



February 9, 2015

David L. Read, P.E.  
Permitting Section 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

**E-Mail Notification**  
[David.Read@dep.state.fl.us](mailto:David.Read@dep.state.fl.us)

**RE: Tampa Electric Company - Big Bend Station  
Temporary Request to Transload Limestone  
Title V Permit Number 0570039-067-AV  
Facility ID No. 0570039  
E.U. ID No. -010, -047**

Dear Mr. Read:

Tampa Electric Company (TEC) is requesting a permitting exemption to unload limestone using different modes of transportation. Big Bend has experienced considerable variability in limestone quality, which appears to be impacting operations. Therefore, TEC is evaluating other sources of limestone to test in the flue gas desulfurization (FGD) process. One potential option is a source of limestone produced by Atlantic Minerals Limited (AML) from the Lower Cove in Canada. Due to the source location, this limestone will be transported by vessel from a port in Newfoundland, Canada.

Another potential source of limestone is produced by Lhoist in Ocala, Florida. This source be transported by either truck or railcar depending on the quantity purchased. If transported by truck, the limestone will be unloaded using the existing truck unloading area. This activity is currently authorized in the current Title V permit. If transported by rail, the limestone will be conveyed from the existing rail house unloading area and conveyed to the solid fuel yard area. Since the mode of transportation depends on the source location and quantity purchased, flexibility in the transportation mode is needed to evaluate new sources of limestone at Big Bend Station. Approximately, 105,000 tons of limestone will be unloaded by rail and/or vessel and tested at Big Bend Station.

## **Proposed Limestone Handling Activity**

### Vessel Material Handling

TEC proposes to utilize the existing solids fuel yard handling system to temporarily unload limestone from the vessels and store in the south or north fuel areas<sup>1</sup>. The PECO clam shell will be unload each vessel at TEC's dock area to existing conveyor CB-D1 (FH-001). The material will be transferred to the radially stack through existing conveyors D1, E1 and F1. The existing south stacker/reclaimer system will radially stack the limestone in a designated area in the south or north fuel yard. Heavy equipment such as track hoe loader will load each truck, which will haul the limestone to the existing unloading area located on the east side of the facility (FH-027, FH-072, FH-073, FH-064). **Table 1** shows the existing equipment and transfer points that will be utilized during this activity.

### Railcar Material Handling

TEC also proposes to utilize the existing solids fuel yard and the railcar unloading and conveying system to unload limestone by rail. As each railcar passes through the railcar unloading building, the limestone will be dropped through a stationary safety screen and into collecting hoppers. The limestone will be discharged from each collecting hopper through a series of slide gates to control the amount of limestone dropped onto the variable speed belt conveyor. A system of conveyors C10 to C-16 (RC-1 to RC-8) will be used convey limestone from the railcar unloading building to the conveyor F1 in the solid fuel yard (RC-9). Similar to the vessel material handling, the existing south stacker/reclaimer system will radially stack the limestone in a designated area in the south or north fuel yard. Heavy equipment such as track hoe loader will load each truck, which will haul the limestone to the existing unloading area located on the east side of the facility (FH-027, FH-072, FH-073, FH-064). **Table 2** shows the existing equipment and transfer points that will be utilized during this activity. Process flow diagrams illustrate the existing transfer points (see **Attachment A**).

## **Proposed Engineering Controls**

No new equipment will be required to transload the limestone by vessel and/or rail. The existing engineering controls and best management practices in the solid fuel yard handling system and the railcar unloading and conveying system will be used to minimize fugitive dust emissions. The existing covered conveyors, totally enclosed transfers points and water sprays/chemical surfactants will be used to minimize fugitive emissions from truck traffic, transfer points and storage piles. **Table 3** shows a summary engineering controls and best management practices.

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<sup>1</sup> The calculations are based on the south fuel yard. These calculations are also valid for the north fuel yard area. This request includes unloading and storage of limestone in either the south or north fuel yard areas.

**Table 1. Proposed Limestone Handling Transfer Points by Vessel.**

<b>E.U. ID No. -010: Solid Fuel Yard Unloading and Handling Operations</b>			
<b>ID</b>	<b>Brief Description</b>	<b>Pollutant</b>	<b>Engineering Controls</b>
<i>Barge Unloading Operations</i>			
FH-001	Barge Clamshell to Conveyor D1	Fugitive VE	BMP - FW.4,FW.5
<i>Coal Conveying Operations</i>			
FH-006	Conveyor D1 to Conveyor E1	---	Conveyor D1 not covered; Conveyor E1 Covered; Transfer Point Totally Enclosed
FH-007	Conveyor E1 to Conveyor F1	---	Conveyor F1 not covered; Conveyor E1 Covered; Transfer Point Totally Enclosed
FH-022	Conveyor F1 to South Stacker Conveyor (G1)	Fugitive VE	Transfer Point Enclosed
FH-023	South Stacker Conveyor (G1) to South/Center Storage Pile	Fugitive VE	BMP - FW.4,FW.5
<i>Coal Equipment &amp; Storage</i>			
FH-027	South Storage Pile	Fugitive VE	BMP - FW.4,FW.5
FH-064	Dozer Reclaim from Storage Pile to Loadout		BMP - FW.4,FW.5
FH-072	Trucks, Full		BMP - FW.4,FW.5
FH-073	Trucks, Empty		BMP - FW.4,FW.5

**Table 2. Proposed Limestone Handling Transfer Points by Rail.**

<b>E.U. ID No. -047: Railcar Unloading and Conveying System</b>			
<b>ID</b>	<b>Brief Description</b>	<b>Pollutant</b>	<b>Engineering Controls</b>
RC-1	Train Car Drop Unloading	---	Enclosed Building
RC-2	Transfer from BF-1 to Conveyor C-10	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-3	Conveyor C-10 to Conveyor C-11	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-4	Conveyor C-11 to Conveyor C-12	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-5	Conveyor C-12 to Conveyor C-13	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-6	Conveyor C-13 to Conveyor C-14	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-7	Conveyor C-14 to Conveyor C-15	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-8	Conveyor C-15 to Conveyor C-16	---	Covered Conveyor; Transfer Point Totally Enclosed
RC-9	Conveyor C-16 Drop to Conveyor F1	---	Conveyor F1 open, Transfer Point Totally Enclosed
<b>E.U. ID No. -010: Solid Fuel Yard Unloading and Handling Operations</b>			
<i>Coal Equipment &amp; Storage</i>			
FH-022	Conveyor F1 to South Stacker Conveyor (G1)	Fugitive VE	Enclosed Transfer Point Enclosed
FH-023	South Stacker Conveyor (G1) to South/Center Storage Pile	Fugitive VE	BMP - FW.4,FW.5
FH-027	South Storage Pile	Fugitive VE	BMP - FW.4,FW.5
FH-064	Dozer Reclaim from Storage Pile to Loadout		BMP - FW.4,FW.5
FH-072	Trucks, Full		BMP - FW.4,FW.5
FH-073	Trucks, Empty		BMP - FW.4,FW.5

## Proposed Emissions Rates

TEC performed a series of emission calculations to estimate PM and PM<sub>10</sub> emissions from the temporary activity. AP-42 procedure, Chapter 13.2.4 - Aggregate Handling and Storage Piles, was used to estimate the limestone 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 emission calculations are shown in **Attachment B**.

**Table 3** shows the estimated PM emissions from the proposed activity. The calculation shows the total limestone fugitive emissions from PM and PM<sub>10</sub> are below 5 tons per year.

**Table 3. Summary of Combined PM Emissions by Vessel and Rail.**

Description	PM Emissions (tons/year)	PM <sub>10</sub> Emissions (tons/year)
Transfer Points	3.0	1.4
Storage Pile (Wind Erosion)	0.086	0.043
Storage Pile Management (Dozer Operations)	0.15	0.032
Truck Traffic	1.1	0.24
Totals	<b>4.4</b>	<b>1.7</b>

As stated earlier, TEC is evaluating new sources of limestone in the FGD systems. TEC will continue to test other new sources of limestone as necessary. TEC is requesting a permitting exemption to transload new sources of limestone by rail and/or sea vessel. This operation is planned to commence in late February 2015 and potentially lasting throughout the year. If a permanent transportation mode is identified, TEC will address this activity in a future permitting application. Please contact me at (813) 228-4232, if you have any questions regarding this request.

Sincerely,

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

EHS/iyw/ RAV264 Temp Request to Transload Limestone

Cc: Tammy McWade DEP