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DIVISION OF AIR
RESOURCE MANAGEMENT

October 18, 2012

Jeffery 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

Via FedEx
Airbill No. 7992-2525-8428

**Re: Tampa Electric Company – Big Bend Station
Fugitive Coal Dust Emissions Control Plan
Supplemental Material Handling J3 Conveyor System (EU-048)
Permit No. 0570039-057-AC
Facility ID No. 0570039**

Dear Mr. Koerner:

Tampa Electric Company (TEC) is submitting the fugitive coal dust emissions control plan pursuant to Section 3, condition 10 of Permit No. 0570039-057-AC. The existing fugitive coal dust emissions control plan has been revised to incorporate the Supplemental Material Handling J3 Conveyor System (EU-048) pursuant to 40 CFR 60, Subpart Y - *Standards of Performance for Coal Preparation and Processing Plants*.

Please contact me at (813) 228-4232 or Byron Burrows at (813) 228-1282, if you have any questions.

Sincerely,

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

EHS/iym/RAV171

Enclosure

c/enc: Robert Wong, FDEP
Diana Lee, EPCHC

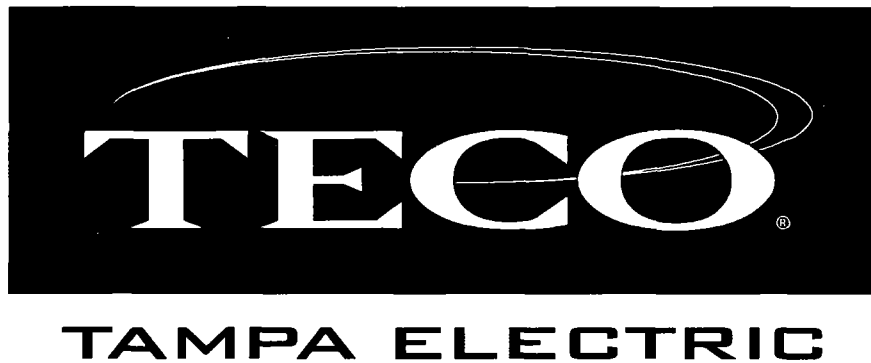
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Tampa Electric Company



Big Bend Station

Fugitive Coal Dust Emission Control Plan



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- Attachment A – Process Flow Diagram - Railcar Unloading and Conveying System
- Attachment B – Process Flow Diagram - J3 Conveyor System
- Attachment C – Surfactant MSDS



1.0 INTRODUCTION

Tampa Electric Company (TEC) is required to prepare a fugitive coal dust emissions control plan for constructed, reconstructed, or modified handling facilities completed after May 27, 2009 pursuant to 40 CFR 60 Subpart Y. Currently, the J3 conveyor system in the Solid Fuel Yard (EU-010) and railcar unloading and conveying system (EU-047) are only handling activities that are subject to the requirements of Subpart Y. The other coal conveyance systems in the Solid Fuel Yard (EU-010) were constructed in the 1970's.

The fugitive coal dust emissions control plan identifies and describes the control measures utilized to minimize fugitive coal dust emissions from open storage pile and conveying operation that are subject to the requirements of Subpart Y. This plan documents the implementation of partial building enclosures, covered/enclosed systems, water spray or fogging systems and chemical dust suppression agents to reduce fugitive emissions. Furthermore, TEC also provides other alternate control measures that may be used to further reduce fugitive dust emissions.

This plan has been revised to incorporate to J3 conveyance system in the Solid Fuel Yard (EU-010). The J3 conveyor system will serve as a supplemental conveyance system for coal, coal blends and coal supplemental additives (such as limestone, flux, magnesium oxide, petroleum coke, ecotherm) for use with the existing conveyance feed system. In the event the use of an existing back up coal conveyor system or related equipment is warranted, the J3 conveyor system will be available to operate continuously.

2.0 COAL HANDLING OPERATIONS

The J3 conveyor system in the Solid Fuel Yard (EU-010) and railcar unloading and conveying system unloading (EU-047) are only handling activities that are subject to the requirements of Subpart Y. A description of each activity is discussed below.

2.1 Railcar Unloading and Conveying System (EU-047)

As an alternative to receiving solid fuel or slag by ship and/or barge, these materials may be delivered by railcar in the railcar unloading building. The railcar unloading building is an enclosed structure (except for the railcar entrance and exit openings), designed to receive material through a slow and controlled continuous unloading process. The railcar will drop the material as each railcar unit enters the unloading building and will continue to discharge the material from its tapered bottom chutes until the railcar reaches the exit end of the building. Once the material is discharged from the railcars, it drops through a stationary safety screen and into collecting hoppers. Each collecting hopper has tapered discharge chutes equipped with slide gates. From the collecting hoppers, the material falls directly onto a variable speed belt which feeds to the series of conveyors that transfers the material to the existing P1 or F1 conveyors of the solid fuel yard (see E.U. ID No. -010). The series of conveyors associated with the Railcar Coal Unloading System consist of conveyors C-10, C-11, C-12, C-13, C-14, C-15 and C-16. The railcar unloading and conveying system is designed for a transport rate of 4,000 tons per hour (TPH) and maximum annual transfer for the railcar unloading operations is 8,000,000 tons per year. A process flow of the railcar unloading and conveying system (EU-047) is shown in **Attachment A**.

2.2 J3 Conveyor System in the Solid Fuel Yard (EU-010)

The J3 Conveyor System is utilized to feed coal, coal blends, and supplemental coal additives. Heavy equipment, such as bull dozers or similar equipment, advances coal, coal blends or supplemental coal additives to the grizzly in-feed hopper (FH-100 and FH-101, dozer operations) from the south coal pile. The material is fed by the dozer trap onto a 72" covered belt conveyor (FH-101) and is then conveyed to a 54" covered belt conveyor (FH-102). Finally, the coal, or supplemental material, is conveyed to the existing enclosed L1 and L2 conveyors). The combination of the dozer trap, the 72" belt conveyor and the 54" belt conveyor are collectively referred to as the J3 Conveyor System. The maximum throughput rate is designed for 2,000 tons per hour of solid materials, which is about half of the feed rate of the primary (existing) conveyor systems. A process flow of the J3 conveyor system (EU-010) is shown in **Attachment B**.

3.0 CURRENT DUST CONTROL MEASURES

The control of fugitive emissions of fuel at all of Tampa Electric's facilities is a primary concern of the fuel yard and plant operators. Fugitive dust is not only a necessary environmental concern, but also an operational and safety concern as well. Therefore, Tampa Electric has implemented numerous control measures for preventing the emission of fuel dust to the air. The following is a summary of some of these measures. The J3 conveyor system in the Solid Fuel Yard (EU-010) and railcar unloading and conveying system unloading (EU-047) are only the only conveyance systems at the facility subject to the requirements of Subpart Y. The process diagrams illustrate these coal handling activities.

3.1 Railcar Unloading and Conveying System (EU-047)

3.1.1 *Surfactant Application*

The application of surfactant to coal fuel blends is one of the primary methods to control fugitive dust emissions. The surfactant acts to bind the smaller fuel particles and prevents their loss due to wind erosion. This substantially reduces nuisance dust and fugitive emissions. The surfactants have an added benefit of sealing the coal keeping the moisture and oxygen content as low as possible. This reduces the deterioration of the stored coal and improves the heating value during combustion.

Surfactants are added to fuel prior to arrival from the ocean vessel or railcars. Depending upon weather conditions and the condition of the fuel upon arrival at Big Bend the fuel may be sprayed with surfactant at the time of offloading. The surfactant addition system is located at the transfer structure T2. The surfactant system consists of one 7,500 gallon tank containing a Midwest RDC 8020 or equivalent surfactant. The surfactant is directly applied in the fuel yard in either North or South conveyer chutes using a spray nozzle system. A MSDS of the typical surfactant is shown in **Attachment C**.

3.1.2 *Fogging System*

The fugitive emissions are controlled with a fog type dust suppression system at all drop points within the enclosures (RC-1 to RC-9) as needed. The fogging system increases the surface tension on the surface of the coal and reactivates the previously applied surfactant to bind the smaller fuel particles on the surface.

3.1.3 *Enclosed Unloading and Conveyors*

The fugitive emissions are controlled from unloading and during conveying. The railcar unloading building is an enclosed structure (except for the railcar entrance and exit openings) and receives material through a slow and controlled continuous unloading process. The belt conveyors are covered and all enclosed at all transfer/drop points to reduce fugitive emissions. The fogging system and enclosures work together to significantly reduce fugitive emissions at the transfer/drop points.

3.2 J3 Conveyor System in the Solid Fuel Yard (EU-010)

3.2.1 Surfactant Application

The J3 conveyor system processes coal fuel blends from solid fuel yard. At this location, the fuel has already been treated with surfactant discussed in Section 3.1.1.

3.2.2 Enclosed Conveyors

The fugitive emissions are controlled with an enclosed conveyor system on all transfer and drop points.

3.2.3 Manual Water Spray Application

Best management practices will be used during the operation of the J3 conveyor system. As necessary, manual water sprays or water trucks will be utilized to the control emissions operation during the heavy equipment operations.

3.3 Other Water Applications

In addition to the sprinklers, water application is accomplished with a special purpose water wagon. The wagon has a 5,000 gallon capacity and is used periodically to wet fuel piles during reclaiming and other transfer operations. When necessary, daily activities may also include the wetting of facility roadways.

4.0 ALTERNATIVE CONTROLS

At the request of EPCHC's Air Management Division, Tampa Electric has investigated alternative and supplemental practices to the current fuel fugitive emission control practices.

4.1 Wind Screens or Tarps

Wind screens or tarps are commonly used for the control of fugitive dust emissions, but their feasibility declines with the size of the application and the amount of activity in the vicinity of the screen. Wind screens or tarps are not feasible at Big Bend due to the large size of the fuel yard and the fact that fuel is periodically moved for pile maintenance. All of the piles at the Big Bend are active piles and application tarps would require the constant movement of the tarps that could result in additional fugitive emissions.

4.2 Alternative Surfactants

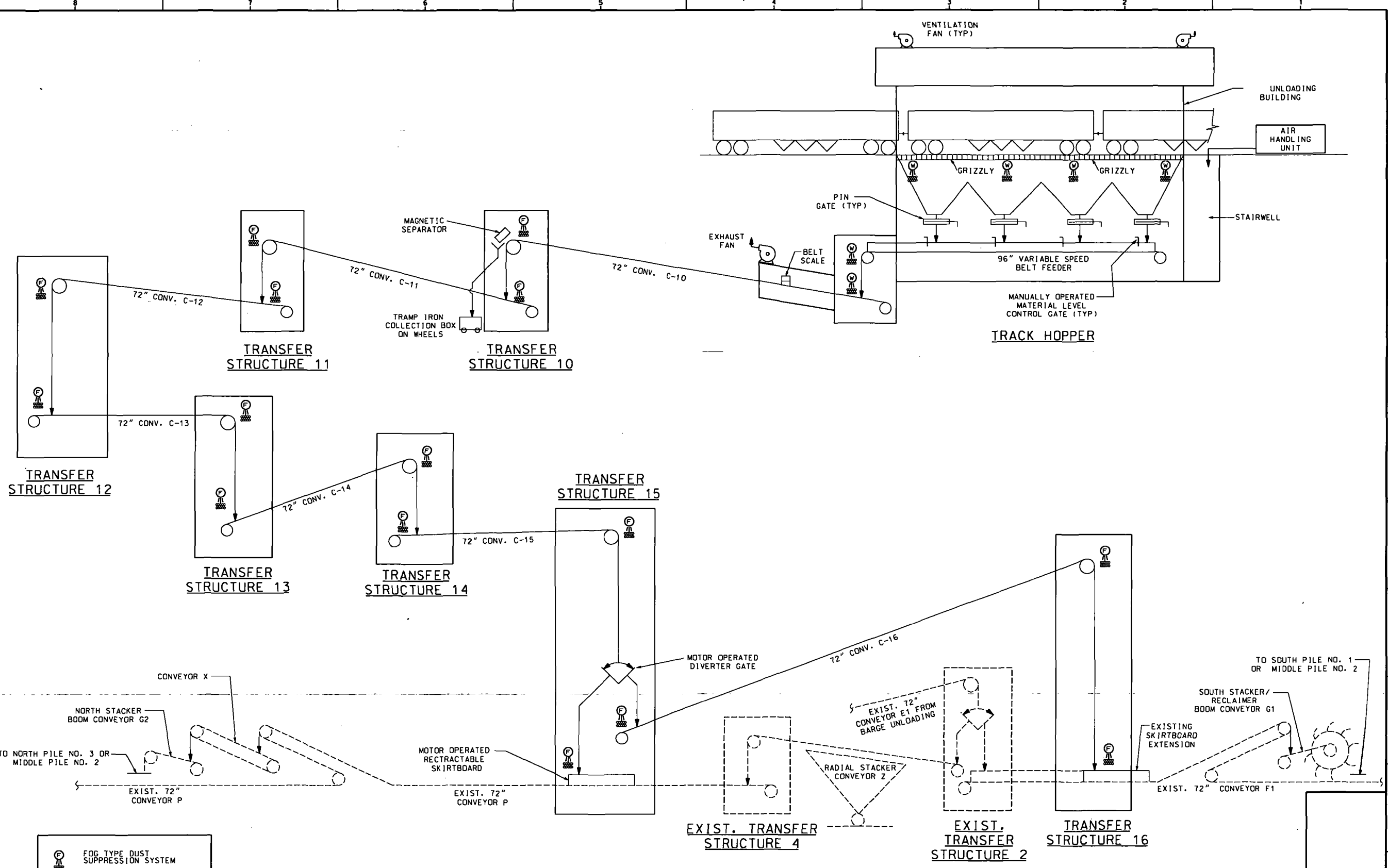
Tampa Electric Company continuously evaluates other surfactants or chemical binders. One alternative includes fuel binder emulsions. This is an emulsified complex petroleum hydrocarbon and water.



4.3 Alternative Coal Pile Arrangement

An important factor in wind erosion with regard to pile arrangement is the height of the pile. The current arrangement and management of coal piles on the site has been optimized to minimize wind erosion. If proportions of fuel types stored are significantly modified, the optimization of the piles will be re-evaluated.

Attachment A

Railcar Unloading and Conveying System



 FOG TYPE DUST SUPPRESSION SYSTEM
 WATER/SURFACTANT DUST SUPPRESSION SYSTEM

NOTE:-
 1. MAXIMUM CONVEYING CAPACITY 4400 TPH AT 650 FPM BELT SPEED.

DRAWING RELEASE RECORD					
REV	DATE	REL'D	PREPARED	REVIEWED	APPROVED
A	07-15-2008		D. SCHRADER	B. SHAH	
B	08-20-2008		D. AMIN	B. SHAH	



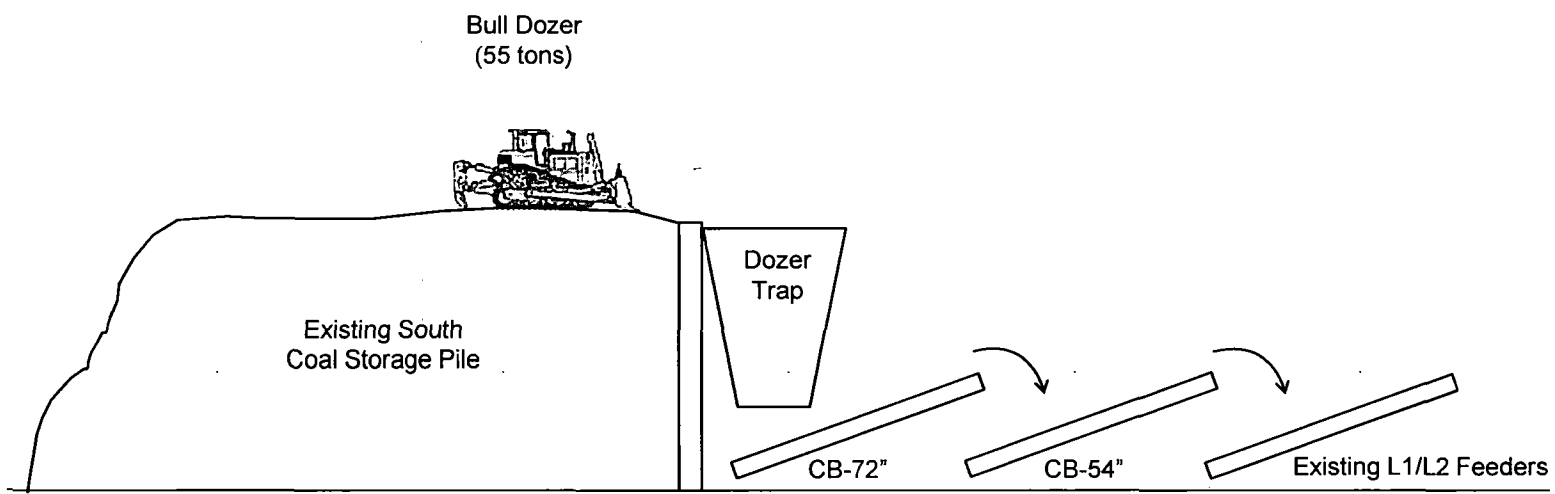
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
 FILE I.D.: BIG-CHS-SK10.DGN

FLOW DIAGRAM
BOTTOM DUMP RAIL CAR UNLOADING AND COAL CONVEYING SYSTEM
 BIG BEND POWER STATION
 TAMPA ELECTRIC CO

Bergant & Lundy
 55 E. WOODS STREET
 CHICAGO, ILLINOIS 60601-5780
 CERTIFICATION OF AUTHORIZATION NO. 0330
 DRAWING NO. REV
 SK-10 B

Attachment B

J3 Conveyor System



Source ID
FH-100

Source ID
FH-101

Source ID
FH-102

Source ID
FH-103

Process Flow Diagram - J3 Conveyor System



Attachment C

Surfactant MSDS

Dust-Buster® RDC-8020

Midwest Dust Control

SECTION I — IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

TRADE NAME: Dust-Buster® RDC-8020
CHEMICAL NAME: Sulfonate Mixture in Water
SYNONYMS: N/A
CHEMICAL FAMILY: N/A
MOLECULAR WEIGHT: N/A
FORMULA: N/A
CAS REGISTRY NO.: 68439-57-6

SECTION II — COMPOSITION/INFORMATION ON INGREDIENTS

NAME	%	CAS REG NO.
Olefin Sulfonate	No Data Available	68439-57-6

SECTION III — FIRST AID MEASURES

EYES: Do not rub eyes. Flush eyes with clear water for at least fifteen (15) minutes while rotating eyes in every direction to ensure that no solid particles remain in creases or eyelids. If so, continue to flush. If irritation persists, consult an ophthalmologist.
INHALATION: If overcome by vapor or mist from sprayed product, immediately remove from exposure and call a physician. If breathing is irregular or has stopped, start resuscitation.
SKIN: Remove from source of irritation. Remove any contaminated clothing and wash affected area(s) thoroughly with a mild soap and water. Launder clothing before re-using. If irritation persists, consult a physician.
INGESTION: If swallowed and person is conscious, induce vomiting to prevent further absorption. Keep exposed person at rest and immediately call physician. Never give anything by mouth to an unconscious person.

SECTION IV — FIRE FIGHTING MEASURES

FLAMMABILITY: No
FLASH POINT (TEST METHOD): N/A—aqueous based solution
AUTOIGNITION TEMPERATURE: N/D
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
EXTINGUISHING MEDIA AND INSTRUCTIONS: ——— Product is not flammable. Use media appropriate to primary source of fire. If unknown, use dry chemical, water spray, water fog, carbon dioxide, foam or sand/earth. Firefighters should be equipped to prevent breathing of vapor, mist or products of combustion. Use NIOSH approved self-contained breathing apparatus for organic vapors and wear appropriate clothing.

SECTION V — ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES: Shut off product at source. Ensure adequate ventilation, especially in confined spaces. Use appropriate respiratory protection. Contain spill and prevent product from entering all bodies of water. Remove all non-essential personnel due to slippery condition. Clean up spill, including any soil and water that is contaminated as soon as possible with pump or vermiculite, sand or similar inert material. Reclaim product for re-use if possible, or collect and seal in DOT approved containers for disposal in an appropriate manner.

SECTION VI - HANDLING AND STORAGE

STORAGE: Consumption of food and beverages should be avoided in work areas where product is being used. After using product, always wash hands and face with soap and water before eating, drinking, or smoking.
HANDLING: Keep container closed when not in use. Use in well ventilated area. Store in a location well away from strong oxidizers. Keep product between 40°F and 120°F. Do not allow product to freeze. Empty containers may retain product residue and vapors.

SECTION VII — EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION: If high vapor or mist concentrations are expected, use NIOSH approved respirator for organic vapors.
EYE PROTECTION: Safety goggles or chemical splash goggles, especially if splashing is anticipated.
PROTECTIVE CLOTHING: Clothing to minimize skin contact, long sleeves, boots or shoes. Change clothing frequently if contaminated with product. Launder soiled work clothes before re-using. For casual contact PVC gloves are suitable, for prolonged contact use neoprene or nitrile gloves.

SPECIFIC ENGINEERING CONTROLS TO BE USED WITH THIS PRODUCT:

This material has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. However, if vapor is generated as the product is heated, misted, or sprayed, adequate ventilation in accordance with good engineering practices must be provided to maintain concentrations below the specified exposure or flammable limits.

PROCEDURES TO FOLLOW IN CASE OF A SPILL OR LEAK:

Shut off product at source. Ensure adequate ventilation, especially in confined spaces. Use appropriate respiratory protection. Contain spill and prevent product from entering all bodies of water. Remove all non-essential personnel due to slippery condition. Clean up spill, including any soil and water that is contaminated as soon as possible with pump or vermiculite, sand or similar inert material. Reclaim product for re-use, if possible, or collect and seal in DOT approved containers for disposal in an appropriate manner.

SECTION VIII — PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (C): 100-105°C
VAPOR PRESSURE (mm Hg): Not determined
SPECIFIC GRAVITY: 1.1 @ 20°C
SOLUBILITY IN WATER: Soluble
APPEARANCE: Pale yellow viscous liquid
ODOR: No specific odor
POUR POINT: N/D
pH: N/D
ACIDITY: N/A
ALKALINITY: N/A
FREEZE POINT: N/D
EVAPORATION RATE: N/D
ODOR THRESH (ppm): N/D
OIL/WATER COEFFIC: N/D

Midwest Industrial Supply, Inc.
 1101 3rd Street Southeast
 Canton, Ohio 44711
 www.midwestind.com

Tel 330.456.3121
 Fax 330.456.3247

Emergency Phone Number 1.800.321.0699



MIDWEST

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SECTION IX— STABILITY AND REACTIVITY

STABILITY:	Stable under normal handling conditions.
CHEMICAL INCOMPATIBILITY:	Strong oxidizers such as, but not limited to, hydro peroxide, bromine and chromic acid.
HAZARDOUS DECOMPOSITION PRODUCTS:	Combustion may yield carbon dioxide and carbon monoxide. In addition, oxides of nitrogen and sulfur dioxide may be emitted.
HAZARDOUS POLYMERIZATION:	This product is not subject to polymerization.
CONDITIONS TO AVOID:	None known
CORROSIVE TO METAL:	N/A

SECTION X— TOXICOLOGICAL CONSIDERATIONS

EFFECTS OF OVEREXPOSURE

INHALATION:	Vapors and mist may be irritating to nose, throat and mucous membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Symptoms include irritation, coughing, chest pain and difficulty in breathing.
SKIN:	Frequent or prolonged skin contact with out adequate personal protection may be irritation to exposed skin and may lead to dermatitis.
EYES:	Vapors may be irritating to eyes. Liquid or mist may also cause irritation in addition to burning and redness if exposure is severe. Swallowing large amounts may cause nausea and vomiting.
INGESTION:	
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:	Exposure to product with out adequate personal protection may aggravate pre-existing respiratory disease or skin condition (such as dermatitis).
CARCINOGENICITY:	Based on studies to date CDS-8020 is not known to be carcinogenic to humans.
NTP	No studies were found. IARC - No studies were found. OSHA - No studies were found.

SECTION XI— DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Consult your local authorities for regulations. Preferred waste management: recycle or reuse, incinerate with energy recovery, disposal in a licensed facility. Disposal facility should be compliant with state, local and federal government regulations.

SECTION XII— TRANSPORTATION INFORMATION

D.O.T. PROPER SHIPPING NAME (49CFR172.101):	Non-regulated
HAZARDOUS SUBSTANCE (40CFR116):	N/A
REPORTABLE QUANTITY (RQ):	N/A
D.O.T. HAZARD CLASSIFICATION (49CFR172.101):	Non-regulated
D.O.T. PLACARDS REQUIRED:	None
POISON CONSTITUENT (49CFR173.343):	N/A
BILL OF LADING DESCRIPTION:	
C NO.:	N/A
UN/NA CODE:	N/A

SECTION XIII— REGULATORY INFORMATION

EPA SARA Title III hazard class:	None
OSHA HCS hazard class:	N/A
EPA SARA Title III Section 313 (40CFR372) Toxic Chemicals present in quantities greater than the "de minimus" level are:	None

SECTION XVI — OTHER INFORMATION

ABBREVIATIONS AND SYMBOLS:	N.D. - Not Determined
	N.A. - Not Applicable
	N.T. - Not Tested
	< - Less Than
	> - Greater Than