Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

May 18, 2006

CERTIFIED MAIL- Return Receipt Requested

Mr. Bernie Cumbie
Plant Manager
Progress Energy
100 Central Ave. CN77
St. Petersburg, FL 33701

Re: Request to Construct SCR systems on Units 4 and 5

Dear Mr. Cumbie,

The Department received your application on April 25, 2006, requesting permission to construct SCR systems on Units 4 and 5. At this time, the application is deemed incomplete. The following information is needed to process your application:

1. Emission Unit Information: The application does not include the emissions unit sections for Units 4 and 5. Provide information for all sections of the emissions unit section.

2. Criteria Pollutants: Provide estimated facility increases (or decreases) emissions for all criteria pollutants.

3. Sulfuric Acid Mist Emissions: The application indicated an increase of SO3 emissions with this installation of the SCR units. Quantify the estimated SO_3 and H_2SO_4 emissions due to the installation the SCR units.

4. Process Flow Diagram: Provide a process flow diagram of the entire system (boiler through stack) identifying the process and control equipment, flue gas fans, fuel inputs, CEMS monitoring points, ammonia injection grid, mixing grid, bypass damper locations (if applicable), and ash removal. Identify the approximate exhaust flows, temperatures, and pressure drop for each major component and for any substantial change in these parameters. Will the existing stacks or CEMS be modified due to this project? What will the pressure drop due to the SCR system even when it is not in operation? What is this in terms of energy loss?

5. Selective Catalytic Reduction (SCR) System: Identify the following SCR design parameters: general catalyst composition (material); catalyst structure (honeycomb, plate, etc.); approximate catalyst volume (ft^3); catalyst operational temperature range (° F); molar ratio of ammonia/NOx; design inlet and outlet NOx emission rates (lb/MMBtu); and design control efficiency. What are the baseline NOx emissions for determining the design control efficiency? Describe the ammonia distribution, flow control, and monitoring systems. What are the general procedures for startup and shutdown of the SCR system? What critical operating parameters and levels must be attained before commencing ammonia injection? Explain how the control system will monitor, adjust, and inject ammonia at a given rate. What are the estimated ammonia injection rates at 50%, 75%, and 100% of the maximum coal-firing rate? What is the target ammonia slip level based on the design criteria NOx reduction? Describe the design and operating techniques used to prevent particulate matter from fouling and masking the catalyst beds. Provide the catalyst vendor's recommendations describing catalyst maintenance procedures and schedule. In response to catalyst deactivation, describe the process of gradually adding catalyst until it is necessary for complete replacement.

6. Bid Specifications: Please provide a copy of the bid specifications for this project.

7. SCR Bypass Duct: Is an SCR bypass duct proposed? Describe the general location and operation of the SCR bypass duct. Under what conditions is it necessary to use the bypass? For each condition, estimate the duration of bypass operation and the number of times per year the bypass is expected to operate under the condition.

Permits applicants are advised that Rule 62-4.055(1), F.A.C. requires applicants to respond to requests for information within 90 days. If you have any questions regarding this request for additional information, please contact Bobby Bull at Robert.Bull@dep.state.fl.us or (850) 921-9585.

Sincerely,

Jeffery F. Koerner
North Permitting Administrator

JFK/rlb

cc: Mara Nasca, DEP-SWD
Dave Meyer, Progress
Scott Osbourn, Golder

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

Mr. Bernie Cumbie, Plant Manager
Progress Energy Florida
Crystal River Units 1&2
100 Central Avenue CN77
St. Petersburg, Florida 33701

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PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

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Mr. Bernie Cumbie, Plant Manager
Progress Energy Florida
Crystal River Units 1&2
100 Central Avenue CN77
St. Petersburg, Florida 33701

PS Form 3800, May 2000 See Reverse for Instructions

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