Memorandum

Florida Department of Environmental Protection

TO: Trina Vielhauer, Chief
Bureau of Air Regulation

THROUGH: Jeff Koerner, Administrator
Air Permitting North Program

FROM: Jonathan Holtom, Air Permitting North Program

DATE: November 20, 2007

SUBJECT: 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;
- Technical Evaluation and Preliminary Determination;
- 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. The P.E. certification briefly summarizes the proposed project. I recommend your approval of the attached draft permit for this project.

Attachments

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

November 20, 2007

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

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

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. Enclosed are the following documents:

- The Technical Evaluation and Preliminary Determination summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue a Draft Permit.
- The proposed Draft Permit includes the specific conditions that regulate the emissions units covered by the proposed project.
- The Written Notice of Intent to Issue Air Permit provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and the availability of mediation.
- The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

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

Sincerely,

Trina L Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

TLV/jfk/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 No. 0170004-017-AC
Facility ID No. 0170004
Crystal River Power Plant
BART Project
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.

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. The following controls and techniques proposed by the applicant may be used to achieve the BART standards: a rebuild of the existing electrostatic precipitator (ESP); a polishing baghouse; replacement of the existing ESP with a new ESP; or replacement of the existing ESP with a new baghouse. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 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: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. 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 an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take

place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 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.

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

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

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

Mediation: Mediation is not available in this proceeding.

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 11/21/07 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)
Mr. Jim Little, EPA Region 4 (Little.James@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) 11/21/07 (Date)

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

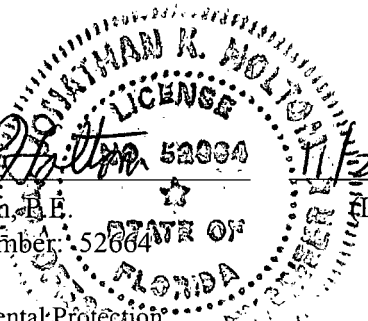
PROJECT DESCRIPTION

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. The draft air construction permit establishes BART standards based on these control methods. The Technical Evaluation and Preliminary Determination issued concurrently with the draft permit provides the project details and rational 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. (Date)
Registration Number: 52664

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
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.

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 0.015 lb/MMBtu. The following controls and techniques proposed by the applicant may be used to achieve the BART standards: a rebuild of the existing electrostatic precipitator (ESP); a polishing baghouse; replacement of the existing ESP with a new ESP; or replacement of the existing ESP with a new baghouse.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and F.A.C. Chapters 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: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. 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 an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 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.

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 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.

(Public Notice to be Published in the Newspaper)

TECHNICAL EVALUATION

&

PRELIMINARY DETERMINATION

PROJECT

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

November 20, 2007

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 requested additional information.

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 requested additional information.

8/29/07 Department received additional information; application complete.

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 PM_{10} 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, PM_{10} 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 PM_{10} 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 62-296.340(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.

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).

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%

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

Based on information submitted by the applicant (assuming a 20-year 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

Although the evaluation shows the option for a rebuilt ESP to be cost effective, the estimated cost effectiveness for all options appears higher than expected. It should be noted that the above cost per ton of pollutant removed provided by the applicant is based on an incremental reduction from the current tested emissions rates of 0.037 lb/MMBtu for Unit 1 and 0.027 lb/MMBtu for Unit 2. However, the information submitted by the applicant contains a statement that the lowest continuously achievable emission rate (annual average) is that of the current

0.10 lb/MMBtu emissions limit. Comparing the proposed emissions rate for each proposed option to the current "lowest continuously achievable emission rate" of 0.10 lb/MMBtu provides the following cost effectiveness:

Control Options	Unit 1		Unit 2	
	Annualized Cost	$/ton Removed	Annualized Cost	$/ton Removed
Baghouse Conversion (0.006 lb/MMBtu)	$6,722,122	4,354	$7,546,238	3,823
Polishing Baghouse (0.012 lb/MMBtu)	$6,738,914	4,660	$7,256,950	3,927
New ESP (0.010 lb/MMBtu)	$7,785,697	5,264	$8,737,094	4,623
Rebuilt ESP (0.015 lb/MMBtu)	$1,652,929	1,183	$1,078,700	604

Based on the revised analysis, all of the control options may be cost effective with substantially lower costs for the rebuilt ESP option. It was also noted that the cost analyses submitted for the different control options included an estimated installation cost factor of 2.5 times the equipment cost, which appears very high. For PSD projects, the installation costs are often estimated between 1 and 1.5 times the equipment costs.

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/PM_{10} and H_2SO_4 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 H_2SO_4 were input directly into the CALPUFF model while PM/PM_{10} 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
		8th highest	22nd highest	
Existing ESP (no change)	0.032 lb/MMBtu	0.71 dv	0.68 dv	14
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, an emissions standard of 0.015 lb/MMBtu may be achieved by all proposed options. Clearly, rebuilding the existing ESP is the most cost effective option. The predicted visibility impacts from this option are shown above and indicate reductions of: 0.10 dv for the 8th highest visibility impairment; 0.09 dv for 22nd highest 3-year visibility impairment; and 4 fewer days that will be over the visibility impairment threshold of 0.50 dv. Only small improvements in visibility impairment are achievable by further reductions with the other control options. Therefore, the Department establishes the following BART determinations for Crystal River Units 1 and 2:

As determined by EPA Method 5 or 17, particulate matter emissions from Unit 1 shall not exceed 0.015 lb/MMBtu of heat input and 56.3 lb/hour. As determined by EPA Method 5 or 17, particulate matter emissions from Unit 2 shall not exceed 0.015 lb/MMBtu of heat input and 71.9 lb/hour.

Opacity Standard: As determined by data collected from the continuous opacity monitoring systems (COMS) or EPA Method 9, visible emissions from Units 1 and 2 shall not exceed 10% 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. This standard applies during all periods of normal operation including soot-blowing, but does not apply when the ESP is not fully functional due to startup, shutdown or malfunctions.

For measured particulate emissions, EPA Method 5 or 17 is specified because that is the method currently required by permit and is the basis for the past actual measured emissions. The current opacity standard was reduced from 40% for Unit 1 and 20% for Unit 2 to 10% based on a review of historical annual visible emissions test data that shows that the highest reported visible emission during the previous five years is 9.2% for Unit 1 and 4.4% for Unit 2. For these units, automated soot blowing activities occur regularly throughout the operating day, so these reported visible emissions rates include some periods of soot blowing operations.

Improvements to the ESP will also reduce opacity levels. For the control option selected, the draft permit requires notification and a summary of the final design specifications.

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 these control devices, 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. Additional parameters should be included, such as: the pressure differential across a baghouse; baghouse leak detectors; or, total power drop across an ESP.

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 a 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/jfk/jh

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

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.]

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	*Description*: -001: 3,750 MMBtu/hr pulverized coal, dry bottom, tangentially-fired boiler. -002: 4,795 MMBtu/hr pulverized coal, dry bottom, tangentially-fired boiler. *Fuels*: 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. *Controls*: Emissions of particulate matter are controlled from each unit with a high efficiency electrostatic precipitator, manufactured by Buell Manufacturing Company, Inc. *Monitors*: Continuous opacity monitor systems (COMS) are used to measure opacity in conformance with 40 CFR Part 75. *Unit 1 Stack Parameters*: Exhaust gas exits at 291° F and 1,407,923 acfm through a 15-foot diameter stack that is 499 feet tall. *Unit 2 Stack Parameters*: Exhaust gas exits at 300° F and 1,931,324 acfm through a 16-foot diameter stack that is 502 feet tall.

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 operate and maintain any and all particulate matter control devices necessary to meet the BART standards specified in this permit. Depending on the final design, this may require either rebuilding the existing electrostatic precipitator (ESP) or the one of the following options: addition of a polishing baghouse following the existing ESP; replacement of the existing ESP with a new ESP, or replacement of the existing ESP with a new baghouse. [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: As determined by EPA Method 5 or 17, particulate matter emissions from Unit 1 shall not exceed 0.015 lb/MMBtu of heat input and 56.3 lb/hour. As determined by EPA Method 5 or 17, particulate matter emissions from Unit 2 shall not exceed 0.015 lb/MMBtu of heat input and 71.9 lb/hour. [Rule 62-296.340 (BART), F.A.C.]
4. Opacity Standard: As determined by data collected from the existing COMS or EPA Method 9, visible emissions from Units 1 and 2 shall not exceed 10% opacity based on a 6-minute average except for one 6-minute average per hour not to exceed 20% opacity. This standard applies during all periods of normal operation including soot-blowing, but does not apply when the ESP is not fully functional due to periods of

startup, shutdown or malfunctions. The COMS shall meet the requirements in 40 CFR 75. [Rule 62-296.340 (BART), F.A.C.]

EXCESS EMISSIONS

5. 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.]

6. 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.]

7. 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

8. Control Equipment Monitoring: The particulate matter emissions control devices used on these units are subject to the Compliance Assurance Monitoring (CAM) provisions contained in 40 CFR 64. The CAM parameters to be monitored for the BART control methodology chosen shall be established during the initial testing period following construction of the new control devices or reconstruction of the existing devices. 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

9. 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
5 or 17	Determination of PM Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources
19	Determination of SO_2 Removal Efficiency and PM, SO_2, and NO_X Emission Rates

   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]

10. 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]

11. 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 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

12. Notification of Selected Controls: Prior to commencing construction of a new particulate matter control device or modification of the existing ESP, the permittee shall submit a report to the Bureau of Air Regulation and to the Compliance Authority that details the control option that will be used to meet the BART standards specified in this permit. The report shall include a construction schedule adequate to meet the testing deadline identified above. [Rules 62-4.070 and 62-296.340 (BART), F.A.C.]

13. 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.]

Harvey, Mary

From: Harvey, Mary

Sent: Wednesday, November 21, 2007 10:53 AM

To: 'Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida'; 'Mr. Dave Kellermeyer, Northern Star Generation'; 'Mr. Scott Osbourn, P.E., Golder Associates'; Zhang-Torres; 'Ms. Katy Forney, EPA Region 4'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, NPS'

Cc: Holtom, Jonathan; Adams, Patty; Gibson, Victoria

Subject: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

Attachments: 0170004.017.AC.D_pdf.zip; 0170004-017-AC BART - Appendix.PDF; 0170004-017-AC BART - Cover Letter.PDF; 0170004-017-AC BART - Draft Permit.PDF; 0170004-017-AC BART - PE Certification.PDF; 0170004-017-AC BART - Public Notice.PDF; 0170004-017-AC BART - TEPD.PDF; 0170004-017-AC BART - Written Notice.PDF; Signed Documents - DEP File #0170004-017-AC-DRAFT.pdf

Tracking:

Recipient	Delivery	Read
'Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida'		
'Mr. Dave Kellermeyer, Northern Star Generation'		
'Mr. Scott Osbourn, P.E., Golder Associates'		
Zhang-Torres	Delivered: 11/21/2007 10:53 AM	Read: 11/21/2007 1:37 PM
'Ms. Katy Forney, EPA Region 4'		
'Mr. Jim Little, EPA Region 4'		
'Mr. Dee Morse, NPS'		
Holtom, Jonathan	Delivered: 11/21/2007 10:53 AM	Read: 11/21/2007 11:02 AM
Adams, Patty	Delivered: 11/21/2007 10:53 AM	Read: 11/21/2007 11:35 AM
Gibson, Victoria	Delivered: 11/21/2007 10:53 AM	

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

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

The 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. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Osbourn, Scott [Scott_Osbourn@golder.com]
To: undisclosed-recipients
Sent: Monday, November 26, 2007 9:17 AM
Subject: Read: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

Your message

To: Scott_Osbourn@golder.com
Subject:

was read on 11/26/2007 9:17 AM.

Harvey, Mary

From: Adams, Patty
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 11:35 AM
Subject: Read: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

Your message

To:	'Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida'; 'Mr. Dave Kellermeyer, Northern Star Generation'; 'Mr. Scott Osbourn, P.E., Golder Associates'; Zhang-Torres; 'Ms. Katy Forney, EPA Region 4'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, NPS'
Cc:	Holtom, Jonathan; Adams, Patty; Gibson, Victoria
Subject:	Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant
Sent:	11/21/2007 10:53 AM

was read on 11/21/2007 11:35 AM.

Harvey, Mary

From: Dee_Morse@nps.gov
Sent: Wednesday, November 21, 2007 11:09 AM
To: Harvey, Mary
Subject: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

Return Receipt

Your document:	Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant
was received by:	Dee Morse/DENVER/NPS
at:	11/21/2007 09:09:22 AM

Harvey, Mary

From: Holtom, Jonathan
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 11:02 AM
Subject: Read: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

Your message

To:	'Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida'; 'Mr. Dave Kellermeyer, Northern Star Generation'; 'Mr. Scott Osbourn, P.E., Golder Associates'; Zhang-Torres; 'Ms. Katy Forney, EPA Region 4'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, NPS'
Cc:	Holtom, Jonathan; Adams, Patty; Gibson, Victoria
Subject:	Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant
Sent:	11/21/2007 10:53 AM

was read on 11/21/2007 11:02 AM.

Harvey, Mary

From: Forney.Kathleen@epamail.epa.gov
Sent: Wednesday, November 21, 2007 11:01 AM
To: Harvey, Mary
Subject: Re: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

thanks

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30024

Phone: 404-562-9130
Fax: 404-562-9019

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us>
11/21/2007 10:52 AM

To: "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>, "Zhang-Torres" <Cindy.Zhang-Torres@dep.state.fl.us>, Kathleen Forney/R4/USEPA/US@EPA, James Little/R4/USEPA/US@EPA, "Mr. Dee Morse, NPS" <Dee_Morse@nps.gov>

cc: "Holtom, Jonathan" <Jonathan.Holtom@dep.state.fl.us>, "Adams, Patty" <Patty.Adams@dep.state.fl.us>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>

Subject: Draft Permit No. 0170004-017-AC - Progress Energy Florida, Crystal River Power Plant

Dear Sir/Madam:

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From: Zhang-Torres
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To:	'Mr. Bernie Cumbie, Plant Manager, Progress Energy Florida'; 'Mr. Dave Kellermeyer, Northern Star Generation'; 'Mr. Scott Osbourn, P.E., Golder Associates'; Zhang-Torres; 'Ms. Katy Forney, EPA Region 4'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, NPS'
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