3,282,000 acfm at an exit temperature of 131° F. Previously, Units 4 and 5 shared a common stack that is 450 feet tall with a diameter of 18.0 feet and had a combined volumetric flow rate at permitted capacity of approximately 802,500 acfm at an exit temperature of 290° F. Also, Units 6 and 7 previously shared a common stack that is 450 feet tall with a diameter of 23.2 feet and had a combined volumetric flow rate at permitted capacity of approximately 2,463,000 acfm at an exit temperature of 320° F.

When it is necessary to operate the boilers without the wet FGD system, the applicant proposes to use the previous shared stacks to bypass the wet FGD system. As shown in the following process flow diagrams, the flue gas exhaust is controlled for NO<sub>x</sub> (by SNCR or SCR) and particulate matter (by ESP) prior to each existing shared stack. The FGD exhaust stack and the bypass stacks are equipped with CEMS for determining emissions of carbon dioxide (CO<sub>2</sub>), NO<sub>x</sub> and SO<sub>2</sub> and continuous monitoring systems for stack gas flow rates. For Units 4 – 6, COMS installed in the ductwork record opacity during normal and bypass operations. For Unit 7, separate COMS are installed in the normal ductwork as well as in the bypass ductwork to record opacity during normal and bypass operations.

As shown in the above process flow diagrams on the following page, the flue gas subsystem is used to transport boiler flue gas to the FGD vessel for SO<sub>2</sub> emission control. The flue gas subsystem consists of fans, ductwork, dampers and a stack. Each unit is equipped with dampers between the induced draft fan discharge, existing stack and new ductwork to the scrubber vessel so that the wet FGD system can be bypassed to the existing stack configurations during startup, shutdown, malfunction and FGD maintenance.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Currently, the boilers have two SO<sub>2</sub> limits: 886 tons of SO<sub>2</sub> based on a 30-day rolling CEMS average (Air Permit No. 0330045-023-AC) and 2.4 lb/MMBtu for Units 4-7 based on a 24-hour CEMS average (Air Permit No. 0330045-008-AC). In addition, Air Permit No. 0330045-015-AC estimated FGD bypass operation to be less than 96 hours per year. The FGD may be bypassed for startup, shutdown, short-term maintenance and long-term maintenance. All CEMS data collected during short-term maintenance periods must be included in the 30-day rolling compliance total. For long-term maintenance periods, up to 360 hours of CEMS data per calendar year may be excluded from the 30-day rolling compliance total. When the wet FGD system is bypassed, SO<sub>2</sub> emissions will exit the bypass stack uncontrolled but must currently meet the 2.4 lb/MMBtu limit.



For this current project, the applicant proposes to reduce the permitted SO<sub>2</sub> emissions rate during FGD bypass from 2.4 lb/MMBtu for Units 4-7 based on a 24-hour CEMS average to a mass-based emissions limit of 25,840 lb/hour based on a 3-hour CEMS average, which is equivalent to 2.1 lb/MMBtu. The plant will achieve this emissions rate by managing the coal blend sulfur content, the supplemental firing of natural gas and unit load.

## 2. PSD APPLICABILITY

### General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 5 tons per year or more of lead;
- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric,

**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the “significant emission rates” defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO<sub>x</sub>); sulfur dioxide (SO<sub>2</sub>); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM<sub>10</sub>); volatile organic compounds (VOC); lead (Pb); fluorides (F); sulfuric acid mist (SAM); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 µg/m<sup>3</sup>, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered “significant” for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several “significant” regulated pollutants.

**PSD Applicability for Project**

As provided in the application and supporting information, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Applicant’s Revised PSD Applicability Analysis (Units 4-7)

Pollutant	Annual Emissions, Tons/Year					Subject to PSD?
	Baseline Period	Baseline Actual	Projected Actual	Increase	Significant Emissions Rate	
CO	Jan07-Dec08	651	730	79	100	No
NO <sub>x</sub>	Jun06-May08	5802.2	5767.4	-34.8	40	No
PM	Jan07-Dec08	396.4	158.7	-237.7	25	No
PM <sub>10</sub>	Jan07-Dec08	396.4	158.7	-237.7	15	No
SO <sub>2</sub>	Jan07-Dec08	39764	13244	-26520	40	No
VOC	Jan07-Dec08	77	86	9	40	No

Notes:

- CO, NO<sub>x</sub>, SO<sub>2</sub> and VOC are based on CEMS data (lb/MMBtu) and fuel data (MMBtu per year).
- PM is based on stack test data (lb/MMBtu) and fuel data (MMBtu per year).

Using coal blend with the maximum sulfur content equivalent to 2.4 lb SO<sub>2</sub>/MMBtu, the applicant estimates an increase in SAM emissions from Unit 6 of 7.13 tons per year due to the additional conversion of SO<sub>2</sub> to SO<sub>3</sub> resulting from the SCR catalyst. See Project No. 0330045-028-AC. When considering a coal blend with a sulfur content of 3.30 lb SO<sub>2</sub>/MMBtu, the applicant estimates a possible SAM emissions increase from Unit 6 of 24.4 tons per year. Because the HLI system will control SAM emissions from all four units, the draft permit establishes a SAM emissions cap of 165.5 tons per year from all four units, which maintains SAM emissions below the PSD significant emissions rate given a baseline actual emissions of 158.53 tons per year.



**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

Table D. Projected Actual SAM Emissions with High Sulfur Coal (3.30 lb SO<sub>2</sub>/MMBtu)

Projected Actual SAM Emissions (tons/year)	Baseline Period	Unit 4	Unit 5	Unit 6	Unit 7	Total
Baseline	Jan07-Dec08	5.81	5.69	33.94	113.09	158.53
Increases with Higher Sulfur Coal Blend						
Before SCR Systems	Jan07-Dec08	18.46	17.94	109.76	176.76	322.92
After SCR Systems	Jan07-Dec08	18.46	17.94	204.67	329.59	570.66
After HLI/ESP Systems	Jan07-Dec08	5.82	5.64	64.98	104.26	180.70
After FGD System	Jan07-Dec08	5.34	5.21	58.27	94.68	163.50
Unit 6 Steam Turbine Project	Increase	---	---	1.9	---	165.4

Table E. Summary of the Applicant's SAM PSD Applicability Analysis with SAM Facility Emissions Limit

Pollutant	Annual Emissions, Tons/Year				Subject to PSD?
	Baseline Actual	Projected Actual	Increase	Significant Emissions Rate	
Unit 6 only	33.9	60.2	26.3	7	---*
Units 4-7	158.53	165.5 (cap)	6.97	7	No

\* Subject to multi-unit emissions cap to avoid PSD.

Even considering the combination of a higher sulfur coal blend with the new SCR reactor for Unit 6, the HLI system and existing control systems will maintain SAM emissions below proposed SAM emissions cap for all four units. Therefore, the project will not exceed the PSD significant emission rate of 7 tons of SAM per year and is not subject to PSD preconstruction review.

**3. DEPARTMENT REVIEW**

**Unit 6 Steam Turbine Upgrade**

The draft permit authorizes the upgrade to Unit 6 steam turbine. Based upon the application Unit 6 may move up in the dispatch order resulting in increased operation because of the improved unit efficiency with the steam turbine upgrade. The following table shows the applicant's projected emissions increases (02/23/10) for Unit 6 considering the newly authorized SCR system, the proposed steam turbine upgrade and the proposed higher sulfur coal.

Pollutant	Unit 6 Annual Emissions, Tons/Year			Subject to PSD?
	Baseline Period	Increase	Significant Emissions Rate	
CO	Jun06-May08	28.6	100	No
NO <sub>x</sub>	Jun06-May08	-1438.0	40	No
PM/PM <sub>10</sub>	Jun06-May08	-66.9	25	No
SAM	Jan07-Dec08	22.2*	7	No*
SO <sub>2</sub>	Jan07-Dec08	-7149.3	40	No
VOC	Jun06-May08	3.4	40	No

\* Subject to multi-unit emissions cap to avoid PSD.

As shown, the projected increases are relatively small and unlikely to trigger PSD review for any pollutant.

## Higher Sulfur Coal

### Criteria Pollutants

Based upon the application the increase in sulfur content of the fuel will not result in a significant increase in emissions because of the newly installed FGD system, SNCR systems, SCR systems and upgraded ESP. The new control equipment substantially decreases the emissions of NO<sub>x</sub>, PM, PM<sub>10</sub> and SO<sub>2</sub>. There may be small increases in CO and VOC emissions; however it is highly unlikely that these increases will trigger PSD preconstruction review.

### SAM Emissions and the HLI System

The higher sulfur coal will generate additional uncontrolled SO<sub>2</sub> and SAM emissions from combustion for all four units. The SCR catalysts for Units 6 and 7 will convert additional SO<sub>2</sub> to SO<sub>3</sub> and eventually SAM. Without the HLI system in operation, SAM emissions would increase above the PSD significant emission rate of 7 tons per year. The draft permit requires installation and proper operation of the HLI system to control for SAM emissions from all four units. To provide reasonable assurance that the project avoids PSD preconstruction review, the draft permit specifies a SAM emission cap of 165.5 tons per year.

The applicant proposes to use an equation to monitor SAM emissions from all four units. The equation is based on work done by the Electric Power Research Institute (EPRI). The equation considers factors such as SO<sub>2</sub> emissions, SAM emissions from combustion, conversion of SO<sub>2</sub> to SO<sub>3</sub> across an SCR catalyst and reductions from air heaters, ESP, HLI system and FGD system. The draft permit includes initial performance test requirements to determine the amount of SAM control provided by the HLI system under various operating scenarios such as load levels and sulfur content of coal blends. If the initial performance tests are not conducted at the maximum coal blend sulfur content, the draft permit includes provisions to repeat the tests. The additional SAM emissions data will also be used to validate, correlate, and refine the plant's SAM equation to ensure emissions increases stay below the 7 tons per year significant emission rate. For operation throughout the year, the draft permit requires the use of the plant's SAM equation to estimate annual emissions to demonstrate compliance with the SAM emissions cap.

### **Boiler Additives**

The applicant proposes to use TIFI MG (magnesium hydroxide) and TIFI XP (aluminum hydroxide) to prevent slag formation and mitigate fouling of heat transfer surfaces as well as the SCR catalyst. Based on the available information, the boiler additives will not result in an increase of actual emissions. The draft permit authorizes the use of two new boiler additives in Units 4 - 7 contingent on a satisfactory trial of the additives in Unit 7 showing:

- Negligible emissions increases related to the use of the boiler additives based on COMS data for opacity and CEMS data for NO<sub>x</sub> and SO<sub>2</sub> emissions;
- Negligible increase in particulate matter emissions related to the use of the boiler additives based on a stack test conducted within 60 days of initial injection of the new additives; and
- Impacts of additives on SAM emissions based on performance testing.

In addition to the test report for particulate matter, the draft permit requires the submittal of a "Summary Report", which shall include: the maximum tested injection rates for each additive; the conditioning period for the additives; a discussion of the effectiveness of slag prevention; a discussion of the effectiveness of improving boiler efficiency; a discussion of the effectiveness in preventing fouling of the SCR catalyst; impacts on PM, NO<sub>x</sub> and SO<sub>2</sub> emissions; impacts on opacity; the effects on SAM emissions; and any refinements to the plant's SAM equation for the boiler additives. Since issues related to the additive conditioning period, slag formation, boiler efficiency and SCR fouling may not be determined until there is a unit outage, the draft permit allows this information to be provided with the Annual Operating Report. The draft permit requires that the boiler additives, the injection points and the maximum injection rates be identified in a revised Title V air operation permit.

### **Bypass of the Wet FGD System**

As previously mentioned, bypass of the FGD system is allowed for:

- Startup and shutdown of each unit. SO<sub>2</sub> data collected from the CEMS during startup and shutdown may be excluded from the permit limit of 886 tons based on a 30-day rolling total. Although not limited, such periods of bypass are estimated to be less than 96 hours per year per unit.
- Short-term maintenance periods, which are not considered part of long-term maintenance (annual routine maintenance, periodic preplanned maintenance or repair for force majeure scrubber outages). SO<sub>2</sub> data collected from the CEMS during short-term maintenance periods must be included to determine in the compliance average permit limit of 886 tons based on a 30-day rolling total.
- Annual routine maintenance. Up to 360 hours of SO<sub>2</sub> data collected from the CEMS during annual routine maintenance may be excluded from the permit limit of 886 tons based on a 30-day rolling total.
- Scrubber repairs due to force majeure outages. Up to 360 hours of SO<sub>2</sub> data collected from the CEMS during annual routine maintenance may be excluded from the permit limit of 886 tons based on a 30-day rolling total.
- During a FGD scrubber bypass, each unit shall remain in compliance with all other valid SO<sub>2</sub> emissions standards, which is currently 2.4 lb SO<sub>2</sub>/MMBtu based on a 24-hour CEMS average.

For this current project, the applicant proposes to reduce the permitted SO<sub>2</sub> emissions rate during FGD bypass from 2.4 lb SO<sub>2</sub>/MMBtu for Units 4-7 based on a 24-hour CEMS average to a mass-based emissions limit of 25,840 lb/hour based on a 3-hour CEMS average, which is equivalent to 2.1 lb SO<sub>2</sub>/MMBtu. The plant will achieve this emissions rate by managing the actual coal blend sulfur content, the supplemental firing of natural gas and unit load. In 2004 The Department performed modeling of Units 4-7 at 5.9 lb SO<sub>2</sub>/MMBtu and showed predicted violations of the National and State Ambient Air Quality Standards (AAQS) for SO<sub>2</sub>. Subsequent modeling performed by the Department showed that the AAQS were not predicted to be exceeded with SO<sub>2</sub> emissions from Units 4-7 at 2.5 lb SO<sub>2</sub>/MMBtu, 24-hour average, or less. Gulf Power voluntarily applied to restrict its emissions from these units to 2.4 lb SO<sub>2</sub>/MMBtu in Air Construction Permit 0330045-008-AC that was issued in June, 2004. The current requested equivalent mass emissions rate is equal to 2.1 lb SO<sub>2</sub>/MMBtu based on a 3-hour CEMS average. Since the proposed emissions cap results in less emissions and a reduced averaging period than previously modeled, no additional air quality modeling was required. The draft permit specifies the new emission cap for bypass operations of 25,840 lb/hour based on a 3-hour CEMS average. In addition, the permittee will monitor temperature and/or flow rate in the ductwork to the bypass stacks to ensure that the bypass dampers are not leaking and track the beginning and end periods of the emissions cap and bypass operations.

### **Potential Emissions Increases and Reporting**

Because these projects are all related to the projects to add air pollution control equipment, it is unlikely that emissions of any pollutant except SAM emissions could increase above the PSD significant emissions rate. For SAM emissions, the draft permit establishes a multi-unit emissions cap to avoid PSD preconstruction review, which is subject to the "source obligation" requirements in Rule 62-212.400(12), F.A.C. The record keeping and monitoring requirements in the draft permit are sufficient such that additional report pursuant to Rule 62-212.300, F.A.C. is unnecessary.

## **4. PRELIMINARY DETERMINATION**

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Christy DeVore is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the

**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

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Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida  
32399-2400.

# DRAFT PERMIT

## PERMITTEE

Gulf Power Company  
One Energy Place, BIN 0328  
Pensacola, FL 32520

Air Permit No. 0330045-029-AC  
Permit Expires: February 15, 2013  
Minor Air Construction Permit

Authorized Representative:

Mr. James Vick, Environmental Affairs Director

Crist Electric Generating Plant  
Higher Sulfur Coal Project

## PROJECT

This is the final air construction permit, which: authorizes a higher sulfur coal blend for Units 4 – 7; authorizes an upgrade of the existing Unit 6 steam turbine; establishes a sulfuric acid mist emissions cap; and authorizes additional boiler additives for Units 4-7 contingent on successful use and testing on Unit 7. 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 located in Escambia County at 11999 Pate Street in Pensacola, Florida. The UTM coordinates are Zone 16, 478.50 km East, and 3381.30 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

(DRAFT)

\_\_\_\_\_  
Joseph Kahn, Director  
Division of Air Resource Management

\_\_\_\_\_  
(Date)

**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 \_\_\_\_\_ (DRAFT) \_\_\_\_\_ to the persons listed below.

- Mr. James Vick, Gulf Power Company ([jovick@southernco.com](mailto:jovick@southernco.com))
- Mr. G. Dwain Waters, Gulf Power Company ([gdwaters@southernco.com](mailto:gdwaters@southernco.com))
- Mr. Gregory Terry, Gulf Power Company ([gnterry@southernco.com](mailto:gnterry@southernco.com))
- Mr. John Dominey, Gulf Power Company ([jmdominey@southernco.com](mailto:jmdominey@southernco.com))
- Mr. Kevin White, Gulf Power Company ([kwhite@southernco.com](mailto:kwhite@southernco.com))
- Mr. Rick Bradburn, DEP NWD Office ([rick.bradburn@dep.state.fl.us](mailto:rick.bradburn@dep.state.fl.us))
- Mr. Mike Halpin, DEP Siting Office ([mike.halpin@dep.state.fl.us](mailto:mike.halpin@dep.state.fl.us))
- Ms. Kathleen Forney, EPA Region 4 ([forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov))
- Ms. Ana M. Oquendo, EPA Region 4 ([oquendo.ana@epa.gov](mailto:oquendo.ana@epa.gov))
- Ms. Heather Abrams, EPA Region 4 ([abrams.heather@epa.gov](mailto:abrams.heather@epa.gov))
- Ms. Vickie Gibson, DEP BAR Reading File ([victoria.gibson@dep.state.fl.us](mailto:victoria.gibson@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.

(DRAFT)

\_\_\_\_\_  
(Clerk)

\_\_\_\_\_  
(Date)

## SECTION 1. GENERAL INFORMATION (DRAFT)

### FACILITY DESCRIPTION

The existing facility consists of the following emissions units.

Facility ID No. 0330045	
EU No.	Brief Description
<i>Regulated Emissions Units</i>	
004	Unit 4 - 1,096.7 million British thermal units (MMBtu)/hour
005	Unit 5 - 1,096.7 MMBtu/hour
006	Unit 6 - 3,704.8 MMBtu/hour
007	Unit 7 - 6,406.4 MMBtu/hour
008	Fly Ash Silos (3)
014	Mechanical Draft Cooling Tower for Unit 7
<i>Unregulated Emissions Units and Activities</i>	
009	Material Handling of Coal and Ash
010	Fugitive PM Sources - On-site Vehicles
011	General Purpose Internal Combustion Engines
012	Cooling Towers (2), one sharing Units 4 and 5 and one for Unit 6
013	Fugitive PM Sources - Sandblasting operations

### PROPOSED PROJECT

This project affects the following emissions units.

Facility ID No. 0330045	
ID No.	Emission Unit Description
004	Unit 4 - 1,096.7 MMBtu/hour
005	Unit 5 - 1,096.7 MMBtu/hour
006	Unit 6 - 3,704.8 MMBtu/hour
007	Unit 7 - 6,406.4 MMBtu/hour

### 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.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

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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 Northwest District at 160 Governmental Center, Pensacola, Florida 32502-5794.
3. Other Permits: This permit is in addition to the requirements in all other valid air construction permits. Unless otherwise specified, this permit does not alter or change previous capacities, fuel firing rates or emissions limits.
4. 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).
5. 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.
6. 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.]
7. 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.]
8. 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 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. 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.]
9. Application for Title V Permit: 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 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, 62-4.220 and Chapter 62-213, F.A.C.]



## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

### A. EU 004, 005, 006 and 007

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
004	Unit 4 - 1,096.7 MMBtu/hour (Substitution Acid Rain Phase I and CAIR Unit)
005	Unit 5 - 1,096.7 MMBtu/hour (Substitution for Acid Rain Phase I and CAIR Unit)
006	Unit 6 - 3,704.8 MMBtu/hour (Acid Rain and CAIR Unit)
007	Unit 7 - 6,406.4 MMBtu/hour (Acid Rain and CAIR Unit)

#### Unit Descriptions

Units 4 and 5 (EU-004 and EU-005) are tangentially-fired, dry-bottom electric utility boilers manufactured by Combustion Engineering with a nominal generating capacity of 93 megawatts (MW) per unit. Units 4 and 5 control particulate matter with electrostatic precipitators (ESP) and control nitrogen oxides (NO<sub>x</sub>) with selective non-catalytic reduction (SNCR). After control by the ESP and SNCR, there is a common stack bypass stack for Units 4 and 5 that allows operation while bypassing the FGD system.

Unit 6 (EU-006) is a front wall-fired, dry-bottom electric utility boiler manufactured by Foster Wheeler with a nominal generating capacity of 369 MW. Unit 6 controls particulate matter with an ESP and currently controls NO<sub>x</sub> with low-NO<sub>x</sub> burners and a SNCR system. After control by the ESP and SNCR, there is a common stack bypass stack for Units 6 and 7 that allows operation while bypassing the FGD system.

Unit 7 is a rear wall-fired, dry-bottom electric utility boiler manufactured by Foster Wheeler with a nominal generating capacity of 578 MW. Unit 7 controls particulate matter with an ESP and controls NO<sub>x</sub> with low-NO<sub>x</sub> burners and a selective catalytic reduction (SCR) system. After control by the ESP and SCR, there is a common stack bypass stack for Units 6 and 7 that allows operation while bypassing the FGD system.

Units 4 - 7 control sulfur dioxide (SO<sub>2</sub>) emissions with a common flue gas desulfurization (FGD) system. In addition, Units 4 - 7 continuously monitor and record opacity, SO<sub>2</sub> and NO<sub>x</sub> emissions.

The primary fuel for all four units is pulverized coal. Supplemental fuels include natural gas, fuel oil and on-specification used oil. For Units 6 and 7, fuel oil is only used for startup and as needed for flame stabilization. In addition, Units 4 and 5 may fire carbonaceous fuel (biomass to include wood, switch grass, sawdust and sander dust). Finally, on-site generated "oil contaminated soil" is periodically combusted for energy recovery purposes.

Permit No. 0330045-028-AC requires the installation of a permanent hydrated lime injection (HLI) system. The hydrated lime injection point is in a duct common to all four units just prior to the inlet of the FGD system. The preliminary schedule is to have the HLI system operational by April 2012 when work is completed on the Unit 6 SCR system.

#### PERFORMANCE RESTRICTIONS

1. Coal Blend Sulfur Specification: Once the permanent HLI system is installed and fully functional, Units 4 – 7 are authorized to fire a coal blend having a maximum specification of 3.30 pounds of sulfur dioxide per million Btu (lb SO<sub>2</sub>/MMBtu, equivalent to 2.1% sulfur by weight) based on the actual sulfur content and heating value of the fuel blend. Prior to permanently installing the HLI system, the permittee may conduct temporary operational trial burns on Unit 7 of coal blends up to this maximum specification; however, all such temporary trials shall be limited to no more than a total of 20 operational days. [Application No. 0330045-029-AC and Rule 62-210.200(PTE), F.A.C.]

#### EMISSIONS STANDARDS

2. Sulfuric Acid Mist (SAM) Emissions Cap: Total SAM emissions from Units 4 – 7 (combined) shall not exceed 165.5 tons during any consecutive 12 months including periods of start up, shutdown, malfunctions

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**A. EU 004, 005, 006 and 007**

and bypass operations. Compliance with this emissions cap shall be demonstrated by performance testing, record keeping and reporting requirements specified in this permit. The SAM emissions cap is effective beginning 30 days after the plant receives the test report on SAM emissions. [Application No. 0330045-028-AC and Rule 62-212.400(12), F.A.C.]

- 3. **FGD Bypass Operation:** The permittee may bypass with authorized fuels the FGD system in accordance with the requirements of previously issued air construction permits. When operating in FGD bypass mode, combined SO<sub>2</sub> emissions from all four units combined shall not exceed 25,840 lb/hour (equivalent to 2.1 lb SO<sub>2</sub>/MMBtu) based on 3-hour block CEMS averages (or a fuel-based calculation if the CEMS is down). [Application No. 330045-029-AC and Rule 62-7.070(3), F.A.C.]

**TESTING REQUIREMENTS**

- 4. **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(7)(a)9, F.A.C.]
- 5. **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*	Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources

\* To demonstrate compliance with the SAM limit specified in this permit, the permittee may use: EPA Method 8; conditional test methods CTM-013, CTM-013A or CTM-013B, as appropriate; or other test methods approved by the Department. 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]

**TESTING REQUIREMENTS**

- 6. **SAM Performance Stack Tests:** The permittee shall conduct performance tests at the stack (or in ductwork after the FGD system) to determine SAM emissions within the following load ranges: 40% to 50%; 50% to 60%; 70% to 80%; 80% - 90%; and greater than 90%. Within each range, the permittee shall conduct at least two test runs to determine SAM emissions. One test run shall be with the HLI system “on” and one test run shall be conducted with the HLI system “off”. For each load range, multiple tests may be conducted at varying HLI rates. Such tests shall be conducted within 90 days of first firing the higher sulfur coal. [Rule 62-4.070(3), F.A.C.]
- 7. **SAM Performance Component Tests:** If technically feasible, the permittee shall conduct sampling to determine the following: increase in SAM emissions caused by the Units 6 and 7 SCR catalysts; control efficiency of the HLI system; and control efficiency of the FGD system. The permittee shall conduct at least two test runs to determine SAM emissions. Such tests shall be conducted at greater than 80% of the combined maximum heat input rates for the four units and with unit 6 and 7 in operation. This information will be used to determine the approximate generation of SAM emissions throughout the systems, verify the estimated control efficiencies and refine the equation used to monitor SAM emissions. Such tests shall be conducted within 90 days of first firing the higher sulfur coal. Data from the tests conducted in accordance with Condition 6 may be used to satisfy some of these requirements. Previous data from tests conducted on Unit 7 may be used to satisfy the requirement for determining the SAM emission increase caused by the Unit

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

### A. EU 004, 005, 006 and 007

7 SCR catalyst. {Permitting Note: The permittee estimates a control efficiency of 66.7% for the HLI system and an additional 25% from the FGD system.} [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; controlled SO<sub>2</sub> emission rate based on CEMS; opacity based on COMS; uncontrolled SO<sub>2</sub> 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 rates for SNCR on Units 4 and 5. [Rule 62-4.070(3), F.A.C.]
9. **SAM Performance Test Protocol:** At least 60 days before conducting the SAM performance tests, the permittee shall submit a draft protocol for conducting each set of SAM performance tests (Stack Tests and Component Tests) to the Bureau of Air Regulation 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; the ammonia injection rates for NO<sub>x</sub> 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.]
10. **Increase in Coal Blend Sulfur Specification:** If the actual coal blend sulfur specification increases by 0.30 lb SO<sub>2</sub>/MMBtu or more based on a 10-day average above the current maximum tested coal blend sulfur specification, the permittee shall conduct new "SAM Performance Stack Tests" pursuant to Condition 6 of this subsection. The tests shall be conducted within 45 days of determining that the actual coal blend sulfur specification increased by 0.30 lb SO<sub>2</sub>/MMBtu or more based on a 10-day average. The actual coal blend sulfur specification shall be monitored by the process CEMS at the inlet to the FGD system content and shall not exceed 3.30 lb/MMBtu (or by a fuel-based calculation if the CEMS is down). [Rule 62-4.070(3), F.A.C.]

### MONITORING REQUIREMENTS

11. **SAM Monitoring:** The permittee shall demonstrate compliance with the SAM emissions cap by conducting the required performance tests and using the SAM emission equation based on research conducted by the Electric Power Research Institute (EPRI). The applicant shall refine this equation when new site-specific emissions data is available. [Rule 62-4.070(3), F.A.C.]
12. **Bypass Monitoring:** The permittee shall monitor the exhaust flow after the bypass dampers to ensure that bypass dampers are effectively sealed. [Rule 62-4.070(3), F.A.C.]

### RECORDS AND REPORTS

13. **SAM Test Reports:** The permittee shall prepare and submit reports with the Compliance Authority as soon as practical but no later than 45 days after the last sampling run of each test is completed. Test reports shall be submitted 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 fuel firing rate of each unit; heat input rate of each unit; hydrated lime injection rate; controlled SO<sub>2</sub> emission rate based on CEMS; uncontrolled SO<sub>2</sub> 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); opacity based on COMS; ammonia injection rates for SCR (Units 6 and 7); and ammonia injection rates for SNCR (Units 4 and 5). [Rule 62-297.310(8), F.A.C.]
14. **SAM Summary Report:** A summary report shall be submitted to the Bureau of Air Regulation and the Compliance Authority for each set of SAM performance tests (Stack Tests and Component Tests). Each report shall: summarize the emissions, monitoring and operational data collected; evaluate the SAM

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

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**A. EU 004, 005, 006 and 007**

emissions for the given conditions; identify the impacts of the control equipment; and provide a discussion for refining the SAM equation. [Rule 62-4.070(3), F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**B. Unit 6 (EU 006)**

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
006	Unit 6 - 3,704.8 MMBtu/hour (Acid Rain & CAIR Unit)

**EQUIPMENT**

1. Unit 6 Steam Turbine: As described in the application, the permittee is authorized to upgrade Unit 6 steam turbine from a Model No. BP43 design to a reconfigured Model No. BP43PA design. The original Model No. BB43 design consists of a combined high-pressure and split-flow intermediate-pressure arrangement. By providing a new outer cylinder design, the Model No. BB43PA can be re-configured as a combined high-pressure and straight-flow intermediate-pressure element. The new configuration is intended to provide significant performance benefits by removing the multiple leakage paths and losses associated with the split-flow design and allowing unconstrained design of the high-pressure and intermediate-pressure blade paths. The greater available axial and radial space of the new design allows for optimal blade heights and higher stage counts to be utilized and results in highly efficient high-pressure and intermediate-pressure blade paths. The project will improve efficiency and produce approximately 7 MW of additional generation while firing the same amount of fuel to produce the same amount of steam flow.

**NOTIFICATION**

2. Completion of Construction: The preliminary schedule is to install the Crist Unit 6 steam turbine upgrade in spring of 2012. Within 30 days of returning the Unit 6 steam turbine to service, the permittee shall notify the Compliance Authority that construction is complete and the approximate increase in generation achieved. [Application No. 0330045-029-AC]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

### C. Unit 7 (EU 007)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
004	Unit 4 - 1,096.7 MMBtu/hour (Substitution Acid Rain Phase I and CAIR Unit)
005	Unit 5 - 1,096.7 MMBtu/hour (Substitution for Acid Rain Phase I and CAIR Unit)
006	Unit 6 - 3,704.8 MMBtu/hour (Acid Rain and CAIR Unit)
007	Unit 7 - 6,406.4 MMBtu/hour (Acid Rain and CAIR Unit)

#### Project Description

The project will evaluate targeted in-furnace injection (TIFI) technology using two new boiler additives manufactured by Fuel Tech: TIFI MG (magnesium hydroxide) and TIFI XP (aluminum hydroxide). The permittee will use computational fluid dynamic (CFD) modeling to determine problem areas of the boiler, the appropriate injection points and the trajectory and droplet size of the chemical additive needed to ensure complete coverage of the area. The boiler additives will be delivered by truck in slurry form and transferred to separate 5000 gallon tanks. When used, the chemicals will be mixed with water and pumped to the injection port determined by the CFD modeling and then atomized with air according to the droplet size needed. Through crystal morphology, slag formation is inhibited and the slag that does form is made more easily controlled through normal boiler cleaning operations such as soot-blowing. Particulate matter remains controlled by the ESP and FGD system.

#### **MATERIAL**

1. Authorization of New Boiler Additives: The permittee is authorized to use the new Fuel Tech boiler additives (TIFI MG and TIFI XP) in Units 4 – 7 contingent on a satisfactory trial of the additives in Unit 7 showing:
  - a. Negligible emissions increases related to the use of the boiler additives based on COMS data for opacity and CEMS data for NO<sub>x</sub> and SO<sub>2</sub> emissions;
  - b. Negligible increase in particulate matter emissions related to the use of the boiler additives based on a stack test conducted within 60 days of initial injection of the new additives; and
  - c. Impacts of additives on SAM emissions based on performance testing.

The additives may be used separately or in combination. [Application No. 0330045-029-AC]

#### **PERFORMANCE RESTRICTIONS**

2. Projected Capacity: The expected maximum injection rates are 12 gallons per hour of TIFI MG and 22 gallons per hour of TIFI XP. [Application No. 0330045-029-AC and Rule 62-210.200(PTE), F.A.C.]
3. Restricted Operation: The hours of operation are not limited (8760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

#### **TESTING REQUIREMENTS**

4. PM Compliance Test: Unit 7 shall be tested to demonstrate compliance with the current PM emissions standards in the Title V air operation permit. The test shall be conducted within 60 days of initial injection of each boiler additive. Each test shall consist of three test runs. If both additives are being injected, only one PM test is required. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]
5. SAM Performance Tests: The permittee shall conduct sufficient SAM emissions testing once Unit 7 has been conditioned with the TIFI boiler additive and during injection of the additive to determine the effect of

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

### C. Unit 7 (EU 007)

the boiler additives on SAM emissions. The EPRI equation used to estimate SAM emissions shall be revised as necessary based on the test results to adjust estimated SAM emissions accordingly. [Rule 62-297.310(7)(a)4, F.A.C.]

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(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
5 or 17	Method for Determining Particulate Matter Emissions
8*	Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources

\* To demonstrate compliance with the SAM limit specified in this permit, the permittee may use: EPA Method 8; conditional test methods CTM-013, CTM-013A or CTM-013B, as appropriate; or other test methods approved by the Department. 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]

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]

### MONITORING REQUIREMENTS

8. **Boiler Additive Injection Rates:** The permittee shall monitor and document the injection rates of boiler additives during all SAM performance tests required by this permit if the boiler additives are in use. [Rule 62-4.070(3), F.A.C.]

### RECORDS AND REPORTS

9. **Test Reports:** The permittee shall prepare and submit reports with the Compliance Authority as soon as practical, but no later than 45 days after the last sampling run of each test is completed. All required tests shall be prepared and submitted 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 boiler additives in use, the injection points, the injection rates at each point, the opacity (COMS), NO<sub>x</sub> emissions (CEMS) and SO<sub>2</sub> emissions (CEMS) at the inlet to and outlet from the FGD system. The report shall discuss any PM emissions increases and the impacts of the boiler additives on SAM emissions. Based on the test data, the boiler additives are authorized for use in Units 4 – 7 provided the criteria in Condition 1 of this subsection are met. [Rule 62-297.310(8), F.A.C.]
10. **Summary Report – Boiler Effects:** The permittee shall report the effects on Unit 7 of injecting the boiler additives including the advantages and disadvantages (e.g. efficiency improvements, prevention of slag formation, prevention of SCR catalyst fouling, etc.). Since some of the effects can only be determined during an outage, the permittee shall report this information with the Annual Operating Report to be submitted after the first Unit 7 outage following the boiler additive testing. [Rule 62-4.070(3), F.A.C.]

**SECTION 4. APPENDICES (DRAFT)**

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**Contents**

- Appendix A. Citation Formats and Glossary of Common Terms
- Appendix B. General Conditions
- Appendix C. Common Conditions
- Appendix D. Common Testing Requirements



**SECTION 4. APPENDIX A (DRAFT)**  
**Citation Formats and Glossary of Common Terms**

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**CITATION FORMATS**

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

**Old Permit Numbers**

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit  
“AO” identifies the permit as an Air Operation Permit  
“123456” identifies the specific permit project number

**New Permit Numbers**

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located  
“2222” represents the specific facility ID number for that county  
“001” identifies the specific permit project number  
“AC” identifies the permit as an air construction permit  
“AF” identifies the permit as a minor source federally enforceable state operation permit  
“AO” identifies the permit as a minor source air operation permit  
“AV” identifies the permit as a major Title V air operation permit

**PSD Permit Numbers**

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality  
“FL” means that the permit was issued by the State of Florida  
“317” identifies the specific permit project number

**Florida Administrative Code (F.A.C.)**

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

**Code of Federal Regulations (CFR)**

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

**GLOSSARY OF COMMON TERMS**

° F: degrees Fahrenheit

µg: microgram

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System  
(Department’s database)

**BACT:** best available control technology

**bhp:** brake horsepower

**Btu:** British thermal units

**CAM:** compliance assurance monitoring

**CEMS:** continuous emissions monitoring system

**cfm:** cubic feet per minute

**CFR:** Code of Federal Regulations

## SECTION 4. APPENDIX A (DRAFT)

### Citation Formats and Glossary of Common Terms

<b>CAA:</b> Clean Air Act	<b>NESHAP:</b> National Emissions Standards for Hazardous Air Pollutants
<b>CMS:</b> continuous monitoring system	<b>NO<sub>x</sub>:</b> nitrogen oxides
<b>CO:</b> carbon monoxide	<b>NSPS:</b> New Source Performance Standards
<b>CO<sub>2</sub>:</b> carbon dioxide	<b>O&amp;M:</b> operation and maintenance
<b>COMS:</b> continuous opacity monitoring system	<b>O<sub>2</sub>:</b> oxygen
<b>DARM:</b> Division of Air Resource Management	<b>Pb:</b> lead
<b>DEP:</b> Department of Environmental Protection	<b>PM:</b> particulate matter
<b>Department:</b> Department of Environmental Protection	<b>PM<sub>10</sub>:</b> particulate matter with a mean aerodynamic diameter of 10 microns or less
<b>dscf:</b> dry standard cubic feet	<b>ppm:</b> parts per million
<b>dscfm:</b> dry standard cubic feet per minute	<b>ppmv:</b> parts per million by volume
<b>EPA:</b> Environmental Protection Agency	<b>ppmvd:</b> parts per million by volume, dry basis
<b>ESP:</b> electrostatic precipitator (control system for reducing particulate matter)	<b>QA:</b> quality assurance
<b>EU:</b> emissions unit	<b>QC:</b> quality control
<b>F:</b> fluoride	<b>PSD:</b> prevention of significant deterioration
<b>F.A.C.:</b> Florida Administrative Code	<b>psi:</b> pounds per square inch
<b>F.A.W.:</b> Florida Administrative Weekly	<b>PTE:</b> potential to emit
<b>F.D.:</b> forced draft	<b>RACT:</b> reasonably available control technology
<b>F.S.:</b> Florida Statutes	<b>RATA:</b> relative accuracy test audit
<b>FGD:</b> flue gas desulfurization	<b>RBLC:</b> EPA's RACT/BACT/LAER Clearinghouse
<b>FGR:</b> flue gas recirculation	<b>SAM:</b> sulfuric acid mist
<b>ft<sup>2</sup>:</b> square feet	<b>scf:</b> standard cubic feet
<b>ft<sup>3</sup>:</b> cubic feet	<b>scfm:</b> standard cubic feet per minute
<b>gpm:</b> gallons per minute	<b>SIC:</b> standard industrial classification code
<b>gr:</b> grains	<b>SIP:</b> State Implementation Plan
<b>HAP:</b> hazardous air pollutant	<b>SNCR:</b> selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
<b>Hg:</b> mercury	<b>SO<sub>2</sub>:</b> sulfur dioxide
<b>I.D.:</b> induced draft	<b>TPD:</b> tons/day
<b>ID:</b> identification	<b>TPH:</b> tons per hour
<b>kPa:</b> kilopascals	<b>TPY:</b> tons per year
<b>lb:</b> pound	<b>TRS:</b> total reduced sulfur
<b>MACT:</b> maximum achievable technology	<b>UTM:</b> Universal Transverse Mercator coordinate system
<b>MMBtu:</b> million British thermal units	<b>VE:</b> visible emissions
<b>MSDS:</b> material safety data sheets	<b>VOC:</b> volatile organic compounds
<b>MW:</b> megawatt	

**SECTION 4. APPENDIX B (DRAFT)**

**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 403.141, 403.727, or 403.859 through 403.861, F.S. 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 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any 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 of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and 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 and 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 reasonable times, access to the premises where the permitted activity is located or conducted to:
  - a. Have access to and copy any records that must be kept under 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 noncompliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. 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 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

**SECTION 4. APPENDIX B (DRAFT)**

**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. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with 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 (applicable for small boiler BACT/not applicable);
  - b. Determination of Prevention of Significant Deterioration (not applicable); and
  - c. Compliance with New Source Performance Standards (applicable/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 for 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:
    - (a) The date, exact place, and time of sampling or measurements;
    - (b) The person responsible for performing the sampling or measurements;
    - (c) The dates analyses were performed;
    - (d) The person responsible for performing the analyses;
    - (e) The analytical techniques or methods used;
    - (f) The results of such analyses.
15. 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 the 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.

## SECTION 4. APPENDIX C (DRAFT)

### Common Conditions

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

#### EMISSIONS AND CONTROLS

1. **Plant Operation - Problems:** If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. **Circumvention:** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. **Excess Emissions Allowed:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24-hour period unless specifically authorized by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210-700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. **Excess Emissions Prohibited:** Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. **Excess Emissions - Notification:** In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. **VOC or OS Emissions:** No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. **Objectionable Odor Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. **General Visible Emissions:** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

#### RECORDS AND REPORTS

10. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. **Emissions Computation and Reporting:**
  - a. **Applicability.** This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance

## SECTION 4. APPENDIX C (DRAFT)

### Common Conditions

with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit. [Rule 62-210.370(1), F.A.C.]

- b. *Computation of Emissions.* For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
- (1) *Basic Approach.* The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
- (a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
- (b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C. but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (2) *Continuous Emissions Monitoring System (CEMS).*
- (a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
- 1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or
- 2) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
- (b) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
- 1) A calibrated flow meter that records data on a continuous basis, if available; or
- 2) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
- (c) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
- (3) *Mass Balance Calculations.*
- (a) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
- 1) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and

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**SECTION 4. APPENDIX C (DRAFT)**

**Common Conditions**

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- 2) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
  - (b) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
  - (c) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
- (4) Emission Factors.
- a. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
    - 1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
    - 2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
    - 3) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
  - b. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- (5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
- (6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
- (7) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
- (8) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

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Common Conditions

[Rule 62-210.370(2), F.A.C.]

c. *Annual Operating Report for Air Pollutant Emitting Facility*

- (1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:
  - a. All Title V sources.
  - b. All synthetic non-Title V sources.
  - c. All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
  - d. All facilities for which an annual operating report is required by rule or permit.
- (2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.
- (3) The annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office by April 1 of the following year. If the report is submitted using the Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office.
- (4) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.
- (5) Facility Relocation. Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department at least 30 days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated.

[Rule 62-210.370(3), F.A.C.]



**SECTION 4. APPENDIX D (DRAFT)**

**Common Testing Requirements**

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Unless otherwise specified in the permit, the following testing requirements apply to all emissions units that require testing.

**COMPLIANCE TESTING REQUIREMENTS**

1. **Required Number of Test Runs:** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
2. **Operating Rate During Testing:** Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
3. **Calculation of Emission Rate:** For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
4. **Applicable Test Procedures:**
  - a. **Required Sampling Time.**
    - (1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
    - (2) **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
      - (a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
      - (b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
      - (c) The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
  - b. **Minimum Sample Volume.** Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

**SECTION 4. APPENDIX D (DRAFT)**

**Common Testing Requirements**

- c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.
- d. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.
- e. Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

TABLE 297.310-1 CALIBRATION SCHEDULE			
ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calibration liquid in glass	5° F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5° F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/- 0.001" mean of at least three readings; Max. deviation between readings, 0.004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, when 5% change observed, annually	Spirometer or calibrated wet test or dry gas test meter	2%
	2. One Point: Semiannually		
	3. Check after each test series	Comparison check	5%

[Rule 62-297.310(4), F.A.C.]

5. Determination of Process Variables:

- a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
- b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

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**SECTION 4. APPENDIX D (DRAFT)**

**Common Testing Requirements**

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6. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.
- a. Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
  - b. Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
  - c. Sampling Ports.
    - (1) All sampling ports shall have a minimum inside diameter of 3 inches.
    - (2) The ports shall be capable of being sealed when not in use.
    - (3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
    - (4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
    - (5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.
  - d. Work Platforms.
    - (1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
    - (2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
    - (3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
    - (4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.
  - e. Access to Work Platform.
    - (1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
    - (2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.
  - f. Electrical Power.

**SECTION 4. APPENDIX D (DRAFT)**

**Common Testing Requirements**

- (1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
- (2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

**g. Sampling Equipment Support.**

- (1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
  - (a) The bracket shall be a standard 3 inch × 3 inch × one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
  - (b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
  - (c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
- (2) A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.
- (3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

7. **Frequency of Compliance Tests.** The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
  - a. **General Compliance Testing.**
    1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
    2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
    3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
      - (a) Did not operate; or
      - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
    4. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

## SECTION 4. APPENDIX D (DRAFT)

### Common Testing Requirements

- (a) Visible emissions, if there is an applicable standard;
  - (b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
  - (c) c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
  6. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
  7. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
  8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
  9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
  10. An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
    - (a) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
    - (b) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of paragraph 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.]

### REPORTS

#### 8. Test Reports:

- a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

**SECTION 4. APPENDIX D (DRAFT)**

**Common Testing Requirements**

- c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information.
- (1) The type, location, and designation of the emissions unit tested.
  - (2) The facility at which the emissions unit is located.
  - (3) The owner or operator of the emissions unit.
  - (4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
  - (5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
  - (6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
  - (7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
  - (8) The date, starting time and duration of each sampling run.
  - (9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
  - (10) The number of points sampled and configuration and location of the sampling plane.
  - (11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
  - (12) The type, manufacturer and configuration of the sampling equipment used.
  - (13) Data related to the required calibration of the test equipment.
  - (14) Data on the identification, processing and weights of all filters used.
  - (15) Data on the types and amounts of any chemical solutions used.
  - (16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
  - (17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
  - (18) All measured and calculated data required to be determined by each applicable test procedure for each run.
  - (19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
  - (20) The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
  - (21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

**MISCELLANEOUS**

9. Stack and Duct: The terms stack and duct are used interchangeably in this rule. [Rule 62-297.310(9), F.A.C.]

## Livingston, Sylvia

---

**From:** Livingston, Sylvia  
**Sent:** Tuesday, April 13, 2010 3:25 PM  
**To:** 'jovick@southernco.com'  
**Cc:** 'gdwaters@southernco.com'; 'gnterry@southernco.com'; 'jmdominey@southernco.com'; 'kwhite@southernco.com'; Bradburn, Rick; Halpin, Mike; 'forney.kathleen@epa.gov'; 'oquendo.ana@epa.gov'; 'abrams.heather@epa.gov'; Gibson, Victoria; DeVore, Christy; Walker, Elizabeth (AIR)  
**Subject:** GULF POWER COMPANY - CRIST ELECTRIC GENERATING PLANT; 0330045-029-AC

Dear Sir/ Madam:

Attached is the official **Notice of Intent to Issue** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

*Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).*

**Click on the following link to access the permit project documents:**

[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0330045.029.AC.D\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0330045.029.AC.D_pdf.zip)

**Owner/Company Name:** GULF POWER COMPANY  
**Facility Name:** CRIST ELECTRIC GENERATING PLANT  
**Project Number:** 0330045-029-AC  
**Permit Status:** DRAFT  
**Permit Activity:** CONSTRUCTION/ Higher Sulfur Coal Project  
**Facility County:** ESCAMBIA  
**Processor:** Christy DeVore

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/emission/apds/default.asp>.

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation

Sylvia Livingston  
Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506  
[sylvia.livingston@dep.state.fl.us](mailto:sylvia.livingston@dep.state.fl.us)

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>

## Livingston, Sylvia

---

**From:** Vick, James O. [JOVICK@southernco.com]  
**Sent:** Wednesday, April 14, 2010 9:18 AM  
**To:** Livingston, Sylvia  
**Subject:** RE: GULF POWER COMPANY - CRIST ELECTRIC GENERATING PLANT; 0330045-029-AC

We are in receipt.

*Jim Vick*  
Director Environmental Affairs  
8-420-6311  
850-444-6311  
Cell: 850-982-6204  
Have a great day.

---

**From:** Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]  
**Sent:** Tuesday, April 13, 2010 2:25 PM  
**To:** Vick, James O.  
**Cc:** Waters, G. Dwain; Terry, Greg N.; jmdominey@southernco.com; White, Kevin; Bradburn, Rick; Halpin, Mike; forney.kathleen@epa.gov; oquendo.ana@epa.gov; abrams.heather@epa.gov; Gibson, Victoria; DeVore, Christy; Walker, Elizabeth (AIR)  
**Subject:** GULF POWER COMPANY - CRIST ELECTRIC GENERATING PLANT; 0330045-029-AC

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**Owner/Company Name:** GULF POWER COMPANY  
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**Project Number:** 0330045-029-AC  
**Permit Status:** DRAFT  
**Permit Activity:** CONSTRUCTION/ Higher Sulfur Coal Project  
**Facility County:** ESCAMBIA  
**Processor:** Christy DeVore



## Livingston, Sylvania

---

**From:** Waters, G. Dwain [GDWATERS@southernco.com]  
**Sent:** Tuesday, April 13, 2010 3:39 PM  
**To:** Livingston, Sylvania; Vick, James O.  
**Cc:** Terry, Greg N.; jmdominey@southernco.com; White, Kevin; Bradburn, Rick; Halpin, Mike; forney.kathleen@epa.gov; oquendo.ana@epa.gov; abrams.heather@epa.gov; Gibson, Victoria; DeVore, Christy; Walker, Elizabeth (AIR)  
**Subject:** RE: GULF POWER COMPANY - CRIST ELECTRIC GENERATING PLANT; 0330045-029-AC

Gulf Power has received the "draft" Crist permit #0330045-029-AC. Thanks, Dwain

G. Dwain Waters, Q.E.P.  
Special Projects and Environmental Assets Coordinator  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520-0328  
Phone: (850) 444-6080  
Cell: (850) 336-6527  
Fax: (850) 444-6217  
[gdwaters@southernco.com](mailto:gdwaters@southernco.com)

---

**From:** Livingston, Sylvania [mailto:Sylvia.Livingston@dep.state.fl.us]  
**Sent:** Tuesday, April 13, 2010 2:25 PM  
**To:** Vick, James O.  
**Cc:** Waters, G. Dwain; Terry, Greg N.; jmdominey@southernco.com; White, Kevin; Bradburn, Rick; Halpin, Mike; forney.kathleen@epa.gov; oquendo.ana@epa.gov; abrams.heather@epa.gov; Gibson, Victoria; DeVore, Christy; Walker, Elizabeth (AIR)  
**Subject:** GULF POWER COMPANY - CRIST ELECTRIC GENERATING PLANT; 0330045-029-AC

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**Processor:** Christy DeVore

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Sylvia Livingston  
Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506  
[sylvia.livingston@dep.state.fl.us](mailto:sylvia.livingston@dep.state.fl.us)

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>

*The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.*