



# Florida Department of Environmental Protection

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2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Rick Scott  
Governor

Jennifer Carroll  
Lt. Governor

Herschel T. Vinyard Jr.  
Secretary

May 18, 2011

*Electronically Sent – Received Receipt Requested*

Mr. Robert Odom, Plant Manager  
Progress Energy Florida  
299 First Avenue North, CN77  
St. Petersburg, FL 33701

Re: Project No. 0170004-031-AC  
Supplements Permit No. 0170004-026-AC  
Crystal River Power Plant, Units 4 and 5  
Collection of Supplemental Sulfuric Acid Mist (SAM) Emissions Data  
Letter of Authorization

Dear Mr. Odom:

The Department acknowledges receipt of the Crystal River Power Plant's request to collect supplemental SAM emissions data from Unit 5. Permit No. 0170004-026-AC (PSD-FL-383D, as amended) requires the installation of the following air pollution control equipment on Units 4 and 5: selective catalytic reduction (SCR) systems to reduce nitrogen oxides (NO<sub>x</sub>); new low-NO<sub>x</sub> burners; new wet flue gas desulfurization (FGD) systems to reduce sulfur dioxide (SO<sub>2</sub>) and other acid gas emissions; a new acid mist mitigation (AMM) system to reduce SAM emissions; and upgraded electrostatic precipitators (ESP) to reduce emissions of particulate matter. To take full advantage of the new wet FGD systems, the project also allowed a higher sulfur coal. As a result, the project was subject to PSD preconstruction review for several pollutants including SAM for which an emissions standard was set that represents Best Available Control Technology (BACT). This permit also requires the plant to collect SAM emissions data under varying operating conditions to establish an operating protocol for injecting ammonia to ensure compliance with the BACT standard for SAM emissions.

A previous test on Unit 4 showed little difference in SAM emissions between ammonia injection on and ammonia injection off. This makes it difficult to establish an effective operating protocol for the ammonia injection rate. The plant believes that residual ammonia may be building up within the system and continues to react for a period after the ammonia injection is stopped. It may take as many as a few days to purge the residual ammonia.

Unit 5 is currently in an outage, which should purge the residual ammonia. The plant proposes to take advantage of the outage by restarting Unit 5 (about May 20<sup>th</sup>) on "low-sulfur" (Alpha) coal, which is approximately 1.5 to 1.6 lb SO<sub>2</sub>/million British thermal units (MMBtu). Unit 5 will continue to fire the Alpha coal for two to three days without any ammonia injection. The preliminary schedule is to conduct SAM emissions tests on May 24<sup>th</sup>. The permit requires the use of Alpha coal if the AMM system is off line for preventative maintenance or to conduct a long-term repair. Use of the Alpha coal will minimize SAM emissions and allow the system to stabilize and further purge any residual ammonia. This will allow the plant to collect the required SAM emissions data when firing the Alpha coal as well as good baseline data for periods when no ammonia is being injected.

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Once the SAM emissions tests are complete, the plant will switch to a higher sulfur coal (approximately 5 lb SO<sub>2</sub>/MMBtu) and continue to operate for a few days without ammonia injection to stabilize the system. Preliminarily, the plant will conduct SAM emissions tests on May 27<sup>th</sup> without ammonia injection and the higher sulfur coal. If feasible, the plant will collect sulfur trioxide (SO<sub>3</sub>) and SAM emissions data in the ductwork (before and/or after the ESP) at the same time to evaluate the SO<sub>3</sub>/SAM profile through the ESP and FGD. If the stack test team remains available, the plant will conduct additional SAM emissions tests to establish a protocol for low ammonia injection rates. Once the testing is completed, the AMM system will be placed back into service at the previously determined operating protocol for ammonia injection while the plant awaits the test results.

This data will also be useful in correlating the “Breen probes” for use during the upcoming alternative sorbent trials. The plant will coordinate these activities with the Department’s Southwest District Office and provide updates as necessary. The Department authorizes these activities to supplement the current permit requirements for conducting SAM performance tests. The Department will consider this action final unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, of the Florida Statutes (F.S.). Mediation under Section 120.573, F.S., will not be available for this proposed action.

A person whose substantial interests are affected by the proposed 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 (received) in the Department’s Office of General Counsel, MS #35, 3900 Commonwealth Boulevard, 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 notice. Petitions filed by any other person must be filed within 14 days of receipt of this proposed action. A petitioner must 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 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 Department’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 how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency’s proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action 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.

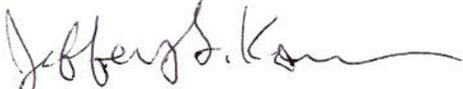
Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department’s final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of 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.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by the filing of a Notice of Appeal, under Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the

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Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within thirty days from the date this notice is filed with the Clerk of the permitting authority.

Executed in Tallahassee, Florida.

  
Trina L. Vielhauer, Deputy Director  
Division of Air Resource Management

TLV/jfk

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this authorization was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on 5/18/11 to the persons listed below.

- Mr. Robert Odom, Progress Energy Florida (robby.odom@pgnmail.com)
- Mr. John Hunter, Progress Energy Florida (john.hunter@pgnmail.com)
- Mr. Scott H. Osbourn, P.E., Golder Associates, Inc. (sosbourn@golder.com)
- Ms. Cindy Zhang-Torres, SWD Office (cindy.zhang-torres@dep.state.fl.us)
- Ms. Cindy Mulkey, DEP Siting Office (cindy.mulkey@dep.state.fl.us)
- Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
- Ms. Heather Abrams, EPA Region 4 (abrams.heather@epa.gov)
- Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 \_\_\_\_\_ (Clerk)      5/18/11 (Date)