

Florida Department of
Environmental Protection

Memorandum

8/22/05 FP

TO: Michael G. Cooke
THRU: Trina Vielhauer
Jeff Koerner JK
FROM: Jonathan Holtom JH
DATE: August 15, 2005
SUBJECT: Final Construction Permit for Gulf Power Crist Electric Generating Plant

Attached for approval and signature is a Final construction permit for Gulf Power Company's Crist Electric Generating plant. This permitting project authorizes the installation of an SNCR system for Unit 6 in order to help the facility comply with the plant-wide NO_x emissions limit of 0.2 lb/MMBtu no later than May 1, 2006.

The Public Notice requirements were met on July 29, 2005, by publishing in The Pensacola News Journal. No comments have been received from the public in response to this Public Notice, and no petitions were filed for an Administrative Hearing. Gulf Power provided a few minor comments that are detailed in the Final Permit Determination.

I recommend your approval and signature.

Attachments

/jh

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mr. G. Dwain Waters, Q.E.P.
Gulf Power Company
One Energy Place
Pensacola, Florida 32520-0100

DEP File No. 0330045-012-AC
Crist Electric Generating Plant
Escambia County

Enclosed is Final Permit Number 0330045-012-AC. This permit authorizes Gulf Power Company to construct a selective non-catalytic reduction (SNCR) system on Unit 6 for the purpose of reducing nitrogen oxide (NO_x) 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. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

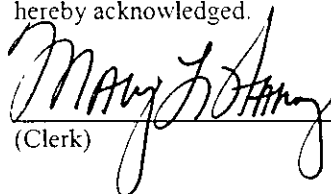
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit determination and the Final permit) was sent by certified mail (*) and copies were electronically mailed by Internet e-mail before the close of business on 8/22/05 to the person(s) listed:

Mr. G. Dwain Waters, QEP, Gulf Power Company (GDWATERS@southernco.com) *
Gregory N. Terry, P.E., Gulf Power Company. (GNTERRY@southernco.com)
Mr. Kevin White, P.E., DEP-NWD (kevin.white@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



(Clerk)

8/22/05
(Date)

FINAL DETERMINATION

Gulf Power Company
Crist Electric Generating Plant
DEP File No. 0330045-012-AC

The Department distributed a public notice package on July 19, 2005, to authorize the installation of an SNCR system on unit 6 at the Gulf Power Crist Electric Generating Plant, which is located on Pate Road, off of 10 Mile Road on Governors Bayou, Escambia County. The Public Notice of Intent to Issue was published in The Pensacola News Journal on July 29, 2005.

COMMENTS/CHANGES

No Public Comments were received during the 14 (fourteen)-day public comment period, however, comments were received from the Permittee. The comments were not considered significant enough to reissue the DRAFT Air Construction Permit and require another Public Notice; therefore, the DRAFT Air Construction Permit was changed. Those comments, and minor changes, are addressed below.

A. Email from Mr. G. Dwain Waters dated July 22, 2005.

Comment 1. Regarding the basic design specification noting the 20% guarantee removal efficiency; we have concerns that this is stated as a permit condition which must be demonstrated annually. Several factors are involved here. 1) As you are aware, inlet NO_x can be affected by several means including Low NO_x Burners and the amount of Nitrogen in the fuel. It may not be possible in all times to meet a 20% reduction limit as stated in the permit. We are ok with stating that the system is designed to meet a 20% guarantee at 0.35 lb/MMBtu inlet and we are ok with initial demonstration of the system but not annual certification of a 20% reduction. The bottom line is that the facility must meet an overall average of 0.20 lb/MMBtu. If less than 20% is needed to do so with the SNCR Unit 6 system, we should be allowed to do so. Annual inlet and outlet demonstration of 20% should be removed.

Response 1. In order to clarify that performance of an annual test would be used to demonstrate compliance with the facility-wide limit, and not with a 20% reduction design, condition 7 has been changed,

FROM:

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_x RATA testing may be used to represent NO_x 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.]

TO:

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

FINAL DETERMINATION

Gulf Power Company
Crist Electric Generating Plant
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NO_x RATA testing may be used to represent NO_x 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) in order to demonstrate compliance with the facility-wide NO_x limit. [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

See also **Comment 8**, below.

Comment 2. Regarding the ammonia slip testing. The Design Specification section (page 5) states wet chemistry must be used to determine the slip. We are utilizing the FTIR monitor in our test trailer to demonstrate annual compliance with Unit 7 and at Stanton A. The Department has no issues with this test method since it is approved by EPA. We would like it clearly stated that we are allowed to utilize FTIR if possible. If other approved methods as stated in Specific Condition 2 by EPA does this then OK. Also, what purpose does correction to 3% O₂ accomplish? Unit 7 and other ammonia slip standards we have are not O₂ corrected. We would like to keep it consistent at Crist with no correction for O₂.

Response 2. In condition 2, the description of the measurement method for ammonia slip, when required, has been changed to reflect the use of FTIR instead of a wet chemical method. The correction to 3% O₂ has been left because that was one of the manufacturer's design parameters specified in the application for this permit. However, the Department has determined that annual testing for ammonia slip is not required because the permit does not contain an ammonia slip limit. The permittee will be required by this permit to perform an initial ammonia slip test in order to demonstrate that the SNCR system was installed and functions according to the design specifications. Subsequent ammonia slip tests will only be required upon request by the Department after a determination of good reason pursuant to Rule 62-297.310(7)(b), F.A.C. As a result of this comment, condition 8 has been changed,

FROM:

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.]

TO:

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 (such as Method 320, which incorporates FTIR). 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.]

Comment 3. Quarterly reporting as outlined in the permit should start in 2nd quarter of 2006 (1st quarter after May, 2006 startup deadline).

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Response 3. Any monitoring and/or excess emissions related to the operation of the SNCR system on unit 6 needs to be included in any required reports that reflect any period in which the SNCR system was operational. As a result of this comment, no changes have been made.

B. Letter from Mr. G. Dwain Waters dated August 3, 2005.

Section 3 Emissions Unit Specific Condition Comments:

Comment 4. (Page 5): Replace Ammonia with Urea at the top of the page.

Response 4. The requested correction has been made.

Comment 5. (Page 5): Urea Injection System: Replace 450,000 with 45,000 gallon tank.

Response 5. The requested correction has been made.

Comment 6. (Page 5): Item 4. Project Completion: Replace May 1, 2005 with May 1, 2006.

Response 6. The requested correction has been made.

Comment 7. (Page 6): Gulf Power has concerns regarding the effective date for the plant-wide NO_x 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).

Response 7. In response to this comment, the ending of condition 5 has been changed,

FROM:

The effective date for the plant-wide NO_x 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]

TO:

The facility shall be in compliance with the plant-wide NO_x emission standard of 0.2 lb/MMBtu no later than May 1, 2006. [Paragraphs 2, 3 and Exhibit B of the Agreement]

Comment 8. (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 NO_x 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.

Response 8. For purposes of this construction permit, the Department agrees that a requirement for concurrent testing of the inlet and outlet is not necessary. It has also been determined that annual testing does not need to be addressed in condition 7 of this construction permit. Initial compliance with the design specifications must be demonstrated, and then continuous compliance with the facility-wide limit will be demonstrated using the NO_x CEMS. It should be noted, however, that the Title V permit contains the applicable requirement (Rule 62-297.310(7), F.A.C.) to perform an annual NO_x test because the unit

FINAL DETERMINATION

Gulf Power Company
Crist Electric Generating Plant
DEP File No. 0330045-012-AC

is subject to a NO_x standard and has the potential to emit greater than 100 tons of NO_x per year. This issue may be addressed during the processing of the upcoming Title V permit revision. As a result of this comment, condition 7 has been further changed in addition to the changes made as a result of Comment 1, above,

FROM:

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_x RATA testing may be used to represent NO_x 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) in order to demonstrate compliance with the facility-wide NO_x limit. [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

TO:

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 conduct one test with the SNCR system operating and compare the results to a baseline test with the SNCR system turned off. Both tests shall be conducted at the same operational and ambient conditions, and shall be performed in accordance with EPA Method 7E as adopted by reference in Rule 62-204.800, F.A.C. [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

Technical Evaluation and Preliminary Determination

Comment 9. (Page 5): Selective Non-Catalytic Reduction (SNCR): Replace Ammonia with Urea in the first sentence.

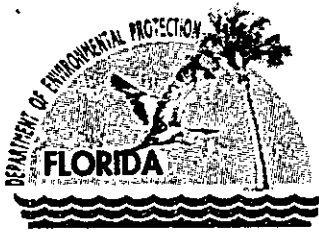
Response 9. The requested correction has been made.

Comment 10. (Page 5): Urea Injection System: Replace 450,000 with 45,000 gallon tank.

Response 10. The requested correction has been made.

CONCLUSION

The final action of the Department is to issue the final permit with the changes noted above.



Jeb Bush
Governor

Department of Environmental Protection

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

Michael G. Cooke

Michael G. Cooke, Director
Division of Air Resource Management

8/19/05

(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_x 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

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_x 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_x Controls: Low NO_x burners and selective non-catalytic reduction (SNCR).

Continuous Monitors: CO₂, NO_x, SO₂, 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_x) 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_x 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 corrected to 3% O₂ based on a 24-hour average. The storage of urea 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 45,000 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_x 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, FTIR 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, 2006. [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_x Limit:** Emissions of nitrogen oxides (NO_x) 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_x 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_x CEMS Rate" shall be determined by the daily average of NO_x CEMS data for each unit and reported in terms of "lb/MMBtu heat input". The plant-wide daily NO_x emissions rate shall be determined each day regardless of the operating status for Unit 7. The plant-wide 30-day rolling NO_x 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_x 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_x emissions data collected during such periods may be excluded from the daily NO_x average. In accordance with Condition No. 9 of Subsection 3A of permit 0330045-005-AC, NO_x emissions data collected during SCR bypass during the non-ozone season may be excluded from the daily NO_x average. The plant-wide NO_x emission standard shall be achieved by utilizing the SCR system for Unit 7 and the SNCR system for Unit 6. The facility shall be in compliance with the plant-wide NO_x emission standard of 0.2 lb/MMBtu no later than May 1, 2006. [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 conduct one test with the SNCR system operating and compare the results to a baseline test with the SNCR system turned off. Both tests shall be conducted at the same operational and ambient conditions, and shall be performed in accordance with EPA Method 7E as adopted by reference in Rule 62-204.800, F.A.C. [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 (such as Method 320, which incorporates FTIR). 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: SO₂, NO_x, CO₂ and stack gas flow.}

9. NO_x CEMS: To demonstrate compliance with the emissions standards, the permittee shall install, calibrate, 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

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Emissions Units 002 - 007

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_x 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_x standard over the range of load conditions by comparing NO_x emissions with urea flow rates. During NO_x 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_x 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_x 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_x CEMS rate for each Unit, lb/MMBtu (see Condition 5 of this Subsection);
 - The Plant-Wide Daily MMBtu-Weighted NO_x Emission Rate (see Condition 5 of this Subsection);
 - The 30-day plant-wide average NO_x 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_x Agreement, Exhibit "B"]

SECTION 4. APPENDICES

C. Appendix SC – Standard Conditions

Appendix CF - Citation Format;
Appendix GC - General Conditions;
Appendix NA - NO_x Agreement; and,
Appendix SC - Standard Conditions

SECTION 4. APPENDIX CF
CITATION FORMATS

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

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

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.

SECTION 4. APPENDIX NA
NO_x 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 CASE
J9191 AUG 30 8
FPSC-COMMISSION CLERK

SECTION 4. APPENDIX NA
NO_x 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_x AGREEMENT

(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_x"), 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_x.

(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

SECTION 4. APPENDIX NA
NO_x AGREEMENT

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_x 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_x 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.¹ The predominant change envisioned by the agreement is the

¹ 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_x emissions than would otherwise result from operating Crist 7 with the new SCR. Since NO_x 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_x AGREEMENT

addition of Selective Catalytic Reduction (“SCR”) technology to Crist 7 by May 1, 2005.² In addition to the NO_x 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_x emissions through the addition of NO_x 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_x reduction technologies for one or more of the other units will follow engineering studies conducted as part of the Ozone Agreement.³ 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_x reductions envisioned from the addition of the NO_x 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_x 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

² 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.

³ The deadline for installing other selected NO_x 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_x 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_x 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_x AGREEMENT

(12) The parties to the Ozone Agreement acknowledge that the NO_x 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.⁴ 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_x 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

⁴ 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

SECTION 4. APPENDIX NA
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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 29th 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

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NO_x AGREEMENT

Appendix A

**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_x 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_x 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_x emission rate as further specified in paragraph 3 below, Gulf agrees to conduct engineering studies on the feasibility of other NO_x 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_x 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_x reduction technology other than SCR on Crist Unit #6, GULF will select and implement one or more NO_x 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_x 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.

SECTION 4. APPENDIX NA
NO_x AGREEMENT

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_x 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_x 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_x 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_x 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_x trading or credits, GULF shall be entitled to retain all NO_x 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_x 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_x 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.

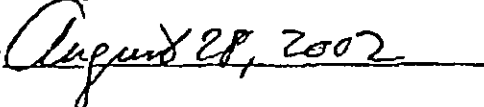
8. This agreement is based upon the assumption that an order from the Florida Public Service Commission (FPSC) authorizing GULF to recover the costs incurred pursuant to this agreement through the Environmental Cost Recovery Clause is rendered final (final order) within 90 days of the execution of the 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.

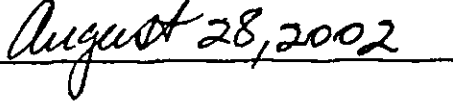
FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

GULF POWER COMPANY

By: 
David B. Struhs
Secretary

By: 
Thomas A. Fanning
President and Chief Executive Officer

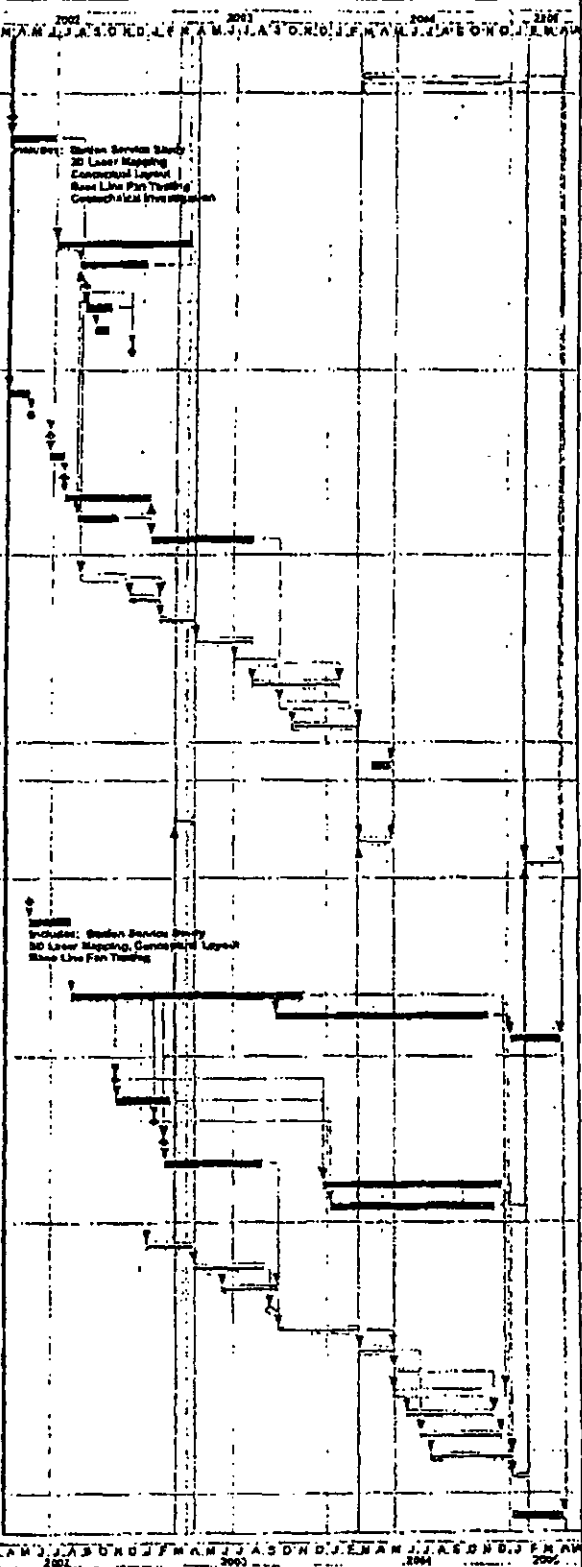
Date: 

Date: 

SECTION 4. APPENDIX NA
NOx AGREEMENT

EXHIBIT "A"

Activity ID	Activity Description	Orig. Est.	Early Start	Early Finish	Year
UNIT OUTAGE					
EN0186	Precedence Work	65	01APR01	09MAY04	0
ENGINEERING					
EN0001	Project Start	0	01APR01		0
EN0196	Preliminary Engineering	65	01APR01	20JUN02	3
EN0105	Detailed Engineering/Design and Support Precede	204	01JUL02	01APR03	10
EN0108	SCS Design Drawings and Supports	100	20AUG02	01JAN03	78
EN0116	Transfer Foundations into Final Precede Vendor	0	02SEP02		0
EN0178	SCS Design Pits and Foundations	40	02SEP02	25OCT02	9
EN0188	SCS Prepare Final Reaction System	20	23SEP02	18OCT02	8
EN0189	Award Pits Location	0	08DEC02		0
PROCUREMENT					
PRO148	Final Specs for Precipitator Design and Supply	30	01APR02	10MAY02	0
PRO180	Issue Precipitator Inquiry for Bids	0		10MAY02	0
PRO200	Receive Precipitator Bids	0		24JUN02	0
PRO210	Evaluate Precipitator Bids	20	24JUN02	20JUL02	0
PRO170	Award Precipitator Design and Supply	0		23JUL02	0
PRO115	Vendor Design Precipitator	120	23JUL02	17JAN03	0
PRO154	Flow Modeling - Precipitator	80	20AUG02	11NOV02	18
PRO149	Precipitator - Fabricate and Deliver	150	18JAN03	08AUG03	53
CONSTRUCTION					
CST101	Rebarwork	90	22AUG02	20NOV02	8
CST102	Install Pits	30	04DEC02	04FEB03	0
CST126	Install Pits Caps	20	07FEB03	18APR03	8
CST124	Erect Precede and Ductwork Support Steel	70	17APR03	08AUG03	5
CST140	Erect Ductwork	40	03JUL03	24SEP03	40
CST114	Erect Precipitator Box	125	07AUG03	23JAN04	0
CST170	Install Precipitator Mechanical Equipment	100	07OCT03	17FEB04	17
CST164	Install Precipitator Electrical Equipment	180	27OCT04	05MAR04	0
STARTUP					
SAU100	Checkout and Start Up	40	27MAY04	09MAY04	0
UNIT OUTAGE					
CST113	SCR Absorbent Change	20	02MAY03	11APR03	0
CST111	Building Reaction Ducting	85	08MAY03	09MAY04	0
CST110	SCR Train Outage	70	05FEB03	13APR03	0
ENGINEERING					
EN0000	Project Start	0	20MAY02		0
EN0137	Preliminary Engineering	60	20MAY02	06AUG02	0
EN0109	Detailed Engineering/Design	340	13AUG02	20NOV02	0
EN0118	Construction Support	320	24SEP02	23NOV04	83
EN0128	Startup Support	100	04JAN03	13APR04	40
PROCUREMENT					
PRO140	Award Catalyst	0		08NOV02	13
PRO130	Flow Modeling	60	11NOV02	28FEB03	278
PRO131	Award ID Fans and Motors	0		28JAN03	44
PRO180	Award Structural Steel	0		14FEB03	21
PRO102	Fabricate and Deliver Structural Steel	140	17FEB03	28AUG03	31
PRO145	Fabricate and Deliver Catalyst	270	20OCT03	16DEC04	13
PRO125	Fabricate and Deliver ID Fans and Motors	250	04JAN04	02DEC04	41
CONSTRUCTION					
CST100	Rebarwork	78	13JAN03	11APR03	0
CST103	Install Pits	100	14APR03	28AUG03	0
CST125	Install Pits Caps	80	08JUN03	26SEP03	0
CST110	Assemble General Construction	0		12SEP03	10
CST116	Erect Structural Steel	125	20SEP03	05MAY04	0
CJ1130	Structural Purlin Installation	30	07MAY04	30MAY04	0
CST130	Erect Steel to Reactor Level	40	11MAY04	05JUL04	0
CST140	Erect Remaining Steel	184	11MAY04	24DEC04	7
CST145	Erect Reactor Floor	75	04JUN04	28NOV04	0
CST140	Install Mechanical Systems	115	08JUL04	13OCT04	0
CST145	Install Electrical Systems	115	28JUL04	04JAN05	0
CST160	Load Catalyst	21	06JAN05	02FEB05	0
STARTUP					
SAU100	Checkout and Start Up	100	04JAN05	13APR05	0



Start Date: 01APR02 CTPS
 Finish Date: 13APR05
 Date DMR: 01APR02
 Issue Date: 11APR02 07:31

SOUTHERN COMPANY GENERATION
CRIST UNIT 7 SCR / PRECIPITATOR

Sheet 1 of 1
 Date: _____ Revision: _____
 02MAY02 Review and Comment
 02MAY02 Include Total Project for Review

**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_x 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:

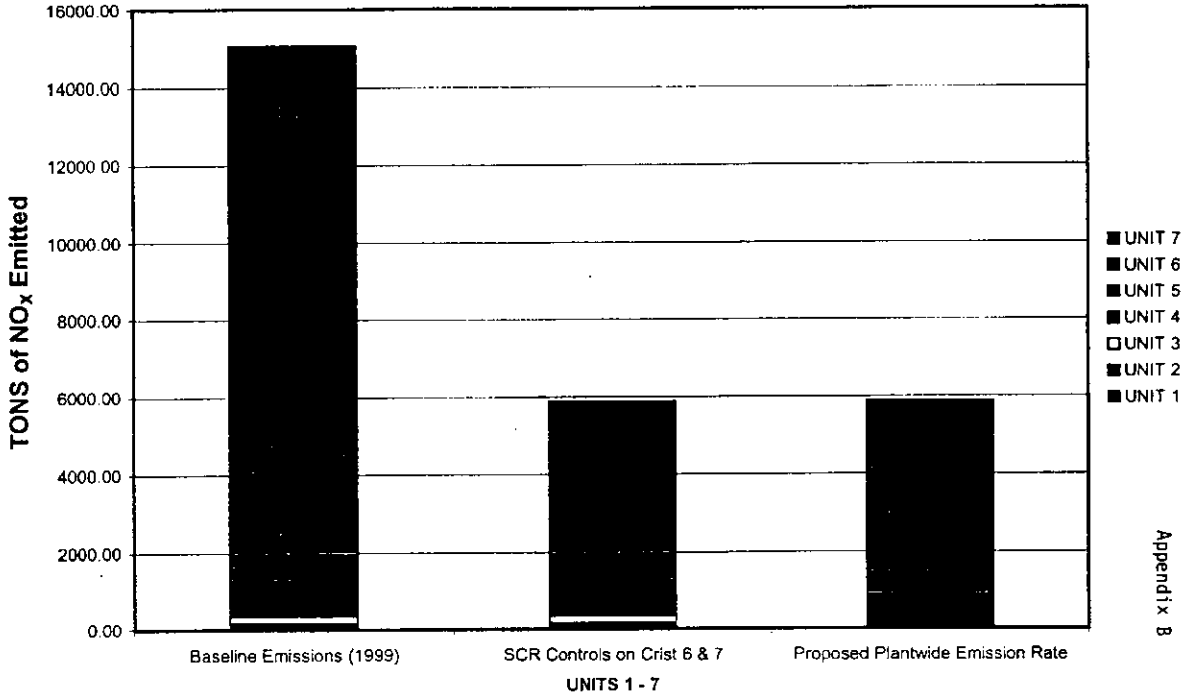
$$\begin{array}{l} \text{plant wide} \\ \text{daily} \\ \text{mmbtu} \\ \text{weighted} \\ \text{NO}_x \text{ rate} \end{array} = \frac{\sum_{\text{Units } 4, 5, 6, 7} \left[\left(\text{Unit \# daily mmbtu} \right) \times \left(24 \text{ hour avg unit \# NO}_x \text{ CEMs rate} \right) \right]}{\sum_{\text{Units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

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_x AGREEMENT

Comparison of Crist Plant Emission Reduction Alternatives



Appendix B

SECTION 4. APPENDIX NA

NO_x 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 29th 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
Office of Public Counsel
c/o The Florida Legislature
111 W. Madison St., Room 812
Tallahassee FL 32399-1400

Lee L. Willis, Esquire
Ausley & McMullen
P. O. Box 391
Tallahassee FL 32302

Joseph A. McGlothlin, Esquire
McWhirter Reeves, P.A.
117 S. Gadsden Street
Tallahassee FL 32301

John W. McWhirter, Esquire
McWhirter Reeves, P.A.
400 N Tampa St Suite 2450
Tampa FL 33602

Ms. Debra Swim
LEAF
1114 Thomasville Rd, Suite E
Tallahassee FL 32303


JEFFREY A. STONE
Florida Bar No. 325953
RUSSELL A. BADDERS
Florida Bar No. 0007455
Beggs & Lane
P. O. Box 12950
Pensacola FL 32591-2950
850 432-2451
Attorneys for Gulf Power Company

SECTION 4. APPENDIX SC
STANDARD CONDITIONS

{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**

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.]

PERMITTEE

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

Authorized Representative:
Penny Manuel

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

?

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

Michael G. Cooke, Director
Division of Air Resource Management

(Date)

SECTION 1. GENERAL INFORMATION

FACILITY AND PROJECT DESCRIPTION

The existing plant consists of seven 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 seven of the units. The following units are affected by this air construction permit.

ID	Emission Unit Description
001	Boiler No. 1 (Phase II Acid Rain Unit) (retired March 31, 2003)
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

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); 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 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

A. EU 006 – Boiler No. 6

This section of the permit addresses the following existing emissions 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 NOx burners and selective non-catalytic reduction.

Continuous Monitors: CO₂, NO_x, SO₂, opacity, stack gas flow, and ammonia injection rate

Stack Parameters: Units 6 and 7 share a common stack that is 450 feet tall with a diameter of 23.2 feet. The volumetric flow rate of Unit 6 at permitted at capacity is approximately 2,463,000 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_x) 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_x emissions as measured across the SCR 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: Southern Company Services Inc. designed the new SNCR system, which will generally consist of the following:

- *Ammonia Injection System: Anhydrous ammonia will be delivered by truck or rail and stored on site in two 20,500 gallons tanks. Ammonia is distributed into the SCR inlet duct through the ammonia injection grid (AIG), which is divided into about two dozen zones. Each zone is equipped with a flow indicator and manual control valve for tuning the AIG to match the inlet NO_x profile. A static mixer installed upstream of the AIG creates flow resistance, flattens this profile, and makes gas flow uniform. A second static mixer is installed downstream of the AIG. The elements of this mixer are precisely oriented with the AIG injection points to impart a swirl to the diluted ammonia and promote good*

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~~mixing with the flue gas. A manual gas sampling grid (GSG) is installed downstream of the last catalyst layer, which allows a high resolution traverse of the flue gas stream. Gas composition data collected from the GSG is used to precisely adjust and tune the AIG. The preliminary design is based on a 0.95 molar ratio of ammonia to NOx.~~

• **Ammonia Control System:** ~~The ammonia control system consists of a control loop with a cascaded, feed-forward control scheme. Process monitors will provide NOx emission rate data collected at the inlet to and the outlet from the SCR system. The ammonia injection rate is set based on a variety of input data including the measured NOx rates at the SCR inlet/outlet, the outlet NOx set point, the heat input to the boiler, the actual NOx rate measured by the stack monitor, and a scaling factor based on the molecular weights of ammonia and NOx. The system is capable of continually adjusting flow control valves to fine-tune the ammonia injection rate based on changing gas stream conditions.~~ ?

• **SCR Bypass:** ~~The SCR design incorporates dampers and ductwork to provide the capability of bypassing the SCR system. The bypass is most commonly used to gradually heat or cool the catalyst structure to minimize thermal fatigue during startup and shutdown. During catalyst maintenance and repair, it would also allow access to the SCR reactor without requiring complete shutdown of the Unit 7 boiler.~~

This information is based on the preliminary design and is subject to change. The permittee shall update this information as necessary during the process of final design and installation. [Design; Paragraph 1 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, 2006 [Applicant Request; Design; Paragraph 1 of the Agreement] ⇐ 2006 ?

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

{Permitting Note: Particulate matter emissions continue to be regulated by Rules 62-296.405(1)(b) and 62-210.700(3), F.A.C. in accordance with current Title V Permit Nos. C.7 and C.8.}

5. **Stack Opacity:** The flue gas opacity from Unit 7 shall not exceed 20% based on a 6-minute block average, except for one 6-minute block per hour that shall not exceed 27%. Compliance shall be determined by data collected from the certified continuous opacity monitor or EPA Method 9, which is incorporated by reference in Chapter 62-297, F.A.C. This standard is effective on the date of the initial compliance test for particulate matter and thereafter. *{Permitting Note: Stack opacity during soot blowing and load change continues to be regulated by Rule 62-210.700(3), F.A.C. in accordance with current Title V Permit Condition C.6. Excess emissions due to startup, shutdown, and malfunction continue to be regulated by Rule 62-210.700(1), (2), and (4), F.A.C. in accordance with current Title V permit Condition Nos. C.12, C.13, and C.14.}* [Design; Rule 62-4.070(3), F.A.C.]
6. **Nitrogen Oxides (Interim):** Prior to implementing the required NOx control strategy for Units 4, 5, and 6, the NOx emissions from Unit 7 shall not exceed 0.15 lb/MMBtu of heat input based on a 30-day rolling average when the SCR system is operational with a catalyst temperature of at least 600° F. The permittee

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shall demonstrate compliance with data collected from the certified CEMS. This standard is effective on the date the CEMS is re-certified in accordance with the acid rain provisions of 40 CFR 75. After the required NOx control strategy is implemented for Units 4, 5, and 6, the plant-wide NOx standard specified in Subsection 3B shall supersede this interim standard. [Design; Rules 62-4.070(3), F.A.C.]

SCR BYPASS OPERATION

- ~~7. SCR Bypass, Startup/Shutdown: During Unit 7 startup and shutdown, the SCR system may be bypassed in accordance with manufacturer's recommended procedures to allow for controlled catalyst heating and cooling. During startup, the SCR system shall be on line and functioning when the minimum operating temperature of the catalyst is achieved ($\geq 600^\circ$ F). During shutdown, the SCR system may be removed from service when the catalyst temperature drops below 600° F. [Design; Rule 62-210.700, F.A.C.]~~
- ~~8. SCR Bypass, Catalyst Maintenance and Repair: The permittee may bypass the SCR system to perform catalyst maintenance and repair for up to 15 days per year during the non ozone season. During such allowable bypass periods, the uncontrolled NOx emissions from Unit 7 shall not exceed 0.35 lb/MMBtu based on a 24 hour average. The daily NOx emission rates for these periods may be excluded from the plant wide 30 day NOx standard specified in Subsection 3B. The permittee shall notify the Compliance Authority in advance of the purpose of the SCR bypass, the expected dates of SCR bypass, and the expected duration of SCR bypass. (Permitting Note: The ozone season is defined as May 1st through September 15th.) [Rules 62-210.700 and 62-4.070(3), F.A.C.]~~

EMISSIONS PERFORMANCE TESTING

9. 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.]
10. Particulate Matter, Compliance Tests: Within 60 days after completing construction of the ~~ESP and~~ ^{Now SCR} bringing Unit 7 on line, the permittee shall conduct tests to demonstrate compliance with the emissions standards for particulate matter and opacity. ~~Tests for particulate matter shall be conducted in accordance with the methods and procedures currently specified in the Title V air operation permit.~~ ^{Tests for particulate matter shall be conducted in accordance with the methods and procedures currently specified in the Title V air operation permit.} Subsequent tests shall be conducted during each federal fiscal year (October 1st to September 30th). The permittee shall demonstrate initial compliance with the opacity standard by submitting the data collected from the certified continuous opacity monitor for each particulate matter test run. [Rule 62-297.310(7), F.A.C.] ^{opacity monitor shall use wet/dry?}
11. Nitrogen Oxides, Compliance Tests: Within 60 days after completing construction of the SCR system and bringing Unit 7 on line, the permittee shall conduct tests to demonstrate compliance with the design specification to achieve no less than an ~~85%~~ ^{82%} reduction in the nitrogen oxide emission rate. The permittee shall concurrently test the SCR inlet and SCR outlet in accordance with EPA Method 7E as adopted by reference in Rule 62-204.800, F.A.C. Data collected during the annual NOx RATA testing may be used to represent NOx emissions at the SCR outlet. Alternatively, the permittee may submit data collected from the NOx rate process monitors at the SCR inlet and SCR outlet, which are part of the ammonia injection system. 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.]
12. Ammonia Slip, Performance Tests: Within 60 days after completing construction of the SCR system and bringing Unit 7 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

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specified in Condition No. 2 of this subsection, the permittee shall take corrective actions such as repair, ~~addition of catalyst, replacement of catalyst, etc.~~ [Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

addition of NOx reductant, repairs, etc.
{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: SO₂, NO_x, CO₂ and stack gas flow.}

13. COMS: The permittee shall install, calibrate, operate and maintain a continuous opacity monitoring system (COMS) to demonstrate compliance with the stack opacity standard. The COMS shall monitor and record data during all periods of Unit 7 operation including startup, shutdown, malfunction or emergency conditions, but not including continuous monitoring system breakdowns, repairs, or calibration checks. {Permitting Note: The existing COMS required by the Acid Rain program satisfies this requirement.} [Rule 62-4.070(3), F.A.C.]
14. NO_x CEMS: To demonstrate compliance with the emissions standards, the permittee shall install, calibrate, 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 7 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_x CEMS required by the Acid Rain program satisfies this requirement. Due to the substantial changes being made to the existing monitor as a result of this project, it will be necessary to re-certify the existing CEMS in accordance with the provisions of 40 CFR 75.} [Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

15. 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_x emission rate (lb/MMBtu) as recorded by the CEMS, and the ammonia injection rate (lb/hour). The report shall also include copies of the continuous monitoring records for opacity and NO_x emissions. [Rule 62-297.310(8), F.A.C.]
16. Quarterly Report
- a. NO_x Summary: For each calendar day during the reporting quarter, the permittee shall report the following information related to the NO_x CEMS for Unit 7:
- Hours of operation for Unit 7;
 - Daily average NO_x emission rate, lb/MMBtu;
 - 30-day average NO_x emission rate, lb/MMBtu; and
 - Whether or not the day included a startup, shutdown, malfunction or bypass of the SCR.

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 7 operation, provide a justification for not obtaining sufficient data and describe the corrective actions taken to

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prevent this in the future. Identify any emissions data excluded from the calculation of emission rates due to startup, shutdown, or malfunction.

- b. *Opacity Summary*: For each calendar day during the reporting quarter, the permittee shall report each 6-minute period in excess of the opacity standard.
- c. *Gas Sampling Grid (GSG)*: The permittee shall summarize any tests using the GSG that were conducted during the calendar quarter.

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

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

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

B. EUs 001 to 007 – Combined Conditions

This section of the permit addresses the following emissions units.

EU No.	Title V Emissions Unit Description
001	Boiler No. 1 (Phase II Acid Rain Unit)
002	Boiler No. 2 (Phase II Acid Rain Unit)
003	Boiler No. 3 (Phase II Acid Rain Unit)
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)

{Permitting Note: 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". This agreement is the basis for the following permit conditions.}

REQUIREMENTS OF THE AGREEMENT

1. **Supplemental Conditions:** The conditions of this section supplement all other valid air construction and operation permits for these units. These conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070(3), F.A.C.]
2. **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:

$$\text{Plant-Wide Daily MMBtu-Weighted NOx Emission Rate} = \frac{\sum_{\text{Units 4, 5, 6, 7}} [(\text{Unit \# daily MMBtu}) \times (\text{Unit \# daily NOx CEMS Rate})]}{\sum_{\text{Units 4, 5, 6, 7}} (\text{Unit \# daily MMBtu})}$$

The "Unit # daily MMBtu" shall be determined by the daily as-burned fuel analysis and the fuel fired for each unit. The "Unit # daily NOx CEMS Rate" shall be determined by the daily average of NOx CEMS data for each unit and reported in terms of "lb/MMBtu heat input". The plant-wide daily NOx emissions rate shall be determined each day regardless of the operating status for Unit 7. The plant-wide 30-day rolling NOx 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 NOx 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, NOx emissions data collected during such periods may be excluded from the daily NOx average. In accordance with Condition No. 8 of Subsection 3A, NOx emissions data collected during SCR bypass during the non-ozone season may be excluded from the daily NOx average. The plant-wide NOx emission standard shall be achieved by utilizing the SCR system for Unit 7 and implementing the selected NOx control strategy for Units 4, 5, and 6. The effective date for the plant-wide NOx emission standard is:

- a. The startup date of the selected additional NOx reduction project, (excluding an SCR project for Unit 6), but no later than May 1, 2006; or
- b. The startup date of the SCR project for Unit 6, but no later than December 31, 2007.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

B. EUs 001 to 007 – Combined Conditions

For purposes of this condition, “startup date” shall mean the date that the permittee demonstrates initial compliance with the terms of the required air construction permit (or other Department approval) that authorized implementation of the additional NOx reduction project. [Paragraphs 2, 3 and Exhibit B of the Agreement]

3. **NOx CEMS:** To demonstrate compliance with the plant-wide NOx emissions standard, the permittee shall install, calibrate, operate and maintain continuous emissions monitoring systems (CEMS) to continuously monitor and record the emissions of nitrogen oxides and an appropriate diluent gas (carbon dioxide or oxygen) from Units 4, 5, 6, and 7. *{Permitting Note: The existing NOx CEMS required by the Acid Rain program satisfy this requirement.}* [Exhibit B of the Agreement]
4. **Quarterly Report:** For each calendar day during the reporting quarter, the permittee shall report the following information related to the NOx CEMS for Unit 7:
 - Daily NOx emission rate for each boiler, lb/MMBtu;
 - Daily heat input rate for each boiler, MMBtu/day;
 - 30-day plant-wide NOx emissions rate, lb/MMBtu;
 - Identify whether Unit 7 operated less than 18 hours;
 - Identify the occurrence of a Unit 7 startup or shutdown; 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 7 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.

{Permitting Notes: To achieve the plant-wide NOx standard for the Crist Plant, Gulf Power Company will take the following additional actions.

Unit Retirements: The Agreement requires the retirement of Unit 1 within 120 days of receiving a final order from the Public Service Commission that authorizes the recovery of costs associated with the pollution control equipment incurred pursuant to the Agreement through the Environmental Cost Recovery Clause. A final order is one that is no longer subject to review or appeal by a court of competent jurisdiction. The Agreement also requires the retirement of Units 2 and 3 on or before May 1, 2006. [Paragraph 4 of the Agreement]

Additional NOx Reduction Projects: The Agreement requires Gulf Power Company to conduct a variety of engineering studies to determine the feasibility of NOx reduction technologies for one or more of the three remaining coal-fired units (Units 4, 5, and 6). The 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 re-burn technology, selective use of biomass fuel, etc. The studies must be complete by May 1, 2005. Before implementing any NOx reduction technology or combination of technologies, Gulf Power Company must obtain written concurrence from the Department that the use thereof is reasonable and necessary to achieve the overall plant-wide NOx emission standard. If a NOx reduction technology or a combination of technologies other than an SCR project for Unit 6 is identified as appropriate, Gulf Power Company will implement the technology or combination of technologies on one or more of the three remaining coal-fired units by May 1, 2006. If an SCR project for Unit 6 is identified as the appropriate NOx reduction technology, Gulf Power Company will implement, begin and continue operating the SCR system by December 31, 2007. [Paragraph 2 of the Agreement]}