



TAMPA ELECTRIC

September 30, 2002

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BUREAU OF AIR REGULATION

Ms. Cindy Phillips  
Florida Department of Environmental Protection  
111 South Magnolia Drive, Suite 4  
Tallahassee, FL 32301

Via FedEx  
Airbill No. 7912 0813 1105

**Re: Tampa Electric Company  
Stack Emission Tests  
Big Bend Station, Unit 2-4  
Permit No. 0570039-012-AC  
AIRS #0570039, ID #002-#004**

Dear Ms. Phillips:

Through this correspondence, Tampa Electric Company (TEC) requests that the expiration date of Permit No. 0570039-012-AC be extended to January 31, 2003 to allow continued use of coal residual at Big Bend Station prior to issuance of a revised Title V operation permit.

### Background

Permit No. 0570039-012-AC required TEC to develop and submit for the Florida Department of Environmental Protection's (the Department) approval a testing protocol for evaluating the effect of firing coal residual fuel at Big Bend. TEC submitted its proposed initial NO<sub>x</sub> and CO compliance testing protocol on December 13, 2001. Section 4 of the protocol outlined a testing schedule that would begin January 2002 and be completed by October 2002. The purpose of the performance testing was to determine if firing coal residual at Big Bend would have any effect on NO<sub>x</sub> and CO emissions from Units 1 through 4.

In June, 2002 TEC submitted a Title V operation permit revision application to the Department reflecting changes to operations at Big Bend Station. The Title V permit revision application addressed the use of coal residual fuel in Units 1 through 4.

In response to TEC's Title V operation permit revision application, in August 2002 the Department requested additional information on NO<sub>x</sub> and CO stack test data to assess the effects of coal residual fuel. The requested NO<sub>x</sub> and CO stack test data are enclosed.

### Test Results

According to Section III, Specific Condition 4, TEC is required to perform stack testing to evaluate NO<sub>x</sub> and CO emissions due to the combustion of coal residual. Enclosed, please find emissions reports for stack tests performed on June 19 and 25, 2002 for Unit 2 (EU.ID. #002), on May 24, August 16 and 17, 2002 for Unit 3 (EU.ID. #003), and on January 10 and March 22, 2002 for Unit 4 (EU.ID. #004).

TAMPA ELECTRIC COMPANY  
P. O. BOX 111 TAMPA, FL 33601-0111

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HTTP://WWW.TAMPAELECTRIC.COM

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HILLSBOROUGH COUNTY (813) 223-0800  
OUTSIDE HILLSBOROUGH COUNTY 1 (888) 223-0800

As stated in the Summary of Results for EU.ID. #002, the average NO<sub>x</sub> rate was derived from the Continuous Emissions Monitoring Systems (CEMS) and the average CO rate was derived from using United States Environmental Protection Agency (USEPA) Test Methods 10 and 19. Table 1 below summarizes the NO<sub>x</sub> and CO emission rates for baseline fuels, coal residual fuel blend tests, and the change in emission rates:

**TABLE 1 – BIG BEND UNIT 2**

Parameter	June 19, 2002 (Baseline)	June 25, 2002 (Coal Residual)	Difference
CO, tons/yr	7,204	8,912	1,709
NO <sub>x</sub> , tons/yr	11,321	11,749	428

*ΔCO 7100  
 ΔNO<sub>x</sub> 740  
 24% INCREASE  
 4% INCREASE*

As stated in the Summary of Results for EU.ID. #003, the average NO<sub>x</sub> rate was derived from the CEMS and the average CO rate was derived from using USEPA Test Methods 10 and 19. Table 2 below summarizes the NO<sub>x</sub> and CO rates for the baseline and the coal residual tests:

**TABLE 2 – BIG BEND UNIT 3**

Parameter	May 24, 2002 (Baseline)	August 16&17, 2002 (Coal Residual)	Difference
CO, tons/yr	1,532	9,142	7,610
NO <sub>x</sub> , tons/yr	12,454	11,868	-586

*400% INCREASE  
 5% DECREASE*

As stated in the Summary of Results for EU.ID. #004, the average NO<sub>x</sub> rate was derived from the CEMS and the average CO rate was derived from using USEPA Test Methods 10 and 19. Table 3 below summarizes the NO<sub>x</sub> and CO rates for the baseline and the coal residual tests:

**TABLE 3 – BIG BEND UNIT 4**

Parameter	January 10, 2002 (Baseline)	March 22, 2002 (Coal Residual)	Difference
CO, tons/yr	394	1,162	767
NO <sub>x</sub> , tons/yr	6,413	6,277	-136

*200% INCREASE  
 2% DECREASE*

**Discussion**

The purpose of performing comparison testing is to isolate the impact of the change in question. In this case, TEC was attempting to isolate the impacts of blending up to 5 percent coal residual with a coal/petcoke blend. Elevated levels of carbon monoxide (CO) emissions were observed in Units 2-4 and an elevated level of NO<sub>x</sub> emissions was observed in Unit 2.

TEC strongly believes that these elevated levels are not representative of the emissions impacts of coal residual. TEC is currently in the process of investigating these results by reviewing the operational, testing and fuel data for all periods during which tests were performed. TEC believes that the results of the baseline and

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blend tests are not associated with the introduction of coal residual, but rather related to operational inconsistencies between the tests. The relatively minor amount of coal residual in the test fuel blend (up to 5 percent) would not be expected to have caused the changes in NO<sub>x</sub> or CO emission rates. TEC believes that retesting of the Big Bend units will confirm these assumptions and provide the Department with sufficient information to make a determination.

Upon discovering these unanticipated levels of CO and NO<sub>x</sub> emissions, TEC immediately ceased burning coal residual at Big Bend Station. In order to further evaluate the coal residual emissions impact, TEC requests that the expiration date of Permit No. 0570039-012-AC be extended to June 30, 2003 to allow continued use of coal residual at Big Bend Station prior to issuance of a revised Title V operation permit. However, TEC would like begin retesting immediately to determine the true impacts of the coal residual. Please contact us as soon as possible with the approval to begin the retest.

TEC appreciates the cooperation and consideration of the Department in this matter. If you have any questions, please contact Ms. Dru Latchman or me at (813) 641-5034.

Sincerely,



Laura R. Crouch  
Manager - Air Programs  
Environmental Affairs

EA/bmr/DNL130

Enclosure

cc: Mr. Jerry Kissel, FDEP-SW  
Mr. Sterlin Woodard, EPCHC

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# DOCUMENT TRANSMITTAL SHEET

ENVIRONMENTAL AFFAIRS

813/641-5034

813/641-5081 FAX

**TO:** Cindy Phillips, FDEP

**FROM:** Dru Latchman, TEC

**DATE:** Monday, September 30, 2002

**COMMENTS:**

Cindy,

Enclosed is Tampa Electric Company's request for a permit extension. The signed letter with the request and the stack test report will be fedex today. Please call me at the number listed above with any questions.

Thank you,  
Dru Latchman

**TAMPA ELECTRIC**

September 30, 2002

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Florida Department of Environmental Protection  
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Laura R. Crouch  
Manager - Air Programs  
Environmental Affairs

EA/bmr/DNL130

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