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SEP 10 2003

BUREAU OF AIR REGULATION

September 3, 2003

Mr. Michael G. Cooke
Division of Air Resource Management
Florida Department of Environmental Protection
111 South Magnolia, Suite 4
Tallahassee, FL 32301

Via FedEx
Airbill No. 7903 9767 2140

**Re: Tampa Electric Company (TEC)
Big Bend Station
Air Construction Permit for Settlement Projects
Permit No. 0570039-010-AV**

Dear Mr. Cooke:

Tampa Electric Company (TEC) is submitting this letter in response to the Florida Department of Environmental Protection's (Department) letter dated July 30, 2003 concerning the NO_x emission reduction projects that are planned for Big Bend Station as mandated in the Consent Decree.

TEC agrees with the Department on waiving air construction permit requirements for sulfur dioxide (SO₂) controls, particulate matter (PM) controls, and nitrogen oxides (NO_x) controls such as refinements to the coal and air flow monitoring system and regulation of sootblowing through the use of neural network controls.

As stated in our conversations with the Department's engineer, Greg DeAngelo, TEC is in the process of analyzing whether or not to continue firing coal, repower or shutdown. Should Big Bend Station remain a coal burning facility, TEC has agreed to submit a non-PSD air construction permit application for the addition of an SCR to allow the Department to review the project details. In addition, the Department had indicated that the non-PSD air construction permitting process will not lead to new emission limitations, permit conditions or delay any deadlines stipulated in the Consent Decree. The same holds true for submittals of non-PSD air construction permit applications for the low NO_x burners (LNB) and the separated over fired air (SOFA) NO_x control projects.

In addition, TEC appreciates your suggestion to pursue permitting of the PM continuous emission monitoring systems (PM CEMS) to help document location and the fact that the results will not be used for compliance determinations. Typically, TEC does not separately permit these types of systems. In this case, TEC believes the purpose for the installation is adequately documented and clear in the Consent Decree. Paragraph 32.E of the Consent Decree states that "data from, the PM CEM shall be used by Tampa Electric, at a minimum, to monitor progress in reducing PM emissions." In addition, Paragraph 32.F of the Consent Decree states that TEC is to

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Mr. Michael G. Cooke
September 3, 2003
Page 2 of 2

demonstrate the PM CEMS for at least two years and determine if the equipment is infeasible. If both EPA and TEC agree that the equipment is infeasible, then an alternate PM monitoring plan will be submitted. Furthermore, Conditions A.14 and B.27 of the Title V Air Operating Permit identify EPA Methods 17, 5, 5B, or 5F as the methods of compliance for PM. Therefore, TEC does not believe there is a need for additional permitting at this time.

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) 641-5033.

Sincerely,



Laura R. Crouch
Manager- Air Programs
Environmental Affairs

EA/bmr/SSC168

c: Ms. Trina Vielhauer- FDEP
Mr. Al Linero - FDEP
Mr. Greg DeAngelo - FDEP
Ms. Patricia Comer - FDEP Attorney
Mr. Scott Sheplak - FDEP
Mr. David Lloyd - EPA Region 4
Mr. Jerry Kissel - FDEP SWD
Mr. Jerry Campbell - EPCHC



TAMPA ELECTRIC

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SEP 22 2003

BUREAU OF AIR REGULATION

September 19, 2003

Ms. Trina Vielhauer
Chief Bureau of Air Regulation
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7916 7645 1040

Re: Tampa Electric Company
Big Bend Station
Permit No. 0570039-010-AV
PM CEM Higher Grain Loading Test Protocol

Dear Ms. Vielhauer:

Tampa Electric Company (TEC) is requesting authorization to conduct Particulate Matter (PM) testing at elevated grain loadings in order to evaluate the performance of the Particulate Matter Continuous Emissions Monitoring (PM CEM) at Big Bend Station in the first quarter of 2004. Pursuant to Paragraph 32.F of the Consent Decree, TEC is to determine if the PM CEM is feasible. Specifically Paragraph 32.F of the Consent Decree states:

"Continuous operation" of the PM CEM shall mean operation at all times that Unit 4 operates, except for periods of malfunction of the PM CEM or routine maintenance performed on the PM CEM. If after Tampa Electric operates this PM CEM for at least two years, and if the parties then agree that it is infeasible to sustain continuous operation of the PM CEM, Tampa Electric shall submit an alternative PM monitoring plan for review and approval by EPA. The plan shall include an explanation of the basis for stopping operation of the PM CEM and a proposal for an alternative monitoring protocol. Until EPA approves such plan, Tampa Electric shall continue to operate the PM CEM."

In order to meet this requirement, TEC is planning a series of particulate emission tests, at a higher grain loading than previously tested, to evaluate the performance of the PM CEM. Simply stated, this evaluation will require TEC to reduce the collection efficiency of the electrostatic precipitator (ESP) on Big Bend Station Unit 3 (Unit 3) and bypass the Unit 3 flue gas around the flue gas desulfurization (FGD) system that services Unit 3 and Big Bend Station Unit 4 (Unit 4). During this test period, Unit 4 will be totally scrubbed and Unit 3 will be burning the unscrubbed compliance fuel with a sulfur content of no greater than 2.2 lb/mmmbtu. Because Unit 3 and Unit 4 gases are combined, the effect of bypassing will significantly lower the indicated removal efficiencies of both Unit 3 and Unit 4.

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TEC is sensitive to both the Consent Decree requirements and the Title V Permit requirements. The unscrubbed days and Unit 3's and Unit 4's removal efficiencies will be in jeopardy since Unit 3's flue gas will bypass the FGD system. TEC requests that during this test period, removal efficiencies not be included in the thirty (30) day average removal efficiency calculations, and that this testing will not result in TEC utilizing additional Unit 3 unscrubbed days to perform this test. Therefore, TEC is requesting a temporary variance with regard to the affected conditions of the Consent Decree and Title V Permit which may be directly attributed to this testing. Authorization of these tests is consistent with the Department's power and duty under Section 403.061(18), Florida Statutes, to "encourage and conduct studies, investigations, and research relating to pollution and its causes, effects, prevention, abatement, and control."

The specific equipment to be tested is the PM CEM, which will be compared to the PM data collected using EPA Method 5B. TEC will measure and record all other parameters required under Title V and the Consent Decree.

Provided in Attachment A is an authorization statement by Karen A. Sheffield, the Responsible Official outlining her approval of this temporary variance request. Provided in Attachment B is a statement by a professional engineer regarding the certification of the test protocol and schedule. Attachment C contains the PM CEM Higher Grain Loading Test Protocol.

Please note that we recently spoke with the staff at the EPA, DEP, and EPCHC to outline this request and TEC's proposed PM CEM test schedule. Mr. Gregory DeAngelo is being copied on this correspondence. If you have any questions or need further information regarding the test procedures for Big Bend Station, please feel free to contact Ms. Greer Briggs or me at (813) 641-5034.

Sincerely,



Laura Crouch
Manager, Air Programs
Environmental Affairs

EA/bmr/GMB106

Enclosure

Attachment A

**CERTIFICATION BY RESPONSIBLE OFFICIAL
BIG BEND STATION UNITS 3 & 4 PARTICULATE MATTER
CONTINUOUS EMISSIONS MONITOR TEST TEMPORARY
VARIANCE REQUEST**

“I, the undersigned, am the responsible official, as defined in Chapter 62-210.200, F.A.C., for the Big Bend Station for which this temporary variance is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this request are true, accurate and complete.”

Responsible Official Signature:

Karen A. Sheffield
Karen A. Sheffield
General Manager of Big Bend Station

9/19/03
Date:

ATTACHMENT B

TAMPA ELECTRIC COMPANY
BIG BEND STATION
UNITS 3 & 4 PARTICULATE MATTER
CONTINUOUS EMISSIONS MONITOR
TEST PROTOCOL AND SCHEDULE

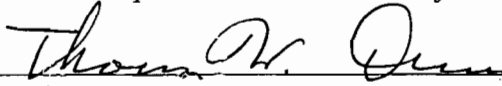
Professional Engineer Certification

Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, the information provided in this submittal concerning particulate matter continuous emissions monitoring system (PM CEMS) higher grain loading tests at the Tampa Electric Company (TEC) Big Bend Station is true, accurate, and complete based on my review of material provided by TEC engineering and environmental staff; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this submittal are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of air pollutants not regulated for an emissions unit, based solely upon the materials, information and calculations provided with this certification.



Signature

9/16/03

Date

(seal)

* Certification is applicable to the Tampa Electric Company (TEC) request to conduct PM CEMS higher grain loading tests at its Big Bend Station.

Attachment C

Tampa Electric Company



Big Bend Station Units 3 & 4 PM CEM Higher Grain Loading Test Plan

September 19, 2003

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1.0 INTRODUCTION

Tampa Electric Company's Big Bend Station (ORIS Code No. 00645) has requested the authorization to conduct Particulate Matter Continuous Emissions Monitoring (PM CEM) testing in two of its steam generator units (Units 3 and 4). Particulate matter is produced as a by-product of combustion in coal-fired boilers. This request was forwarded to the Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (Department) and is consistent with the Department's power and duty under Section 403.061(18), Florida Statutes, to "[e]ncourage and conduct studies, investigations, and research relating to pollution and its causes, effects, prevention, abatement, and control.

The purpose of this performance testing is to determine the dynamic linearity of the PM CEM equipment and its accuracy at higher grain loading in the range of 0.01 to 0.03 lb/mmmbtu. The test for PM will be conducted using USEPA reference method 5B for "Determination of Particulate Matter Emissions from Stationary Sources" and the Sulfur Dioxide (SO₂) removal efficiency and opacity will be monitored using data from the plant CEMS. The testing for PM will be conducted at the outlet of the flue gas desulfurization (FGD or scrubber) system that serves both Big Bend Station Units 3 and 4 in common stack 3 (CS003). Tampa Electric Company has contracted ENSR to perform the PM stack testing.

2.0 FACILITY DESCRIPTION

2.1 Facility Location and Description

Tampa Electric Company's Big Bend Station is located in Apollo Beach, Hillsborough County, Florida. Big Bend Station consists of four steam boilers (Units 1 through 4). Units 1, 2, 3, and 4 have a nominal maximum heat input of 4,037, 3,996, 4,115, and 4,330 million Btu/hour, respectively. Units 1 through 4 are each serviced by an electrostatic precipitator (ESP) for the control of flyash emissions and an FGD system for the control of SO₂ emissions. Opacity monitors are located in the ductwork downstream of the ESP and upstream of the FGD system. These units are fired with either bituminous coal or with a petcoke/coal mixture up to 20 percent petcoke and 80 percent coal (by weight).

2.2 Reference Methods Sampling Location

The emission sampling location on the outlet downstream from the FGD system for Units 3 and 4 consists of four (4) ports spaced 90 degrees apart. Also, Units 3 and 4 share common stacks with test platforms located inside a stack annulus at the 250-foot level on each stack. The emission sampling location in the outlet downstream of the FGD system for CS003 consists of multiple ports accessed by a testing platform located inside the stack annulus. All of the sampling port locations meet EPA Reference Method 1 testing criteria.

3.0 REFERENCE METHOD TESTING

Particulate Matter will be sampled and analyzed using USEPA test method 5B (40CFR60, Appendix A). SO₂ and Opacity will be monitored using the existing CEM.

Output megawatts, applicable boiler operating data, ESP operating data, FGD operating data, etc will be measured, documented, and recorded, to verify the various process conditions during testing.

3.1 QA/QC Operations

Gas Emission Test and Gas Sample Strategy:

The data from approximately twenty runs will be used for the purposes of determining the feasibility of the PM CEM as specified in Paragraph 32.F of the Consent Decree. PM emission test runs will be a minimum of 1 hour in duration and will be performed with the Units operating at their daily load capabilities.

Unit Exhaust Gas for PM Measurements:

Each probe will be calibrated at the ENSR instrument laboratory and QA/QC procedures will be performed as required by each USEPA test methods. Following initial calibrations of the equipment, a sample of exhaust gas will be extracted from CS003 using paired trains as specified in the USEPA's proposed Performance Specification 11 (PS-11). The results of these measurements will be manually recorded and entered into a portable personal computer to document the sample analysis, calibrations and quality assurance activities conducted during the tests.

3.2 Instrumental Reference Methods - PM

USEPA Proposed Performance Specification 11 for PM CEM:

PM will be measured by extracting an exhaust gas sample from CS003. The mass of the collected PM from the gas sample will be determined gravimetrically from the nozzle, probe, and filter holder and front half filter fraction. A heated, glass-lined probe with a glass nozzle and attached thermocouple and pitot tubes will be used to sample the gas from CS003. The sample gas passes through the probe to the heated glass fiber filter. The temperature of the probe and filter are heated to 320°F +/-25°F. Four impingers are located after the filter box. A pump, dry gas meter, and calibrated orifice follow the impingers. In addition, molecular weight will be determined using an integrated tedlar bag sample collected from the gas stream for O₂ and CO₂ analysis.



ENSR will perform an analysis of the PM samples and filters at the ENSR Air Toxics Laboratory, after the sample collection and recovery procedures have been completed for all twenty test runs.

4.0 PROPOSED TESTING SCHEDULE

The dynamic linearity and high grain loading tests are tentatively scheduled to begin in the first quarter of 2004. Testing is planned for completion in one week or until twenty runs have been completed, based on the operating conditions of both Units. During the tests, emissions from CS003 will be evaluated while firing coal with a sulfur content of no more than 2.2 lb/mmbtu in Unit 3. Listed below is the proposed schedule for each day of testing. This is subject to change based on the daily operation of Units 3 and 4.

Day 1:

1. Reduce booster fans for the FGD system on A and B towers until approximately 80% of Unit 3's flue gas is bypassed.
2. Reduce power to Unit 3's ESP transformer/rectifier (T/R) sets until the opacity is between 16 and 20%.
3. Hold this condition for approximately 12 hours while 5 to 6 Reference Method 5B PM sample runs are performed in CS003.
4. Reset Unit 3's ESP T/R sets to their original power levels.
5. Reset the FGD system booster fans to their normal operation.
6. Check the grain loading recorded by the PM CEM.

Day 2:

1. If 12 to 20 mg/dscm was recorded by the PM CEM during the first day's testing, then repeat the procedures for day 1. If not, proceed with step 2.
2. Reduce booster fans for the FGD system on A and B towers until approximately 90 to 95% of Unit 3's flue gas is bypassed.
3. Reduce power to Unit 3's ESP T/R sets until the opacity is between 20 and 25%.
4. Hold this condition for approximately 12 hours while 5 to 6 Reference Method 5B PM sample runs are performed in CS003.
5. Reset Unit 3's ESP T/R sets to their original power levels.
6. Reset the FGD booster fans to their normal operation.
7. Check the grain loading recorded by the PM CEM.

Day 3:

1. If 12 to 20 mg/dscm was recorded by the PM CEM during the first day's testing, then repeat the procedures for day 1. If not, repeat the procedures for Day 2.

Day 4:

1. If 12 to 20 mg/dscm was recorded by the PM CEM during the first day's testing, then repeat the procedures for day 1. If not, repeat the procedures for Day 2.

Day 5:

1. If 12 to 20 mg/dscm was recorded by the PM CEM during the first day's testing, then repeat the procedures for day 1. If not, repeat the procedures for Day 2.

Day 6:

1. If 12 to 20 mg/dscm was recorded by the PM CEM during the first day's testing, then repeat the procedures for day 1. If not, repeat the procedures for Day 2.

Day 7:

1. If 12 to 20 mg/dscm was recorded by the PM CEM during the first day's testing, then repeat the procedures for day 1. If not, repeat the procedures for Day 2.



December 1, 2003

Mr. Errin Pichard
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Via Email Notification
errin.pichard@dep.state.fl.us

CEM Section
U.S. Environmental Protection Agency
633 3rd Street, NW, 8th Floor
Washington, D.C. 20001

Via Email Notification
AIREMS@dep.state.fl.us

**Re: Tampa Electric Company (TEC)
Big Bend Power Station Unit 3 & 4
Re-Certification Testing Notification
Project No. 0570039-010-AV**

Dear Mr. Pichard:

Per our telephone conversation on December 1, 2003, Tampa Electric Company (TEC) is notifying the Florida Department of Environmental Protection (FDEP) and the Environmental Protection Commission of Hillsborough County (EPCHC) that the re-certification testing for Big Bend Unit 4 and Big Bend Unit 3 will be performed on December 6 and 13, 2003 respectively. TEC is currently replacing aging CEMS equipment at Big Bend with new CEMS equipment

TEC hereby notifies FDEP and EPCHC that the re-certification of the Big Bend Units will commence December 6, 2003.

As the schedule changes TEC will keep FDEP and EPCHC updated. TEC appreciates your cooperation in this matter and if you have any questions, please call Greer Briggs at (813) 641-5034.

Sincerely,

(No Electronic Signature Available)

Greer Briggs for
Laura R. Crouch
Manager – Air Programs
Environmental Affairs

EA\bmr\GMB

c: Sterlin Woodard, EPCHC
woodard@epchc.org
Joel Smolen, FDEP
Joel.smolen@dep.state.fl.us



December 3, 2003

Mr. Errin Pichard
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Via Email Notification
errin.pichard@dep.state.fl.us

CEM Section
U.S. Environmental Protection Agency
633 3rd Street, NW, 8th Floor
Washington, D.C. 20001

Via Email Notification
AIREMS@dep.state.fl.us

**Re: Tampa Electric Company (TEC)
Big Bend Power Station Unit 3 & 4
Part 75 Re-Certification Testing
Project No. 0570039-010-AV**

Dear Mr. Pichard:

Tampa Electric Company (TEC) is re-notifying the Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) of the Continuous Emissions Monitoring System (CEMS) re-certification test. The CEMS re-certification test will comprise of a 7-day calibration error test, linearity check, RATA, bias test, and cycle time test. TEC hereby gives notice that the CEMS re-certification test for Big Bend Power Station (BB) Unit 3&4 may begin on the following dates and order:

BB 4 – December 7, 2003
BB 3 – December 13, 2003

As the schedule changes TEC will keep EPA and FDEP updated. TEC appreciates your cooperation in this matter and if you have any questions, please call Greer Briggs at (813) 641-5034.

Sincerely,

(No Electronic Signature Available)

Greer Briggs for
Laura R. Crouch
Manager – Air Programs
Environmental Affairs

EA\bmr\GMB

c: Sterlin Woodard, EPCHC
woodard@epchc.org
Joel Smolen, FDEP
Joel.smolen@dep.state.fl.us



December 8, 2003

Mr. Errin Pichard
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Via Email Notification
errin.pichard@dep.state.fl.us

CEM Section
U.S. Environmental Protection Agency
633 3rd Street, NW, 8th Floor
Washington, D.C. 20001

Via Email Notification
AIREMS@dep.state.fl.us

**Re: Tampa Electric Company (TEC)
Big Bend Power Station Unit 3 & 4
Part 75 Re-Certification Testing
Project No. 0570039-010-AV**

Dear Mr. Pichard:

The Continuous Emissions Monitoring System (CEMS) re-certification test for Big Bend (BB) Unit 4 has been rescheduled to occur the week of December 8, 2003. The CEMS re-certification test will comprise of a 7-day calibration error test, linearity check, RATA, bias test, and cycle time test. TEC hereby gives notice that the CEMS re-certification test for Big Bend Power Station (BB) Unit 3&4 may begin on the following dates and order:

BB 4 – week of December 8, 2003
BB 3 – December 13, 2003

As the schedule changes TEC will keep EPA and FDEP updated. TEC appreciates your cooperation in this matter and if you have any questions, please call Greer Briggs at (813) 641-5034.

Sincerely,

(No Electronic Signature Available)

Greer Briggs for
Laura R. Crouch
Manager – Air Programs
Environmental Affairs

EA\bmr\GMB

c: Sterlin Woodard, EPCHC
woodard@epchc.org
Joel Smolen, FDEP
Joel.smolen@dep.state.fl.us



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OCT 07 2005

BUREAU OF AIR REGULATION

October 6, 2005

Mr. Al Linero, P.E.
Florida Department of Environmental Protection
Division of Air Resource Management
111 South Magnolia, Suite 4
Tallahassee, FL 32301

Via FedEx
Airbill No. 7901 7884 7225

**Re: Tampa Electric Company (TEC)
Big Bend Station
Title V Permit Number 0570039-023-AV
Notification of Insignificant Emissions and
Request for Generic Exemption-Fluxing**

Dear Ms. Vielhauer,

The purpose of this correspondence is to notify the Florida Department of Environmental Protection (Department) that Tampa Electric Company (TEC) intends to introduce fluxing material, specifically iron ore, in the combustion process. TEC intends to store the fluxing material in the former residual fuel building at Big Bend Station.

TEC's Big Bend Station is subject to the provisions of a Consent Decree entered in the United States of America v. Tampa Electric Company, Civil Action Number 99-2524 CIV-T-23F. Paragraphs 29 and 30 of the Consent Decree authorize operation of Units 1, 2 and 3 during outages of the Flue Gas Desulfurization ("FGD") systems serving those units, but requires that an alternative low sulfur coal be utilized during those outages. The use of the alternative low sulfur coal results in several operational and safety changes due to the potential of trapping combustible gases within the slag tank. Big Bend Station Units 1 through 3 are Riley-Stoker Turbo[®] furnace wet-bottom boilers. Proper operation of these boilers requires an ash fusion temperature of the coal such that the ash will stay in a molten state and tap out of the bottom of the boiler. If the ash does not stay in a molten state, then the tap will close trapping combustible gases within the slag tank. The use of iron ore will assist in lowering the ash fusion temperature of this alternative low sulfur coal. Although, iron ore is a material that is known to lower fusion temperature, the extent to which the temperature will be lowered is unknown with this fuel and in the Big Bend Station boilers. If the iron ore is successful in mitigating the current situation with alternative coal, we will be able to maintain reliable operations.

TEC intends to use the building formerly used to store residual fuel at the Big Bend Station to store the iron ore that will be used for fluxing. The iron ore will be brought in by truck at infrequent intervals and stored in the former residual fuel building pending an FGD outage.

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When the iron ore is required, Big Bend Station will transfer the iron ore using the existing hopper and conveyor system in the former residual fuel building or loaded directly onto the K conveyors. This activity will occur only on an infrequent basis, and it is estimated that the maximum amount of iron ore handled in the former residual fuel building will be no more than 5,000 tons per year. The former residual fuel building is enclosed on three sides ensuring that the iron ore will have minimal dust potential.

The iron ore will be emptied into the former residual fuel building from a nominal 24.5 ton dump truck and a bulldozer will either push the material into the dozer trap in the rear of the building onto the BF conveyor or load onto the K conveyors. The conveyors are fully enclosed to prevent fugitive emissions.

TEC requests that the Department confirm that this operation qualifies for a generic exemption from permitting requirements pursuant to the provisions of Rule 62-210.300(3)(b), Florida Administrative Code (F.A.C.). The activity is not subject to any unit specific applicable requirement. The activity will not result in the emission of lead or any hazardous air pollutants, and the activity will fall well below the 5 ton per year threshold for fugitive emissions of particulate matter. Emissions from this activity, in combination with the emissions of other units and activities of the facility, will not cause the facility to exceed any major source threshold either alone, or in combination with emissions from all other insignificant sources. This activity does not constitute a modification of any emissions unit at Big Bend Station.

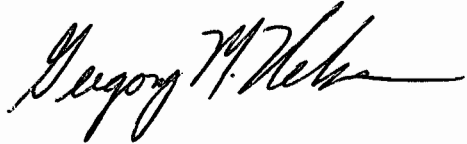
TEC believes the activity also qualifies as an insignificant emissions activity pursuant to Rule 62-213.430(6), F.A.C. As noted above, the activity is not subject to any unit specific applicable requirement, no lead or hazardous air pollutants are emitted, and the activity will not exceed any major source thresholds, by itself or in combination with emissions from all other insignificant sources. The emissions will fall well below the 5 ton per year threshold for fugitive emissions. We understand that the activity, if determined insignificant, will be incorporated into the Title V permit at its next renewal, assuming that the generic exemption is approved.

Based on the foregoing, TEC believes that the operation is exempt from permitting under Rule 62-210.300(3)(b), and constitutes an insignificant pollutant emitting activity under Rule 62-213.430(6), F.A.C. Enclosed are the emissions calculations and professional engineer's certification. TEC would appreciate the Department providing written concurrence regarding this matter. Thank you for your prompt consideration.

Mr. Al Linero
October 6, 2005
Page 3 of 3

If you have any questions or need additional information, please contact Shelly Castro or me at (813) 228-4408.

Sincerely,



for

Byron T. Burrows, P.E.
Manager - Air Programs
Environmental, Health & Safety

EHS/rk/SSC

Enclosures

c/enc: Mr. David Lloyd, EPA Region IV
Mr. Jason Waters, FDEP SW
Ms. Trina Vielhauer, FDEP
Ms. Alice Harman, EPCHC

EMISSION INVENTORY WORKSHEET							Iron Ore Handling		
Tampa Electric Company - Big Bend Station									
EMISSION SOURCE TYPE									
FUGITIVE PM - MATERIAL TRANSFER (DROPS)							Figure:		
FACILITY AND SOURCE DESCRIPTION									
Emission Source Description:			Fugitive PM - Truck Unloading of Iron Ore Flux						
Emission Control Method(s)/ID No.(s):			Moist material						
Emission Point ID:			IOT-001						
EMISSION ESTIMATION EQUATIONS									
PM Emission (lb/hr) = 0.74 x 0.0032 x [(Wind Speed/5) ^{1.2} / (Material Moisture Content/2) ^{1.4}] x Material Handled (ton/hr)									
PM Emission (ton/yr) = 0.74 x 0.0032 x [(Wind Speed/5) ^{1.2} / (Material Moisture Content/2) ^{1.4}] x Material Handled (ton/yr) x (1 ton/2,000 lb)									
Source: Section 13.2.4, AP-42, January 1995.									
INPUT DATA AND EMISSIONS CALCULATIONS									
Mean Wind Speed: 8.6 mph			Material Moisture Content: 10.0 weight %						
Material Transfer Point	Source ID	Material Transfer Rates		Uncontrolled Emission Factor (lb PM/ton)	Control Efficiency (%)	Controlled Emission Factor (lb PM/ton)	Potential PM Emission Rates		
		(ton/hr)	(ton/yr)				(lb/hr)	(ton/yr)	
Truck Unloading to Storage Building	IOT-001A	73.5	5,000	0.000504	25.0	0.000378	0.0278	0.0009	
Transfer to "K" Conveyors	IOT-001B	73.5	5,000	0.000504	0.0	0.000504	0.0370	0.0013	
Totals							0.0648	0.0022	
SOURCES OF INPUT DATA									
Parameter	Data Source								
Mean Wind Speed, mph	Climate of the States (Tampa, FL), Third Edition, 1985.								
Material Moisture Content	TEC, 2005.								
Material Transfer Point Identification	TEC, 2005.								
Material Transfer Rates	TEC, 2005.								
Control Efficiency	Table 3.2.17-2, Workbook on Estimation and Dispersion Modeling for Fugitive Particulate Sources, UARG, September 1981.								
NOTES AND OBSERVATIONS									
1 Control Efficiency: Side Enclosure (25%)									
DATA CONTROL									
Data Collected by:	S. Castro						Date:	10/05	
Evaluated by:	T. Davis						Date:	10/05	
Data Entered by:	T. Davis						Date:	10/05	

EMISSION INVENTORY WORKSHEET							Iron Ore Handling	
Tampa Electric Company - Big Bend Station								
EMISSION SOURCE TYPE								
FUGITIVE PM₁₀ - MATERIAL TRANSFER (DROPS)							Figure:	
FACILITY AND SOURCE DESCRIPTION								
Emission Source Description:			Fugitive PM ₁₀ - Truck Unloading of Iron Ore Flux					
Emission Control Method(s)/ID No.(s):			Moist material					
Emission Point ID:			IOT-001					
EMISSION ESTIMATION EQUATIONS								
PM ₁₀ Emission (lb/hr) = 0.35 x 0.0032 x [(Wind Speed/5) ^{1.3} / (Material Moisture Content/2) ^{1.4}] x Material Handled (ton/hr)								
PM ₁₀ Emission (ton/yr) = 0.35 x 0.0032 x [(Wind Speed/5) ^{1.3} / (Material Moisture Content/2) ^{1.4}] x Material Handled (ton/yr) x (1 ton/2,000 lb)								
Source: Section 13.2.4, AP-42, January 1995.								
INPUT DATA AND EMISSIONS CALCULATIONS								
Mean Wind Speed:			8.6 mph		Material Moisture Content:		10.0 weight %	
Material Transfer Point	Source ID	Material Transfer Rates		Uncontrolled Emission Factor (lb PM/ton)	Control Efficiency (%)	Controlled Emission Factor (lb PM/ton)	Potential PM ₁₀ Emission Rates	
		(ton/hr)	(ton/yr)				(lb/hr)	(ton/yr)
Truck Unloading to Storage Building	IOT-001A	73.5	5,000	0.000238	25.0	0.000179	0.0131	0.0004
Transfer to "K" Conveyors	IOT-001B	73.5	5,000	0.000238	0.0	0.000238	0.0175	0.0006
Totals							0.0306	0.0010
SOURCES OF INPUT DATA								
Parameter	Data Source							
Mean Wind Speed, mph	Climate of the States (Tampa, FL), Third Edition, 1985.							
Material Moisture Content	TEC, 2005.							
Material Transfer Point Identification	TEC, 2005.							
Material Transfer Rates	TEC, 2005.							
Control Efficiency	Table 3.2.17-2, Workbook on Estimation and Dispersion Modeling for Fugitive Particulate Sources, UARG, September 1981.							
NOTES AND OBSERVATIONS								
1 Control Efficiency: Side Enclosure (25%)								
DATA CONTROL								
Data Collected by:	S. Castro					Date:	10/05	
Evaluated by:	T. Davis					Date:	10/05	
Data Entered by:	T. Davis					Date:	10/05	

EMISSION INVENTORY WORKSHEET						Truck Traffic (Paved Roads)			
Tampa Electric Company - Big Bend Station									
EMISSION SOURCE TYPE									
FUGITIVE PM - TRUCK TRAFFIC ON PAVED ROADS									
FACILITY AND SOURCE DESCRIPTION									
Emission Source Description:		Fugitive PM - Iron Ore Flux Truck Traffic on Paved Roads							
Emission Control Method(s)/ID No.(s):		Watering, As Necessary							
Emission Point ID:		IOT-002							
EMISSION ESTIMATION EQUATIONS									
$PM \text{ Emission (lb/hr)} = ((0.082 \times [(Silt \text{ Loading Factor}/2)^{0.65}] \times [(Truck \text{ Weight}/3)^{1.50} - 0.00047] \times (1 - ("Wet" \text{ Days}/1,460)) \times Vehicle \text{ Miles Traveled (VMT)}/hr \times (1 - (Control \text{ Eff.} / 100)))$									
$PM \text{ Emission (ton/yr)} = ((0.082 \times [(Silt \text{ Loading Factor}/2)^{0.65}] \times [(Truck \text{ Weight}/3)^{1.50} - 0.00047] \times (1 - ("Wet" \text{ Days}/1,460)) \times Vehicle \text{ Miles Traveled (VMT)}/yr \times (1 \text{ ton}/2,000 \text{ lb}) \times (1 - (Control \text{ Eff.} / 100)))$									
Source: Section 13.2.1, AP-42, December 2003.									
INPUT DATA AND EMISSIONS CALCULATIONS									
Uncontrolled Silt Loading Factor:		70.0 g/m ²		Mean Annual Number of "Wet" Days:		100			
Operating Hours:		1 hr/dy		75 dy/yr		75 hr/yr			
Iron Ore Received by Truck:		5,000 ton/yr		Truck Travel Distance (one way):		4,300 ft			
Hourly Truck Count:		2 trucks/hr		Annual Truck Count:		204 trucks/yr			
Truck Traffic Type	Source ID	Vehicle Miles Traveled		Vehicle Weight (ton)	Control Efficiency (%)	Potential PM Emission Rates			
		(VMT/hr)	(VMT/yr)			(lb/hr)	(ton/yr)		
Iron Ore Trucks (Empty)	IOT-002a	1.629	166	16.0	90.0	1.545	0.079		
Iron Ore Trucks (Full)	IOT-002b	1.629	166	40.5	90.0	6.223	0.318		
Totals						7.77	0.396		
SOURCES OF INPUT DATA									
Parameter		Data Source							
Uncontrolled Silt Loading Factor		Based on factor for sand and gravel processing, Suggested by FDEP, 2005.							
Mean Annual Number of "Wet" Days		Figure 13.2.1-2, Section 13.2.1, AP-42, November 2003.							
Vehicle Miles Traveled, VMT		TEC, 2005.							
Truck Weights, ton		TEC, 2005.							
Control Efficiency		Estimated, ECT 2005.							
NOTES AND OBSERVATIONS									
DATA CONTROL									
Data Collected by:		S. Castro			Date:		10/05		
Evaluated by:		T. Davis			Date:		10/05		
Data Entered by:		T. Davis			Date:		10/05		

EMISSION INVENTORY WORKSHEET						Truck Traffic (Paved Roads)	
Tampa Electric Company - Big Bend Station							
EMISSION SOURCE TYPE							
FUGITIVE PM₁₀ - TRUCK TRAFFIC ON PAVED ROADS							
FACILITY AND SOURCE DESCRIPTION							
Emission Source Description:		Fugitive PM ₁₀ - Iron Ore Flux Truck Traffic on Paved Roads					
Emission Control Method(s)/ID No.(s):		Watering, As Necessary					
Emission Point ID:		IOT-002					
EMISSION ESTIMATION EQUATIONS							
$PM_{10} \text{ Emission (lb/hr)} = ((0.016 \times ((\text{Silt Loading Factor}/2)^{0.65}) \times ((\text{Truck Weight}/3)^{1.50} - 0.00047) \times (1 - (\text{"Wet" Days}/1,460))) \times \text{Vehicle Miles Traveled (VMT)}/\text{hr} \times (1 - (\text{Control Eff.} / 100)))$							
$PM_{10} \text{ Emission (ton/yr)} = ((0.016 \times ((\text{Silt Loading Factor}/2)^{0.65}) \times ((\text{Truck Weight}/3)^{1.50} - 0.00047) \times (1 - (\text{"Wet" Days}/1,460))) \times \text{Vehicle Miles Traveled (VMT)}/\text{yr} \times (1 \text{ ton}/2,000 \text{ lb}) \times (1 - (\text{Control Eff.} / 100)))$							
Source: Section 13.2.1, AP-42, December 2003.							
INPUT DATA AND EMISSIONS CALCULATIONS							
Uncontrolled Silt Loading Factor:		70.0 g/m ²		Mean Annual Number of "Wet" Days:		100	
Operating Hours:		8 hr/dy		75 dy/yr		600 hr/yr	
Iron Ore Received by Truck:		5,000 ton/yr		Truck Travel Distance (one way):		4,300 ft	
Hourly Truck Count:		2 trucks/hr		Annual Truck Count:		204 trucks/yr	
Truck Traffic Type	Source ID	Vehicle Miles Traveled		Vehicle Weight (ton)	Control Efficiency (%)	Potential PM ₁₀ Emission Rates	
		(VMT/hr)	(VMT/yr)			(lb/hr)	(ton/yr)
Iron Ore Trucks (Empty)	IOT-002a	1.629	166	16.0	90.0	0.301	0.015
Iron Ore Trucks (Full)	IOT-002b	1.629	166	40.5	90.0	1.214	0.062
Totals						1.52	0.077
SOURCES OF INPUT DATA							
Parameter		Data Source					
Uncontrolled Silt Loading Factor		Based on factor for sand and gravel processing, Suggested by FDEP, 2005.					
Mean Annual Number of "Wet" Days		Figure 13.2.1-2, Section 13.2.1, AP-42, November 2003.					
Vehicle Miles Traveled, VMT		TEC, 2005.					
Truck Weights, ton		TEC, 2005.					
Control Efficiency		Estimated, ECT 2005.					
NOTES AND OBSERVATIONS							
DATA CONTROL							
Data Collected by:		S. Castro			Date:		10/05
Evaluated by:		T. Davis			Date:		10/05
Data Entered by:		T. Davis			Date:		10/05

Sheplak, Scott

From: Linero, Alvaro
Sent: Monday, October 10, 2005 3:24 PM
To: 'Shelly Castro'
Cc: tdavis@ectinc.com; Byron Burrows; Sheplak, Scott
Subject: RE: Fluxing

To: Shelley Castro
From: Al Linero

Re: Fluxing

Based on the information provided including the characteristics and amount of material, pollution controls and infrequent nature, the described activity appears to be insignificant.

You have already provided the necessary information pursuant to Rule 62-213.430(6) that establishes the notification protocol for insignificant activities at Title V facilities. You may want to update the information upon confirmation that the activity will or will not increase fusion temperature.

Call Scott Sheplak at 850-921-9532 if you have any questions.

Thanks.

Al Linero

From: Shelly Castro [mailto:sscastro@tecoenergy.com]
Sent: Thursday, October 06, 2005 5:39 PM
To: Linero, Alvaro
Cc: tdavis@ectinc.com; Byron Burrows; Shelly Castro
Subject: Fluxing Generic Exemption Request

Al,

As per our conversation today, attached is the information you will receive tomorrow via federal express requesting a generic exemption for Tampa Electric Company to be able to store and use flux at Big Bend Station. TEC appreciates your immediate attention to this matter.

Please feel free to contact me should you have any questions. Thank you.

Sincerely,
Shelly Castro
Engineer,
Environmental, Health & Safety
Tampa Electric Company
ph# 813-228-4408
fax# 813-228-1308
email: sscastro@tecoenergy.com

10/25/2005