



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

December 18, 2008

Mr. Bernie Cumbie, Plant Manager
100 Central Avenue CN 77
St. Petersburg, Florida 33701

Re: Progress Energy Florida, Crystal River Power Plant
Revised Draft Permit No. 0170004-017-AC, BART Project
Draft Permit No. 0170004-019-AC / PSD-FL-383A, Units 4 and 5 Pollution Controls Project Revisions

Dear Mr. Cumbie:

On January 31, 2007, you submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code for the eligible units at the facility identified above. A draft permit was issued in response to this request on November 21, 2007. On December 24, 2007, you submitted a new application to combine the requirements of BART and Reasonable Progress Control Technology (RPCT) along with a request to issue a new permit to replace the November 21st Draft. Based on your request, that permit was withdrawn on December 28, 2007. The replacement application was deemed incomplete and the project has been on hold pending the outcome of the U.S. Court of Appeals for the District of Columbia recommendation to vacate the Clean Air Interstate Rule (CAIR). EPA has recently reiterated to the State that we must submit our State Implementation Plan (SIP) revision for the BART program as soon as possible. In an effort to satisfy the State's requirement to submit the BART SIP revision, the draft permit that was withdrawn on December 28, 2007 is being replaced by the enclosed revised draft permit. The revised draft permit contains allowances for excess particulate matter and visible emissions as a result of soot blowing and load change operations and contains a revised BART determination based on Progress Energy's commitment to shut down Units 1 and 2 by the time that the Levy Nuclear Unit 2 becomes commercially operational (scheduled for 2020).

In addition, under the Department's authority provided in Rule 62-4.080, F.A.C., permit No. 0170004-019-AC / PSD-FL-383A is being issued to revise permit No. 0170004-016-AC / PSD-FL-383 in order to require the continuous operation of the control devices authorized to be constructed by that permit. In addition, the allowable nitrogen oxides emissions limit is being reduced to 2,085 tons per year based on a 12-month rolling average.

Enclosed are the following documents:

- The Technical Evaluation and Preliminary Determination which summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary BART determination to issue a Draft Permit.
- The Technical Evaluation and Preliminary Determination which summarizes the Permitting Authority's rationale for making the described revisions to permit No. 0170004-016-AC / PSD-FL-383
- The Draft Permits include the specific conditions that regulate the emissions units covered by the proposed projects.
- The Written Notice of Intent to Issue Air Permit provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and, the availability of mediation.
- The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

Mr. Bernie Cumbie, Plant Manager
Progress Energy Florida, Inc.
Page 2 of 2

If you have any questions, please contact the Project Engineer, Jonathan Holtom, P.E., at (850) 921-9531.

Sincerely,

A handwritten signature in black ink, appearing to read "Trina Vielhauer". The signature is fluid and cursive, with the first name "Trina" written in a smaller, more compact script than the last name "Vielhauer".

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures
TLV/jh

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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

Progress Energy Florida
100 Central Avenue CN 77
St. Petersburg, Florida 33701

Authorized Representative:
Mr. Bernie Cumbie, Plant Manager

Draft Permit Nos. 0170004-017-AC and
0170004-019-AC / PSD-FL-383A
Facility ID No. 0170004
Crystal River Power Plant
BART Project & Units 4 and 5, Pollution
Controls Project Revisions
Citrus County, Florida

Facility Location: The applicant, Progress Energy Florida, operates the existing Crystal River Power Plant, which is located in Citrus County on Power Line Road, West of U.S. Highway 19, in Crystal River, Florida.

BART Project: On January 31, 2007, Progress Energy Florida submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code (F.A.C.) for the eligible units at the facility identified above. For the existing Crystal River Power Plant, the BART-eligible units are coal-fired Units 1 and 2. The Department of Environmental Protection (Department) reviewed the application and establishes BART emissions standards for particulate matter in the draft air construction permit. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

Units 4 and 5 Pollution Controls Project Revisions: Subsequent to the issuance of permit No. 0170004-016-AC / PSD-FL-383, the Environmental Protection Agency revised the 8-hour ozone standard. Pursuant to the Department's authority under Rule 62-4.080, Florida Administrative Code, the Department is revising permit No. 0170004-016-AC / PSD-FL-383 to require the continuous operation of the scrubber and the selective catalytic reduction systems that were authorized to be built by that permit. In addition, the NO_x limit is being reduced to reflect the emission reductions achievable by the required continuous operation of the new low-NO_x burners and new SCR systems. Details of the project are provided in the enclosed Technical Evaluation and Preliminary Determination.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters F.A.C. 62-4, 62-210, 62-212 and 62-296. The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: The complete project files are available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permits, the Technical Evaluation and Preliminary Determinations, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available on the following web site:

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue air permits to the applicant for the projects described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

issue Final Permits in accordance with the conditions of the proposed Draft Permits unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the Draft BART Permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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

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

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action

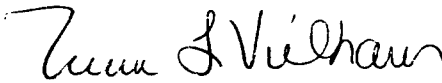
WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

Mediation: Mediation is not available in this proceeding.

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 Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by electronic mail with received receipt requested before the close of business on 12/19/08 to the persons listed below.

Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida (Bernie.Cumbie@pgnmail.com)

Mr. Dave Kellermeyer, Northern Star Generation (dave.kellermeyer@northernstargen.com)

Mr. Scott Osbourn, P.E., Golder Associates (sosbourn@golder.com)

Ms. Cindy Zhang-Torres, DEP-SWD (Cindy.Zhang-Torres@dep.state.fl.us)

Ms. Katy Forney, EPA Region 4 (forney.kathleen@epa.gov)

Ms. Ana Oquendo, EPA Region 4 (oquendo.ana@epa.gov)

Mr. Dee Morse, NPS (Dee_Morse@nps.gov)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.


(Clerk)

12/19/08
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
Draft Air Construction Permit No. 0170004-017-AC
Draft Construction Permit No. 0170004-019-0AC / PSD-FL-383A
Progress Energy Florida, Crystal River Power Plant
Citrus County, Florida

Applicant: The applicant for this project is Progress Energy Florida. The applicant's authorized representative and mailing address is: Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida, Crystal River Power Plant, 100 Central Avenue CN 77, St. Petersburg, Florida 33701.

Facility and Location: The applicant, Progress Energy Florida, operates the existing Crystal River Power Plant, which is located in Citrus County on Power Line Road, West of U.S. Highway 19, in Crystal River, Florida. The facility is an existing coal-fired power plant, which is identified by Standard Industrial Classification code No. 4911.

BART Project: On January 31, 2007, Progress Energy Florida submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code (F.A.C.) for the existing Crystal River Power Plant. The purpose of the BART regulation is to improve visibility in the Class I areas, which include six national parks and federal wildlife areas in and around Florida. The BART provisions apply to emissions units built between 1962 and 1977 at one of the 26 specified industrial categories that have the potential to emit more than 250 tons per year of visibility-impairing pollutants, which only includes particulate matter for electric utilities subject to CAIR. Many of these units have not previously been subject to pollution control requirements under the Clean Air Act.

The BART regulation requires a control technology review to establish a BART standard, which is an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by a BART-eligible source. The emission limitation must be established, on a case-by case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. In addition, an air dispersion modeling analysis is conducted to evaluate the visibility impacts.

For the existing Crystal River Power Plant, the BART-eligible units are coal-fired Units 1 and 2. The Department of Environmental Protection (Department) reviewed the application and establishes BART emissions standards for particulate matter in the draft air construction permit as 0.04 lb/MMBtu. This limit will be a combined limit based on the weighted average of the heat inputs from Units 1 and 2. To meet this new limit, Progress energy will make upgrades to the ESP for Unit 2. In addition, Units 1 and 2 will cease to be operated as coal-fired units by December 31, 2020. This date assumes timely licensing, construction and commencement of commercial operation of PEF's proposed new nuclear units (Levy County Units 1 and 2). The shutdown (or repowering) of Units 1 and 2 coal-fired units is contingent upon completion of the first fuel cycle for Levy County Unit 2. PEF shall timely advise the Department of any developments that would delay the shutdown (or repowering) of Units 1 and 2 beyond the completion of the first fuel cycle for Levy County Unit 2.

Units 4 and 5 Pollution Controls Project Revisions: Subsequent to the issuance of permit No. 0170004-016-AC / PSD-FL-383, the Environmental Protection Agency revised the 8-hour ozone standard. Pursuant to the Department's authority under Rule 62-4.080, Florida Administrative Code, the Department is revising permit No. 0170004-016-AC / PSD-FL-383 to require the continuous operation of the scrubber and the selective catalytic reduction systems that were authorized to be built by that permit. In addition, the NO_x limit is being reduced to reflect the emission reductions achievable by the required continuous operation of the new low-NO_x burners and new SCR systems.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the

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PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

provisions of Chapter 403, Florida Statutes (F.S.) and F.A.C. Chapters 62-4, 62-210, 62-212 and 62-296. The proposed projects are not exempt from air permitting requirements and air permits are required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for these projects. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

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

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

Comments: The Permitting Authority will accept written comments concerning the proposed Draft BART Permit (project No. 0170004-017-AC) for a period of 30 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

The Permitting Authority will accept written comments concerning the Draft Permit for the pollution controls project revisions (project No. 0170004-019-AC) for a period of 14 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone

(Public Notice to be Published in the Newspaper)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

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

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

Mediation: Mediation is not available for this proceeding.

Florida Department of Environmental Protection

Memorandum

TO: Trina Vielhauer, Chief
Bureau of Air Regulation

FROM: Jonathan Holtom, Title V Section JH

DATE: December 16, 2008

SUBJECT: Revised Draft Air Permit No. 0170004-017-AC
Progress Energy Florida, Crystal River Power Plant
BART Project

Attached for your review are the following items:

- Cover letter;
- Written Notice of Intent to Issue Permit;
- Public Notice of Intent to Issue Permit;
- Revised Technical Evaluation and Preliminary Determination;
- Revised Draft Permit with Appendices; and
- PE Certification.

The Technical Evaluation and Preliminary Determination provides a detailed description of the project, rule applicability, and emissions standards. This revised draft permit is being issued to replace the draft BART permit that was previously issued on November 21, 2007 then withdrawn on December 28, 2007. The revised draft permit recognizes the company's commitment to shut down Units 1 and 2 at the time that the new Levy Nuclear Unit 2 becomes commercially operational (around 2020). The P.E. certification briefly summarizes the proposed project. I recommend your approval of the attached revised draft permit for this project.

Attachments

PROFESSIONAL ENGINEER CERTIFICATION STATEMENT

PERMITTEE

Progress Energy Florida
100 Central Avenue CN 77
St. Petersburg, Florida 33701

Draft Air Permit No. 0170004-017-AC
Crystal River Power Plant
BART Project
Citrus County, Florida

PROJECT DESCRIPTION

Project: On January 31, 2007, Progress Energy Florida submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code (F.A.C.) for the existing Crystal River Power Plant. The purpose of the BART regulation is to improve visibility in the Class I areas, which include six national parks and federal wildlife areas in Florida. The BART provisions apply to emissions units built between 1962 and 1977 at one of the 26 specified industrial categories that have the potential to emit more than 250 tons per year of visibility-impairing pollutants, which only includes particulate matter for electric utilities subject to CAIR. Many of these units have not previously been subject to pollution control requirements under the Clean Air Act.

The BART regulation requires a control technology review to establish a BART standard, which is an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by a BART-eligible source. The emission limitation must be established, on a case-by case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. In addition, an air dispersion modeling analysis is conducted to evaluate the visibility impacts.

The existing Crystal River facility is a coal-fired power plant, which is one of the 26 specified categories subject to regulation under BART. The BART-eligible units at this facility include emissions units 1 and 2. The Department of Environmental Protection (Department) reviewed the application and makes a preliminary determination regarding the BART controls and emissions standards in the draft air construction permit. In summary, the control equipment and techniques evaluated include the following: rebuilding the existing ESPs, replacing the ESPs with new ESPs, replacing the existing ESPs with baghouses and adding a polishing baghouse following the existing ESPs. In light of the recent commitment from Progress Energy to shut down Units 1 and 2 within seven years of the BART compliance date, it was determined that all of the control device options would not be cost efficient. Instead, PEF has agreed to upgrade the ESP for Unit 2 and continuously meet a lower PM emissions limit for the remaining duration of the life of the units. The draft air construction permit establishes BART standards based on these methods. The Technical Evaluation and Preliminary Determination issued concurrently with the draft permit provides the project details and rationale for the BART determinations.

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



Jonathan Holtom, P.E.
Registration Number: 52664

12/16/08
(Date)

**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

PROJECT

Revised Draft Permit No. 0170004-017-AC
Best Available Retrofit Technology (BART)

Crystal River Power Plant

Citrus County, Florida

APPLICANT

Progress Energy Florida (PEF)
100 Central Avenue CN 77
St. Petersburg, Florida 33701

PERMITTING AUTHORITY

Air Permitting North Program
Bureau of Air Regulation
Division of Air Resource Management
Florida Department of Environmental Protection



December 18, 2008

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL PROJECT INFORMATION

Facility Description and Location

The applicant, Progress Energy Florida, operates an existing coal-fired power plant, which consists of four coal-fired fossil fuel steam generating (FFSG) units and associated equipment. The Standard Industrial Classification (SIC) code for this type of plant is SIC No. 4911. The facility is located on Power Line Road, West of U.S. Highway 19, in Crystal River, Citrus County. The UTM coordinates are Zone 17, 334.3 km East and 3204.5 km North.

Regulatory Categories

This project is subject to the applicable environmental laws in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection (Department) to establish rules regarding air quality in the Florida Administrative Code (F.A.C.). The facility is classified according to the following major regulatory categories.

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates BART-eligible units subject to Rule 62-296.340, F.A.C.

Project Description

Progress Energy Florida submitted an application to satisfy the requirements of Rule 62-296.340 (BART), F.A.C., which addresses the following BART-eligible emissions units.

ID No.	Description
-001	Fossil Fuel Steam Generator Unit 1
-002	Fossil Fuel Steam Generator Unit 2

This Technical Evaluation and Preliminary Determination details the project, provides the top-down BART analysis, and identifies the preliminary BART determinations.

Processing Schedule

- 1/31/07 Department received the BART application for an air pollution construction permit.
- 2/27/07 Department sent request for additional information (RAI).
- 5/16/07 Department sent letter granting additional time to respond.
- 6/27/07 Department received additional information. Application remained incomplete.
- 7/27/07 Department sent 2nd RAI.
- 8/29/07 Department received additional information; application complete.
- 11/21/07 Draft permit issued.
- 12/24/07 New application received to combine BART and Reasonable Further Progress (RFP).
- 12/28/07 Intent to Issue Draft Permit withdrawn by Department at applicant's request.
- 1/18/08 Department sent RAI for new application.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

4/15/08 Additional time to respond to RAI granted until 6/1/08, at applicant's request.
6/1/08 Additional time to respond to RAI granted until 8/1/08, at applicant's request.
8/1/08 Additional time to respond to RAI granted until 9/1/08, at applicant's request.
9/1/08 Additional time to respond to RAI granted until 11/1/08, at applicant's request.
10/15 Additional time to respond to RAI granted until 12/1/08, at applicant's request.
10/22 Additional information received regarding the shut down of Units 1 & 2.
10/24 Additional information received proposing new achievable emissions limits.
12/18/08 Revised Draft permit issued.

2. APPLICABLE BART REGULATIONS

Regulatory Authority

This project is subject to the applicable regulatory requirements in the following Chapters of the F.A.C.: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, PSD Review and BACT, and Non-attainment Area Review and LAER); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures). It is also subject to the applicable provisions in Title 40 of the Code of Federal Regulations (CFR) as adopted in Chapter 62-204 and 62-296, F.A.C.

Specifically, this project is subject to Rule 62-296.340 (BART), F.A.C. for determining and applying the Best Available Retrofit Technology for each BART-eligible source as defined in 40 CFR 51.301. The Department previously identified all BART-eligible sources through a series of notifications, workshops, and rule making efforts. The state rule implements the federal provisions of Appendix Y in 40 CFR Part 51, "Guidelines for BART Determinations Under the Regional Haze Rule".

Affected Pollutants

In accordance with Appendix Y in 40 CFR 51, the affected visibility-impairing pollutants include the following: nitrogen oxides, particulate matter, and sulfur dioxide. For electric utilities subject to CAIR, only particulate matter is subject to BART review. With respect to particulate emissions, Rule 62-210.200, F.A.C. defines PM as, "... all finely divided solid or liquid material, other than uncombined water, emitted to the atmosphere as measured by applicable reference methods, or an equivalent or alternative method ...". Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers is defined as PM₁₀ and particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers is defined as PM_{2.5}. Emissions of PM, PM₁₀ and PM_{2.5} are all regulated pollutants. For the existing emissions units and air pollution control equipment, the control strategy specified in the BART determinations directly reduces PM emissions, which serves as a surrogate to also reduce PM₁₀ and PM_{2.5} emissions.

BART Definition

Pursuant to 40 CFR 51.301, *Best Available Retrofit Technology (BART)* means, "... an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by ... [a BART-eligible source]. The emission limitation must be established, on a case-by case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology." In accordance with Rule 62-

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

296.340(3), F.A.C., the Department shall determine BART for each affected source in an air construction permit.

BART Analysis Procedure

There are five basic steps in the case-by-case BART analysis:

- Step 1.** Identify all available retrofit control technologies. A comprehensive list of available technologies for analysis must be identified that includes the most stringent option and a reasonable set of available options. It is not necessary to list all permutations of available control levels that exist for a given technology. The list is complete if it includes the maximum level of control each technology is capable of achieving.
- Step 2.** Eliminate technically infeasible options. Control technologies are technically feasible if either (1) they have been installed and operated successfully for the type of source under review under similar conditions, or (2) the technology could be applied to the source under review. "Availability" and "applicability" are two key concepts in determining whether a technology could be applied. A technology is considered "available" if the source owner may obtain it through commercial channels, or it is otherwise available within the common sense meaning of the term. An available technology is "applicable" if it can reasonably be installed and operated on the source type under consideration. A technology that is available and applicable is technically feasible.
- Step 3.** Evaluate control effectiveness of remaining control technologies. There are two key issues in this process, including (1) expressing the degree of control in consistent terms to ensure an "apples-to-apples" comparison of emissions performance levels among options, and (2) giving appropriate treatment and consideration of control techniques that can operate over a wide range of emission performance levels.
- Step 4.** Evaluate the impacts and document the results. The evaluation will consider the costs of compliance, energy impacts, non-air quality environmental impacts, and remaining useful life.
- Step 5.** Evaluate visibility impacts. Use CALPUFF or other appropriate dispersion model to determine the visibility improvement expected at a Class I area from the potential BART control technology applied to the source. Note that if the most stringent BART control option available is selected, it is not necessary to conduct an air quality modeling analysis for the purpose of determining its visibility impacts.

BART Determination: In making a final BART determination, the following will be considered: (1) technically feasible options; (2) the average and incremental costs of each option; (3) the energy and non-air quality environmental impacts of each option; (4) the remaining useful life; and (5) the modeled visibility impacts. A justification for selecting a technology as the "best" level of control must be provided and include an explanation of these factors that led to the BART determination. When a BART determination is made for two regulated pollutants on the same source, if the result is two different BART technologies that do not work well together, it may be reasonable to substitute a different technology or combination of technologies.

3. UNITS 1 AND 2 – BART DETERMINATION

This section provides the control technology review and BART determination for the following emissions units.

ID No.	Emission Unit Description
-001	FFSG Unit 1 is a 3,750 MMBtu/hr pulverized coal, dry bottom, tangentially-fired boiler.
-002	FFSG Unit 2 is a 4,795 MMBtu/hr pulverized coal, dry bottom, tangentially-fired boiler.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

PM Control Technology Review

Particulate matter is emitted from the stacks of Units 1 and 2 as a result of the firing of coal to generate electricity. The emissions are currently controlled from each of the boilers through the use of an electrostatic precipitator (ESP), one for each unit.

Step 1. Identify all available retrofit control technologies.

The available retrofit control technologies for these boilers include the following:

- Add wet scrubbers following the existing ESPs.
- Add multi-cyclones following the existing ESPs.
- Replace the existing ESPs with new baghouses.
- Add polishing baghouses to the exhaust stream following the existing ESPs.
- Replace the existing ESPs with new state-of-the-art ESPs.
- Rebuild the existing ESPs and improve collection efficiencies.

Step 2. Eliminate technically infeasible options.

All of the above options are feasible controls for particulate matter. Baghouses and ESP are generally recognized as the top controls with removal efficiencies greater than 99%.

Step 3. Evaluate control effectiveness of remaining control technologies.

Based on information submitted by the applicant, which includes proposals provided by air pollution control device vendors, the effectiveness of the potential control techniques and available options are as follows:

Unit 1: 3,750 MMBtu/hour

Control Technology Options	Continuously Achievable Emission Rate	Potential Emissions tons/year	Potential Reduction tons/year	Percent Reduction*
Existing ESP (Baseline)	0.1 lb/MMBtu	1,643	0	0
Baghouse Conversion	0.006 lb/MMBtu	99	1,544	94%
Polishing Baghouse	0.012 lb/MMBtu	197	1,446	88%
New ESP	0.010 lb/MMBtu	164	1,479	90%
Rebuilt ESP	0.015 lb/MMBtu	246	1,397	85%

* Percent Reduction is the further reduction from the current permit limit, not total reduction from the uncontrolled potential emissions level.

Unit 2: 4,795 MMBtu/hour

Control Technology Options	Continuously Achievable Emission Rate	Potential Emissions tons/year	Potential Reduction tons/year	Percent Reduction
Existing ESP (Baseline)	0.1 lb/MMBtu	2,100	0	0
Baghouse Conversion	0.006 lb/MMBtu	126	1,974	94%
Polishing Baghouse	0.012 lb/MMBtu	252	1,848	88%
New ESP	0.010 lb/MMBtu	210	1,890	90%
Rebuilt ESP	0.015 lb/MMBtu	315	1,785	85%

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Step 4. Evaluate the impacts of the remaining technologies and document the results.

Based on the original information submitted by the applicant (assuming a 20-year remaining useful life and 7% annual interest rate), the following is a summary of the expected costs associated with the proposed control options:

Control Options	Unit 1		Unit 2	
	Annualized Cost	\$/ton Removed	Annualized Cost	\$/ton Removed
Baghouse Conversion (0.006 lb/MMBtu)	\$6,722,122	12,951	\$7,546,238	18,688
Polishing Baghouse (0.012 lb/MMBtu)	\$6,738,914	16,027	\$7,256,950	25,161
New ESP (0.010 lb/MMBtu)	\$7,785,697	17,204	\$8,737,094	21,479
Rebuilt ESP (0.015 lb/MMBtu)	\$1,652,929	4,369	\$1,078,700	4,977

Subsequent to the initial issuance of this evaluation (which was withdrawn on December 28, 2007), the following information was provided by the applicant regarding the useful life of Units 1 & 2:

“The previous submittal to the Department (RAI response dated August 28, 2007) provided revised cost estimates based on a 20 year control equipment lifetime. The assumptions of a 20 year lifetime, as well as an interest rate of 7 percent, were used in the previous assessment at the request of the Department. In accordance with the EPA guidance referenced above, this revised submittal is based on a 7 year remaining useful life, which represents the difference between the BART compliance deadline (2013) and the date that PEF currently projects to stop operating CR 1 and 2 as coal-fired units (2020). This estimate assumes timely licensing, construction and commencement of commercial operation of PEF’s proposed new nuclear units (Levy County Units 1 and 2). The shutdown or (repowering) of the CR 1 and 2 coal-fired units is contingent upon completion of the first fuel cycle for Levy County Unit 2. PEF will timely advise the Department of any developments that would delay the shutdown (or repowering) of the CR 1 and 2 coal units beyond the completion of the first fuel cycle for Levy County Unit 2.”

In addition to the revised useful life, these estimates incorporate a 5 year cost escalation based on the Chemical Engineering Plant Cost Index. This accounts for the fact that the estimates are being submitted to the Department in 2008, but actual expenditures would not be incurred until 2012 (i.e., contract execution and installation).

A summary of the previous cost-effectiveness estimates (\$/ton reduced) and the new revised cost estimates is provided below for each of the different control options that were investigated.

Cost – Effectiveness (\$/ton) Summary Table*

Control Option Units 1 and 2	Previous Submittal (Dated August 28, 2008)		Revised	
	Unit 1 (\$/ton)	Unit 2 (\$/ton)	Unit 1 Revised (\$/ton)	Unit 2 Revised (\$/ton)
Baseline	N/A	N/A	N/A	N/A
0.015 lb/MMBtu ESP Upgrades	4,369	4,977	12,136	13,837
0.012 lb/MMBtu Polishing Baghouse	16,027	25,161	31,553	49,154
0.010 lb/MMBtu ESP Replacement	17,204	21,479	43,824	54,724
0.006 lb/MMBtu Baghouse Conversion	12,951	18,688	24,882	36,282

*Revised costs assume a 7% interest rate, a 7 year equipment lifetime and a 5 year cost escalation, using the Chemical Engineering Plant Cost Index

Following a review of the above information, it is the Department’s opinion that the cost numbers prepared by the applicant may be somewhat conservative, even though the revised cost analyses submitted for the different control options included an estimated installation cost factor of 2.5 times the equipment cost (the installation

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

costs for PSD projects are often estimated between 1 and 1.5 times the equipment costs). When evaluating the cost difference (based on the original submission) between a 20-year useful life and a 7-year useful life, the cost effectiveness numbers appear to be even higher than presented above. Adding a 5-year cost escalation factor on top of that makes the dollar per ton values even higher, which leads to the conclusion that all of the proposed control options are well above typical cost-effectiveness levels.

Step 5. Evaluate visibility impacts.

The CALPUFF model (Version 5.756) was used to predict the maximum visibility impairment at four PSD Class I areas located within 300 km of the Progress Energy Florida Crystal River Power Plant. The nearest PSD Class I area is the Chassahowitzka National Wilderness Area (NWA), which is located approximately 21 km from the facility at the closest point. The other three Class I areas are: the St. Marks NWA, which is located approximately 174 km from the facility; the Okefenokee NWA, which is located approximately 178 km from the facility; and the Wolf Island NWA, which is located approximately 293 km from the facility. The CALPUFF modeling analysis followed the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) common protocol, version 3.2. The Department provided the applicant with 4-km "CALPUFF-ready" CALMET meteorological data for the period 2001-2003. Class I receptor locations were obtained from the National Park Service (NPS) and a Lambert Conformal Conic (LCC) coordinate system was used.

For the two BART-eligible sources, the baseline case is the existing ESP with no change. Emissions rates for PM/PM₁₀ and H₂SO₄ were determined from stack test data and AP-42 emission factors to reflect the maximum 24-hour average actual operation for the period 2001 through 2006. These baseline emissions were established by calculating maximum tested soot blowing emissions for three hours in a 24-hour period and maximum tested non sootblowing emissions for the other 21 hours. The emission rate for Unit 1 was approximately 0.039 lb/MMBtu and the rate for Unit 2 was approximately 0.026 lb/MMBtu for a combined emission rate of 0.032 lb/MMBtu.

Emission rates of H₂SO₄ were input directly into the CALPUFF model while PM/PM₁₀ emissions were speciated into six particulate species in specific size categories and modeled. CALPOST method 6 was used to compute the extinction change (visibility impairment) in deciviews (dv) consistent with procedures outlined in the VISTAS modeling protocol. In addition, the results in the table below are based on a new visibility impairment algorithm developed by the Interagency Monitoring of Protected Visual Environments (IMPROVE) committee called the "new IMPROVE" algorithm. This algorithm includes light extinction due to sea salt, which is important near sea coasts. Since the new IMPROVE equation cannot be directly implemented using the existing version of the CALPUFF model without additional post-processing or model revision, VISTAS has developed a method for implementing the new IMPROVE equation using existing CALPUFF/CALPOST output in a spreadsheet. The spreadsheet was used to recalculate visibility impairment due to Crystal River Units 1 and 2 in addition to visibility impacts due to the old IMPROVE equation.

Based on the predicted 24-hour visibility impairment values for 2001 to 2003, the 8th highest (98th percentile) for each year and the 22nd highest values over the three years 2001-2003 were determined. These values are compared with the threshold of 0.50 deciview (dv) change from the predicted natural conditions. In addition, the model output shows the number of days that an extinction change greater than 0.50 dv is predicted for the three year period (2001-2003). The Class I area with the highest predicted impacts is the Chassahowitzka NWA, which is also the nearest to the facility. These predicted values for Chassahowitzka are shown in the table below for each control technology reviewed and show predicted impacts over 0.50 dv for all control strategies.

Control Technology Options	Particulate Matter (PM) Emission Rate	3-Year Period (2001-2003)		
		Visibility Impairment		Number of Days > 0.50 dv for Highest Year
		8 th highest	22 nd highest	
Existing ESP (no change)	0.032 lb/MMBtu	0.71 dv	0.68 dv	14

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rebuilt ESP	0.015 lb/MMBtu	0.61 dv	0.59 dv	10
Polishing Baghouse	0.012 lb/MMBtu	0.60 dv	0.57 dv	10
New ESP	0.010 lb/MMBtu	0.58 dv	0.56 dv	10
Baghouse Conversion	0.006 lb/MMBtu	0.56 dv	0.53 dv	10

Preliminary PM BART Determination

The purpose of the BART regulations is to reduce regional haze by requiring air pollution emitting facilities to reduce the amount of visibility-impairing pollutants that is emitted. For many sources, this will require the installation of new control devices. Other sources may be able to reduce emissions by upgrading existing pollution control equipment. For comparison, units subject to the revisions to NSPS Subpart Da, for units constructed, reconstructed or modified after February 28, 2005, must meet a PM standard of 0.015 lb/MMBtu. Based on the BART analysis for the Crystal River project, meeting an emissions standard of 0.015 lb/MMBtu may be achieved by all proposed options; however, it is not cost effective to do so. As an alternative to spending potentially greater than \$300 million dollars to replace the particulate matter control devices on these old units and yet still operate them for seven years beyond the BART implementation date, Progress Energy Florida has proposed to spend around \$50 million to upgrade the existing ESP for Unit 2 in order to meet a proposed combined emissions limit from Units 1 and 2 of 0.04 lb/MMBtu. While historical tests on these units at full load and steady-state operation have shown them capable of emitting PM at less than 0.04 lb/MMBtu, normal operation tends to vary at levels less than full load, which results in emissions close to the permitted limit of 0.1 lb/MMBtu. If the Units were newer and were going to remain in operation for at least 20 years, a clear argument could be made that replacing the existing ESPs with new, state-of-the-art, ESPs would be cost effective. Considering the age of the existing units, it is not reasonable to require the large capital expenditure needed to bring emissions down to levels achievable by new units and control devices given the very limited remaining useful life. Therefore, the Department accepts Progress Energy Florida's proposal for reducing emissions from the current allowable emissions limit down to levels near what has been reported on the last five year's stack tests with a commitment to shut these old units down by December 31, 2020. The units may be repowered with a fuel other than coal. Such repowering will require an air construction permit application prior to any changes. Based on the above information, the Department establishes the following BART determinations for Crystal River Units 1 and 2:

The ESP for Unit 2 shall be upgraded as necessary to meet the BART emissions limits listed below.

As determined by EPA Method 5 or 17, particulate matter emissions during steady-state operations from Units 1 and 2 combined shall not exceed 0.04 lb/MMBtu, on a weighted average basis of the total heat input. Particulate matter emissions during soot-blowing operations from Units 1 and 2 combined shall not exceed 0.12 lb/MMBtu, on a weighted average basis of the total heat input, not to exceed 3 hours in any 24-hour period.

As determined by data collected from the continuous opacity monitoring systems (COMS) or EPA Method 9, visible emissions during steady-state operations from: Unit 1 shall not exceed 30% opacity based on a 6-minute average, except for one 6-minute average per hour not to exceed 35% opacity; Unit 2 shall not exceed 15% opacity based on a 6-minute average, except for one 6-minute average per hour not to exceed 20% opacity. The COMS shall meet the requirements in 40 CFR 75.

As determined by data collected from the existing COMS or EPA Method 9, visible emissions resulting from soot-blowing and load change operations shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized. In no case shall the duration of such emissions exceed 3 hours in any 24-hour period and visible emissions from: Unit 1 shall not exceed 40% opacity based on a 6-minute average; Unit 2 shall not exceed 25% opacity based on a 6-minute average. A load change occurs when the operational capacity of a unit is in the 10

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

Units 1 and 2 shall cease to be operated as coal-fired units by December 31, 2020. This date assumes timely licensing, construction and commencement of commercial operation of PEF's proposed new nuclear units (Levy County Units 1 and 2). The shutdown or (repowering) of Units 1 and 2 coal-fired units is contingent upon completion of the first fuel cycle for Levy County Unit 2. PEF shall timely advise the Department of any developments that would delay the shutdown (or repowering) of Units 1 and 2 beyond the completion of the first fuel cycle for Levy County Unit 2.

It should be noted that these units are currently subject to the requirements of 40 CFR 64, Compliance Assurance Monitoring (CAM) in the Title V operating permit. During the compliance testing following the upgrades to the Unit 2 ESP, sufficient testing should be conducted in order to establish new CAM excursion indicators ranges for inclusion in the Title V permit revision application. Although the use of the COMS must be part of the CAM plan, the use of opacity monitoring alone is typically not sufficient for monitoring PM emissions from combustion sources due to the difficulty in reliably demonstrating a direct correlation between monitored opacity and actual PM emissions. The additional parameter of total power drop across the ESP also needs to be included.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations regarding BART as conditioned by the draft permit. This determination is based on a technical review of the complete application, all available information, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Jonathan Holtom, P.E., is the project engineer responsible for reviewing the application and drafting the permit. Cleve Holladay is the project meteorologist responsible for reviewing the modeling analysis for visibility.

DRAFT PERMIT

PERMITTEE

Progress Energy Florida (PEF)
100 Central Avenue CN 77
St. Petersburg, Florida 33701

Air Permit No. 0170004-017-AC Expiration Date: 07/01/2014 Crystal River Power Plant BART Project

Authorized Representative:
Bernie Cumbie, Plant Manager

PLANT AND LOCATION

Progress Energy Florida operates the Crystal River Power Plant, which is located on Power Line Road, West of U.S. Highway 19, Crystal River, Citrus County, Florida. The UTM coordinates are Zone 17, 334.3 km East and 3204.5 km North. The facility is an existing coal-fired power plant, which is identified by Standard Industrial Classification code No. 4911.

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.). Specifically, this project is subject to Rule 62-296.340, F.A.C., which requires a determination of the Best Available Retrofit Technology (BART) for each BART-eligible source as defined in 40 CFR 51.301. The state rule implements the federal provisions of Appendix Y in 40 CFR Part 51, "Guidelines for BART Determinations Under the Regional Haze Rule". The affected visibility-impairing pollutants include only particulate matter (PM) for electric utilities subject to CAIR. Pursuant to Rule 62-296.340, F.A.C., the permittee shall install or modify the air pollution control equipment to achieve the specified BART standards.

EFFECTIVE DATE

Unless otherwise specified by this permit, the BART-eligible sources shall demonstrate compliance with the conditions of this permit no later than December 31, 2013. [Rule 62-296.340(3)(b)2, F.A.C.]

Executed in Tallahassee, Florida

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

(Date)

JK/tlv/jh

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

Progress Energy Florida, operates an existing coal-fired power plant, which consists of four coal-fired fossil fuel steam generating (FFSG) units and associated equipment.

FACILITY REGULATORY CLASSIFICATIONS

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates BART-eligible units subject to Rule 62-296.340 (BART), F.A.C.

BART-ELIGIBLE EMISSIONS UNITS

This permitting action affects the following BART-eligible emissions units at the plant.

EU No.	Emission Unit Description
-001	Fossil Fuel Steam Generator Unit 1
-002	Fossil Fuel Steam Generator Unit 2

CONTENTS

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Units Specific Conditions

Section 4. Appendices

Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Standard Testing Requirements

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority. The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority. All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department of Environmental Protection's Southwest District Office. The mailing address and phone number of the Southwest District Office is: 13051 North Telecom Parkway, Temple Terrace, FL 33637-0926, telephone: 813/632-7600, fax: 813/632-7668.
3. Appendices. The following Appendices are attached as an enforceable part of this permit: Appendix A (Citation Formats), Appendix B (General Conditions), and Appendix C (Standard Testing Requirements).
4. Applicable Regulations, Forms and Application Procedures. Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to the applicable provisions of: Chapter 403, Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, Florida Administrative Code (F.A.C.); and the applicable parts and subparts of Title 40, Code of Federal Regulations (CFR). Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. Title V Permit. This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit **on or before December 31, 2013**. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]
6. Records Retention. All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
7. 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(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Emissions Units 1 and 2(EU-001 & -002)

This subsection addresses the following affected emissions unit.

ID No.	Emissions Unit Description
-001 and -002	<p><i>Description:</i> -001: 3,750 MMBtu/hr pulverized coal, dry bottom, tangentially-fired boiler. -002: 4,795 MMBtu/hr pulverized coal, dry bottom, tangentially-fired boiler.</p> <p><i>Fuels:</i> The fuels allowed to be burned in these units are: bituminous coal; a bituminous coal and bituminous coal briquette mixture, on-specification used oil, and distillate fuel oil for startup. These units may also burn up to 2%, by weight, of oily fly ash generated by Unit 1 at the Bartow Power Plant.</p> <p><i>Controls:</i> Emissions of particulate matter are controlled from each unit with a high efficiency electrostatic precipitator, manufactured by Buell Manufacturing Company, Inc.</p> <p><i>Monitors:</i> Continuous opacity monitor systems (COMS) are used to measure opacity in conformance with 40 CFR Part 75.</p> <p><i>Unit 1 Stack Parameters:</i> Exhaust gas exits at 291° F and 1,407,923 acfm through a 15-foot diameter stack that is 499 feet tall.</p> <p><i>Unit 2 Stack Parameters:</i> Exhaust gas exits at 300° F and 1,931,324 acfm through a 16-foot diameter stack that is 502 feet tall.</p>

Pursuant to Rule 62-296.340 (BART), F.A.C., the following standards represent the Best Available Retrofit Technology. These standards apply to each BART-eligible unit and are in addition to, and supplement, all other applicable standards.

CONTROL EQUIPMENT

1. Particulate Controls. To control emissions of particulate matter (PM), the permittee shall continue to operate and maintain the existing electrostatic precipitators (ESP) for Units 1 and 2 to meet the BART standards specified in this permit. This permit authorizes any upgrades to the ESP for Unit 2 necessary to meet the BART emissions limits, below. [Rule 62-296.340 (BART), F.A.C.]
2. Circumvention. The permittee shall not circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

BART EMISSIONS STANDARDS

3. Particulate Matter Emissions Standard – Steady State Operations. As determined by EPA Method 5 or 17, particulate matter emissions from Units 1 and 2 combined shall not exceed 0.04 lb/MMBtu, on a weighted average basis of the total heat input. Compliance shall be demonstrated based on the average of the 3 required 1-hour test runs. [Rule 62-296.340 (BART), F.A.C.]
4. Particulate Matter Emissions Standard – Soot Blowing and Load Change Operations. As determined by EPA Method 5 or 17, particulate matter emissions from Units 1 and 2 combined shall not exceed 0.12 lb/MMBtu, on a weighted average basis of the total heat input, not to exceed 3 hours in any 24-hour period. Compliance shall be demonstrated based on the average of the 3 required 1-hour test runs. [Rule 62-296.340 (BART), F.A.C.]
5. Opacity Standard – Steady-State Operations. As determined by data collected from the existing COMS or EPA Method 9, visible emissions during steady-state operations from: Unit 1 shall not exceed 30% opacity

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Emissions Units 1 and 2(EU-001 & -002)

based on a 6-minute average except for one 6-minute average per hour not to exceed 35% opacity; Unit 2 shall not exceed 15% opacity based on a 6-minute average except for one 6-minute average per hour not to exceed 20% opacity. [Rule 62-296.340 (BART), F.A.C.]

6. Opacity Standard – Soot-Blowing and Load Change Operations. As determined by data collected from the existing COMS or EPA Method 9, visible emissions resulting from soot-blowing and load change operations shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized. In no case shall the duration of such emissions exceed 3 hours in any 24-hour period and visible emissions from: Unit 1 shall not exceed 40% opacity based on a 6-minute average; Unit 2 shall not exceed 25% opacity based on a 6-minute average. A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more. [Rule 62-296.340 (BART), F.A.C.]

EXCESS EMISSIONS

7. Excess Emissions Allowed. Unless otherwise specified by 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.]
8. 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.]
9. Excess Emissions Notification. In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

MONITORING REQUIREMENTS

10. Control Equipment Monitoring. The ESPs used for the control of particulate matter emissions from these units are subject to the Compliance Assurance Monitoring (CAM) provisions contained in 40 CFR 64. The CAM parameter ranges to be monitored (total ESP power and continuous VE) shall be re-established during the initial testing required in Condition 13 and shall be submitted with the Title V operation permit revision application required by Section 2, Condition 5. Adherence to an approved CAM plan will satisfy the BART control equipment monitoring requirement. [Rules 62-296.340 (BART) and 62-4.070(3), F.A.C.; and 40 CFR 64]

{Permitting Note: Because these units are subject to CAM, sufficient testing shall be conducted prior to submitting an application for a Title V permit revision to support the chosen CAM excursion indicators and ranges.}

EMISSIONS PERFORMANCE TESTING

11. Test Methods. The following reference methods (or more recent versions) shall be used to conduct any required emissions tests.

Method	Description of Method and Comments
1 - 4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Emissions Units 1 and 2(EU-001 & -002)

Method	Description of Method and Comments
5 or 17	Determination of PM Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3, 4, and 19 shall be used as necessary to support the other test methods. The above methods are described in 40 CFR 60, Appendix A, which is adopted by reference in Rule 62-204.800, F.A.C. No other methods shall be used without prior written approval from the Permitting Authority. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]

12. Standard Testing Requirements. All required emissions tests shall be conducted in accordance with the requirements specified in Appendix C (Standard Testing Requirements) of this permit. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]
13. Compliance Tests. During each federal fiscal year (October 1st to September 30th), the permittee shall conduct tests on Units 1 and 2 to demonstrate compliance with the BART standards for particulate matter and opacity. Initial compliance tests shall be conducted during federal fiscal year 2012/2013 (following the upgrades to the Unit 2 ESP) and a test report demonstrating compliance shall be submitted before October 1, 2013. [Rules 62-204.800, 62-296.340(3)(b)2 and 62-297.310(7)(a)4, F.A.C.; and 40 CFR 60, Appendix A, Method 9]

NOTIFICATIONS, RECORDS AND REPORTS

14. 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.]
15. BART Permit Application for SO₂ and NO_x. In the event that CAIR is vacated by the Federal courts, the Department reserves the right to require the submission of a BART application for SO₂ and NO_x within 60 days of notification by the Department. [Rule 62-296.340, F.A.C.]
16. Shut Down of Units 1 and 2. Units 1 and 2 shall cease to be operated as coal-fired units by December 31, 2020. This date assumes timely licensing, construction and commencement of commercial operation of PEF's proposed new nuclear units (Levy County Units 1 and 2). The shutdown or (repowering) of Units 1 and 2 coal-fired units is contingent upon completion of the first fuel cycle for Levy County Unit 2. PEF shall timely advise the Department of any developments that would delay the shutdown (or repowering) of Units 1 and 2 beyond the completion of the first fuel cycle for Levy County Unit 2. [Rule 62-296.340 (BART), F.A.C. and Applicant Request]

SECTION 4. APPENDICES

CONTENTS

Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Standard Testing Requirements

SECTION 4. APPENDIX A

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-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
“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 B

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.

SECTION 4. APPENDIX B
GENERAL CONDITIONS

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 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);
 - b. Determination of Prevention of Significant Deterioration (Not Applicable); and
 - c. Compliance with New Source Performance Standards (Not Applicable).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application 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 D
STANDARD CEMS REQUIREMENTS

Unless otherwise specified by permit, all emissions units that require testing are subject to the following conditions as applicable.

1. **Required Number of Test Runs:** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
2. **Operating Rate During Testing:** Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity as defined below. If it is impracticable 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.
 - a. *Combustion Turbines.* (Reserved)
 - b. *All Other Sources.* Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.[Rule 62-297.310(2), F.A.C.]
3. **Calculation of Emission Rate:** For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
4. **Applicable Test Procedures:**
 - a. *Required Sampling Time.*
 - 1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
 - 2) **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
 - a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation

SECTION 4. APPENDIX D
STANDARD CEMS REQUIREMENTS

shall be equal to the duration of the batch cycle or operation completion time.

- b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
- c) The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- b. *Minimum Sample Volume.* Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
- c. *Required Flow Rate Range.* For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
- d. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.
- e. *Allowed Modification to EPA Method 5.* When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

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

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

SECTION 4. APPENDIX D
STANDARD CEMS REQUIREMENTS

5. Determination of Process Variables:

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

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

6. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
- b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
- c. *Sampling Ports.*
 - 1) All sampling ports shall have a minimum inside diameter of 3 inches.
 - 2) The ports shall be capable of being sealed when not in use.
 - 3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
 - 4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
 - 5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

SECTION 4. APPENDIX D
STANDARD CEMS REQUIREMENTS

d. *Work Platforms.*

- 1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
- 2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
- 3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
- 4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

- 1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
- 2) Walkways over free-fall areas shall be equipped with safety rails and toeboards.

f. *Electrical Power.*

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

g. *Sampling Equipment Support.*

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

SECTION 4. APPENDIX D
STANDARD CEMS REQUIREMENTS

7. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
- a. General Compliance Testing.
- 1) The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
 - 2) For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
 - 3) The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a) Did not operate; or
 - b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
 - 4) During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a) Visible emissions, if there is an applicable standard;
 - b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c) Each NESHAP pollutant, if there is an applicable emission standard.
 - 5) An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
 - 6) For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
 - 7) For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
 - 8) Any combustion turbine that does not operate for more than 400 hours per year shall conduct a

SECTION 4. APPENDIX D
STANDARD CEMS REQUIREMENTS

visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

- 9) The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- 10) An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
- b. 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.

8. Test Reports:

- a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
 - 1) The type, location, and designation of the emissions unit tested.
 - 2) The facility at which the emissions unit is located.
 - 3) The owner or operator of the emissions unit.
 - 4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 - 5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 - 6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 - 7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 - 8) The date, starting time and duration of each sampling run.

SECTION 4. APPENDIX D
STANDARD CEMS REQUIREMENTS

- 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.]

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

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Friday, January 09, 2009 3:03 PM
To: Hatcher, Larry
Cc: dave.kellermeyer@northernstargen.com; sosbourn@golder.com; Zhang-Torres; forney.kathleen@epa.gov; oquendo.ana@epa.gov; Dee_Morse@nps.gov; Walker, Elizabeth (AIR); Holtom, Jonathan; Gibson, Victoria; Vielhauer, Trina; Meyer, Dave; Wilkinson, Cynthia; Brenda.Brickhouse@pgnmail.com
Subject: Progress Energy Florida - Chrystal River Power Plant; Revised Draft Permit 0170004-017-AC

Dear Sir/ Madam:

Attached is the official **Notice of Revised Draft Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following links to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0170004.017.AC.R_pdf.zip

Owner/Company Name: PROGRESS ENERGY FLORIDA

Facility Name: CRYSTAL RIVER POWER PLANT

Project Number: 0170004-017-AC

Permit Status: REV DRAFT

Permit Activity: CONSTRUCTION/ BART Project

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

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

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

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

Tracking:

Recipient	Delivery	Read
Hatcher, Larry dave.kellermeyer@northernstargen.coi sosbourn@golder.com		
Zhang-Torres forney.kathleen@epa.gov oquendo.ana@epa.gov Dee_Morse@nps.gov	Delivered: 1/9/2009 3:03 PM	Read: 1/9/2009 4:09 PM
Walker, Elizabeth (AIR)	Delivered: 1/9/2009 3:03 PM	
Holtom, Jonathan	Delivered: 1/9/2009 3:03 PM	Read: 1/9/2009 3:16 PM
Gibson, Victoria	Delivered: 1/9/2009 3:03 PM	Read: 1/9/2009 3:29 PM
Vielhauer, Trina	Delivered: 1/9/2009 3:03 PM	Read: 1/9/2009 3:05 PM
Meyer, Dave Wilkinson, Cynthia Brenda.Brickhouse@pgnmail.com		

Livingston, Sylvia

From: Brickhouse, Brenda [Brenda.Brickhouse@pgnmail.com]
To: Livingston, Sylvia
Sent: Friday, January 09, 2009 3:09 PM
Subject: Read: Progress Energy Florida - Chrystal River Power Plant; Revised Draft Permit 0170004-017-AC

Your message

To: Brenda.Brickhouse@pgnmail.com
Subject:

was read on 1/9/2009 3:09 PM.

Livingston, Sylvia

From: Dee_Morse@nps.gov
Sent: Friday, January 09, 2009 3:17 PM
To: Livingston, Sylvia
Subject: Re: Progress Energy Florida - Chrystal River Power Plant; Revised Draft Permit 0170004-017-AC

permit received

Dee Morse
Environmental Protection Specialist
Air Resources Division
Natural Resource Program Center
National Park Service
Phone: 303 969-2817
Fax: 303 969-2822
e-mail: dee_morse@nps.gov

Florida Department of Environmental Protection

Memorandum

TO: Trina Vielhauer, Chief
Bureau of Air Regulation

FROM: Jonathan Holtom, Title V Section *JH*

DATE: December 16, 2008

SUBJECT: Draft Air Permit No. 0170004-019-AC / PSD-FL-383A
Progress Energy Florida, Crystal River Power Plant
Units 4 and 5, Pollution Controls Project Revisions

Attached for your review are the following items:

- Cover letter;
- Written Notice of Intent to Issue Permit;
- Public Notice of Intent to Issue Permit;
- Revised Technical Evaluation and Preliminary Determination;
- Revised Draft Permit with Appendices; and
- PE Certification.

The Technical Evaluation and Preliminary Determination provides a detailed description of the project, rule applicability, and emissions standards. This project is being issued to make minor revisions to permit No. 0170004-016-AC / PSD-FL-383, which was issued to authorize the installation of NO_x and SO₂ control devices. The revisions make the use of the new control devices mandatory and reduce the allowable NO_x emissions to 0.07 lb/MMBtu. I recommend your approval of the attached draft permit for this project.

For the company's convenience, this project is being issued under a combined Notice of Intent with the BART project in order to allow for a combined Public Notice.

Attachments

PROFESSIONAL ENGINEER CERTIFICATION STATEMENT

PERMITTEE

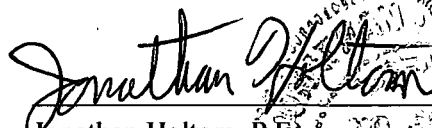

Progress Energy Florida
100 Central Avenue CN 77
St. Petersburg, Florida 33701

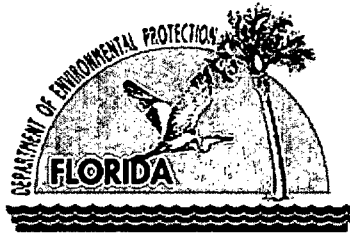
Draft Air Permit No. 0170004-019-AC
PSD-FL-383A
Crystal River Power Plant
Units 4 and 5, Pollution Controls Project Revisions
Citrus County, Florida

PROJECT DESCRIPTION

Project: This project is being issued to make minor revisions to permit No. 0170004-016-AC / PSD-FL-383, which was issued to authorize the installation of NO_x and SO₂ control devices. The revisions make the use of the new control devices mandatory and reduce the allowable NO_x emissions to 2,085 tons per year based on a 12-month rolling average.

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


Jonathan Holtom, P.E.
Registration Number: 52664

(Date)



**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

PROJECT

Project No. 0170004-019-AC
Air Permit No. PSD-FL-383A
Progress Energy Florida, Inc. – Crystal River Power Plant
ARMS Facility ID No. 0170004
FGD/SCR Projects for Units 4 and 5

COUNTY

Citrus County, Florida

APPLICANT

Progress Energy Florida, Inc.
Crystal River Power Plant
100 Central Ave, CN77
St. Petersburg, FL 34428

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation - Air Permitting North
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400

December 18, 2008

1. GENERAL PROJECT INFORMATION

General Facility Information

The existing Crystal River Power Plant is located in the Crystal River Energy Complex in Citrus County, north of Crystal River and west of U.S. Highway 19. The UTM coordinates are Zone 17, 334.3 km East, and 3204.5 km North (Latitude: 28/57/34; Longitude: 82/42/01). This is an area that is currently in attainment with the state and federal Ambient Air Quality Standards (AAQS) or otherwise designated as unclassifiable. The existing Crystal River Power Plant consists of four coal-fired fossil fuel steam generating (FFSG) units with electrostatic precipitators; two natural draft cooling towers; three helper mechanical cooling towers; coal and ash material handling facilities; relocatable diesel fired generators; and, a nuclear unit, which is not considered a source of air pollution.

Major Regulatory Categories

The facility is regulated in accordance with the following major categories.

Title III: Major source of hazardous air pollutants (HAP);

Title IV: Units subject to the acid rain provisions of the Clean Air Act;

Title V: Title V major source of air pollution;

PSD: Major stationary source; and

CAIR: Subject to the Clean Air Interstate Rule (CAIR).

Application Processing Schedule

11/07/08: Received request to revise permit No. 0170004-016-AC.

12/18/08: Draft Permit Issued.

Project Description

Permit No. 0170004-016-AC / PSD-FL-383 was issued on May 18, 2007, to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) under CAIR. Under the authority of that permit, the applicant is in the process of installing new low-NO_x burners, new selective catalytic reduction (SCR) systems, new flue gas desulfurization (FGD) systems, and new stacks for Units 4 and 5. In conjunction with the proposed new control equipment, the applicant was granted the flexibility to fire additional fuel blends (sub-bituminous coal and petroleum coke) and recognition of the true maximum heat input rates for Units 4 and 5. The applicant is also installing a new carbon burn-out (CBO™) system that will reburn fly ash generated at this plant to recover the remaining heating value in this material and minimize the onsite landfilling of fly ash.

Subsequent to the issuance of permit No. 0170004-016-AC / PSD-FL-383, the Environmental Protection Agency revised the 8-hour ozone standard. Based on the 2006 – 2008 ambient monitoring data, several counties near the Crystal River Power Plant are close to exceeding the new ozone standard. In addition, the U.S. Court of Appeals for the District of Columbia vacated the Clean Air Interstate Rule (CAIR). The Clean Air Act clearly requires states to address the interstate transport of pollutants and, to the extent vacature of CAIR is not reversed, Florida is under an obligation to address interstate transport.

In light of the foregoing and the Department's authority under Rule 62-4.080, Florida Administrative Code, the Department is revising permit No. 0170004-016-AC / PSD-FL-383 to require the operation of the scrubber and the selective catalytic reduction systems that were authorized to be built by that permit. In addition, the NO_x limit is being reduced to reflect the emission reductions achievable by the required continuous operation of the new low-NO_x burners and new SCR systems.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Affected Emissions Units

This project addresses the following new and existing emissions units.

EU No.	Type	Emission Unit Description
003	Existing	Unit 5 Fossil Fuel Steam Generator
004	Existing	Unit 4 Fossil Fuel Steam Generator

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters F.A.C.: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, PSD Review and BACT, and Non-attainment Area Review and LAER); 62-213 (Title V Air Operation Permits for Major Sources of Air Pollution); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures). These units are also subject to Power Plant Site Certification No. PA 77-09.

Federal Regulations

The Environmental Protection Agency establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 identifies New Source Performance Standards (NSPS) for a variety of industrial activities. Part 61 specifies the National Emissions Standards for Hazardous Air Pollutant (NESHAP) based on specific pollutants. Part 63 identifies National Emissions Standards for Hazardous Air Pollutant (NESHAP) based on the Maximum Achievable Control Technology (MACT) for given source categories. Federal regulations are adopted in Rule 62-204.800, F.A.C. These units are subject to 40 CFR 60, Subpart D (fossil fuel-fired steam generators) and 40 CFR 60, Subpart Y (coal preparation plants).

General PSD Applicability

The Department regulates major air pollution sources in accordance with Florida's PSD program, as approved by the EPA in Florida's State Implementation Plan and defined in Rule 62-212.400, F.A.C. A PSD review is required in areas currently in attainment with the state and federal Ambient Air Quality Standards (AAQS) or areas designated as "unclassifiable" for a given pollutant. A new facility is considered "major" with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant, or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD Major Facility Categories, or
- 5 tons per year of lead.

For new projects at PSD-major sources, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates as defined in 62-210.200, F.A.C. Pollutant emissions from the project exceeding these rates are considered "significant" and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility may be "major" with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for the Project

This project makes changes to the previously issued permit No. 0170004-016-AC / PSD-FL-383, which contained limits to avoid triggering PSD applicability. The changes being made by this revision will require the continuous use of the control equipment authorized by that permit, which will make the reduced SO₂ emissions an enforceable limit and will provide additional reductions to the allowable NO_x emissions limits. As such, PSD review does not apply to this project.

3. PROJECT REVIEW & EMISSIONS STANDARDS

Brief Discussion of Emissions

Permit No. 0170004-016-AC / PSD-FL-383 authorized the installation of control equipment capable of reducing NO_x and SO₂ emissions; however, the use of that equipment was at the permittee's discretion. If the equipment were operated continuously under the provisions of that permit, potential NO_x emissions would reduce to 27,996 tons per year (TPY) from units 4 and 5 and potential SO₂ emissions would reduce to 16,083 TPY.

Under the provisions of this permit, the continuous use of the control equipment for SO₂ and NO_x will be required upon completion of the construction authorized by permit No. 0170004-016-AC / PSD-FL-383. In addition, to reflect the design capabilities of the installed equipment, the previous potential NO_x emissions rates are being reduced from 0.47 lb/MMBtu and become a maximum allowable emission limit of 2,085 tons per year based on a 12-month rolling average (assuming an SCR inlet rate of 0.35 lb/MMBtu and 80% reduction by the SCR systems). This change will further reduce the allowable NO_x emissions from Units 4 and 5 (combined) by another 23,826 tons per year, when compared to the potential emissions achievable under permit No. 0170004-016-AC / PSD-FL-383.

Draft Permit Requirements

This project makes the changes listed below to permit No. 0170004-016-AC/ PSD-FL-383. Additions to the permit are shown in double underline format and deletions are shown in ~~strike-through~~ format.

- The second paragraph of the FACILITY AND PROJECT DESCRIPTION section is changed as follows:

~~To provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) under the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR), the permittee elects to install~~ Due to the Environmental Protection Agency's revised 8-hour ozone standard, the permittee shall install and continuously operate new low-NO_x burners, new selective catalytic reduction systems, new flue gas desulfurization systems, and new stack configurations for existing Units 4 and 5. Because CAIR and CAMR afford the flexibility to evaluate market conditions to determine whether it will install controls, operate existing controls, or purchase allowances generated by other plants, the Department does not require the installation of this equipment nor its operation. However, other changes requested by the permittee The installation and use of these control devices require a demonstration of continuous compliance with new standards for NO_x and SO₂.

- Section 3, condition 2 is changed:

CAIR Emissions Reduction Projects: For Units 4 and 5, the permittee is ~~authorized~~ required to perform the following type of work make the following modifications to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) under the Clean Air Interstate Rule (CAIR) assure compliance with the new emissions limits listed below.

- a. Low-NO_x Burners: The permittee is ~~authorized~~ required to install new low-NO_x burners manufactured by Babcock & Wilcox (Model No. DRB-42) or equivalent. The preliminary design is for 54 burners per unit. The existing burner inlet system will be modified to allow even airflow distribution to the new burners.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- b. *SCR Systems*: The permittee is ~~authorized~~ required to install new SCR systems to reduce NO_x emissions. Each system will consist of the following basic components: an ammonia injection grid, a mixing grid, SCR reactor with catalyst modules, a urea-to-ammonia processing system, associated bulk storage systems, an automated control system, piping, electrical, and other ancillary equipment. As needed, urea will be converted into ammonia, which will be mixed to the proper concentration. Ammonia will be injected ahead of the SCR reactor, which will be installed upstream of the air heater for each unit. The ammonia will combine with NO_x in the presence of the catalyst in a reduction reaction to form nitrogen and water. The preliminary design is for 90% reduction in NO_x emissions with a maximum ammonia slip of 2 to 5 ppmv. The design also 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, the bypass would also allow access to the SCR reactor without requiring the complete shutdown of a unit.
- c. *FGD Systems*: The permittee is ~~authorized~~ required to install new wet flue gas desulfurization (FGD) systems after the existing ESPs and induced draft fans to reduce SO₂ and other acid gas emissions. A limestone slurry will be injected into the FGD absorbers at design feed rate of approximately 352 gpm. The slurry will consist of approximately 25 to 30% solids and a specific gravity of 1.22. The preliminary design is for a 97% reduction in SO₂ emissions. In addition to the FGD absorbers, the systems will consist of limestone storage and handling, limestone preparation, limestone slurry injection, FGD blowdown, and gypsum dewatering, transfer and storage.
- d. *Stacks*: In conjunction with the ~~CAIR~~ emissions reduction projects, the permittee is authorized to construct a single new 550 feet tall chimney with separate internal stack liners for Units 4 and 5, one per unit. Each stack liner will have an internal diameter of 30.5 feet. The existing stacks will no longer be used. The required continuous emissions monitoring systems (CEMS) will be installed on each new stack liner.

The above information is based on the preliminary design. As necessary, the permittee shall provide the Permitting and Compliance Authorities with updated information should the final design significantly change. [Application No. 0170004-016-AC; Rules 62-4.070(3), 62-4.080 and 62-212.300, F.A.C.]

- Section 3, conditions 9.a. and b. are changed:

- 9. *Standards Based on CEMS*: Including the emissions from the CBO unit, emissions from Units 4 and 5 each shall not exceed the following standards based on data collected by the CEMS.
 - a. *NO_x Emissions*: As determined by CEMS data, NO_x emissions shall not exceed ~~0.47 lb/MMBtu of heat input~~ 2.085 tons per year based on a 12-month rolling average for all periods of operation including startup, shutdown and malfunction. [Application No. 0170004-016-AC; Rules 62-4.070(3), 62-4.080 and 62-212.400(12), F.A.C.]
 - b. *SO₂ Emissions*: As determined by CEMS data, SO₂ emissions shall not exceed 0.27 lb/MMBtu of heat input based on a 30-day rolling average for all periods of operation including startup, shutdown and malfunction. As determined by CEMS data, SO₂ emissions shall not exceed 1944.0 lb/hour based on a 24-hour block average excluding startup, shutdown and malfunction of the FGD system. [Application No. 0170004-016-AC; Rules 62-4.070(3), 62-4.080 and 62-212.400(12), F.A.C.]

No other changes are being made to the previously issued air construction permit No. 0170004-016-AC.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Jonathan Holtom is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Progress Energy Florida, Inc.
Crystal River Power Plant
299 First Avenue North, CN-77
St. Petersburg, Florida 33701

Authorized Representative:
Mr. Bernie Cumbie, Plant Manager

Air Permit No. PSD-FL-383A
Project No. 0170004-019-AC
Facility ID No. 0170004
Crystal River Power Plant
Units 4 and 5, Pollution Controls Project Revisions
Permit Expires: November 1, 2011

PLANT LOCATION

The existing Crystal River Power Plant (SIC No. 4911) is located in the Crystal River Energy Complex in Citrus County, north of Crystal River and west of U.S. Highway 19.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.), and Part 60 in Title 40 of the Code of Federal Regulations (CFR). Specifically, this permit is issued in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. The permittee is authorized to install the proposed equipment and 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 of Environmental Protection (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

Executed in Tallahassee, Florida

DRAFT

Joseph Kahn, Director
Division of Air Resource Management

Effective Date

SECTION 1. GENERAL INFORMATION

FACILITY AND PROJECT DESCRIPTION

The existing Crystal River Power Plant consists of the following: four coal-fired fossil fuel steam generating units with electrostatic precipitators; two natural draft cooling towers; two sets of mechanical draft cooling towers (one set of “helper” cooling towers and a second set of “modular” cooling towers); coal and ash material handling facilities; and relocatable diesel fired generators. The Crystal River Energy Complex includes a nuclear unit and associated facilities permitted under the same Title V air operation permit.

This project makes changes to the previously issued permit No. 0170004-016-AC / PSD-FL-383. The changes being made will require the continuous use of the control equipment authorized by that permit, which will make the reduced SO₂ emissions an enforceable limit and will provide additional reductions to the allowable NO_x emissions limits. This permit affects the following emissions units:

EU No.	New/Existing	Emission Unit Description
003	Existing	Unit 5 Fossil Fuel Steam Generator
004	Existing	Unit 4 Fossil Fuel Steam Generator

REGULATORY CLASSIFICATION

Title III: The existing facility is a major source of hazardous air pollutants.

Title IV: The existing facility operates units subject to the Acid Rain provisions.

Title V: The existing facility is a Title V major source of air pollution.

PSD: The existing facility is a major stationary source.

PPS: The existing facility is subject to Power Plant Site Certification No. PA 77-09.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. **Permitting Authority:** The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the permitting authority's office. Copies of all such applications shall also be submitted to each Compliance Authority.
2. **Compliance Authority:** All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's Southwest District Office at 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.
3. **Appendices:** The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Glossary of Common Terms;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions; and
 - d. Appendix D. Common Testing Requirements.
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 the applicable requirements 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 terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the appropriate forms provided in Rule 62-210.900, F.A.C. and follow the applicable permitting procedures as specified in the above regulations. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. **New or Additional Conditions:** For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. **Modifications:** The permittee shall notify the Compliance Authority upon commencement of construction. No 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. **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. [Rule 62-4.030 and Chapters 62-210 and 62-212, F.A.C.]
8. **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 unit. 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. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

F. Units 4 and 5 – Temporary Trial Period with up to 30% Petroleum Coke

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
003	Unit 5 is a fossil fuel-fired electric utility steam generator consisting of a pulverized coal, dry bottom, wall-fired boiler rated at 760 MW, which began commercial operation in 1984. Air pollution control equipment will include: low-NO _x burners, selective catalytic reduction (SCR) systems, flue gas desulfurization (FGD) systems, alkali injection, and an electrostatic precipitator (ESP). The flue gas exhausts at 130° F with a volumetric flow rate of 2,205,195 acfm through a stack that is 30.5 feet in diameter and 550 feet tall. Units 4 and 5 share a common chimney with separate internal stack liners.
004	Unit 4 is a fossil fuel-fired, electric utility steam generator consisting of a pulverized coal, dry bottom, wall-fired boiler rated at 760 MW, which began commercial operation in 1982. Air pollution control equipment will include: low-NO _x burners, selective catalytic reduction (SCR) systems, flue gas desulfurization (FGD) systems, alkali injection, and an electrostatic precipitator (ESP). The flue gas exhausts at 130° F with a volumetric flow rate of 2,205,195 acfm through a stack that is 30.5 feet in diameter and 550 feet tall. Units 4 and 5 share a common chimney with separate internal stack liners.

{Permitting Note: Existing units EU-003 and EU-004 are currently subject to the following applicable requirements: Power Plant Site Certification No. PA 77-09; 40 CFR 60, NSPS Subpart D (fossil fuel-fired steam generators); NSPS Subpart Y (coal preparation plants); and Chapter 62-214, F.A.C. (Acid Rain Program). This permit does not affect these previous requirements.}

This permit makes the changes listed below to permit No. 0170004-016-AC/ PSD-FL-383. Additions to the permit are shown in double underline format and deletions are shown in ~~strike through~~ format.

1. **Previous Permits:** The conditions of this permit make the changes listed below to permit No. 0170004-016-AC/ PSD-FL-383. Additions to the permit are shown in double underline format and deletions are shown in ~~strike through~~ format. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations including: Power Plant Site Certification No. PA 77-09; 40 CFR 60, NSPS Subpart D (fossil fuel-fired steam generators); and Chapter 62-214, F.A.C. (Phase I and II of the Acid Rain Program). Except for the changes listed below, all other conditions of permit No. 0170004-016-AC / PSD-FL-383 pertaining to emissions limitations, testing requirements, reporting requirements, etc., remain in effect and are unchanged. [Permit No. 0170004-016-AC; Rules 62-4.070(3) and 62-4.080, F.A.C.]
2. The second paragraph of the FACILITY AND PROJECT DESCRIPTION section is changed as follows:
~~To provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) under the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR), the permittee elects to install~~ Due to the Environmental Protection Agency's revised 8-hour ozone standard, the permittee shall install and continuously operate new low-NO_x burners, new selective catalytic reduction systems, new flue gas desulfurization systems, and new stack configurations for existing Units 4 and 5. ~~Because CAIR and CAMR afford the flexibility to evaluate market conditions to determine whether it will install controls, operate existing controls, or purchase allowances generated by other plants, the Department does not require the installation of this equipment nor its operation. However, other changes requested by the permittee~~ The installation and use of these control devices require a demonstration of continuous compliance with new standards for NO_x and SO₂.
3. Section 3, condition 2 is changed:
 2. ~~CAIR Emissions Reduction Projects:~~ For Units 4 and 5, the permittee is ~~authorized~~ required to ~~perform the following type of work~~ make the following modifications to ~~provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) under the Clean Air Interstate Rule (CAIR)~~ assure compliance with the new emissions limits listed below.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

F. Units 4 and 5 – Temporary Trial Period with up to 30% Petroleum Coke

- a. *Low-NO_x Burners*: The permittee is ~~authorized~~ required to install new low-NO_x burners manufactured by Babcock & Wilcox (Model No. DRB-42) or equivalent. The preliminary design is for 54 burners per unit. The existing burner inlet system will be modified to allow even airflow distribution to the new burners.
- b. *SCR Systems*: The permittee is ~~authorized~~ required to install new SCR systems to reduce NO_x emissions. Each system will consist of the following basic components: an ammonia injection grid, a mixing grid, SCR reactor with catalyst modules, a urea-to-ammonia processing system, associated bulk storage systems, an automated control system, piping, electrical, and other ancillary equipment. As needed, urea will be converted into ammonia, which will be mixed to the proper concentration. Ammonia will be injected ahead of the SCR reactor, which will be installed upstream of the air heater for each unit. The ammonia will combine with NO_x in the presence of the catalyst in a reduction reaction to form nitrogen and water. The preliminary design is for 90% reduction in NO_x emissions with a maximum ammonia slip of 2 to 5 ppmv. The design also 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, the bypass would also allow access to the SCR reactor without requiring the complete shutdown of a unit.
- c. *FGD Systems*: The permittee is ~~authorized~~ required to install new wet flue gas desulfurization (FGD) systems after the existing ESPs and induced draft fans to reduce SO₂ and other acid gas emissions. A limestone slurry will be injected into the FGD absorbers at design feed rate of approximately 352 gpm. The slurry will consist of approximately 25 to 30% solids and a specific gravity of 1.22. The preliminary design is for a 97% reduction in SO₂ emissions. In addition to the FGD absorbers, the systems will consist of limestone storage and handling, limestone preparation, limestone slurry injection, FGD blowdown, and gypsum dewatering, transfer and storage.
- d. *Stacks*: In conjunction with the ~~CAIR~~ Emissions reduction projects, the permittee is authorized to construct a single new 550 feet tall chimney with separate internal stack liners for Units 4 and 5, one per unit. Each stack liner will have an internal diameter of 30.5 feet. The existing stacks will no longer be used. The required continuous emissions monitoring systems (CEMS) will be installed on each new stack liner.

The above information is based on the preliminary design. As necessary, the permittee shall provide the Permitting and Compliance Authorities with updated information should the final design significantly change. [Application No. 0170004-016-AC; Rules 62-4.070(3), 62-4.080 and 62-212.300, F.A.C.]

4. Section 3, conditions 9.a. and b. are changed:

9. *Standards Based on CEMS*: Including the emissions from the CBO unit, emissions from Units 4 and 5 each shall not exceed the following standards based on data collected by the CEMS.
 - a. *NO_x Emissions*: As determined by CEMS data, NO_x emissions shall not exceed ~~0.47 lb/MMBtu of heat input~~ 2.085 tons per year based on a 12-month rolling average for all periods of operation including startup, shutdown and malfunction. [Application No. 0170004-016-AC; Rules 62-4.070(3), 62-4.080 and 62-212.400(12), F.A.C.]
 - b. *SO₂ Emissions*: As determined by CEMS data, SO₂ emissions shall not exceed 0.27 lb/MMBtu of heat input based on a 30-day rolling average for all periods of operation including startup, shutdown and malfunction. As determined by CEMS data, SO₂ emissions shall not exceed 1944.0 lb/hour based on a 24-hour block average excluding startup, shutdown and malfunction of the FGD system. [Application No. 0170004-016-AC; Rules 62-4.070(3), 62-4.080 and 62-212.400(12), F.A.C.]

SECTION 4. APPENDICES

CONTENTS

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

Appendix C. Common Conditions

Appendix D. Common Testing Requirements

SECTION 4. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

CITATION FORMATS

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

Old Permit Numbers

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

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

New Permit Numbers

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

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

PSD Permit Numbers

Example: Permit No. PSD-FL-317

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

Florida Administrative Code (F.A.C.)

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

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

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

acfm: actual cubic feet per minute

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

BACT: best available control technology

Btu: British thermal units

CAM: compliance assurance monitoring

SECTION 4. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

CEMS: continuous emissions monitoring system
cfm: cubic feet per minute
CFR: Code of Federal Regulations
CO: carbon monoxide
COMS: continuous opacity monitoring system
DEP: Department of Environmental Protection
Department: Department of Environmental Protection
dscfm: dry standard cubic feet per minute
EPA: Environmental Protection Agency
ESP: electrostatic precipitator (control system for reducing particulate matter)
EU: emissions unit
F.A.C.: Florida Administrative Code
F.D.: forced draft
F.S.: Florida Statutes
FGR: flue gas recirculation
Fl: fluoride
ft²: square feet
ft³: cubic feet
gpm: gallons per minute
gr: grains
HAP: hazardous air pollutant
Hg: mercury
I.D.: induced draft
ID: identification
kPa: kilopascals
lb: pound
MACT: maximum achievable technology
MMBtu: million British thermal units
MSDS: material safety data sheets
MW: megawatt
NESHAP: National Emissions Standards for Hazardous Air Pollutants
NO_x: nitrogen oxides
NSPS: New Source Performance Standards
O&M: operation and maintenance
O₂: oxygen

SECTION 4. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

Pb: lead

PM: particulate matter

PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less

PSD: prevention of significant deterioration

psi: pounds per square inch

PTE: potential to emit

RACT: reasonably available control technology

RATA: relative accuracy test audit

SAM: sulfuric acid mist

scf: standard cubic feet

scfm: standard cubic feet per minute

SIC: standard industrial classification code

SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

SO₂: sulfur dioxide

TPH: tons per hour

TPY: tons per year

UTM: Universal Transverse Mercator coordinate system

VE: visible emissions

VOC: volatile organic compounds

SECTION 4. APPENDIX B

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, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., 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 F.S. 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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S.. Such evidence

SECTION 4. APPENDIX B

GENERAL CONDITIONS

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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (not applicable);
 - b. Determination of Prevention of Significant Deterioration (not applicable); and
 - c. Compliance with New Source Performance Standards (not applicable).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application 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 C
COMMON CONDITIONS

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

EMISSIONS AND CONTROLS

1. **Plant Operation - Problems:** If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. **Circumvention:** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. **Excess Emissions Allowed:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 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 (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. **Objectionable Odor Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. **General Visible Emissions:** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

{Permitting Note: Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any NSPS or NESHAP provision.}

RECORDS AND REPORTS

10. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. **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(3), F.A.C.]

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

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

COMPLIANCE TESTING REQUIREMENTS

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

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

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

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

5. Determination of Process Variables

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

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

6. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
- b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
- c. *Sampling Ports.*
 - (1) All sampling ports shall have a minimum inside diameter of 3 inches.
 - (2) The ports shall be capable of being sealed when not in use.
 - (3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
 - (4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
 - (5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

d. *Work Platforms.*

- (1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
- (2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
- (3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
- (4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

- (1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
- (2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.

f. *Electrical Power.*

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

g. *Sampling Equipment Support.*

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

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

7. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

a. *General Compliance Testing.*

1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - (a) Did not operate; or
 - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
 4. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - (a) Visible emissions, if there is an applicable standard;
 - (b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - (c) c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
 6. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
 7. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
 8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
 10. An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
- b. *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

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

- c. *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of paragraph 62-297.310(7)(b), F.A.C., shall apply.

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

RECORDS AND REPORTS

8. Test Reports:

- a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information.
 1. The type, location, and designation of the emissions unit tested.
 2. The facility at which the emissions unit is located.
 3. The owner or operator of the emissions unit.
 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 8. The date, starting time and duration of each sampling run.
 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 10. The number of points sampled and configuration and location of the sampling plane.
 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 12. The type, manufacturer and configuration of the sampling equipment used.
 13. Data related to the required calibration of the test equipment.
 14. Data on the identification, processing and weights of all filters used.
 15. Data on the types and amounts of any chemical solutions used.

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

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.]

Livingston, Sylvia

From: Wilkinson, Cynthia [Cynthia.Wilkinson@pgnmail.com]
Sent: Tuesday, December 23, 2008 11:39 AM
To: Livingston, Sylvia
Cc: Hatcher, Larry; Odom, Robby A; Cumbie, Bernie M.; Maltese, Nick; Tuchbaum-Biro, Erika; Meyer, Dave
Subject: RE: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

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FYI - Bernie Cumbie is no longer the Plant Manager for the Progress Energy Crystal River Fossil Plant. Larry Hatcher would be the correct recipient for your email in the future.

Thanks and happy holidays.

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From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Friday, December 19, 2008 12:22 PM
To: Cumbie, Bernie M.
Cc: dave.kellermeyer@northernstargen.com; sosbourn@golder.com; Zhang-Torres; forney.kathleen@epa.gov; oquedo.ana@epa.gov; Dee_Morse@nps.gov; Walker, Elizabeth (AIR); Holtom, Jonathan; Gibson, Victoria; Vielhauer, Trina
Subject: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

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<http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0170004.019.AC.D_pdf.zip>

Owner/Company Name: PROGRESS ENERGY FLORIDA Facility Name: CRYSTAL RIVER POWER PLANT Project Number: 0170004-017-AC Permit Status: REV DRAFT Permit Activity: CONSTRUCTION/ BART Project

Project Number: 0170004-019-AC/ PSD-FL-383A Permit Status: DRAFT Permit Activity: CONSTRUCTION/ Units 4 and 5 Pollution Controls Project Revisions Facility County: CITRUS Processor: Jonathan Holtom

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

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The Department of Environmental

Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and

improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of

service you received. Copy the url below to a web browser to complete the DEP

survey: <http://survey.dep.state.fl.us/?refemail=Sylvia.Livingston@dep.state.fl.us> Thank you in advance for completing the survey.

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Friday, December 19, 2008 12:22 PM
To: Bernie.Cumbie@pgnmail.com
Cc: dave.kellermeyer@northernstargen.com; sosbourn@golder.com; Zhang-Torres; forney.kathleen@epa.gov; oquedo.ana@epa.gov; Dee_Morse@nps.gov; Walker, Elizabeth (AIR); Holtom, Jonathan; Gibson, Victoria; Vielhauer, Trina
Subject: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A
Attachments: 0170004-017-019-AC_Intent.pdf

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Owner/Company Name: PROGRESS ENERGY FLORIDA

Facility Name: CRYSTAL RIVER POWER PLANT

Project Number: 0170004-017-AC

Permit Status: REV DRAFT

Permit Activity: CONSTRUCTION/ BART Project

Project Number: 0170004-019-AC/ PSD-FL-383A

Permit Status: DRAFT

Permit Activity: CONSTRUCTION/ Units 4 and 5 Pollution Controls Project Revisions

Facility County: CITRUS

Processor: Jonathan Holtom

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Sylvia Livingston
Bureau of Air Regulation

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, December 24, 2008 5:16 PM
To: Wilkinson, Cynthia
Cc: Hatcher, Larry; Odom, Robby A; Cumbie, Bernie M.; Maltese, Nick; Tuchbaum-Biro, Erika; Meyer, Dave; Linero, Alvaro
Subject: RE: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

Cynthia,

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http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0170004.019.AC.D_pdf.zip

Thanks,

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

-----Original Message-----

From: Livingston, Sylvia
Sent: Wednesday, December 24, 2008 5:08 PM
To: 'Wilkinson, Cynthia'
Cc: 'Hatcher, Larry'; 'Odom, Robby A'; 'Cumbie, Bernie M.'; 'Maltese, Nick'; 'Tuchbaum-Biro, Erika'; 'Meyer, Dave'; Linero, Alvaro
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Subject: RE: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

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I'm checking on this problem and will let you know when it's fixed.

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Cc: dave.kellermeyer@northernstargen.com; sosbourn@golder.com; Zhang-Torres; forney.kathleen@epa.gov; oquedo.ana@epa.gov; Dee_Morse@nps.gov; Walker, Elizabeth (AIR); Holtom, Jonathan; Gibson, Victoria; Vielhauer, Trina
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Owner/Company Name: PROGRESS ENERGY FLORIDA Facility Name: CRYSTAL RIVER POWER PLANT Project Number: 0170004-017-AC Permit Status: REV DRAFT Permit Activity: CONSTRUCTION/ BART Project

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850/921-9506
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The Department of Environmental

Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and

improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of

service you received. Copy the url below to a web browser to complete the DEP

survey: <http://survey.dep.state.fl.us/?refemail=Sylvia.Livingston@dep.state.fl.us> Thank you in advance for completing the survey.

Tracking:

Livingston, Sylvia

From: Wilkinson, Cynthia [Cynthia.Wilkinson@pgnmail.com]
Sent: Wednesday, December 31, 2008 11:37 AM
To: Livingston, Sylvia
Subject: RE: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

Got it to work if I copied both pieces of the link separately. Thanks.

-----Original Message-----

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Tuesday, December 30, 2008 8:50 AM
To: Wilkinson, Cynthia
Subject: RE: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

Cynthia,

Could you try copying the entire link including .AC.R_pdf.zip into the web address field of your browser to see if you can access it?

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

-----Original Message-----

From: Wilkinson, Cynthia [mailto:Cynthia.Wilkinson@pgnmail.com]
Sent: Monday, December 29, 2008 3:54 PM
To: Livingston, Sylvia
Subject: RE: Progress Energy Florida - Draft Permit Nos. 0170004-017-AC and 0170004-019-AC/ PSD-FL-383A

I'm sorry, I still get a "page cannot be accessed" response.

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From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, December 24, 2008 5:16 PM
To: Wilkinson, Cynthia
Cc: Hatcher, Larry; Odom, Robby A; Cumbie, Bernie M.; Maltese, Nick; Tuchbaum-Biro, Erika; Meyer, Dave; Linero, Alvaro
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.AC.D_pdf.zip

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The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by

clicking on the link provided above, or search for other project documents using the "Air Permit Documents Search" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp> <<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>> .

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

The Department of Environmental

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