

## Department of Environmental Protection

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

Colleen M. Castille Secretary

June 30, 2005

## CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Karen Sheffield, General Manager Big Bend Station Tampa Electric Company Post Office Box 111 Tampa, Florida 33601-0111

Re: Big Bend Unit 3

DEP File No. 0570039-022-AC

Selective Catalytic Reduction (SCR) System

Dear Ms. Sheffield:

We have begun the review of your air construction permit application received on June 6, 2005. However, we must deem your application *incomplete*, because we need further information relative to the following items:

- You are requesting a permit condition authorizing the cessation of the ammonia injection during periods of low load and exhaust temperature. Please provide documentation from the SCR catalyst manufacturer recommending this operating practice.
- Please provide a status report concerning EPA's responses to the items in Mr. Gregory Nelson's letter of June 24, 2005, on the SCR project, specifically:
  - $\circ$  Approval of the emissions limit of 0.15 lb/mmBtu for NO<sub>x</sub> for the Unit.
  - o Assessment of the request for cessation of the ammonia injection during periods of low load and exhaust temperature (SCR bypass).
- We note that one difference between the Big Bend 3 and Big Bend 4 projects is the addition of a "partial SCR maintenance bypass" duct as indicated in the Flow Diagram. Although logical for maintenance needs, perhaps a condition identifying the need to ensure closure of this duct when not in a maintenance period should be added. Please comment on this item.

When we receive this information, we will continue processing your application. If you have any questions, please contact Tom Cascio at 850-921-9526.

Rule 62-4.050(3), F.A.C., requires that all applications for a Department 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. Permit applicants are advised that Rule 62-4.055(1), F.A.C., requires applicants to respond to requests for information within 90 days, unless the applicant has requested in writing, and has been granted, additional time within 90 days.

"More Protection, Less Process"

Ms. Karen Sheffield, General Manager Big Bend Station Page 2 of 2

Sincerely

A. A. Linero, P.E. Program Administrator Permitting South Section

Cc: Thomas Davis, P.E.
Shelly Castro, TEC
Alice Harman, EPCHC
Jason Waters, FDEP-SWD
David Lloyd, EPA Region 4

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  Agent  Addresse  B. Received by (Printed Name)  C. Date of Delive  D. Is delivery address different and the printed Name of Section 1.		
<ul> <li>1. Article Addressed to:</li> <li>Ms. Karen Sheffield, General Manager</li> <li>Big Bend Station</li> <li>Tampa Electric Company</li> <li>Post Office box 111</li> </ul>	If YES, enter deliver address below: No		
Тамра, Florida 33601—0111	3. Service Type  XM Certified Mail  Registered Return Receipt for Merchandise  C.O.D.		
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PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540			

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	PS Form 3800, May 20	000	See Reverse for Instructions	



## RECEIVED

JUN 06 2005

June 3, 2005

BUREAU OF AIR REGULATION

Mr. Tom Cascio,
Florida Department of
Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

Via FedEx Airbill No. 7922 9890 5641

Re: Tampa Electric Company
Big Bend Station
Consent Decree
Civil Action No. 99-2524 CIV-T-23F
Air Construction Permit Application for
Unit 3 Selective Catalytic Reduction (SCR) Project

Dear Mr. Cascio,

Tampa Electric Company (TEC) requests an air construction permit to install a selective catalytic reduction (SCR) system for nitrogen oxides (NO<sub>x</sub>) control on its Big Bend Station Unit 3 coal-fired boiler. TEC entered into the agreements with the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) concerning the installation of additional air pollution control systems at Big Bend Station. These agreements (EPA Consent Decree and FDEP Consent Final Judgment) included requirements to install additional air pollution control systems for NO<sub>x</sub> control on Unit 3. In response to these requirements, TEC determined that the installation of low NO<sub>x</sub> burners (LNB) and an SCR system are the technologies to be utilized to reduce the NO<sub>x</sub> emissions on Big Bend Unit 3 to satisfy the requirements of the agreements.

Additionally, TEC reviewed the impacts with the operation of the SCR, associated combustion controls and associated systems (sulfur trioxide control) to determine the affects on the coal combustion byproducts and found that the fly ash would have limited marketability due to high ammonia content and carbon content. Therefore, a large portion of the fly ash could potentially need to be disposed of in a landfill. TEC researched this issue and found that several other companies mitigate the SCR impacts on fly ash by using carbon burnout (CBO) technology to reduce the carbon content. TEC has evaluated this technology and determined it to be feasible at Big Bend Station. A separate air construction permit for the CBO technology will be submitted.

As stated in a letter sent to the FDEP dated April 4, 2003 and as mentioned in the meeting between TEC and FDEP on May 31, 2005, TEC reviewed the effects of installing the future NO<sub>x</sub>

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Mr. Tom Cascio June 3, 2005 Page 2 of 2

control and SO<sub>3</sub> control systems and determined that there is a potential for increase in particulate matter (PM) and opacity. Therefore, a request for higher permit limits may be submitted in the future.

Please find the enclosed air construction permit application for Big Bend Station's Unit 3 SCR.

TEC appreciates the cooperation of the Department in this matter. If you have any questions or comments, please contact Shelly Castro or me at (813) 228-4408.

Sincerely,

Byron T. Burrows

Manager - Air Programs

Environmental, Health & Safety

EHS/rlk/SSC222

## Enclosure

c/enc: Ms. Alice Harman, EPCHC

Mr. Jerry Kissel, FDEP SW

Mr. David Lloyd, EPA

Mr. Scott Sheplak, FDEP

Ms. Trina Vielhauer, FDEP

Mr. Sterlin Woodard, EPCHC