



Larry E. Hatcher
Plant Manager
Crystal River Fossil Plant & Fuel Operations

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APR 01 2010

**BUREAU OF
AIR REGULATION**

March 26, 2010

Mr. Jeff Koerner, P.E.
DEP/DARM, Permitting Section
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Re: Crystal River Power Plant; Permit Number 0170004-023-AC
Revised Air Construction Permit Application

Dear Mr. Koerner:

As you recall, Progress Energy Florida (PEF) submitted an air permit application to the Department, dated September 23, 2009, requesting certain revisions to the above-referenced permit. Based on recent discussions with the Department, this letter serves to transmit a revised application that requests air construction permit revisions to provide for a reasonable period of allowable excess emissions due to malfunctions of the acid mist mitigation (AMM) system [i.e., the sulfuric acid mist (SAM) control system]. The Department will consider additional SAM test data, to be obtained during scheduled testing in early April, in order to more fully evaluate this request. Therefore, supplemental information will be submitted to this application within 4 to 6 weeks of the completion of testing. Finally, PEF understands that the Department will continue to consider the issues and revisions that had been requested in the earlier referenced air application.

Prior to this revision request, the permitting action (Permit No. PSD-FL-383C; Project No. 0170004-023-AC) had requested revisions to the original permit to: authorize limited periods of shutdown of the alkali injection system for scheduled maintenance; clarify SAM control system commissioning and testing requirements; and clarify the deadline for submitting an application to revise the Title V air operation permit after completing the project. PEF understands that, by submittal of this revised or supplemental application filing, the Department's permit processing time clock will essentially be restarted. However, none of the previously requested items are time sensitive, except for the TV application submittal deadline, and the Department has agreed that the submittal is due no later than 180 days after completing the work on *both* Units 4 and 5 and commencing operation.

Specifically, regarding this request, PEF is concerned with the "continuous" compliance obligation in the currently permitted SAM emission limits of 0.009 lb/mmBtu and 64.8 lb/hr (based on stack test results using EPA Methods 8 or 8A). These limits are contained in Condition 8.c. This issue was previously brought to the Department's attention in PEF's application for revisions to Permit No. 017004-016-AC, dated December 11, 2008.

The development of a CAM Plan and reporting requirements to demonstrate continuous compliance are also provided in Conditions 16 and 25.c, respectively. As previously stated, the SAM testing necessary to develop the CAM Plan will be conducted during early April and these results will be available for the Department's consideration on this issue. The concern has to do with the allowable excess emissions provision in Condition 12, which states:

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
CN77
Crystal River, FL 34428

In accordance with Rule 62-210.700(6), F.A.C., excess emissions due to startup, shutdown or malfunction have been considered in establishing the sets of emissions standards of this permit. No other periods of excess emissions are authorized. [Rule 62-210.700(6), F.A.C.]

PEF believes that this statement is appropriate for the standards based on CEMS listed in Condition 9 of the permit. However, for standards based on consistent operation such as the SAM mitigation system, a different consideration may be appropriate. PEF requests the Department confirm that Condition 12 applies specifically to the pollutants addressed in condition 9. PEF will work with the agency to determine appropriate monitoring of system operation related to the SAM mitigation system including necessary maintenance intervals and the potential for resulting periods of excess emissions as a part of the development of the operating protocol required by Condition 16.e and the monitoring requirements of Condition 25.c.

PEF believes that the FDEP had already contemplated this approach. For example, in Condition 10, the permit contains language specific to the SAM mitigation (alkali injection) system, as follows:

Circumvention: *No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. The SCR and FGD systems shall operate as necessary to comply with the emissions standards of this permit. The alkali injection system and ESP shall operate in accordance with the automated controls system as determined by subsequent performance and compliance testing.*

The AMM system design is relatively new to the utility industry, compared to more common pollution control equipment, such as flue gas desulfurization systems. While the AMM systems have been used in the power industry for approximately eight years, during most of that time the equipment has been in seasonal utilization (ozone season), which then allowed for scheduled annual maintenance downtime. During the last two to three years, these systems have been pressed into year-round service as part of increased nitrogen oxide emission regulation in the utility industry. However, the reliability of these systems, the necessary maintenance intervals for year-round service and the impacts on potential periods of excess emissions are still being demonstrated and are not fully developed by the industry.

The individual components provided by Wahlco as part of the AMM System are typical of the equipment provided for power plant pollution control systems, including valves, pumps, instruments, etc. As such, the failure rates for individual components should be comparable to systems which have much longer utility service records. It is important to note that redundancy has been built into many of the systems and most customers, including PEF, have developed contingency plans, including identification of critical spare parts and routine equipment inspections to reduce potential system downtimes. PEF commits to keep critical spare parts on hand and will optimize maintenance practices and maintenance opportunities to keep any out of service time to a minimum.

Wahlco Inc. will supply equipment for the urea to ammonia conversion system associated with the AMM System consisting of the following major components:

1. AMM Urea Solution Day Tank;
2. AMM Hydrolyzer Feed Pump Skid;
3. AMM Hydrolyzer Skids A and B;


4. AMM Hydrolyzer Blowdown Tank;
5. Units 4 and 5 AMM AFCU Skids;
6. Urea Steam Saturator
7. Condensate Cooler Unit Assembly
8. Urea Auxiliary Steam Supply Line

These project components have been specified, designed, engineered and fabricated to provide robust and reliable operation. In addition, most of the equipment on these skids including pumps, blowers, valves and instrumentation, has redundant features built into the design specifically to improve system availability.

Therefore, PEF requests the Department's consideration of permit provisions to adequately address malfunction events and a reasonable period for allowable excess emissions that may result from these occurrences. Once the results of the upcoming SAM emission tests are available, PEF would be pleased to meet with the Department to further discuss the details surrounding this issue. It is understood that, by submittal of this revised or supplemental application filing, the Department's permit processing time clock will essentially be restarted.

PEF appreciates the Department's consideration of this additional information. If you have any questions, please contact Dave Meyer at (727) 820-5295.

Sincerely,



Larry E. Hatcher
Manager, Crystal River Fossil Plant & Fuel Operations

xc: Bill Schroeder, DEP SW District
Scott Osbourn, P.E., Golder Associates

Attachment

Bxc: Scott Osbourn P.E., Golder Associates
Dave Meyer, (ESS Files)
Darrell Okain

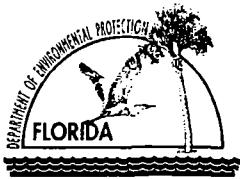
Plant file point: 12512-C-01

CERTIFIED MAIL ARTICLE NO. 7009 0080 0000 8078 8962

Scott Osbourn, P.E.
Golder Associates
5100 West Lemon St. Suite 114
Tampa Fl. 33609

Bill Schroder
FDEP Southwest District
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926

Attachment A



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

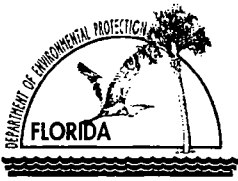
1. Facility Owner/Company Name: Progress Energy Florida, Inc.	
2. Site Name: Crystal River Power Plant	
3. Facility Identification Number: 0170004	
4. Facility Location... Street Address or Other Locator: North of Crystal River, West of U.S.19 15760 West Power Line Street City: Crystal River County: Citrus Zip Code: 34428	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Dave Meyer, Senior Environmental Specialist	
2. Application Contact Mailing Address... Organization/Firm: Progress Energy Florida, Inc. Street Address: 299 First Ave., North, Mail Code PEF 903 City: St. Petersburg State: FL Zip Code: 33701	
3. Application Contact Telephone Numbers... Telephone: (727) 820 - 5295 ext. Fax: (727) 820 - 5229	
4. Application Contact E-mail Address: dave.meyer@pgnmail.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- ☒ Air construction permit.
- ☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- ☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- ☐ Initial Title V air operation permit.
- ☐ Title V air operation permit revision.
- ☐ Title V air operation permit renewal.
- ☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- ☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- ☐ Air construction permit and Title V permit revision, incorporating the proposed project.
- ☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- ☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application serves to request air construction permit revisions to provide for a reasonable period of allowable excess emissions due to malfunctions of the acid mist mitigation (AMM) system [i.e., the sulfuric acid mist (SAM) control system]. The Department will consider additional SAM test data, to be obtained during scheduled testing in early April, in order to more fully evaluate this request. Therefore, supplemental information will be submitted to this application within 4 to 6 weeks of the completion of testing.

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
003	Fossil Fuel Steam Generator (FFSG), Unit 5		
004	Fossil Fuel Steam Generator (FFSG), Unit 4		

Application Processing Fee

Check one: ☐ Attached - Amount: \$ _____ ☒ Not Applicable

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Larry Hatcher, Plant Manager
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Progress Energy Florida Street Address: 299 First Ave., North, Mail Code CN77 City: St. Petersburg State: FL Zip Code: 33701
3. Owner/Authorized Representative Telephone Numbers... Telephone: (352) 563-4484 ext. Fax: (352) 563-4496
4. Owner/Authorized Representative E-mail Address: <u>larry.hatcher@pgnmail.com</u>
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i> <div style="display: flex; justify-content: space-between;"><div>Signature <u><i>Larry E. Hatcher</i></u></div><div>Date <u><i>3/29/10</i></u></div></div>

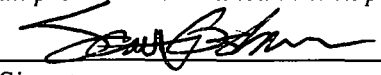
Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: ext. Fax:
5. Application Responsible Official E-mail Address:
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i> _____ Signature _____ Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Scott H. Osbourn, Senior Consultant Registration Number: 57557
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates, Inc. Street Address: 5100 West Lemon Street, Suite 114 City: Tampa State: FL Zip Code: 33609
3. Professional Engineer Telephone Numbers... Telephone: (813) 287-1717 ext. Fax: (813) 287-1716
4. Professional Engineer E-mail Address: sosbourn@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature <u></u> Date <u>3/29/10</u> (seal)

* Attach any exception to certification statement.

