

One Energy Place  
Pensacola, Florida 32520

Tel 850.444.6111



Certified Mail

August 3, 2005

Jonathan Holtom, P.E.  
Florida Department of Environmental Protection  
Division of Air Resources Management  
2600 Blair Stone Road  
Mail Station #5505  
Tallahassee, Florida 32399-2400

RECEIVED

AUG 08 2005

BUREAU OF AIR REGULATION

Dear Mr. Holtom:

RE: CRIST ELECTRIC GENERATING PLANT  
PROPOSED UNIT 6 SNCR CONSTRUCTION PERMIT  
AIR PERMIT NO. 0330045-012-AC

Please find enclosed Gulf Power's response to FDEP's proposed construction permit of the installation and operation of the Crist Unit 6 SNCR.

We appreciate your efforts to work with us regarding the startup of the Crist emission control systems. Please call me regarding any additional questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "G. Dwain Waters, Q.E.P." The signature is written in a cursive style.

G. Dwain Waters, Q.E.P.  
Air Quality Programs Supervisor

cc: w/att: Jim Vick, Gulf Power Company  
Terry Wright, Gulf Power Company  
John Dominey, Gulf Power Company  
Greg Terry, Gulf Power Company  
David Hollinger, Southern Company Services  
Gary Perko, Hopping, Green & Sams  
Sandra Veazey, FDEP Northwest District Office, Pensacola, Florida

**GULF POWER COMPANY**  
**Plant Crist Unit 6 SNCR Draft Permit Comments**  
**Air Construction Permit: 0330045-012-AC**  
**August 2, 2005**

**Section 3 Emissions Unit Specific Condition Comments:**

- 1) (Page 5): Replace Ammonia with Urea at the top of the page.
- 2) (Page 5): Urea Injection System: Replace 450,000 with 45,000 gallon tank.
- 3) (Page 5): Item 4. Project Completion: Replace May 1, 2005 with May 1, 2006.
- 4) (Page 6): Gulf Power has concerns regarding the effective date for the plant-wide NOx emission standard as the startup of the SNCR. Gulf requests the effective date be established as "May 1, 2006" in order to include options to operate Crist 2 and 3 until May 1, 2006 and to grant extra time for SNCR installation if and as needed for Crist 4 & 5 as outlined in our control strategy. The objective of the FDEP-Gulf Ozone Agreement is to reduce emissions by the beginning of the Ozone season (May 1).
- 5) (Page 6): Item 6: Nitrogen Oxide, Compliance Tests: Current design plans do not have inlet ports for concurrent testing of the inlet and outlet. Gulf Power does not plan on monitoring inlet NOx emissions. Gulf requests the test conditions be revised to utilize the standard stack test location comparing a baseline test to SNCR operation (i.e. SNCR off to on) to demonstrate the 20% reduction specification as an initial test only.

**Technical Evaluation and Preliminary Determination**

- 1) (Page 5): Selective Non-Catalytic Reduction (SNCR): Replace Ammonia with Urea at in the first sentence.
- 2) (Page 5): Urea Injection System: Replace 450,000 with 45,000 gallon tank.



Jeb Bush  
Governor

# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Colleen M. Castille  
Secretary

July 18, 2005

Mr. G. Dwain Waters, Q.E.P.  
Air Quality Programs Supervisor  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520

Re: Air Construction Permit No. 0330045-012-AC  
Gulf Power Company- Crist Electric Generating Plant  
Unit 6 SNCR Project

Dear Mr. Waters:

On January 25, you submitted an application for an air permit to construct a selective non-catalytic reduction (SNCR) system on Unit 6 for the purpose of reducing nitrogen oxide (NO<sub>x</sub>) emissions in order to comply with the requirements of the Agreement For The Purpose Of Ensuring Compliance With Ozone Ambient Air Quality Standards, dated August 28, 2002. The equipment will be installed at the Crist Electric Generating Plant, which will be located on Pate Road, off of 10 Mile Road on Governors Bayou, Escambia County. Enclosed are the following documents: "Technical Evaluation and Preliminary Determination", "Draft Permit", "Written Notice of Intent to Issue Air Permit", and "Public Notice of Intent to Issue Air Permit".

The "Technical Evaluation and Preliminary Determination" summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue a Draft Permit. The proposed "Draft Permit" includes the specific conditions that regulate the emissions units covered by the proposed project. The "Written Notice of Intent to Issue Air Permit" provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and the availability of mediation. 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, Jonathan Holtom, P.E., at (850) 921-9531.

Sincerely,

Trina L. Vielhauer, Chief  
Bureau of Air Regulation

TLV/jh

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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

Mr. G. Dwain Waters, Q.E.P.  
Air Quality Programs Supervisor  
Gulf Power Company  
One Energy Place  
Pensacola, Florida 32520

Draft Air Permit No. 0330045-012-AC  
Crist Electric Generating Plant  
Unit 6 SNCR Project  
Escambia County, Florida

**Facility Location:** The applicant proposes to construct a new selective non-catalytic reduction (SNCR) system on Unit 6 at the existing Crist Electric Generating Plant, which is located on Pate Road, off of 10 Mile Road on Governors Bayou in Pensacola, Escambia County, Florida.

**Project:** The applicant proposes to instal an SNCR system on Unit 6. Details of the project are provided in the 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 Department of Environmental Protection is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 S. Magnolia Drive, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station 5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**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 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), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within seven (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 fourteen (14) days from the date of publication of the Public Notice. Written comments must be provided to the Permitting Authority at the above address. Any written comments filed will be made available for public inspection. 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.

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

**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 fourteen (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 fourteen (14) days of publication of the attached Public Notice or within fourteen (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 fourteen (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 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 how and when each petitioner received notice of the agency action or proposed action; (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; 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.

Executed in Tallahassee, Florida.



\_\_\_\_\_  
Trina L. Vielhauer, Chief  
Bureau of Air Regulation

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

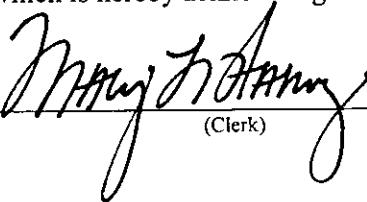
**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this "Written Notice of Intent to Issue Air Permit" package (including the Public Notice, the Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 7/19/05 to the persons listed below.

G. Dwain Waters, Q.E.P., Gulf Power Company\*  
Gregory N. Terry, P.E., Gulf Power Company  
Kevin White, P.E., DEP-NWD  
EPA Region 4 (if necessary)

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)

7/19/05  
(Date)

## **PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT**

Bureau of Air Regulation  
Draft Air Permit No. 0330045-012-AC  
Gulf Power Company – Crist Electric Generating Plant  
Escambia County

**Applicant:** The applicant for this project is Gulf Power Company, One Energy Place, Pensacola, Florida 322520. The applicant's authorized representative is G. Dwain Waters, Q.E.P., Air Quality Programs Supervisor.

**Facility Location:** The applicant proposes to construct a new selective non-catalytic reduction (SNCR) system on Unit 6 at the existing Crist Electric Generating Plant, which is located on Pate Road, off of 10 Mile Road on Governors Bayou in Pensacola, Escambia County, Florida.

**Project:** The applicant proposes to install a selective non-catalytic reduction (SNCR) system on the existing Unit 6 for the purpose of reducing nitrogen oxide (NO<sub>x</sub>) emissions from the facility. The project is not expected to result in any significant increases of collateral pollutants. The NO<sub>x</sub> reduction is being made in order to comply with the new facility-wide NO<sub>x</sub> emissions limit of 0.2 lb/MMBtu that was required by the Agreement For The Purpose Of Ensuring Compliance With Ozone Ambient Air Quality Standards, dated August 28, 2002.

**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 regarding this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station 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 and phone number listed above. A copy of the complete project file is also available at the Department of Environmental Protection's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794 (Telephone: 850/595-8364).

**Notice of Intent to Issue Air 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 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 fourteen (14) days from the date of publication of this Public Notice. Written comments must be provided to the Permitting Authority at the above address. Any written comments filed will be made available for public inspection. 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.

**(Public Notice to be Published in the Newspaper)**

## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

**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. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (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 fourteen (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 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 how and when the petitioner received notice of the agency action or proposed action; (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; 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.





Jeb Bush  
Governor

# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Colleen M. Castille  
Secretary

## P.E. Certification Statement

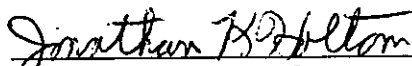
**Permittee:**

Gulf Power Company  
Crist Electric Generating Plant

**DRAFT Construction Permit No.:** 0330045-012-AC  
**Facility ID No.:** 0330045

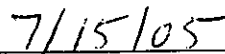
**Project:** Minor Air Construction Permit to Install SNCR on Unit 6.

**I HEREBY CERTIFY** that the engineering features described in the above referenced application and related additional information submittals, if any, 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 aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).



Jonathan K. Holtom, P.E.

Registration Number: 0052664



Date

Permitting Authority:

Florida Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114

Fax: 850/922-6979

"More Protection, Less Process"

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**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**PROJECT**

Draft Air Construction Permit No. 0330045-012-AC  
Crist Unit 6 SNCR Project

**COUNTY**

Escambia County

**APPLICANT**

Gulf Power Company  
Crist Electric Generating Plant  
ARMS Facility ID No. 0330045

**PERMITTING  
AUTHORITY**

Florida Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
New Source Review Section



July 15, 2005

*{Filename: Crist 6 SNCR TEPD}*

## **1. GENERAL PROJECT INFORMATION**

### **Applicant Name and Address**

Gulf Power Company – Crist Electric Generating Plant  
One Energy Place  
Pensacola, FL 32520-0328

#### *Authorized Representative:*

Penny M. Manuel

### **Processing Schedule**

01/25/05 Received the application for a pollution control project.  
02/24/05 Department requested additional information.  
06/02/05 Department received additional information.

### **Facility Description and Location**

Gulf Power Company operates the existing Crist Power Plant, which is located on Governors Bayou off 10 Mile Road in Pensacola, Escambia County, Florida. This site is in an area that is currently in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS).

### **Standard Industrial Classification Code (SIC)**

SIC No. 4911 – Electrical Services

### **Regulatory Categories**

Title III: The existing facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The existing facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

### **Project Description**

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" (Agreement). The purpose of the agreement is to support continuing efforts to maintain compliance with the ambient air quality standard for ozone in the Escambia County area. In brief, Gulf Power Company agreed to:

- Construct and operate a new electrostatic precipitator (ESP) for Crist Unit 7;
- Construct and operate a new selective catalytic reduction (SCR) system for Crist Unit 7;
- Ultimately retire Crist coal-fired Units 1, 2, and 3; and
- Employ additional NO<sub>x</sub> reduction techniques for one or more of the remaining coal-fired Units 4, 5, and 6.

The agreement was contingent on approval from the Public Service Commission to recover costs from the ratepayers related to the pollution control projects, which became final November 18, 2002. The approval was granted and Gulf Power Company submitted an application for an air permit to install the new ESP and SCR for Crist Unit 7. The Unit 7 project met its schedule and was completed in May 2005.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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Emissions unit 1 was permanently retired on March, 31, 2003. Emissions units 2 and 3 will be retired by May, 2006.

The focus of this project is to initiate compliance with the last part of the Agreement. Gulf Power has proposed to install SNCR on Unit 6 in order to gain additional NO<sub>x</sub> reductions. Depending on the resulting reductions achieved, further NO<sub>x</sub> controls may still be required for Units 4 and/or 5 in order to fully comply with the Agreement.

### 2. APPLICABLE REGULATIONS

#### State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). In general, this project is subject to the applicable rules and regulations defined in the following Chapters of the F.A.C.

<u>Chapter</u>	<u>Description</u>
62-4	Permitting Requirements
62-204	Ambient Air Quality Requirements and Federal Regulations Adopted by Reference
62-210	Required Permits, Public Notice, Reports, Circumvention, Excess Emissions, and Forms
62-212	Preconstruction Review
62-213	Operation Permits for Major Sources of Air Pollution
62-296	Emission Limiting Standards
62-297	Testing, Continuous Monitoring, and Alternate Sampling Procedures

*{Note: The project is not subject to Florida's Power Plant Siting Act because there will be no change in steam-generated electrical capacity.}*

#### General PSD Applicability

The Department regulates major air pollution sources in accordance with the Prevention of Significant Deterioration (PSD) program, as delegated by the EPA for electric utilities. A PSD review is required only in areas currently in attainment with the National Ambient Air Quality Standard (NAAQS) or areas designated as "unclassifiable" for a given pollutant. A new facility is considered "major" with respect to PSD if it emits or has the potential to emit:

- 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 28 PSD Major Facility Categories (Table 62-212.400-1, F.A.C.), or
- 5 tons per year of lead.

For new projects at PSD-major sources, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates listed in Table 62-212.400-2, F.A.C. Pollutant emissions from the project exceeding these rates are considered "significant". The applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility 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

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The Department's Rule 62-212.400(2)(a)2, F.A.C. exempts certain pollution control projects from the requirements of PSD review. Subparagraph "a" of this rule states that, "A pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40 CFR 52.21(b)(2)(iii)(h), adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall not be subject to the preconstruction review requirements of this rule." This federal rule defines a "major modification" as any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. However, it also specifically states that a physical change or change in the method of operation shall not include the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless it is determined that such addition, replacement, or use renders the unit less environmentally beneficial, or except:

1. There is reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and
2. It is determined that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.

The addition of the SNCR system is not considered a pollution control project because there are no expected significant increases of a collateral pollutant. This project is considered a minor modification that will result in a reduction of NO<sub>x</sub> emissions. The project is not expected to result in, nor does it authorize, an increase in the capacity utilization of Unit 6; and, uncontrolled representative actual emissions are not expected to be any different than past actual emissions. Based on the information reported on the previous two annual operating reports, the average NO<sub>x</sub> emissions rate has been approximately 0.47 lb/MMBtu, or 4,674 tons per year. However, following the replacement of the low-NO<sub>x</sub> burners on Unit 6 (performed prior to this SNCR project), Gulf Power has stated that the NO<sub>x</sub> emissions rate prior to the injection of urea has been reduced to 0.35 lb/MMBtu (which is equivalent to 3,481 tons per year at current levels of utilization). At the manufacturer's guaranteed 20% reduction, Gulf Power expects the resultant NO<sub>x</sub> emissions rate to be as low as 0.28 lb/MMBtu. This will result in a reduction of approximately 697 tons per year of NO<sub>x</sub> directly attributable to the addition of SNCR on Unit 6. It should be noted that this is the level of reduction that could be observed if the SNCR were to be utilized at all times that Unit 6 is in operation. However, the Agreement does not require that a particular control device must be used continuously; it only requires that a facility-wide NO<sub>x</sub> emissions limit of 0.2 lb/MMBtu be met. The Department believes that the proposed NO<sub>x</sub> reduction project will be environmentally beneficial and will not result in a significant net increase in representative actual annual emissions of any criteria pollutant. As such, this project is exempt from the requirements of PSD preconstruction review. Nevertheless, an air construction permit is required to conduct the proposed work.

### 3. APPLICATION REVIEW

Crist Unit 6 (ARMS Emissions Unit -006) is a 369 MW Foster Wheeler front wall-fired, dry bottom boiler. The maximum heat input rate is 3,704.8 MMBtu per hour while combusting the primary fuels of pulverized bituminous coal and/or natural gas. Distillate oil and on-specification used oil fuel are also combusted as a secondary fuels for periods of start-up and flame stabilization. Emissions of particulate matter are currently reduced by a Wheelabrator (model # HaRDE) cold side electrostatic precipitator. Nitrogen oxides are controlled with low NO<sub>x</sub> burners. Unit 6 has continuous monitors for opacity, stack gas flow, carbon dioxide, nitrogen oxides, and sulfur dioxide. Units 6 and 7 share a common stack that is 23.2 feet in diameter and 450 feet high. Based on the current Title V air operation permit, Unit 6 is subject to Rule 62-296.405, F.A.C. (Fossil Fuel Fired Steam Generators > 250 MMBtu/Hour Heat Input), predates the requirements of Rule 62-212.400, F.A.C. (PSD Preconstruction Review), and is regulated under Phase I of the federal Acid Rain Program.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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The applicant proposes to perform the following work on Unit 6:

### **Boiler Parameters**

As a direct result of the pollution control project, the following boiler components will be modified: 6 urea injectors will be installed spaced across the front of the boiler at an elevation of 171'-3". The proposed changes will not increase emissions nor add to the capacity of Unit 6. The materials of construction should be carefully selected to inhibit corrosion.

### **Selective Non-Catalytic Reduction (SNCR)**

Unit 6 currently uses low NO<sub>x</sub> burners to inhibit the formation of NO<sub>x</sub>. Gulf Power Company proposes to add a new SNCR system manufactured by Fuel Tech, Inc. SNCR is an add-on control technology in which ammonia is injected into the exhaust gas stream in an area of the duct where the stack gas temperature is in the range of 1,600 – 2,100 °F. The ammonia combines with NO<sub>x</sub> in the gas stream to form nitrogen and water. Ammonia that escapes the stack without reacting with NO<sub>x</sub> is called "ammonia slip". If a fuel contains significant amounts of sulfur, high levels of ammonia slip can lead to the formation of bisulfates and other particulate matter. To avoid these problems, SNCR systems can be designed with very low levels of ammonia slip (< 5 ppmv) while still achieving control efficiencies in the range of up to 75%. SNCR is a commercially available, demonstrated control technology currently employed on numerous utility boilers and combined cycle gas turbine projects worldwide.

### Design Specifications

The following specifications summarize the preliminary design of the proposed new SNCR system.

- *Basic Design Specifications:* The SNCR system is designed for a maximum NO<sub>x</sub> conversion efficiency of 25% based on an inlet NO<sub>x</sub> emissions rate of 0.35 lb/MMBtu, with a guaranteed removal efficiency of 20%.
- *Urea Storage and Mixing:* Urea will be delivered by truck (or possibly rail) and stored on site as a 40% aqueous solution in one 450,000 gallon tank. This will provide a minimum of 7 days operating inventory. The solution will be maintained at a temperature of approximately 40 °F by circulating through the SNCR system piping loop heating module.
- *Ammonia Slip:* The SNCR is designed and guaranteed to have a maximum ammonia slip concentration of 5 ppmvd corrected to 3% O<sub>2</sub> (24 hour basis) in the duct cross-sectional area for all boiler loads. There are no provisions for continuously monitoring ammonia concentration in the flue gas. When ammonia measurements in the flue gas are required, a wet chemical method will be utilized. More frequent tracking of ammonia slip will be monitored by measuring the amount of residual ammonia adsorbed by the fly ash. Fly ash samples will be measured periodically using an ion-specific electrode.
- *Urea Injection and Control System:* Using plant service water or other dilution water source, the metering module dilutes the reagent to a predetermined concentration (somewhat less than 30%) and precisely controls the flow of the diluted reagent to distribution modules located near the boiler injection point. The distribution modules provide the final control of diluted reagent and atomizing/cooling (plant) air being delivered to each injector. The diluted reagent is injected into the boiler via wall-mounted air atomizing lances, which will be installed across the face of the boiler at an elevation of 171'-3". At peak load for Unit 6, with 0.35 lb/MMBtu inlet NO<sub>x</sub> and 20% reduction, urea injection would be 741 lb/hr on a dry basis. This translates to an ammonia flow of 333.8 lb/hr.

### SNCR Operation

The SNCR will operate as needed to meet the facility 0.20 lb/MMBtu NO<sub>x</sub> plant-wide emissions limit. During these periods, the SNCR will operate whenever the Unit is operating at or above its normal low

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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load level. If the unit drops below this level, the SNCR system will automatically stop injection until the Unit returns to its low load level.

### Conclusion

While the design specifications will result in NO<sub>x</sub> conversion efficiency quite a bit lower than can typically be expected for similar SNCR projects, based on the application, the preliminary design appears capable of achieving a minimum guaranteed NO<sub>x</sub> conversion efficiency of 20%. Gulf Power believes that this lower level of efficiency will be sufficient to comply with the facility-wide NO<sub>x</sub> emissions cap of 0.20 lb/MMBtu, as required by the Agreement.

The draft permit requires continuous monitoring to demonstrate compliance with the standards for NO<sub>x</sub> emissions. Annual performance testing is required for NO<sub>x</sub> reduction efficiency, and ammonia slip. Quarterly reports are required to summarize compliance with the NO<sub>x</sub> standards.

### **4. PRELIMINARY DETERMINATION**

The NO<sub>x</sub> reduction project is based on the design and operation of conventional SNCR air pollution control equipment. This type of air pollution control device is operating successfully on numerous coal-fired utility boilers throughout the world.

The Department makes a preliminary determination that the proposed project will comply with the terms of the Agreement and all existing applicable air pollution regulations. However, it is still possible that additional measures may need to be taken to reduce NO<sub>x</sub> emissions from Units 004 and 005 if it turns out that the addition of the SNCR on Unit 006 is not quite sufficient to allow the facility to comply with the facility-wide limit. This determination is based on a technical review of the application, the preliminary design, 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. Jonathan Holtom 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 Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

### **REFERENCES**

1. Data Compiled from the Department's ARMS Database
2. EPA's White Paper, "Selective Non-Catalytic Reduction (SNCR) For Controlling NO<sub>x</sub> Emissions", Prepared By: SNCR Committee, Institute Of Clean Air Companies, Inc., May 2000.

**PERMITTEE**

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

*Authorized Representative:*

G. Dwain Waters, Q.E.P., Air Quality Programs Supervisor

Crist Electric Generating Plant Unit 6 SNCR Project Facility ID No. 0330045 SIC No. 4911 Air Permit No. 0330045-012-AC Permit Expires: September 1, 2006
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**PROJECT AND LOCATION**

This permit authorizes the construction of a new new selective non-catalytic reduction system for Unit 6 at the existing Crist Electric Generating Station, which is located on Governors Bayou off 10 Mile Road in Pensacola, Escambia County, Florida. The map coordinates are: Zone 16; 478.50 km East; and 3381.30 km North.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This air construction permit supplements all other valid air construction and operation permits.

**CONTENTS**

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

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Michael G. Cooke, Director  
Division of Air Resource Management

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(Date)



## SECTION 1. GENERAL INFORMATION

### FACILITY AND PROJECT DESCRIPTION

The existing plant consists of six fossil fuel fired steam generators and two fly ash silos. Natural gas is the primary fuel for Units 2 and 3. Pulverized coal is the primary fuel for Units 4, 5, 6 and 7. Fuel oil is used as supplemental fuel in all six of the units. The following units are affected by this air construction permit.

ID	Emission Unit Description
002	Boiler No. 2 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
003	Boiler No. 3 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
004	Boiler No. 4 (Phase I and II Acid Rain Unit)
005	Boiler No. 5 (Phase I and II Acid Rain Unit)
006	Boiler No. 6 (Phase I Acid Rain Unit)
007	Boiler No. 7 (Phase I Acid Rain Unit)

### REGULATORY CLASSIFICATION

Title III: The existing facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The existing facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

### RELEVANT DOCUMENTS

Agreement For The Purpose Of Ensuring Compliance With Ozone Ambient Air Quality Standards, dated August 28, 2002. (Attached and made part of this permit as Appendix NA – NO<sub>x</sub> Agreement.)

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: All documents related to applications for permits to construct, modify, or operate emissions units at this facility shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all permit applications shall also be sent to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794.
3. Appendices: The following Appendices are attached as part of this permit: Appendix CF (Citation Format); Appendix GC (General Conditions); Appendix NA (NO<sub>x</sub> Agreement); and, Appendix SC (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated 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. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-4, 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Construction Approval: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Rule 62-210.200(76), F.A.C. defines *construction* as, "The act of performing on-site fabrication, erection, installation or modification of an emissions unit or facility of a permanent nature, including installation of foundations or building supports; laying of underground pipe work or electrical conduit; and fabrication or installation of permanent storage structures, component parts of an emissions unit or facility, associated support equipment, or utility connections. Land clearing and other site preparation activities are not a part of the construction activities." Such permits shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions units. The permittee shall apply for a Title V operation permit (revision) at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

This section of the permit addresses the following existing emissions units, with an emphasis on Unit 006.

ID	Emission Unit Description
002	Boiler No. 2 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
003	Boiler No. 3 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
004	Boiler No. 4 (Phase I and II Acid Rain Unit)
005	Boiler No. 5 (Phase I and II Acid Rain Unit)
006	Boiler No. 6 (Phase I Acid Rain Unit)
007	Boiler No. 7 (Phase I Acid Rain Unit)

#### Emissions Unit No. 006

*Description:* Unit 6 is a Foster Wheeler front wall-fired, dry bottom boiler that began commercial operation on May 1, 1970.

*Fuels:* coal, natural gas, new No. 2 fuel oil and/or on-specification used oil, and occasional on-site generated "oil contaminated soil".

*Capacity:* 3,704.8 MMBtu/hour when firing pulverized coal and/or natural gas.

*PM Controls:* Cold side electrostatic precipitator.

*NO<sub>x</sub> Controls:* Low NO<sub>x</sub> burners and selective non-catalytic reduction (SNCR).

*Continuous Monitors:* CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, opacity, stack gas flow, and urea injection rate.

*Stack Parameters:* Units 6 shares a common stack with Unit 7 that is 450 feet tall with a diameter of 23.2 feet. The volumetric flow rate of Unit 6 & 7 combined, at permitted capacity, is approximately 2,462,700 acfm.

*{Permitting Notes: Based on the current Title V air operation permit, Unit 6: is regulated under Rule 62-296.405, F.A.C. (Fossil Fuel Fired Steam Generators > 250 MMBtu/Hour Heat Input); predates the requirements of Rule 62-212.400, F.A.C. (PSD Preconstruction Review); and is regulated under Phase I of the federal Acid Rain Program (40 CFR 75).}*

*{Permitting Note: 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" (Agreement). The "Agreement" is the basis for many of the following permit conditions.}*

#### PREVIOUS APPLICABLE REQUIREMENTS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

#### EQUIPMENT AND CONSTRUCTION

2. Selective Non-Catalytic Reduction (SNCR) System: The permittee shall construct, tune, operate, and maintain a new SNCR system for Unit 6 to reduce emissions of nitrogen oxides (NO<sub>x</sub>) as described in the application, approved drawings, plans, and other documents on file with the Department. The SNCR system shall be designed to achieve no less than a 20% reduction in NO<sub>x</sub> emissions as measured across the

## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

SNCR unit inlet and outlet. The designed target ammonia slip level is 5 ppmv based on a 24-hour average. The storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.

*{Permitting Note: Fuel Tech, Inc. designed the new SNCR system, which will generally consist of the following:*

- **UREA Injection System:** Urea will be delivered by truck (or possibly rail) and stored on site as a 40% aqueous solution in one 450,000 gallon tank. This will provide a minimum of 7 days operating inventory. The solution will be maintained at a temperature of approximately 40 °F by circulating through the SNCR system piping loop heating module. Using plant service water or other dilution water source, the metering module dilutes the reagent to a predetermined concentration (somewhat less than 30%) and precisely controls the flow of the diluted reagent to distribution modules located near the boiler injection point. The distribution modules provide the final control of diluted reagent and atomizing/cooling (plant) air being delivered to each injector. The diluted reagent is injected into the boiler via wall-mounted air atomizing lances, which will be installed across the face of the boiler at an elevation of 171'-3". At peak load for Unit 6, with 0.35 lb/MMBtu inlet NO<sub>x</sub> and 20% reduction, urea injection would be 741 lb/hr on a dry basis. This translates to an ammonia flow of 333.8 lb/hr.
- **Ammonia Slip:** The SNCR is designed and guaranteed to have a maximum ammonia slip concentration of 5 ppmvd corrected to 3% O<sub>2</sub> (24 hour basis) in the duct cross-sectional area for all boiler loads. There are no provisions for continuously monitoring ammonia concentration in the flue gas. When ammonia measurements in the flue gas are required, a wet chemical method will be utilized. More frequent tracking of ammonia slip will be monitored by measuring the amount of residual ammonia adsorbed by the fly ash. Fly ash samples will be measured periodically using an ion-specific electrode.

[Design; Paragraph 2 of the Agreement; Rule 62-204.800, F.A.C.; 40 CFR 68]

3. **Updated Designs:** The permittee shall update the Department with final design specifications and any substantial changes made to the final design specifications during the actual construction phase. [Rule 62-4.070(3), F.A.C.]
4. **Project Completion:** The permittee shall complete construction and commence operation of the new SNCR system by May 1, 2005. [Applicant Request; Design; Paragraph 2 of the Agreement]

### PERFORMANCE REQUIREMENTS

*{Permitting Note: This permit does not alter any specifications or limitations included in previous permits that define permitted capacities such as heat input rates, fuel consumption, or hours of operation. It does not authorize any additional fuels or such other methods of operation.}*

### EMISSIONS STANDARDS

5. **Plant-Wide NO<sub>x</sub> Limit:** Emissions of nitrogen oxides (NO<sub>x</sub>) from the combined operation of Units 4, 5, 6, and 7 shall not exceed 0.2 lb/MMBtu heat input based on a 30-day rolling average except for periods when Unit 7 is shutdown. The plant-wide daily NO<sub>x</sub> emission rate shall be determined by the following equation:

$$\text{Plant-Wide Daily MMBtu-Weighted NO}_x \text{ Emission Rate} = \frac{\sum_{\text{Units 4, 5, 6, 7}} [(\text{Unit \# daily MMBtu}) \times (\text{Unit \# daily NO}_x \text{ CEMS Rate})]}{\sum_{\text{Units 4, 5, 6, 7}} (\text{Unit \# daily MMBtu})}$$

## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

The "Unit # daily MMBtu" shall be determined by the daily as-burned fuel analysis and the fuel fired for each unit. The "Unit # daily NO<sub>x</sub> CEMS Rate" shall be determined by the daily average of NO<sub>x</sub> CEMS data for each unit and reported in terms of "lb/MMBtu heat input". The plant-wide daily NO<sub>x</sub> emissions rate shall be determined each day regardless of the operating status for Unit 7. The plant-wide 30-day rolling NO<sub>x</sub> average shall be determined for each 30 sequential Unit 7 operating days, which need not be consecutive. A Unit 7 operating day means any calendar day that Unit 7 operates a minimum of 18 hours. The Unit 7 daily NO<sub>x</sub> CEMS rate may consist of less than 18 hours of data if this is due to CEMS malfunction or invalid CEMS data. When the catalyst temperature is below 600° F during a startup or shutdown, NO<sub>x</sub> emissions data collected during such periods may be excluded from the daily NO<sub>x</sub> average. In accordance with Condition No. 9 of Subsection 3A of permit 0330045-005-AC, NO<sub>x</sub> emissions data collected during SCR bypass during the non-ozone season may be excluded from the daily NO<sub>x</sub> average. The plant-wide NO<sub>x</sub> emission standard shall be achieved by utilizing the SCR system for Unit 7 and the SNCR system for Unit 6. The effective date for the plant-wide NO<sub>x</sub> emission standard is the startup date of the SNCR system on Unit 6, but no later than May 1, 2006.

For purposes of this condition, "startup date" shall mean the date that the permittee demonstrates initial compliance with the terms of this air construction permit. [Paragraphs 2, 3 and Exhibit B of the Agreement]

#### EMISSIONS PERFORMANCE TESTING

6. Test Notification: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. The notification shall include: the scheduled date, approximate start time, test team, contact name and phone number, description of unit to be tested, and the tests to be performed. [Rule 62-297.310(7)(a)9, F.A.C.]
7. Nitrogen Oxides, Compliance Tests: Within 60 days after completing construction of the SNCR system and bringing Unit 6 on line, the permittee shall conduct tests to demonstrate compliance with the design specification to achieve no less than a 20% reduction in the nitrogen oxide emission rate. The permittee shall concurrently test the SNCR inlet and SNCR outlet in accordance with EPA Method 7E as adopted by reference in Rule 62-204.800, F.A.C. Data collected during the annual NO<sub>x</sub> RATA testing may be used to represent NO<sub>x</sub> emissions at the SNCR outlet. The data shall be collected for at least three consecutive hours. Subsequent tests shall be conducted during each federal fiscal year (October 1st to September 30th). [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]
8. Ammonia Slip, Performance Tests: Within 60 days after completing construction of the SNCR system and bringing Unit 6 on line, the permittee shall conduct tests to determine the ammonia slip rate in accordance with EPA Method CTM-027 or other methods approved by EPA. Subsequent tests shall be conducted during each federal fiscal year. If tests show ammonia slip emissions are greater than the design target level specified in Condition No. 2 of this subsection, the permittee shall take corrective actions such as repair, addition of urea injectors for better mixing, addition of mixing vanes in the duct, etc. [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

*{Permitting Note: EPA Methods 1 (Traverse Points), 2 (Velocity and Flow Rate), 3 (Gas Analysis), 4 (Moisture Content), and 19 (Calculating Emission Rates, Use of F-Factors) may also be used to supplement the required test methods.}*

#### CONTINUOUS MONITORING REQUIREMENTS

*{Permitting Note: In accordance with the federal Acid Rain requirements, the following continuous monitors are installed on these units: SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub> and stack gas flow.}*

9. NO<sub>x</sub> CEMS: To demonstrate compliance with the emissions standards, the permittee shall install, calibrate,

## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

operate and maintain a continuous emissions monitoring system (CEMS) to continuously monitor and record the emissions of nitrogen oxides and an appropriate diluent gas (carbon dioxide or oxygen). The CEMS shall monitor and record data during all periods of Unit 6 operation including startup, shutdown, malfunction or emergency conditions, but not including continuous monitoring system breakdowns, repairs, calibration checks, or zero and span adjustments. For each calendar quarter, monitor availability shall be 95% or greater. If unable to achieve this level, the permittee shall submit a report identifying the problems in achieving 95% monitor availability and a plan of corrective actions. The permittee shall implement the reported corrective actions within the next calendar quarter. *{Permitting Note: The existing NO<sub>x</sub> CEMS required by the Acid Rain program satisfies this requirement. [Rule 62-4.070(3), F.A.C.]}*

10. **SNCR Urea Injection:** In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a flow meter to measure and record the urea injection rate for the SNCR system. The permittee shall document the general range of urea flow rates required to meet the NO<sub>x</sub> standard over the range of load conditions by comparing NO<sub>x</sub> emissions with urea flow rates. During NO<sub>x</sub> monitor downtimes or malfunctions, the permittee shall operate at a urea flow rate that is consistent with the documented flow rate for the given load condition. [Rules 62-4.070(3) and 62-212.400(5)(c), F.A.C.]

### RECORDS AND REPORTS

11. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the provisions of Rule 62-297.310(8), F.A.C. For each required test run, the report shall indicate the actual heat input rate (MMBtu/hour), the NO<sub>x</sub> emission rate (lb/MMBtu) as recorded by the CEMS, and the urea injection rate (lb/hour). The report shall also include copies of the continuous monitoring records for the NO<sub>x</sub> emissions. [Rule 62-297.310(8), F.A.C.]

- a. **Quarterly Report:** For each calendar day during the reporting quarter, the permittee shall report the following information related to the operation of Units 4, 5, 6 & 7:

- Hours of operation for each Unit;
- The Unit # daily MMBtu for each Unit (see Condition 5 of this Subsection);
- The Unit # daily NO<sub>x</sub> CEMS rate for each Unit, lb/MMBtu (see Condition 5 of this Subsection);
- The Plant-Wide Daily MMBtu-Weighted NO<sub>x</sub> Emission Rate (see Condition 5 of this Subsection);
- The 30-day plant-wide average NO<sub>x</sub> emission rate, lb/MMBtu;
- Identify whether Unit 7 operated less than 18 hours;
- Identify the occurrence of a Unit 7 startup or shutdown;
- Whether or not the day included a startup, shutdown, or malfunction of the SNCR or SCR systems; and,
- Identify operation of Unit 7 with SCR bypass for catalyst maintenance or repair and the duration of bypass (hours).

Identify the "F" factor used for any calculations, the method of determination, and type of fuel combusted. For each day that CEMS data was not obtained for at least 18 hours of Unit 6 operation, provide a justification for not obtaining sufficient data and describe the corrective actions taken to prevent this in the future. Identify any emissions data excluded from the calculation of emission rates due to startup, shutdown, or malfunction.

Each quarterly report is due within 30 days of the calendar quarter being reported.

[Rule 62-4.070(3), F.A.C.; NO<sub>x</sub> Agreement, Exhibit "B"]

**SECTION 4. APPENDICES**

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**C. Appendix SC – Standard Conditions**

Appendix CF - Citation Format;  
Appendix GC - General Conditions;  
Appendix NA - NO<sub>x</sub> Agreement; and,  
Appendix SC - Standard Conditions

**SECTION 4. APPENDIX CF**  
**CITATION FORMATS**

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*The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.*

**Old Permit Numbers**

**Example:** Permit No. AC50-123456 or Air 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  
"001" identifies the specific permit project  
"AC" identifies the permit as an air construction permit  
"AF" identifies the permit as a minor federally enforceable state operation permit  
"AO" identifies the permit as a minor source air operation permit  
"AV" identifies the permit as a Title V Major Source Air Operation Permit

**PSD Permit Numbers**

**Example:** Permit No. PSD-FL-317

**Where:** "PSD" means issued pursuant to 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

**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

**Agreement**

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". Throughout the permit, this is cited as the "Agreement".



**SECTION 4. APPENDIX GC**  
**GENERAL CONDITIONS**

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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 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. 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 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and 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 or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does 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 or 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 a reasonable time, access to the premises, where the permitted activity is located or conducted to:
  - a. Have access to and copy and records that must be kept under the 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 non-compliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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 403.73 and 403.111, Florida

**SECTION 4. APPENDIX GC**  
**GENERAL CONDITIONS**

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Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code 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 (not applicable to project);
  - b. Determination of Prevention of Significant Deterioration (not applicable to project); and
  - c. Compliance with New Source Performance Standards (not applicable to project).
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 or 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:
    - 1) The date, exact place, and time of sampling or measurements;
    - 2) The person responsible for performing the sampling or measurements;
    - 3) The dates analyses were performed;
    - 4) The person responsible for performing the analyses;
    - 5) The analytical techniques or methods used; and
    - 6) 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 that 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.

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NO<sub>x</sub> AGREEMENT

One Energy Place  
Pensacola, Florida 32520  
Tel 850.444.6111



August 29, 2002

Ms. Blanca S. Bayo, Director  
Division of the Commission Clerk and Administrative Services  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee FL 32399-0870

020943 - E1

Dear Ms. Bayo:

Enclosed are an original and fifteen copies of the Petition for Approval of FDEP/Gulf Power Company Agreement Pursuant to Section 366.8255(1)(d)7 of the Florida Statutes for Purposes of Cost Recovery of the Related Expenditures and Expenses through the Environmental Cost Recovery Clause.

Also enclosed is a 3.5 inch double sided, high density diskette containing the Petition in Microsoft Word format as prepared on a Windows NT based computer.

Sincerely,

A handwritten signature in cursive script that reads "Susan D. Ritenour".

Susan D. Ritenour  
Assistant Secretary and Assistant Treasurer

lw

cc: Beggs and Lane  
Jeffrey A. Stone, Esquire

DOCUMENT NUMBER DATE  
J9191 AUG 30 8  
FPSC-COMMISSION CLERK

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NO<sub>x</sub> AGREEMENT

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Petition for approval of FDEP/Gulf Power agreement pursuant to Section 366.8255(1)(d)7 of the Florida Statutes for purposes of cost recovery of the related expenditures and expenses through the Environmental Cost Recovery Clause.

Docket No. 02 \_\_\_\_\_-EI  
Date Filed: August 30, 2002

**PETITION FOR APPROVAL OF FDEP/GULF POWER AGREEMENT PURSUANT TO SECTION 366.8255(1)(d)7 OF THE FLORIDA STATUTES FOR PURPOSES OF COST RECOVERY OF THE RELATED EXPENDITURES AND EXPENSES THROUGH THE ENVIRONMENTAL COST RECOVERY CLAUSE**

GULF POWER COMPANY ("Gulf Power", "Gulf", or "the Company"), by and through its undersigned counsel, and pursuant to Section 366.8255(1)(d)7 of the Florida Statutes as amended during the 2002 Florida legislative session and Florida Public Service Commission ("Commission") Order Nos. PSC-94-0044-FOF-EI and PSC-94-1207-FOF-EI, hereby petitions this Commission for approval of the "Agreement for the Purpose of Ensuring Compliance with Ozone Ambient Air Quality Standards" ("Ozone Agreement") entered into on August 28, 2002 between the Florida Department of Environmental Protection ("FDEP") and Gulf Power as a new program for cost recovery through the Environmental Cost Recovery Clause ("ECRC"). As grounds for the relief requested by this petition, the Company would respectfully show:

(1) Notices and communications with respect to this petition and docket should be addressed to:

Jeffrey A. Stone  
Russell A. Badders  
Beggs & Lane  
P. O. Box 12950  
Pensacola, FL 32591-2950

Susan D. Ritenour  
Assistant Secretary and Assistant Treasurer  
Gulf Power Company  
One Energy Place  
Pensacola, FL 32520-0780

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**NO<sub>x</sub> AGREEMENT**

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(2) Gulf is a corporation with its headquarters located at 500 Bayfront Parkway, Pensacola, Florida 32501. The Company is an investor-owned electric utility operating under the jurisdiction of this Commission.

(3) Gulf owns and operates the Crist Plant generating facility in Escambia County, Florida. This plant generates electricity for the consuming public through the combustion of fossil fuels. The combustion of fossil fuels produces nitrogen oxides ("NO<sub>x</sub>"), which are some of the precursor compounds that contribute to the formation of ozone in the ambient air. The Crist Plant currently satisfies all federal and state air emissions requirements, including those applicable to NO<sub>x</sub>.

(4) Under the authority of the Clean Air Act, the United States Environmental Protection Agency ("USEPA") promulgated regulations dealing with air quality, including ambient air quality standards designed to protect human health and welfare. One such regulation places a limit on the amount of ozone that is considered to be acceptable in the ambient air during any 8-hour period ("Ozone Standard"). Based upon the best available information, including ambient air quality monitoring data, FDEP does not expect Escambia and Santa Rosa Counties to be in compliance with the Ozone Standard in 2004/2005 unless significant reductions of emissions of ozone precursor compounds are achieved in the Pensacola, Florida Metropolitan Planning Area ("PFMPA").

(5) In its 2002 session, the Florida legislature adopted amendments to section 366.8255(1)(d) of the Florida Statutes to provide that an electric utility may seek recovery of costs and expenses prudently incurred pursuant to a voluntary agreement with FDEP or USEPA, for the purpose of ensuring compliance with ozone ambient air quality standards. The

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NO<sub>x</sub> AGREEMENT

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legislation, which was sponsored in the Florida House by Representative Jerry Maygarden of Pensacola and in the Florida Senate by Senator Charlie Clary of Destin, and was supported during the legislative session by FDEP Secretary David Struhs and Florida Governor Jeb Bush, was signed into law by Governor Bush on May 23, 2002. In order to qualify for recovery through the ECRC, the agreement between the electric utility and the qualifying environmental agency for the purpose of ensuring compliance with ozone ambient air quality standards must be entered into on or after May 23, 2002 and prior to October 1, 2002.

(6) Representatives of FDEP and Gulf have met and arrived at a mutual agreement in furtherance of the purposes of Section 366.8255(1)(d)7 of the Florida Statutes as amended by Chapter 2002-276 of the Laws of Florida. A copy of the resulting Ozone Agreement, which was signed by the parties on August 28, 2002, is attached to and made a part of this petition as Appendix A.

(7) The Ozone Agreement calls for Gulf Power to make changes in its equipment and/or operations at Plant Crist. Such changes are designed to reduce the overall NO<sub>x</sub> emission rate at the plant as part of a community wide effort to reduce ozone precursor compounds in the PFMPA. When fully implemented, the Ozone Agreement will limit the overall 30 day average NO<sub>x</sub> emission rate at Plant Crist to 0.2 lbs./mmbtu year-round except for periods in which Crist Unit No. 7 ("Crist 7") is offline.<sup>1</sup> The predominant change envisioned by the agreement is the

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<sup>1</sup> As the largest and most efficient of seven generating units at Plant Crist, Crist 7 is generally the economic choice to be operated. Whenever Crist 7 is offline, there is a greater reduction in NO<sub>x</sub> emissions than would otherwise result from operating Crist 7 with the new SCR. Since NO<sub>x</sub> reduction is the goal, the Ozone Agreement recognizes that the emission rate limit is not necessary when Crist 7 is not operating.

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NO<sub>x</sub> AGREEMENT

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addition of Selective Catalytic Reduction ("SCR") technology to Crist 7 by May 1, 2005.<sup>2</sup> In addition to the NO<sub>x</sub> emission reductions that will occur as a result of the installation and operation of the Crist 7 SCR project, the Ozone Agreement also calls for further reductions in NO<sub>x</sub> emissions through the addition of NO<sub>x</sub> reduction technologies on one or more of the other coal-fired units at Plant Crist. The selection and installation of one or more additional NO<sub>x</sub> reduction technologies for one or more of the other units will follow engineering studies conducted as part of the Ozone Agreement.<sup>3</sup> The engineering studies contemplated by the Ozone Agreement are intended to produce unit specific cost and performance data that will allow Gulf to make a decision between various alternatives based on the relative cost-effectiveness of each technology. To augment the NO<sub>x</sub> reductions envisioned from the addition of the NO<sub>x</sub> reduction technologies discussed above, the Ozone Agreement also calls for the retirement of the three oldest Crist generating units (Crist 1, Crist 2 and Crist 3) by May 1, 2006.

(8) As shown in the graph set forth in Appendix B to this petition, the annual NO<sub>x</sub> emission reductions envisioned by the Ozone Agreement, as compared to 1999 baseline data, are equivalent to a result that could otherwise be achieved by the installation of SCR technology on both Crist 7 and Crist 6. The flexibility to study other alternatives for achieving an overall plant

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<sup>2</sup> Due to structural interference and performance concerns for the new SCR, the Ozone Agreement also calls for a new Crist 7 precipitator to be constructed at a new location in order to allow the new SCR to be built in the location of the old Crist 7 precipitator. The new SCR will be completed one year after construction of the new precipitator is completed.

<sup>3</sup> The deadline for installing other selected NO<sub>x</sub> reduction technologies is May 1, 2006 unless the cost effective choice is determined to be SCR technology for Crist 6. If SCR for Crist 6 is selected, the deadline for installation will be December 31, 2007. The Ozone Agreement calls for Gulf to obtain written concurrence from FDEP before implementing NO<sub>x</sub> reduction technology or technologies on one or more of the remaining coal-fired units at Plant Crist. The written concurrence from FDEP will specify that the use of the selected technology or technologies is reasonable and necessary to achieve the overall plantwide emission rate of 0.2 lbs/mmBtu specified in the Ozone Agreement.

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wide btu weighted average NO<sub>x</sub> emission rate of 0.2 lbs/mmbtu may allow Gulf to avoid the cost of installing SCR technology on Crist 6 for a net savings of as much as \$50 million or more.

(9) Gulf seeks approval of the Ozone Agreement as an environmental compliance program/activity appropriate for recovery through the ECRC pursuant to the amendments to the Florida Statutes contained in Chapter 2002-276 of the Laws of Florida. This new program is appropriate for ECRC recovery based on the provisions of Section 366.8255(1)(d)7 of the Florida Statutes and the prior orders of the Commission implementing the ECRC.

(10) The Company's expenses and/or expenditures associated with the activities discussed in the Ozone Agreement are not recovered through any other cost recovery mechanism or through base rates. These new activities were not included in the Company's last test year forecast upon which its current base rates were established. As a result, the expenditures and/or expenses associated with these activities will be incurred separate and apart from the expenditures and/or expenses for activities that were approved in the Company's last test year forecast upon which rates are based.

(11) Gulf is not requesting a change in the ECRC factors as part of this petition. The projected expenditures and expenses will be reflected in subsequent true-up and/or projection filings submitted as part of the ongoing docket addressing the ECRC. The actual expenditures made and expenses incurred by the Company will be addressed in subsequent ECRC filings and will be subject to audit.



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**NO<sub>x</sub> AGREEMENT**

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(12) The parties to the Ozone Agreement acknowledge that the NO<sub>x</sub> reduction activities identified therein are conditioned upon timely approval by this Commission for cost recovery through the ECRC. Given that substantial expenditures must be undertaken early in 2003 in order to meet the deadlines set forth in the Ozone Agreement, it is imperative that Gulf obtain an order from this Commission authorizing Gulf to recover the costs incurred pursuant to this agreement through the Environmental Cost Recovery Clause that is rendered final within 90 days of the execution of the agreement.<sup>4</sup> If a final order is not rendered within 90 days of the date of execution of this agreement, the parties concur that the dates and schedules set forth in the Ozone Agreement are subject to revision solely by mutual agreement of the parties in order to allow Gulf to move forward with the activities described therein above pending a final order by the FPSC. If a final order is not rendered within 120 days of execution of this agreement, the entire agreement automatically becomes null and void unless extended by mutual written agreement of the parties within 30 days thereafter. The net effect of these provisions is that delay in final rendition of an order approving the request made by this petition beyond the end of this year will either result in delay of the NO<sub>x</sub> emission reductions contemplated by the Ozone Agreement or cancellation of the agreement altogether. Either result will frustrate the intent underlying enactment of Chapter 2002-276 of the Laws of Florida which is to enable communities such as the PFMPA to avoid becoming classified as non-attainment areas for ozone ambient air quality standards with the consequential effects that may include imposition of emission caps that could limit expansion of business and industry, addition of required vehicle emission testing, and federal road funding cutbacks. As a result, Gulf respectfully requests that

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<sup>4</sup> A final order is one that is no longer subject to review or appeal by a court of competent jurisdiction.

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the Commission take this petition up for consideration as Proposed Agency Action at the earliest opportunity. Towards that end, Gulf respectfully suggests that a Commission decision on this petition as Proposed Agency Action at the Commission Conference scheduled for October 1, 2002 followed by expedited entry of a PAA order would allow the traditional 21 day period for substantially affected parties to request a hearing to run in time for the Commission to hold a hearing, if requested, on November 20-22, 2002 as part of the proceedings in Docket No. 020007-EI related to the ECRC. Absent a request for hearing, such a PAA order will become final and begin the time for a substantially affected party to file a notice of appeal. If no such notice is filed, the resulting order will be rendered final and no longer subject to review or appeal within the deadlines specified by the Ozone Agreement. If a request for hearing is filed by an appropriate party, a Commission decision could still be issued and made final in the absence of an appeal before the Ozone Agreement would be rendered null and void by its own terms.

WHEREFORE, Gulf Power Company respectfully requests the Commission to approve the "Agreement for the Purpose of Ensuring Compliance with Ozone Ambient Air Quality Standards" entered into on August 28, 2002 between the Florida Department of Environmental Protection and Gulf Power Company and the costs associated therewith for recovery through the

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NO<sub>x</sub> AGREEMENT

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Environmental Cost Recovery Clause consistent with this petition, and that such approval and authorization be set forth in a Proposed Agency Action order issued by the Commission at the earliest practical opportunity or grant such other relief as is just and reasonable.

Respectfully submitted the 29<sup>th</sup> day of August, 2002.



**JEFFREY A. STONE**

Florida Bar No. 325933

**RUSSELL A. BADDERS**

Florida Bar No. 7455

**Beggs & Lane**

501 Commendencia Street

P. O. Box 12950

Pensacola, Florida 32591-2950

(850) 432-2451

**Attorneys for Gulf Power Company**

**AGREEMENT FOR THE PURPOSE OF ENSURING  
COMPLIANCE WITH OZONE AMBIENT AIR  
QUALITY STANDARDS**

This agreement is entered into by the Florida Department of Environmental Protection (DEP) and Gulf Power Company (GULF), for the exclusive purposes as follows: (a) ensuring that GULF's electrical generating facility located within the Pensacola, Florida Metropolitan Planning Area (PFMPA) supports the Area's compliance with the eight hour ozone ambient air quality standard and (b) authorizing related cost recovery pursuant to Section 366.8255(1)(d) of the Florida Statutes as amended by the Florida Legislature in its 2002 session and signed into law by the Governor of the State of Florida.

**WHEREAS:**

I. GULF owns and operates the Crist Plant electrical generating facility in Escambia County, Florida. This plant generates electricity for the consuming public through the combustion of fossil fuel. The combustion of fossil fuels produces some of the precursor compounds that contribute to the formation of ozone in the ambient air.

II. Under the authority of the Clean Air Act, the U. S. Environmental Protection Agency (EPA) promulgated regulations dealing with air quality, including ambient air quality standards designed to protect human health and welfare. One such regulation places a limit on the amount of ozone that is considered to be acceptable in the ambient air during any 8-hour period (Ozone Standard).

III. Based upon the best available information, including ambient air quality monitoring data, DEP does not expect Escambia and Santa Rosa Counties to be in compliance with the Ozone Standard in 2004/2005 unless significant reductions of emissions of ozone precursor compounds are achieved in the Pensacola, Florida Metropolitan Planning Area.

IV. In its 2002 session, the Florida legislature adopted amendments to section 366.8255(1)(d) of the Florida Statutes to provide that an electric utility may seek recovery of costs and expenses prudently incurred pursuant to a voluntary agreement with DEP or EPA, for the purpose of ensuring compliance with ozone ambient air quality standards.

V. Representatives of DEP and GULF have met and arrived at a mutual agreement in furtherance of the purposes of Section 366.8255(1)(d)7 of the Florida Statutes as amended during the 2002 Florida legislative session.

VI. DEP and GULF concur that installation of Selective Catalytic Reduction (SCR) controls at Crist Unit #7 as well as the implementation of other NO<sub>x</sub> reduction

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technologies on one or more of the other three coal-fired generating units at Plant Crist will be needed as part of a community wide effort to reduce ozone precursor compounds in the Pensacola Metropolitan Planning Area. Due to structural interference and performance concerns for the new SCR, a new Unit #7 precipitator will also be constructed at a new location and the SCR will be completed one year later in the location of the old Unit #7 precipitator.

VII. It is anticipated that the implementation of this agreement will result in an approximately 61% reduction [9,188 tons] in annual NO<sub>x</sub> emissions from the GULF Crist Plant based upon 1999 baseline data.

NOW THEREFORE, in consideration of the premises and the mutual agreements contained herein, and intending to be legally bound, the DEP and GULF hereby agree as follows:

1. By May 1, 2005, GULF, after obtaining necessary permits and approvals, will install and begin and continue operating an SCR system at Crist Unit #7 whenever the Crist Unit #7 is online. The SCR system is designed to achieve no less than an 85% reduction in the quantity of nitrogen oxides as measured at the SCR unit inlet (SCR Project). The SCR Project includes the installation of a new precipitator necessary to structurally accommodate installation of the SCR. See Exhibit "A" for proposed project schedule.
  
2. In addition to the Crist Unit #7 SCR Project, and in order to achieve an overall plant wide Btu weighted average of 0.2 lbs/mmbtu NO<sub>x</sub> emission rate as further specified in paragraph 3 below, Gulf agrees to conduct engineering studies on the feasibility of other NO<sub>x</sub> reduction technologies on one or more of the remaining three coal-fired units at Plant Crist. Such studies and related unit specific demonstration projects may include (but are not limited to) SCR, Selective Non-Catalytic Reduction (SNCR) technology, Over-Fired Air (OFA) technology, natural gas reburn technology, selective use of biomass fuel, etc. Gulf further agrees to complete these studies by May 1, 2005. In the event GULF identifies an SCR project for Crist Unit #6 as the NO<sub>x</sub> reduction technology, GULF will implement, begin and continue operating the SCR on Crist Unit #6 as described in paragraph 3 below by December 31, 2007. In the event GULF identifies a NO<sub>x</sub> reduction technology other than SCR on Crist Unit #6, GULF will select and implement one or more NO<sub>x</sub> reduction technologies on one or more of the three other Plant Crist coal-fired units by May 1, 2006. GULF will obtain written concurrence from DEP, before implementing such NO<sub>x</sub> reduction technology or technologies, that the use thereof is reasonable and necessary to achieve the overall plantwide emission rate of 0.2 lbs/mmbtu specified in paragraph 3 below.

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3. **GULF will make necessary changes identified and within the timeframes set forth in paragraph 2 above, that will allow it to limit the overall 30 day average NO<sub>x</sub> emission rate at the Crist Plant to 0.2 lbs./mmbtu year-round except for periods in which Crist Unit #7 is offline. The emission rate shall be calculated pursuant to the formula set forth in Exhibit "B" to this agreement. While Crist Unit #7 is online, this 0.2 lbs./mmbtu will be achieved by utilizing the SCR system on Crist Unit #7 [discussed in paragraph 1 above] and the controls identified pursuant to paragraph 2 above. During such time as Crist Unit #7 may be offline between May 1 and September 15, GULF agrees to operate any NO<sub>x</sub> reduction technology or technologies DEP may have determined to be reasonable and necessary at other Plant Crist coal-fired units, pursuant to paragraph 2 above, unless prevented from doing so by circumstances beyond its reasonable control.**
4. **In addition to the NO<sub>x</sub> emission rate reduction strategies implemented pursuant to paragraphs 1 through 3 above, as a further part of this agreement to support the PFMPA's compliance with the eight hour ozone ambient air quality standard, GULF agrees to retire Crist Unit #1 within 120 days of receiving a final order from the Florida Public Service Commission as provided in paragraph 8 below. In addition, GULF further agrees to retire Crist Unit #2 and Crist Unit #3 on or before May 1, 2006.**
5. **In the event state or federal law changes to require a change in NO<sub>x</sub> emissions or the PFMPA is declared non-attainment for ozone, any reduction requirements would be in accordance with all applicable state and federal requirements. In addition, although Florida currently has no state statute providing for NO<sub>x</sub> trading or credits, GULF shall be entitled to retain all NO<sub>x</sub> reduction credits and trading rights that may be authorized by Florida law in the future.**
6. **In the event the FPSC issues a final order authorizing GULF to recover costs incurred pursuant to this agreement, by July 5, 2004, GULF will submit a Title V renewal application to the Department's Bureau of Air Regulation, 2600 Blair Stone Rd, MS 5500, Tallahassee, FL 32399 to incorporate the control technologies contained in this agreement as well as the NO<sub>x</sub> emission rate as described in paragraphs 1 through 3 above. DEP concurs that the changes envisioned by this agreement will not constitute "modifications" that trigger New Source Review.**
7. **DEP concurs that the steps and changes described in paragraphs 1 through 4 above are prudent for purposes of (a) ensuring that GULF's electrical generating facility located within the PFMPA supports the Area's compliance with the eight hour ozone ambient air quality standard and (b) authorizing**

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NO<sub>x</sub> AGREEMENT

related cost recovery pursuant to Section 366.8255(1)(d) of the Florida Statutes as amended by the Florida Legislature in its 2002 session and signed into law by the Governor of the State of Florida.

8. This agreement is based upon the assumption that an order from the Florida Public Service Commission (FPSC) authorizing GULF to recover the costs incurred pursuant to this agreement through the Environmental Cost Recovery Clause is rendered final (final order) within 90 days of the execution of the agreement. A final order is one that is no longer subject to review or appeal by a court of competent jurisdiction. If a final order is not rendered within 90 days of the date of execution of this agreement, the parties concur that the dates and schedules herein are subject to revision solely by mutual agreement, in order to allow GULF to move forward with the activities described in paragraphs 1-4 above pending a final order by the FPSC. Gulf will exercise good faith in seeking approval of such cost recovery from the FPSC in a timely manner. DEP will support the efforts of GULF before the FPSC and in any subsequent review or appeal. If a final order is not rendered within 120 days of execution of this agreement, the entire agreement shall automatically become null and void unless extended by mutual written agreement of the parties within 30 days thereafter.
9. This agreement shall bind the parties hereto and those whom they represent and may be modified only in writing with the consent of both parties.
10. This agreement is entered into and effective on the date of the last signature of the parties below.

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

GULF POWER COMPANY

By: David B. Struhs  
David B. Struhs  
Secretary

By: Thomas A. Fanning  
Thomas A. Fanning  
President and Chief Executive Officer

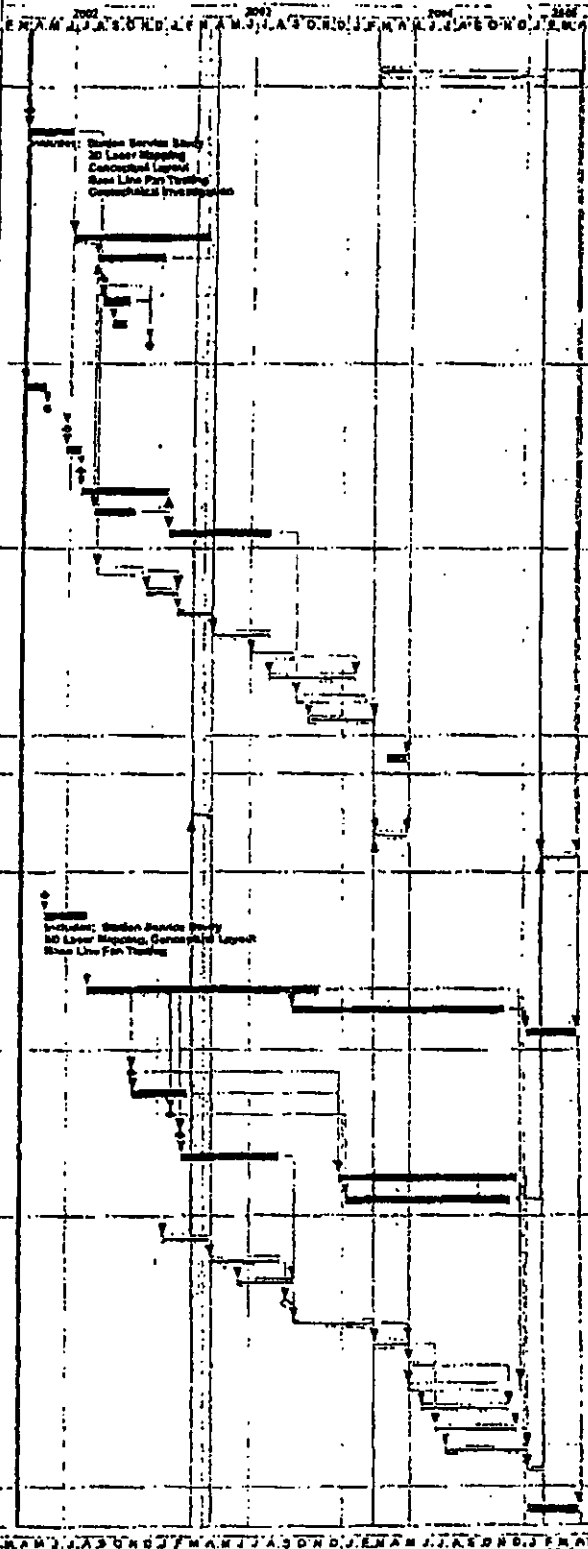
Date: August 28, 2002

Date: August 28, 2002

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EXHIBIT "A"

Activity ID	Activity Description	Org	Est	Start	Finish	Total Hours
<b>DESIGN</b>						
<b>DESIGN OUTAGE</b>						
DCT100	Preparator Work	CS	DEMAR01	09MAY04		0
<b>ENGINEERING</b>						
ENG001	Project Start	0	01APR02			0
ENG002	Preliminary Engineering	65	01APR02	28JUN02		3
ENG100	Detailed Engineering Design and Support Provide	204	01JUL02	01APR03		19
ENG101	DCS Design Documents and Support	100	28AUG02	01JAN03		76
ENG110	Receive Foundation Info From Prebid Vendor	0	02SEP02			0
ENG118	SCS Design Pits and Foundations	40	02SEP02	25OC702		0
ENG180	SCS Prepare Pits Excavation	20	23SEP02	18OCT02		0
ENG185	Award Pits Excavation	0	08DEC02			0
<b>PROCUREMENT</b>						
PRO100	Final Specs for Preparator Design and Supply	30	01APR02	10MAY02		0
PRO130	Issue Preparator Inquiry for Bids	0		13MAY02		0
PRO200	Receive Preparator Bids	0		24JUN02		0
PRO210	Evaluate Preparator Bids	20	24JUN02	23AUG02		0
PRO170	Award Preparator Design and Supply	0		23AUG02		0
PRO115	Vendor Design Preparator	120	23AUG02	07JAN03		0
PRO150	Flow Modeling - Preparator	80	20AUG02	11NOV02		18
PRO180	Preparator - Fabricate and Deliver	150	18JAN03	09AUG03		68
<b>CONSTRUCTION</b>						
CST100	Rebarwork	80	24AUG02	20NOV02		0
CST105	Install Pits	80	04DEC02	06FEB03		0
CST120	Install Pit Caps	80	07FEB03	18APR03		0
CST130	Excav. Pits and Ductwork Steel Deck	70	17APR03	08AUG03		0
CST140	Install Ductwork	40	03AUG03	24SEP03		0
CST150	Install Preparator Box	125	07AUG03	23JAN04		0
CST170	Install Preparator Mechanical Equipment	105	02OCT03	17FEB04		17
CST180	Install Preparator Electrical Equipment	105	27OCT03	05MAY04		0
<b>STARTUP</b>						
SU100	Checkout and Startup	40	21MAY04	09MAY04		0
<b>ADMINISTRATIVE REDUCTION</b>						
<b>TEAM OUTAGE</b>						
CST110	SCA Substation Change	35	08MAY03	11APR03		0
CST181	Building Relocation Outage	85	08MAY04	08MAY04		0
CST190	SCA Tie-in Change	70	03FEB04	13APR03		0
<b>ENGINEERING</b>						
ENG000	Project Start	0	20MAY02			0
ENG001	Preliminary Engineering	80	20MAY02	06AUG02		0
ENG100	Detailed Engineering Design	340	12AUG02	20NOV03		0
ENG110	Construction Support	320	24SEP03	23NOV04		83
ENG120	Design Support	100	04JAN04	13APR04		40
<b>PROCUREMENT</b>						
PRO140	Award Catalyst	0		09NOV02		13
PRO150	Flow Modeling	65	11NOV02	20FEB03		270
PRO130	Award ID Fans and Motors	0		26JAN03		44
PRO180	Award Structural Steel	0		14FEB03		21
PRO120	Fabricate and Deliver Structural Steel	140	17FEB03	28AUG03		21
PRO145	Fabricate and Deliver Catalyst	270	26OCT03	16DEC04		13
PRO135	Fabricate and Deliver ID Fans and Motors	250	06JAN04	02DEC04		41
<b>CONSTRUCTION</b>						
CST100	Rebarwork	75	10JAN03	11APR03		0
CST105	Install Pits	100	14APR03	28AUG03		0
CST125	Install Pit Caps	80	06JUN03	20SEP03		0
CST110	Award General Contractor	0		12SEP03		10
CST115	Install Ductwork Steel	125	20SEP03	09MAY04		0
CST130	Structural Framing Reinforcement	50	07MAY04	10MAY04		0
CST135	Install Steel to Rebar Level	40	11MAY04	05JUL04		0
CST140	Install Remaining Steel	154	11MAY04	24DEC04		7
CST145	Install Preparator Fan	125	02JUN04	20NOV04		0
CST150	Install Mechanical Systems	115	08JUL04	13OCT04		0
CST155	Install Electrical Systems	115	28JUL04	01JAN05		0
CST160	Install Catalyst	21	02JAN05	02FEB05		0
<b>STARTUP</b>						
SU100	Checkout and Start Up	100	04JAN05	13APR05		0



Start Date	01APR02	C7P3	Sheet 1 of 11
Final Date	13APR03		
Draw Date	01APR02		
Rev Date	11APR02 07:11		

**SOUTHERN COMPANY GENERATION**  
**CRIST UNIT 7 SCR / PRECIPITATOR**

Date	Revision	Checked	Approved
02MAR02	Revise and Comment		
02MAR02	Include Total Project Hours		



**AGREEMENT FOR THE PURPOSE OF ENSURING  
COMPLIANCE WITH OZONE AMBIENT AIR  
QUALITY STANDARDS**

**Exhibit "B"**

Gulf will measure its compliance with the emission rate limit set forth in paragraph 3 of this agreement by determining the Plant Crist NO<sub>x</sub> emission rate, when Crist Unit #7 has operated for 30 sequential days (which need not be consecutive) on a generating unit-specific btu weighted average basis pursuant to the following formula:

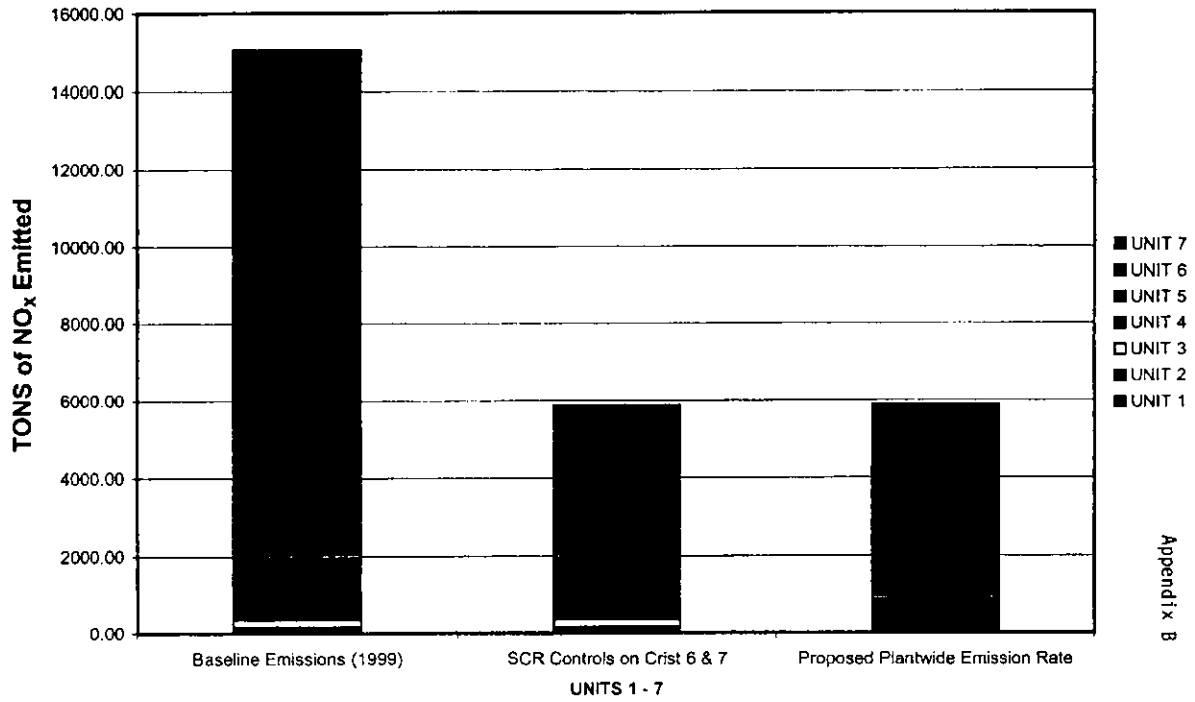
$$\begin{array}{l} \text{plant wide} \\ \text{daily} \\ \text{mmbtu} \\ \text{weighted} \\ \text{NO}_x \text{ rate} \end{array} = \frac{\sum_{\substack{\text{Units} \\ 4, 5, 6, 7}} \left[ \left( \text{Unit \# daily mmbtu} \right) \times \left( 24 \text{ hour avg unit \# NO}_x \text{ CEMs rate} \right) \right]}{\sum_{\substack{\text{Units} \\ 4, 5, 6, 7}} \left( \text{Unit \# daily mmbtu} \right)}$$

For the purposes of this calculation, a Crist Unit #7 operating day means any calendar day that Crist Unit #7 is online a minimum of 18 hours.

Unit # daily mmbtu (heat input) in the foregoing formula is determined by Plant Crist's daily as-burned fuel analysis

SECTION 4. APPENDIX NA  
NO<sub>x</sub> AGREEMENT

Comparison of Crist Plant Emission Reduction Alternatives



SECTION 4. APPENDIX NA  
NO<sub>x</sub> AGREEMENT

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of FDEP/Gulf )  
Power agreement pursuant to Section ) Docket No. 02\_\_\_\_-EI  
366.8255(1)(d)7 of the Florida Statutes for )  
purposes of cost recovery of the related )  
expenditures and expenses through the )  
Environmental Cost Recovery Clause. )  
\_\_\_\_\_ )

Certificate of Service

this 29<sup>th</sup> I HEREBY CERTIFY that a copy of the foregoing has been furnished  
day of August 2002 by U.S. Mail or hand delivery to the following:

Marlene Stern, Esquire  
Staff Counsel  
FL Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee FL 32399-0863

John T. Butler, Esquire  
Steel, Hector & Davis LLP  
200 S. Biscayne Blvd., Ste 4000  
Miami FL 33131-2398

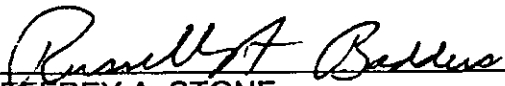
John Roger Howe, Esquire  
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Pensacola FL 32591-2950  
850 432-2451  
Attorneys for Gulf Power Company

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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*{Permitting Note: Unless otherwise specified by permit or rule, the following conditions apply to all emissions units and activities at this 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:** Unless otherwise specified in the permit, 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 two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [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 Department or the appropriate Local Program 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. **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(203), F.A.C.]
7. **General Visible Emissions:** Unless otherwise specified in the permit, 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 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
8. **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.]

**TESTING REQUIREMENTS**

9. **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.]
10. **Operating Rate During Testing:** Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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. [Rule 62-297.310(2), F.A.C.]

11. **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.]
12. **Test Procedures:** Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.
  - a. **Required Sampling Time.** 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. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.
  - 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.
  - 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.

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

13. **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.]

14. **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.
15. **Test Notification:** 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. [Rule 62-297.310(7)(a)9, F.A.C.]
16. **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. [Rule 62-297.310(7)(b), F.A.C.]
17. **Test Reports:** 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. 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. 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:

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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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.]

**RECORDS AND REPORTS**

18. 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 five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]
19. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

July 15, 2005  
Preliminary  
Tech. Evaluation  
and  
Preliminary  
Determination

**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**PROJECT**

Draft Air Construction Permit No. 0330045-012-AC  
Crist Unit 6 SNCR Project

**COUNTY**

Escambia County

**APPLICANT**

Gulf Power Company  
Crist Electric Generating Plant  
ARMS Facility ID No. 0330045

**PERMITTING  
AUTHORITY**

Florida Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
New Source Review Section



*Print this page  
in color*

July 15, 2005

*(Filename: Crist 6 SNCR TEPD)*



# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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## 1. GENERAL PROJECT INFORMATION

### Applicant Name and Address

Gulf Power Company – Crist Electric Generating Plant  
One Energy Place  
Pensacola, FL 32520-0328

*Authorized Representative:*  
Penny M. Manuel

### Processing Schedule

01/25/05 Received the application for a pollution control project;

02/24/05 Department requested additional information;

06/02/05 Department received additional information; and

### Facility Description and Location

Gulf Power Company operates the existing Crist Power Plant, which is located on Governors Bayou off 10 Mile Road in Pensacola, Escambia County, Florida. This site is in an area that is currently in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS).

### Standard Industrial Classification Code (SIC)

SIC No. 4911 – Electrical Services

### Regulatory Categories

Title III: The existing facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The existing facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

### Project Description

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" (Agreement). The purpose of the agreement is to support continuing efforts to maintain compliance with the ambient air quality standard for ozone in the Escambia County area. In brief, Gulf Power Company agreed to:

- Construct and operate a new electrostatic precipitator (ESP) for Crist Unit 7;
- Construct and operate a new selective catalytic reduction (SCR) system for Crist Unit 7;
- Ultimately retire Crist coal-fired Units 1, 2, and 3; and
- Employ additional NO<sub>x</sub> reduction techniques for one or more of the remaining coal-fired Units 4, 5, and 6.

The agreement was contingent on approval from the Public Service Commission to recover costs from the ratepayers related to the pollution control projects, which became final November 18, 2002. The approval was granted and Gulf Power Company submitted an application for an air permit to install the new ESP and SCR for Crist Unit 7. The Unit 7 project met its schedule and was completed in May 2005.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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Emissions unit 1 was permanently retired on March, 31, 2003. Emissions units 2 and 3 will be retired by May, 2006.

The focus of this project is to initiate compliance with the last part of the Agreement. Gulf Power has proposed to install SNCR on Unit 6 in order to gain additional NO<sub>x</sub> reductions. Depending on the resulting reductions achieved, further NO<sub>x</sub> controls may still be required for Units 4 and/or 5 in order to fully comply with the Agreement.

### 2. APPLICABLE REGULATIONS

#### State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). In general, this project is subject to the applicable rules and regulations defined in the following Chapters of the F.A.C.

<u>Chapter</u>	<u>Description</u>
62-4	Permitting Requirements
62-204	Ambient Air Quality Requirements and Federal Regulations Adopted by Reference
62-210	Required Permits, Public Notice, Reports, Circumvention, Excess Emissions, and Forms
62-212	Preconstruction Review
62-213	Operation Permits for Major Sources of Air Pollution
62-296	Emission Limiting Standards
62-297	Testing, Continuous Monitoring, and Alternate Sampling Procedures

*{Note: The project is not subject to Florida's Power Plant Siting Act because there will be no change in steam-generated electrical capacity.}*

#### General PSD Applicability

The Department regulates major air pollution sources in accordance with the Prevention of Significant Deterioration (PSD) program, as delegated by the EPA for electric utilities. A PSD review is required only in areas currently in attainment with the National Ambient Air Quality Standard (NAAQS) or areas designated as "unclassifiable" for a given pollutant. A new facility is considered "major" with respect to PSD if it emits or has the potential to emit:

- 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 28 PSD Major Facility Categories (Table 62-212.400-1, F.A.C.), or
- 5 tons per year of lead.

For new projects at PSD-major sources, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates listed in Table 62-212.400-2, F.A.C. Pollutant emissions from the project exceeding these rates are considered "significant". The applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility 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

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The Department's Rule 62-212.400(2)(a)2, F.A.C. exempts certain pollution control projects from the requirements of PSD review. Subparagraph "a" of this rule states that, "A pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40 CFR 52.21(b)(2)(iii)(h), adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall not be subject to the preconstruction review requirements of this rule." This federal rule defines a "major modification" as any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. However, it also specifically states that a physical change or change in the method of operation shall not include the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless it is determined that such addition, replacement, or use renders the unit less environmentally beneficial, or except:

1. There is reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and
2. It is determined that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.

The addition of the SNCR system is not considered a pollution control project because there are no expected significant increases of a collateral pollutant. This project is considered a minor modification that will result in a reduction of NO<sub>x</sub> emissions. The project is not expected to result in, nor does it authorize, an increase in the capacity utilization of Unit 6; and, uncontrolled representative actual emissions are not expected to be any different than past actual emissions. Based on the information reported on the previous two annual operating reports, the average NO<sub>x</sub> emissions rate has been approximately 0.47 lb/MMBtu, or 4,674 tons per year. However, following the replacement of the low-NO<sub>x</sub> burners on Unit 6 (performed as a routine replacement and not as a part of this SNCR project), Gulf Power has stated that the NO<sub>x</sub> emissions rate prior to the injection of urea has been reduced to 0.35 lb/MMBtu (which is equivalent to 3,481 tons per year at current levels of utilization). At the manufacturer's guaranteed 20% reduction, Gulf Power expects the resultant NO<sub>x</sub> emissions rate to be as low as 0.28 lb/MMBtu. This will result in a reduction of approximately 697 tons per year of NO<sub>x</sub> directly attributable to the addition of SNCR on Unit 6. It should be noted that this is the level of reduction that could be observed if the SNCR were to be utilized at all times that Unit 6 is in operation. However, the Agreement does not require that a particular control device must be used continuously; it only requires that a facility-wide NO<sub>x</sub> emissions limit of 0.2 lb/MMBtu be met. The Department believes that the proposed NO<sub>x</sub> reduction project will be environmentally beneficial and will not result in a significant net increase in representative actual annual emissions of any criteria pollutant. As such, this project is exempt from the requirements of PSD preconstruction review. Nevertheless, an air construction permit is required to conduct the proposed work.

### 3. APPLICATION REVIEW

Crist Unit 6 (ARMS Emissions Unit -006) is a 369 MW Foster Wheeler front wall-fired, dry bottom boiler. The maximum heat input rate is 3,704.8 MMBtu per hour while combusting the primary fuels of pulverized bituminous coal and/or natural gas. Distillate oil and on-specification used oil fuel are also combusted as a secondary fuels for periods of start-up and flame stabilization. Emissions of particulate matter are currently reduced by a Wheelabrator (model # HaRDE) cold side electrostatic precipitator. Nitrogen oxides are controlled with low NO<sub>x</sub> burners. Unit 6 has continuous monitors for opacity, stack gas flow, carbon dioxide, nitrogen oxides, and sulfur dioxide. Units 6 and 7 share a common stack that is 23.2 feet in diameter and 450 feet high. Based on the current Title V air operation permit, Unit 6 is subject to Rule 62-296.405, F.A.C. (Fossil Fuel Fired Steam Generators > 250 MMBtu/Hour Heat Input), predates the requirements of Rule 62-212.400, F.A.C. (PSD Preconstruction Review), and is regulated under Phase I of the federal Acid Rain Program.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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The applicant proposes to perform the following work on Unit 6:

### **Boiler Parameters**

As a direct result of the pollution control project, the following boiler components will be modified: 6 urea injectors will be installed spaced across the front of the boiler at an elevation of 171'-3". The proposed changes will not increase emissions nor add to the capacity of Unit 6. The materials of construction should be carefully selected to inhibit corrosion.

### **Selective Non-Catalytic Reduction (SNCR)**

Unit 6 currently uses low NO<sub>x</sub> burners to inhibit the formation of NO<sub>x</sub>. Gulf Power Company proposes to add a new SNCR system manufactured by Fuel Tech, Inc. SNCR is an add-on control technology in which ammonia is injected into the exhaust gas stream in an area of the duct where the stack gas temperature is in the range of 1,600 – 2,100 °F. The ammonia combines with NO<sub>x</sub> in the gas stream to form nitrogen and water. Ammonia that escapes the stack without reacting with NO<sub>x</sub> is called "ammonia slip". If a fuel contains significant amounts of sulfur, high levels of ammonia slip can lead to the formation of bisulfates and other particulate matter. To avoid these problems, SNCR systems can be designed with very low levels of ammonia slip (< 5 ppmv) while still achieving control efficiencies in the range of ~~30%~~ 75%. SNCR is a commercially available, demonstrated control technology currently employed on numerous utility boilers and combined cycle gas turbine projects worldwide.

### Design Specifications

The following specifications summarize the preliminary design of the proposed new SNCR system.

- *Basic Design Specifications:* The SNCR system is designed for a maximum NO<sub>x</sub> conversion efficiency of 25% based on an inlet NO<sub>x</sub> emissions rate of 0.35 lb/MMBtu, with a guaranteed removal efficiency of 20%.
- *Urea Storage and Mixing:* Urea will be delivered by truck (or possibly rail) and stored on site as a 40% aqueous solution in one 450,000 gallon tank. This will provide a minimum of 7 days operating inventory. The solution will be maintained at a temperature of approximately 40 °F by circulating through the SNCR system piping loop heating module.
- *Ammonia Slip:* The SNCR is designed and guaranteed to have a maximum ammonia slip concentration of 5 ppmvd corrected to 3% O<sub>2</sub> (24 hour basis) in the duct cross-sectional area for all boiler loads. There are no provisions for continuously monitoring ammonia concentration in the flue gas. When ammonia measurements in the flue gas are required, a wet chemical method will be utilized. More frequent tracking of ammonia slip will be monitored by measuring the amount of residual ammonia adsorbed by the fly ash. Fly ash samples will be measured periodically using an ion-specific electrode.
- *Urea Injection and Control System:* Using plant service water or other dilution water source, the metering module dilutes the reagent to a predetermined concentration (somewhat less than 30%) and precisely controls the flow of the diluted reagent to distribution modules located near the boiler injection point. The distribution modules provide the final control of diluted reagent and atomizing/cooling (plant) air being delivered to each injector. The diluted reagent is injected into the boiler via wall-mounted air atomizing lances, which will be installed across the face of the boiler at an elevation of 171'-3". At peak load for Unit 6, with 0.35 lb/MMBtu inlet NO<sub>x</sub> and 20% reduction, urea injection would be 741 lb/hr on a dry basis. This translates to an ammonia flow of 333.8 lb/hr.

### SNCR Operation

The SNCR will operate as needed to meet the facility 0.20 lb/MMBtu NO<sub>x</sub> plant-wide emissions limit. During these periods, the SNCR will operate whenever the Unit is operating at or above its normal low

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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load level. If the unit drops below this level, the SNCR system will automatically stop injection until the Unit returns to its low load level.

### Conclusion

While the design specifications will result in NO<sub>x</sub> conversion efficiency quite a bit lower than can typically be expected for similar SNCR projects, based on the application, the preliminary design appears capable of achieving a minimum guaranteed NO<sub>x</sub> conversion efficiency of 20%. Gulf Power believes that this lower level of efficiency will be sufficient to comply with the facility-wide NO<sub>x</sub> emissions cap of 0.20 lb/MMBtu, as required by the Agreement.

The draft permit requires continuous monitoring to demonstrate compliance with the standards for NO<sub>x</sub> emissions. Annual performance testing is required for NO<sub>x</sub> reduction efficiency, and ammonia slip. Quarterly reports are required to summarize compliance with the NO<sub>x</sub> standards.

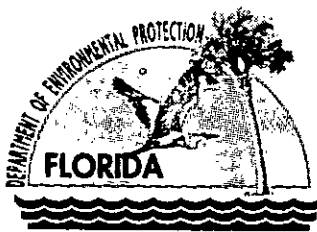
### **4. PRELIMINARY DETERMINATION**

The pollution control project is based on the design and operation of conventional SNCR air pollution control equipment. This type of air pollution control device is operating successfully on numerous coal-fired utility boilers throughout the world.

The Department makes a preliminary determination that the proposed project will comply with the terms of the Agreement and all existing applicable air pollution regulations. However, it is still possible that additional measures may need to be taken to reduce NO<sub>x</sub> emissions from Units 004 and 005 if it turns out that the addition of the SNCR on Unit 006 is not quite sufficient to allow the facility to comply with the facility-wide limit. This determination is based on a technical review of the application, the preliminary design, 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. Jonathan Holtom 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 Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

### **REFERENCES**

1. Data Compiled from the Department's ARMS Database
2. EPA's White Paper, "Selective Non-Catalytic Reduction (SNCR) For Controlling NO<sub>x</sub> Emissions", Prepared By: SNCR Committee, Institute Of Clean Air Companies, Inc., May 2000.



# Department of Environmental Protection

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Colleen M. Castille  
Secretary

## PERMITTEE

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

*Authorized Representative:*

G. Dwain Waters, Q.E.P., Air Quality Programs Supervisor

Crist Electric Generating Plant  
Unit 6 SNCR Project  
Facility ID No. 0330045  
SIC No. 4911  
Air Permit No. 0330045-012-AC  
Permit Expires: September 1, 2006

## PROJECT AND LOCATION

This permit authorizes the construction of a new selective non-catalytic reduction system for Unit 6 at the existing Crist Electric Generating Station, which is located on Governors Bayou off 10 Mile Road in Pensacola, Escambia County, Florida. The map coordinates are: Zone 16; 478.50 km East; and 3381.30 km North.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This air construction permit supplements all other valid air construction and operation permits.

## CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

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Michael G. Cooke, Director  
Division of Air Resource Management

(Date)

## SECTION 1. GENERAL INFORMATION

### FACILITY AND PROJECT DESCRIPTION

The existing plant consists of six fossil fuel fired steam generators and two fly ash silos. Natural gas is the primary fuel for Units 2 and 3. Pulverized coal is the primary fuel for Units 4, 5, 6 and 7. Fuel oil is used as supplemental fuel in all six of the units. The following units are affected by this air construction permit.

ID	Emission Unit Description
002	Boiler No. 2 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
003	Boiler No. 3 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
004	Boiler No. 4 (Phase I and II Acid Rain Unit)
005	Boiler No. 5 (Phase I and II Acid Rain Unit)
006	Boiler No. 6 (Phase I Acid Rain Unit)
007	Boiler No. 7 (Phase I Acid Rain Unit)

### REGULATORY CLASSIFICATION

Title III: The existing facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The existing facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

### RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: All documents related to applications for permits to construct, modify, or operate emissions units at this facility shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all permit applications shall also be sent to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794.
3. Appendices: The following Appendices are attached as part of this permit: , Appendix CF (Citation Format); Appendix GC (General Conditions); Appendix NA (NO<sub>x</sub> Agreement); and, Appendix SC (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated 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. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-4, 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Construction Approval: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Rule 62-210.200(76), F.A.C. defines *construction* as, "The act of performing on-site fabrication, erection, installation or modification of an emissions unit or facility of a permanent nature, including installation of foundations or building supports; laying of underground pipe work or electrical conduit; and fabrication or installation of permanent storage structures, component parts of an emissions unit or facility, associated support equipment, or utility connections. Land clearing and other site preparation activities are not a part of the construction activities." Such permits shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions units. The permittee shall apply for a Title V operation permit (revision) at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]



## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

This section of the permit addresses the following existing emissions units, with an emphasis on Unit 006.

ID	Emission Unit Description
002	Boiler No. 2 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
003	Boiler No. 3 (Phase II Acid Rain Unit) (to be retired by May 1, 2006)
004	Boiler No. 4 (Phase I and II Acid Rain Unit)
005	Boiler No. 5 (Phase I and II Acid Rain Unit)
006	Boiler No. 6 (Phase I Acid Rain Unit)
007	Boiler No. 7 (Phase I Acid Rain Unit)

#### Emissions Unit No. 006

*Description:* Unit 6 is a Foster Wheeler front wall-fired, dry bottom boiler that began commercial operation on May 1, 1970.

*Fuels:* coal, natural gas, new No. 2 fuel oil and/or on-specification used oil, and occasional on-site generated "oil contaminated soil".

*Capacity:* 3,704.8 MMBtu/hour when firing pulverized coal and/or natural gas.

*PM Controls:* Cold side electrostatic precipitator.

*NOx Controls:* Low NO<sub>x</sub> burners and selective non-catalytic reduction (SNCR).

*Continuous Monitors:* CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, opacity, stack gas flow, and urea injection rate.

*Stack Parameters:* Units 6 shares a common stack with Unit 7 that is 450 feet tall with a diameter of 23.2 feet. The volumetric flow rate of Unit 6 & 7 combined, at permitted capacity, is approximately 2,462,700 acfm.

*{Permitting Notes: Based on the current Title V air operation permit, Unit 6: is regulated under Rule 62-296.405, F.A.C. (Fossil Fuel Fired Steam Generators > 250 MMBtu/Hour Heat Input); predates the requirements of Rule 62-212.400, F.A.C. (PSD Preconstruction Review); and is regulated under Phase I of the federal Acid Rain Program (40 CFR 75).}*

*{Permitting Note: 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" (Agreement). The "Agreement" is the basis for many of the following permit conditions.}*

#### PREVIOUS APPLICABLE REQUIREMENTS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

#### EQUIPMENT AND CONSTRUCTION

2. Selective Non-Catalytic Reduction (SNCR) System: The permittee shall construct, tune, operate, and maintain a new SNCR system for Unit 6 to reduce emissions of nitrogen oxides (NO<sub>x</sub>) as described in the application, approved drawings, plans, and other documents on file with the Department. The SNCR system shall be designed to achieve no less than a 20% reduction in NO<sub>x</sub> emissions as measured across the

SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

Emissions Units 002 - 007

SNCR unit inlet and outlet. The designed target ammonia slip level is 5 ppmv based on a 24-hour average. The storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.

{Permitting Note: Fuel Tech, Inc. designed the new SNCR system, which will generally consist of the following:

- UREA Injection System: Urea will be delivered by truck (or possibly rail) and stored on site as a 40% aqueous solution in one 450,000 gallon tank. This will provide a minimum of 7 days operating inventory. The solution will be maintained at a temperature of approximately 40 °F by circulating through the SNCR system piping loop heating module. Using plant service water or other dilution water source, the metering module dilutes the reagent to a predetermined concentration (somewhat less than 30%) and precisely controls the flow of the diluted reagent to distribution modules located near the boiler injection point. The distribution modules provide the final control of diluted reagent and atomizing/cooling (plant) air being delivered to each injector. The diluted reagent is injected into the boiler via wall-mounted air atomizing lances, which will be installed across the face of the boiler at an elevation of 171'-3". At peak load for Unit 6, with 0.35 lb/MMBtu inlet NOx and 20% reduction, urea injection would be 741 lb/hr on a dry basis. This translates to an ammonia flow of 333.8 lb/hr.
• Ammonia Slip: The SNCR is designed and guaranteed to have a maximum ammonia slip concentration of 5 ppmvd corrected to 3% O2 (24 hour basis) in the duct cross-sectional area for all boiler loads. There are no provisions for continuously monitoring ammonia concentration in the flue gas. When ammonia measurements in the flue gas are required, a wet chemical method will be utilized. More frequent tracking of ammonia slip will be monitored by measuring the amount of residual ammonia adsorbed by the fly ash. Fly ash samples will be measured periodically using an ion-specific electrode.

[Design; Paragraph 2 of the Agreement; Rule 62-204.800, F.A.C.; 40 CFR 68]

3. Updated Designs: The permittee shall update the Department with final design specifications and any substantial changes made to the final design specifications during the actual construction phase. [Rule 62-4.070(3), F.A.C.]
4. Project Completion: The permittee shall complete construction and commence operation of the new SNCR system by May 1, 2005. [Applicant Request; Design; Paragraph 2 of the Agreement]

PERFORMANCE REQUIREMENTS

{Permitting Note: This permit does not alter any specifications or limitations included in previous permits that define permitted capacities such as heat input rates, fuel consumption, or hours of operation. It does not authorize any additional fuels or such other methods of operation.}

EMISSIONS STANDARDS

5. Plant-Wide NOx Limit: Emissions of nitrogen oxides (NOx) from the combined operation of Units 4, 5, 6, and 7 shall not exceed 0.2 lb/MMBtu heat input based on a 30-day rolling average except for periods when Unit 7 is shutdown. The plant-wide daily NOx emission rate shall be determined by the following equation:

Plant-Wide Daily MMBtu-Weighted NOx Emission Rate = (sum of (Unit # daily MMBtu) x (Unit # daily NOx CEMS Rate)) / (sum of (Unit # daily MMBtu)) for Units 4, 5, 6, 7

## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

The "Unit # daily MMBtu" shall be determined by the daily as-burned fuel analysis and the fuel fired for each unit. The "Unit # daily NO<sub>x</sub> CEMS Rate" shall be determined by the daily average of NO<sub>x</sub> CEMS data for each unit and reported in terms of "lb/MMBtu heat input". The plant-wide daily NO<sub>x</sub> emissions rate shall be determined each day regardless of the operating status for Unit 7. The plant-wide 30-day rolling NO<sub>x</sub> average shall be determined for each 30 sequential Unit 7 operating days, which need not be consecutive. A Unit 7 operating day means any calendar day that Unit 7 operates a minimum of 18 hours. The Unit 7 daily NO<sub>x</sub> CEMS rate may consist of less than 18 hours of data if this is due to CEMS malfunction or invalid CEMS data. When the catalyst temperature is below 600° F during a startup or shutdown, NO<sub>x</sub> emissions data collected during such periods may be excluded from the daily NO<sub>x</sub> average. In accordance with Condition No. 9 of Subsection 3A of permit 0330045-005-AC, NO<sub>x</sub> emissions data collected during SCR bypass during the non-ozone season may be excluded from the daily NO<sub>x</sub> average. The plant-wide NO<sub>x</sub> emission standard shall be achieved by utilizing the SCR system for Unit 7 and the SNCR system for Unit 6. The effective date for the plant-wide NO<sub>x</sub> emission standard is the startup date of the SNCR system on Unit 6, but no later than May 1, 2006.

For purposes of this condition, "startup date" shall mean the date that the permittee demonstrates initial compliance with the terms of this air construction permit. [Paragraphs 2, 3 and Exhibit B of the Agreement]

#### EMISSIONS PERFORMANCE TESTING

6. Test Notification: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. The notification shall include: the scheduled date, approximate start time, test team, contact name and phone number, description of unit to be tested, and the tests to be performed. [Rule 62-297.310(7)(a)9, F.A.C.]
7. Nitrogen Oxides, Compliance Tests: Within 60 days after completing construction of the SNCR system and bringing Unit 6 on line, the permittee shall conduct tests to demonstrate compliance with the design specification to achieve no less than a 20% reduction in the nitrogen oxide emission rate. The permittee shall concurrently test the SNCR inlet and SNCR outlet in accordance with EPA Method 7E as adopted by reference in Rule 62-204.800, F.A.C. Data collected during the annual NO<sub>x</sub> RATA testing may be used to represent NO<sub>x</sub> emissions at the SNCR outlet. The data shall be collected for at least three consecutive hours. Subsequent tests shall be conducted during each federal fiscal year (October 1st to September 30th). [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]
8. Ammonia Slip, Performance Tests: Within 60 days after completing construction of the SNCR system and bringing Unit 6 on line, the permittee shall conduct tests to determine the ammonia slip rate in accordance with EPA Method CTM-027 or other methods approved by EPA. Subsequent tests shall be conducted during each federal fiscal year. If tests show ammonia slip emissions are greater than the design target level specified in Condition No. 2 of this subsection, the permittee shall take corrective actions such as repair, addition of urea injectors for better mixing, addition of mixing vanes in the duct, etc. [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

*{Permitting Note: EPA Methods 1 (Traverse Points), 2 (Velocity and Flow Rate), 3 (Gas Analysis), 4 (Moisture Content), and 19 (Calculating Emission Rates, Use of F-Factors) may also be used to supplement the required test methods.}*

#### CONTINUOUS MONITORING REQUIREMENTS

*{Permitting Note: In accordance with the federal Acid Rain requirements, the following continuous monitors are installed on these units: SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub> and stack gas flow.}*

9. NO<sub>x</sub> CEMS: To demonstrate compliance with the emissions standards, the permittee shall install, calibrate,

## SECTION 3 EMISSIONS UNIT SPECIFIC CONDITIONS

### Emissions Units 002 - 007

operate and maintain a continuous emissions monitoring system (CEMS) to continuously monitor and record the emissions of nitrogen oxides and an appropriate diluent gas (carbon dioxide or oxygen). The CEMS shall monitor and record data during all periods of Unit 6 operation including startup, shutdown, malfunction or emergency conditions, but not including continuous monitoring system breakdowns, repairs, calibration checks, or zero and span adjustments. For each calendar quarter, monitor availability shall be 95% or greater. If unable to achieve this level, the permittee shall submit a report identifying the problems in achieving 95% monitor availability and a plan of corrective actions. The permittee shall implement the reported corrective actions within the next calendar quarter. *{Permitting Note: The existing NO<sub>x</sub> CEMS required by the Acid Rain program satisfies this requirement. [Rule 62-4.070(3), F.A.C.]}*

10. SNCR Urea Injection: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a flow meter to measure and record the urea injection rate for the SNCR system. The permittee shall document the general range of urea flow rates required to meet the NO<sub>x</sub> standard over the range of load conditions by comparing NO<sub>x</sub> emissions with urea flow rates. During NO<sub>x</sub> monitor downtimes or malfunctions, the permittee shall operate at a urea flow rate that is consistent with the documented flow rate for the given load condition. [Rules 62-4.070(3) and 62-212.400(5)(c), F.A.C.]

### RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the provisions of Rule 62-297.310(8), F.A.C. For each required test run, the report shall indicate the actual heat input rate (MMBtu/hour), the NO<sub>x</sub> emission rate (lb/MMBtu) as recorded by the CEMS, and the urea injection rate (lb/hour). The report shall also include copies of the continuous monitoring records for the NO<sub>x</sub> emissions. [Rule 62-297.310(8), F.A.C.]
- a. Quarterly Report: For each calendar day during the reporting quarter, the permittee shall report the following information related to the operation of Units 4, 5, 6 & 7:
- Hours of operation for each Unit;
  - The Unit # daily MMBtu for each Unit (see Condition 5 of this Subsection);
  - The Unit # daily NO<sub>x</sub> CEMS rate for each Unit, lb/MMBtu (see Condition 5 of this Subsection);
  - The Plant-Wide Daily MMBtu-Weighted NO<sub>x</sub> Emission Rate (see Condition 5 of this Subsection);
  - The 30-day plant-wide average NO<sub>x</sub> emission rate, lb/MMBtu;
  - Identify whether Unit 7 operated less than 18 hours;
  - Identify the occurrence of a Unit 7 startup or shutdown;
  - Whether or not the day included a startup, shutdown, or malfunction of the SNCR or SCR systems; and,
  - Identify operation of Unit 7 with SCR bypass for catalyst maintenance or repair and the duration of bypass (hours).

Identify the "F" factor used for any calculations, the method of determination, and type of fuel combusted. For each day that CEMS data was not obtained for at least 18 hours of Unit 6 operation, provide a justification for not obtaining sufficient data and describe the corrective actions taken to prevent this in the future. Identify any emissions data excluded from the calculation of emission rates due to startup, shutdown, or malfunction.

Each quarterly report is due within 30 days of the calendar quarter being reported.

[Rule 62-4.070(3), F.A.C.] *Agreement App B*

## SECTION 4. APPENDICES

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### Contents

Appendix CF - Citation Format;  
Appendix GC - General Conditions;  
Appendix NA - NO<sub>x</sub> Agreement; and,  
Appendix SC - Standard Conditions