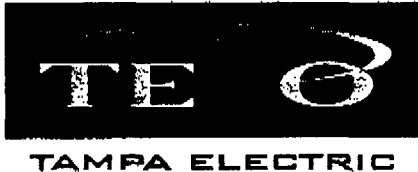


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ENV. PROT. COMM.
OF H.C.

November 13, 2001

Mr. Richard Tschantz, Esquire
General Counsel
Environmental Protection Commission
of Hillsborough County
1900 Ninth Avenue
Tampa, Florida 33605

Via FedEx
Airbill No. 7917 0330 5149

Re: Tampa Electric Company (TEC)
Big Bend Station Unit 3 - Corrective Action Plan
EPC Case #: 00-1223CCG0039

Dear Mr. Tschantz:

As you are aware, in December 2000, Big Bend Unit 3 exceeded its 30-day rolling average NO_x emissions limit as defined by Specific Condition Number A.10 of Title V Permit Number 0570039-002-AV. The plant took immediate corrective action to reduce the NO_x emissions. In addition, Tampa Electric Company (TEC) telephoned the agency on December 29, 2000 to notify them of this occurrence. On January 5, 2001, a follow-up letter was sent to the agency. TEC received a warning notice on January 26, 2001 from the Environmental Protection Commission (EPC) requesting a response to this emissions violation. TEC sent a response letter on February 5, 2001, summarizing the incident. TEC received a Notice of Intent to Initiate Enforcement on May 9, 2001 from EPC. On October 15, 2001, TEC entered into Consent Order, EPC Case # 00-1223CCG0039 in which a \$16,875.00 fine was paid and a commitment was made to develop and submit a Corrective Action Plan (CAP).

Enclosed is the CAP, which describes the implementation of current and future actions that have been or will be implemented to reduce NO_x emissions from Big Bend Unit 3. TEC understands that submittal of this document satisfies paragraph 5 of Consent Order, EPC Case # 00-1223CCG0039.

If you have any questions or need further clarification, please feel free to contact Shelly Castro or me at (813) 641-5833.

Sincerely,

Laura Crouch
Manager-Air Programs
Environmental Affairs

Enclosure

EA/bmr/SSC104

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Tampa Electric Company



Big Bend Station Unit 3
Corrective Action Plan
EPC Case No. 00-1223CCG0039

November 12, 2001

Tampa Electric Company
Big Bend Station Unit 3 – Corrective Action Plan
EPC Case No. 00-1223CCG0039



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Tampa Electric Company
Big Bend Station Unit 3 – Corrective Action Plan
EPC Case No. 00-1223CCG0039



1.0 Summary

From December 23, 2000 through December 31, 2000, Tampa Electric Company's (TEC's) Big Bend Station Unit 3 exceeded its 30-day rolling average (Nitrogen Oxides) NO_x emission limit of 0.70 pounds per million BTU (lb/MMBtu), as described in Specific Condition No. A10 of Title V permit number 0570039-002-AV. TEC notified the Environmental Protection Commission of Hillsborough County (EPC) on December 29, 2000 of this occurrence. A follow-up letter was sent to the EPC on January 5, 2001, describing the event. On January 26, 2001, TEC received a warning notice from EPC, which requested a more detailed description of the events that caused the emissions violation. TEC responded with a letter dated February 5, 2001, that summarized the incident. On May 9, 2001, TEC received a Notice of Intent to Initiate Enforcement from EPC and on October 15, 2001 TEC executed Consent Order, EPC Case No. 00-1223CCG0039 with the EPC. Pursuant to the requirements set forth in the Consent Order, TEC agreed to pay a fine in the amount of \$16,875.00 and submit a Corrective Action Plan (CAP) for the aforementioned NO_x exceedance. TEC understands that with the submittal of this document, the Consent Order condition requiring the development and submittal of a CAP will be satisfied.

Tampa Electric Company
Big Bend Station Unit 3 - Corrective Action Plan
EPC Case No. 00-1223CCG0039



2.0 Introduction

Big Bend Unit 3 is a fossil fuel fired steam boiler generating unit rated at 4,115 MMBtu/hour with an electrical generating capacity of 445 MW. It is a "wet" bottom utility boiler manufactured by Riley Stoker Corporation. This unit may be fired on coal, a coal/residual fuel blend containing a maximum of 5.0% residual fuel by weight, a coal/petroleum coke blend consisting of a maximum of 20.0% petroleum coke by weight, or a coal/residual fuel/petcoke blend containing a maximum of 5.0% residual fuel and a maximum of 20.0% petcoke, by weight. Operation of this unit may include diverting all of the flue gas into the existing Big Bend Unit No. 4 flue gas desulfurization (FGD) system for sulfur dioxide emissions control. Sulfur dioxide emissions that are generated and not diverted through the Unit No. 4 FGD system are uncontrolled. However, Consent Decree number 99-2524 CIV-T-23F limits this method of operation to no more than 30 days per year. Particulate matter emissions generated during the operation of the unit are controlled by a dry electrostatic precipitator (ESP) manufactured by Research-Cottrell, Inc.

The facility is currently permitted under the Title V program administered by the Florida Department of Environmental Protection (FDEP), Permit No. 0570037-002-AV. Specific Condition No. A.10 of the current Title V Permit limits the NO_x emissions to 0.70 lb/MMBtu heat input based on a 30 day rolling average.

Paragraph 5 of Consent Order, EPC Case No. 00-1223CCG0039 executed on October 15, 2001 between EPC and TEC requires TEC to develop, implement, and submit a CAP to prevent future NO_x emissions exceedances from Big Bend Unit 3. Pursuant to the requirements and intent of the Consent Order, TEC has developed a CAP, which is discussed in the following section.

Tampa Electric Company
Big Bend Station Unit 3 – Corrective Action Plan
EPC Case No. 00-1223CCG0039



3.0 Corrective Action Plan

Development of this CAP was initiated immediately after the Big Bend Unit 3 NO_x exceedance was discovered, and initial corrective actions were implemented. Big Bend also developed long-term solutions and continues to evaluate additional measures to ensure compliance with the NO_x limitations. Below is a description of each implemented action to support immediate and continued reduction of NO_x emissions.

3.1. Procedure Review & Update

Procedure Review – Immediately following the event, TEC provided refresher training regarding procedures for all operators to ensure they understand their environmental role within TEC. In addition, Big Bend Station personnel were clearly assigned responsibility to track and monitor NO_x levels.

Control Room Display and Placard Installation – At the time of the event, the NO_x emission rate was already displayed on the screen in the control room. However, to heighten awareness, a warning placard was installed in the control room. This display is now monitored 24 hours a day by the control room operators. Additionally, an alarm has been installed in the control room to alert the operators when the instantaneous NO_x emission levels reach 0.7 lb/MMBtu. This provides the operations personnel time to adjust operating parameters to lower NO_x before reaching a 30-day average exceedance.

3.2. Emission Data Analysis

Daily Summary – Prior to this event, TEC had established a report, which calculates the average NO_x emission rate on a daily basis. This data is obtained directly from the Continuous Emissions Monitoring system (CEMs). TEC also created a spreadsheet which tracks these daily averages and provides a weighted 30-day rolling average NO_x emission limit. Since this event, the plant has assigned specific personnel and back-ups to maintain and check this information.

Trending – To avoid future events, an interactive spreadsheet program was developed and implemented to calculate the average NO_x emission rate on a monthly basis, using actual and forecast data inputs. This interactive program can be used to trend and predict NO_x emission levels resulting from continued operations of the unit. Based on event warning criteria and the daily summaries, when the unit reaches or approaches an instantaneous NO_x emission level of 0.7 lb/MMBtu operational adjustments can be made to maintain compliance. This program can also be used to predict what impact forecast load profiles can have on the 30-day rolling average NO_x emission limit and allow adjustments to be made in advance to ensure compliance.

Tampa Electric Company
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3.3. Operational Enhancements

Slag Removal – As a corrective action to this event, TEC has implemented more selective and frequent slag removal to reduce NO_x emissions formation from the unit. NO_x formation and the boiler thermal performance are directly effected by the operation of a unit's sootblowers. During normal operations, excessive slag can build up in the radiant section of the boiler and reduce the heat flux in that area. This results in higher peak flame temperatures, which is directly related to the amount of thermal NO_x generated. The current control philosophy uses sequential based schemes whose frequency is dictated by the control room operator. Careful and selective sootblowing of the furnace optimizes heat transfer to the various sections to achieve maximum boiler efficiency. This produces lower peak flame temperatures, which results in reduced NO_x formation.

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4.0 Conclusion

TEC has taken great strides to prevent NO_x emissions exceedances for Big Bend Station's Unit 3 and has been extremely successful thus far. Through the immediate corrective actions taken by plant personnel, NO_x emissions from Unit 3 were returned to below permitted levels in a short period of time after the exceedance was discovered. In addition, Unit 3 has continued to operate in compliance with permitted NO_x emissions since the original exceedance.

TEC is evaluating further NO_x reductions from Big Bend Unit 3 through the implementation of the Early NO_x Reduction Program as required by the Consent Decree entered into between the United States of America and TEC on October 4, 2000. Specifically, paragraph 35 of the document requires that TEC spend up to \$3 million with the goal of reducing NO_x emissions from Units 1 and 2 by 30% below 1998 levels and from Unit 3 by 15% below 1998 levels. TEC and U.S. Environmental Protection Agency (EPA) agree that in 1998, the NO_x emission rate from Unit 3 was 0.57 lb/MMBtu. Thus far, TEC has installed low NO_x burners on Unit 1, a neural network on Unit 2, and is evaluating options for Unit 3. No later than January 1, 2002, TEC will submit a report to EPA detailing its plans for achieving early NO_x reductions from Unit 3. No later than December 31, 2002, the Unit 3 NO_x reduction strategy identified in the above report should be implemented.