TAMPA ELECTRIC

RECEIVED
OCT 07 2005
BUREAU OF AIR REGULATION

October 6, 2005

Ms. Trina Vielhauer,
Florida Department of Environmental Protection
Division of Air Resource Management
111 South Magnolia, Suite 23
Tallahassee, FL 32301

Via FedEx
Airbill No. 7925 4700 9400

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.

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.

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/rlk/SSC

Enclosures

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

EMISSION INVENTORY WORKSHEET

Tampa Electric Company - Big Bend Station

Iron Ore Handling

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)$^{1.3}$ / (Material Moisture Content/2)$^{1.4}$] x Material Handled (ton/hr)

PM Emission (ton/yr) = 0.74 x 0.0032 x [(Wind Speed/5)$^{1.3}$ / (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 (ton/hr)	Material Transfer Rates (ton/yr)	Uncontrolled Emission Factor (lb PM/ton)	Control Efficiency (%)	Controlled Emission Factor (lb PM/ton)	Potential PM Emission Rates (lb/hr)	Potential PM Emission Rates (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

Tampa Electric Company - Big Bend Station

Iron Ore Handling

EMISSION SOURCE TYPE

FUGITIVE PM_{10} - 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 (ton/hr)	Material Transfer Rates (ton/yr)	Uncontrolled Emission Factor (lb PM/ton)	Control Efficiency (%)	Controlled Emission Factor (lb PM/ton)	Potential PM_{10} Emission Rates (lb/hr)	Potential PM_{10} Emission Rates (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

Tampa Electric Company - Big Bend Station

Truck Traffic (Paved Roads)

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 Emission (lb/hr) = ((0.082 x [(Silt Loading Factor/2)$^{0.65}$] x [(Truck Weight/3)$^{1.50}$ - 0.00047) x (1 - ("Wet" Days/1,460)) x Vehicle Miles Traveled (VMT)/hr x (1 - (Control Eff. / 100))

PM Emission (ton/yr) = ((0.082 x [(Silt Loading Factor/2)$^{0.65}$] x [(Truck Weight/3)$^{1.50}$ - 0.00047) x (1-("Wet" Days/1,460)) x Vehicle Miles Traveled (VMT)/yr x (1 ton/2,000 lb) x (1 - (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:	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 (VMT/hr)	Vehicle Miles Traveled (VMT/yr)	Vehicle Weight (ton)	Control Efficiency (%)	Potential PM Emission Rates (lb/hr)	Potential PM Emission Rates (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

Tampa Electric Company - Big Bend Station

Truck Traffic (Paved Roads)

EMISSION SOURCE TYPE

FUGITIVE PM_{10} - 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} Emission (lb/hr) = ((0.016 x [(Silt Loading Factor/2)$^{0.65}$] x [(Truck Weight/3)$^{1.5}$) - 0.00047) x (1 - ("Wet" Days/1,460)) x Vehicle Miles Traveled (VMT)/hr x (1 - (Control Eff. / 100))

PM_{10} Emission (ton/yr) = ((0.016 x [(Silt Loading Factor/2)$^{0.65}$] x [(Truck Weight/3)$^{1.5}$) - 0.00047) x (1-("Wet" Days/1,460)) x Vehicle Miles Traveled (VMT)/yr x (1 ton/2,000 lb) x (1 - (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 (VMT/hr)	Vehicle Miles Traveled (VMT/yr)	Vehicle Weight (ton)	Control Efficiency (%)	Potential PM_{10} Emission Rates (lb/hr)	Potential PM_{10} Emission Rates (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