TAMPA ELECTRIC

November 9, 2011

Jeffrey F. Koerner, Program Administrator
Florida Department of Environmental Protection
Division of Air Resource Management
Office of Air Permitting and Compliance
2600 Blair Stone Road, M.S. 5505
Tallahassee, Florida 32399-2400

Re: Tampa Electric Company - Big Bend Station
Title V Permit Number 0570039-045-AV
Gypsum Truck to Barge Transloading
Notification of Change without Permit Revision
Facility ID No. 0570039

Dear Mr. Koerner:

This correspondence serves as a courtesy notification to the Florida Department of Environmental Protection (Department) pursuant to 62-213.410 (2) F.A.C. that Tampa Electric Company (TEC) will transload gypsum to barge vessels. This operation will result in additional handling procedures not currently conducted at the facility. This activity is considered an insignificant source of emissions and exempt from air construction permitting requirements.

The existing operation transports gypsum to National Gypsum Inc., a major wallboard manufacturer. Gypsum from the flue gas desulfurization (FGD) system is transported approximately 1 mile to the gypsum stockpile area using a dedicated conveyance system. Wallboard grade gypsum in the storage is loaded into trucks and transported about 2 miles to the National Gypsum Facility for processing.

This proposed operation will transfer up to 300,000 tons of gypsum per year. Trucks and existing equipment will be used to transload the gypsum to barge vessels. Trucks will haul gypsum from the current storage area to the dock at Big Bend Station. Trucks will transport the gypsum to the dock area using the paved road on the southside of the facility. At the dock, the trucks will unload the gypsum onto a portable loading conveyor. Once the gypsum is unloaded, the trucks will pull forward and detour around the dock area through the coal yard on a designated short unpaved road. The trucks will exit the facility using the same paved road on the southside of the facility. Figure 1 illustrates the proposed travel path of the trucks during the transloading operation.

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

(813) 228-4111

CUSTOMER SERVICE:
HILLSBOROUGH COUNTY (813) 223-0800
POLK COUNTY (863) 299-0800
ALL OTHER COUNTIES 1 (888) 223-0800

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Portable conveyors and existing equipment will be used to transload gypsum to barge vessels. As mentioned earlier, trucks will unload gypsum onto a portable loading conveyor. An intermediate tube conveyor will transport the gypsum from the loading conveyor to an open bunker. The bunker will be enclosed on all four (4) sides to prevent gypsum from spilling on to the dock. The existing crane or PECO clam shell system will pick-up the gypsum from the bunker and load the barge vessel. This entire process will occur continuously until the barge vessel is loaded to the desired capacity. Figure 2 illustrates the process flow diagram and layout of the transloading process.

TEC performed a series of emission calculations to estimate PM, PM_{10} and $PM_{2.5}$ emissions from the proposed operation. AP-42 procedure, Chapter 13.2.4 - Aggregate Handling and Storage Piles, was used to estimate the gypsum fugitive emissions. AP-42 procedures, Chapter 13.2.1 Paved Roads and Chapter 13.2.2 Unpaved Road, were used to estimate emissions from vehicle traffic. These calculations assumed a 90% control efficiency to reduce fugitive emissions from vehicle traffic. Details of the calculations are shown attached.

Table 1 shows the estimated PM emissions from the proposed activity. The calculation shows the total gypsum emission rate (0.6 tons per year) is below the 5 tons per year threshold and meets the insignificant emission requirements. The calculations also show the PM_{10} and $PM_{2.5}$ emissions are substantially below the significant emission thresholds for this activity. A summary of the emissions calculations are shown attached.

Table 1 – Summary of Proposed PM Emissions.

Description	Total PM Emissions (tons/year)	PM_{10} Emissions (tons/year)	$PM_{2.5}$ Emissions (tons/year)
Gypsum Emissions	0.63	0.30	0.045
Fugitive Emissions from Vehicle Traffic	3.9	1.1	0.24
Total Emissions	4.5	1.4	0.29

The aforementioned calculations demonstrate that this operation is exempt from permitting under Rule 62-210.300(3)(b)1. F.A.C., *Generic Emission Unit or Activity Exemption.*, and constitutes an insignificant pollutant emitting activity under Rule 62-213.430(6), F.A.C., *Insignificant Emissions Units or Pollutant-Emitting Activities*. Therefore, this notice fulfills the requirements of 62-213.410 (2), F.A.C., Changes Without Permit Revision.

This material handling operation is planned to commence during the last week of November 2011. TEC requests the Department review and comment in advance of this operation. Please contact me at (813) 228-4232 or Byron Burrows at (813) 228-1282, if you have any questions or comments regarding this notification.

Sincerely,

Robert A. Velasco, P.E., BCEE, QEP
Air Programs
Environmental, Health & Safety

EHS/iym/RAV122

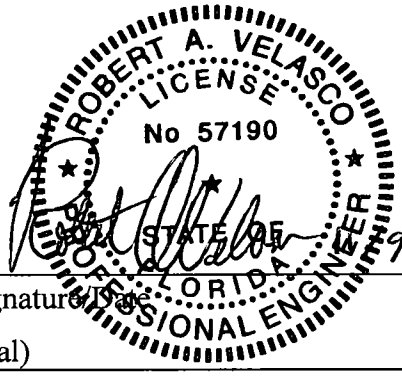
Enclosures

c/enc Cindy Zhang-Torres DEP
Diana Lee, EPCHC

Tampa Electric Company

Professional Engineer Certification

1. Professional Engineer Name: Robert A. Velasco, P.E.
   Registration Number: 57190
2. Professional Engineer Address...
   Organization/Firm: Tampa Electric Company
   Street Address: P.O. Box 111
   City: Tampa State: FL Zip Code: 33601
3. Professional Engineer Telephone Numbers...
   Telephone: (813) 228 - 4232 Fax: (813) 228 - 1308
4. Professional Engineer E-mail Address: ravelasco@tecoenergy.com
5. Professional Engineer Statement:
   (1) Engineering opinion and information included herein provides reasonable assurance of meeting the requirements of Rule 62-213.410 (2), F.A.C.;
   (2) Permit exemption request is based on the best available information at the time of preparation;
   (3) Information included herein is believed to be correct to the best of the Engineer's knowledge;
   (4) Emission information is based on acceptable techniques available for calculating emissions or estimating emissions from designated emission sources; and
   (5) Seal does not certify or attest to the accuracy of work or information prepared by others who are qualified to perform such services. This includes, but not limited to drawings, specifications, vendor information, engineering test data, correspondences, personnel communication etc.



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Signature/Date

(seal)

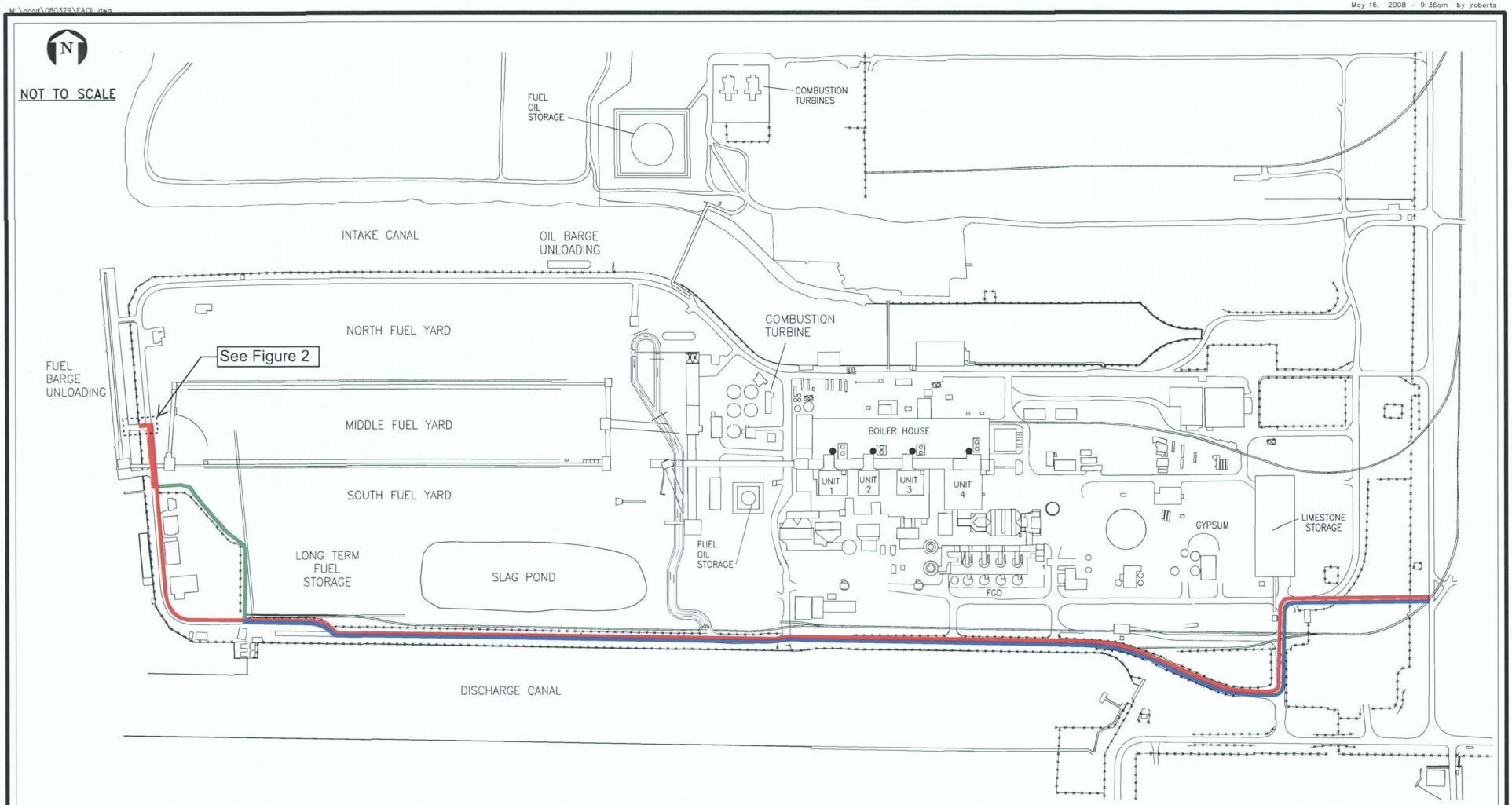

Figure 1
Overall Site Plan

Loaded Truck (Paved)
Unloaded Truck (Unpaved)
Unloaded Truck (Paved)

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Figure 1 Inset

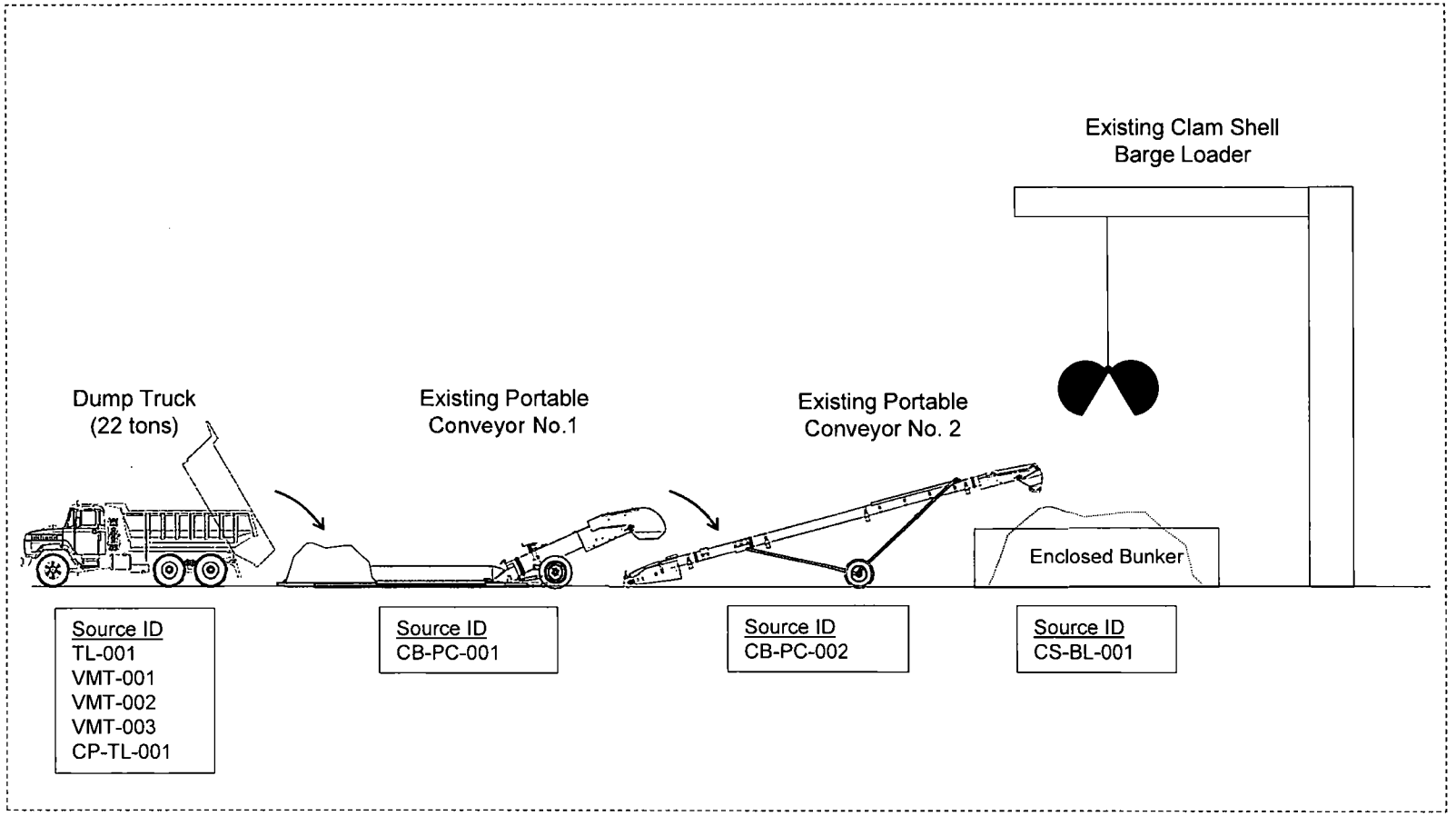

Figure 2.
Proposed Truck to Barge Gypsum Transloading.

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Emission Inventory Work Sheet

Big Bend Power Station
Tampa Electric Company
Facility ID No. 0570039
FUGITIVE PM EMISSIONS - MATERIAL TRANSFER DROP LOCATIONS

INPUT DATA AND EMISSION CALCULATIONS

Emission Source Description:	Gypsum to Barge Transloading
PM Emissions:	Total PM
Emission Control Methods:	Best Management Practices
Emission Points:	Gypsum Transloading and Vehicle Miles Traveled Dust Emissions

INPUT DATA AND EMISSION CALCULATIONS

Mean wind speed:	8.6 mph	Gypsum Moisture:	5 % weight
Tons Transloaded:	300 tons/hr	Total Load:	300,000 tons/yr
Vehicle Miles Traveled (Paved):	2.0 miles/load	Vehicle Miles Traveled (Unpaved):	0.2 miles/load
Vehicle Weight:	13 tons	Load Weight:	22 tons
silt loading:	10 g/m^2	Silt content -Unpaved Road:	5 % weight

		Material Transfer Rates		Uncontrolled Emission Factor	Control Efficiency	Uncontrolled Emission Factor	Potential PM Emission Rates	
Material Transfer Point	Source ID	(ton/hr)	(tons/yr)	(lb PM/ton)	(%)	(lb PM/ton)	(lb/hr)	(ton/yr)
Gypsum Truck Unloading	TL-001	300	300,000	0.001329	0.0	0.001329	------	0.20
Potable Conveyor #1	CB-PC-001	300	300,000	0.001329	85.0	0.000199	------	0.030
Potable Conveyor #2/Bunker	CB-PC-002	300	300,000	0.001329	0.0	0.001329	------	0.20
Clam Shell into Barge	CS-BL-001	300	300,000	0.001329	0.0	0.001329	------	0.20
Contingency Pile (extra dump)	CP-TU-001	300	75,000	0.001329	0.0	0.001329	------	0.050
							Subtotal	**0.63**

		Travel Rates		Uncontrolled Emission Factor	Assumed Control	Uncontrolled Emission Factor	Potential PM Emission Rates	
Vehicle Travel	Source ID	(loads/yr)	(miles/yr)	(lb PM/VMT)	Efficiency	(lb PM/VMT)	(lb/hr)	(ton/yr)
Travel Truck Paved (full)	VMT-001	13,636	15,003	3.36	90.0	0.336	------	2.5
Travel Truck Paved (Empty)	VMT-002	13,636	12,601	1.22	90.0	0.122	------	0.77
Travel Truck Unpaved (Empty)	VMT-003	13,636	2,402	5.14	90.0	0.514	------	0.62
							Subtotal	3.9
							Total	**4.5**

Emission Inventory Work Sheet

Big Bend Power Station
Tampa Electric Company
Facility ID No. 0570039
FUGITIVE PM EMISSIONS - MATERIAL TRANSFER DROP LOCATIONS
EMISSION ESTIMATATION EQUATIONS

$$PM\ Emission\ \{tpy\} = 0.74 \times 0.0032 \left(\frac{(Wind\ speed\{mph\}/5)^{1.3}}{(Material\ Moisture/2)^{1.4}}\right)(Material\ Handled\{tph\})\left(1 - (Con\ Eff/100)\right)(1\ ton/2000\ lb)$$

Source: Section 13.2.4, *AP* 42, *November* 2006

$$PM\ Emission\ \{ton/VMT\} = 0.011(silt\ loading\{g/m^2\}^{0.91}(vehicle\ weight\{tons\})^{1.02}\left(1 - (Con\ Eff/100)\right)(1\ ton/2000\ lb)$$

Source: Section 13.2.1, *AP* 42, *November* 2006

$$PM\ Emission\ \{ton/VMT\} = 4.9\ (silt\ content\{\%\}/12)^{0.7}(vehicle\ weight\{tons\}/3)^{0.45}\left(1 - (Con\ Eff/100)\right)(1\ ton/2000\ lb)$$

Source: Section 13.2.2, *AP* 42, *November* 2006

SOURCES OF INPUT DATA

INPUT DATA	Source
Input Data	Tampa Electric Company
Control Efficiency	Table 3.2.17-2 Workbook on Estimation and Dispersion Modeling for Fugitive Emissions Source: UARG, September 1981

NOTES AND OBSERVATIONS

Control efficiencies: None (0%); Side Enclosure (25%); Enclosure (85%); treated with dust suppression (90%)
Limestone moisture estimated around 5%.

Emission Inventory Work Sheet

Big Bend Power Station
Tampa Electric Company
Facility ID No. 0570039
FUGITIVE PM EMISSIONS - MATERIAL TRANSFER DROP LOCATIONS

INPUT DATA AND EMISSION CALCULATIONS

Emission Source Description:	Gypsum to Barge Transloading
PM Emissions:	PM_{10}
Emission Control Methods:	Best Management Practices
Emission Points:	Gypsum Transloading and Vehicle Miles Traveled Dust Emissions

INPUT DATA AND EMISSION CALCULATIONS

Mean wind speed:	8.6 mph	Gypsum Moisture:	5 % weight
Tons Transloaded:	300 tons/hr	Total Load:	300,000 tons/yr
Vehicle Miles Traveled (Paved):	2.0 miles/load	Vehicle Miles Traveled (Unpaved):	0.2 miles/load
Vehicle Weight:	13 tons	Load Weight:	22 tons
silt loading:	10 g/m^2	Silt content -Unpaved Road:	5 % weight

		Material Transfer Rates		Uncontrolled Emission Factor	Control Efficiency	Uncontrolled Emission Factor	Potential PM_{10} Emission Rates	
Material Transfer Point	Source ID	(ton/hr)	(tons/yr)	(lb PM/ton)	(%)	(lb PM/ton)	(lb/hr)	(ton/yr)
Gypsum Truck Unloading	TL-001	300	300,000	0.000628	0.0	0.000628	------	0.094
Potable Conveyor #1	CB-PC-001	300	300,000	0.000628	85.0	0.000094	------	0.014
Potable Conveyor #2/Bunker	CB-PC-002	300	300,000	0.000628	0.0	0.000628	------	0.094
Clam Shell into Barge	CS-BL-001	300	300,000	0.000628	0.0	0.000628	------	0.094
Contingency Pile (extra dump)	CP-TU-001	300	75,000	0.000628	0.0	0.000628	------	0.024
							Subtotal	**0.30**

		Travel Rates		Uncontrolled Emission Factor	Assumed Control Efficiency	Uncontrolled Emission Factor	Potential PM_{10} Emission Rates	
Vehicle Travel	Source ID	(loads/yr)	(miles/yr)	(lb PM/VMT)		(lb PM/VMT)	(lb/hr)	(ton/yr)
Travel Truck Paved (full)	VMT-001	13,636	15,003	0.67	90.0	0.067	------	0.50
Travel Truck Paved (Empty)	VMT-002	13,636	12,601	0.67	90.0	0.067	------	0.42
Travel Truck Unpaved (Empty)	VMT-003	13,636	2,402	1.32	90.0	0.132	------	0.16
							Subtotal	1.1
							Total	**1.4**

Emission Inventory Work Sheet

Big Bend Power Station
Tampa Electric Company
Facility ID No. 0570039
FUGITIVE PM EMISSIONS - MATERIAL TRANSFER DROP LOCATIONS
EMISSION ESTIMATATION EQUATIONS

$$PM\ Emission\ \{tpy\} = 0.35 \times 0.0032 \left(\frac{(Wind\ speed\{mph\}/5)^{1.3}}{(Material\ Moisture/2)^{1.4}}\right)(Material\ Handled\{tph\})\big(1-(Con\ Eff/100)\big)(1\ ton/2000\ lb)$$

Source: Section 13.2.4, AP 42, November 2006

$$PM\ Emission\ \{ton/VMT\} = 0.0022(silt\ loading\{g/m^2\}^{0.91}(vehicle\ weight\{tons\})^{1.02}\big(1-(Con\ Eff/100)\big)(1\ ton/2000\ lb)$$

Source: Section 13.2.1, AP 42, November 2006

$$PM\ Emission\ \{ton/VMT\} = 1.5\ (silt\ content\{\%\}/12)^{0.9}(vehicle\ weight\{tons\}/3)^{0.45}\big(1-(Con\ Eff/100)\big)(1\ ton/2000\ lb)$$

Source: Section 13.2.2, AP 42, November 2006

SOURCES OF INPUT DATA

INPUT DATA	Source
Input Data	Tampa Electric Company
Control Efficiency	Table 3.2.17-2 Workbook on Estimation and Dispersion Modeling for Fugitive Emissions Source: UARG, September 1981

NOTES AND OBSERVATIONS

Control efficiencies: None (0%); Side Enclosure (25%); Enclosure (85%); treated with dust suppression (90%)
Limestone moisture estimated around 5%.

Emission Inventory Work Sheet

Big Bend Power Station
Tampa Electric Company
Facility ID No. 0570039
FUGITIVE PM EMISSIONS - MATERIAL TRANSFER DROP LOCATIONS

INPUT DATA AND EMISSION CALCULATIONS

Emission Source Description:	Gypsum to Barge Transloading
PM Emissions:	$PM_{2.5}$
Emission Control Methods:	Best Management Practices
Emission Points:	Gypsum Transloading and Vehicle Miles Traveled Dust Emissions

INPUT DATA AND EMISSION CALCULATIONS

Mean wind speed:	8.6 mph	Gypsum Moisture:	5 % weight
Tons Transloaded:	300 tons/hr	Total Load:	300,000 tons/yr
Vehicle Miles Traveled (Paved):	2.0 miles/load	Vehicle Miles Traveled (Unpaved):	T miles/load
Vehicle Weight:	13 tons	Load Weight:	22 tons
silt loading:	10 g/m^2	Silt content -Unpaved Road:	5 % weight

		Material Transfer Rates		Uncontrolled Emission Factor	Control Efficiency	Uncontrolled Emission Factor	Potential $PM_{2.5}$ Emission Rates	
Material Transfer Point	Source ID	(ton/hr)	(tons/yr)	(lb PM/ton)	(%)	(lb PM/ton)	(lb/hr)	(ton/yr)
Gypsum Truck Unloading	TL-001	300	300,000	0.000095	0.0	0.000095	------	0.014
Potable Conveyor #1	CB-PC-001	300	300,000	0.000095	85.0	0.000014	------	0.0021
Potable Conveyor #2/Bunker	CB-PC-002	300	300,000	0.000095	0.0	0.000095	------	0.014
Clam Shell into Barge	CS-BL-001	300	300,000	0.000095	0.0	0.000095	------	0.014
Contingency Pile (extra dump)	CP-TU-001	300	75,000	0.000095	0.0	0.000095	------	0.0036
							Subtotal	0.045

		Travel Rates		Uncontrolled Emission Factor	Assumed Control Efficiency	Uncontrolled Emission Factor	Potential $PM_{2.5}$ Emission Rates	
Vehicle Travel	Source ID	(loads/yr)	(miles/yr)	(lb PM/VMT)		(lb PM/VMT)	(lb/hr)	(ton/yr)
Travel Truck Paved (full)	VMT-001	13,636	#VALUE!	0.16	90.0	0.016	------	#VALUE!
Travel Truck Paved (Empty)	VMT-002	13,636	#VALUE!	0.16	90.0	0.016	------	#VALUE!
Travel Truck Unpaved (Empty)	VMT-003	13,636	#VALUE!	0.13	90.0	0.013	------	#VALUE!
							Subtotal	#VALUE!
							Total	**#VALUE!**

Emission Inventory Work Sheet

Big Bend Power Station
Tampa Electric Company
Facility ID No. 0570039
FUGITIVE PM EMISSIONS - MATERIAL TRANSFER DROP LOCATIONS
EMISSION ESTIMATATION EQUATIONS

$$PM\ Emission\ \{tpy\} = 0.053 \times 0.0032 \left(\frac{(Wind\ speed\{mph\}/5)^{1.3}}{(Material\ Moisture/2)^{1.4}} \right) (Material\ Handled\{tph\}) \left(1 - (Con\ Eff/100)\right)(1\ ton/2000\ lb)$$

Source: Section 13.2.4, AP 42, November 2006

$$PM\ Emission\ \{ton/VMT\} = 0.00054(silt\ loading\{g/m^2\}^{0.91}(vehicle\ weight\{tons\})^{1.02}\left(1 - (Con\ Eff/100)\right)(1\ ton/2000\ lb)$$

Source: Section 13.2.1, AP 42, November 2006

$$PM\ Emission\ \{ton/VMT\} = 0.15(silt\ content\{\%\}/12)^{0.9}(vehicle\ weight\{tons\}/3)^{0.45}\left(1 - (Con\ Eff/100)\right)(1\ ton/2000\ lb)$$

Source: Section 13.2.2, AP 42, November 2006

SOURCES OF INPUT DATA

INPUT DATA	Source
Input Data	Tampa Electric Company
Control Efficiency	Table 3.2.17-2 Workbook on Estimation and Dispersion Modeling for Fugitive Emissions Source: UARG, September 1981

NOTES AND OBSERVATIONS

Control efficiencies: None (0%); Side Enclosure (25%); Enclosure (85%); treated with dust suppression (90%)
Limestone moisture estimated around 5%.