

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

Crist Electric Generating Plant
Air Permit No. 0330045-004-AC
Project: Units 4 and 5, Field-Testing
of Carbonaceous Fuels

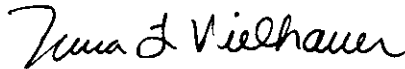
Authorized Representative:

Mr. Gene L. Ussery, Jr.
Vice President of Power Generation

Enclosed is Final Air Permit No. 0330045-004-AC, which authorizes a temporary period to conduct field-testing of carbonaceous fuels (wood chips, sawdust, sander dust, and switchgrass) to determine the feasibility of use in a NOx reduction program for Units 4 and 5 at the existing Crist Plant, which is located in Escambia County, Florida. As noted in the Final Determination (attached), only minor changes were made. 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 (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

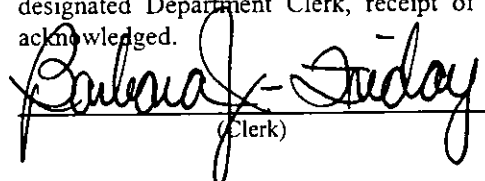
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/9/02 to the persons listed:

Mr. Gene L. Ussery, Jr., Gulf Power Co.*
Mr. G. Duane Waters, Gulf Power Co.
Mr. Gregory N. Terry, Gulf Power Co.
Ms. Sandra Veazey, NWD

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.

 Barbara J. Sunday 12/9/02
(Clerk) (Date)

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- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

Mr. Gene L. Ussery, Jr.
 Vice Pres. of Power Generation
 Gulf Power Company
 One Energy Place
 Pensacola, FL 32520

COMPLETE THIS SECTION ON DELIVERY

A. Receiver's Name: Please Print Clearly *L. Conrad* B. Date of Delivery *12/11/02*

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Sent To: Mr. Gene L. Ussery, Jr., Gulf Power Co.
 Street, Apt. No.,
 or PO Box No. One Energy Place
 City, State, ZIP+4® Pensacola, FL 32520

FINAL DETERMINATION

PERMITTEE

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

PERMITTING AUTHORITY

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

PROJECT

Crist Electric Generating Plant
Units 4 and 5, Field-Testing of Carbonaceous Fuels
Air Permit No. 0330045-004-AC

This permit authorizes a temporary period to conduct field-testing of carbonaceous fuels (wood chips, sawdust, sander dust, and switchgrass) to determine the feasibility of use in a NOx reduction program for Units 4 and 5 at the existing Crist Plant, which is located in Escambia County, Florida.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on November 12, 2002. The applicant published the "Public Notice of Intent to Issue" in the Pensacola News Journal on November 14, 2002. The Department received the proof of publication on November 25, 2002. Gulf Power requested an extension of time in which to file a petition for an administrative hearing. On December 3, 2002, Gulf Power withdrew the request for an extension of time based on the agreed upon changes.

COMMENTS

No comments on the Draft Permit were received from the public or the Department's Northwest District Office. The following summarizes comments received from the applicant and the Department's response.

Condition No. 2: Gulf Power requests clarification regarding the unit heat input rate. The following sentence is added, "The maximum total heat input rate for each unit remains at 1096.7 MMBtu per hour."

Condition No. 6: Gulf Power submitted a brief summary of the field-testing program. The condition is revised to the following, "Before firing any carbonaceous fuel, the permittee shall submit a preliminary schedule detailing the proposed field-testing protocol to the Bureau of Air Regulation and the Compliance Authority. Updates to the field-testing protocol and schedule shall be submitted as necessary."

Condition No. 9: Gulf Power requests the ability to perform baseline CO and VOC testing for coal firing after carbonaceous fuels were fired. The first sentence is revised accordingly. Requirements for ash resistivity and particle size distribution are moved to Condition No. 14. The following note is added, "Baseline VOC testing is only required if VOC testing is required for any carbonaceous fuel." See comments and response for Condition No. 10.

Condition No. 10: Gulf Power requests that only one test be required for particulate matter and that additional CO testing be performed in lieu of VOC testing. The condition is revised to require additional CO testing with VOC testing required only if initial CO tests show that emissions from carbonaceous fuel firing are higher than baseline CO emissions. An initial PM test is required and a second must be performed if the initial test result is

FINAL DETERMINATION

greater than 0.025 lb/MMBtu. This rate is based on the most recent PM test (05/01/02) for Unit 4, which is indicated in the ARMS database as 0.022 lb/MMBtu. Requirements for particle size distribution are moved to Condition No. 14.

Condition No. 11: Gulf Power requests clarification that only NO_x and opacity need to be reported continuously by CEMS. Units 4 and 5 do not record flue gas oxygen content, but rather CO₂ flue gas content. Gulf Power also requests that the fuel feed rates be monitored as required by the current Title V permit. The condition is revised accordingly.

Condition No. 12: Gulf Power requests that the critical ESP parameters be recorded at the beginning and end of each test run rather than at 15-minute intervals. Gulf Power also requests clarification that the amount of ash generated would be estimated. The condition is revised accordingly. Requirements for ash resistivity and particle size distribution are moved to Condition No. 14.

Condition No. 13: Gulf Power requests that the condition be revised to require fuel samples to be taken and analyzed for the specified properties for each fuel delivery and for each stack test. As this would provide a reasonable number of samples, the condition is revised accordingly.

Condition No. 14: Gulf Power does not believe that particulate matter emissions will increase because of the existing ESP controls and the amounts of carbonaceous fuels being fired. In addition, Gulf Power believes that the ash sampling and particle size distribution tests are complicated and expensive. The Department believes that this information may prove worthwhile if testing shows increased PM emissions. Therefore, the condition is revised to require a second PM test, ash sampling, and particle size distribution testing if PM emissions are higher than the emission rate specified in Condition No. 10.

Condition No. 15: Gulf Power states that it may not be possible to operate at permitted capacity for the tests and that the condition should allow for the possibility of reduced operating rates. The first two sentences are revised to, "The permittee shall attempt to conduct all tests at permitted capacity, which is defined as 90% to 100% of the maximum operating rate allowed by permit (total heat input rate of coal and carbonaceous fuel). If the permittee is unable to operate at this level, then any subsequent request to fire this fuel shall be limited to 110% of the tested rate."

Condition No. 16: Gulf Power requests additional flexibility in the test notification because field testing will be conducted on the basis of actual fuel deliveries and amounts. The condition is revised to, "The permittee shall provide a 5-day advance notice of any scheduled stack tests to afford the Compliance Authority the opportunity to witness the tests. If unavoidable circumstances occur that would delay the stack tests, the permittee shall keep the Compliance Authority informed of the delays and the new schedule."

Condition No. 19: Gulf Power requests that the final report be submitted within 90 days of the permit expiration date rather than completion of the field-testing project. The condition is revised accordingly.

CONCLUSION

The changes to the draft permit are not considered substantial. The final action of the Department is to issue the permit with the changes described above.



Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

Authorized Representative:

Mr. Gene L. Ussery, Jr.
Vice President of Power Generation

Crist Electric Generating Plant Air Permit No. 0330045-004-AC Facility ID No. 0330045 SIC No. 4911 Permit Expires: October 4, 2003
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PROJECT AND LOCATION

This permit authorizes a temporary period to conduct field-testing of carbonaceous fuels (wood chips, sawdust, sander dust, and switchgrass) to determine the feasibility of use in a NO_x reduction program for Units 4 and 5 at the Crist Plant. This existing plant is located on Pate Road, off of 10 Mile Road on Governors Bayou in Escambia County, Florida. The map coordinates are: Zone 16, 478.50 km East and 3381.30 km North (Latitude: 30° 33' 58" North and Longitude: 87° 13' 44" West).

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to perform the work 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 permit supplements all other air construction and operation permits for the affected emissions units and does not alter any requirements from such previously issued air permits.

CONTENTS

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

Howard L. Rhodes, Director
Division of Air Resources Management

12/09/02
(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 1, 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. Only the following units are affected by this air construction permit.

ID	Emission Unit Description
004	Unit 4 is a utility boiler with a maximum heat input rate of 1096.7 MMBtu/hour.
005	Unit 5 is a utility boiler with a maximum heat input rate of 1096.7 MMBtu/hour.

REGULATORY CLASSIFICATION

Title III: The existing facility is identified as a potential 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. In addition, the field-testing of carbonaceous fuels ("biomass") is contemplated as a possible engineering feasibility study for NOx reduction in the "Agreement for the Purpose of Ensuring Compliance with Ozone Ambient Air Quality Standards" that was entered into on August 28, 2002 between the Florida Department of Environmental Protection and the Gulf Power Company.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify, or operate the emissions units regulated by this permit 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 such documents shall be submitted 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 unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. 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 62-204.800, 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. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: The scope of this temporary project is to develop information in support of a permanent project. A future request for permanent authorization to fire carbonaceous fuels would then require a revision to the Title V air operation permit. [Rule 62-213.400, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-004 and 005 – Existing Units 4 and 5

This section of the permit addresses the following existing emissions units.

Emissions Unit Nos. 004 and 005

Description: Each unit is a tangentially fired, dry-bottom boiler manufactured by Combustion Engineering.

Capacity and Fuels: Each unit is rated at a maximum heat input of 1,096.7 MMBtu per hour when firing pulverized coal, natural gas or distillate No. 2 fuel oil (used as back-up fuel).

Controls: Particulate matter emissions from each unit are controlled by hot side (Buell Model # Bal. 2x34n333-4-3p) and cold side (Buell Model # 1.1x48k33-1p) electrostatic precipitators.

Monitors: Each unit is continuously monitored for opacity, carbon dioxide, nitrogen oxides, and sulfur dioxide.

Stack Parameters: Units 4 and 5 share a common stack with Units 1, 2 and 3 having the following characteristics: stack height is 450 feet; exit diameter is 18.0 feet; exit temperature is 290° F; actual volumetric flow rate is approximately 802,500 acfm.

AUTHORIZATION

1. Relation to Other Permits: The conditions of this permit are in addition to those of any other air construction or operation permits. [Rule 62-4.210, F.A.C.]
2. Field-Testing of Carbonaceous Fuels: Subject to the conditions of this permit, the permittee is temporarily authorized to conduct a ten-month field-testing program to determine the feasibility of co-firing carbonaceous fuels with coal in existing Units 4 and 5 as a NOx reduction technique. Carbonaceous fuels shall only include the following untreated materials: wood chips, sawdust, sander dust, and switchgrass. For each unit, these materials may be co-fired with coal at a maximum heat input rate of 97.7 MMBtu per hour. The maximum total heat input rate for each unit remains at 1096.7 MMBtu per hour. The permittee shall implement the field-testing program to determine and report operational and environmental impacts that will result from co-firing carbonaceous fuels. This information may be used to support a future request for permanent authorization of one or more of these fuels. Units 4 and 5 shall remain subject to the conditions of all existing permits related to air pollution and control equipment during the field-testing program. *{Permitting Note: Rule 62-210.200(55), F.A.C. defines "carbonaceous fuel" as, "Solid materials composed primarily of vegetative matter such as tree bark, wood waste, or bagasse." This permit further limits carbonaceous fuels to untreated wood chips, sawdust, sander dust, and switchgrass.}* [Applicant Request]
3. Expiration: Upon the expiration of this permit, the authority to fire carbonaceous fuels is withdrawn.

PERFORMANCE RESTRICTIONS

4. Temporarily Authorized Fuels: Subject to the conditions of this permit, each unit may also fire carbonaceous fuel consisting of the following untreated materials: wood chips, switchgrass, sawdust, and sander dust in addition to currently authorized fuels. These materials shall be substantially free of plastics, metals, paint or other chemicals. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
5. Permitted Capacity:
 - a. For each unit, the maximum hourly firing rates (tons per hour) for the carbonaceous fuels are: 10.9 tons of wood chips per hour, 6.7 tons of switchgrass per hour, 8.7 tons of sawdust per hour, and 8.7 tons of sander dust per hour. The above limits are not cumulative and only one carbonaceous fuel type may be fired at a time. *{Permitting Note: These restrictions are roughly equivalent to a heat input rate of 97.7 MMBtu per hour.}*

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-004 and 005 – Existing Units 4 and 5

- b. During the project, no more than the following amounts of carbonaceous fuels shall be fired: 7816 tons of wood chips, 4836 tons of switchgrass, 6288 tons of sawdust, and 6288 tons of sander dust. *{Permitting Note: These restrictions are roughly equivalent to 30 days of firing for each fuel.}*

When firing any carbonaceous fuel, the permittee shall continuously monitor and record the amount of each fuel being fired. [Rule 62-210.200(PTE), F.A.C.]

6. Schedule: Before firing any carbonaceous fuel, the permittee shall submit a preliminary schedule detailing the proposed field-testing protocol to the Bureau of Air Regulation and the Compliance Authority. Updates to the field-testing protocol and schedule shall be submitted as necessary. [Rule 62-4.070(3), F.A.C.]

EMISSIONS STANDARDS

7. Emissions Standards: This permit does not establish any new emissions standards for these units. Units 4 and 5 shall continue to comply with the requirements of all existing, valid Department permits. [Rule 62-4.070(3), F.A.C.]
8. Fugitive Dust Emissions: The permittee shall minimize unconfined particulate matter emissions from the storage and handling of carbonaceous fuels by using dust suppressing techniques such as covering, confining, or applying water to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING AND MONITORING REQUIREMENTS

9. Baseline Coal Emissions Tests: Initial testing for each boiler when firing only coal shall be performed to determine CO and VOC emissions and establish baseline levels. All CO and VOC tests required by this permit shall be conducted in accordance with the procedures normally used for PM compliance tests. CO₂, NO_x, opacity, and SO₂ emissions data collected by the existing continuous monitors shall be reported for each test run. Baseline NO_x, opacity, and SO₂ emissions shall be determined from continuous monitor data. Baseline PM emissions shall be determined from recent annual compliance tests. Baseline tests shall be performed at permitted capacity. *{Permitting Note: Baseline VOC testing is only required if VOC testing is required for any carbonaceous fuel.}* [Rule 62-4.070(3), F.A.C.]
10. Carbonaceous Fuel Emissions Tests: A series of tests shall be conducted to determine emissions of CO, PM and VOC when co-firing each carbonaceous fuel with coal. Within 21 days of first firing a given carbonaceous fuel, the permittee shall conduct an initial CO test. If the initial CO test shows that CO emissions are no greater than baseline emissions from coal firing, then VOC tests are not required. If the initial CO test shows that CO emissions are greater than baseline emissions from coal firing, then at least one VOC test is required. In addition to the preliminary CO tests, the permittee shall conduct two additional CO tests. The permittee shall conduct at least one test to determine particulate matter emissions from each carbonaceous fuel. Each CO, PM, and VOC test shall consist of at least three, 1-hour test runs. CO₂, NO_x, opacity, and SO₂ emissions data collected by the existing continuous monitors shall be reported for each test run. Tests shall be performed while co-firing the highest percentage of carbonaceous fuel that will be requested on a permanent basis. All CO, PM, and VOC tests required by this permit shall be conducted in accordance with the procedures normally used for PM compliance tests. Any problems related to storage, handling, pulverizing, charging, boiler or ESP performance shall be reported. [Rule 62-4.070(3), F.A.C.]
11. Monitoring: When co-firing any carbonaceous fuel, the permittee shall continuously monitor and record NO_x emissions (lb/MMBtu) and opacity (percent). For each day any carbonaceous fuel is fired, the permittee shall report the following: total tons of each fuel charged; hours of fuel firing; average charging rate of each fuel (tons per hour); and average total heat input rate from each fuel (MMBtu/hour). [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-004 and 005 – Existing Units 4 and 5

12. **ESP Parameters:** At the beginning and end of each required PM test run, the critical ESP parameters (field voltages, rapping intensity, and rapping frequency) shall be monitored and recorded. For each test, estimates of the quantities of ash generated and adjustments made to the ESP shall also be reported. For the baseline tests when firing coal, these parameters shall be monitored and recorded at the beginning and end of each required CO test run. [Rule 62-4.070(3), F.A.C.]
13. **Fuel Sampling:** During each required test, a representative fuel sample shall be taken and analyzed for the following fuel properties: heating value (Btu/lb), moisture (% by weight), nitrogen (% by weight), sulfur (% by weight), ash (% by weight), fluorides (ppm by weight), lead (ppm by weight), and mercury (ppm by weight). This includes coal samples for the baseline tests. Representative samples of each carbonaceous fuel shall also be taken and analyzed for these properties for each delivery. [Rule 62-4.070(3), F.A.C.]
14. **Ash Sampling and Particle Size Testing:** If initial tests for a carbonaceous fuel shows PM emissions of 0.025 lb/MMBtu or higher, the permittee shall conduct a second PM test to include particle size distribution. During the second PM test, a representative sample of ESP ash shall be taken and analyzed for resistivity. [Rule 62-4.070(3), F.A.C.]
15. **Rate During Testing:** The permittee shall attempt to conduct all tests at permitted capacity, which is defined as 90% to 100% of the maximum operating rate allowed by permit (total heat input rate of coal and carbonaceous fuel). If the permittee is unable to operate at this level, then any subsequent request to fire this fuel shall be limited to 110% of the tested rate. If the co-firing of any carbonaceous fuel results in any emissions that are not in accordance with the existing permits, co-firing shall cease as soon as practicable. Co-firing that fuel shall not resume until appropriate actions are taken to correct the problem. The Compliance Authority shall be notified immediately upon such cessation and resumption of co-firing the carbonaceous fuel. [Rules 62-297.310(7)(a)9 and 62-4.070(3), F.A.C.]
16. **Test Notification:** The permittee shall provide a 5-day advance notice of any scheduled stack tests to afford the Compliance Authority the opportunity to witness the tests. If unavoidable circumstances occur that would delay the stack tests, the permittee shall keep the Compliance Authority informed of the delays and the new schedule. [Rule 62-297.310(7)(a)9, F.A.C.]
17. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Permitting Note: Tests performed as necessary to support other methods.}</i>
5, 5B, 5F or 17	Particulate Matter <i>{Permitting Note: Testing shall be performed in accordance with the procedures specified in the Title V air operation permit.}</i>
10	Carbon Monoxide
19	Determination of Mass Emission Rates for Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides <i>{Permitting Note: Used as necessary to support other methods.}</i>
18	Organic Compounds <i>{Permitting Note: As an optional supplement to Method 25A, EPA Method 18 may be performed to determine the fraction of methane and ethane emissions. Otherwise, all compounds measured by Method 25A are assumed to be "volatile organic compounds".}</i>
25A	Volatile Organic Compounds

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. Tests shall also be conducted in accordance with the requirements specified in Appendix SC of this permit. Other equivalent methods may be used only if written approval is obtained from the Bureau of Air

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-004 and 005 – Existing Units 4 and 5

Regulation prior to conducting the tests. CO₂, NO_x, opacity, and SO₂ emissions shall be determined by data collected with the existing continuous monitoring systems.

[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

RECORDS AND REPORTS

18. Stack Test Reports: The permittee shall prepare and submit reports for all required stack tests in accordance with the requirements specified in Rule 62-297.310(8), F.A.C. All stack test data collected during the field-testing program shall be submitted for review. For each test run, the report shall also indicate the information required by this permit. For each required stack test, the permittee shall submit a written report that summarizes the results within 45 days of completing such test. [Rule 62-297.310(8), F.A.C.]
19. Final Report: Within 90 days of the permit expiration date, the permittee shall submit a report summarizing the following: a description of the entire project; baseline emissions when firing coal; emissions when firing each carbonaceous fuel; ambient conditions during each test; properties of each carbonaceous fuel compared to coal; fuel feed rates; heat input rates; critical ESP parameters (field voltages, rapping intensity, and rapping frequency); and ash resistivity of each carbonaceous fuel compared to coal. The report shall note and discuss any adjustments to the boiler or ESP that were made to accommodate the co-firing of carbonaceous fuels. It shall also detail any operational concerns related to the following items: storage, handling, pulverizing, and charging carbonaceous fuels; co-firing carbonaceous fuels with coal; ash generation; boiler combustion efficiency; and opacity. Finally, the report shall quantify expected NO_x reductions and discuss the feasibility of co-firing carbonaceous fuels as a NO_x reduction technique. [Rule 62-4.070(3), F.A.C.]

SECTION 4. APPENDICES
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Appendix CF. Citation Format
Appendix GC. General Conditions
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.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

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

RULE CITATION FORMATS

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

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 SC
STANDARD CONDITIONS

{Permitting Note: Unless otherwise specified by permit, 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**: 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. **VOC or OS Emissions**: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. **Objectionable Odor Prohibited**: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]
8. **General Visible Emissions**: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions**: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. **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.]

SECTION 4. APPENDIX SC
STANDARD CONDITIONS

11. 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 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.]
12. 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.]
13. 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.]
14. 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.]
15. 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.
16. 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.]
17. 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.]
18. 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

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STANDARD CONDITIONS

sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

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

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

RECORDS AND REPORTS

19. **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.]
20. **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.]

Florida Department of
Environmental Protection

Memorandum

TO: Howard Rhodes
THRU: Trina Vielhauer *TV*
Al Linero *AL*
FROM: Jeff Koerner *JK*
DATE: December 6, 2002
SUBJECT: Final Air Construction Permit No. 0330045-004-AC
Gulf Power Company, Crist Plant
Units 4 and 5 – Field-Testing of Carbonaceous Fuels

The Final Permit for this project is attached for your approval and signature, which authorizes a temporary period to conduct field-testing of carbonaceous fuels (wood chips, sawdust, sander dust, and switchgrass) to determine the feasibility of use in a NOx reduction program for Units 4 and 5 at the Crist Plant. This existing plant is located in Escambia County, Florida.

The Department distributed an "Intent to Issue Permit" package on November 12, 2002. The applicant published the "Public Notice of Intent to Issue" in the Pensacola News Journal on November 14, 2002. The Department received the proof of publication on November 25, 2002. Gulf Power requested an extension of time in which to file a petition for an administrative hearing, which was withdrawn on December 4, 2002.

Day #90 is February 24, 2003. I recommend your approval of the attached Final Permit for this project.

Attachments

TLV/AAL/jfk

CRIST BIOMASS RENEWABLE ENERGY PROJECT

Background: The agreement between Gulf Power and FDEP for the purpose of ensuring compliance with ozone ambient air quality standards has a provision allowing Gulf Power to study and demonstrate alternative technologies in the selection of methods to reduce nitrogen oxides at Crist Units 4, 5 and 6. The burning of biomass fuel qualifies as an alternative method of nitrogen oxide control and a renewable energy source which Gulf Power wishes to study.

Project Test Proposal: Gulf Power proposes to burn up to 10% of the heat input as biomass fuel in the boilers at Crist Unit 4 and 5 to study its feasibility as a low nitrogen oxide emitter and as a renewable energy source. A test program of 10 months is requested to study various biomass fuels consisting of wood chips, switchgrass, sawdust and sander dust. Only non-treated wood and wood products will be considered as fuel for this demonstration.

Project Report: A report consisting of each biomass fuel tested will be submitted to the Florida Department of Environmental Protection. The report will contain the quantity, quality and fuel analyses of each biomass fuel tested with stack emission measurements of sulfur dioxide, nitrogen oxides, particulate, opacity and carbon monoxide.

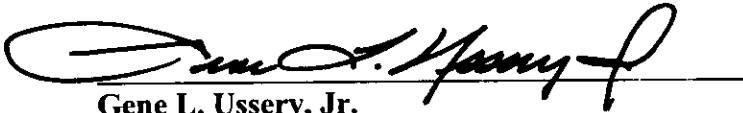
Schedule: The target schedule to conduct the above referenced study and testing program is from November 18, 2002 through August 30, 2003. Each fuel will have an approximate 3 month study period to determine its feasibility and any operational problems associated with the fuel.

Emissions Estimate: Gulf Power believes that no emissions increases will occur for the testing and use of biomass fuels because the amounts of sulfur, nitrogen and particulate is lower in biomass than in the coal it will be replacing. The potential emissions reductions in SO₂, NO_x and Particulate may range between 3-5% from the use of biomass fuels.

CERTIFICATION BY RESPONSIBLE OFFICIAL

“I, the undersigned, am the responsible official, as defined in Chapter 62-210.200, F.A.C., for the Title V source for which this request is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this request are true, accurate and complete.”

Responsible Official Signature:

A handwritten signature in black ink, appearing to read "Gene L. Ussery, Jr.", written over a horizontal line.

**Gene L. Ussery, Jr.
Vice-President of Power Generation**

A handwritten date "10-17-07" written in black ink over a horizontal line.

Date: