

## Department of Environmental Protection

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

Colleen M. Castille Secretary

November 17, 2005

## **CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Mr. Mark J. Hornick, General Manager Tampa Electric Company P.O. Box 111 Tampa, Florida 33604-5927

Re: Request for Additional Information

Project No. 1050233-018- AC, PSD-FL-363
Request for 2 New Simple-Cycle Combustion Turbines at Polk Power Station

## Dear Mr. Hornick:

On October 18, 2005, the Department received your application for a PSD permit to construct two new simple cycle combustion turbines at the Polk Power Station. The application is deemed to be incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

- 1. The proposed carbon monoxide (CO) emissions limits of 9.0 ppm on gas and 20.0 ppm on oil are higher than currently issued BACT determinations of 4.1 ppm on gas and 8.0 ppm on oil for similar units. It is the Department's intention to continue to issue all new BACT determinations with emissions limits at least as stringent as those being currently and routinely demonstrated by similar existing sources. Please provide a copy of the manufacturer's guaranteed CO emissions rates for these units and any comments you may have regarding why these units should not be held to currently achievable CO emissions rates.
- 2. The proposed nitrogen oxide (NO<sub>X</sub>) emissions limit of 10.5 ppm on gas is higher than currently issued BACT determinations of 9.0 ppm for similar units. Please provide a copy of the manufacturer's guaranteed NO<sub>X</sub> emissions rate for these units while firing gas. Also include the manufacturer's guarantee for firing oil and any comments you may have regarding why these units should not be held to currently achievable NO<sub>X</sub> emissions rates.
- 3. Please provide an anticipated schedule for operation of these simple cycle units. Include the projected number of start ups and shut downs for a given year and quantify the emissions for each start up and each shut down. Are multiple start ups and shut down cycles anticipated during any single day? Does the plant currently have a gas contract that will provide sufficient gas for these units to operate for the 4,380 hours of operation that have been requested? Considering the gas contract, how often is it anticipated that fuel switching will be required?
- 4. The application contains a statement that the nameplate generation capacity for these units is 175.8 MW. However, the requested allowable capacity is 165 MW. Please explain the reason for this difference.
- 5. It is our understanding that these units may have been previously permitted, but never operated. Please provide information on the age and origin of these units, including information regarding the original permittee.

"More Protection, Less Process"

- 6. Please provide a more detailed plot plan. The Department is requesting both an electronic version (preferably a .dwg file or file compatible with AutoCAD2006) and an updated paper plan (preferably 2 x 3 feet). Please grid the plot plan in UTM coordinates and highlight the buildings, structures and stacks.
- 7. Since the previous permit application for TECO Polk Power Station (Combustion Turbines 2 and 3) was processed, the standard for the fence line receptor grid has become more refined within the Department, with at least 100 meter spacing along the boundary required. Please update the Class II modeling to reflect the 100 meter spacing requirement.
- 8. In Section 10.10, page 10-6, the modeled emissions sources for the Class I impact modeling were based on Case 4 instead of Cases 1, 2 or 9, which were the worst cases in the Class II modeling. Please explain.
- 9. On page 10-1 and Table 10-8, the maximum change in light extinction coefficient (B<sub>ext</sub>) at the Chassahowitzka NWR is stated to be 9.33 percent. However, on page 10-8, the maximum change is stated to be 11.01 percent. Please explain this discrepancy.
- 10. Please explain why three different 1996 CALPUFF modeling runs were performed (January, February to July, and August to December).
- 11. Please discuss strategies for reducing SO<sub>2</sub>, NO<sub>X</sub> and PM<sub>10</sub> emissions sufficiently to lower the predicted B<sub>ext</sub> in the Chassahowitzka NWR to less than 5.0 percent.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department construction permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9531.

Jonathan Helton

Jonathan Holtom, P.E. North Permitting Section

/jh

EC: Raisa Calderon, TECO (<u>realderon@tecoenergy.com</u>)

Byron Burrows, P.E., TECO (<u>btburrows@tecoenergy.com</u>)

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	A. Signature  X
Facility ID #: 1050233 Mr. Mark J. Hornick, General Manager Tampa Electric Company	D. Is delivery address different from flam 1?  Yes  If YES, enter delivery address below:  No
P.O. Box 111 Tampa, Florida 33 <del>604-5927.</del>	3. Service Type  Certified Mail  Registered Receipt for Merchandis  Insured Mail  C.O.D.  4. Restricted Delivery? (Extra Fee)  Yes
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	Mr. Mark J. Hornick, General Manager  Tampa Electric Company or PO. P.O. Box 111  City. S Tampa, Florida 33604-5927				
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	PS Form 3500, June 200	2	See Reverse.for In	structions.	