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BUREAU OF AIR REGULATION

April 22, 2002

Mr. Clair Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
111 South Magnolia Avenue, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7918 2101 9366

**Re: Big Bend Station
Request for Additional Information
Use of Asphalt-Based Binder as a Coal Dust Suppressant**

Dear Mr. Fancy:

Tampa Electric Company (TEC) has received your letter dated September 26, 2001 requesting additional information with regard to the use of an asphalt-based coal dust suppressant binder. This correspondence is intended to provide a response to each specific issue raised by the Department. For your convenience, TEC has restated each point and provided a response below each specific issue.

FDEP Item 1.

Please provide the Manufacturers Safety Data Sheet for the proposed material.

TEC Response

The requested Manufacturers Safety Data Sheet (MSDS) is enclosed as Attachment 1.

FDEP Item 2.

Please provide a detailed evaluation of the effects of combustion of this asphalt-based material, comparing future potential emissions to the past actual emissions from these boilers.

TEC Response

As previously advised, the Asphalt Emulsion material is a liquid emulsion comprised primarily of asphalt and water. The high combustion temperatures and residence times occurring in the Big Bend Station coal-fired furnaces would be expected to result in essentially complete oxidation of the Asphalt Emulsion binder to carbon dioxide (CO₂) and water (H₂O). TEC proposes to apply the Asphalt Emulsion material on an 8.74 gallon per ton of coal basis. At a liquid density of 8.35 pounds per gallon, the binder will comprise only 3.5 weight cent of the treated coal. Based on the small quantities of Asphalt Emulsion material that will be combusted and since the binder is expected to be essentially completely oxidized in the Big Bend Station coal-fired furnaces, any change in actual annual emission rates due to the combustion of Asphalt Emulsion treated coal at the Big Bend Station will be negligible.

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FDEP Item 3.

Please address the potential increase in hazardous air pollutant (HAP) emissions, as well as all criteria pollutant emissions, as a result of the combustion of this asphalt-based material.

TEC Response

Please see the response to FDEP Item 2. above. Due to the small quantities of Asphalt Emulsion material that will be combusted and expected essentially complete oxidation of the binder material in the Big Bend Station coal-fired furnaces, any change in actual HAP or criteria pollutant emission rates due to the combustion of Asphalt Emulsion treated coal at the Big Bend Station will be negligible.

FDEP Item 4.

Please address the potential increase in emissions of heavy metals as a result of the combustion of this asphalt-based material.

TEC Response

The following data concerning heavy metal concentrations of the Asphalt Emulsion was provided by the binder manufacturer:

<i>Metal</i>	<i>Concentration (mg/l)</i>
<i>Arsenic</i>	<i><0.10</i>
<i>Barium</i>	<i>0.64</i>
<i>Cadmium</i>	<i>0.010</i>
<i>Chromium</i>	<i>0.051</i>
<i>Lead</i>	<i><0.050</i>
<i>Mercury</i>	<i><0.00020</i>
<i>Selenium</i>	<i><0.10</i>
<i>Silver</i>	<i><0.010</i>

Due to these low heavy metal concentrations, the small amounts of Asphalt Emulsion coal binder that will be combusted, and the existing particulate matter control systems in use at the Big Bend Station (i.e., electrostatic precipitators), heavy metal emissions due to the combustion of Asphalt Emulsion treated coal at the Big Bend Station will be negligible.

FDEP Item 5.

Please provide information on the heat content of this material and compare it to the heat content of the coal that it will be applied to.

TEC Response

The heat content of the Asphalt Emulsion material, based on manufacturer data, is 17,186 British thermal units per pound (Btu/lb), higher heating value (HHV). The average heat content of coal combusted at the Big Bend Station in 2000 was approximately 12,000 Btu/lb, HHV.

FDEP Item 6.

Please provide information on the sulfur content of this material and compare it to the sulfur content of the coal that it will be applied to.

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TEC Response

The sulfur content of the Asphalt Emulsion material, based on manufacturer data, is 1.4 weight percent. The average sulfur content of coal combusted at the Big Bend Station in 2000 was 2.54 weight percent.

FDEP Issue 7.

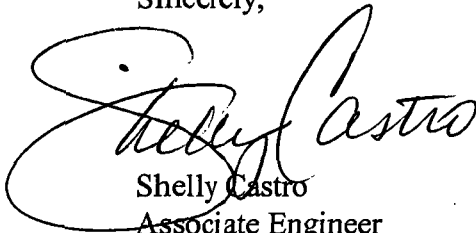
Please provide information on the percentage, by weight, that this material will comprise in the coal, as it is being combusted.

TEC Response

The Asphalt Emulsion binder material will comprise 3.5 weight percent of the treated coal.

TEC understands that with the submission of this additional information, the Department will continue processing our request to combust Asphalt Emulsion treated coal at the Big Bend Station. If you have any further questions regarding this matter, please contact me at (813) 641-5033.

Sincerely,



Shelly Castro
Associate Engineer
Environmental Affairs

Enclosure

EA/gm/SSC115

c/enc: Mr. Jerry Kissel, FDEP-SW District
Mr. Jerry Campbell, EPCHC

Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard
 29 CFR 1900.1200. Standard must be
 consulted for specific requirements

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072

IDENTITY (As Used on Label and List)
Asphalt Emulsion

Section 1

Manufacturer's Name Midwest Terminals of Toledo Inc.	Emergency Telephone Number 419-367-1028
Address 2633 Sunset Lane Henderson, KY 42420	Telephone Number for Information 270-830-6560
	Date Prepared 7/23/01
	Signature of Preparer (optional)

Section 2 - Identity Information

Hazardous Components	CAS Number	OSHA PEL	ACGIH TLV	Other Limits	% (optional)
Asphalt					45 - 65%
Tall Oil					.03 - .05%
Caustic Soda					.025 - .045%
Water					34.905 - 54.945%

Section 3 - Physical / Chemical Characteristics

Boiling Point	212°F		
Vapor Pressure(mm HG)	approx. 22 @ 77°F	Specific Gravity (H ₂ O=1)	0.96-1.05
Vapor Density (Air =1)	>1	Melting Point	N/A
Solubility in Water	moderately to completely	Evaporation Rate (Butyl Acetate=1)	similar to water
Appearance and Odor	Light brown liquid, minimal odor		

Section 4 - Fire and Explosion Hazard Data

Flash Point(Method Used)	Flammable Limits	
Not Applicable as an Emulsion	LEL	UEL
Extinguishing Media		
If water is evaporated, treat as with an asphalt / oil fire. Use dry chemical foam CO ₂		
Special Fire Fighting Procedure		
Do not enter confined fire area without full bunker gear and NIOSH approved, self-contained breathing apparatus.		
Unusual Fire and Explosion Hazards		
Emulsion may foam if heated to 212°F. If materials in excess of 212°F are added to the emulsion, foaming can occur.		