# (: 450 ) =60491, 1 100-00014 10/16/02 -f h6 NGM: DOMININ Terminal 2.inf

# **P&A** Engineers and Consultants, Inc.

P.O. Box: 470 Alum Creek, W.Va. 25003-0470

Phone (304) 756-4066 Fax (304) 756-4068

October 15, 2002

P.O. Box: 279 Louisa, Ky. 41230

Phone (606) 673-4413 (606) 673-4415



Mr. Dennis Treacy, Director Commonwealth of Virginia Department of Environmental Quality 5636 Southern Boulevard Virginia Beach, VA 23462

Re: Dominion Terminal Associates – Pier 11 Facility AIRS ID 51-700-00074, Registration No. 60997 Air Quality Modification Application

Dear Mr. Treacy:

On behalf of our client, Dominion Terminal Associates, P & A Engineers and Consultants, Inc. submit the attached modification application to the coal/coke storage and export facility for your

review and approval.

The purpose of this modification application is to identify existing and proposed NSPS equipment, as well as additional storage, associated with the production of a synfuel product. The synfuel process consists of coal fines being treated with a binding agent that creates a chemical change and produces an alternate fuel source. As evidenced in the attached MSDS sheets, the proposed binder for the synfuel product is environmentally friendly and contains no VOC's.

Dominion Terminal Associates currently maintains a highly efficient dust suppression system and proposes no change to its operation or current permit requirements in regard to emission controls.

If additional information or clarification is needed, please contact me at the Alum Creek address listed above or call 304-756-4066.

Sincerely, Jana John



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•

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# Section B General Information

Section C Processing, Manufacturing, Surface Coating and Degreasing Operations – Form 5

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Section E Air Pollution Control and Monitoring Equipment – Form 12

Section F Air Pollution Control – Supplemental Information – Form 13

Section G Criteria Pollutant Emissions – Form 14

Section H Toxic or Hazardous Emissions From Proposed Facility – Form 15

| Section I | <b>Control Device Listing</b>            |
|-----------|--|
| Section J | <b>Emission Calculations</b>             |
| Section K | Material Flow Diagram – Proposed Facilit |
| Section L | Site Plan                                |
| Section M | <b>Proposed Synfuel Binder</b>           |

#### COMMONWEALTH OF VIRGINIA Department of Environmental Quality



#### AIR PERMIT APPLICATION General information CHECK ALL FORMS THAT APPLY AND LIST ALL ATTACHED DOCUMENTS.

CRITERIA POLLUTANT EMISSIONS, Page 14

PROCESS FLOW DIAGRAM/SCHEMATIC

OPERATING PERIODS, Page 16

LIST ATTACHED DOCUMENTS

MAP of SITE LOCATION

FACILITY SITE PLAN

MSDS or CPDS SHEETS

MAP AND LOCALITIES LIST (information), Pages iii-vi

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\_\_ INCINERATORS, Page 7

- \_\_\_ VOLATILE ORGANIC COMPOUND/PETROLEUM STORAGE TANKS, Page 8
- \_\_VOLATILE ORGANIC COMPOUND/PETROLEUM STORAGE TANKS -CONTINUED, Page 9
- LOADING RACKS AND OIL-WATER SEPARATORS, Page 10.

STACK PARAMETERS AND FUEL DATA, Page 11

ESTIMATED EMISSIONS CALCULATIONS \_ STACK TESTS

\_ AIR MODEL DATA

\_\_LOCAL GOVERNING BODY CERTIFICATION FORM

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT, PAGE 12

Note added form sheets above; also indicate the number of copies of each form in blank provided.

DOCUMENT CERTIFICATION FORM (see other side for instructions)

I certify under penalty of law that this document and all attachments [as noted above] were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE:

NAME:

PRESIBANT

DATE: 10/15/02

NUMBER: 60997





#### REGISTRATION

**Dominion Terminal Associates** COMPANY: References: Virginia Regulations, 9 VAC 5-80-10.D.4. See reverse of this form for instructions.



Page Revised April 15, 2002

#### COMMONWEALTH OF VIRGINIA DEP. IENT OF ENVIRONMENTAL QUALITY AIR PERMIT APPLICATION GENERAL INFORMATION

| PERSON COMPLETING FORM   | DATE     | REGISTRATION NUMBER |
|--|----------|---------------------|
| Donna J. Toler, Air Quality Project Manager, P & A Engineers and Consultants, Inc. | 10-15-02 | 60997               |

| REASON(S) FOR SUBMISSION:   |  |
|-----------------------------|--|
| OPERATING PERMIT            |  |
| RENEWAL OF OPERATING PERMIT | (CURRENT PERMIT EXPIRATION DATE:)  |
| MODIFICATION                | THIS PERMIT IS APPLIED FOR PURSUANT TO THE<br>FOLLOWING PROVISION(S) OF THE VIRGINIA   |
| NEW SOURCE                  | REGULATIONS OR FEDERAL REGULATIONS (IF KNOWN):<br>9 VAC 5-80-10 (NEW AND MOD. SOURCES) |



Would you be interested in a DEQ Pollution Prevention (P2) site visit to discuss the potential benefits of implementing P2 practices at your facility? Please note that there is no charge for this service and that the site visit is not limited to air pollution issues. Site visits can yield air/water pollution or waste minimization recommendations that can benefit your facility. The purpose of these visits is not to assess compliance with applicable regulatory requirements.



If yes, would you prefer the P2 site visit to occur:

| COMPANY AND DIVISION NAME:           |                             |              | ·····                  |           |
|--------------------------------------|-----------------------------|--------------|------------------------|-----------|
| <b>Dominion Terminal Associates</b>  |                             |              |                        |           |
| MAILING ADDRESS:                     |                             |              |                        |           |
| PO Box 967A, Newport News, VA 2      | 23607                       |              |                        |           |
| TELEPHONE NUMBER:                    | NUMBER OF EMPOLYEES AT S    | SITE:        | PROPERTY AREA AT SITE: |           |
| 757-245-2275                         |                             |              |                        |           |
| EXACT SOURCE LOCATION - INLCUDE NAM  | E OF CITY (COUNTY) AND FULL | STREET ADDRE | SS OR DIRECTIONS:      | . <u></u> |
| Pier 11, Harbor Road, Newport News   | , VA 23607                  |              |                        |           |
| PERSON TO CONTACT ON AIR POLLUTION N | ATTERS - NAME AND TITLE:    | PHONE NUME   | 3ER:                   |           |
|                                      | 275 ext. 307                |              |                        |           |
| DERRIS BRADSHAW, PE                  |                             | FAX NUMBER   | l:                     |           |
| Plant Engineer                       |                             | 757-247-9    | 729                    |           |



Please check here if you obtained this form from the DEQ website.

|              | FOR OFFICIAL USE ONL | Υ            |  |
|--------------|----------------------|--------------|--|
| COUNTY CODE: | PLANT ID NUMBER:     | UTM NUMBERS: |  |
|              |                      |              |  |
| <b>.</b>     |                      |              |  |

#### COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AIR PERMIT APPLICATION GENERAL INFORMATION (continued)

| COMPANY NAME                 | DATE     | REGISTRATION NUMBER |
|------------------------------|----------|---------------------|
| Dominion Terminal Associates | 10-15-02 | 60997               |

IS THE FACILITY TO BE PERMITTED AS A PORTABLE PLANT?YES \_\_\_\_NO

DESCRIBE THE PRODUCTS MANUFACTURED AND/OR SERVICES PERFORMED AT THIS FACILITY:

Coal and coke handling, storage, and barge loading facility modified to include a synfuel processing plant with storage and loadout of the alternative fuel source.



PRIMARY SIC SECONDARY SICs

PLEASE LIST ALL THE FACILITIES IN VIRGINIA UNDER COMMON OWNERSHIP OR CONTROL BY THE OWNER OF THIS FACILITY:

|   |             | <br>                                       | · · · · · · · · · · · · · · · · · · · |  |
|---|-------------|--|---------------------------------------|--|
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**MILESTONES.** This section is to be completed if the permit application includes a new emissions unit or modification to existing operations.

| MILESTONES*                                   | STARTING DATE        | ESTIMATED COMPLETION DATE  |
|---|----------------------|----------------------------|
| New equipment installation                    | Upon Permit Approval | Approx. 90 days thereafter |
| Modification of existing process or equipment |                      |                            |
| Start-up dates                                | January 1, 2003      |                            |

\* For new or modified installations to be constructed in phased schedule, give construction/installation starting and completion date for each phase.



Page Revised April 15, 2002

#### Page 2 Instructions



# Dominion Terminal Associates Avoids Demurrage, Reduces Inventory Levels and Adheres to Government Regulations Using MRO Software's Strategic Asset Management Solution

Storing and shipping up to 20 million tons of coal peryear is no small feat, especially in light of stringent



environmental and safety regulations and the need for efficient and precise management of many different types of coal. Dominion Terminal Associates (DTA) is a coal shipping and ground storage facility located on the United States' eastern seaboard at Newport News, Virginia. Stretching over 100 acres, DTA receives coal by rail, stores it and then sends it out by ship or coastal barge to its appropriate global destination. Whorly owned by coal-producing and sales companies, DTA operates 24-hours-per-day, 7-days-per-week.

On any given day at DTA, CSX Transportation delivers. trains from eastern coal mines, bringing many types of coal for storage and/or shipping. Once received at DTA, up to 1.7 million tons of coal can be stored at a time, and segregated in storage areas by coal type and shipper.

To meet these maintenance, operational and safety demands, DTA required a world-class asset management solution. DTA found MRO Software's MAXIMO® to be the most costeffective, user-friendly and compatible solution available to meet its needs. DTA planned to create an integrated system that housed all maintenance, repair and operations (MRO) infor-

DTA combines efficient, high-speed coal handling with sophisticated sampling and blending systems. These capabilities, coupled with an impervious surface of storage areas, a system of runoff ditches, chemically balanced holding ponds and a computerized water spray dust suppression system in the storage area, make DTA an environmentally responsible, state-of-the-art facility. After DTA handles, segregates and stores the coal, seagoing and coastal barges and colliers transport. it to its final destinations.

Resulting in the on-time delivery of quality, uncontaminated coal products, DTA's daily round-the-clock effort necessitates worker efficiency, handling precision and well-managed, properly functioning equipment A tandem rotary car dumper, three stacker/reclaimers, nineteen belt conveyors with over four miles of belting,

mation in one place. In addition, DTA needed to maintain safety and performance, reduce inventory and labor costs and improve the overall efficiency of the terminal. DTA has used MAXIMO since 1996 to address these needs.

"DTA places major emphasis on reliability, efficiency and safety," commented Dan Wagoner, Maintenance Superintendent for DTA. "MAXIMO plays a very significant role in our achieving those objectives."

"MAXIMO helps us track and maintain almost 5,000 pieces of equipment -- all of which are essential to our daily operations," said Zach Howard, MAXIMO Administrator for DTA. "At our terminal, when even one piece of equipment goes down, it puts a burden on our whole operation. The MAXIMO preventive maintenance (PM) functionality has optimized our equipment performance and helped streamline operations."

#### **Results:** Goals: Equipment history in MAXIMO allowed DTA to Reduce inventory levels ----predict needed parts and immediately reduce

metal detectors, mechanical samplers and magnetic

separators are only a few of the many pieces of equip-

ment that must be operating optimally to ensure that

DTA meets its goals. In addition, DTA must adhere to

air and water regulations imposed by the state and tederal agencies.

Meet government regulations

Effectively allocate

labor resources

inventory levels by approximately five percent

DTA leverages MAXIMO and easily adheres to the latest environmental regulations

MAXIMO's visibility into DTA's labor requirements allows them to accurately forecast labor, and ensure that resources are available to complete mission critical jobs

# **Dominion Terminal Associates Customer Profile**

One of DTA's primary goals in implementing MAXIMO was to optimize equipment performance through consistent monitoring and maintenance. Inefficient maintenance of the equipment that handles the coal can delay or stop shipping, resulting in costly downtime. Using MAXIMO to generate PM reports at scheduled intervals, DTA effectively monitors the performance of its equipment and ensures. that repairs are made in a strategic manner. For example, DTA regularly checks the components of all of its conveyor drives. If a drive fails, then operations would essentially shut down while the repairs. were being made. The damage would result in significant downtime. and hefty repair costs. DTA avoids emergency repairs by regularly conducting PM routines to check the drives. This ounce of prevention allows DTA to realize significant savings as they reduce equipment downtime and improve the overall operation of the terminal. Every month, DTA also runs a MAXIMO report that outlines the number of emergency work orders for each piece of equipment. With these reports DTA identifies and replaces the equipment that is causing the greatest amount of downtime, resulting in increased uptime.

as the supervisor quickly identifies and orders the correct part without having to type in the information," commented Wagoner. "The equipment history in MAXIMO also allows us to predict how much inventory we are going to need, which saves us money as we were able to reduce our inventory levels by approximately five percent."

MAXIMO also helps DTA's Controller monitor the Company's expen-

"Downtime in our world also makes the threat of demurrage, a fee that we pay if we do not dump cars and load vessels in a timely manner, a reality. Demurrage fees can quickly run into very high costs," explained Wagorier. "MAXIMO helps us avoid unnecessary downditures. At any given time, she can access a report that outlines the materials issued in and out of inventory and the general ledger (GL) account code charged. These real time numbers help management keep their fingers on the pulse of the organization's spending patterns, ensuring that the departments do not exceed the budget.

MAXIMO's labor functionality helps DTA organize labor into five areas of expertise, streamline the work assignment process and monitor the effectiveness of how they allocate the labor resources. The MAXIMO data enables DTA to identify trends based on an analysis of the type of work being done and hours spent doing each activity.

"This visibility into our labor requirements allows us to more accurately forecast labor to make sure that people are available to complete mission critical jobs," added Wagoner. "Operating time is where we make our money, and MAXIMO helps us make sure that we have enough people available to complete this job."

time and eliminate demurrage fees."

DTA also used MAXIMO to streamline its inventory tracking system. Using MAXIMO, DTA minimized labor time and costs associated with finding and ordering parts. For example, a materials control supervisor can access MAXIMO's inventory module to search for and reorder specific pieces of equipment. MAXIMO checks the availability of the needed materials from internal sources first, and then if the part is not in stock the supervisor can automatically create a purchase requisition without typing the part in the system.

"MAXIMO not only saves us money as it makes sure that we do not order a part that we already have in stock, but it also saves us labor time. In addition, MAXIMO enabled DTA to remain in compliance with the latest government-imposed environmental requirements. With so much coal being handled, DTA is responsible for making sure the environment is not subject to harmful contamination. MAXIMO generates preventive maintenance work orders for regular water and air testing, and ensures that the appropriate controls are properly working. Work orders that require immediate attention due to safety concerns receive the highest priority in the MAXIMO system.

"MAXIMO streamlined the operations of DTA's entire terminal. Because we run on a 24 x 7 schedule, MAXIMO is critical to ensuring that all of our parts, equipment and labor are working at the highest optimization," continued Wagoner. "With MAXIMO, we now use our MRO information strategically to improve business efficiencies, save money and maintain the highest environmental and safety standards."



| Corporate Headquarters | Asia                        | Australia and New Zealand   | Europe, Middle East, Africa | Latin America      |
|------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------|
| MRO Software, Inc.     | MRO Software Hong Kong Ltd. | MRO Software Australia Pty. | (EMEA)                      | MRO Software, Inc. |
| 100 Crosby Drive       | ph +852-2166-8760           | Limited                     | MRO Software                | ph 305-267-8820    |
| Bedford, MA 01730      | fax +852-2166-8555          | ph +61-2-9463-7734          | ph +44-1-483-727000         | fax 305-264-8853   |
| ph 800-244-3346        |                             | fax +61-2-9957-2669         | fax +44-1-483-727979        |                    |
| fax 770-481-3071       |                             |                             |                             |                    |



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# 60997 EGISTRATION NUMBER

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| IM EXPECTED FEED C | λΥ   | 16,800    | 16,800    | 16,800    | 16,800    | 16,800    | 16,800    |      |
| XIML               |      |           |           |           |           |           |           |      |

attach appropriate intermediates and by-products;

be based on historical high or attach justification. cess schematic) relating process steps and a narrative description including feed materials, product materials, reaction erials used or consumed and products manufactured or handled. For modification codes see next page. Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable.

FORM 7

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| ole deck screen                          | 700                                   | 200    |
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Maximum Expected Feed Input for state operating permits shall

# AND DEGREAS COATING SURFACE PROCESSING, MANUFACTURING,

# As **Jal** i. Ter iníon

| COMPANY    | NAME Dominion Terminal Asso   | ciate |   |
|------------|---|-------|---|
|            |   | 200   |   |
| NNT<br>NG. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | ОООш  | EQUIPMENT MANU<br>MODEL NUMBER<br>OTHERWISE, TYPE |
| CR-1       | Crusher   | 4     | Fully-enclosed dou                                |
| CR-2       | Crusher   | 4     | Fully-enclosed dou                                |
| SS-1       | Screen  | 4     | Fully-enclosed dou                                |
| SS-2       | Screen  | 4     | Fully-enclosed sing                               |
| SS-3       | Screen  | 4     | Fully-enclosed dou                                |
| SS-4       | Screen  | 4     | Fully-enclosed sing                               |
|            |   |       |   |
|            |   |       |   |

materials Include flow diagram (pro MSDS or CPDS for raw mate \*

Page Revised April 15, 2002

# FORM 7

be based on historical high or attach justification.

intermediates and by-products; attach appropriate Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, product materials, reaction MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

| INPUT **         | DUTPUT **         | Maximum<br>Thruput<br>YEAR | 24.000.000 | 24,000,000 | 24,000,000 | 24,000,000 | 12,264,000 | 2,000 | 12,264,000 |
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|  |  | MAXIMU   | M EXPECTED E   |
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| FACTURER AND<br>3, IF KNOWN;<br>OF EQUIPMENT | MAXIMUM<br>STORAGE<br>CAPACITY<br>HR** | <b>H</b> | ,<br>DAY       |
| itorage                                      | 350,000 tons                           |          |                |
| Storage                                      | 40,000 tons                            |          |                |
| Storage                                      | 50 tons                                |          |                |
| Storage                                      | 20,000 tons                            |          |                |
|  |  |          |                |

Maximum Expected Feed Input for state operating permits shall Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable.

# AND DEGREAS SURFACE COATING PROCESSING, MANUFACTURING,

# **Dominion Terminal Associates**

COMPANY NAME

|  | ΣοΔ |   |
|--|-----|---|
| I OPERATION NAME*<br>MANUFACTURE OR<br>RUCTION DATE) | ООС | EQUIPMENT MANUFA<br>MODEL NUMBER, I<br>OTHERWISE, TYPE OF |
| Stockpile #1   | 0   | Material Sto  |
| Stockpile #2   | 0   | Material Sto  |
| Stockpile #3   | 0   | Material Sto  |
| Stockpile #4   | 0   | Material Sto  |
| Stockpile #5   | 4   | Material Sto  |
| Stockpile #5   | 4   | Material Sto  |
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PROCESS OR (PROVIDE M CONSTR Open Open Open Open Open Open Open **OS-5** 0S-6 **0S-7 OS-2 OS-3 OS-4 OS-1** UNIT Ref. Ň. \*

| COMPANY    | NAME Dominion Terminal Asso   | NCIATES        | ALING AND DEGREADING OFERALIONS   | DATE 10-15-02                          | REGISTR  | ATION NUMBER 60     | 7997        |
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|            |   | Σ              |   |  | MAXIML   | JM EXPECTED FEED II | NPUT **     |
|            |   |                |   |  | MAXIMUI  | M EXPECTED FEED OI  | UTPUT * *   |
| NO.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | <u>ы о о п</u> | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>STORAGE<br>CAPACITY<br>HR** | Æ        | ΡΑΥ                 | YEAR        |
| BS-1       | Storage Silo #1   | 0              | Fully-enclosed w/baghouse   | 1,000 tons                             | 2,740    | 65,753              | 24,000,000  |
| BS-2       | Storage Silo #2   | 0              | Fully-enclosed w/baghouse   | 3,800 tons                             | 2.740    | 65.753              | 24.000.000  |
| BS-3       | Stoarge Silo #3   | •              | Fully-enclosed w/baghouse   | 4,100 tons                             | 2 740    | 65 7 5 3<br>7 5 3   | 000 000 000 |
|            | Plant #1  |                | Fully-enclosed with water/chemical  |  |          |                     |             |
| 407        | Feed Bin  | 4              | solution  | DC tons                                | 700      | 16,800              | 6,132,000   |
| BS-5       | Plant #1<br>Pugmill Bin   | 4              | Fully-enclosed in building  | 5 tons                                 | 700      | 16,800              | 6, 132,000  |
| BS-O       | Pugmill Feed Bin  | 4              | Fully-enclosed in building  | 5 tons                                 | 700      | 16,800              | 6,132,000   |
| BS-7       | Plant #2<br>Feed Bin  | 4              | Fully-enclosed with water/chemical solution   | So tons                                | 700<br>7 | 16,800              | 6, 132,000  |
| BS-8       | Plant #2<br>Pugmill Bin   | 4              | Fully-enclosed in building  | 5 tons                                 | 002      | 16,800              | 6,132,000   |
| BS-9       | Pugmill Feed Bin  | 4              | Fully-enclosed in building  | 5 tons                                 | 700      | 16,800              | 6,132,000   |
|            |   |                |   |  |          |                     |             |

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|-----------------------------|----|---|-----------------|-----------------|-----------------|----------------------|-------------------------|------------------|----------------------|-------------------------|------------------|--|
| NAME Dominion Terminal Asso |    | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | Storage Silo #1 | Storage Silo #2 | Stoarge Silo #3 | Plant #1<br>Feed Bin | Plant #1<br>Pugmill Bin | Pugmill Feed Bin | Plant #2<br>Feed Bin | Plant #2<br>Pugmill Bin | Pugmilt Feed Bin |  |
| COMPANY                     |    | NNT<br>NG.  | BS-1            | BS-2            | BS-3            | BS-4                 | BS-5                    | BS-6             | BS-7                 | BS-8                    | BS-9             |  |

| PROCESS             | ING, MANUFACTURING, SURFA   | CE CO            | ATING AND DEGREASING OPERATION  | IS:                                    | <u> </u> |           |
|---------------------|---|------------------|---|--|----------|-----------|
| COMPAN              | Y NAME Dominion Terminal Asso   | ciates           |   | DATE10-15-02                           | REGIST   | RATION NU |
|                     |   | M<br>O<br>D      |   |  | MAXIM    |           |
| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>RATED<br>CAPACITY<br>_/HR** | /HR      |           |
| BC-1                | Rotary Dump Discharge Belt  | 0                | Fully-enclosed belt conveyor  | 6800                                   | 2,740    | 65,7      |
| BC-2                | Silo #1 Feed Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                   | 2,740    | 65,7      |
| BC-3                | Silo #1 Discharge Belt  | 0                | Fully-enclosed belt conveyor  | 6800                                   | 2,740    | 65,7      |
| BC-4                | Stockpile Feed Belt   | 0                | Belt conveyor(yard)   | 6800                                   | 2,740    | 65,       |
| BC-5                | CC/Coke Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                   | 2,740    | 65,       |
| BC-6                | CC/Coke Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                   | 2,740    | 65,       |
| BC-7                | Stockpile Feed Belt   | 0                | Belt conveyor(yard)   | 6800                                   | 2,740    | 65,       |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable. Maximum Expected Feed Input for state operating permits shall be based on historical high or attach justification.

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#### JMBER 60997

| TED FEED I | NPUT * *                              |
|------------|---------------------------------------|
| ED FEED O  | UTPUT * *                             |
|            |                                       |
|            |                                       |
| /DAY       | /YEAR                                 |
|            | i<br>                                 |
| 753        | 24,000,000                            |
|            |                                       |
| 753        | 24,000,000                            |
|            |                                       |
| 753        | 24 000 000                            |
| / 00       | 24,000,000                            |
| 750        | 24.000.000                            |
| /53        | 24,000,000                            |
|            |                                       |
| 753        | 24,000,000                            |
|            | · · · · · · · · · · · · · · · · · · · |
| 753        | 24,000,000                            |
|            |                                       |
| 753        | 24,000,000                            |

# PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIO

| OMPANY              | NAME Dominion Terminal Asso   | clates           |   | DATE10-15-02                          | REGIST |                  | 0997      |
|---------------------|---|------------------|---|---------------------------------------|--------|------------------|-----------|
|                     |   | M<br>O<br>D      |   |                                       | MAXIMU | UM EXPECTED FEED |           |
| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>RATED<br>CAPACITY<br>/HR** | _/HR   | /DAY             | /YEAF     |
| BC-8                | CC/Coke Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740  | 65,753           | 24,000,00 |
| BC-9                | CC/Coke Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740  | 65,753           | 24,000,00 |
| BC-10               | Loadout Belt  | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740  | 65,753           | 24,000,00 |
| BC-11               | Silo Transfer Belt  | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740  | 65,753           | 24.000.00 |
| BC-12               | Silo Transfer Belt  | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2 740  | 85 753           | 24 000 00 |
| BC-13               | Stockpile Reversing Belt  | 0                | Belt conveyor(yard)   | 6800                                  | 2 740  | 65 753           | 24,000,00 |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable. Maximum Expected Feed Input for state operating permits shall be based on historical high or attach justification.

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| <u> ЛиЭ:</u> |
|--------------|
|--------------|

### PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates

| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAM<br>(PROVIDE MANUFACTURE O<br>CONSTRUCTION DATE) |
|---------------------|--|
| BC-14               | Clean Coal Stockpile Fe<br>Belt  |
| BC-15               | Crusher Feed Belt  |
| BC-16               | Screen Oversize Belt   |
| BC-17               | Plant Feed Belt  |
| BC-18               | Pugmill Bin Feed Belt  |
| BC-19               | Pugmill Mixer Feed Bel   |
| BC-20               | Pug Mixer Discharge Be   |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

Page Revised April 15, 2002

|                              | M<br>O<br>D      |   |
|------------------------------|------------------|---|
| ON NAME*<br>TURE OR<br>DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT |
| oile Feed                    | 4                | Fully-enclosed belt conveyor  |
| Belt                         | 4                | Fully-enclosed belt conveyor  |
| e Beit                       | 4                | Fully-enclosed belt conveyor  |
| <b>Belt</b>                  | 4                | Fully-enclosed belt conveyor  |
| d Belt                       | 4                | Fully-enclosed belt conveyor  |
| ed Belt                      | 4                | Fully-enclosed belt conveyor  |
| rge Belt                     | 4                | Fully-enclosed belt conveyor  |
|                              |                  |   |

| <br>DATE 10-15-0 | 2   | REGISTR |        |
|------------------|-----|---------|--------|
|                  |     | MAXIMU  |        |
| DATE 10-15-0     |     | /HR     | /DAY   |
| 6800             | 68( | 00      | 33,600 |
| 1500             | 14  | 00      | 33,600 |
| 100              | 0.2 | 23      | 5.48   |
| 700              | 70  | )0      | 16,800 |
| 700              | 70  | )0      | 16,800 |
| 700              | 70  | )0      | 16,800 |
| 700              | 70  | )0      | 16,800 |

| PECTED FEED INPUT * * |            |  |  |  |  |  |  |
|-----------------------|------------|--|--|--|--|--|--|
| ECTED FEED O          | UTPUT * *  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| /DAY                  | /YEAR      |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 33,600                | 12,264,000 |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 33,600                | 12,264,000 |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 5.48                  | 2,000      |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 16,800                | 6,132,000  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 16,800                | 6,132,000  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 16,800                | 6,132,000  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |
| 16,800                | 6,132,000  |  |  |  |  |  |  |

# PROCESSING MANIFACTURING SURFACE COATING AND DEGREASING OPERATIONS:

|                     | <u>Ma, MAROLACTORNA, JON A</u>  |                  |   |  |        |              |
|---------------------|---|------------------|---|--|--------|--------------|
| COMPANY             | <b>NAME</b> Dominion Terminal Asso  | DATE 10-15-02    | REGIST  | RATION NUMBE                           |        |              |
|                     |   | M                |   |  | MAXIM  | UM EXPECTED  |
|                     |   | D                |   |  | MAXIMU | M EXPECTED F |
| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>RATED<br>CAPACITY<br>_/HR** | /HR    | /DAY         |
| BC-21               | Spreader Belt   | 4                | Fully-enclosed belt conveyor  | 700                                    | 700    | 16,800       |
| BC-22               | Briquetter Discharge Belt   | 4                | Fully-enclosed belt conveyor  | 233                                    | 233    | 5,600        |
| BC-23               | Briquetter Discharge Belt   | 4                | Fully-enclosed belt conveyor  | 233                                    | 233    | 5,600        |
| BC-24               | Briquetter Discharge Belt   | 4                | Fully-enclosed belt conveyor  | 233                                    | 233    | 5,600        |
| BC-25               | Screen SS-2 Feed Belt   | 4                | Fully-enclosed belt conveyor  | 700                                    | 700    | 16,800       |
| BC-26               | Recirculating Belt  | 4                | Fully-enclosed belt conveyor  | 100                                    | 0.23   | 5.48         |
| BC-27               | Screen SS-2 Discharge Belt  | 4                | Fully-enclosed belt conveyor  | 700                                    | 700    | 16,800       |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable. Maximum Expected Feed Input for state operating permits shall be based on historical high or attach justification.

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#### MBER 60997

#### FED FEED INPUT \*\*

# ED FEED OUTPUT \* \* /DAY /YEAR **BOO** 6,132,000 00 2,044,000 **600** 2,044,000 600 2,044,000 800 6,132,000 48 2,000 \_\_\_\_\_

#### FORM 7

6,132,000

# PROCESSING. MANUFACTURING. SURFACE COATING AND DEGREASING OPERATIONS:

| COMPANY             | COMPANY NAME Dominion Terminal Associates                                   |                  |   |                                       | DATE 10-15-02 REGISTRATION NUMBER 60997 |                   |            |  |  |
|---------------------|---|------------------|---|---------------------------------------|---|-------------------|------------|--|--|
|                     |   |                  |   |                                       | MAXIMUM EXPECTED FEED INPUT * *         |                   |            |  |  |
|                     |   | O<br>D           |   |                                       | MAXIMU                                  | M EXPECTED FEED C | OUTPUT + + |  |  |
| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>RATED<br>CAPACITY<br>/HR** | /HR                                     | /DAY              | /YEAR      |  |  |
| BC-28               | Synfuel Stacking Belt   | 4                | Fully-enclosed belt conveyor  | Fully-enclosed belt conveyor 700      |   | 16,800            | 6,132,000  |  |  |
| BC-29               | Screen SS-3 Oversize Belt   | 4                | Fully-enclosed belt conveyor  | 100                                   | ,23                                     | 5.48              | 2,000      |  |  |
| BC-30               | Plant Feed Belt   | 4                | Fully-enclosed belt conveyor  | 700                                   | 700                                     | 16.800            | 6.132.000  |  |  |
| BC-31               | Pugmill Bin Feed Belt   | 4                | Fully-enclosed belt conveyor  | 700                                   | 700                                     | 16,800            | 6,132,000  |  |  |
| BC-32               | Pugmill Mixer Feed Belt   | 4                | Fully-enclosed belt conveyor  | 700                                   | 700                                     | 16,800            | 6,132,000  |  |  |
| BC-33               | Pug Mixer Discharge Belt  | 4                | Fully-enclosed belt conveyor  | 700                                   | 700                                     | 16,800            | 6,132,000  |  |  |
| BC-34               | Spreader Belt   | 4                | Fully-enclosed belt conveyor  | 700                                   | 700                                     | 16,800            | 6,132,000  |  |  |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, product materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable. Maximum Expected Feed Input for state operating permits shall be based on historical high or attach justification.

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# PROCESSING MANUFACTURING SURFACE COATING AND DEGREASING OPERATIONS:

| COMPANY             | NAME Dominion Terminal Asso   | ociates          |   | DATE 10-15-02                         | REGIST | RATION NUMBER 6               | 0997       |  |  |
|---------------------|---|------------------|---|---------------------------------------|--------|-------------------------------|------------|--|--|
|                     |   |                  |   |                                       | MAXIM  | MAXIMUM EXPECTED FEED INPUT** |            |  |  |
|                     |   | D D              |   |                                       | MAXIMU | M EXPECTED FEED (             | OUTPUT * * |  |  |
| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>RATED<br>CAPACITY<br>/HR** | /HR    | /DAY                          | YEAR       |  |  |
| BC-35               | Briquetter Discharge Belt   | 4                | Fully-enclosed beit conveyor  | 233                                   | 233    | 5,600                         | 2,044,000  |  |  |
| BC-36               | Briquetter Discharge Belt   | 4                | Fully-enclosed belt conveyor  | 233                                   | 233    | 5,600                         | 2,044,000  |  |  |
| BC-37               | Briquetter Discharge Belt   | 4                | Fully-enclosed belt conveyor  | 233                                   | 233    | 5 600                         | 2.044.000  |  |  |
|                     |   |                  |   |                                       |        |                               |            |  |  |
| BC-38               | Screen SS-4 Feed Belt   | 4                | Fully-enclosed belt conveyor  | 700                                   | 700    | 16,800                        | 6,132,000  |  |  |
| BC-39               | Recirculating Belt  | 4                | Fully-enclosed belt conveyor  | 100                                   | 0.23   | 5,48                          | 2,000      |  |  |
| BC-40               | Screen SS-4 Discharge Belt  | 4                | Fully-enclosed belt conveyor  | 700                                   | 700    | 16.800                        | 6.132.000  |  |  |
| BC-41               | Synfuel Stacking Belt   | 4                | Fully-enclosed belt conveyor  | 700                                   | 700    | 16,800                        | 6,132,000  |  |  |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable. Maximum Expected Feed Input for state operating permits shall be based on historical high or attach justification.

Page Revised April 15, 2002

# PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATI

| COMPANY             | NAME Dominion Terminal Asso   | ciates           |   | DATE 10-15-02                         | REGIST                |        |  |
|---------------------|---|------------------|---|---------------------------------------|-----------------------|--------|--|
|                     |   | M<br>O<br>D      |   |                                       | MAXIMUM EXPECTED FEED |        |  |
| UNIT<br>REF.<br>NO. | PROCESS OR OPERATION NAME*<br>(PROVIDE MANUFACTURE OR<br>CONSTRUCTION DATE) | C<br>O<br>D<br>E | EQUIPMENT MANUFACTURER AND<br>MODEL NUMBER, IF KNOWN;<br>OTHERWISE, TYPE OF EQUIPMENT | MAXIMUM<br>RATED<br>CAPACITY<br>/HR** | ſHR                   | /DAY   |  |
| BC-42               | Synfuel Product Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 1500                                  | 1,400                 | 33,600 |  |
| BC-43               | CC/RC Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740                 | 65,753 |  |
| BC-44               | CC/RC Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740                 | 65,753 |  |
| BC-45               | CC/RC Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740                 | 65,753 |  |
| BC-46               | CC/RC Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740                 | 65,753 |  |
| BC-47               | CC/RC Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2.740                 | 65.753 |  |
| 8C-48               | CC/RC Transfer Belt   | 0                | Fully-enclosed belt conveyor  | 6800                                  | 2,740                 | 65,753 |  |

\* Include flow diagram (process schematic) relating process steps and a narrative description including feed materials, product materials, reaction intermediates and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or handled. For modification codes see next page. \*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applicable. Maximum Expected Feed Input for state operating permits shall be based on historical high or attach justification.

| IONS: |  |
|-------|--|
|-------|--|

#### UMBER 60997

| PECTED FEED INPUT * * |            |  |  |  |  |  |  |  |
|-----------------------|------------|--|--|--|--|--|--|--|
| PECTED FEED O         | UTPUT * *  |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| /DAY                  | /YEAR      |  |  |  |  |  |  |  |
| <u></u>               |            |  |  |  |  |  |  |  |
| 33,600                | 12,264,000 |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| 65,753                | 24,000,000 |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| 65,753                | 24,000,000 |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| 65,753                | 24,000,000 |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| 65,753                | 24,000,000 |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| 65,753                | 24,000,000 |  |  |  |  |  |  |  |
|                       |            |  |  |  |  |  |  |  |
| 65,753                | 24,000,000 |  |  |  |  |  |  |  |

### STACK PARAMETERS AND FUEL DATA: Not Applicable

#### COMPANY NAME Dominion Terminal Associates

|                     |                       |  | VEN                               | T/STACK O              | R EXHAUST D                   | ATA                             |                              | · · · · · · · · · · · · · · · · · · · | FL   | JEL(S) DATA  |   |                     |
|---------------------|-----------------------|--|-----------------------------------|------------------------|-------------------------------|---------------------------------|------------------------------|---------------------------------------|--|--|---|---------------------|
| UNIT<br>REF.<br>NO. | VENT/<br>STACK<br>NO. | VENT/<br>STACK<br>CONFIG.<br>(USE<br>CODE K) | VENT<br>STACK<br>HEIGHT<br>(feet) | EXIT<br>DIA.<br>(feet) | EXIT GAS<br>VELOCITY<br>(fpm) | EXIT<br>GAS<br>VOLUME<br>(acfm) | EXIT<br>GAS<br>TEMP.<br>("F) | TYPE OF<br>FUEL                       | MAX.<br>RATED<br>BURNED/<br>HOUR<br>(SPECIFY<br>UNITS) | MAX.<br>EXPECTED<br>BURNED/<br>DAY<br>(SPECIFY<br>UNITS) | MAX.<br>EXPECTED<br>BURNED/<br>YEAR<br>(SPECIFY<br>UNITS) | HE<br>V<br>(SI<br>U |
|                     |                       |  |                                   |                        |                               |                                 |                              |                                       |  |  |   |                     |
|                     |                       |  |                                   |                        |                               | · · · · · ·                     |                              |                                       |  |  |   |                     |
|                     |                       |  |                                   |                        |                               |                                 |                              |                                       |  |  |   |                     |
|                     |                       |  |                                   |                        |                               |                                 |                              |                                       |  |  |   |                     |
|                     |                       |  |                                   |                        |                               |                                 |                              | ·<br>                                 |  |  |   |                     |
|                     |                       |  |                                   |                        |                               |                                 |                              |                                       |  |  |   |                     |
|                     |                       |  |                                   |                        |                               |                                 |                              |                                       |  |  |   |                     |

#### Code K - Vent/Stack Configuration

- 1. Unobstructed vertical discharge
- 2. Obstructed vertical discharge (e.g., raincap)
- 3. Horizontal or downward discharge (e.g., T-stack)
- 99. Other (specify)

| <br><u> </u> |          | <br>      | · |
|--------------|----------|-----------|---|
| DATE         | 10-15-02 | REGISTRAT |   |

#### JMBER 60997

| IGHER<br>ATING<br>ALUE<br>PECIFY<br>NITS) | MAX.<br>%<br>SULFUR | MAX.<br>%<br>ASH |
|---|---------------------|------------------|
|   |                     |                  |
|   |                     |                  |
|   |                     |                  |
|   |                     |                  |
|   |                     |                  |
|   |                     |                  |
|   | 1                   | i                |

#### **COMPANY NAME** Dominion Terminal Associates

|  | M  |   |                       |   |  | ION CONTROL                | EQUIPMENT               |   | MONIT   |
|--|--|---|-----------------------|---|--|----------------------------|-------------------------|---|---|
|  | D  |   |                       |   |  |                            | % EFFICI                |   |   |
| UNIT<br>REF.<br>NO.  | C<br>O<br>D<br>E   | VENT/<br>STACK<br>NO.   | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See Instructions) | MANUFACTURER<br>AND MODEL NUMBER   | TYPE<br>(USE<br>CODE<br>L) | DESIGN                  | ACTUAL  | SP<br>POL   |
| <b>0</b> S-1   | 0  | Fugitive  | SW-CS                 | TSP/PM-10                                 | Open Stockpile No. 1   | 099                        | 99                      | 99  | Existin   |
| OS-2   | 0  | Fugitive  | SW-CS                 | TSP/PM-10                                 | Open Stockpile No. 2   | 099                        | 99                      | 99  | Existin   |
| OS-3   | 0 Fugitive SW-CS TSP/PM-10   |   | TSP/PM-10             | Open Stockpile No. 3                      | 099  | 99                         | 99                      | Existin   |   |
| OS-4   | 0  | Fugitive  | SW-CS                 | TSP/PM-10                                 | Open Stockpile No. 4   | 099                        | 99                      | 99  | Existin   |
| OS-5   | 4  | Fugitive  | SW-CS                 | TSP/PM-10                                 | Open Stockpile No. 5   | 099                        | 99                      | 99  | Existin   |
| OS-6   | 4  | Fugitive  | SW-CS                 | TSP-PM-10                                 | Open Stockpile No. 6   | 099                        | 99                      | 99  | Existin   |
| OS-7<br>Code L - A   | 4  | Fugitive  | SW-CS                 | TSP/PM-10<br>MENT TYPE                    | Open Stockpile No. 7   | 099                        | 99                      | 99  | Existin   |
| 1. Settli<br>2. Cyclo<br>3. Multi<br>4. Cyclo<br>5. Orific<br>6. Mech<br>7. Vent<br>(a) fix<br>(b) va<br>8. Mist | ing Cha<br>one<br>icyclon<br>one scru<br>hanical<br>ce scru<br>hanical<br>ced thro<br>ariable<br>elimina | amber<br>amber<br>abber<br>scrubber<br>ubber<br>oat<br>throat<br>ator |                       | 9. Ele<br>10. Fil<br>11. Ca<br>12. Dir    | ctrostatic Precipitator<br>(a) hot side<br>(b) cold side<br>(c) high voltage<br>(d) low voltage<br>(d) low voltage<br>(e) single stage<br>(f) two stage<br>(g) other (specify)<br>ter<br>(a) baghouse<br>(b) other (specify)<br>stalytic Afterburner<br>rect Flame Afterburner |                            | 13. A<br>14. A<br>15. C | BSORBER<br>(a) packed<br>(b) spray t<br>(c) tray to<br>(d) venturi<br>(e) other (s<br>DSORBER<br>(a) activat<br>(b) molecu<br>(c) activat<br>(c) activat<br>(d) silica g<br>(e) other (spec | tower<br>ower<br>wer<br>specify)<br>ed carbon<br>lar sieve<br>ed alumina<br>el<br>specify)<br>cify) |

## DATE 10-15-02

# **REGISTRATION NUMBER 60997**

| TORING INSTRUMENTATION                                |
|---|
| PECIFY TYPE, MEASURED<br>LUTANT, AND RECORDER<br>USED |
| ng PM10 Monitor                                       |
| 1g PM10 Monitor                                       |

99. Other Water sprays w/chemical solution, as needed

#### **COMPANY NAME** Dominion Terminal Associates

|                      | м                |                       |                       |   |                                    | ION CONTROL                | EQUIPMENT |  | MONITORING INSTRUMENTATION  |  |
|----------------------|------------------|-----------------------|-----------------------|---|------------------------------------|----------------------------|-----------|--|---|--|
|                      | O<br>D           |                       |                       |   |                                    |                            | % EFFICIE |  |   |  |
| UNIT<br>REF.<br>NO.  | C<br>O<br>D<br>E | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER   | TYPE<br>(USE<br>CODE<br>L) | DESIGN    | ACTUAL                                       | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER<br>USED           |  |
| CR-1                 | 4                | Source                | CS-FC                 | TSP/PM-10 - OPACITY                       | Double-Roll Crusher                | 099                        | 99        | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| CR-2                 | 4                | Source                | CS-FC                 | TSP/PM-10 - OPACITY                       | Double Roll Crusher                | 099                        | 99        | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| SS-1                 | 4                | Source                | CS-FC                 | TSP/PM-10 - OPACITY                       | Double Deck Screen                 | 099                        | 99        | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| SS-2                 | 4                | Source                | CS-FC                 | TSP/PM-10 - OPACITY                       | Single Deck Screen                 | 099                        | 99        | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| SS-3                 | 4                | Source                | CS-FC                 | TSP/PM-10 - OPACITY                       | Double Deck Screen                 | 099                        | 99        | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| SS-4                 | 4                | Source                | CS-FC                 | TSP/PM-10 - OPACITY                       | Single Deck Screen                 | 099                        | 99        | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| Code L - Al          | R POL            | LUTION CON            | TROL EQUIP            | MENT TYPE                                 |                                    |                            |           |  |   |  |
| 1. Settli            | ng Cha           | mber                  |                       | 9. Elec                                   | trostatic Precipitator             |                            | 13. A     | BSORBER                                      |   |  |
| 2. Cyclo<br>2. Multi | ne               | •                     |                       |   | (a) not side<br>(b) cold side      |                            |           | (a) packed<br>(b) sprav to                   | tower   |  |
| 4. Cvclo             | ne scr           | ubber                 |                       |   | (c) high voltage                   |                            |           | (c) trav tov                                 | ver   |  |
| 5. Orific            | e scru           | bber                  |                       |   | (d) low voltage                    |                            |           | (d) venturi                                  |   |  |
| 6. Mech              | anical           | scrubber              |                       |   | (e) single stage                   |                            |           | (e) other (s                                 | pecify)   |  |
| 7. Ventu             | iri scru         | ibber                 |                       |   | (f) two stage                      |                            | 14. A     | 14. ADSORBER                                 |   |  |
| (a) fix:<br>(b) vo   | ed thro          | broot                 |                       | 10 Eilt.                                  | (g) other (specify)                |                            |           | (a) activate                                 | nd carbon<br>Lar sieve  |  |
| (D) Val<br>8 Mist    |                  | nroal<br>Nor          |                       |   | a) baohouse                        |                            |           | (D) MOIOCUIAR SIEVE<br>(c) activated alumina |   |  |
| <b>U</b> . mildt     |                  |                       |                       | (b) other (specify)                       |                                    |                            |           | el al    |   |  |
|                      | 11. Cat          |                       |                       |   | 1. Catalytic Afterburner (specify) |                            |           |  | pecify)   |  |
|                      |                  |                       |                       | 12. Dire                                  | ect Flame Afterburner              | 15. Condenser (specify)    |           |  |   |  |
|                      |                  |                       |                       |   |                                    |                            | 99. O     | ther – <i>Full Enc</i>                       | losure w/chemical solution, as neede                                |  |

### DATE 10-15-02

#### **REGISTRATION NUMBER 60997**

# \*Partially enc. discharge w/chemical solution, as neede

| СОМРА               | NY N             | AME Do                | minion Te             | erminal Associates                        |                                  | DATE                       | 10-15-02  | REGISTE | <b>TRATION NUMBER 60997</b>   |  |
|---------------------|------------------|-----------------------|-----------------------|---|----------------------------------|----------------------------|-----------|---------|---|--|
|                     | м                |                       |                       |   | AIR POLLUT                       | ION CONTROL                | EQUIPMENT |         | MONITORING INSTRUMENTATION  |  |
|                     | D<br>D           |                       |                       |   |                                  |                            | % EFFICI  |         |   |  |
| UNIT<br>REF.<br>NO. | C<br>O<br>D<br>E | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER | TYPE<br>(USE<br>CODE<br>L) | DESIGN    | ACTUAL  | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER USED              |  |
| BS-1                | 0                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Storage Silo #1                  | 99/10a                     | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-2                | 0                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Storage Silo #2                  | 99/10a                     | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-3                | 0                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Storage Silo #3                  | 99/10a                     | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-4                | 4                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Plant #1<br>Feed Bin             | 99                         | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-5                | 4                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Plant #1<br>Pugmill Feed Bin     | 99                         | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-6                | 4                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Plant #2<br>Pugmill Bin          | 99                         | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-7                | 4                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Plant #2<br>Feed Bin             | 99                         | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| <b>BS-8</b>         | 4                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Plant #2<br>Pugmill Feed Bin     | 99                         | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BS-9                | 4                | Fugitive              | SW-FE                 | TSP/PM-10 - OPACITY                       | Plant #2<br>Pugmill Bin          | 99                         | 100       | 100     | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |

as needed

| AIR POLL   | UTIO                    | N CONTR               | OL AND M   | IONITORING EQUIPMENT:                      | )<br> <br>   |   |   | <u> </u> |   |  |
|--|-------------------------|-----------------------|--|--|--|---|---|----------|---|--|
| COMPA  | NY N                    | IAME Do               | minion Te  | erminal Associates                         |  | DATE  | 10-15-02  | REGISTR  | ATION NUMBER 60997  |  |
|  | M                       |                       |  |  |  | ON CONTROL  |   |          | MONITORING INSTRUMENTATION  |  |
|  | D                       |                       |  |  |  |   | % EFFICI  |          |   |  |
| UNIT<br>REF.<br>NO.  | C<br>O<br>D<br>E        | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO.                                | POLLUTANT/PARAMETER<br>(See instructions)  | MANUFACTURER<br>AND MODEL NUMBER   | TYPE<br>(USE<br>CODE<br>L)  | DESIGN  | ACTUAL   | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER<br>USED           |  |
| BC-1   | 0                       | TP-03                 | TC-FC  | TSP/PM-10 - OPACITY                        | Rotary Dump Discharge<br>Belt  | 099   | 99  | 99       | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-2   | 0                       | TP-04                 | TC-BH  | TSP/PM-10 - OPACITY                        | Silo #1 Feed Belt  | 099   | 99  | 99       | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-3   | 0                       | TP-06                 | TC-FC  | TSP/PM-10 - OPACITY                        | Silo #1 Discharge Belt   | 099   | 99  | 99       | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-4   | 0                       | TP-07                 | LO-FC  | TSP/PM-10 - OPACITY                        | Stockpile Feed Belt  | 099   | 99  | 99       | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-5   | 0                       | TP-09                 | TC-FC  | TSP/PM-10 - OPACITY                        | CC/Coke Transfer Beit  | 099   | 99  | 99       | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-6   | 0                       | TP-12                 | TC-FC  | TSP/PM-10 - OPACITY                        | CC/Coke Transfer Belt  | 099   | 99  | 99       | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| Code L - A   | IR POL                  | LUTION CON            | ITROL EQUIP  | MENT TYPE                                  |  |   |   |          |   |  |
| 1. Settli<br>2. Cyclo<br>3. Multi  | ng Cha<br>one<br>cyclon | e<br>e                |  | 9. Elec                                    | ctrostatic Precipitator<br>(a) hot side<br>(b) cold side<br>(c) high voltage |   | 13. ABSORBER<br>(a) packed tower<br>(b) spray tower |          |   |  |
| 4. Cyclone scrubber<br>5. Orifice scrubber<br>6. Mechanical scrubber<br>7. Mechanical scrubber |                         |                       | (d) low voltage<br>(e) single stage<br>(f) two stage | (d) venturi<br>(e) other (specify)         |  |   |   |          |   |  |
| (a) fixed throat<br>(b) variable throat  |                         |                       | 10. Filt   | (g) other (specify)<br>ter<br>(a) bachouse | (a) activated carbon<br>(b) molecular sieve                                  |   |   |          |   |  |
| 8. Mist eliminator   |                         |                       |  | 11. Ca<br>12. Dir                          | (b) other (specify)<br>talytic Afterburner<br>ect Flame Afterburner          | (c) activated alumina<br>(d) silica gel<br>(e) other (specify)<br>15. Condenser (specify) |   |          |   |  |

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39. Other (rull enclosures w/chemical solution, as neede

\*Partially-enc. discharge w/chemical solution, as neede

FORM 7

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| AIR | POL | LUT. | ION | CON | TROL | AND | MON |
|-----|-----|------|-----|-----|------|-----|-----|
|     |     |      | ·   |     |      |     |     |

| СОМРА               | NYN              | IAME Do               | minion Te             | erminal Associates                        |                                  | DATE                       | 10-15-02  | REGISTR | GISTRATION NUMBER 60997   |  |
|---------------------|------------------|-----------------------|-----------------------|---|----------------------------------|----------------------------|-----------|---------|---|--|
|                     | Μ                |                       |                       |   |                                  | N CONTROL                  | EQUIPMENT |         | MONITORING INSTRUMENTATION  |  |
|                     | O<br>D           |                       |                       |   |                                  |                            | % EFFICI  | INCY    |   |  |
| UNIT<br>REF.<br>NO. | C<br>O<br>D<br>E | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER | TYPE<br>(USE<br>CODE<br>L) | DESIGN    | ACTUAL  | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER<br>USED           |  |
| BC-7                | 0                | TP-13                 | LO-RC                 | TSP/PM-10 - OPACITY                       | Stockpile Feed Belt              | 099                        | 98        | 98      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-8                | 0                | TP-80                 | TC-FC                 | TSP/PM-10 - OPACITY                       | CC/Coke Transfer Belt            | 099                        | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-9                | 0                | TP-81                 | ТС-ВН                 | TSP/PM-10 - OPACITY                       | CC/Coke Transfer Belt            | 099                        | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-10               | 0                | TP-87                 | LO-CS                 | TSP/PM-10 - OPACITY                       | Loadout Belt                     | 099                        | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-11               | 0                | TP-84                 | ТС-ВН                 | TSP/PM-10 - OPACITY                       | Silo Transfer Belt               | 099                        | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-12               | 0                | TP-86                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Silo Transfer Belt               | 099                        | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |
| BC-13               | 0                | TP-78                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Stockpile Reversing Belt         | 099                        | 99        | 99      | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |

1. Settling Chamber

2. Cyclone

3. Multicyclone

4. Cyclone scrubber

5. Orifice scrubber

6. Mechanical scrubber

7. Venturi scrubber

(a) fixed throat

(b) variable throat

8. Mist eliminator

#### ITORING FOLIPMENT.

9. Electrostatic Precipitator

- (a) hot side
- (b) cold side
- (c) high voltage
- (d) low voltage
- (e) single stage
- (f) two stage
- (g) other (specify)
- 10. Filter
  - (a) baghouse
  - (b) other (specify)
- 11. Catalytic Afterburner
- 12. Direct Flame Afterburner

#### 13. ABSORBER

(a) packed tower

(b) spray tower

(c) tray tower

(d) venturi

(e) other (specify)

15. Condenser (specify) 99. Other Full enclosures with chemical solutions, as needed \*Partially enc. discharge w/chemical solution, as needed

#### **COMPANY NAME** Dominion Terminal Associates

|                        |                  | <b></b>               | <b>*</b>              |   | <u></u>                           | <u> </u>                   |                     | <u></u>      | r  |  |
|------------------------|------------------|-----------------------|-----------------------|---|-----------------------------------|----------------------------|---------------------|--------------|--|--|
|                        | м                |                       |                       |   |                                   | N CONTROL                  | EQUIPMENT           |              | MONITORING INSTRUMENTATION   |  |
|                        | O<br>D           |                       |                       |   |                                   |                            | % EFFICIE           |              |  |  |
| UNIT<br>REF.<br>NO.    | C<br>O<br>D<br>E | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER  | TYPE<br>(USE<br>CODE<br>L) | DESIGN              | ACTUAL       | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER<br>USED            |  |
| BC-14                  | 4                | TP-16                 | TC-PC                 | TSP/PM-10 - OPACITY                       | Clean Coal Stockpile Feed<br>Beit | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation -<br>Method 9 |  |
| BC-15                  | 4                | TP-18                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Crusher Feed Belt                 | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9  |  |
| BC-16                  | 4                | TP-21                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Crusher Feed Belt                 | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9  |  |
| BC-17                  | 4                | TP-24                 | TC-PC                 | TSP/PM-10 - OPACITY                       | Screen SS-1 Oversize Belt         | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9  |  |
| BC-18                  | 4                | TP-27                 | TC-PC                 | TSP/PM-10 - OPACITY                       | Screen SS-1 Discharge<br>Belt     | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9  |  |
| BC-19                  | 4                | TP-28                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Pugmill Bin Feed Belt             | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9  |  |
| BC-20                  | 4                | TP-30                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Pugmill Mixer Feed Belt           | 099                        | 99                  | 99           | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9  |  |
| Code L - Al            | R POL            | LUTION CON            | TROL EQUIP            | MENT TYPE                                 |                                   |                            | 10 4                |              |  |  |
| 1. Settin              | ng Una<br>ng     | amber                 |                       | 9, E10                                    | ctrostatic Precipitator           |                            |                     |              |  |  |
| 3 Multiz               | velop            | 9                     |                       |   | (b) cold side                     |                            |                     | (h) enrav to |  |  |
| 4 Cvelo                | na ser           | ubber                 |                       |   | (b) cold slue<br>(c) high voltage |                            |                     | (c) trav tow | Ver  |  |
| 5 Orifice scrubber     |                  |                       |                       |   | (d) low voltage                   |                            | (d) venturi         |              |  |  |
| 6. Mechanical scrubber |                  |                       |                       |   | (e) single stage                  |                            | (e) other (specify) |              |  |  |

- 7. Venturi scrubber (a) fixed throat
- (b) variable throat
- 8. Mist eliminator

- (f) two stage
- (g) other (specify)
- 10. Filter
  - (a) baghouse
  - (b) other (specify)
- 11. Catalytic Afterburner
- 12. Direct Flame Afterburner

#### DATE 10-15-02

#### **REGISTRATION NUMBER 60997**

- 14. ADSORBER
  - (a) activated carbon
  - (b) molecular sieve
  - (c) activated alumina
  - (d) silica gel
  - (e) other (specify)
- 15. Condenser (specify)
- 99. Other Full Enclosures w/chemical solution, as needed

#### **COMPANY NAME** Dominion Terminal Associates

|  |                                 | ·                     |                       |   |   | ···                        | ·   |  |   |  |  |
|--|---------------------------------|-----------------------|-----------------------|---|---|----------------------------|---|--|---|--|--|
|  | Μ                               |                       |                       |   | AIR POLLUTIC  | ON CONTROL                 | EQUIPMENT   |  | MONITORING INSTRUMENTATION  |  |  |
|  | O<br>D                          |                       |                       |   |   |                            | % EFFICIE   |  |   |  |  |
| UNIT<br>REF.<br>NO.  | C<br>O<br>D<br>E                | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER  | TYPE<br>(USE<br>CODE<br>L) | DESIGN  | ACTUAL   | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER<br>USED           |  |  |
| BC-21  | 4                               | TP-32                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Pugmill Mixer Discharge<br>Belt   | 099                        | 99  | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |
| BC-22  | 4                               | TP-33-<br>36-39       | TC-FC                 | TSP/PM-10 - OPACITY                       | Spreader Belt   | 099                        | 99  | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |
| BC-23  | 4                               | TP-35                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Briquetter Discharge Belt   | 099                        | 99  | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |
| BC-24  | 4                               | TP-38                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Briquetter Discharge Belt   | 099                        | 99  | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |
| BC-25  | 4                               | TP-41                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Briquetter Discharge Belt   | 099                        | 99  | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |
| BC-26  | 4                               | TP-42                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Screen SS-2 Feed Belt   | 099                        | 99  | 99   | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |
| Code L - Al  | r Pol                           | LUTION CON            | TROL EQUIP            | MENT TYPE                                 |   |                            |   |  |   |  |  |
| 1. Settlin<br>2. Cyclo<br>3. Multic<br>4. Cyclo                      | ng Cha<br>ne<br>γclon<br>ne scr | amber<br>e<br>ubber   |                       | 9. Elec                                   | etrostatic Precipitator<br>(a) hot side<br>(b) cold side<br>(c) high voltage  |                            | 13. ABSORBER<br>(a) packed tower<br>(b) spray tower<br>(c) tray tower |  |   |  |  |
| 5. Orifice scrubber<br>6. Mechanical scrubber<br>7. Venturi scrubber |                                 |                       |                       |   | (d) fow voltage<br>(e) single stage<br>(f) two stage  |                            | (d) venturi<br>(e) other (specify)<br>14. ADSORBER                    |  |   |  |  |
| (a) fixed throat<br>(b) variable throat<br>8. Mist eliminator        |                                 |                       |                       | 10. Filt                                  | (g) other (specity)<br>10. Filter<br>(a) baghouse   |                            |   | (a) activated carbon<br>(b) molecular sieve<br>(c) activated alumina |   |  |  |
| 11. Cata<br>12. Dire   |                                 |                       |                       |   | (b) other (specify)<br>Italytic Afterburner<br>rect Flame Afterburner<br>99. Other (specify)<br>99. Other (specify) |                            |   | pecify)<br>ify)<br>F <b>ull Enclosures w/chemical solution.</b> .    |   |  |  |
|  |                                 |                       |                       |   |   |                            | nooda   | d .  |   |  |  |

#### DATE 10-15-02

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\* Partially-enclosed discharge w/chemical solution, as needed

#### **REGISTRATION NUMBER 60997**

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#### **COMPANY NAME** Dominion Terminal Associates

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| UNIT<br>REF.<br>NO.   | C<br>O<br>D<br>E   | VENT/<br>STACK<br>NO.                                   | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See Instructions) | MANUFACTURER<br>AND MODEL NUMBER  | TYPE<br>{USE<br>CODE<br>L} | DESIGN         | ACTUAL  | SPI<br>POLI  |
| BC-27   | 4  | TP-43   | TC-FC                 | TSP/PM-10 - OPACITY                       | Recirculating Belt  | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| BC-28   | 4  | TP-45   | TC-FC                 | TSP/PM-10 - OPACITY                       | Screen SS-2 Discharge<br>Belt   | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| BC-29   | 4  | TP-46   | TC-PC                 | TSP/PM-10 - OPACITY                       | Synfuel Stacking Belt   | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| BC-30   | 4  | TP-49   | TC-FC                 | TSP/PM-10 - OPACITY                       | Crusher Feed Belt   | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| BC-31   | 4  | TP-52   | TC-FC                 | TSP/PM-10 - OPACITY                       | Screen SS-3 Oversize Belt   | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| BC-32   | 4  | TP-55   | TC-FC                 | TSP/PM-10 - OPACITY                       | Plant Feed Belt   | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| BC-33   | 4  | TP-56   | TC-FC                 | TSP/PM-10 - OPACITY                       | Pugmill Bin Feed Belt   | 099                        | 99             | 99  | Existin<br>Visual<br>Metho   |
| 1. Settli<br>2. Cyclo<br>3. Multi<br>4. Cyclo<br>5. Orific<br>6. Mech<br>7. Ventu<br>(a) fix<br>(b) va<br>8. Mist | ng Cha<br>one<br>cyclon<br>one scr<br>one scrut<br>anical<br>uri scrut<br>ed thro<br>riable t<br>elimina | e<br>ubber<br>bber<br>scrubber<br>ubber<br>at<br>throat |                       | 9. Ele<br>10. Fil<br>11. Ca               | ctrostatic Precipitator<br>(a) hot side<br>(b) cold side<br>(c) high voltage<br>(d) low voltage<br>(e) single stage<br>(f) two stage<br>(g) other (specify)<br>ter<br>(a) baghouse<br>(b) other (specify)<br>stalytic Afterburner |                            | 13. A<br>14. A | BSORBER<br>(a) packed<br>(b) spray to<br>(c) tray to<br>(d) venturi<br>(e) other (s<br>DSORBER<br>(a) activate<br>(b) molecu<br>(c) activate<br>(d) silica ge<br>(e) other (s | tower<br>ower<br>wer<br>specify)<br>ed carbon<br>lar sieve<br>ed alumina<br>el<br>specify) |
|   |  |   |                       | 12. Di                                    | rect Flame Afterburner  |                            | 15. C          | ondenser (spec  | xifγ)  |

#### DATE 10-15-02

#### **REGISTRATION NUMBER 60997**

# TORING INSTRUMENTATION ECIFY TYPE, MEASURED LUTANT, AND RECORDER USED g PM10 Monitor and **Opacity Evaluation**é b ng PM10 Monitor and Opacity Evaluation-

1.

ng PM10 Monitor and Opacity Evaluationng PM10 Monitor and Opacity Evaluation-

d 9

ng PM10 Monitor and **Opacity Evaluation**d 9

ng PM10 Monitor and **Opacity Evaluation**d 9

ng PM10 Monitor and **Opacity Evaluationd** 9

99. Other Full Enclosures w/chemical solution, as needed

#### **COMPANY NAME** Dominion Terminal Associates

|                       | М                |                       |                       |   |                                   | ON CONTROL                 | EQUIPMENT             |   | MONITORING INSTRUMENTATION  |  |  |  |
|-----------------------|------------------|-----------------------|-----------------------|---|-----------------------------------|----------------------------|-----------------------|---|---|--|--|--|
|                       | O<br>D           |                       |                       |   |                                   |                            | % EFFICIE             |   |   |  |  |  |
| UNIT<br>REF.<br>NO.   | C<br>O<br>D<br>E | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER  | TYPE<br>(USE<br>CODE<br>L) | DESIGN                | ACTUAL                                      | SPECIFY TYPE, MEASURED<br>POLLUTANT, AND RECORDER<br>USED           |  |  |  |
| BC-34                 | 4                | TP-58                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Pugmill Mixer Feed Belt           | 099                        | 99                    | 99  | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |  |
| BC-35                 | 4                | TP-60                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Pugmill Mixer Discharge<br>Belt   | 099                        | 99                    | 99  | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |  |
| BC-36                 | 4                | TP-61-<br>64-67       | TC-FC                 | TSP/PM-10 - OPACITY                       | Spreader Belt                     | 099                        | 99                    | 99  | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |  |
| BC-37                 | 4                | TP-63                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Briquetter Discharge Belt         | 099                        | 99                    | 99  | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |  |
| BC-38                 | 4                | TP-66                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Briquetter Discharge Belt         | 099                        | 99                    | 99  | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |  |
| BC-39                 | 4                | TP-69                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Briquetter Discharge Belt         | 099                        | 99                    | 99  | Existing PM10 Monitor and<br>Visual Opacity Evaluation-<br>Method 9 |  |  |  |
| Code L - Al           | r Pol            | LUTION CON            | TROL EQUIP            | MENT TYPE                                 |                                   |                            |                       |   |   |  |  |  |
| 1. Settli             | ng Cha           | imber                 |                       | 9. Elec                                   | strostatic Precipitator           |                            | 13. AI                | BSORBER                                     |   |  |  |  |
| 2. Cyclo              | ne               |                       |                       |   | (a) hot side                      |                            |                       | (a) packed                                  | tower   |  |  |  |
| 3. Multic             | cyclon           | 9                     |                       |   | (b) cold side                     |                            |                       | (b) spray to                                | ower  |  |  |  |
| 4. Cycło              | ne scr           | ubber                 |                       |   | (c) high voltage                  |                            |                       | (c) tray tov                                | ver   |  |  |  |
| 5. Orific             | e scrui          |                       |                       |   | (d) low voltage                   |                            |                       | (a) venturi                                 | nadifici  |  |  |  |
| O, IVIECH<br>Z. Montu | anical           | scrupper              |                       |   | (e) single stage<br>(f) two stage |                            | 1Λ Δ                  |   | μθοπγ/  |  |  |  |
| (a) fix               | nt sore          | nat                   |                       |   | (a) other (specify)               |                            |                       | (a) activate                                | d carbon  |  |  |  |
| (b) vai               | iable t          | hroat                 |                       | 10. Filt                                  |                                   |                            |                       | (a) activated carbon<br>(b) molecular sieve |   |  |  |  |
| 8. Mist e             | elimina          | tor                   |                       |   | (a) baghouse                      |                            | (c) activated alumina |   |   |  |  |  |
|                       |                  |                       |                       |   | (b) other (specify)               |                            |                       | (d) silica ge                               | ca gel  |  |  |  |
|                       |                  |                       |                       | 11. Ca                                    | talytic Afterburner               |                            |                       | (e) other (s                                | (specify)   |  |  |  |
|                       |                  |                       |                       | 12. Dir                                   | ect Flame Afterburner             |                            | 15. Co                | ondenser (spec                              | ify)  |  |  |  |
|                       |                  |                       |                       |   |                                   |                            | 99. Ot                | ther (specify)                              | Full Enclosures w/chemical solution,                                |  |  |  |

#### DATE 10-15-02

- <u>needed</u>

<u>needed</u>

#### **REGISTRATION NUMBER 60997**

#### \_\_\_\_\_ \_\_\_\_\_

#### \* Partially-enclosed discharge w/chemical solution, as

#### **COMPANY NAME** Dominion Terminal Associates

| M                |   |   |   |   | ON CONTROL  | EQUIPMENT  |   | MONIT   |
|------------------|---|---|---|---|---|--|---|---|
| D<br>D           |   |   |   |   |   | % EFFICI   | ENCY  |   |
| C<br>O<br>D<br>E | VENT/<br>STACK<br>NO.                               | DEVICE<br>REF.<br>NO.   | POLLUTANT/PARAMETER<br>(See instructions)   | MANUFACTURER<br>AND MODEL NUMBER  | TYPE<br>(USE<br>CODE<br>L)  | DESIGN   | ACTUAL  | SPE<br>POLL                                       |
| 4                | TP-70   | TC-FC   | TSP/PM-10 - OPACITY   | Screen SS-4 Feed Belt   | 099   | 99   | 99  | Existin<br>Visual<br>Method                       |
| 4                | <b>TP-71</b>  | LO-FC   | TSP/PM-10 - OPACITY   | Recirculating Belt  | 099   | 99   | 99  | Existing<br>Visual<br>Method                      |
| 4                | TP-73   | TC-FC   | TSP/PM-10 - OPACITY   | Screen SS-4 Discharge<br>Belt   | 099   | 99   | 99  | Existing<br>Visual<br>Method                      |
| 4                | TP-74   | TC-PC   | TSP/PM-10 - OPACITY   | Synfuel Stacking Belt   | 099   | 99   | 99  | Existin<br>Visual<br>Method                       |
| 4                | <b>TP76</b>   | TC-FC   | TSP/PM-10 - OPACITY   | Stockpile Loadout Transfer<br>Belt  | 099   | 99   | 99  | Existin<br>Visual<br>Method                       |
|                  | M<br>O<br>D<br>C<br>O<br>D<br>E<br>4<br>4<br>4<br>4 | М<br>О<br>D<br>VENT/<br>E<br>STACK<br>NO.<br>4<br>TP-70<br>4<br>TP-71<br>4<br>TP-73<br>4<br>TP-74<br>4<br>TP-74 | M<br>O<br>D<br>VENT/ DEVICE<br>E STACK REF.<br>NO. NO.<br>4 TP-70 TC-FC<br>4 TP-71 LO-FC<br>4 TP-73 TC-FC<br>4 TP-74 TC-PC<br>4 TP-76 TC-FC | M<br>O<br>D<br>VENT/<br>E<br>STACK<br>NO.<br>VENT/<br>DEVICE<br>E<br>STACK<br>NO.<br>NO.<br>POLLUTANT/PARAMETER<br>(See instructions)<br>4<br>TP-70<br>TC-FC<br>TSP/PM-10 - OPACITY<br>4<br>TP-73<br>TC-FC<br>TSP/PM-10 - OPACITY<br>4<br>TP-74<br>TC-FC<br>TSP/PM-10 - OPACITY<br>4<br>TP-74<br>TC-FC<br>TSP/PM-10 - OPACITY<br>4<br>TP-74<br>TC-FC<br>TSP/PM-10 - OPACITY<br>4<br>TP-76<br>TC-FC<br>TSP/PM-10 - OPACITY | M       Air PolLUTIC         O       D         C       O         O       D         VENT/       DEVICE         E       STACK         NO.       NO.         (See instructions)         AND MODEL NUMBER         4       TP-70         TC-FC       TSP/PM-10 - OPACITY         Screen SS-4 Feed Belt         4       TP-71         LO-FC       TSP/PM-10 - OPACITY         Recirculating Belt         4       TP-73         TC-FC       TSP/PM-10 - OPACITY         Screen SS-4 Discharge         Belt | M       AIR POLLUTION CONTROL         O       D         C       TYPE         O       VENT/         D       VENT/         O       POLLUTANT/PARAMETER         MANUFACTURER       CODE         AIR POLLUTION CONTROL       CODE         AIR POLLUTION CONTROL       OPA         4       TP-70       TC-FC         TSP/PM-10 - OPACITY       Synfuel Stacking Belt       O99         4       TP-74       TC-FC </td <td>M       Air PollUTION CONTROL EQUIPMENT         0      </td> <td>M       Air Pollution Control Equipment         0      </td> | M       Air PollUTION CONTROL EQUIPMENT         0 | M       Air Pollution Control Equipment         0 |

CODE L - AIR POLLUTION CONTROL EQUIPMENT TYPE

- 1. Settling Chamber
- 2. Cyclone
- 3. Multicyclone
- 4. Cyclone scrubber
- 5. Orifice scrubber
- 6. Mechanical scrubber
- 7. Venturi scrubber (a) fixed throat
- (b) variable throat
- 8. Mist eliminator

9. Electrostatic Precipitator

- (a) hot side
- (b) cold side
- (c) high voltage
- (d) low voltage
- (e) single stage
- (f) two stage
- (g) other (specify)
- 10. Filter
  - (a) baghouse
  - (b) other (specify)
- 11. Catalytic Afterburner
- 12. Direct Flame Afterburner

#### DATE 10-15-02

#### **REGISTRATION NUMBER 60997**

#### 13. ABSORBER

- (a) packed tower
- (b) spray tower
- (c) tray tower
- (d) venturi
- (e) other (specify)
- 14. ADSORBER
  - (a) activated carbon
  - (b) molecular sieve
  - (c) activated alumina
  - (d) silica gel
  - (e) other (specify)
- 15. Condenser (specify)
- needed

# ORING INSTRUMENTATION ECIFY TYPE, MEASURED LUTANT, AND RECORDER USED PM10 Monitor and **Opacity Evaluation**d 9 PM10 Monitor and **Opacity Evaluation-**PM10 Monitor and **Opacity Evaluation**g PM10 Monitor and **Opacity Evaluation**g PM10 Monitor and **Opacity Evaluation-**19

#### 99. Other Full Enclosures w/chemical solution, as needed \* Partially-enclosed discharge w/chemical solution, as

#### **COMPANY NAME** Dominion Terminal Associates

|                     | м                |                       |                       |   | AIR POLLUT                       | ION CONTROL                | EQUIPMENT | <u> </u> | MONIT                       |
|---------------------|------------------|-----------------------|-----------------------|---|----------------------------------|----------------------------|-----------|----------|-----------------------------|
|                     | O<br>D           |                       |                       |   |                                  |                            | % EFFICI  | INCY     |                             |
| UNIT<br>REF.<br>NO. | C<br>O<br>D<br>E | VENT/<br>STACK<br>NO. | DEVICE<br>REF.<br>NO. | POLLUTANT/PARAMETER<br>(See instructions) | MANUFACTURER<br>AND MODEL NUMBER | TYPE<br>(USE<br>CODE<br>L) | DESIGN    | ACTUAL   | SPI<br>POLI                 |
| BC-45               | 4                | TP-89                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Coal Transfer Belt               | 099                        | 99        | 99       | Existin<br>Visual<br>Methor |
| BC-46               | 4                | TP-91                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Coal Transfer Belt               | 099                        | 99        | 99       | Existin<br>Visual<br>Metho  |
| BC-47               | 4                | TP-92                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Coal Transfer Belt               | 099                        | 99        | 99       | Existin<br>Visual<br>Metho  |
| BC-48               | 4                | TP-93                 | TC-FC                 | TSP/PM-10 - OPACITY                       | Coal Transfer Belt               | 099                        | 99        | 99       | Existin<br>Visual<br>Metho  |
| Code L - Al         | R POL            | LUTION CON            | ITROL EQUIP           | PMENT TYPE                                |                                  |                            |           |          |                             |

- 1. Settling Chamber
- 2. Cyclone
- 3. Multicyclone
- 4. Cyclone scrubber
- 5. Orifice scrubber
- 6. Mechanical scrubber
- 7. Venturi scrubber (a) fixed throat
- (b) variable throat
- 8. Mist eliminator

9. Electrostatic Precipitator

- (a) hot side
- (b) cold side
- (c) high voltage
- (d) low voltage
- (e) single stage
- (f) two stage
- (g) other (specify)

10. Filter

- (a) baghouse
- (b) other (specify)
- 11. Catalytic Afterburner
- 12. Direct Flame Afterburner

#### DATE 10-15-02

#### **REGISTRATION NUMBER 60997**

#### 13. ABSORBER

- (a) packed tower
- (b) spray tower
- (c) tray tower
- (d) venturi
- (e) other (specify)
- 14. ADSORBER
  - (a) activated carbon
  - (b) molecular sieve
  - (c) activated alumina
  - (d) silica gel
  - (e) other (specify)
- 15. Condenser (specify)

needed

# needed

| ORING INSTRUMENTATION |
|-----------------------|
|                       |
|                       |
| CIFY TYPE, MEASURED   |
| UTANT, AND RECORDER   |
| USED                  |
| a PM10 Monitor and    |
| Opacity Evaluation-   |
| g PM10 Monitor and    |
| Opacity Evaluation-   |
| g PM10 Monitor and    |
| Opacity Evaluation-   |
| g PM10 Monitor and    |
| Opacity Evaluation-   |
|                       |
|                       |

99. Other (specify) Full Enclosures w/chemical solution, i

\*Partially-enclosed discharge w/chemical solution, as

# AIR POLLUTION CONTROL EQUIPMENT - SUPPLEMENTAL INFORMATION: SEE ATTACHED

## COMPANY NAME Dominion Terminal Associates

| DEVICE<br>REF.<br>NO.<br>SEE ATTA<br>CONTROL | TYPE<br>(Use<br>Code<br>L)<br>CHED<br>DEVIC | LIQUID<br>FLOW<br>RATE(gpm)<br>(Codes 4,5,<br>6,7,13,15)<br>BAGHOUSE<br>E SHEETS | LIQUID<br>MEDIUM<br>(Codes<br>4,6,6,7,<br>13,15)<br>AIR POLLU | CLEANING<br>METHOD<br>(Codes 9,<br>10,13,14) | NUMBER<br>OF FIELDS<br>(Code 9) | NUMBER OF<br>SECTIONS<br>{Codes<br>9,10} | AIR-<br>TO-<br>CLOTH<br>RATIO<br>(fpm)<br>(Code 10) | FILTER<br>MATERIAL<br>(Code 10) | INLET<br>TEMP<br>(EF) | REGENERATION<br>METHOD<br>& CYCLE<br>TIME (sec)<br>(Code 14) | CHAMBER<br>TEMP.<br>(EF)<br>(Codes<br>11,12) | RETENTION<br>TIME (sec)<br>(Codes<br>11,12) | PRESSURE<br>DROP<br>(In. H2O)<br>(if Codes<br>3,4,5,6,7,<br>10,13) |
|--|---|--|---|--|---------------------------------|--|---|---------------------------------|-----------------------|--|--|---|--|
|  |   |  |   |  |                                 |  |   |                                 |                       |  |  |   |  |
|  |   |  |   |  |                                 |  |   |                                 |                       |  |  |   |  |
|  |   |  |   |  |                                 |  |   |                                 |                       |  |  |   |  |
|  |   |  |   |  |                                 |  |   |                                 |                       |  |  |   |  |
|  |   |  |   |  |                                 |  |   |                                 |                       |  |  |   |  |

#### Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE

- 1. Settling Chamber
- 2. Cyclone
- 3. Multicyclone
- 4. Cyclone scrubber
- 5. Orifice scrubber
- 6. Mechanical scrubber
- 7. Venturi scrubber (a) fixed throat (b) variable throat
- 8. Mist eliminator

9. Electrostatic Precipitator

- (a) hot side
- (b) cold side
- (c) high voltage
- (d) low voltage
- (e) single stage
- (f) two stage
- (g) other (specify)
- 10. Filter
  - (a) baghouse
  - (b) other (specify)
- 11. Catalytic Afterburner
- 12. Direct Flame Afterburner

#### DATE 10-15-02

#### 13. ABSORBER

- (a) packed tower
- (b) spray tower
- (c) tray tower
- (d) venturi
- (e) other (specify)
- 14. ADSORBER
  - (a) activated carbon
  - (b) molecular sieve
  - (c) activated alumina
  - (d)silica gel
  - (e) other (specify)
- 15. Condenser (specify)
- 99. Other (specify)

#### REGISTRATION NUMBER 60997

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# **BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET**

BAGHOUSE NO. 1 – SURGE SILO NO. 1 (ID BS-1)

Complete a Baghouse Air Pollution Control Device Sheet for each baghouse control device.

- 1. Baghouse Control Device Identification Number: FE-BH
- 2. Manufacturer's name and model identification: Johnson Marsh Skykleen PCSB 10-10 Dust Collector
- 3. Number of compartments in baghouse: <u>1</u>
- 4. Number of compartments online during normal operation and conditions: <u>1</u>
- 5. Gas flow rate into baghouse: <u>8,000</u> ACFM @ <u>Ambient</u> °Fand <u>14.7</u> PSIA
- 6. Total cloth area: **2396** ft<sup>2</sup>
- 7. Operating air to cloth ratio: <u>7.5 : 1</u> ft/min
- 8. Filter media type: Polyester fabric
- 9. Stabilized static pressure drop across baghouse: <u>2</u> inches H<sub>2</sub>O
- 10. Baghouse operation is:

Continuous Automatic Intermittent

11. Method used to clean bags:

□ Shaker

Pulse jet

Reverse jet

12. Emission rate of particulate matter entering and exiting baghouse at maximum design operating conditions:

 Entering baghouse:
 Ib/hr and
 20
 grains/ACF

 Exiting baghouse:
 Ib/hr and
 .015
 grains/ACF

- 13. Guaranteed minimum baghouse collection efficiency: 99 %
- 14. Provide a written description of the capture system (e.g. hooding and ductwork arrangement), size of ductwork and hoods and air volume, capacity and operating horsepower of fan:

# Ductwork +20" pipe – Fan 9200 SCFM @ 10" WC & 70'

15. Describe the method of disposal for the collected material: **Baghouse is a bin vent. Material is dropped** directly from the bags back to the silo.

# **BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET**

#### BAGHOUSE NO. 2 – SURGE SILO NO. 2 & 3 (ID BS-2 and BS-3)

Complete a Baghouse Air Pollution Control Device Sheet for each baghouse control device.

- 1. Baghouse Control Device Identification Number: <u>FE-BH</u>
- 2. Manufacturer's name and model identification: Johnson Marsh Skykleen PCSB 10-10 Dust Collector
- 3. Number of compartments in baghouse: <u>1</u>
- 4. Number of compartments online during normal operation and conditions: \_\_\_\_1
- 5. Gas flow rate into baghouse: <u>18,000</u> ACFM @ <u>Ambient</u> °Fand <u>14.7</u> PSIA
- 6. Total cloth area: 2396 ft<sup>2</sup>
- 7. Operating air to cloth ratio: <u>7.5:1</u> ft/min
- 8. Filter media type: Polyester fabric
- 9. Stabilized static pressure drop across baghouse:  $\underline{2}$  inches H<sub>2</sub>O
- 10. Baghouse operation is:

Continuous Automatic Intermittent

11. Method used to clean bags:

Shaker
<p

12. Emission rate of particulate matter entering and exiting baghouse at maximum design operating conditions:

| Entering baghouse: | lb/hr and | 20          | grains/ACF |
|--------------------|-----------|-------------|------------|
| Exiting baghouse:  | ib/hr and | <u>.015</u> | grains/ACF |

- 13. Guaranteed minimum baghouse collection efficiency: 99 %
- 14. Provide a written description of the capture system (e.g. hooding and ductwork arrangement), size of ductwork and hoods and air volume, capacity and operating horsepower of fan:

## Ductwork +50' - single fan on discharge of 2 houses; piped in parallel - Fan 20,700 ACFM @ 10" WC

15. Describe the method of disposal for the collected material: **Baghouse is a bin vent. Material is dropped** directly from the bags back to the silo.

#### COMPANY NAME **Dominion Terminal Associates**

|                     | M                |                             |                                    |                          |                           | AXIMUM           | EMISSION     | RATES T          |         | PHERE |
|---------------------|------------------|-----------------------------|------------------------------------|--------------------------|---------------------------|------------------|--------------|------------------|---------|-------|
|                     | 0<br>D<br>C<br>0 | TC<br>SUSF<br>PARTIC<br>(TS | OTAL<br>PENDED<br>CULATES<br>SP) * | 10<br>SM<br>PARTIC<br>{P | uM OR<br>ALLER<br>ULATES* | SUI<br>DIO<br>(S | LFUR<br>XIDE | NITF<br>OX<br>(N | M       |       |
| UNIT<br>REF.<br>NO. | D<br>E           | lb/hr                       | tons/yr                            | r Ib/hr tons/vr          |                           | lb/hr            | tons/yr      | lb/hr            | tons/yr | lb/h  |
| CR-1                | 4                | 0.07                        | 0.30                               | 0.035                    | 0.145                     |                  |              |                  |         |       |
| CR-2                | 4                | 0.07                        | 0.30                               | 0.035                    | 0.145                     |                  |              |                  |         |       |
| SS-1                | 4                | 0.35                        | 1.53                               | 0.17                     | 0.72                      |                  |              |                  |         |       |
| SS-2                | 4                | 0.35                        | 1.53                               | 0.17                     | 0.72                      |                  |              |                  |         |       |
| SS-3                | 4                | 0.35                        | 1.53                               | 0.17                     | 0.72                      |                  |              |                  |         |       |
| SS-4                | 4                | 0.35                        | 1.53                               | 0.17                     | 0.72                      |                  |              |                  |         |       |
|                     |                  | 0.35 1.55 0                 |                                    |                          |                           |                  |              |                  |         |       |

#### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

# DATE 10-15-02

# **REGISTRATION NUMBER 60997**

# OF CRITERIA POLLUTANTS CARBON VOLATILE IONOXIDE ORGANIC LEAD COMPOUNDS \* (VOC) (CO) (Pb) lb/hr lb/hr tons/yr tons/yr tons/yr

| STATE<br>OPERATING<br>PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
|---|--------------------------------------|
| NO  | 2                                    |
|   |                                      |

#### COMPANY NAME Dominion Terminal Associates

|                     | м                |                             |                                    |                          |                                   | MAXIMUM          | EMISSION            | RATES T          |         | HERE |
|---------------------|------------------|-----------------------------|------------------------------------|--------------------------|-----------------------------------|------------------|---------------------|------------------|---------|------|
|                     | 0<br>D<br>C<br>0 | TC<br>SUSP<br>PARTIC<br>(TS | OTAL<br>PENDED<br>CULATES<br>SP) * | 10<br>SM<br>PARTIC<br>(P | μM OR<br>ALLER<br>ULATES*<br>M10) | SUI<br>DIO<br>(S | LFUR<br>XIDE<br>O2) | NITR<br>OX<br>(N | M       |      |
| UNIT<br>REF.<br>NO. | D<br>E           | lb/hr                       | tons/yr                            | lb/hr                    | tons/yr                           | lb/hr            | tons/yr             | lb/hr            | tons/yr | lb/h |
| <b>OS</b> -1        | 0                | 0.02                        | 0.09                               | 0.01                     | 0.04                              |                  |                     |                  |         |      |
| <b>OS-2</b>         | 0                | 0.02                        | 0.08                               | 0.01                     | 0.04                              |                  |                     |                  |         |      |
| OS-3                | 0                | 0.02                        | 0.08                               | 0.01                     | 0.04                              |                  |                     |                  |         |      |
| OS-4                | 0                | 0.02                        | 0.10                               | 0.01                     | 0.05                              |                  |                     |                  |         |      |
| OS-5                | 4                | 0.01                        | 0.04                               | 0.00                     | 0.02                              |                  |                     |                  |         |      |
| <b>OS-6</b>         | 4                | 0.00                        | 0.00                               | 0.00                     | 0.00                              |                  |                     |                  |         |      |
| OS-7                | 4                | 0.01                        | 0.04                               | 0.00                     | 0.02                              |                  |                     |                  |         |      |

#### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

# DATE 10-15-02

#### **REGISTRATION NUMBER 60997**

# OF CRITERIA POLLUTANTS CARBON MONOXIDE VOLATILE ORGANIC COMPOUNDS \* (CO) LEAD (CO) (VOC) (Pb) or tons/yr Ib/hr tons/yr or tons/yr Ib/hr tons/yr

| STATE<br>OPERATING<br>PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
|---|--------------------------------------|
| NO  | 2                                    |

#### COMPANY NAME **Dominion Terminal Associates**

|                     |        | ·          |                  |              |                  |            |                  |            |          |            |              |            |                |       | ·       |                                       |                                      |
|---------------------|--------|------------|------------------|--------------|------------------|------------|------------------|------------|----------|------------|--------------|------------|----------------|-------|---------|---------------------------------------|--------------------------------------|
|                     | м      |            |                  |              | /                | AXIMUM     | EMISSION         | RATES T    | O ATMOSF | HERE OF    | CRITERIA     | POLLUTA    | NTS            |       |         |                                       |                                      |
|                     | O<br>D | TC<br>SUSF | DTAL<br>PENDED   | 10  <br>SM   | µM OR<br>IALLER  | SUI<br>DIO | _FUR<br>XIDE     | NITF<br>OX | IOGEN    | CAF<br>MON | RON<br>OXIDE | VOL<br>ORC | ATILE<br>SANIC | LE    | EAD     |                                       |                                      |
|                     | C<br>O | PARTIC     | CULATES<br>SP) * | PARTIC<br>(P | CULATES*<br>M10) | (S         | O <sub>2</sub> ) | (N         | 10×)     | (0         | :0)          |            | DUNDS *        | (     | Pb)     | STATE<br>OPERATING                    |                                      |
| UNIT<br>REF.<br>NO. | D<br>E | lb/hr      | tons/yr          | lb/hr        | tons/yr          | lb/hr      | tons/yr          | lb/hr      | tons/yr  | lb/hr      | tons/yr      | lb/hr      | tons/yr        | lb/hr | tons/yr | PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
|                     |        |            |                  |              |                  |            |                  |            |          |            |              |            |                |       |         |                                       |                                      |
| BS-1                | 0      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            | <u> </u> |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-2                | 0      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-3                | 0      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-4                | 4      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-5                | 4      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-6                | 4      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-7                | 4      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-8                | 4      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |
| BS-9                | 4      | 0.00       | 0.00             | 0.00         | 0.00             |            |                  |            |          |            |              |            |                |       |         | NO                                    | 99                                   |

#### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations

99. Other (describe)fully-enclosed in building or fully-enclosed w/water and chemical solution \* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

#### COMPANY NAME Dominion Terminal Associates

|                     | M<br>O<br>D<br>C<br>O | MAXIMUM EMISSION RATES TO ATMOSPHERE          |         |  |         |                            |          |                             |         |      |
|---------------------|-----------------------|---|---------|--|---------|----------------------------|----------|-----------------------------|---------|------|
|                     |                       | TOTAL<br>SUSPENDED<br>PARTICULATES<br>(TSP) * |         | 10 μM OR<br>SMALLER<br>PARTICULATES*<br>(PM10) |         | SULFUR<br>DIOXIDE<br>(SO2) |          | NITROGEN<br>OXIDES<br>(NOx) |         | M    |
| UNIT<br>REF.<br>NO. | D<br>E                | lb/hr   | tons/yr | lb/hr  | tons/yr | lb/hr                      | _tons/yr | lb/hr                       | tons/yr | lb/h |
| BC-1                | 0                     | 0.04  | 0.16    | 0.02   | 0.08    |                            |          |                             |         |      |
| BC-2                | 0                     | 0.04  | 0.16    | 0.02   | 0.08    |                            |          |                             |         |      |
| BC-3                | 0                     | 0.01  | 0.05    | 0.01   | 0.03    |                            |          |                             |         |      |
| BC-4                | 0                     | 0.01  | 0.05    | 0.01   | 0.03    |                            |          |                             |         |      |
| BC-5                | 0                     | 0.01  | 0.05    | 0.01   | 0.03    |                            |          |                             |         |      |
| BC-6                | 0                     | 0.01  | 0.05    | 0.01   | 0.03    |                            |          |                             |         |      |
| BC-7                | 0                     | 0.01  | 0.05    | 0.01   | 0.03    |                            |          |                             |         |      |

#### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

# DATE10-15-02

# **REGISTRATION NUMBER 60997**

# OF CRITERIA POLLUTANTS CARBON VOLATILE ONOXIDE LEAD ORGANIC COMPOUNDS \* (CO) (VOC) (Pb)0 lb/hr lb/hr tons/yr tons/yr tons/yr .

| STATE<br>PERATING<br>PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
|--|--------------------------------------|
| NO   | 2                                    |
### COMPANY NAME Dominion Terminal Associates

|                     | ·····  |   |         |  |         | ····                       |          |                             |          |         |          |                                    |         | <u></u>      |         |                                       |                                      |
|---------------------|--------|---|---------|--|---------|----------------------------|----------|-----------------------------|----------|---------|----------|------------------------------------|---------|--------------|---------|---------------------------------------|--------------------------------------|
|                     | м      |   |         |  | A       | AXIMUM                     | EMISSION | RATES 1                     | O ATMOS  | HERE OF | CRITERIA | POLLUTA                            | NTS     |              |         |                                       |                                      |
|                     |        | TOTAL<br>SUSPENDED<br>PARTICULATES<br>(TSP) * |         | 10 μM OR<br>SMALLER<br>TES PARTICULATES*<br>(PM10) |         | SULFUR<br>DIOXIDE<br>(SO2) |          | NITROGEN<br>OXIDES<br>(NOx) |          |         |          | VOLATILE<br>ORGANIC<br>COMPOUNDS * |         | LEAD<br>(Pb) |         | STATE                                 |                                      |
| UNIT<br>REF.<br>NO. | D<br>E | lb/hr   | tons/yr | 1b/hr  | tons/yr | lb/hr                      | tons/yr  | lb/hr                       | tons/yr_ | lb/hr   | tons/yr  | lb/hr                              | tons/yr | lb/hr        | tons/yr | PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
| BC-8                | 0      | 0.03  | 0.13    | 0.01   | 0.06    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |
| BC-9                | 0      | 0.01  | 0.06    | 0.01   | 0.03    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |
| BC-10               | 0      | 0.03  | 0.13    | 0.01   | 0.06    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |
| BC-11               | 0      | 0.01  | 0.06    | 0.01   | 0.03    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |
| BC-12               | 0      | 0.03  | 0.13    | 0.01   | 0.06    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |
| BC-13               | 0      | 0.03  | 0.13    | 0.01   | 0.06    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |
| BC-14               | 4      | 0.02  | 0.06    | 0.01   | 0.04    |                            |          |                             |          |         |          |                                    |         |              |         | NO                                    | 2                                    |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

### DATE 10-15-02

### REGISTRATION NUMBER 60997

### COMPANY NAME Dominion Terminal Associates

|                     | м                |                             |   |            |  | MAXIMUN    | I EMISSION                 | RATES 1 |                             | HERE  |
|---------------------|------------------|-----------------------------|---|------------|--|------------|----------------------------|---------|-----------------------------|-------|
|                     | 0<br>D<br>C<br>0 | TC<br>SUSP<br>PARTIC<br>(TS | TOTAL<br>SUSPENDED<br>PARTICULATES<br>(TSP) * |            | 10 μM OR<br>SMALLER<br>PARTICULATES*<br>(PM10) |            | SULFUR<br>DIOXIDE<br>(SO2) |         | NITROGEN<br>OXIDES<br>(NOx) |       |
| UNIT<br>REF.<br>NO. | D<br>E           | lb/hr                       | tons/yr                                       | lb/hr      | tons/yr  | lb/hr      | tons/yr                    | lb/hr   | tons/yr                     | lb/h  |
| BC-15               | 4                | 0.02                        | 0.08  | 0.01       | 0.04   |            |                            |         |                             |       |
| BC-16               | 4                | 0.01                        | 0.04  | 0.00       | 0.02   |            |                            |         |                             |       |
| BC-17               | 4                | 0.00                        | 0.00  | 0.00       | 0.00   |            |                            |         |                             |       |
| BC-18               | 4                | 0.01                        | 0.04  | 0.00       | 0.02   |            |                            |         |                             |       |
| BC-19               | 4                | 0.01                        | 0.04  | 0.00       | 0.02   |            |                            |         |                             |       |
| BC-20               | 4                | 0.01                        | 0.04  | 0.00       | 0.02   |            |                            |         |                             |       |
| BC-21               | 4                | 0.01                        | 0.03  | 0.00       | 0.01   |            |                            |         |                             |       |
| BC-22               | 4                | 0.00                        | 0.01  | 0.00       | 0.00   |            |                            |         |                             |       |
| Code M -            | Emia             | alon Esti                   | mate Metho                                    | od (provid | e detailed ca                                  | alculation | including                  | assumed | control effic               | iency |

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

| DATE | 10-15-02 |
|------|----------|
|      |          |

### **REGISTRATION NUMBER 60997**

# OF CRITERIA POLLUTANTS CARBON VOLATILE IONOXIDE ORGANIC LEAD COMPOUNDS \* (CO) (VOC) (Pb) 0 lb/hr tons/yr lb/hr tons/yr tons/yr

of control equipment to support reported values.)

| STATE<br>PERATING<br>PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
|--|--------------------------------------|
| NO   | 2                                    |
| NO   | 2                                    |
| NO   | 2                                    |
|  |                                      |
|  | ~                                    |
| NO   | 2                                    |

### COMPANY NAME **Dominion Terminal Associates**

|                     |                  |                             | يوسيعه المحمد والمحمول والمحمول والم          |            |  | · · · · · · · · · · · · · · · · · · · |                            |         |                             |        |
|---------------------|------------------|-----------------------------|---|------------|--|---------------------------------------|----------------------------|---------|-----------------------------|--------|
|                     | Μ                |                             |   |            |  | AXIMUM                                | EMISSION                   | RATES T | O ATMOSE                    | PHERE  |
|                     | 0<br>D<br>C<br>0 | TC<br>SUSF<br>PARTIC<br>(TS | TOTAL<br>SUSPENDED<br>PARTICULATES<br>(TSP) * |            | 10 μM OR<br>SMALLER<br>PARTICULATES*<br>(PM10) |                                       | SULFUR<br>DIOXIDE<br>(SO2) |         | NITROGEN<br>OXIDES<br>(NOx) |        |
| UNIT<br>REF.<br>NO. | D<br>E           | lb/hr                       | tons/yr                                       | _ib/hr     | tons/yr  | lb/hr                                 | tons/yr                    | lb/hr   | tons/yr                     | ib/h   |
| BC-23               | 4                | 0.00                        | 0.01  | 0.00       | 0.00   |                                       |                            |         |                             |        |
| BC-24               | 4                | 0.00                        | 0.01  | 0.00       | 0.00   |                                       |                            |         |                             |        |
| BC-25               | 4                | 0.00                        | 0.01  | 0.00       | 0.00   |                                       |                            |         |                             |        |
| BC-26               | 4                | 0.01                        | 0.03  | 0.00       | 0.01   |                                       |                            |         |                             |        |
| BC-27               | 4                | 0.00                        | 0.00  | 0.00       | 0.00   |                                       |                            |         |                             |        |
| BC-28               | 4                | 0.01                        | 0.03  | 0.00       | 0.01   |                                       |                            |         |                             |        |
| BC-29               | 4                | 0.01                        | 0.03  | 0.00       | 0.01   |                                       |                            |         |                             |        |
| BC-30               | 4                | 0.01                        | 0.04  | 0.00       | 0.02   |                                       |                            |         |                             |        |
| Code M -            | Emi              | ssion Est                   | imate Meth                                    | od (provid | le detailed c                                  | alculation                            | s including                | assumed | control effi                | ciency |

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

### DATE 10-15-02

### **REGISTRATION NUMBER 60997**

# OF CRITERIA POLLUTANTS CARBON VOLATILE IONOXIDE ORGANIC LEAD COMPOUNDS \* (CO) (VOC) (Pb) tons/yr lb/hr lb/hr tons/yr tons/yr

of control equipment to support reported values.)



### COMPANY NAME Dominion Terminal Associates

|                     | M                |                             |                                   |  | /       | AXIMUM                     | EMISSION | RATES T                     | O ATMOS | PHERE |
|---------------------|------------------|-----------------------------|-----------------------------------|--|---------|----------------------------|----------|-----------------------------|---------|-------|
|                     | 0<br>D<br>C<br>0 | TC<br>SUSP<br>PARTIC<br>(TS | TAL<br>PENDED<br>CULATES<br>SP) * | 10 μM OR<br>SMALLER<br>PARTICULATES*<br>(PM10) |         | SULFUR<br>DIOXIDE<br>(SO2) |          | NITROGEN<br>OXIDES<br>(NOx) |         | M     |
| UNIT<br>REF.<br>NO. | D<br>E           | lb/hr                       | tons/yr                           | lb/hr  | tons/yr | lb/hr                      | tons/yr  | 1b/hr                       | tons/yr | lb/h  |
| BC-31               | 4                | 0.00                        | 0.00                              | 0.00   | 0.00    |                            |          |                             |         |       |
| BC-32               | 4                | 0.01                        | 0.04                              | 0.00   | 0.02    |                            |          |                             |         |       |
| BC-33               | 4                | 0.01                        | 0.04                              | 0.00   | 0.02    |                            |          |                             |         |       |
| BC-34               | 4                | 0.01                        | 0.04                              | 0.00   | 0.02    |                            |          |                             |         |       |
| BC-35               | 4                | 0.01                        | 0.03                              | 0.00   | 0.01    |                            |          |                             |         |       |
| BC-36               | 4                | 0.00                        | 0.01                              | 0.00   | 0.00    |                            |          |                             |         |       |
| BC-37               | 4                | 0.00                        | 0.01                              | 0.00   | 0.00    |                            |          |                             |         |       |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

### DATE 10-15-02

### REGISTRATION NUMBER 60997

# OF CRITERIA POLLUTANTS CARBON VOLATILE IONOXIDE ORGANIC LEAD COMPOUNDS \* (CO) (VOC) (Pb) lb/hr lb/hr tons/yr tons/yr tons/yr

| STATE<br>OPERATING<br>PERMIT<br>EMISSION<br>CAP<br>(Yes/No) | BASIS OF<br>ESTIMATE<br>{USE CODE M} |
|---|--------------------------------------|
| NO  | 2                                    |

### COMPANY NAME Dominion Terminal Associates

|                     | M                | MAXIMUM EMISSION RATES TO ATMOSPH |                         |  |         |                            |         |                             |         |        |  |  |
|---------------------|------------------|-----------------------------------|-------------------------|--|---------|----------------------------|---------|-----------------------------|---------|--------|--|--|
|                     | 0<br>D<br>C<br>0 | TC<br>SUSP<br>PARTIC<br>(TS       | TAL<br>ENDED<br>CULATES | 10 μM OR<br>SMALLER<br>PARTICULATES*<br>(PM10) |         | SULFUR<br>DIOXIDE<br>(SO2) |         | NITROGEN<br>OXIDES<br>(NOx) |         | (<br>M |  |  |
| UNIT<br>REF.<br>NO. | D<br>E           | lb/hr                             | tons/yr                 | lb/hr  | tons/yr | lb/hr                      | tons/yr | lb/hr                       | tons/yr | lb/h   |  |  |
| BC-38               | 4                | 0.00                              | 0.01                    | 0.00   | 0.00    |                            |         |                             |         |        |  |  |
| BC-39               | 4                | 0.00                              | 0.01                    | 0.00   | 0.00    |                            |         |                             |         |        |  |  |
| BC-40               | 4                | 0.01                              | 0.03                    | 0.00   | 0.01    |                            |         |                             |         |        |  |  |
| BC-41               | 4                | 0.00                              | 0.00                    | 0.00   | 0.00    |                            |         |                             |         |        |  |  |
| BC-42               | 4                | 0.01                              | 0.03                    | 0.00   | 0.01    |                            |         |                             |         |        |  |  |
| BC-43               | 4                | 0.03                              | 0.14                    | 0.01   | 0,06    |                            |         |                             |         |        |  |  |
| BC-44               | 4                | 0.01                              | 0.05                    | 0.01   | 0.03    |                            |         |                             |         |        |  |  |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

1. Stack Test (include a copy of summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

### DATE 10-15-02

### **REGISTRATION NUMBER 60997**

# OF CRITERIA POLLUTANTS CARBON MONOXIDE VOLATILE ORGANIC COMPOUNDS \* (CO) LEAD (CO) (VOC) (Pb) C or tons/yr Ib/hr tons/yr Ib/hr tons/yr or tons/yr Ib/hr tons/yr Ib/hr Ib/hr or tons/yr Ib/hr tons/yr Ib/hr Ib/hr or tons/yr Ib/hr tons/yr Ib/hr Ib/hr

| STATE<br>OPERATING<br>PERMIT<br>EMISSION<br>CAP | BASIS OF<br>ESTIMATE<br>(USE CODE M) |
|---|--------------------------------------|
|   |                                      |
| NO  | 2                                    |

-

### COMPANY NAME **Dominion Terminal Associates**

|                     | м           |   |         | - <u></u>   | ٨       | AXIMUN                     | EMISSION | RATES T                     | O ATMOSE | HERE OF                    | CRITERIA | POLLUTA                                     | NTS     |              |         |  |
|---------------------|-------------|---|---------|---|---------|----------------------------|----------|-----------------------------|----------|----------------------------|----------|---|---------|--------------|---------|--|
|                     | 0<br>D<br>0 | TOTAL<br>SUSPENDED<br>PARTICULATES<br>(TSP) * |         | TOTAL 10 μM OR<br>SUSPENDED SMALLER<br>PARTICULATES PARTICULATE<br>(TSP) * (PM10) |         | SULFUR<br>DIOXIDE<br>{SO2} |          | NITROGEN<br>OXIDES<br>(NOx) |          | CARBON<br>MONOXIDE<br>(CO) |          | VOLATILE<br>ORGANIC<br>COMPOUNDS *<br>(VOC) |         | LEAD<br>(Pb) |         |  |
| UNIT<br>REF.<br>NO. | D<br>E      | lb/hr   | tons/yr | lb/hr   | tons/yr | Ib/hr                      | tons/yr  | lb/hr                       | tons/yr  | lb/hr                      | tons/yr  | lb/hr                                       | tons/yr | lb/hr        | tons/yr |  |
| BC-45               | 4           | 0.04  | 0.16    | 0.02  | 0.08    |                            |          |                             |          |                            |          |   |         |              |         |  |
| BC-46               | 4           | 0.04  | 0.16    | 0.02  | 0.08    |                            |          |                             |          |                            |          |   |         |              |         |  |
| BC-47               | 4           | 0.04  | 0.16    | 0.02  | 0.08    |                            |          |                             |          |                            |          |   |         |              |         |  |
| BC-48               | 4           | 0.04  | 0.16    | 0.02  | 0.08    |                            |          |                             |          |                            |          |   |         |              |         |  |
|                     |             |   |         |   |         |                            |          |                             |          |                            |          |   |         |              |         |  |
|                     |             |   |         |   |         |                            |          |                             |          |                            |          |   |         |              |         |  |
|                     |             |   |         |   |         |                            |          |                             |          |                            |          |   |         |              |         |  |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment to support reported values.)

- 1. Stack Test (include a copy of summary)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify source) and include calculations 99. Other (describe)

\* TSP, PM10, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

### DATE 10-15-02

### **REGISTRATION NUMBER 60997**



### COMPANY NAME Dominion Terminal Associates

|                     | M                |                   | MAXIMUM EMISSIO | N RATES TO ATMOSPH | ERE OF POLLUTAN | IT (Specify polluta | ant)*          |  |
|---------------------|------------------|-------------------|-----------------|--------------------|-----------------|---------------------|----------------|--|
|                     | D                |                   |                 | CONT               | ROLLED          | UNCONT              |                |  |
| UNIT<br>REF.<br>NO. | C<br>O<br>D<br>E | VENT/<br>STACK NO | NAME<br>CAS #   | lb/hr              | tons/yr         | lb/hr               | tons/yr        | STATE OPEF<br>PERMIT<br>EMISSION<br>(YES/N |
| CR-1                | 4                | Source            | TSP<br>PM10     | 0.07<br>0.035      | 0.30<br>0.145   | 7.0<br>3.29         | 30.66<br>14.41 | No   |
| CR-2                | 4                | Source            | TSP<br>PM10     | 0.07<br>0.035      | 0.30<br>0.145   | 7.0<br>3.29         | 30.66<br>14.41 | No   |
| SS-1                | 4                | Source            | TSP<br>PM10     | 0.35<br>0.165      | 1.5325<br>0.72  | 35.0<br>16.45       | 153.3<br>72.05 | No   |
| <u>SS-2</u>         | 4                | Source            | TSP<br>PM10     | 0.35<br>0.165      | 1.5325<br>0.72  | 35.0<br>16.45       | 153.3<br>72.05 | No   |
| _ <u>SS-3</u>       | 4                | Source            | TSP<br>PM10     | 0.35<br>0.165      | 1.5325<br>0.72  | 35.0<br>16.45       | 153.3<br>72.05 | No   |
| SS-4                | 4                | Source            | TSP<br>PM10     | 0.35<br>0.165      | 1.5325<br>0.72  | 35.0<br>16.45       | 153.3<br>72.05 | No   |

1. Stack Test (include a copy)

- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)

99. Other (describe)

+

page.

If you have other regulated pollutants, list as the first CAS number. Toxic Pollutant on the designated list at the front of this application. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances within these classes may be toxic pollutants because their toxic properties or because a TLV (tm) has been established. See the toxic pollutant listing in the front of this application. Specify which pollutants are also reported as components of TSP, PM10, or VOCs on the previous

### DATE 10-15-02

REGISTRATION NUMBER 60997



| COMPAN                            | IY NAN           | AE Dominion Terr  | minal Associates |                  | REGISTRATION NUMBER 6 | 0997                |              |  |          |
|-----------------------------------|------------------|-------------------|------------------|------------------|-----------------------|---------------------|--------------|--|----------|
|                                   | M                |                   | MAXIMUM EMISSION | RATES TO ATMOSPH | IERE OF POLLUT        | ANT (Specify pollut | ant)*        |  |          |
|                                   |                  |                   |                  | CONT             | ROLLED                | UNCON               | TROLLED      |  |          |
| C<br>O<br>UNIT D<br>REF. E<br>NO. | C<br>O<br>D<br>E | VENT/<br>STACK NO | NAME<br>CAS #    | lb/hr            | tons/yr               | lb/hr               | tons/yr      | STATE OPERATING<br>PERMITS<br>EMISSION CAP<br>(YES/NO) | E<br>(U: |
| BS-4                              | 4                | Fugitive          | TSP<br>PM10      | 0.00<br>0.00     | 0.00<br>0.00          | 0.00                | 0.00<br>0.00 | No   |          |
| BS-5                              | 4                | Fugitive          | TSP<br>PM10      | 0.00<br>0.00     | 0.00<br>0.00          | 0.00                | 0.00<br>0.00 | No   |          |
| BS-6                              | 4                | Fugitive          | TSP<br>PM10      | 0.00<br>0.00     | 0.00<br>0.00          | 0.00                | 0.00<br>0.00 | No   |          |
| BS-7                              | 4                | Fugitive          | TSP<br>PM10      | 0.00<br>0.00     | 0.00<br>0.00          | 0.00                | 0.00<br>0.00 | No   |          |
| BS-8                              | 4                | Fugitive          | TSP<br>PM10      | 0.00<br>0.00     | 0.00<br>0.00          | 0.00<br>0.00        | 0.00<br>0.00 | No   |          |
| BS-9                              | 4                | Fugitive          | TSP<br>PM10      | 0.00<br>0.00     | 0.00                  | 0.00<br>0.00        | 0.00<br>0.00 | No   |          |

Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)

+

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Page Revised April 15, 2002

### 99. Other (describe) - FULLY-ENCLOSED IN BUILDING OR FULLY-ENCLOSED W/WATER & CHEMICAL SOLUTION



| COMPANY NAME Dominion Terminal Associates |   |                   |                  |                    | DATE 10-15-    | 02                  | REGISTRATION NU |  |
|---|---|-------------------|------------------|--------------------|----------------|---------------------|-----------------|--|
|   | M   |                   | MAXIMUM EMISSION | N RATES TO ATMOSPH | ERE OF POLLUTA | ANT (Specify pollut |                 |  |
|   | D   |                   |                  | CONT               | ROLLED         | UNCON               | TROLLED         |  |
| UNIT<br>REF.<br>NO.                       | C<br>O<br>UNIT<br>REF. D<br>REF. E<br>NO. ST/ | VENT/<br>STACK NO | NAME<br>CAS #    | lb/hr              | tons/yr        | lb/hr               | tons/y          | STATE OPE<br>PERMI<br>EMISSION<br>(YES/N |
| OS-5                                      | 4   | Fugitive          | TSP<br>PM10      | 0.01<br>0.00       | 0.04<br>0.02   | 0.90<br>0.42        | 3.92<br>1.84    | No                                       |
| 05-6                                      | 4   | Fugitive          | TSP<br>PM10      | 0.00<br>0.00       | 0.00<br>0.00   | 0.00<br>0.00        | 0.02<br>0.01    | No                                       |
| <u>0S-7</u>                               | 4   | Fugitive          | TSP<br>PM10      | 0.01<br>0.00       | 0.04<br>0.02   | 0.90<br>0.42        | 3.92<br>1.84    | No                                       |
|   |   |                   |                  |                    |                |                     |                 |  |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)
- 99. Other (describe)
- + page.

If you have other regulated pollutants, list as the first CAS number. Toxic Pollutant on the designated list at the front of this application. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, but individual substances within these classes may be toxic pollutants because their toxic properties or because a TLV (tm) has been established. See the toxic pollutant listing in the front of this application. Specify which pollutants are also reported as components of TSP, PM10, or VOCs on the previous

### JMBER 60997



| COMPANY NAME Dominion Terminal Associates       |                   |               |                  | DATE 10-15-02    |                | REGISTRATION NUM    |   |    |
|---|-------------------|---------------|------------------|------------------|----------------|---------------------|---|----|
|   | м                 |               | MAXIMUM EMISSION | RATES TO ATMOSPH | IERE OF POLLUT | ANT (Specify pollut | <u>ant)*</u>                                |    |
|   | O<br>D            |               |                  | CONT             | ROLLED         | UNCON               | TROLLED                                     |    |
| C<br>O<br>UNIT D<br>REF. E VENT/<br>NO. STACK I | VENT/<br>STACK NO | NAME<br>CAS # | lb/hr            | tons/yr          | lb/hr          | tons/yr             | STATE OPER<br>PERMIT<br>EMISSION<br>(YES/NO |    |
| BC-14   | 4                 | TP-16         | TSP<br>PM10      | 0.02<br>0.01     | 0.08<br>0.04   | 1.87<br>0.88        | 8.18<br>3.87                                | No |
| BC-15   | 4                 | TP-18         | TSP<br>PM10      | 0.02<br>0.01     | 0.08<br>0.04   | 1.87<br>0.88        | 8.18<br>3.87                                | No |
| BC-16   | 4                 | TP-21         | TSP<br>PM10      | 0.01<br>0.00     | 0.04<br>0.02   | 0.93<br>0.44        | 4.09<br>1.94                                | No |
| BC-17   | 4                 | TP-24         | TSP<br>PM10      | 0.00             | 0.00<br>0.00   | 0.00                | 0.00<br>0.00                                | No |
| BC-18   | 4                 | TP-27         | TSP<br>PM10      | 0.01<br>0.00     | 0.04<br>0.02   | 0.93<br>0.44        | 4.09<br>1.94                                | No |
| BC-19   | 4                 | TP-28         | TSP<br>PM10      | 0.01             | 0.04<br>0.02   | 0.93<br>0.44        | 4.09<br>1.94                                | No |

. Stack Test (include a copy)

- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)

99. Other (describe)

\*

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### MBER 60997



| COMPANY NAME Dominion Terminal Associates |                   |               |                  |                  | DATE 10-15-02 |                     | REGISTRATION NU                          |           |
|---|-------------------|---------------|------------------|------------------|---------------|---------------------|--|-----------|
|   | M                 |               | MAXIMUM EMISSION | RATES TO ATMOSPH | ERE OF POLLUT | ANT (Specify pollut | ant)*                                    |           |
|   | D                 |               |                  | CONT             | ROLLED        | UNCON               | TROLLED                                  |           |
| C<br>O<br>UNIT<br>REF. D<br>REF. E<br>NO. | VENT/<br>STACK NO | NAME<br>CAS # | lb/hr            | tons/yr          | lb/hr         | tons/yr             | STATE OPE<br>PERMI<br>EMISSION<br>(YES/N |           |
| BC-20                                     | 4                 | TP-30         | TSP<br>PM10      | 0.01<br>0.00     | 0.04<br>0.02  | 0.93<br>0.44        | 4.09<br>1.94                             | No        |
| BC-21                                     | 4                 | TP-32         | TSP<br>PM10      | 0.01<br>0.00     | 0.03<br>0.01  | 0.62<br>0.30        | 2.73<br>1.29                             | No        |
| BC-22                                     | 4                 | TP-33-36-39   | TSP<br>PM10      | 0.00<br>0.00     | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                             | No        |
| BC-23                                     | 4                 | TP-35         | TSP<br>PM10      | 0.00             | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                             | <u>No</u> |
| BC-24                                     | 4                 | TP-38         | TSP<br>PM10      | 0.00<br>0.00     | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                             | No        |

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)
- 99. Other (describe)
- + page.

Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

If you have other regulated pollutants, list as the first CAS number. Toxic Pollutant on the designated list at the front of this application. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, but individual substances within these classes may be toxic pollutants because their toxic properties or because a TLV (tm) has been established. See the toxic pollutant listing in the front of this application. Specify which pollutants are also reported as components of TSP, PM10, or VOCs on the previous

### JMBER 60997



### COMPANY NAME Dominion Terminal Associates

|                                   | м                 |               | MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)* |              |              |              |   |    |
|-----------------------------------|-------------------|---------------|--|--------------|--------------|--------------|---|----|
|                                   | O<br>D            |               |  | CONTI        | ROLLED       | UNCONTROLLED |   |    |
| C<br>O<br>UNIT D<br>REF. E<br>NO. | VENT/<br>STACK NO | NAME<br>CAS # | lb/hr  | tons/yr      | lb/hr        | tons/yr      | STATE OPER<br>PERMIT<br>EMISSION<br>(YES/N) |    |
| BC-25                             | 4                 | TP-41         | TSP<br>PM10  | 0.00<br>0.00 | 0.01<br>0.00 | 0.21<br>0.10 | 0.91<br>0.43                                | No |
| BC-26                             | 4                 | TP-42         | TSP<br>PM10  | 0.01<br>0.00 | 0.03<br>0.01 | 0.62<br>0.30 | 2.73<br>1.29                                | No |
| BC-27                             | 4                 | TP-43         | TSP<br>PM10  | 0.00<br>0.00 | 0.00<br>0.00 | 0.00<br>0.00 | 0.00<br>0.00                                | No |
| BC-28                             | 4                 | TP-45         | TSP<br>PM10  | 0.01<br>0.00 | 0.03<br>0.01 | 0.62<br>0.30 | 2.73<br>1.29                                | No |
| BC-29                             | 4                 | TP-46         | TSP<br>PM10  | 0.01<br>0.00 | 0.03<br>0.01 | 0.62<br>0.30 | 2.73<br>1.29                                | No |
| BC-30                             | 4                 | TP-49         | TSP<br>PM10  | 0.01<br>0.00 | 0.04<br>0.02 | 0.93<br>0.44 | 4.09<br>1.94                                | No |

1. Stack Test (include a copy)

- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)

99. Other (describe)

\*

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Page Revised April 15, 2002

Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

### REGISTRATION NUMBER 60997



| COMPANY NAME Dominion Terminal Associates |                                   |                   |                  | DATE 10-15-      | 02            | REGISTRATION NUI    |              |  |
|---|-----------------------------------|-------------------|------------------|------------------|---------------|---------------------|--------------|--|
| <br> <br>                                 | м                                 |                   | MAXIMUM EMISSION | RATES TO ATMOSPH | ERE OF POLLUT | ANT (Specify pollut | ant)*        |  |
|   | O<br>D                            |                   |                  | CONTI            | ROLLED        | UNCON               | TROLLED      |  |
| UNIT<br>REF.<br>NO.                       | C<br>O<br>UNIT D<br>REF. E<br>NO. | VENT/<br>STACK NO | NAME<br>CAS #    | lb/hr            | tons/yr       | lb/hr               | tons/y       | STATE OPER<br>PERMIT<br>EMISSION<br>(YES/N |
| BC-31                                     | 4                                 | TP-52             | TSP<br>PM10      | 0.00<br>0.00     | 0.00<br>0.00  | 0.00<br>0.00        | 0.00<br>0.00 | No   |
| BC-32                                     | 4                                 | TP-55             | TSP<br>PM10      | 0.01<br>0.00     | 0.04<br>0.02  | 0.93<br>0.44        | 4.09<br>1.94 | No   |
| BC-33                                     | 4                                 | TP-56             | TSP<br>PM10      | 0.01<br>0.00     | 0.04<br>0.02  | 0.93<br>0.44        | 4.09<br>1.94 | No   |
| BC-34                                     | 4                                 | TP-58             | TSP<br>PM10      | 0.01<br>0.00     | 0.04<br>0.02  | 0.93<br>0.44        | 4.09<br>1.94 | No   |
| BC-35                                     | 4                                 | TP-60             | TSP<br>PM10      | 0.01<br>0.00     | 0.03<br>0.01  | 0.62<br>0.30        | 2.73<br>1.29 | No   |

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)
- 99. Other (describe)
- . page.

Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

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### MBER 60997



| COMPANY NAME Dominion Terminal Associates |                   |               |                  | DATE 10-15-        | 02            | REGISTRATION NUI    |  |    |
|---|-------------------|---------------|------------------|--------------------|---------------|---------------------|--|----|
|   | м                 |               | MAXIMUM EMISSION | I RATES TO ATMOSPH | ERE OF POLLUT | ANT (Specify pollut | ant)*                                      |    |
|   | O<br>D            |               |                  | CONTI              | ROLLED        | UNCON               | TROLLED                                    |    |
| C<br>O<br>UNIT D<br>REF. E<br>NO.         | VENT/<br>STACK NO | NAME<br>CAS # | lb/hr            | tons/yr            | lb/hr         | tons/y              | STATE OPEF<br>PERMIT<br>EMISSION<br>(YES/N |    |
| BC-36                                     | 4                 | TP-61         | TSP<br>PM10      | 0.00               | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                               | Νο |
| BC-37                                     | 4                 | TP-63         | TSP<br>PM10      | 0.00<br>0.00       | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                               | Νο |
| BC-38                                     | 4                 | TP-66         | TSP<br>PM10      | 0.00<br>0.00       | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                               | No |
| BC-39                                     | 4                 | TP-69         | TSP<br>PM10      | 0.00<br>0.00       | 0.01<br>0.00  | 0.21<br>0.10        | 0.91<br>0.43                               | No |
| BC-40                                     | 4                 | TP-70         | TSP<br>PM10      | 0.01<br>0.00       | 0.03<br>0.01  | 0.62<br>0.30        | 2.73<br>1.29                               | Νο |

Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)
- 99. Other (describe)
- \*

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### MBER 60997



### COMPANY NAME Dominion Terminal Associates

|                     | м  |               | MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)* |              |              |              |              |                                   |
|---------------------|--|---------------|--|--------------|--------------|--------------|--------------|-----------------------------------|
|                     | O<br>D   |               |  | CONT         | ROLLED       | UNCONTROLLED |              | STATE OPER<br>PERMITE<br>EMISSION |
| UNIT<br>REF.<br>NO. | C<br>O<br>UNIT D<br>REF. E VENT/<br>NO. STACK NO | NAME<br>CAS # | lb/hr  | tons/yr      | lb/hr        | tons/yr      |              |                                   |
| BC-41               | 4  | TP-71         | TSP<br>PM10  | 0.00<br>0.00 | 0.00         | 0.00<br>0.00 | 0.00         | No                                |
| BC-42               | 4  | TP-73         | TSP<br>PM10  | 0.01<br>0.00 | 0.03<br>0.01 | 0.62<br>0.30 | 2.73<br>1.29 | No                                |
| BC-43               | 4  | TP-74         | TSP<br>PM10  | 0.01<br>0.00 | 0.03<br>0.01 | 0.62<br>0.30 | 2.73<br>1.29 | No                                |
| BC-44               | 4  | TP-76         | TSP<br>PM10  | 0.01<br>0.01 | 0.05<br>0.03 | 1.25<br>0.59 | 5.47<br>2.59 | Νο                                |
|                     |  |               |  |              |              |              |              |                                   |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)
- 99. Other (describe)
- + page.

### Page Revised April 15, 2002

If you have other regulated pollutants, list as the first CAS number. Toxic Pollutant on the designated list at the front of this application. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, but individual substances within these classes may be toxic pollutants because their toxic properties or because a TLV (tm) has been established. See the toxic pollutant listing in the front of this application. Specify which pollutants are also reported as components of TSP, PM10, or VOCs on the previous

| DATE | 10-15-02 |
|------|----------|

REGISTRATION NUMBER 60997



| COMPANY NAME Dominion Terminal Associates   |   |   |   |   | DATE 10-15-   | 02  | REGISTRATION NU                            |
|---|---|---|---|---|---|---|--|
| M   |   | MAXIMUM EMISSION  | RATES TO ATMOSPH  | ERE OF POLLUT   | ANT (Specify pollut   | ant)*   |  |
|   |   |   | CONT  | OLLED   | UNCON   | UNCONTROLLED  |  |
| C<br>O<br>UNIT D<br>REF. E<br>NO.   | VENT/<br>STACK NO                                     | NAME<br>CAS #   | lb/hr   | tons/yr   | lb/hr   | tons/yr   | STATE OPER<br>PERMIT<br>EMISSION<br>(YES/N |
| 3C45 4  | TP-89   | TSP<br>PM10   | 0.01<br>0.01  | 0.05<br>0.03  | 1.22<br>0.58  | 5.34<br>2.52  | No   |
| 4<br>3C-46  | TP-91   | TSP<br>PM10   | 0.01<br>0.01  | 0.05<br>0.03  | 1.22<br>0.58  | 5.34<br>2.52  | No   |
| 3C-47   | TP-92   | TSP<br>PM10   | 0.01<br>0.01  | 0.05<br>0.03  | 1.22<br>0.58  | 5.34<br>2.52  | No   |
| 4<br>3C-48  | TP-93   | TSP<br>PM10   | 0.01<br>0.01  | 0.05<br>0.03  | 1.22<br>0.58  | 5.34<br>2.52  | No   |
| REF.       E         NO.       4         3C45       4         3C-46       4         3C-47       4         3C-48       4 | VENT/<br>STACK NO<br>TP-89<br>TP-91<br>TP-92<br>TP-93 | NAME<br>CAS #<br>TSP<br>PM10<br>TSP<br>PM10<br>TSP<br>PM10<br>TSP<br>PM10 | lb/hr           0.01           0.01           0.01           0.01           0.01           0.01           0.01           0.01           0.01           0.01 | tons/γr<br>0.05<br>0.03<br>0.05<br>0.03<br>0.05<br>0.03<br>0.05<br>0.03 | Ib/hr         1.22         0.58         1.22         0.58         1.22         0.58         1.22         0.58         1.22         0.58 | tons/yr<br>5.34<br>2.52<br>5.34<br>2.52<br>5.34<br>2.52<br>5.34<br>2.52 |  |

### Code M - Emission Estimate Method (provide detailed calculations including assumed control efficiency of control equipment, if applicable)

- 1. Stack Test (include a copy)
- 2. Material Balance (include calculations)
- 3. Emission Factor (identify)

99. Other (describe)

+

If you have other regulated pollutants, list as the first CAS number. Toxic Pollutant on the designated list at the front of this application. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, but individual substances within these classes may be toxic pollutants because their toxic properties or because a TLV (tm) has been established. See the toxic pollutant listing in the front of this application. Specify which pollutants are also reported as components of TSP, PM10, or VOCs on the previous page.

### JMBER 60997



### **EPA ACCEPTED - CONTROL DEVICE LISTING**

| Fugitive Dust Sources | Control Device* Control Device Pre         |       | Control Efficiency (%) |  |
|-----------------------|--|-------|------------------------|--|
|                       | UNLOADING                                  |       |                        |  |
| From Railcar or Truck | Full Enclosure Vented to Baghouse          | UL-BH | 99                     |  |
| From Railcar or Truck | Full Enclosure                             | UL-FE | 70                     |  |
| From Railcar or Truck | Wet Suppression with Chemical Solution     | UL-CS | 80                     |  |
| From Railcar or Truck | Water Spray                                | UL-WS | 50                     |  |
| Dump Bins             | FE and Water Sprays with Chemical Solution | บD-FC | 99                     |  |
| Dump Bins             | Full Enclosure with water sprays           | UD-FW | 90                     |  |
|                       |  |       |                        |  |

**CRUSHING AND SCREENING** 

| Crushing or Screening   | Full Enclosure Vented to Baghouse         | CS-BH | 99  |  |  |  |
|-------------------------|---|-------|-----|--|--|--|
| Crushing or Screening   | Wet Suppression with Chemicals            | CS-CS | 90  |  |  |  |
| Crushing or Screening   | Full Enclosure with Water Spray           | CS-FW | 90  |  |  |  |
| Crushing or Screening   | Full Enclosure/Wet Suppression/Chemicals  | CS-FC | 99  |  |  |  |
| Crushing or Screening   | Full enclosure                            | CS-FE | 80  |  |  |  |
|                         | TRANSFER AND CONVE                        | YING  | -   |  |  |  |
| Conveyor Transfer Point | Full Enclosure Vented to Baghouse         | TC-BH | 99  |  |  |  |
| Conveyor Transfer Point | Full Enclosure with Water Spray           | TC-FW | 90  |  |  |  |
| Conveyor Transfer Point | FE and Water Spray with Chemical Solution | TC-FC | 99  |  |  |  |
| Conveyor Transfer Point | PE and Water Spray with Chemical Solution | TC-PC | 95  |  |  |  |
| Conveyor Transfer Point | Full enclosure                            | TC-FE | 80  |  |  |  |
| Conveyor Transfer Point | Water spray                               | TC-WS | 70  |  |  |  |
| Conveyor Transfer Point | Partial Enclosure                         | TC-PE | 50  |  |  |  |
| CLEANING                |   |       |     |  |  |  |
| Wet Wash Operations     | Full Enclosure                            | WW-FE | 100 |  |  |  |
|                         | STORAGE                                   |       |     |  |  |  |
| Loading onto Piles      | Full Enclosure                            | SL-FE | 80  |  |  |  |
| Loading onto Piles      | Telescopic Chute                          | SL-TC | 75  |  |  |  |
| Loading onto Piles      | Wet Suppression with Chemical Solution    | SL-CS | 75  |  |  |  |
| Loading onto Piles      | Wind Guard                                | SL-WG | 50  |  |  |  |
| Wind Erosion            | Full Enclosure                            | SW-FE | 100 |  |  |  |
| Wind Erosion            | Wet Suppression with Chemical Solution    | SW-CS | 99  |  |  |  |
| Wind Erosion            | Water Spray                               | SW-WS | 75  |  |  |  |
|                         | LOADING OUT                               |       |     |  |  |  |
| From Stockpiles         | Wet Suppression with Chemical Solution    | LO-CS | 95  |  |  |  |
| From Stockpiles         | Under-pile Conveyor with Water Sprays     | LO-UC | 85  |  |  |  |
| From Stockpiles         | Bucket Wheel Reclaimer                    | LO-RC | 80  |  |  |  |

|                            | LOADING                                |       |    |
|----------------------------|--|-------|----|
| To Railcar, Barge or Truck | Wet Suppression with Chemical Solution | LR-CS | 80 |
| To Railcar, Barge or Truck | Telescopic Chute with Water Sprays     | LR-TW | 90 |
|                            | HAULROADS                              |       |    |
| Unpaved                    | Water Truck with Chemical Solution     | HR-CS | 85 |
| Unpaved                    | Water Truck with Water Spray           | HR-WS | 70 |

For purposes of a General Permit for coal handling and preparation facilities, the following emission calculation methods will provide an adequate estimate of facility emissions from point sources and fugitive emission sources. However, where source (facility) specific tests are available, such information is preferable. Other emission factors may be acceptable provided documentation as to accuracy and appropriateness are provided by the applicant.

Completely fill out the following INPUTS pages with all requested facility specific information.

| INPUTS   |                    | Pag                                 |
|--|--------------------|-------------------------------------|
| Include all information for each emission source and | Name of applicant: | <b>Dominion Terminal Associates</b> |
| transfer point as listed in the permit application.  | Name of plant:     | Pier 11 Facility                    |
|  |                    | Modification October, 2002          |

|                    | Number of   | Max, raw coal | Max. raw coal | Control   | Control    |
|--------------------|-------------|---------------|---------------|-----------|------------|
|                    | Crushers    | input per     | input per     | Device    | Efficiency |
|                    | and Screens | hour (Tons)   | year (Tons)   | ID Number | %          |
|                    |             |               |               |           |            |
| Primary Crushing   | 2           | 700           | 6,132,000     | CS-FC     | 99         |
| Secondary Crushing |             |               |               |           |            |
| Screening          | 4           | 700           | 6,132,000     | CS-FC     | 99         |

### 2. TRANSFER POINTS (including all conveyor transfer points, equipment transfer points etc.)

|  | <u> </u> | <u>PM-10</u> |          |
|--|----------|--------------|----------|
| k = Particle Size Multiplier (dimensionless) | 0.74     | 0.35         |          |
| U = Mean Wind Speed (mph)                    | 10.5     | Obtained     | from NWS |

| Point<br>ID No.         Include ID Numbers of all conveyors,<br>crusters, screens, stockpiles, etc. involved         Moisture<br>Cantent %         Transfer Rate<br>TP+         Device<br>ID Number         Eff           TP-01         Railcar Dump #1 to Belt BC-01         6         1,370         12,000,000         UD-FC           TP-02         Railcar Dump #2 to Belt BC-01         6         1,370         12,000,000         UD-FC           TP-03         Belt BC-01 to Belt BC-02         6         2,740         24,000,000         TC-FC           TP-04         Belt BC-02 to Surge Silo #1 (BS-01)         6         2,740         24,000,000         TC-FC           TP-05         Silo #1 to Belt BC-03         6         2,740         24,000,000         TC-FC           TP-06         Belt BC-03 to Belt BC-05         6         1,826         16,000,000         TC-FC           TP-09         Belt BC-05 to Belt BC-05         6         1,826         16,000,000         TC-FC           TP-09         Belt BC-05 to Belt BC-05         6         1,826         16,000,000         TC-FC           TP-10         Belt BC-07 to Stockpile         6         913         8,000,000         LO-RC           TP-11         Belt BC-13 to Stockpile         6         1,400         12,264,000         TC-FC <th>Transfer</th> <th>Transfer Point Description</th> <th>Material</th> <th></th> <th>Maximum</th> <th>Control</th> <th>Control</th> | Transfer | Transfer Point Description                   | Material  |       | Maximum       | Control   | Control    |
|---|----------|--|-----------|-------|---------------|-----------|------------|
| ID No.         crushers, screens, stockpiles, etc. involved         Content %         TPH         TPY         ID Number           TP-01         Railcar Dump #1 to Belt BC-01         6         1,370         12,000,000         UD-FC           TP-02         Railcar Dump #2 to Belt BC-01         6         1,370         12,000,000         UD-FC           TP-03         Belt BC-01 to Belt BC-02         6         2,740         24,000,000         TC-BH           TP-04         Belt BC-03 to Belt BC-03         6         2,740         24,000,000         TC-BH           TP-05         Sil #1 to Belt BC-03         6         2,740         24,000,000         LO-BH           TP-06         Belt BC-03 to Belt BC-04         6         913         8,000,000         TC-FC           TP-07         Belt BC-03 to Belt BC-05         6         1,826         16,000,000         TC-FC           TP-09         Belt BC-05 to Belt BC-13         6         913         8,000,000         TC-FC           TP-10         Belt BC-06 to Belt BC-13         6         913         8,000,000         TC-FC           TP-11         Belt BC-13 to Stockpile         6         913         8,000,000         LO-RC           TP-13         Belt BC-14 to Synful Feed Stockpile<   | Point    | Include ID Numbers of all conveyors,         | Moisture  | Tr    | Transfer Rate |           | Efficiency |
| TP-01         Railcar Dump #1 to Belt BC-01         6         1,370         12,000,000         UD-FC           TP-02         Railcar Dump #2 to Belt BC-01         6         1,370         12,000,000         UD-FC           TP-03         Belt BC-01 to Belt BC-02         6         2,740         24,000,000         TC-FC           TP-04         Belt BC-03 to Selt BC-03         6         2,740         24,000,000         TC-FC           TP-05         Sile #1 to Belt BC-03         6         2,740         24,000,000         TC-FC           TP-06         Belt BC-04 to Stockpile         6         913         8,000,000         TC-FC           TP-07         Bet BC-03 to Belt BC-05         6         1,826         16,000,000         TC-FC           TP-08         Belt BC-03 to Belt BC-05         6         913         8,000,000         TC-FC           TP-09         Belt BC-05 to Belt BC-06         6         913         8,000,000         TC-FC           TP-10         Belt BC-05 to Belt BC-06         6         913         8,000,000         TC-FC           TP-11         Belt BC-07 to Stockpile         6         913         8,000,000         TC-FC           TP-13         Belt BC-14 to Symfuel Feed Stockpile         6   | ID No.   | crushers, screens, stockpiles, etc. involved | Content % | TPH   | TPY           | ID Number | %          |
| TP-01       Railcar Dump #1 to Belt BC-01       6       1,370       12,000,000       UD-FC         TP-02       Railcar Dump #2 to Belt BC-01       6       1,370       12,000,000       UD-FC         TP-03       Belt BC-01 to Belt BC-02       6       2,740       24,000,000       TC-FC         TP-04       Belt BC-02 to Surge Silo #1 (BS-01)       6       2,740       24,000,000       TC-FC         TP-05       Silo #1 to Belt BC-03       6       2,740       24,000,000       TC-FC         TP-06       Belt BC-03 to Belt BC-04       6       913       8,000,000       TC-FC         TP-07       Belt BC-05 to Belt BC-05       6       1,826       16,000,000       TC-FC         TP-08       Belt BC-05 to Belt BC-05       6       913       8,000,000       TC-FC         TP-10       Belt BC-05 to Belt BC-05       6       913       8,000,000       TC-FC         TP-10       Belt BC-07 to Stockpile       6       913       8,000,000       TC-FC         TP-11       Belt BC-07 to Stockpile       6       913       8,000,000       TC-FC         TP-13       Belt BC-13       6       1,400       12,284,000       LO-RC         TP-14       Stockpile to Belt BC-13 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>  |          |  |           |       |               |           |            |
| TP-02       Railcar Dump #2 to Belt BC-01       6       1,370       12,000,000       UD-FC         TP-03       Belt BC-01 to Belt BC-02       6       2,740       24,000,000       TC-FC         TP-04       Belt BC-03 to Surge Site #1 (BS-01)       6       2,740       24,000,000       TC-FC         TP-05       Sile #1 to Belt BC-03       8       2,740       24,000,000       TC-FC         TP-06       Belt BC-03 to Belt BC-04       6       913       8,000,000       TC-FC         TP-07       Belt BC-04 to Stockpile       6       913       8,000,000       TC-FC         TP-08       Belt BC-05 to Belt BC-05       6       1,826       16,000,000       TC-FC         TP-09       Belt BC-05 to Belt BC-13       6       913       8,000,000       TC-FC         TP-10       Belt BC-13 to Stockpile       6       913       8,000,000       TC-FC         TP-11       Belt BC-05 to Belt BC-07       6       913       8,000,000       TC-FC         TP-14       Belt BC-07 to Stockpile       6       1,400       12,264,000       LO-RC         TP-14       Belt BC-13       6       1,400       12,264,000       TC-FC         TP-14       Belt BC-14       6   | TP-01    | Railcar Dump #1 to Belt BC-01                | 6         | 1,370 | 12,000,000    | UD-FC     | 99         |
| TP-03       Bett BC-01 to Bett BC-02       6       2,740       24,000,000       TC-FC         TP-04       Bett BC-02 to Surge Silo #1 (BS-01)       6       2,740       24,000,000       TC-FC         TP-05       Silo #1 to Bett BC-03       6       2,740       24,000,000       IC-FC         TP-06       Bett BC-03 to Bett BC-04       6       913       8,000,000       IC-FC         TP-07       Bett BC-03 to Bett BC-05       6       1,826       16,000,000       TC-FC         TP-08       Bett BC-05 to Bett BC-05       6       1,826       16,000,000       TC-FC         TP-09       Bett BC-05 to Bett BC-05       6       1,826       16,000,000       TC-FC         TP-10       Bett BC-05 to Bett BC-06       6       913       8,000,000       TC-FC         TP-11       Bett BC-05 to Bett BC-06       6       913       8,000,000       TC-FC         TP-13       Bett BC-07 to Stockpile       6       913       8,000,000       LO-RC         TP-14       Stockpile to Bett BC-13       6       1,400       12,264,000       TC-FC         TP-14       Stockpile to Bett BC-15       6       1,400       12,264,000       TC-FC         TP-15       Bett BC-16 to Crusher  | TP-02    | Railcar Dump #2 to Belt BC-01                | 6         | 1,370 | 12,000,000    | UD-FC     | 99         |
| ITP-04       Beit BC-02 to Surge Silo #1 (BS-01)       6       2,740       24,000,000       TC-BH         TP-05       Silo #1 to Beit BC-03       6       2,740       24,000,000       LO-BH         TP-06       Beit BC-03 to Beit BC-04       6       913       8,000,000       TC-FC         TP-07       Beit BC-03 to Beit BC-05       6       1,826       16,000,000       TC-FC         TP-09       Beit BC-05 to Beit BC-13       6       913       8,000,000       TC-FC         TP-10       Beit BC-05 to Beit BC-05       6       1,826       16,000,000       TC-FC         TP-10       Beit BC-05 to Beit BC-05       6       913       8,000,000       TC-FC         TP-11       Beit BC-05 to Beit BC-06       6       913       8,000,000       TC-FC         TP-12       Beit BC-07 to Stockpile       6       913       8,000,000       TC-FC         TP-13       Beit BC-13 to Beit BC-13       6       1,400       12,264,000       TC-FC         TP-14       Stockpile to Beit BC-15       6       1,400       12,264,000       TC-FC         TP-15       Beit BC-15 to Crushers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP-16       Beit BC-16 to   | TP-03    | Belt BC-01 to Belt BC-02                     | 6         | 2,740 | 24,000,000    | TC-FC     | 99         |
| ITP-05       Silo #1 to Belt BC-03       6       2,740       24,000,000       LC-BH         TP-06       Belt BC-03 to Belt BC-04       6       913       8,000,000       TC-FC         TP-07       Belt BC-03 to Belt BC-05       6       1,826       16,000,000       TC-FC         TP-08       Belt BC-05 to Belt BC-13       6       913       8,000,000       TC-FC         TP-09       Belt BC-05 to Belt BC-13       6       913       8,000,000       TC-FC         TP-10       Belt BC-05 to Belt BC-06       6       913       8,000,000       TC-FC         TP-11       Belt BC-05 to Belt BC-07       6       913       8,000,000       TC-FC         TP-12       Belt BC-07 to Stockpile       6       913       8,000,000       TC-FC         TP-13       Belt BC-13 to Belt BC-13       6       1,400       12,264,000       TC-FC         TP-16       Belt BC-14 to Synfuel Feed Stockpile       6       1,400       12,264,000       TC-FC         TP-18       Belt BC-16 to Crusher       6       700       6,132,000       TC-FC         TP-18       Belt BC-16       6       700       6,132,000       TC-FC         TP-19       Stockpile to Bin #4       6   | TP-04    | Belt BC-02 to Surge Silo #1 (BS-01)          | 6         | 2,740 | 24,000,000    | TC-BH     | 99         |
| TP-06       Beit BC-03 to Beit BC-04       6       913       8,000,000       TC-FC         TP-07       Beit BC-03 to Beit BC-05       6       913       8,000,000       LC-RC         TP-08       Beit BC-03 to Beit BC-05       6       18,26       16,000,000       TC-FC         TP-09       Beit BC-05 to Beit BC-13       6       913       8,000,000       TC-FC         TP-10       Beit BC-05 to Beit BC-06       6       913       8,000,000       TC-FC         TP-11       Beit BC-05 to Beit BC-06       6       913       8,000,000       TC-FC         TP-12       Beit BC-06 to Beit BC-07       6       913       8,000,000       TC-FC         TP-13       Beit BC-07 to Stockpile       6       913       8,000,000       LO-RC         TP-14       Stockpile to Beit BC-13       6       1,400       12,264,000       TC-FC         TP-15       Beit BC-14 to Synfuel Feed Stockpile       6       1,400       12,264,000       TC-FC         TP-16       Beit BC-15 to Crushers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP-18       Beit BC-16 to Sonshers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP-17       Stockpile  | TP-05    | Silo #1 to Belt BC-03                        | 6         | 2,740 | 24,000,000    | LO-BH     | 99         |
| IP-07       Beit BC-04 to Stockpile       6       913       8,000,000       LO-RC         TP-08       Beit BC-03 to Beit BC-05       6       1,826       16,000,000       TC-FC         TP-09       Beit BC-05 to Beit BC-13       6       913       8,000,000       TC-FC         TP-10       Beit BC-05 to Beit BC-06       6       913       8,000,000       TC-FC         TP-11       Beit BC-06 to Beit BC-07       6       913       8,000,000       TC-FC         TP-12       Beit BC-06 to Beit BC-07       6       913       8,000,000       TC-FC         TP-13       Beit BC-07 to Stockpile       6       913       8,000,000       TC-FC         TP-14       Stockpile to Beit BC-13       6       1,400       12,264,000       LO-RC         TP-15       Beit BC-14 to Synfuel Feed Stockpile       6       1,400       12,264,000       TC-FC         TP-17       Stockpile to Bin #4       6       700       6,132,000       LO-FC       TC-FC         TP-18       Beit BC-16 to Crusher       6       700       6,132,000       TC-FC       TC-FC         TP-17       Stockpile to Bin #4       6       700       6,132,000       LO-FC       TC-FC         TP2  | TP-06    | Belt BC-03 to Belt BC-04                     | 6         | 913   | 8,000,000     | TC-FC     | 99         |
| TP-08       Bett BC-03 to Bett BC-05       6       1,826       16,000,000       TC-FC         TP-09       Bett BC-05 to Bett BC-13       6       913       8,000,000       TC-FC         TP-10       Bett BC-13 to Stockpile       6       913       8,000,000       LO-RC         TP-11       Bett BC-05 to Bett BC-06       6       913       8,000,000       TC-FC         TP-12       Bett BC-06 to Bett BC-07       6       913       8,000,000       TC-FC         TP-13       Bett BC-07 to Stockpile       6       913       8,000,000       LO-RC         TP-13       Bett BC-13 to Stockpile       6       913       8,000,000       LO-RC         TP-15       Bett BC-13 to Bett BC-13       6       1,400       12,264,000       TC-FC         TP-16       Bett BC-14 to Synfuel Feed Stockpile       6       1,400       12,264,000       TC-FC         TP-17       Stockpile to Bitt BC-15       6       1,400       12,264,000       TC-FC         TP-18       Bett BC-15 to Crushers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP20       Bin #4 to Bett BC-16       6       700       6,132,000       LO-FC         TP21       Bett BC-16 to Crusher <td>TP-07</td> <td>Belt BC-04 to Stockpile</td> <td>6</td> <td>913</td> <td>8,000,000</td> <td>LO-RC</td> <td>99</td>  | TP-07    | Belt BC-04 to Stockpile                      | 6         | 913   | 8,000,000     | LO-RC     | 99         |
| TP-09       Belt BC-05 to Belt BC-13       6       913       8,000,000       TC-FC         TP-10       Belt BC-13 to Stockpile       6       913       8,000,000       LO-RC         TP-11       Belt BC-05 to Belt BC-06       6       913       8,000,000       TC-FC         TP-12       Belt BC-06 to Belt BC-07       6       913       8,000,000       TC-FC         TP-13       Belt BC-07 to Stockpile       6       913       8,000,000       LO-RC         TP-14       Stockpile to Belt BC-13       6       1,400       12,264,000       LO-RC         TP-15       Belt BC-14 to Synfuel Feed Stockpile       6       1,400       12,264,000       TC-FC         TP-17       Stockpile to Belt BC-15       6       1,400       12,264,000       TC-FC         TP-18       Belt BC-14 to Synfuel Feed Stockpile       6       1,400       12,264,000       TC-FC         TP-18       Belt BC-15 to Crushers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP-18       Belt BC-16 to Crusher       6       700       6,132,000       LO-FC         TP20       Bin #4 to Belt BC-16       6       700       6,132,000       LO-FC         TP21       Belt BC-16 to Cr  | TP-08    | Belt BC-03 to Belt BC-05                     | 6         | 1,826 | 16,000,000    | TC-FC     | 99         |
| TP-10         Beit BC-13 to Stockpile         6         913         8,000,000         LO-RC           TP-11         Beit BC-05 to Beit BC-06         6         913         8,000,000         TC-FC           TP-12         Beit BC-06 to Beit BC-07         6         913         8,000,000         TC-FC           TP-13         Beit BC-07 to Stockpile         6         913         8,000,000         LO-RC           TP-14         Stockpile to Beit BC-13         6         1,400         12,264,000         LO-RC           TP-15         Beit BC-14 to Synfuel Feed Stockpile         6         1,400         12,264,000         TC-FC           TP-16         Beit BC-15         6         1,400         12,264,000         TC-FC           TP-17         Stockpile to Beit BC-15         6         1,400         12,264,000         TC-FC           TP-18         Beit BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Beit BC-16         6         700         6,132,000         LO-FC           TP21         Beit BC-16 to Crusher         6         700         6,  | TP-09    | Belt BC-05 to Belt BC-13                     | 6         | 913   | 8,000,000     | TC-FC     | 99         |
| TP-11         Beit BC-05 to Beit BC-06         6         913         8,000,000         TC-FC           TP-12         Beit BC-06 to Beit BC-07         6         913         8,000,000         TC-FC           TP-13         Beit BC-07 to Stockpile         6         913         8,000,000         LO-RC           TP-13         Beit BC-07 to Stockpile         6         913         8,000,000         LO-RC           TP-14         Stockpile to Beit BC-13         6         1,400         12,264,000         LO-RC           TP-15         Beit BC-14 to Synfuel Feed Stockpile         6         1,400         12,264,000         TC-FC           TP-16         Beit BC-15 to Crusher CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP-17         Stockpile to Beit BC-15         6         1,400         12,264,000         TC-FC           TP-18         Beit BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Beit BC-16         6         700         6,132,000         LO-FC           TP21         Beit BC-16 to Crusher         6         70   | TP-10    | Belt BC-13 to Stockpile                      | 6         | 913   | 8,000,000     | LO-RC     | 99         |
| TP-12         Beit BC-06 to Beit BC-07         6         913         8,000,000         TC-FC           TP-13         Beit BC-07 to Stockpile         6         913         8,000,000         LO-RC           TP-14         Stockpile to Beit BC-13         6         1,400         12,264,000         LO-RC           TP-15         Beit BC-13 to Beit BC-14         6         1,400         12,264,000         TC-FC           TP-16         Beit BC-14 to Synfuel Feed Stockpile         6         1,400         12,264,000         TC-FC           TP-17         Stockpile to Beit BC-15         6         1,400         12,264,000         TC-FC           TP-18         Beit BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP-18         Beit BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Beit BC-16         6         700         6,132,000         LO-FC           TP21         Beit BC-16 to Crusher         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Bett BC-17         6  | TP-11    | Belt BC-05 to Belt BC-06                     | 6         | 913   | 8,000,000     | TC-FC     | 99         |
| TP-13         Belt BC-07 to Stockpile         6         913         8,000,000         LO-RC           TP-14         Stockpile to Belt BC-13         6         1,400         12,254,000         LO-RC           TP-15         Belt BC-13 to Belt BC-14         6         1,400         12,264,000         TC-FC           TP-16         Belt BC-14 to Synfuel Feed Stockpile         6         1,400         12,264,000         TC-FC           TP-17         Stockpile to Belt BC-15         6         1,400         12,264,000         TC-FC           TP-18         Belt BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP-18         Belt BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Belt BC-16         6         700         6,132,000         LO-FC           TP21         Belt BC-16 to Crusher         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6   | TP-12    | Belt BC-06 to Belt BC-07                     | 6         | 913   | 8,000,000     | TC-FC     | 99         |
| TP-14         Stockpile to Belt BC-13         6         1,400         12,264,000         LO-RC           TP-15         Belt BC-13 to Belt BC-14         6         1,400         12,264,000         TC-FC           TP-16         Belt BC-14 to Synfuel Feed Stockpile         6         1,400         12,264,000         TC-FC           TP-16         Belt BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP-18         Belt BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP-18         Belt BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP-18         Belt BC-16 to Crushers CR-1/CR-2         6         700         6,132,000         LO-FC           TP20         Bin #4 to Belt BC-16         6         700         6,132,000         LO-FC           TP21         Belt BC-16 to Crusher         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpi   | TP-13    | Belt BC-07 to Stockpile                      | 6         | 913   | 8,000,000     | LO-RC     | 99         |
| TP-15         Belt BC-13 to Belt BC-14         6         1,400         12,264,000         TC-FC           TP-16         Bett BC-14 to Synfuel Feed Stockpile         6         1,400         12,264,000         TC-FC           TP-17         Stockpile to Belt BC-15         6         1,400         12,264,000         TC-FC           TP-18         Bett BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Belt BC-16         6         700         6,132,000         LO-FC           TP21         Bett BC-16 to Crusher         6         700         6,132,000         TC-FC           TP22         Crusher CR-1 to Screen SS-1         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6 <t< td=""><td>TP-14</td><td>Stockpile to Belt BC-13</td><td>6</td><td>1,400</td><td>12,264,000</td><td>LO-RC</td><td>99</td></t<>  | TP-14    | Stockpile to Belt BC-13                      | 6         | 1,400 | 12,264,000    | LO-RC     | 99         |
| TP-16         Bett BC-14 to Syntuel Feed Stockpile         6         1,400         12,264,000         TC-PC           TP-17         Stockpile to Belt BC-15         6         1,400         12,264,000         TC-FC           TP-18         Bett BC-15 to Crushers CR-1/CR-2         6         1,400         12,264,000         TC-FC           TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Belt BC-16         6         700         6,132,000         LO-FC           TP21         Bett BC-16 to Crusher         6         700         6,132,000         TC-FC           TP22         Crusher CR-1 to Screen SS-1         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         TC-FC           TP27         Belt BC-18 to Belt BC-19         6         70   | TP-15    | Belt BC-13 to Belt BC-14                     | 6         | 1,400 | 12,264,000    | TC-FC     | 99         |
| TP-17       Stockpile to Belt BC-15       6       1,400       12,264,000       TC-FC         TP-18       Belt BC-15 to Crushers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP19       Stockpile to Bin #4       6       700       6,132,000       LO-FC         TP20       Bin #4 to Belt BC-16       6       700       6,132,000       LO-FC         TP21       Belt BC-16 to Crusher       6       700       6,132,000       TC-FC         TP22       Crusher CR-1 to Screen SS-1       6       700       6,132,000       CS-FC         TP23       Screen SS-1 to Oversize Belt BC-17       6       0.23       2,000       LO-FC         TP24       Belt BC-17 to Stockpile       6       0.23       2,000       LO-FC         TP25       Oversize Stockpile to Feed Stockpile       6       0.23       2,000       LO-FC         TP26       Screen SS-1 to Belt BC-18       6       700       6,132,000       LO-FC         TP27       Belt BC-18 to Belt BC-19       6       700       6,132,000       TC-FC         TP27       Belt BC-19 to Pugmill Feed Bin BS-5       6       700       6,132,000       TC-FC         TP28       Belt BC-19 to Pugmill Keer BS-6 </td <td>TP-16</td> <td>Beit BC-14 to Synfuel Feed Stockpile</td> <td>6</td> <td>1,400</td> <td>12,264,000</td> <td>TC-PC</td> <td>99</td>   | TP-16    | Beit BC-14 to Synfuel Feed Stockpile         | 6         | 1,400 | 12,264,000    | TC-PC     | 99         |
| TP-18       Belt BC-15 to Crushers CR-1/CR-2       6       1,400       12,264,000       TC-FC         TP19       Stockpile to Bin #4       6       700       6,132,000       LO-FC         TP20       Bin #4 to Belt BC-16       6       700       6,132,000       LO-FC         TP21       Belt BC-16 to Crusher       6       700       6,132,000       TC-FC         TP22       Crusher CR-1 to Screen SS-1       6       700       6,132,000       CS-FC         TP23       Screen SS-1 to Oversize Belt BC-17       6       0.23       2,000       LO-FC         TP24       Belt BC-17 to Stockpile       6       0.23       2,000       LO-FC         TP25       Oversize Stockpile to Feed Stockpile       6       0.23       2,000       LO-FC         TP26       Screen SS-1 to Belt BC-18       6       700       6,132,000       LO-FC         TP26       Screen SS-1 to Belt BC-19       6       700       6,132,000       LO-FC         TP27       Belt BC-19 to Pugmill Feed Bin BS-5       6       700       6,132,000       TC-FC         TP28       Belt BC-19 to Pugmill Feed Bin BS-5       6       700       6,132,000       TC-FC         TP30       Belt BC-20 to Pugmill Mi  | TP-17    | Stockpile to Belt BC-15                      | 6         | 1,400 | 12,264,000    | TC-FC     | 99         |
| TP19         Stockpile to Bin #4         6         700         6,132,000         LO-FC           TP20         Bin #4 to Belt BC-16         6         700         6,132,000         LO-FC           TP21         Belt BC-16 to Crusher         6         700         6,132,000         TC-FC           TP22         Crusher CR-1 to Screen SS-1         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         <  | TP-18    | Belt BC-15 to Crushers CR-1/CR-2             | 6         | 1,400 | 12,264,000    | TC-FC     | 99         |
| TP20         Bin #4 to Belt BC-16         6         700         6.132,000         LO-FC           TP21         Belt BC-16 to Crusher         6         700         6.132,000         TC-FC           TP22         Crusher CR-1 to Screen SS-1         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         TC-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700 </td <td>TP19</td> <td>Stockpile to Bin #4</td> <td>6</td> <td>700</td> <td>6,132,000</td> <td>LO-FC</td> <td>99</td>   | TP19     | Stockpile to Bin #4                          | 6         | 700   | 6,132,000     | LO-FC     | 99         |
| TP21         Bett BC-16 to Crusher         6         700         6,132,000         TC-FC           TP22         Crusher CR-1 to Screen SS-1         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Bett BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP26         Screen SS-1 to Bett BC-18         6         700         6,132,000         LO-FC           TP26         Screen SS-1 to Bett BC-19         6         700         6,132,000         LO-FC           TP27         Bett BC-18 to Bett BC-19         6         700         6,132,000         TC-FC           TP28         Bett BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Bett BC-20         6         700         6,132,000         LO-FC           TP30         Bett BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC   | TP20     | Bin #4 to Belt BC-16                         | 6         | 700   | 6,132,000     | LO-FC     | 99         |
| TP22         Crusher CR-1 to Screen SS-1         6         700         6,132,000         CS-FC           TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         TC-PC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP26         Screen SS-1 to Belt BC-19         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC  | TP21     | Belt BC-16 to Crusher                        | 6         | 700   | 6,132,000     | TC-FC     | 99         |
| TP23         Screen SS-1 to Oversize Belt BC-17         6         0.23         2,000         LO-FC           TP24         Belt BC-17 to Stockpile         6         0.23         2,000         TC-PC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-FC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-RC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC   | TP22     | Crusher CR-1 to Screen SS-1                  | 6         | 700   | 6,132,000     | CS-FC     | 99         |
| TP24         Belt BC-17 to Stockpile         6         0.23         2,000         TC-PC           TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-RC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC   | TP23     | Screen SS-1 to Oversize Belt BC-17           | 6         | 0.23  | 2,000         | LO-FC     | 99         |
| TP25         Oversize Stockpile to Feed Stockpile         6         0.23         2,000         LO-RC           TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC   | TP24     | Belt BC-17 to Stockpile                      | 6         | 0.23  | 2,000         | TC-PC     | 99         |
| TP26         Screen SS-1 to Belt BC-18         6         700         6,132,000         LO-FC           TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         LO-FC  | TP25     | Oversize Stockpile to Feed Stockpile         | 6         | 0.23  | 2,000         | LO-RC     | 99         |
| TP27         Belt BC-18 to Belt BC-19         6         700         6,132,000         TC-FC           TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         LO-FC   | TP26     | Screen SS-1 to Belt BC-18                    | 6         | 700   | 6,132,000     | LO-FC     | 99         |
| TP28         Belt BC-19 to Pugmill Feed Bin BS-5         6         700         6,132,000         TC-FC           TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC   | TP27     | Belt BC-18 to Belt BC-19                     | 6         | 700   | 6,132,000     | TC-FC     | 99         |
| TP29         Pug. Feed Bin to Belt BC-20         6         700         6,132,000         LO-FC           TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC  | TP28     | Belt BC-19 to Pugmill Feed Bin BS-5          | 6         | 700   | 6,132,000     | TC-FC     | 99         |
| TP30         Belt BC-20 to Pugmill Mixer BS-6         6         700         6,132,000         TC-FC   | TP29     | Pug. Feed Bin to Belt BC-20                  | 6         | 700   | 6,132,000     | LO-FC     | 99         |
|   | TP30     | Belt BC-20 to Pugmill Mixer BS-6             | 6         | 700   | 6,132,000     | TC-FC     | 99         |
| 11P31 Pug. Mixer to Belt BC-21 8 1 /00 [6,132,000 LO-FC]  | TP31     | Pug. Mixer to Belt BC-21                     | 8         | 700   | 6,132,000     | LO-FC     | 99         |
| TP32 Belt BC-21 to Belt BC-22 8 700 6,132,000 TC-FC   | TP32     | Belt BC-21 to Belt BC-22                     | 8         | 700   | 6,132,000     | TC-FC     | 99         |
| TP33 Belt BC-22 to Briquetter #1 8 233 2,044,000 TC-FC  | TP33     | Belt BC-22 to Briquetter #1                  | 8         | 233   | 2,044,000     | TC-FC     | 99         |
|   |          |  |           |       |               |           |            |

| 11234      | Briguetter #1 to Belt BC-23             | 8        | 233                | 2.044.000   | LO-FC | 99 |
|------------|---|----------|--------------------|-------------|-------|----|
| ГР35       | Belt BC-23 to Belt BC-26                | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P36        | Belt BC-22 to Briquetter #2             | 8        | 233                | 2,044,000   | TC-FC | 99 |
|            |   |          |                    |             |       |    |
|            |   |          |                    | ·           |       |    |
| P37        | Briquetter #2 to Belt BC-24             | 8        | 233                | 2,044,000   | LO-FC | 99 |
| P38        | Belt BC-24 to Belt BC-26                | 8        | 233                | 2,044,000   | TC-FC | 99 |
| rP39       | Belt BC-22 to Briquetter #3             | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P40        | Briquetter #3 to Belt BC-25             | 8        | 233                | 2,044,000   | LO-FC | 99 |
| P41        | Belt BC-25 to Belt BC-26                | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P42        | Belt BC-26 to Screen SS-2               | 8        | 700                | 6,132,000   | TC-FC | 99 |
| [P43       | Screen SS-2 to Recirculating belt BC-27 | 8        | 0.23               | 2,000       | LO-FC | 99 |
| P44        | Screen SS-2 to Belt BC-28               | 8        | 700                | 6,132,000   | LO-FC | 99 |
| P45        | Belt BC-28 to Belt BC-29                | 8        | 700                | 6,132,000   | TC-FC | 99 |
| P46        | Belt BC-29 to Synfuel Stockpile OS-7    | 8        | 700                | 6,132,000   | TC-FC | 99 |
| P4/        | Stockpile to Bin #7                     | 6        |                    | 0,132,000   | LO-RC |    |
| P48        | Bin # / to Belt BC-30                   | 6        | - 700              | 0,132,000   |       |    |
| P49        | Beit BC-30 to Crusher                   | 6        |                    | 6,132,000   | IC-FC |    |
| HOU        | Crusher CK-2 to Screen 55-3             |          | $+\frac{100}{200}$ | 0,132,000   |       |    |
| 1050       | Bell BC 21 to Oversize Bell BC-31       |          | 0.23               | 2,000       |       | 33 |
| P52        | Beit BC-31 to OversizeStockpile         | •<br>•   | 0.23               | 2,000       |       | 99 |
|            |   |          |                    |             |       |    |
| P53        | Oversize Stockpile to Feed Stockpile    | 6        | 0.23               | 2,000       | LO-RC | 99 |
| P54        | Screen SS-3 to Belt BC-32               | 6        | 700                | 6,132,000   | LO-FC | 99 |
| P55        | Belt BC-32 to Belt BC-33                | 6        | 700                | 6,132,000   | TC-FC | 99 |
| P56        | Belt BC-33 to Pugmill Feed Bin BS-8     | 6        | 700                | 6,132,000   | TC-FC | 99 |
| P57        | Pug. Feed Bin to Belt BC-34             | 6        | 700                | 6,132,000   | LO-FC | 99 |
| P58        | Belt BC-34 to Pugmill Mixer BS-9        | 6        | 700                | 6,132,000   | TC-FC | 99 |
| P59        | Pug. Mixer to Belt BC-35                | 8        | 700                | 6,132,000   | LO-FC | 99 |
| P60        | Belt BC-35 to Belt BC-36                | 8        | 700                | 6,132,000   | TC-FC | 99 |
| P61        | Belt BC-36 to Briquetter #4             | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P62        | Briquetter #4 to Belt BC-37             | 8        | 233                | 2,044,000   | LO-FC | 99 |
| P63        | Belt BC-37 to Belt BC-40                | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P64        | Belt BC-36 to Briquetter #5             | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P65        | Briquetter #5 to Beit BC-38             | 8        | 233                | 2,044,000   | LO-FC | 99 |
| P66        | Belt BC-38 to Belt BC-40                | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P67        | Belt BC-36 to Briquetter #6             | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P68        | Briquetter #6 to Bett BC-39             | 8        | 233                | 2,044,000   | LO-FC | 99 |
| P69        | Belt BC-39 to Belt BC-40                | 8        | 233                | 2,044,000   | TC-FC | 99 |
| P70        | Belt BC-40 to Screen SS-4               | 8        | 700                | 6,132,000   | TC-FC | 99 |
| P71        | Screen SS-4 to Recirculating belt BC-41 | 8        | 0.23               | 2,000       | LO-FC | 99 |
| P72        | Screen SS-4 to Belt BC-42               | 8        | 0.23               | 2,000       | LO-FC | 99 |
| P73        | Belt BC-42 to Belt BC-43                | 8        | 700                | 6,132,000   | TC-FC | 99 |
| P74        | Belt BC-43 to Synfuel Stockpile OS-7    | 88       | 700                | 6,132,000   | TC-PC | 99 |
| P75        | Synfuel Stockpile to Belt BC-44         | 8        | 700                | 6,132,000   | LO-FC | 99 |
| P76        | Belt BC-44 to Belt BC-13                | 8        | 1,400              | 12,264,000  | TC-FC | 99 |
| P77        | Coal/Coke Stockpile to Belt BC-13       | 6        | 1,340              | 11,736,000  | LO-RC | 99 |
| P78        | Belt BC-13 to Belt BC-06                | 7        | 2,740              | 24,000,000  | TC-FC | 99 |
| P79        | Belt BC-06 to Belt BC-08                | 7        | 2,740              | 24,000,000  | TC-FC | 99 |
| P80        | Belt BC-08 to Belt BC-09                | 7        | 2,740              | 24,000,000  | TC-FC | 99 |
| P81        | Beit BC-09 to Surge Silo #2 BS-2        | 7        | 1,370              | 12,000,000  | TC-BH | 99 |
| P82        | Silo BS-2 to Belt BC-12                 | <b>7</b> | 1,370              | 112,000,000 | LO-BH | 99 |
| P83        | Belt BC-09 to Belt BC-11                | 7        | 1,370              | 12,000,000  | TC-FC | 99 |
| <u>P84</u> | Belt BC-11 to Surge Silo #3 BS-3        | 7        | 1,370              | 12,000,000  | TC-BH | 99 |
| <u>P85</u> | SHO BS-3 to Belt BC-12                  | 7        | 1,370              | 12,000,000  | LO-BH |    |
| <u>~86</u> | Beit BC-12 to Beit BC-10                | 7        | 2,740              | 24,000,000  | TC-FC | 99 |
|            | INAR MIT 10 to Deres                    | . 7      | ■ 3740             |             |       | 00 |

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|     |     |                      |   |       |            |       | • •  |
|-----|-----|----------------------|---|-------|------------|-------|------|
| Т   | P88 | Belt #3 to Belt #45  | 6 | 2,740 | 24,000,000 | TC-FC | 99   |
| Т   | P89 | Belt #45 to Belt #13 | 6 | 2,740 | 24,000,000 | TC-FC | 99   |
| IT. | P90 | Belt #13 to Belt #46 | 6 | 2,740 | 24,000,000 | TC-FC | 99   |
| T   | P91 | Belt #46 to Belt #4  | 6 | 2,740 | 24,000,000 | TC-FC | _ 99 |
| T   | P92 | Belt #4 to Belt #47  | 6 | 2,740 | 24,000,000 | TC-FC | 99   |
| T   | P93 | Belt to Belt #48     | 6 | 2,740 | 24,000,000 | TC-FC | 99   |
|     |     |                      |   |       |            |       |      |
|     |     |                      |   |       |            |       |      |
|     |     |                      |   |       |            |       |      |
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### 3. WIND EROSION OF STOCKPILES (including all stockpiles of raw coal, clean coal, coal refuse, etc.)

| p = | number of days per year with precipitation >0.01 inch | 157         |
|-----|---|-------------|
| f = | percentage of time that the unobstructed wind speed   | 20 NWS Data |
|     | exceeds 12 mph at the mean pile height                |             |

| Source                                 | Stockpile          | Silt                 | Stockpile | Control   | Control    |
|--|--------------------|----------------------|-----------|-----------|------------|
| ID No                                  | Description        | Content of base area |           | Device    | Efficiency |
|  |                    | Material %           | Max. sqft | ID Number | %          |
| <b>OS-1</b>                            | CC/Coke or Synfuel | 35                   | 440.670   | SW-CS     | 99         |
| OS-2                                   | CC/Coke or Synfuel | 3.5                  | 388,125   | SW-CS     | 99         |
| <b>OS-3</b>                            | CC/Coke or Synfuel | 3.5                  | 388,125   | SW-CS     | 99         |
| <b>OS-4</b>                            | CC/Coke or Synfuel | 3.5                  | 504,000   | SW-CS     | 99         |
| OS-5                                   | CC                 | 3.5                  | 200,000   | SW-CS     | 99         |
| OS-6                                   | CC                 | 3.5                  | 1,000     | SW-CS     | 99         |
| OS-7                                   | Synfuel            | 3.5                  | 200,000   | SW-CS     | 99         |
|  |                    |                      |           |           |            |
|  | <u> </u>           |                      |           |           |            |
| ······································ |                    |                      |           |           |            |
|  |                    |                      |           |           |            |

### INPUTS

### 4. UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

|            |   | PM   | PM-10 |
|------------|---|------|-------|
| k =        | particle size multiplier                              | 0.80 | 0.36  |
| <b>S</b> = | silt content of road surface material (%)             | 5    |       |
| p =        | number of days per year with precipitation >0.01 inch | 157  |       |

| ltem<br>Number | Description          | Number<br>of<br>wheels | Mean<br>Vehicle<br>Weight(tons) | Mean<br>Vehicle<br>Speed (mph) | Miles<br>per<br>Trip | Maximum<br>Trips Per<br>Hour | Maximum<br>Trips Per<br>Year | Control<br>Device<br>ID Number | Control<br>Efficiency<br>% |
|----------------|----------------------|------------------------|---------------------------------|--------------------------------|----------------------|------------------------------|------------------------------|--------------------------------|----------------------------|
| 1              | NO CHANGE RECOMMENDE | D                      |                                 |                                |                      |                              |                              |                                |                            |
| 2              |                      | T                      |                                 |                                |                      |                              | · · · ·                      |                                |                            |
| 3              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |
| 4              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |
| 5              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |
| 6              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |
| 7              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |
| 8              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |
| 9              |                      |                        |                                 |                                |                      |                              |                              |                                |                            |

| <b>5</b> . I | NDUSTRIAL PAVED HAULROADS | (including all equipment traffic involved in process, haul trucks, etc.) |  |
|--------------|---------------------------|--|--|
|--------------|---------------------------|--|--|

| =   | Industrial augmentation factor (dimension less) |       |
|-----|---|-------|
| n = | number of traffic lanes                         | 2     |
| s = | surface material silt content (%)               | 3     |
| L = | surface dust loading (lb/mile)                  | 13300 |

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| ItemDescriptionVehicleperTripsTripsPerDeviceEfficiencyNumberNO CHANGE RECOMMENDEDTripHourYearID Number%2   | - 11     |        |             | Mean          | Miles                                 | Maximum   | Maximum   | Control   | Control    |
|--|----------|--------|-------------|---------------|---------------------------------------|-----------|-----------|-----------|------------|
| Number         Weight (tons)         Trip         Hour         Year         ID Number         %           1         NO CHANGE RECOMMENDED  <   | ſ        | ltem   | Description | Vehicle       | per                                   | Trips Per | Trips Per | Device    | Efficiency |
| 1       NO CHANGE RECOMMENDED  | L        | Number |             | Weight (tons) | Trip                                  | Hour      | Year      | ID Number | %          |
| NO CHANGE RECOMMENDED         Image: Commended point           2         1 | <b>-</b> |        |             |               |                                       |           |           |           |            |
| 2     3 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><b>{</b></td> <td></td> <td></td>  |          |        |             |               |                                       |           | <b>{</b>  |           |            |
| 3       4       1       1       1       1         5       5       1       1       1       1         6       1       1       1       1       1         7       1       1       1       1       1         8       1       1       1       1       1  | ┞        |        |             | <b> </b>      | - <u> </u>                            |           |           |           |            |
| 4     5       5     6       7     6       8     6  | ╟        |        |             |               |                                       |           |           |           |            |
|  |          |        |             | <b></b>       | ·                                     |           |           |           |            |
|  | ╟        |        |             |               |                                       |           |           |           |            |
| 8  | ╟        |        |             |               | · · · · · · · · · · · · · · · · · · · |           |           | ····      |            |
|  | ╟        | 8      |             |               |                                       |           |           |           |            |
|  | ╟        |        |             |               |                                       |           |           |           |            |
|  | Ш_       | ···-   |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |
|  |          |        |             |               |                                       |           |           |           |            |

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|  |                              | Name of applicant:<br>Name of plant: | Dominion Terminal<br>Pier 11 Facility | Associates   |
|--|------------------------------|--------------------------------------|---------------------------------------|--------------|
| Particulate Matter or PM (for                            | Major Source [               | Determination)                       |                                       |              |
|  | Uncont                       | rolled PM                            | Contro                                | lled PM      |
|  | lb/hr                        | TPY                                  | lb/hr                                 | TPY          |
|  | FUGITI\                      | /E EMISSIONS                         |                                       |              |
| Stockpile Emissions                                      | 9.50                         | 41.62                                | 0.10                                  | 0.42         |
| Unpaved Haulroad Emissions                               | 0.00                         | 0.00                                 | 0.00                                  | 0.00         |
| Paved Haulroad Emissions                                 | 0.00                         | 0.00                                 | 0.00                                  | 0.00         |
| Fugitive Emissions Total                                 | 9.50                         | 41.62                                | 0.10                                  | 0.42         |
| Equipment Emissions<br>Transfer Point Emissions          | POINT SO<br>84.00<br>100.37  | URCE EMISSIONS<br>367.92<br>466.04   | 0.84                                  | 3.68<br>4.64 |
| Point Source Emissions Total*                            | 184.37                       | 833.96                               | 1.84                                  | 8.32         |
| Note: Point Source Total Controlled PM TPY               | emissions is used for        | Major Source determination           | on (see below)                        |              |
|  |                              |                                      | 1                                     |              |
| Facility Emissions Total                                 | 193.87                       | 875.58                               | 1.93                                  | 8.74         |
| Facility Emissions Total  *Facility Potential to Emit (P | <u>193.87</u><br>TE) (Baseli | 875.58<br>ne Emissions)              | <u>    1.93</u><br>=                  | 8.74         |

|                            | Uncontro | olled PM-10    | Contro | lled PM-10 |
|----------------------------|----------|----------------|--------|------------|
|                            | lb/hr    | TPY            | lb/hr  | TPY        |
|                            | FUGITIV  | EMISSIONS      |        |            |
| Stockpile Emissions        | 4.47     | 19.56          | 0.04   | 0.20       |
| Unpaved Haulroad Emissions | 0.00     | 0.00           | 0.00   | 0.00       |
| Paved Haulroad Emissions   | 0.00     | 0.00           | 0.00   | 0.00       |
| Fugitive Emissions Total   | 4.47     | 19.56          | 0.04   | 0.20       |
|                            | POINT SO | JRCE EMISSIONS |        |            |
| Equipment Emissions        | 39.48    | 172.92         | 0.39   | 1.73       |
| Transfer Point Emissions   | 47.29    | 219.56         | 0.47   | 2.20       |
|                            |          | 202.40         | 0.07   | 2.02       |

| Facility Emissions Total | 91.24 | 412.05 | 0.91 | 4.12 |
|--------------------------|-------|--------|------|------|
|                          |       |        |      |      |

### **1. Emissions From CRUSHING AND SCREENING**

|                    |          | PM     |         |      |          |        |         |          |
|--------------------|----------|--------|---------|------|----------|--------|---------|----------|
|                    | Uncontro | olled  | Control | led  | Uncontro | olled  | Control | fed      |
| EMISSION SOURCE    | lb/hr    | TPY    | lb/hr   | TPY  | lb/hr    | TPY    | lb/hr   | TPY      |
| Primary Crushing   | 14.00    | 61.32  | 0.14    | 0.61 | 6.58     | 28.82  | 0.07    | <br>0.29 |
| Secondary Crushing | 0.00     | 0.00   | 0.00    | 0.00 | 0.00     | 0.00   | 0.00    | 0.00     |
| Screening          | 70.00    | 306.60 | 0.70    | 3.07 | 32.90    | 144.10 | 0.33    | 1.44     |
| TOTAL              | 84.00    | 367.92 | 0.84    | 3.68 | 39.48    | 172.92 | 0.39    | 1.73     |

### Source:

Air Pollution Engineering Manual and References

### **EMISSION FACTORS**

Primary Crushing



Ib/ton processed (maximum raw coal input) Ib/ton processed (maximum raw coal input) Ib/ton processed (maximum raw coal input)

Assumption that PM-10 is 47% of PM (based on particle size multiplier)



### 2. Emissions From TRANSFER POINTS

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| Transfer |              | P           | M     |        |       | PM      | -10      |        |
|----------|--------------|-------------|-------|--------|-------|---------|----------|--------|
| Point    | Uncor        | ntrolled    | Cont  | rolled | Uncon | trolled | Cont     | rolled |
| ID No    | lb/hr        | TPY         | lb/hr | TPY    | lb/hr | TPY     | lb/hr    | TPY    |
|          |              |             |       |        |       |         |          |        |
| TP-01    | 1.83         | 8.01        | 0.02  | 0.08   | 0.86  | 3.79    | 0.01     | 0.04   |
| TP-02    | 1.83         | 8.01        | 0.02  | 0,08   | 0.86  | 3.79    | 0.01     | 0.04   |
| TP-03    | 3.66         | 16.01       | 0.04  | 0.16   | 1.73  | 7.57    | 0.02     | 0.08   |
| TP-04    | 3.66         | 16.01       | 0.04  | 0.16   | 1.73  | 7.57    | 0.02     | 0.08   |
| TP-05    | 3.66         | 16.01       | 0.04  | 0.16   | 1.73  | 7.57    | 0.02     | 0.08   |
| TP-06    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-07    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-08    | 2.44         | 10.68       | 0.02  | 0.11   | 1.15  | 5.05    | 0.01     | 0.05   |
| TP-09    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-10    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-11    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-12    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-13    | 1.22         | 5.34        | 0.01  | 0.05   | 0.58  | 2.52    | 0.01     | 0.03   |
| TP-14    | 1.87         | 8.18        | 0.02  | 0.08   | 0.88  | 3.87    | 0.01     | 0.04   |
| TP-15    | 1.87         | 8.18        | 0.02  | 0.08   | 0.88  | 3.87    | 0.01     | 0.04   |
| TP-16    | 1.87         | 8.18        | 0.02  | 80.0   | 0.88  | 3.87    | 0.01     | 0.04   |
| TP-17    | 1.87         | 8.18        | 0.02  | 0.08   | 0.88  | 3.87    | 0.01     | 0.04   |
| TP-18    | 1.87         | 8.18        | 0.02  | 0.08   | 0.88  | 3.87    | 0.01     | 0.04   |
| TP19     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP20     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP21     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP22     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP23     | 0.00         | 0.00        | 0.00  | 0.00   | 0.00  | 0.00    | 0.00     | 0.00   |
| TP24     | 0.00         | 0.00        | 0.00  | 0.00   | 0.00  | 0.00    | 0.00     | 0.00   |
| TP25     | 0.00         | 0.00        | 0.00  | 0.00   | 0.00  | 0.00    | 0.00     | 0.00   |
| TP26     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP27     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP28     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TD29     | 0,93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TD24     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| 17020    | 0.62         | 2.73        | 0.01  | 0.03   | 0.30  | 1.29    | 0.00     |        |
| TP32     | 0.62         | 2.73        | 0.01  | 0.03   | 0.30  | 1.29    | 0.00     | 0.01   |
|          | 0.21         | 0.91        | 0.00  | 0.01   |       | 0.43    | 0.00     | 0.00   |
|          | 0.00         | 0.00        | 0.00  | 0.00   | 0.00  | 0.00    |          | 0.00   |
| TD25     | 0.21         | 0.91        | 0.00  | 0.01   | 0.10  | 0.43    | 0.00     |        |
|          |              | 0.91        | 0.00  | 0.01   | 0.10  | 0.45    |          | 0.00   |
| TD27     | 0.21         | 0.91        |       | 0.01   | 0.10  | 0.45    |          | 0.00   |
| TD29     |              | 0.91        | 0.00  | 0.01   |       | 0.43    |          |        |
| TPRO     | 0.21         | 0.91        | 0.00  | 0.01   |       | 0.45    |          |        |
| TPAN     | 0.21<br>0.21 | 0.91        | 0.00  | 0.01   | 0.10  | 0.45    | 0.00     |        |
|          | <u> </u>     | <u> </u>    | 0.00  | 0.01   | 0.10  | 0.40    | 0.00     |        |
| TP42     | 0.62         | 273         | 0.00  | 0.01   | 0.10  | 1 20    |          | 0.00   |
| TP43     | 0.02         | <u>~.75</u> | 0.01  | 0.00   | 0.00  | 0.00    | <u> </u> |        |
| TP44     | Ca 0         | 273         | 0.00  | 0.00   | 0.00  | 1 20    |          | 0.00   |
| TP45     | 0.62         | 2 73        | 0.01  | 0.00   | 0.00  | 1 29    | 0.00     | 0.01   |
| TP46     | 0.62         | 2 73        | 0.01  | 0.03   | 0.30  | 1 29    | 0.00     | 0.01   |
| TP47     | 0.93         | 4 09        | 0.01  | 0 04   | 0 44  | 1 94    | 0.00     | 0.02   |
| TP48     | 0.93         | 4 09        | 0.01  | 0.04   | 0 44  | 1 94    | 0.00     | 0.02   |
| TP49     | 0.93         | 4 09        | 0.01  | 0.04   | 0 44  | 1 94    | 0.00     | 0.02   |
| TP50     | 0.93         | 4 09        | 0.01  | 0.04   | 0 44  | 1 94    | 0.00     | 0.02   |
| TP51     | 0.00         | 0.00        | 0.00  | 0.00   | 0.00  | 0.00    | 0.00     | 0.00   |
| TP52     | 0.00         | 0.00        | 0.00  | 0.00   | 0.00  | 0.00    | 0.00     | 0.00   |
| TP54     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP55     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP56     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP57     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP58     | 0.93         | 4.09        | 0.01  | 0.04   | 0.44  | 1.94    | 0.00     | 0.02   |
| TP59     | 0.62         | 2.73        | 0.01  | 0.03   | 0.30  | 1.29    | 0.00     | 0.01   |
| TP60     | 0.62         | 2.73        | 0.01  | 0.03   | 0.30  | 1.29    | 0.00     | 0.01   |
| TP61     | 0.21         | 0.91        | 0.00  | 0.01   | 0.10  | 0.43    | 0.00     | 0.00   |
|          |              |             |       |        |       |         |          |        |

| TP62        | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
|-------------|--------|--------|------|------|-------|--------|------|------|
| TP63        | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
|             | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
| TDES        | 0.21   | 0.01   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
|             | 0.21   | 0.91   | 0.00 |      | 0.10  | 0.43   | 0.00 | 0.00 |
|             | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   |      | 0.00 |
|             | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
|             | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
|             | 0.21   | 0.91   | 0.00 | 0.01 | 0.10  | 0.43   | 0.00 | 0.00 |
|             | 0.62   | 2.73   | 0.01 | 0.03 | 0.30  | 1.29   | 0.00 | 0.01 |
|             | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| <u>1P72</u> | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| TP73        | 0.62   | 2.73   | 0.01 | 0.03 | 0.30  | 1.29   | 0.00 | 0.01 |
| TP74        | 0.62   | 2.73   | 0.01 | 0.03 | 0.30  | 1.29   | 0.00 | 0.01 |
| TP75        | 0.62   | 2.73   | 0.01 | 0.03 | 0.30  | 1.29   | 0.00 | 0.01 |
| TP-76       | 1.22   | 5.47   | 0.01 | 0.05 | 0.58  | 2.59   | 0.01 | 0.03 |
| TP77        | 1.22   | 7.83   | 0.01 | 0.08 | 0.58  | 3.70   | 0.01 | 0.04 |
| TP78        | 1.22   | 12.90  | 0.01 | 0.13 | 0.58  | 6.10   | 0.01 | 0.06 |
| TP79        | 1.22   | 12.90  | 0.01 | 0.13 | 0.58  | 6.10   | 0.01 | 0.06 |
| TP80        | 1.22   | 12.90  | 0.01 | 0.13 | 0.58  | 6.10   | 0.01 | 0.06 |
| TP81        | 1.22   | 6.45   | 0.01 | 0.06 | 0.58  | 3.05   | 0.01 | 0.03 |
| TP82        | 1.47   | 6.45   | 0.01 | 0.06 | 0.70  | 3.05   | 0.01 | 0.03 |
| TP83        | 1.47   | 6.45   | 0.01 | 0.06 | 0.70  | 3.05   | 0.01 | 0.03 |
| TP84        | 1.47   | 6.45   | 0.01 | 0.06 | 0.70  | 3.05   | 0.01 | 0.03 |
| TP85        | 1.47   | 6.45   | 0.01 | 0.06 | 0.70  | 3.05   | 0.01 | 0.03 |
| TP86        | 2.95   | 12.90  | 0.03 | 0.13 | 1.39  | 6.10   | 0.01 | 0.06 |
| TP87        | 2.95   | 12.90  | 0.03 | 0.13 | 1.39  | 6.10   | 0.01 | 0.06 |
| TP89        | 3.66   | 16.01  | 0.04 | 0.16 | 1.73  | 7.57   | 0.02 | 0.08 |
| TP90        | 3.66   | 16.01  | 0.04 | 0.16 | 1.73  | 7.57   | 0.02 | 0.08 |
| TP91        | 3.66   | 16.01  | 0.04 | 0.16 | 1.73  | 7.57   | 0.02 | 0.08 |
| TP92        | 3.66   | 16.01  | 0.04 | 0.16 | 1.73  | 7.57   | 0.02 | 0.08 |
| ТР93        | 3.66   | 16.01  | 0.04 | 0.16 | 1.73  | 7.57   | 0.02 | 0.08 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| Ö           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| 0           | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
|             | 0.00   | 0.00   | 0.00 | 0.00 | 0.00  | 0.00   | 0.00 | 0.00 |
| TOTALS      | 100.37 | 466.04 | 1.00 | 4.64 | 47.29 | 219.56 | 0.47 | 2.20 |
|             |        |        |      |      |       |        |      |      |

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### 2. Emissions From TRANSFER POINTS (Continued) Source: AP-42 Fifth Edition 13.2.4 Aggregate Handling and Storage Piles Emissions From Batch Drop $E = k^{*}(0.0032) * [(U/5)^{1.3}/[(M/2)^{1.4}] = pounds/ton$ PM PM-10 Where: Particle Size Multiplier (dimensionless) 0.35 0.74 **k** = Mean Wind Speed (mph) U = Material Moisture Content (%) M =

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| Assumptions:  |  |   |
|---|--|---|
| k - Particle size mult<br>For PM (< or equal to<br>For PM-10 (< or equa | tiplier<br>30um) k =<br>I to 10um) k = | 0.74<br>0.35                            |
| For PM  | E(M) =                                 | 0.0062125 *[1/((M/2)^1.4)] = pounds/ton |
| For PM-10   | E(M) =                                 | 0.0029383 *[1/((M/2)^1.4)] = pounds/ton |
| For Ib/hr   | [lb/ton]*[ton                          | /hr] = [lb/hr]                          |
| For Tons/year   | [lb/ton]*[ton                          | /yr]*[ton/2000lb] = [ton/yr]            |
|   |  |   |



### 3. Emissions From WIND EROSION OF STOCKPILES

| Stockpile |        | PN     | <u></u> |      | PM-10  |        |        |       |  |
|-----------|--------|--------|---------|------|--------|--------|--------|-------|--|
| ID No     | Uncont | rolled | Contro  | lled | Uncont | rolled | Contro | olled |  |
|           | lb/hr  | TPY    | lb/hr   | ŢPY  | lb/hr  | TPY    | lb/hr  | TPY   |  |
| OS-1      | 1.97   | 8.64   | 0.02    | 0.09 | 0.93   | 4.06   | 0.01   | 0.04  |  |
| OS-2      | 1.74   | 7.61   | 0.02    | 0.08 | 0.82   | 3.58   | 0.01   | 0.04  |  |
| OS-3      | 1.74   | 7.61   | 0.02    | 0.08 | 0.82   | 3.58   | 0.01   | 0.04  |  |
| OS-4      | 2.26   | 9.88   | 0.02    | 0.10 | 1.06   | 4.65   | 0.01   | 0.05  |  |
| OS-5      | 0.90   | 3.92   | 0.01    | 0.04 | 0.42   | 1.84   | 0.00   | 0.02  |  |
| OS-6      | 0.00   | 0.02   | 0.00    | 0.00 | 0.00   | 0.01   | 0.00   | 0.00  |  |
| OS-7      | 0.90   | 3.92   | 0.01    | 0.04 | 0.42   | 1.84   | 0.00   | 0.02  |  |
| 0         | 0.00   | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   | 0.00   | 0.00  |  |
| Ō         | 0.00   | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   | 0.00   | 0.00  |  |
| 0         | 0.00   | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   | 0.00   | 0.00  |  |
| 0         | 0.00   | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   | 0.00   | 0.00  |  |
| 0         | 0.00   | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   | 0.00   | 0.00  |  |
|           | 0.00   | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   | 0.00   | 0.00  |  |
| TOTALS    | 9.50   | 41.62  | 0.10    | 0.42 | 4.47   | 19.56  | 0.04   | 0.20  |  |

### Source:

• 2.5

Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

 $E = 1.7^{*}[s/1.5]^{*}[(365-p)/235]^{*}[f/15] = (lb/day/acre)$ 

Where:

| <u>S</u> =   | sut content of material   |  |  |  |  |  |  |  |  |  |
|--------------|---|--|--|--|--|--|--|--|--|--|
| p =          | number of days with >0.01 inch of precipitation per year                      |  |  |  |  |  |  |  |  |  |
| f =          | percentage of time that the unobstructed wind speed                           |  |  |  |  |  |  |  |  |  |
|              | exceeds 12 mph at the mean pile height  |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
| For PM       | E(s)= 1.3374941 * s = lb/dav/acre   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
| For DM-10    | $E(s) = 0.6286222 + s = lb/day/acre}$   |  |  |  |  |  |  |  |  |  |
|              | L(3) = 0.0200222 - 0.0000000000000000000000000                                |  |  |  |  |  |  |  |  |  |
| Ear th/hr    | []b/dov/corol#[dov/9.4br]#[booc.coroc.of.mile.(coroc.)](b/br                  |  |  |  |  |  |  |  |  |  |
| FOLIDAD      | [ib/day/acre] [day/24nr]*[base area of pile (acres)] = ib/nr                  |  |  |  |  |  |  |  |  |  |
| <b>F T</b> ( |   |  |  |  |  |  |  |  |  |  |
| For I on/yr  | $[iD/day/acre]^[365day/yr]^[10n/2000ib]^[base area of pile (acres)] = 10n/yr$ |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |
|              |   |  |  |  |  |  |  |  |  |  |

### 4. Emissions From UNPAVED HAULROADS

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| ltem  |  | P  | М                        |  |                 | PM                              | -10      |       |
|---|--|--|--------------------------|--|-----------------|---------------------------------|----------|-------|
| No.   | Uncon  | trolled                                  | Contre                   | olled  | Uncon           | trolled                         | Contr    | olled |
| [   | lb/hr  | TPY                                      | lb/hr                    | TPY  | lb/hr           | TPY                             | lb/hr    | TPY   |
|   | 0.00   | 0.00                                     | 0.00                     |  |                 | 0.00                            |          |       |
|   | 0.00   | 0.00                                     | 0.00                     | 0.00   |                 | 0.00                            | 0.00     |       |
|   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            | 0.00     | 0.00  |
| d   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            |          | 0.00  |
|   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            | 0.00     | 0.00  |
| 6   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            | 0.00     | 0.00  |
| 7   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            | 0.00     | 0.00  |
| 8   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            | 0.00     | 0.00  |
|   |  |  |                          |  |                 |                                 |          |       |
| OTALS   | 0.00   | 0.00                                     | 0.00                     | 0.00   | 0.00            | 0.00                            | 0.00     | 0.00  |
| <pre>3.2.2 Unp 5.2.2 Unp inission E:</pre>          | stimate For<br>(s/12)*(S/3<br>particle size                  | Unpaved Hat<br>0)*(W/3)^0.7              | ulroads<br>*(w/4)^0.5*(( | (365-p)/365)   | = Ib / Vehicle  | e Mile Travel                   | ed (VMT) |       |
| $\frac{S}{S} = \frac{1}{2}$                         | Mean vehic   | le speed (mr                             | ice material (           | 70)  |                 |                                 |          |       |
| <del>w</del> = 1                                    | Mean vehic   | le weight (tor                           | ns)                      |  |                 |                                 |          |       |
| w =   | mean numt  | per of wheels                            | per vehicle              |  |                 |                                 |          |       |
| p =   | number of o  | days per year                            | with precipi             | tation >0.01   | inch            |                                 |          |       |
| ssumption<br>- Particle<br>or PM (< o<br>or PM-10 ( | s:<br><b>size multip</b><br>or equal to 30<br>(< or equal to | o <b>lier</b><br>Dum) k =<br>5 10um) k = | 0.80<br>0.36             |  |                 |                                 |          |       |
| or PM   |  | E(S,W,w)≍                                | 1.1207306                | *(S/30) * [(W  | //3)^0.7]*[(w/  | 4)^0.5] = \b/\<br>4)40.5] = \b/ | VMT      |       |
| or PM-10  | <b>,</b>   | E(S,₩,₩)=<br>[[6Δ/ <b>84</b> T1 + Ⴊ/     | U.5043288                | "(S/30) " [(W  | //3)^().7]*[(W/ | 4)^U.5] = lb/\                  | VIVI I   |       |
|   | r (  | [ID/ VIVI I ] [V                         |                          | $\frac{1}{1} = \frac{1}{1} = \frac{1}$ |                 | = Topelvoo                      | r        |       |
| or rousely  | •  | firm a lari T - F A                      | wurn <b>h</b> l fa       | iha i cail (   |                 | - ionavyed                      | I        |       |

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### 5. Emissions From INDUSTRIAL PAVED HAULROADS

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| No                                       |  |   | PM  |               |               |          | -10    |     |
|--|--|---|---|---------------|---------------|----------|--------|-----|
|  |  | olled   | Contr   | olled         |               | rolled   | Contro |     |
|  | io/nr  | IPY   | ID/nr   | IPY           |               |          |        |     |
| 1  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| 2  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| 3  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| 4  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| 5  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.( |
| 6  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.( |
| 7  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| 8  | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| TOTALS                                   | 0.00   | 0.00  | 0.00  | 0.00          | 0.00          | 0.00     | 0.00   | 0.0 |
| 11.2.6 IND<br>Emission Es<br>E = 0.077 * | JSTRIAL PAY<br>stimate For Pa  | VED ROAD<br>ived Haulroa  | S<br>ads<br>* [W/3]^0.7                       | = lb / Vehicl | e Mile Travel | ed (VMT) |        |     |
|  |  |   |   |               |               |          |        |     |
| =  | Industrial au  | gmentation  | factor (dimer                                 | nsionless)    |               |          |        |     |
| =<br>n =                                 | Industrial au<br>number of tr  | igmentation<br>affic lanes  | factor (dimer                                 | nsionless)    |               |          |        |     |
| =<br>n =<br>s =                          | Industrial au<br>number of tr<br>surface mat                               | igmentation<br>affic lanes<br>erial silt con                                    | factor (dimer<br>tent (%)                     | nsionless)    |               |          |        |     |
| =<br>n =<br>s =<br>L =                   | Industrial au<br>number of tr<br>surface mat<br>surface dus                | igmentation<br>affic lanes<br>erial silt cont<br>t loading, (lb                 | factor (dimer<br>tent (%)<br>v/mile)          | nsionless)    |               |          |        |     |
| =<br>n =<br>s =<br>L =<br>W =            | Industrial au<br>number of tr<br>surface mat<br>surface dus<br>average veh | igmentation<br>affic lanes<br>erial silt cont<br>t loading, (lb<br>icle weight, | factor (dimer<br>tent (%)<br>v/mile)<br>(ton) | nsionless)    |               |          |        |     |

### 5. Emissions From INDUSTRIAL PAVED HAULROADS

| Item   | PM           |      |            |      | PM-10        |      |            |      |
|--------|--------------|------|------------|------|--------------|------|------------|------|
| No     | Uncontrolled |      | Controlled |      | Uncontrolled |      | Controlled |      |
|        | lb/hr        | TPY  | lb/hr      | TPY  | lb/hr        | TPY  | lb/hr      | TPY  |
| 1      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 2      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 3      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 4      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 5      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 6      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 7      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| 8      | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |
| TOTALS | 0.00         | 0.00 | 0.00       | 0.00 | 0.00         | 0.00 | 0.00       | 0.00 |

Source: AP-42 83' Edition 11.2.6 INDUSTRIAL PAVED ROADS

Emission Estimate For Paved Haulroads

E = 0.077 \* I \* [4/n] \* [s/10] \* [L/1000] \* [W/3]^0.7 = Ib / Vehicle Mile Traveled (VMT)

Where:

| =        | Industrial augmentation factor (dimensionless) |
|----------|--|
| <u> </u> | number of traffic lanes                        |

|            | number of traffic lanes  |
|------------|--|
| s =        | surface material silt content (%)  |
| L =        | surface dust loading, (lb/mile)  |
| - W =      | average vehicle weight, (ton)  |
|            |  |
|            |  |
|            |  |
|            |  |
| For PM     | $E(W) = 0.61446 [W/3]^0.7 = (Ib/VMT)$  |
|            |  |
| For PM-10  | $E(W) = 0.2887962 [(W/3)^0.7] = (Ib/VMT)$                                    |
|            |  |
| For Ib/hr  | [lb/VMT] * [VMT/trip] * [Trips/Hour] = lb/hr                                 |
|            |  |
| For Tons/y | <pre>r [lb/VMT] * [VMT/trip] * [Trips/Year] * [Ton/2000lb] = Tons/year</pre> |
|            |  |
|            |  |
|            |  |
|            |  |
|            |  |
|            |  |
|            |  |





provide the chemical bonding required in the SynFuel manufacturing process.

without any adverse effect to utilization or the environment.

# FIE-TOO Benedts I. Freduced from natural polymers: Environmentally renewable

TESOUTC2.

3. Eon viscosier for sass of application.

Nery stable emuision eliminares

heren storage

5. Remanently bonds to the fiel



SynFuel samples producted with FIE-100 submitted to

Combustion Resources, in for Fourier-transformed

infined (FIR) analysis obtained the following indicated

ciunge.



- Neural oH protzen equipment from
- correston and description.
- 7. Retains fuel compartion & contine
- 2702010
- Positive ZTU addition of
  - approximately 3,300 BTULL.
- . 9. Ann and sulfar addition of less than . 0.00126 -
- 10. Positive environmental impact.



![](_page_67_Picture_28.jpeg)

Telephone (724) 941-3076 FAX (724) 941-9464

![](_page_67_Picture_30.jpeg)

![](_page_67_Picture_31.jpeg)

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**Technical Data Sheet** 

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### **Product: FTH-100**

# **RCRA** Metals

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| Metals   | Result | EPA Method |
|----------|--------|------------|
|          |        |            |
| Arsenic  | <1.0   | 206.2      |
| Barium   | <1.0   | 200.7      |
| Cadmium  | <0.05  | 200.7      |
| Chromlum | <1.0   | 200.7      |
| Lead     | 0.22   | 239.2      |
| Mercury  | <0.002 | 245.1      |
| Selenium | <0.5   | 270.2      |
| Silver   | <2.0   | 200.7      |
|          |        |            |

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All data reported in mg/l

### ¥90---E00'a ZSO-1 -

![](_page_68_Picture_13.jpeg)

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Technical Data Sheet

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## Product: FTH-100

# Semi-Volatile Organics by Method 8270

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| CAS#       | Compound                      | Concentration (ug/K | <u>(2)</u> |
|------------|-------------------------------|---------------------|------------|
| 67-75-9    | N-Nitmsodimethylamine         | 8,000               | U          |
| 110_26_1   | Puridine                      | 8,000               | U          |
| 97_63_7    | Ethvi methacrvlate            | 8,000               | U          |
| 173-63-7   | Paraldehydc                   | 8,000               | U          |
|            | 2-Picoline                    | 16,000              | U          |
| 10505-05-6 | Nitrosomethylethylamine       | 8,000               | U          |
| 66_27_3    | Methyl methanesulfonate       | 8,000               | ប          |
| 108-95-7   | Phenol                        | 8,000               | U          |
| 55-18-5    | N-Nitrosodiethylamine         | 8,000               | U          |
| 62-50-5    | Ethvl methanesulfonate        | 8,000               | U          |
| 62-53-3    | Aniline                       | 8,000               | U          |
| 76_01_7    | Pentachlomethane              | 8,000               | U          |
| 111_14_4   | his (7-Chiorocthyl) ether     | 16,000              | U          |
| Q5_57_R    | 2-Chlorophenol                | 8,000               | U          |
| 541_73_1   | 13-Dichlombenzene             | 8,000               | U          |
| 100_44_7   | Renzyl chloride               | 8,000               | U          |
| 106-46-7   | 1 4 Dichlombenzene            | 8,000               | U          |
| 100-51-6   | Benzyl alcohol                | 8,000               | U          |
| 95-50-1    | 1 2-Dichlombenzene            | 8,000               | Ų          |
| 95_48_7    | 2-Methylohcool                | 8,000               | U          |
| 30638_32.0 | his (2-Chloroisonrooyl) ether | 8,000               | U          |
| 102-39-4   | 3-Methvinhenol                | 8,000               | U          |
| 106-44-5   | 4 Methylphenol                | 8,000               | U          |
| 930-55-2   | N-Nitrosonvrrolidine          | 8,000               | U          |
| 59-89-2    | N-Nitrosomorpholine           | 8,000               | U          |
| 98-86-2    | Acetophenone                  | 8,000               | U          |
| 621-64-7   | N-Nitroso-Di-n-Propylamine    | 8,000               | U          |
| 636-21-5   | o-Toluidine hydrochloride     | 8,000               | U          |
| 67-72-1    | Hexachlorosthane              | 000,8               | U          |
| 98-95-3    | Nitrobenzene                  | 8,000               | U          |

![](_page_69_Figure_12.jpeg)

T-052 P.004/018 F-054

![](_page_69_Picture_14.jpeg)

### Page 2

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# Product: FTH-100

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Semi-Volatile Organics by Method 8270

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| CAS#      | Compound                     | Concentration (ug/Kg) |         |  |
|-----------|------------------------------|-----------------------|---------|--|
|           | ~ ~ ~ * * * * *              | በ በ በ                 | ŤŤ      |  |
| 100-75-4  | N-Nitrosopipciidine          |                       | 1<br>1  |  |
| 78-59-1   | Isophorone                   | 8,000<br>8,000        | U<br>TT |  |
| 88-75-5   | Z-Nitrophanol                | 8,000                 |         |  |
| 105-67-9  | Z,4-Dimethylphcnol           | 8,000                 |         |  |
| 108-70-3  | 1,3,5-Trichlorobenzene       | 8,000                 | U<br>TT |  |
| 98-87-3   | Benzal chloride              | 8,000                 | U       |  |
| 65-85-0   | Benzoic acid                 | <b>990</b>            | ]<br>   |  |
| 111-91-1  | bis (2-Chloroethoxy) methane | 8,000                 | U       |  |
| 120-83-2  | 2,4-Dichlorophenol           | 8,000                 | U       |  |
| 120-82-1  | 1,2,4-Trichlorobenzene       | 8,000                 | U       |  |
| 91-20-3   | Napthalene                   | 8,000                 | U       |  |
| 106-47-8  | 4-Chloroanilinc              | 8,000                 | U       |  |
| 87-65-0   | 2,6-Dichlorophenol           | 16,000                | U       |  |
| 95-54-5   | o-Phenylenediamine           | 8,000                 | U       |  |
| 122-09-8  | dimethylphcnylethylamine     | 8,000                 | U       |  |
| 1888-71-7 | Hexachloropropene            | 8,000                 | U       |  |
| 87-68-3   | Herachlorobutadiene          | 8,000                 | U       |  |
| 87-61-6   | 1.2.3-Trichlorobenzene       | 8,000                 | U       |  |
| 98-07-7   | Benzotrichloride             | 16,000                | U       |  |
| 924-16-3  | N-Nitroso-di-n-butylamine    | 8,000                 | U       |  |
| 59-50-7   | 4-Chloro-3-methylphenol      | 8,000                 | U       |  |
| 106-50-3  | P-Phenylencdiamine           | 8,000                 | U       |  |
| 94-59-7   | Safrole                      | 8,000                 | U       |  |
| 106-50-3  | m-Phenylenediamine           | 8,000                 | U       |  |
| 91-57-6   | 2-Methylnanhthalcne          | 8,000                 | U       |  |
| 90-12-0   | 1-Methylnanhthalene          | 8,000                 | U       |  |
| 95-94-3   | 1245-Tetrachlomhenzetté      | 8.000                 | U       |  |
| 634-90-7  | 1235-Tetrachlombenzene       | 8.000                 | U       |  |
| 77_47_4   | Hexachlomevelopentadiene     | 8,000                 | ប       |  |
| 88-06-2   | 2.4.6-Trichlorophenol        | 16,000                | U       |  |
| 95-95-4   | 2.4.5-Trichlorophenol        | 16,000                | U       |  |
| 120-58-1  | Isosafrole                   | 16,000                | U       |  |
| 91-58-1   | 2-Chloronaphthalene          | 8,000                 | U       |  |
| 90-13-1   | 1-Chloronaphthalcnc          | 8,000                 | U       |  |
|           | —                            |                       |         |  |

1-025 6'002/018 E-024

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# Page 3 Product: FTH-100

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Semi-Volatile Organics by Method 8270

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| <u>C.A.S</u> # | Compound                   | Concentration (ug/Kg) |   |  |
|----------------|----------------------------|-----------------------|---|--|
| 634-66-2       | 1.2.3.4-Tetrachlorobenzene | 8,000                 | ប |  |
| 88-74-4        | 2-Nitroaniline             | 8,000                 | U |  |
| 130-15-4       | 1.4-Naphthoquinone         | 16,000                | U |  |
| 100-25-4       | 1,4-Dinitrobenzene         | 16,000                | U |  |
| 131-11-3       | Dimethyl Phthalate         | 8,000                 | U |  |
| 208-96-8       | Acenaphthylene             | 8,000                 | U |  |
| 99-09-2        | 3-Nitroaniline             | 16,000                | U |  |
| 83-32-9        | Acenaphthene               | 8,000                 | U |  |
| 51-28-5        | 2,4-Dinimophenul           | 32,000                | U |  |
| 100-02-7       | 4-Nitrophenol              | 8,000                 | U |  |
| 132-64-9       | Dibenzofuran               | 8,000                 | U |  |
| 121-14-2       | 2,4-Dinitrotolucus         | 8,000                 | U |  |
| 608-93-5       | Pentachlorobenzene         | 8,000                 | U |  |
| 134-32-7       | 2-Naphthylamine            | 16,000                | U |  |
| 606-20-2       | 2,6-Dinitrotolucne         | 8,000                 | U |  |
| 134-32-7       | 1-Naphthylamine            | 16,000                | U |  |
| 58-90-2        | 2,3,4,5-Tetrachlorophenol  | 16,000                | U |  |
| 84-66-2        | Diethylphthalate           | 8,000                 | U |  |
| 297-97-2       | Zinophos                   | 8,000                 | U |  |
| 7005-72-3      | 4-Chlorophenyl-phenylether | 8,000                 | U |  |
| 86-73-7        | Fluorene                   | 8,000                 | U |  |
| 100-01-6       | 4-Nitroanilinc             | 16,000                | U |  |
| 99-55-8        | 5-Nitro-o-toluidine        | 16,000                | U |  |
| 534-52-1       | 4,6-Dinitro-2-methylphenol | 24,000                | U |  |
| 86-30-6        | N-Nitrosodiphenylamine (1) | 8,000                 | U |  |
| 122-39-4       | Diphenylamine              | 8,000                 | U |  |
| 99-35-4        | 1,3,5-Trinitrobenzene      | 16,000                | U |  |
| 122-66-7       | 1,2-Diphenylhydrazine      | 8,000                 | U |  |

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![](_page_71_Picture_4.jpeg)
#### Page 4

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# Product: FTH-100

Semi-Volatile Organics by Method 8270

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- U- Indicates compound was analyzed but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J- Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- B- This flag is used when the analyte is found in the associated blank us well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- E- This flag identifies compounds whose concentrations exceed the calibration range of the GC-MS instrument for the specific analysis.

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#### P40-4 B10/20014 ZS0-1



# **Technical Data Sheet**

Product: FTH-100

# **TCLP** Metals

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| Metals   | Result | Limits | EPA Method |  |
|----------|--------|--------|------------|--|
|          |        |        |            |  |
| Arsenic  | 0.046  | 5.0    | 208.2      |  |
| Barium   | <0.50  | 100    | 208.1      |  |
| Cadmium  | <0.005 | 1.0    | 213.2      |  |
| Chromium | <0.05  | 5.0    | 218.1      |  |
| Lead     | <0.05  | 5.0    | 239.1      |  |
| Mercury  | <0.001 | 0.2    | 245.1      |  |
| Selenium | 0.01   | 1.0    | 270.2      |  |
| Silver   | <0.005 | 5.0    | 272.1      |  |

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All data reported in ppm

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# **Technical Data Sheet**

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# Calorific Content by ASTM D-240

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# <u>Test</u> Result

Calorific Content 8,826 BTU/Ib

Reported on an as is basis

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## 1-025 6:008/018 E-064

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Page 1 of 6

Product Name: FTH-100

Preparation date: 8/16/00

MSDS REVISION #: 001



| PRODUCT NAME: | FTH-100 |
|---------------|---------|
|               | • -     |

SYNONYMS:

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None

DISTRIBUTED BY:

Accretion Technologies 300 Business Center Drive, Suite 302 Pittsburgh, PA 15205

PHONE NUMBER: (304) 552-2919

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Component

<u>%</u> CAS No. Exposure Limits

Organic resins

30-60 Proprietary N

Not established

| Surfactant blend         | 1-10  | Proprietary | Not established |
|--------------------------|-------|-------------|-----------------|
| Guar gum                 | 1-10  | 9000-30-0   | Not established |
| Fatty alcohol/fatty acid | 1-10  | Proprietary | Not established |
| Water                    | 30-60 | 7732-18-6   | Not established |

SECTION 3 - HAZARDS IDENTIFICATION

Product is a brown liquid with a slight, bland odor. The product may cause eye irritation. Avoid contact with skin, eyes and clothing. Wear protective goggles and gloves when handling this product. Wash thoroughly after handling.

#### POTENTIAL HEALTH EFFECTS

#### EYES: Can cause initation.

#### Section 3 continued on next page

790-1 810/01014 ZS0-1

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Product Name: FTH-100

Page 2 of 6

Preparation date: 8/16/00

#### - HAZARDS IDENTIFICATION (continued) SECTION

SKIN:

Prolonged or repeated contact may slight irritation. Persons with pre-existing skin conditions are particularly susceptible.

INGESTION (swallowing):

May cause imitation of the mouth and throat, nausea, vomiting and diarrhea.

**INHALATION** (breathing):

Spray or mist may cause imitation to the nose, throat and lungs. Persons with pre-existing lung disorders are particularly susceptible.

CHRONIC EFFECTS/CARCINOGENICITY:

This product (or component) is not listed in IARC Monographs, the NTP Seventh Annual Report or the ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

# SECTION 4 - FIRST AID MEASURES

#### EYE CONTACT:

Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

#### SKIN CONTACT:

Wash exposed area with soap and water. Launder contaminated clothing before reuse.

#### INGESTION (swallowing):

Immediately drink two large glasses of water. Call a physician. Do NOT induce vomiting unless instructed to do so by physician. Never give anything by mouth to an unconscious person.

#### INHALATION (breathing): If affected, move to fresh air.

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Product Name: FTH-100

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Page 3 of 6

Preparation date: 8/16/00

## SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: ~500° F (100° C)

FLASH POINT METHOD: PMCC

UPPER EXPLOSION LIMIT: Una LOWER EXPLOSION LIMIT: Una AUTOIGNITION TEMPERATURE: Una SENSITIVITY/SPARKS: Unk SENSITIVITY/STATIC ELECTRICITY: Unk

Unavailable Unavailable Unavailable Unknown Unknown

EXTINGUISHING MEDIA:

Dry chemical, water fog, and regular foam

FIRE AND EXPLOSION HAZARDS:

None known. Product contains a large amount of water, and would not normally burn.

### FIRE-FIGHTING EQUIPMENT:

Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other absorbent material and shovel into containers.



#### HANDLING:

# Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

### STORAGE: Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation.

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Product Name: FTH-100

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Page 4 of 6

Preparation date: 8/16/00

# SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Not required under normal conditions.

SKIN PROTECTION: Wear protective gloves such as Neoprene or Buna-N.

EYE PROTECTION:

Chemical splash goggles in compliance with OSHA regulations are advised.

**OTHER PROTECTION:** 

Normal work clothing covering arms and legs are recommended.

Unavailable

Unavailable

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ENGINEERING CONTROLS:

Provide sufficient ventilation to maintain exposure below level of overexposure.

# SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: ODOR: SPECIFIC GRAVITY: VAPOR PRESSURE (mm Hg): VAPOR DENSITY (Air = 1): INITIAL BOILING POINT: EVAPORATION RATE: (Ethyl Ether = 1) SOLUBILITY in WATER: VOLATILE %: pH: pH METHOD: Brown liquid @  $68^{\circ}$  F ( $20^{\circ}$  C) Slight bland >0.998 17.5 @  $68^{\circ}$  F ( $20^{\circ}$  C) Lighter than air 212° F ( $100^{\circ}$  C) <1 Dispersible

#### 1-025 6'013/018 E-0E4



Product Name: FTH-100

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Page 5 of 8

Preparation date: 8/16/00

SECTION 10 - STABILITY AND REACTIVITY

STABILITY (conditions to avoid): Stable under normal conditions.

INCOMPATIBILITIES (materials to avoid): Avoid contact with strong oxidizing agents and strong mineral acids.

DECOMPOSITION: Not available.

HAZARDOUS POLYMERIZATION: Can not occur.



# SECTION 12 - ECOLOGICAL INFORMATION

In an effort to demonstrate the safety of the product when used as a dust control agent, 82 grams of product were mixed with 1,890 grams of aggregate, typical of dirt roads. The mixture was allowed to dry, then mixed with water and allowed to stand. The water was then tested in aquatic toxicity studies, and found to be non-toxic to Daphnia magna.

## SECTION 13 - DISPOSAL CONSIDERATIONS

Incineration is the recommended disposal method for all chemical wastes. Material collected on absorbent material may be deposited in a landfill in accordance with all applicable local, state and federal regulations.

This product, if disposed of, is not considered a hazardous waste under current RCRA definitions.



1-025 6'0/710'd 290-1

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Product Name: FTH-100

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Page 6 of 6

Preparation date: 8/16/00

Not regulated under current DOT, IMO, or ICAO regulations.

# SECTION 15 - REGULATORY INFORMATION

#### **TSCA INFORMATION:**

All components in this product are in compliance with TSCA Inventory requirements.

#### SARA 313 INFORMATION:

SARA requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level that could require reporting under the statute are: None



### HAZARD RATING:



0 - LEAST 1 - SUGHT 2 - MODERATE 3 - HIGH 4 - EXTREME

HAZARD RATING METHOD: NFPA

**REASON FOR REVISION:** Updated flash point information (Section 5).

The product information contained herein is believed to be accurate as of the date of the Material Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this Information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, Including any resultant personal injury or property damage.

#### \*\*\*\*END OF REPORT\*\*\*\*

#### F-024 1-025 b 012/018

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Technical Data Sheet

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Product: FTH-100

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# Volatile Organics by Method 8240

| CAS#       | Compound                   | Concentration (ug/ | <u>(g)</u> |
|------------|----------------------------|--------------------|------------|
|            |                            |                    |            |
| 74-87-3    | Chloromethane              | 23                 | J          |
| 74-83-9    | Bromomethane               | 26                 | U          |
| 75-01-4    | Vinyl chloride             | 53                 | U          |
| 75-00-3    | Chloroethane               | 53                 | U          |
| 75-09-2    | Methylene chloride         | 1,700              | B,E        |
| 67-64-1    | Acctone                    | 2,800              | B,E        |
| 75-15-0    | Carbon disulfide           | 22                 | J          |
| 75-35-4    | 1,1-Dichloroethane         | 26                 | U          |
| 75-34-3    | 1,1-Dichloroethane         | 26                 | U          |
| 540-59-0   | 1,2-Dichloroethane (total) | 26                 | U          |
| 67-66-3    | Chloroform                 | 27                 | -          |
| 107-06-2   | 1,2-Dichloroethane         | 26                 | U.         |
| 78-93-3    | 2-Butanone                 | 830                | B          |
| 71-55-6    | 1,1,1-Trichloroethane      | 26                 | U          |
| 56-23-5    | Carbon tetrachloride       | 26                 | U          |
| 108-05-4   | Vinyl acetate              | 53                 | U          |
| 75-27-4    | Bromodichloromethane       | 26                 | U          |
| 78-87-5    | 1,2-Dichloropropane        | 26                 | U          |
| 10061-01-5 | cis-1,3-Dichloropropane    | 26                 | Ŭ          |
| 79-01-6    | Trichloroethane            | 26                 | U          |
| 124-48-1   | Dibromochloromethane       | 26                 | U          |
| 79-00-5    | 1,1,2-Trichloroethane      | 26                 | ប          |
| 71-43-2    | Benzene                    | 150                |            |
| 10061-02-6 | Trans-1,3-Dichloropropene  | 26                 | U          |
| 110-75-8   | 2-Chloroethylvinylether    | 53                 | U          |
| 75-25-2    | Bromoform                  | 53                 | U          |

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| 108-10-1 | 4-Methyl-2-Pentanone      | 280       |   |
|----------|---------------------------|-----------|---|
| 591-78-6 | 2-Hexanone                | <b>79</b> | U |
| 127-18-4 | Tetrachlorocthane         | 26        | U |
| 79-34-5  | 1,1,2,2-Tetrachloroethane | 53        | U |

### 790-1 810/910.9 Z20-1

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# Product: FTH-100

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Volatile Organics by Method 8240

Concentration (walk a)

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| Compound                              | Concentration [ug/  | NET.  |
|---------------------------------------|---|---|
| ━━ _ 1                                | 1 200   | F   |
| loiuene                               | 1,JVV<br>47   | ישג<br>ד ד  |
| Chlorobenzenc                         | 20  | U   |
| Ethylbenzene                          | 360   |   |
| Styrenc                               | 63  |   |
| Total xylcnes                         | 340   |   |
| Iodomethane                           | 53  | U   |
| Acrolein                              | 640   | U   |
| Acrylonitrile                         | 26  | Ũ   |
| Trichlorofluoromethane                | 25  | U   |
| 3-Chloropropene                       | 79  | U   |
| 1,1,2-Trichloro-1,2,2-triftuoromethan | e 53  | U   |
| 1,1,1-Trichloro-2,2,2-trifluoromethan | <b>c</b> 53   | U   |
| Dibromomethane                        | 53  | U   |
| Crotonaldehyde                        | 530   | U   |
| 1,2-Dibromoethane                     | 26  | U   |
| 1,1,1,2-Tetrachloroethane             | 26  | U   |
| cis-1,4-Dichloro-2-butene             | 79  | U   |
| 1,2,3-Trichloropropane                | 79  | U   |
| trans-1,4-Dichloro-2-butene           | <b>79</b>   | U   |
| Ethylmethacrylate                     | 53  | U   |
| 1,2-Dibromo-3-chloroptopane           | 53  | U   |
|                                       | CompoundTolueneChlorobenzeneEthylbenzeneStyreneTotal xylenesIodomethaneAcroleinAcroleinAcroleinAcroleinAcrylonitrileTrichlorofluoromethane3-Chloropropene1,1,2-Trichloro-1,2,2-trifluoromethanDibromomethaneCrotonaldehyde1,2-Dibromoethane1,1,1,2-Tetrachloroethaneis-1,4-Dichloro-2-butene1,2,3-Trichloropropanetrans-1,4-Dichloro-2-buteneEthylmethacrylate1,2-Dibromo-3-chloroptopane | CompoundConcentration (ug/Toluene1,300Chlorobenzene26Ethylbenzene360Styrene63Total xylenes340Iodomethane53Acrolein640Acrylonitrile26Trichlorofluoromethane253-Chloropropene791,1,2-Trichloro-1,2,2-trifluoromethane530ibromomethane531,1,1-Trichloro-2,2,2-trifluoromethane53Crotonaldehyde5301,2-Dibromoethane261,1,2-Tetrachloroethane261,2,3-Trichloropropane791,2,3-Trichloropropane79trans-1,4-Dichloro-2-butene79Ethylmethacrylate531,2-Dibromo-3-chloropropane53 |

- U- Indicates compound was analyzed but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J- Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- B- This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- E. This flag identifies compounds whose concentrations exceed the calibration range of the GC-MS instrument for the specific analysis.

#### 1-025 b'0//010 E-064

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# Technical Data Sheet

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# Product: FTH-100

# Extractable Organic Halldes in Soil by EPA 600/4-84-008



Reported on dry weight basis

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#### T-DE2 P.D18/019 F-D64

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# Technical Data Sheet

Product: FTH-100

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# Polynuclear Aromatic Hydrocarbons by EPA Method 625/8270C

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| Compound                 | Concentration (ug/Kg) | <u>Fiag</u> |
|--------------------------|-----------------------|-------------|
|                          |                       |             |
| Acemanhtheric            | <100,000              | U           |
| Acenanhthviene           | <100,000              | U           |
| Anthracene               | <100,000              | U           |
| Renzo (a) anthracene     | <100,000              | Ŭ           |
| Benzo (a) monthe         | <100,000              | U           |
| Benzo (h) fluoranthene   | <100,000              | U           |
| Renzo (g.h.i) perviene   | <100,000              | び           |
| Benzo (k) fluoranthene   | <100,000              | U           |
| Chrysene                 | <100,000              | U           |
| Diberry (a h) anthracene | <100,000              | U           |
| Fluoranthene             | <100,000              | U           |
|                          | <100,000              | U           |
| Indeno (173-cd) pyrene   | <100,000              | U           |
| Nanhthalene              | <100.000              | U           |
|                          | <100.000              | U           |
|                          | <100.000              | U           |
| x ya calle               |                       |             |

- U- Indicates compound was analyzed but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J- Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- B- This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate

#### action.

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E- This flag identifies compounds whose concentrations exceed the calibration range of the GC-MS instrument for the specific analysis.

#### 1-022 610/610 E-DEV



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\*\*\*OCR\*\*\*

The following pages contain the Optical Character Recognition text of the preceding scanned images.

q4 P & A Engineers and Consultants, Inc. P.O. Box: 4 70 P.O. Box: 279 Alum Creek, W. Ta. 25003-0470 Louisa, kv. 41230 Photie (304) 756-4066 Phone (606) 673-4413 Far (304) 756-4068 (606) 673-4415 October 15, 2002 ED Mr. Dennis Treacy, Director Commonwealth of Virginia Department of Environmental Quality 5636 Southem Boulevard Virginia Beach, VA 23462 Re: Dominion Terminal Associates - Pier I I Facility AIRS ID 51-700-00074, Registration No. 60997 Air Quality Modification Application Dear Mr. Treacy: On behalf of our client, Dominion Terminal Associates, P & A Engineers and Con sultants, Inc. submit the attached modification application to the coal/coke storage and expo rt facility for your review and approval. The purpose of this modification application is to identify existing and propo sed NSPS equipment, as well as additional storage, associated with the production of a synfuel pro duct. The synfuel process consists of coal fines being treated with a binding agent that creates a chemical change and produces an altemate fuel source. As evidenced 'm the attached MSDS sheets, t he proposed binder for the svnfuel product is environtmentally friendly and contains no VOC's. Т Domim'on Temifimi Associates currently ma'mtains a highly efficient dust suppr ession systern and proposes no change to its opention or current permit requirements in regard to emission controls. If additional information or clarification is needed, please contact me at the Alum Creek address listed above or cafl 304-7564066. S' I

Donna J. T Air Quality Project Manager dtolereapandaengineers.com

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Section A Document Certirication Section B General Information Section C Processing, Manufacturing, Surface Coating and Degreasing Operations - Form 5 Section D Stack Parameters and Fuel Data - Form 1 1 Section E Air Pollution Control and Monitoring Equipment - Form 12 Section F Air Pollution Control - Supplemental Information - Form 13 Section G Criteria Pollutant Emissions - Form 14 Section H Toxic or Hazardous Emissions From Proposed Facility -Form 15 Section J Emission Calculations Section K Material Flow Diagram - Proposed Facility Section L Site Plan Section M Proposed Synfuel Binder COMMONWEALTH OF VIRGINIA Department of Environmental Quality

AIR PERMIT APPLICATION General information CHECK ALL FORMS THAT APPLY AND LIST ALL ATTACHED DOCUMENTS. CRITERIA POLLUTANT EMISSIONS, Page 14 MAP AND LOCALTTIES LIST (infa(mationi, Pages, ii-vt TOXIC OR HAP OR OTHER EMISS IONS, Page 15 CONFIDENTIAL INFORMATION, Page vii OPERATING PERIODS, Page 16 FORMULA-BASED HAZARDOUS AIR POLLUTANT INFORMATION, Page viii HAZARDOUS AIR POLLUTANT LIST linformation), Pages ix-x LIST ATTACHED DOCUMENTS REQUEST FOR LOCAL GOVERNMENT CERTIFICATION FORM, Pages xi-xii MAP f SITE LOCAT TON CONTENTS AND DOCUMENT CERTIFICATION, Page I FACILITY SITE PLAN GENERAL INFORMATION, Page 2 PROCESS FLOW DIAGRAM/SCHEMATIC GENERAL INFORMATION (continued), Page 3 MSDS or CPDS SHEETS FUEL-BURNING EQUIPMENT, Page 4 ESTIMATED EMISSIONS CALCULATIONS PROCESSING, Page 5 STACK TESTS INKS, COATINGS, STAINS, AND ADHESIVES, Page 6 AIR MODEL DATA INCINERATORS, Page 7 LOCAL GOVERNING BODY CERTIFICATION FORM VOLATILE ORGANIC COMPOUND/PETROLEUM STORAGE TANKS, Page 8 VOLATILE ORGANIC COMPOUNDIPETROLEUM STORAGE TANKS -CONTINUED, Page 9 LOADING RACKS AND OIL-WATER SEPARATORS, Page 10 STACK PAFtAMETEFtS AND FUEL DATA, Page 1 1 AJR POLLUTION CONTROL AND MONITORING EQUIPMENT, PAGE 12 AIR POLLUTION CONTROLISUPPLEMENTAL INFORMATION, PAGE 13 Note added form sheets above; also indicate the number of copies of each form in blank provided. DOCUMENT CERTIFICATION FORM (see other side for instructions) corW under penafty of law that this document and all attachments [as noted abo ve] were prepared under my direction or supervision in accordance with a system designed to assure that q ualiried personnel propefly gather and ovaluate the informaWon submitted. Based on my inquiry of tho person or perso ns who manage the system, or those persons directfy ivsponsible for gathadng and evaluaiffng the informatFon, the inforinadon submitted is, to the best of my knowledge and belief, true, accurate, and complets. / am aware that there are significant ponaldes for submftdng false

informadon, including the possibirity of flne and impdsonment for knowing viol agons.

SIGNATURE: DATE:

NAME: e9\*1 ig; @11-41L

TITLE: Ilez"1131"Ir REGISTRATION

COMPANY: Dominion Terminal Associates NUMBER: 60997 References: Virginia Regulations, 9 VAC 5-80-IO.D.4. See reverse of this form for instructions. EL) @RE

COMMONWEALTH OF VIRGINIA DEP, IENT OF ENVIRONMENTAL QUALITY AIR PERMIT APPLICA TION GENER4L INFORMA TION

PERSON COMPLETING FORM DATE REGISTRATION NUMBER

Donna J. Toler, Air Quality Project Manager, P & A Engineers and 10-15-02 6099 7 Consuttants, Inc.

REASON(S) FOR SUBMISSION:

OPERATING PERMIT

RENEWAL OF OPERATING PEE04IT (CURRENT PEP24IT EXPIRATION DATE:

MDIFICATION THIS PERKIT IS APPLIED FOR PURSUANT TO THE FOLLOWING PROVISION(S) OF THE VIRGINIA REGULATIONS OR FEDERAL REGULATIONS (IF KNOWN): NEW SOURCE 9 VAC 5-80-10 (NEW AND MOD. SOURCES) 9 VAC 5 Chapter 80, Article 8 (PSD, MAJOR SOURCES) 9 VAC 5 Chapter 80, Article 9 (NON-ATTAINMENT MAJOR SOURCES) EXEMPTION 9 VAC 5 Chapter 80, Article 5 (STATE OPERATING PERMITS)

REGISTRATION UPDATE

OWNERSHIP OR NAME CHANGE - EFFECTIVE DATE: (COMPLETE PAGES 1 AND 2 ONLY)

OTHER (SPECIFY)

Would you be interested in a DEQ Pollution Prevention 11132) site visit to dis cuss the potential benefits of implerrienting P2 prac 6r facility? Please note that there is no charge for this service and that the site visit i s not limited to air pollution issues. Site visits can yield air/water PoDuti on or waste minimization recommendations that can benefit your facility. The pur pose of these visits is not to assess compliance with applicable regulatory requirements.

= Yes No

If yes, would you prefer the P2 site visit to occur:

Before permit issuance After permit issuance

COMPANY AND DIVISION NAME: Dominion Terminal Associates

MAILING ADDRESS: PO Box 967A, Newport News, VA 23607

TELEPHONE NUMBER: NUMBER OF EMPOLYEES AT SITE: PROPERTY AREA AT SITE: 757-245-2275

EXACT SOURCE LOCATION - INLCUDE NAME OF CITY (COUNTY) AND FULL STREET ADDRESS OR DIRECTIONS: Pier 1 1, Harbor Road, Newport News, VA 23607

PERSON TO CONTACT ON AIR POLLUTION MATTERS - NAME AND TITLE: PHONE NUMBER: 757-245-2275 ext. 307 DERRIS BFtADSHAW, PE FAX NUMBER: Plant Engineer 757-247-9729

FWP[ease check here if you obtained this form from the DEQ website.

FOR OFFICIAL USE ONLY COUNTY CODE: PLANT ID NUMBER: NUMBERS: COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AIR PERMIT APPLICA TION GENERAL INFORMA TION (contfnued)

COMPANY NAME DATE REGISTRATION NUMBER

Dominion Terminal Associates 10-15-02 60997

IS THE FACILITY TO BE PERMITTED AS A PORTABLE PLANT?YES -NOE

DESCRIBE THE PRODUCTS MANUFACTURED AND/OR SERVICES PERFORMED AT THIS FACILITY:

Coal and coke handling, storage, and barge loading facility modified to includ e a synfuel processing plant with storage and loadout of the alternative fuel source.

PRIMARY SIC SECONDARY SiCs

PLEASE LIST ALL THE FACILITIES IN VIRGINIA UNDER COMMON OWNERSHIP OR CONTROL B Y THE OWNER OF THIS FACILITY:

MILESTONES. This section is to be completed if the permit application include s a new emissions unit or modification to existing operations.

MILESTONES\* STARTING DATE ESTIMATED COMPLETION DATE

New equipment installation Upon Permit Approval Approx. 90 days thereafter

Modification of existing process or equipment

Start-up dates January 1, 2003

For new or modified installations to be constructed in phased schedule, give c onstruction/installation starting and completion date for each phase.

7@ Page Revised April 15, 2002 Page 2 Instructions FORM 7 Dominion Terminal Associates Avoids Demurrage, Reduces

Inventory Levels and Adheres to Government Regulations

Using MRO Software's Strategic Asset Management Solution

Storing and siI pp ng up to 'IO rr I ion tons 3f coal per year is no sma,l feat, especial y in light of stringent envIronmental 3nd safety re. u!ations and the need for . g efficient and precise managenient of many d fferent

types of coal. Dominion Terminal Associates (DTA) s a coal shipp:ng and ground storage facil ty located on the Umted States' eastern seaboard at Newport News, Virg nia. Stretch,ng over 100 acres, DTA recelves coal by rail, stores t and then sends it cut by ship or coastal

barge to ts appropriate 91-obal clest nation. Whoilv owned by coal-producing and sales compames, DTA Opefates 24-hoirs-per-day, 7-days-per-week.

On arv qi@.en day at DTA, CSX Transportat, on del vers trains from eastern coa@ mines, br nqing many types of Tc, meet these maintena nce, operationa) and safety demands, DTA requird a wor!,4-claSs

coal for storage and/or shipping. Once received at DTA, asset management solu tion. DTA found MRO Software's MA@<IMO(` to be the most -.osz-

Up to 1 7 nn:l@,on tcns of coal can be stored at a time, and effective, user-f riendly and compal e solut ori avai abi e to meet ts needs. DTA planned to

segregated In storage areas by coal type and sh pper. create an integrated sys tem that housed a I ma,nTenance, repa r and operat ons (MRO) infor-

DTA coml efficient, high-speed coal hard ing w,th mation in one place. In addition, DTA needed to mainta,n safety and pert .ormance, reduce

soph sticated sampi nq and blending systems. These inventory and labor costs a nd improve the overall eff;.-iencv of the terminal. DTA hos used

capab; litiel-, coupled with an irrpervious surface of MAXIMO since 1996 to add ress these needs.

stcrage areas, a system of runoff d tches, chemic31;y "DTA p aces maior emphas is on reliability, efficiency and safety," conimented Dan baianced hold.ng ponds and a romputer,zed water Waqoner, Maintenance Super nte ndent for DTA. "NIAXIMO plays a very s 9n,f cant spray dist suppression system in The storage area, make role in our achieving those objectivcs."

DTA an environmentally responsible, state-of-the-art

fac hty. Aft,-r DTA handles, segregates and stores the "MAXIMO helpsustrackand ma,ntain almost5,000pieces of equipment-allof,,Vh@charee.3sen-

cca , 3eaclo nci and -oasTal bar:ies and co I ers t,-31 to our daily operation s," said Zach Hcward, MAYIMO Administrator fcr DTA. "At our terrii-

it to ts Fina destinations. nal, @vhenevenonepieceofequiprnentgoesdcwn, itputs a burdenonourwholeoperat,on. The

MAXIMO preventive maintenance (PM) functional,ty has optimized our equipment p erformance Resultitig in The on-time del,very of quality, uncontam;- and helped streamlin e cperat,ons."

n-@l coa@ croducts, DTAs daily rcund-the-cicck effxt

necess tates -v-, rker eff c @ncy, hand rg prec, sion and

well-manacied, properly funct cn,ng equ pment A Goals: Results:

tandem rotary car duniper, three stacker/reclainiers, Reduce inventory levels -o- Equipment history in MAXIMO allowed DTA to

n neleen belt conveyors with over four miles of be;tina, predic-t needed parts and immediately reduce

inventory levels by approximately five percent meta detectors, mechan ca samp ers and rragnetic

S@carator@ are @-n;y @j fe,.v -jf zh@-. riiany p eces c-f equ,p- Meet governme nt DTA leverages M"MO and easily adheres to

rrerit that must be op@rat ng cpr,mally zo ensure that regulations the latest environmental regulations

DTA me@ts t3 :@oals In a,@dqion, LTA irList adliere rr,-@ Effectively allocate MAXIMO's visibility into DTA!s labor require-

a r and water regulauc, is n, FDse,: 1 ov t1he state and labor resources ments al lows them to accurately forecast

f-de,a j,-I-r : e,. labor, and ensure that resources are available

to complete mission critical jobs

Ore of DTAs primary goals in implementing MAXIMO was to opti- as the superviso r ciuickly identifies and orders the correct part w,thout

mize equipment performance through consistent monitcring and having to type in the information," commented Wagoner. "The equip-

maintenance. Inefficient rra ntenance of the equ pment that handles ment histor y in MAXIMO also allows us to predict how much Inventory

tHe coal can delay or stcp sh:pp,ng, resulting n cost y downtime. Lve are goin g to need, which saves us money as we were able to reduce

Using MAXIMO to generate PM reports at scheduied intervals, DTA our inventory levels by approximately five percent."

effect ve y mor tors the performance of its equipment and ensures MAXIMO also helps DTA's Controller monitor the Company's expenthat repairs are rnade n a strateg c manner. For example, DTA regu- d,tures. A t any given time, she can access a report that outlines the larly checks the components of all of its conveyor drives. if a drive material s issued in and out of inventory and the generai ledger (GL) fai s, then ocerations would essentially shut down while the reQairs a,-count code charged. These real t me numbers help management viere being made. The damage would result in significant downt me keep their f ingers on the pulse of the organization's spending patand hefty repair costs. DIA avoids emergency repairs by regularly terns, ensuring that the departments do not exceed the budget. conducting PM routines to check the drives. This ounce of preven-

tion ailows DTA to realize s gnificant savings as they reduce equip- MAXIMO's labor functionality helps DTA organi--e labor Into five areas

ment downtime and improve the overall operation of the terminal. of expertise, stream@ine thework assignment process and monitor the

effect, veness of how they allocate the abor resources. The MAXIMO Every month, DTA also runs a MAXIMO report that outlines the num- data enables DTA to identify trends based on an analysis of the type ber of er-nergency work orders for each piece of equipment. W th of work being done and hours spent dcing each activity. these reports DTA identifies and replace5 the equipment that is caus-

ng the rgreatest amoint of doNntime, resulting in Increased ptime. "This visib iiity into our labor requirements a@lows us to more accu-

rately forecast labor to rnake sure that people are available to com-"Downtime In oLir viorld also makes the [hreat of dFmurrage, a fe? D'ere Miss on critical jobs," added Wagoner. "Operating time is that we pay f we co not dump cars and load vesseis in a t,meiy rllanwhere we make our money, and MAXIMO helps us make sure that ner, a reality. Demurrage fees can quickly run into very h,gh costs, Vp have e nough people available to corrplete this job." explained Wagoner. "MAXIIVIC, heips us avoid unnecessary do@vn-

time anc! eliminate rJemurraqe fees." In 3dclition, MAXIMO enabled DTA to rernain in compliance with

the latest government-imposed environmental requirements. With DTA a:so ised MAXIMO to streamline @ts inventory track-mg system. so much coal being handled, DTA is responsible for rraking sure the Using MAXIMO, DTA mWirriZed labor time and costs associated env,rcnment is not subject to harmful contamination. MAXIMO genwith fincfing and order ng parts. For examp e, a materials control erates preventive maintenance work orders for regular water and air superviscDr can access MAXIMO's iriventory module to search for testing, and e nsures that the appropriate controls are properly and reorder spec,f,c p eces of equipment. MAXIMO chpcks the working. Work orde rs that require immediate attention due to availability of the needed rraterials from internal sources first, and safety concerns receive the highest pnority in the MAXIMO system. then if the part is not in stc)(--k the supervisor can automatically cre-

ate a purchase requisition without typing the part in the system. streamiined the operat,ons of DTA.'s entire terminal.

Because we run on a 24 x 7 scheduie, MAXIMO is crtical to ensur-"MAXIMO not only saves us money as it makes sure that we do not ing that all o f our parts, equipment ancf Jabor are working at the order a part tha-, @Ne a ready have n stock, but it also saves us labor time h ghest optinniZation," continued Wagoner. "With MAXINIC), we

now use cur tviRO nformation strategicaJly to improve business

efficienc es, save money and maintain the h ghest environmental

ancf safety standards."

CC) m ro

#### SOFTWARE

Corporate Headquarters Asia Australia and New Zealand Europe, Middle East, Africa Latin America

ID MRO Software, Inc. MRO Software Hong Kong Ltd. NIRO Soft%, vare Austral, a Pt y. (EMEA) MRO Software, Inc.

1(0 C,osby Dr@ve ph -852-2166-8760 Lirr,t@d MRO Software ph 305-267-8820

Bedford, MA 0 1 7 30 fax -852-2166-8555 ph 61-2-9463-7734 ph -44-1-483-727000 fax 305-264-8853 0 ph 800-'%1,1-3346 fa, -61 2-9957-2669 fax 44-1-483-727079

fa, 770-481-3071

www.mroxom ,Ft \_Yx\_)2 MRC roll-,. -3H! MR,:,

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: 2 REGISTRATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates DATE 10-15-0 \_F m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF. (PROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT -/HR\*\* /HR /DAY NEAR CR-1 Crusher 4 Fully-enclosed double-roll crusher 1000 700 16,800 6,132,000 CR-2 Crusher 4 Fully-enclosed double-roll crusher 1000 1 700 16,800 6,132,000 SS-1 Screen 4 Fully-enclosed double deck screen 700 700 16,800 6,132,000 SS-2 Screen 4 Fully-enclosed single deck screen 700 700 16,800 6,132,000 SS-3 Screen 4 Fully-enclosed double deck screen 700 700 16,800 6,132,000 SS-4 Screen 4 Fully-enclosed single deck screen 700 700 16,800 6,132,000

Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS- -FREGIST RATION NUMBER COMPANY NAME Dominion Terminal Associates DATE 10-15-02 60997 m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c AfAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND STOR40E Maximum REF@ (PROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY Thfuput NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT /HR\*\* /HR /DAY IYEAR OS-1 Open Stockpile #1 0 Material Storage 350,000 tons 24,000,000 OS-2 Open Stockpile #2 0 Material Storage 350,000 tons 24,000,000 OS-3 Open Stockpile #3 0 Material Storage 350,000 tons 24,000,000 OS-4 Open Stockpile #4 0 Material Storage 350,000 tons 24,000,000 OS-5 Open Stockpile #5 4 Material Storage 40,000 tons 12,264, 000 OS-6 Open Stockpile #5 4 Material Storage 50 tons 2,000 OS-7 Open Stockpile #7 4 Material Storage 20,000 tons 12,264,000 Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page. \*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

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PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: COMPANY NAME Dominion Terminal Associates DATE10-15-02 REGISTRATION NUMBER 609 97 m MAXIMUM EXPECTED FEED INPUT" Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF. IPROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT /HR\*\* IHR /DAY NEAR BC-1 Rotary Dump Discharge Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-2 Silo #1 Feed Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-3 Silo #1 Discharge Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-4 Stockpile Feed Belt 0 Belt conveyor(yard) 6800 1 1 2,740 65,753 24,000,000 BC-5 CC/Coke Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-6 CC/Coke Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 2,740 BC-7 Stockpile Feed Belt o Belt conveyor(yard) 6800 65,753 24,000,000 Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, ate., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: COMPANY NAME Dominion Terminal Associates DATE10-15-02 REGISTRATION NUMBER 609 97 m MAXIMUM EXPECTED FEED INPLIT\*\* 0 MAXIMUM EXPECTED FEED OLITPUT\*\* D c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF. IPROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT -/HR\*\* /HR /DAY IYEAR BC-8 CC/Coke Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24 ,000,000 BC-9 CC/Coke Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24 ,000,000 BC-10 Loadout Bolt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-1 1 Silo Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24, 000,000 BC-1 2 Silo Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24, 000,000 BC-1 3 Stockpile Reversing Belt 0 Belt conveyor(yard) 6800 2,740 65,753 24,000 ,00

Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF@ IPROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT -IHR\*\* /HR /DAY rYSAR BC-14 Clean Coal Stockpile Feed 4 Fully-enclosed belt conveyor 6800 -Belt 6800 33,600 12,264,000 BC-15 Crusher Feed Belt 4 Fully-enclosed belt conveyor 1500 1400 33,600 12,264,000 BC-16 Screen Oversize Belt 4 Fully-enclosed belt conveyor 100 0.23 5.48 2,000 BC-17 Plant Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-18 Pugmill Bin Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-19 Pugmill Mixer Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,8.00 6-,..132,000 BC-20 Pug Mixer Discharge Belt 4 Fully-enclosed belt conveyor 700 700-- 16,800 6,132,000 Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h For modification codes see next page. andled. Page Revised April 15, 2002 5 FORM 7

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: -TREGIST RATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates DATE 10-15-02 m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF. (PROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT /HR\*\* IHR /DAY NEAR BC-21 Spreader Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-22 Briquatter Discharge Belt 4 Fully-enclosed belt conveyor 233 233 5,600 2,044,000 BC-23 Briquetter Discharge Belt 4 Fully-enclosed belt conveyor 233 233 5,600 2,044,000 BC-24 Briquetter Discharge Belt 4 Fully-enclosed belt conveyor 233 233 5,600 2,044,000 BC-25 Screen SS-2 Food Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-26 Recirculating Belt 4 Fully-enclosed belt conveyor 100 0.23 5.48 2,000 BC-27 Screen SS-2 Discharge Belt 4 Fully-enclosed belt conveyor 700 700 ioo 6,132,000 Include flow diagram (process schernatic) relating process steps and a narrati ve description including feed materials, product materials, reaction intermedi ates and by-products; attach appropriata MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page. 1\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 -FREGISTRATION NUMBER 60997 m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF, (PROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN: CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT -/HR\*\* /HR /DAY NEAR BC-28 Synfuel Stacking Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-29 Screen SS-3 Oversize Belt 4 Fully-enclosed belt conveyor 100 .23 5.48 2,000 BC-30 Plant Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-31 Pugmill Bin Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,800. 6,132,000 BC-32 Pugmill Mixer Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-33 Pug Mixer Discharge Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-34 Spreader Belt 4 Fully-enclosed belt conveyor 700 16,800 6,132,000 Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page. 1\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: -FREGIST RATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates DATE 10-15-02 m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PROCESS OR OPERATION NAME\* 0 EQUIPMENT MANUFACTURER AND RATED REF. (PROVIDE MANUFACTURE OR D MODEL NUMBER, IF KNOWN; CAPACITY NO. CONSTRUCTION DATE) E OTHERWISE, TYPE OF EQUIPMENT -/HR\*\* /HR /DAY NEAR BC-35 Briquetter Discharge Belt 4 Fully-enclosed belt conveyor 233 233 5,600 2,044,000 BC-36 Briquetter Discharge Belt 4 Fully-enclosed belt conveyor 233 233 5,600 2,044,000 BC-37 Briquetter Discharge Belt 4 Fully-enclosed belt conveyor 233 233 5,600 2,044,000 BC-38 Screen SS-4 Feed Belt 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-39 Recirculating Belt 4 Fully-enclosed belt conveyor 100 I 1 0.23 5.48 2,000 1 BC-40 Screen SS-4 Discharge Beit 4 Fully-enclosed belt conveyor 700 700 16,800 6,132,000 BC-41 Synfuel Stacking Belt 4 Fully-enclosed belt conveyor 700 800 6,132,000 Include flow diagram (process schematic) relating process steps and a narrativ e description including feed materials, product materials, reaction intermedia tes and by-products; attach appropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page.

\*\* Specify units for each operation in Tons, Pounds, Gallons, etc., as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS: т COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 m MAXIMUM EXPECTED FEED INPUT\*\* Ω D MAXIMUM EXPECTED FEED OUTPUT" c MAXIMUM UNIT PFIOCESS OR OPERATION NAME& 0 ECIUIPMENT MANUFACTURER AND RATED REF. IPROVIDE MANUFACTURE OR 0 MODEL NUMBER, IF KNOWN; CAPACITY NO. J CONSTRUCTION DATEI E OTHERWISE, TYPE OF EQUIPMENT \_1HR0\* fHR /DAY [YEA R BC-42 Synfuel Product Transfer Belt 0 Fully-enclosed belt conveyor 1500 1,400 33,600 12,264,000 BC-43 CC/RC Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-44 CC/RC Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-45 CC/RC Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-46 CC/RC Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,000 BC-47 CC/RC Transfer Belt 0 Fully-enclosed belt conveyor 6800 BC-48 2,740 65,753 24,000,000 CC/RC Transfer Belt 0 Fully-enclosed belt conveyor 6800 2,740 65,753 24,000,00 0 lncludeflowdiagram(processsehematio)relatingprocessstepsandanarrativedeseripti onincludingfeedmaterials, productmaterials, reactionintermadiates and by-products; attachappropriate MSDS or CPDS for raw materials used or consumed and products manufactured or h andled. For modification codes see next page. \*\* Specify units for each operation in Tons, Pounds, Gallons, etc,, as applica ble. Maximum Expected Feed Input for state operating permits shall be based o n historical high or attach justification.

STACK PARAMETERS AND FUEL DATA: Not Applicable --TDATE 10-15-02 COMPANY NAME Dominion Terminal Associates I REGISTRATION NUMBER 60997

VENT/STACK OR EXHAUST DATA FUELIS) DATA

MAX. MAX. MAX. VENT/ EXIT RATED EXPECTED EXPECTED HIGHER STACK VENT EXIT EXIT GAS GAS EXIT BURNED/ BURNED/ BURNED/ HEATING UNIT VENTI CONFIG. STACK DIA. VELOCITY VOLUME GAS HOUR DAY YEAR VALUE MAX. MAX. . REF. STACK (USE HEIGHT TEMP. TYPE OF (SPECIFY ISPECIFY (SPECIFY (SPECIFY % % No. NO. I CODE K) lfeet) lfeet) (fpm) facfm) JIF) FUEL UNITS) UNITS) UNITS) UNITS) UNITS) UNITS) UNITS) SULFUR ASH

Code K - Vent/Stack Configuration

Unobstructed vertical discharge
Obstructed vertical discharge (e.g., raineap)
Horizontal or downward discharge (e.g., T-stack)
Other (specify)

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AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates I @DATE@ 10-15-02TREGISTRATION NUMBE R 60997 m AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE IUSE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. (See Instructions) AND MODEL NUMBER LI DESIGN ACTUAL OS-1 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 1 099 99 99 Existing PM10 M onitor OS-2 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 2 099 99 99 Existing PM10 M onitor OS-3 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 3 099 99 99 Existing PM 1 0 Monitor OS-4 0 Fugitive SW-Cs TSP/PM-110 Open Stockpile No. 4 099 99 99 Existing PM 10 Monitor OS-5 4 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 5 099 99 99 Existing PM10 M onitor OS-6 4 Fugitive SW-Cs TSP-PM-10 qp@n Swclkpile No. IS 099 99 - 99 Existing PMI O Monitor -\_0S-7 4 Fugitive SW-CS TSP/PM-10 Open tockpile No. 7 099 99- 99 Existing PM10 Monitor Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (bl cold side (b) spray tovver 4. Cyclone scrubber (c) high voltage (e) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (a) single stage (e) other (specify) 7. Venturi scrubber (t) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon(b) variable throat 1 0. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) (d) silica gel 1 1 . Catalytic Afterburner (a) other (specifyl 1 2. Direct Flame Afterburner 15. Condenser (specify) 99. Other Water sprays wlchomical solution, as needed Page Revised July 31, 2001 1 2 FORM 7

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: DATE 10-15-02T Fc oMPANY NAME Dominion Terminal Associates REGISTRATION NUMBER 60997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. (See instructional AND MODEL NUMBER Li DESIGN ACTUAL PMIO Monitor and acity Evaluation-CR-1 4 Source CS-FC TSP/PM-10 - OPACITY Double-Roll Crusher 099 99 99 Method 8 Existing PMIO Monitor and Visual 0 acity Evaluation-CR-2 4 Source CS-FC TSP/PM-10 - OPACITY Double Roll Crusher 099 99 99 Method 9 Existing PM IO Monitor and vi M:ual Ogacity Evaluation-SS-1 4 Source CS-FC TSPIPM-10 - OPACITY Double Deck Screen 099 99 thod Existing PM10 Monitor and Visual Opacity Evaluation-SS-2 4 Source CS-FC TSP/PM-10 - OPACITY Single Deck Screen 099 99 99 Method 9 PM10 Monitor and acity Evaluation-SS-3 4 --Source CS-FC TSP/PM-10 - OPACITY Double Deck Screen 099 99 99 Method B - --lExisting PM 1 0 Monitor and Visual Opacity Evaluation-SS-4 4 1 Source CS-FC @ TSP/PM-10 - OPACITY Single Deck Screen 099 99 99 Metho d 9 Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13. ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (W cold side (b) spray tower 4. Cyclone scrubber (e) high voltage (e) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (e) other (specify) 7. Venturi scrubber (f) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat 1 0. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) id) silica gal 1 1 . Catalytic Afterburner (e) other (specify) 1 2. Direct Flame Afterburner 15. Condenser (specify) 99. Other -Full Enclosure wlchomical solution, as neade, \*PartiaflV enc. discharge wlchomical solution, as neade

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates \_\_FDATE 10-15-02 REGISTRATION NUMBER 60997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С 0 TYPE UNIT D VENT/ DEVICE (USE SPECIFY TYPE, MEASURED REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE POLLUTANT, AND RECORDE R USED NO. NO. iSse instructions) AND MODEL NUMBER L) DESIGN ACTUAL =010 Monitor and BS\_ 1 0 Fugitive SW-FE TSP/PM-110 - OPACITY Storage Silo #1 99/1 Oa 100 100 Me thod S acity Evaluation-=010 Monitor and BS-2 0 Fugitive SW-FE TSP/PM-10 - OPACITY Storage Silo #2 99/1 Oa 100 100 Meth od S scity Evaluation-=010 Monitor and BS-3 0 Fugitive SW-FE TSP/PM-10 - OPACITY Storage Silo #3 99/10a 100 100 Metho d C acity Evaluation-Existing PM IO Monitor and Plant #1 Visual Opacity Evaluation-BS-4 4 Fugitive SW-FE TSP/PM-10 - OPACITY Feed Bin 99 99 99 Method 9 =0110 Monitor and Plant #1 acity Evaluation-BS-5 4 Fugitive SW-FE TSP/PM-10 - OPACITY Pugmill Feed Bin 99 100 100 Method S Existing PM10 Monitor and Plant #2 Visual 0 acity Evaluation-BS-6\_ 4 Fugitive SW-FE TSP/PM-10 - OPACITY Pugmill Bin 99 100 \_\_100 Method S Existing PM10 Monitor and Plant #2 Visual 0 acity Evaluation-BS-7 4 Fugitive SW-FE TSP/PM-10 - OPACITY Feed Bin 99 99 Method S PM10 Monitor and Plant #2 =t acity Evaluation-BS-8 4 Fugitive SW-FE TSP/PM1-10 - OPACITY PugTlll Feed Bin 99 100 100 Method Existing PM 1 0 Monitor and Plant #2 Visual Opacity Evaluation-ESS-9 4 11 Fugitive SW-FE TSP/PM-110 - OPACITY PugTW Bin 99 100 100 Method u 99. Other FuliV enclosed or in buflding with chemical soludons, as needed

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE JUSE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL Rotary Dump Discharge PM10 Monitor and =@ acity Evaluation-BC-1 0 TP-03 TC-FC TSP/PM-10 - OPACITY Belt 099 99 Method S PMIO Monitor and acity Evaluation-SC-2 0 TP-04 TC-BH TSPtPM-10 - OPACITY Silo #1 Feed Belt 099 99 99 Method S Existing PM 1 0 Monitor and TP-06 TC-FC TSP/PM-10 - OPACITY Silo #1 Discharge Belt 099 99 99 Visual 0 acit y Evaluation-BC-3 0 Method S Existin PM10 Monitor and Visual t acity Evaluation-BC-4 0 TP-07 LO-Fc TSP/PM- 1 0 - OPACITY Stockpile Feed Belt 099 99 99 Method Existing PM10 Monitor and Visual Opacity Evaluation-OC-5 TP-09 TC-FC TSP/PM-10 - OPACITY CC/Coke Transfer Belt 099 99 99 Method 9 Existing PM10 Monitor and L 0 TP-12 , TC-FC , TSP/PM-10 - OPACITY CC/Coke Transfer Belt 099 99 Visual Opacity Evaluation-\_Method 9 Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (c) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (e) other (specify) 7. Venturi scrubber (f) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat 10. Filter (b) molecular sieve B. Mist eliminator (a) baghouse (e) activated alumina (b) other (specify) (d) silica gel 1 1 . Catalytic Afterburner (e) other (specify) 1 2. Direct Flame Afterburner 15. Condenser (specify) 9 9. Other (Full enclosures wlchomical solution, as needs \*Partially@enc. discharge wlchomical solution, as neede.

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL I Existing PM 1 0 Monitor and Visual 0 scity Evaluation-SC-7 0 TP-13 LO-RC TSP/PM-10 - OPACITY Stockpile Feed Belt 099 98 98 Method 9 =0110 Monitor and BC-8 0 TP-80 TC-FC TSP/PM-10 - OPACITY CC/Coke Transfer Belt 099 99 99 Method 9 acity Evaluation-Existing PM 1 0 Monitor and Visual 0 acity Evaluation-BC-9 0 TP-81 TC-BH TSP/PM-10 - OPACITY CC/Coke Transfer Belt 099 99 99 Method Existing PM 1 0 Monitor and Visual 0 acity Evaluation-EC-10 0 TP-87 LO-CS TSPIPM-10 - OPACITY Loadout Belt 099 99 99 Method 9 PM10 Monitor and acity Evaluation-BC-1 1 0 TP-84 \_\_TC-BH TSP/PM-10 - OPACITY Silo Transfer Belt 099 99 99 Method S Existing PM 1 0 Monitor and BC-12 0 TP-86 @TC+C TSPIPM-10 - OPACITY Silo Transfer Belt 099 99 99 Visual OS acity Evaluation-Method Existing PM 1 0 Moni and Visual Opacity Evalu on-0 TP-78 TC FC TSP/PM-110 - OPACITY Stockpile Reversing Belt 099 99 99 Method u Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE I .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (e) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (e) other (specify) 7. Venturi scrubber (f) two stage (a) fixed throat (g) other (specify) 15. Condenser (specify) (b) variable throat 1 0. Filter 99, Other Full enclosures with chemkol soludon s, as 8. Mist eliminator (a) baghouse needed (b) other (specify) 'Pardally onc. discharge wlchomical soludon, as needed 1 1 . Cataiytic Afterburner 1 2. Direct Flame Afterburner

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: - MPANY NAME Dominion Terminal Associates DATE 10-15-02TREGISTRATION NUMBER 60 997 COIII M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION D % EFFICIENCY C O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE IUSE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL I Clean Coal Stockpile Food PM10 Monitor and =t acity Evaluation -BC-14 4 TP-16 TC-PC TSPIPM-10 - OPACITY Belt 099 99 99 Method 9 Exifting PM10 Monitor and Visual 0 scity Evaluation-BC-15 4 TP-18 TC-FC TSP/PM-10 - OPACITY Crusher Feed Belt 099 99 99 Method 8 Existing PM10 Monitor and Visual 0 acity Evaluation-BC-16 4 TP-21 TC-FC TSP/PM-10 - OPACITY Crusher Feed Belt 099 99 99 Method 9 PM10 Monitor and =t acity Evaluation-BC-17 4 TP-24 TC-PC TSP/PM-10 - OPACITY Screen SS-1 Oversize Belt 099 99 Me thod 9-Existin PM10 Monitor and Screen SS-1 Discharge Visual t acity Evaluation-BC-18 4 TP-27 TC-PC TSP/PM-10 - OPACITY Belt 099 99 99 Method I-xisting PM10 Monitor and Visual Osacity Evaluation-BC-19 4 TP-28 TC-FC TSP/PM-110 - OPACITY Pugmill Bin Feed Belt 099 99 99 Metho d PM I 6 M-onitor and I =t acity Evaluation-8 -20 1 4 TP-30 TC-FC TSP/PM-10 - OPACITY 1 Pugmill Mixer Feod Belt 099 1 99 9 9 Method Code L - AIR POLLUTION CONI MENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (e) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (e) other (specify) 7. Venturi scrubber (f) two stage 14.ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat 10. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina lb) other (specify) (d) silica gel 1 1. Catalytic Afterburner (e) other (specify) 1 2. Direct Flame Afterburner 1 5. Condenser (specify) 99. Other Full Enclosures wlchomical solution, as needed

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates FDATE 10-15-02TREGISTRATION NUMBER 60997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE IUSE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. I NO. I NO. (See lnistructional AND MODEL NUMBER L) DESIGN ACTUAL Pugmill Mixer Discharge PM10 Monitor and BC-21 4 TP-32 TC-FC TSP/PM-10 - OPACITY Belt 099 99 =@ acity Evaluation-99 Method C TP-33- Existing PMIO Monitor and BC-22 4 36-39 TC-FC TSP CITY Visual 0 acity Evaluation-/PM-10 - OPA Spreader Belt 099 99 99 Method 9 ExistinQ PM10 Monitor and BC-23 4 TP-35 TC-FC Visual 0 acity Evaluation-TSP/PM-10 - OPACITY Briguatter Discharge Belt 099 99 Method 9 PM10 Monitor and =t acity Evaluation-BC-24 4 TP-38 TC-FC TSIP/PM-110 - OPACITY Stiquatter Discharge Belt 099 99 99 Method 9 PM10 Monitor and BC =t acity Evaluation--25 4 TP-41 TC-FC TSIP/PM-110 - OPACITY Briquetter Discharge Belt 099 99 99 Me thod Existing PM10 Monitor and Visual Opacity Evaluation-BC-26 , 4 , TP-42. TC-FC , TSIP/IPM-110 - OPACITY Screen SS-2 Food Belt 099 99 99 Method 9 Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (c) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (a) other (specify) 7. Venturi scrubber (f) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat 1 0. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) (d) silica gel 1 1 . Catalytic Afterburner (a) other (specify) 1 2. Direct Flame Afterburner 1 5. Condenser (specify) 99, Other (specify) Full Enclosufes wlchomical solution, j needed 'Partially-enclosed discharge wlchomical solution, as needed Page Revised July 31, 2001 12 FORM 7

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates FDATE 10-15-02TREGISTRATION NUMBER 6 0997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. I NO. I NO. lSes Instructions) AND MODEL NUMBER L) DESIGN ACTUAL M10 Monitor and BC-27 4 TP-43 TC-FC TSP/PM-10 - OPACITY 99 99 =CcitV Evaluation-Recirculating Belt 099 Method 9 Screen SS-2 Discharge Existing PM IO Monitor and BC-28 4 TP-45 Visual Opacity Evaluation-TC-FC TSPIPM-10 - OPACITY Belt 099 99 99 Method 9 Existing PM10 Monitor and Visual Opacity Evaluation-BC-29 4 TP-46 TC-PC TSP/PM-10 - OPACITY Synfuel Stacking Belt 099 99 Method U Existing PM IO Monitor and BC-30 4 TP-49 TC-FC TSP/PM-10 - OPACITY Crusher Feed Belt 099 99 99 Visual 0 s city Evaluation-Method 9 Existing PM 1 0 Monitor and ec-31 4 T Visual Opacity Evaluation-P-52 TC-FC TSP/PM-10 - OPACITY Screen SS-3 Oversize Belt 099 99 99 Method 9 Existing PM IO Monitor and Visual 0 acity Evaluation-BC-32 4 TP-55 TC-FC TSP/PM-10 - OPACITY Plant Feed Belt 099 99 99 Method 9 PMIO Monitor and L BC-33\_ 4 TP-56 LjC-Fq\_j TSP/PM-10 - OPACITY Pugmill Bin Feed Belt 099 99 =@ acity Evaluation-Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 99 Method 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber to) high voltage (e) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (a) other (specify) 7. Venturi scrubber (f) two stage 14.ADSORBER (a) fixed throat (g) other tspecify) (a) activated carbon (b) variable throat 1 0. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) (d) silica gel 1 1. Catalytic Afterburner (e) other (specify) 1 2. Direct Flame Afterburner 15. Condenser (specify) 99. Other Full Enclosures wlchomical solution, as noodee Page Revised July 31, 2001 12 FORM 7

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: COMPANY NAME Dominion Terminal Associates IDATE 10-15-02TREGISTRATION NUMBER 6 0997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. I NO. ISse instructions) AND MODEL NUMBER L) DESIGN ACTUAL Existing PMIO Monitor and BC-34 4 TP-58 TC-FC TSP/PM-10 - OPACITY Pugmill Mixer Feed Belt 099 99 99 Visu al 0 acity Evaluation-Method 9 Pugmill Mixer Discharge Existin PM10 Monitor and Visual t acity Evaluation-BC-35 4 TP-60 TC-FC TSP/PM-10 - OPACITY Belt 099 99 99 Method 9 TP-61 - PM 1 0 Monitor and 64-67 TC-FC TSPIPM-10 - OPACITY Spreader Belt 099 99 =t scity Evaluation-BC-36 4 Method 8 PMIO Monitor and Briquetter Discharge Bolt 099 99 99 =@ acity Evaluation-BC-37 4 TP-63 TC-FC TSP/PM-10 - OPACITY Method C Existinfj PM10 Monitor and Visual 0 acity Evaluation-BC-38 4 TP-66 TC-FC TSP/PM-10 - OPACITY Briguetter DischaNe Belt 099 99 99 Met hod 8 Existing PM 1 0 Monitor and BC-39 4 TP-69 TC-FC TSP/PM-10 - OPACITY 099 99 99 Visual Opacity Evaluation-I 40"etter Discharge Belt Method 9 R POLLUTION CONTROL EQUIPMENT TYPE I .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (e) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (e) other (specify) 7. Venturi scrubber (f) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat IO. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) (d) silica gel 1 1 . Catalytic Afterburner (e) other (specify) 1 2. Direct Flame Afterburner 1 5. Condenser (specify) 99. Other (specify) Full Enclosures wlchemical solution, i needed I Partiafly-enclosed discharge wlchomical solution, as needed Page Revised July 31, 2001 12 FORM 7

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT: DATE 10-15-02 T [COMPANY NAME Dominion Terminal Associates REGISTRATION NUMBER 60997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED NO. NO. ISee instructions) AND MODEL NUMBER L) DESIGN ACTUAL I Existing PMIO Monitor and Visual 0 acity Evaluation-BC-40 4 TP-70 TC-FC TSP/PM-10 - OPACITY Screen SS-4 Feed Belt 099 99 99 Method 9 PMIO Monitor and acity Evaluation-BC-41 4 TP-71 LO-FC TSP/PM-10 - OPACITY Recirculating Belt 099 99 99 Method C Screen SS-4 Discharge Existing PM10 Monitor and Visual 0 acity Evaluation-BC-42 4 TP-73 TC-FC TSP/PM-10 - OPACITY Belt 099 99 99 Method Existing PM10 Monitor and Visual 0 acity Evaluation-BC-43 4 TP-74 TC-PC TSP/PM-10 - OPACITY Synfuel Stacking Belt 099 99 Method 9 Existing PM10 Monitor and Stockpile Loadout Transfer Visual Ogacity Evaluation-BC-44 4 TP76 TC-FC TSP/PM-10 - OPACITY Belt 099 99 Method Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (c) tray tower 5. Orifice scrubber (d) low voltage (d) venturi Mechanical scrubber (e) single stage (a) other (specify)
 Venturi scrubber (t) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat 1 0. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) (d) silica gel 1 1. Catalytic Afterburner (a) other (specify) 1 2. Direct Flame Afterburner 1 5. Condenser (specify) 99. OtherFul/ Enclosures wlchomical solution, as noodea I Partially-enclosed discharge wlchomical solution, as needed Page Revised July 31, 2001 12 FORM 7

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT-COMPANY NAME Dominion Terminal Associates FDATE 10-15-02TREGISTRATION NUMBER 6 0997 M AIR POLLUTION CONTROL EQUIPMENT MONITORING INSTRUMENTATION Ω D % EFFICIENCY С O TYPE SPECIFY TYPE, MEASURED UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER REF. E STACK REF. POLLUTANTIPARAMETER MANUFACTURER CODE USED NO. NO. ISae instructions) AND MODEL NUMBER L) DESIGN ACTUAL Existing PM IO Monitor and BC-45 4 TP-89 TC-FC TSP/PM-10 - OPACITY Coal Transfer Belt 099 99 99 Visual 0 acity Evaluation-Method 9 Mio Monitor and =tPacity Evaluation-BC-46 4 TP-91 TC-FC TSP/PM-10 - OPACITY Coal Transfer Belt 099 99 99 Method PM 10 Monitor and SC-47 4 TP-92 TC-FC TSP/PM-10 - OPACITY Coal Transfer Belt 099 99 99 acity Ev aluation-Method 9 =tPM10 Monitor and BC-48 4 TP-93 TC-FC TSP/PM-10 - OPACITY Coal Transfer Belt 099 99 99 Method a city Evaluation-Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE 1 .Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER 2. Cyclone (a) hot side (a) packed tower 3. Multicyclone (b) cold side (b) spray tower 4. Cyclone scrubber (c) high voltage (c) tray tower 5. Orifice scrubber (d) low voltage (d) venturi 6. Mechanical scrubber (e) single stage (a) other (specify) 7. Venturi scrubber (f) two stage 14. ADSORBER (a) fixed throat (g) other (specify) (a) activated carbon (b) variable throat 1 0. Filter (b) molecular sieve 8. Mist eliminator (a) baghouse (c) activated alumina (b) other (specify) (d) silica gal 1 1 . Catalytic Afterburner (e) other (specify) 1 2. Direct Flanie Afterburner 15. Condenser (specify) 99. Other (specify) Full Enclosures wlchomical solution, i needed I Partially-enclosed discharge wlchemical solution, as needed

AIR POLLUTION CONTROL EQUIPMENT - SUPPLEMENTAL INFORMATION: SEE ATTACHED

COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997

LIQUID LIQUID AIR- REGENERATION CHAMBER PRESSURE FLOW MEDIUM CLEANING TO- METHOD TEMP. RETENTION DROP TYPE RATEigpm) METHOD NUMBER NUMBER OF CLOTH FILTER & CYCLE (EF) TIME (mc) ( in. H20) DEVICE (Use (Codes OF FIELDS SECTIONS RATIO MATERIAL INLET TIME (mc) (if Code s REF. Code (Codes 4,5, 4,6,6.7, (Codes S. (Codes (tpm) TEMP (Codes (Codes 3,4, 5,6,7, 13,14) (Code 9) 9,10) (Cod@ 10) (Code 10) (EF) (Code 14) 11,12) 11,12) 10,13) SER@CAD hMalE XIFINFIREILOTION CONTROL DEVICE SHEETS

Code L - AIR POLLUTION CONTROL EQUIPMENT TYPE
1 . Settling Chamber 9. Electrostatic Precipitator 13.ABSORBER
2. Cyclone (a) hot side (a) packed tower
3. Multicyclone (b) cold side (b) spray tower
4. CYGIone scrubber (c) high voltage (e) tray tower
5. Orifice scrubber (d) low voltage (d) venturi
6. Mechanicai scrubber (e) single stage (e) other (specify)
7. Venturi scrubber (f) two stage 14. ADSORBER
(a) fixed throat (g) other (specify) (a) activated carbon
(b) variable throat 1 0. Filter (b) molecular sieve
8. Mist eliminator (a) baghouse (c) activated alumina
(b) other (specify) (d)silica gal
1 1. Catalytic Afterburner (a) other (specify)
9. Other (specify)

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BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET BAGHOUSE NO. 1 - SURGE SILO NO. I (ID BS-1) Complete a Baghouse Air Polluton Control Device Sheet for each baghouse contro l device. 1 . Baghouse Control Device Identficaton Number: FE-BH 2. Manufacturer'snameandmodelidenbficabon: JohnsonMarshSkvkleenPCSB10-10DustCo llector 3. Number of compartments in baghouse: 1 4. Number of compartments online dudng normal operation and conditons: 1 5. Gas flow rate into baghouse: 8,000 ACFM @ Ambient OFand 14.7 PSIA 6. Total cloth area: 2396 ft2 7. Operabng air to cloth rato: 7.5 : 1 fUmin 8. Filter media type: Polyester fabric 9. Stabilized stabc pressure drop across baghouse: 2 inches H20 10. Baghouse operabon is: 0 Confinuous 0 Automatc 0 intermittent 11. Method used to clean bags: 0 Shaker n Pulse jet 0 Reverse jet 12. Emission rate of parficulate mafter entedng and exibng baghouse at maximum design operafing conditons: Entering baghouse: lb/hr and 20 grains/ACF Exifing baghouse: lb/hr and .015 grains/ACF 13. Guaranteed minimum baghouse collecton efficiency: 99 % 14. Provide a wrftten descdpfion of the capture system (e.g. hooding and ductw ork arrangement), size of ductwork and hoods and air volume, capacity and operabng horsepower of fan: Ductwork +20" pipe - Fan 9200 SCFM (cb 10" WC & 70'. 15. Describe the method of disposal for the collected matedal: Baghouse is bin vent. Material is dropped directly from the bags back to the silo.

BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET BAGHOUSE NO. 2 - SURGE SILO NO. 2 & 3 (ID BS-2 and BS-3) Complete a Baghouse Air Polluton Control Device Sheet for each baghouse contro l device. 1 . Baghouse Control Device Idenbficabon Number: FE-BH 2. Manufacturer'snameandmodelidenbficabon: JohnsonMarshSkvkleenPCSB10-IODustCo llector 3. Number of compartments in baghouse: 1 4. Number of compartments online dudng normal operabon and conditons: 1 5. Gas flow rate into baghouse: 18,000 ACFM @ Ambient - OFand 14.7 PSIA 6. Total cloth area: -2396 ff 7. Operatng air to cloth rato: 7.5 : I ft/min 8. Filter media type: Polyester fabric 9. Stabilized stabc pressure drop across baghouse: 2 inches H20 10. Baghouse operabon is: 0 Confinuous n Automatc 0 intermittent 11. Method used to clean bags: 0 Shaker n Pulse jet 0 Reverse jet 12. Emission rate of particulate mafter entedng and exifing baghouse at maximu m design operabng conditons: Entedng baghouse: lb/hr and 20 grains/ACF Exibng baghouse: lb/hr and .015 grains/ACF 13. Guaranteed minimum baghouse collecton efficiency: 99 % 14. Provide a wrftten descdpbon of the capture system (e.g. hooding and ductwo rk arrangement), size of ductwork and hoods and air volume, capacity and operatng horsepower of fan: Ductwork +50'- single fan on discharge of 2 houses; piped in parallel - Fan 20 ,700 ACFM (d 1 0" WC 15. Describe the method of disposal for the collected material: Baghouse is a bin vent. Material is dropped directly from the bags back to the silo.

CRITERIA POLLUTANT EMISSIONS:

MPANY NAME Dominion Terminal Associates -FDATE 10-15-02] REGISTRATION NUMBER 6 0997 FCO

m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRIFERIA POLLUTANTS
0
D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE
SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD
c PARTICULATES PARTICULATES\* COMPOUNDS STATE
0 (TSP) (Pmlo) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING
UNIT D PERMIT BASIS OF
REF. E EMISSION ESTIMATE
CAP
NO. lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr I l
b/hr tons/yr lb/hr tons/yr I IY\*s/No) (USE CODE M)
CR-1 4 0.07 0.30 0.035 0.145 1 NO 2CR-2 4 0.07 0.30 0.035 0.145 1 1 NO 2
SS-1 4 0.35 1.53 0.17 0.72 NO 2
SS-2 4 0.35 1.53 0.17 0.72 1 NO 2

SS-3 4 0.35 1.53 0.17 0.72 -1 I NO 2

ss-4 4 0.35 1.53 0.17 0.72 1 1 1 NO 2

Code M - Emission Estimate Method lprovide detailed calculations including ass umed control efficiency of control equipment to support reported values.)

 Stack Test (include a copy of summary)
 Material Balance (include calculations)
 Emission Factor (identify source) and include calculations
 Other (describe)
 \* TSP, PMio, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS: --FDATE 10-1 5-02 TREGISTRATION NUMBER 60997 FCOMPANY NAME Dominion Terminal Associates m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS 0 D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES\* COMPOUNDS STATE 0 (TSP) (Pmlo) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING UNIT PERMIT BASIS OF D EMISSION REF. E CAP ESTIMATE NO. lb/hr tons/yr lb/hr tonslyr lb/hr tonslyr lb/hr tonslyr lb/hr tons/yr lb/ hr tons/yr lb/hr tons/yT 4Y\*s1No\$ (USE CODE Ml OS-1 01 0.02 0.09 0.01 1 0.04 1 NO 2 OS-2 01 0.02 0.08 0.01 0.04 NO 2 OS-3 01 0.02 0.08 0.01 0.04 NO 2 OS-4 01 0.02 0.10 0.01 I -0.06 NO 2 OS-5 41 0.01 0.04 0.00 0.02 No 2 OS-6 41 0.00 0.00 0.00 0.00 NO 2 OS-7 41 0.01 0.04 0.00 1 0.02 NO 2

Code M - Emission Estimate Method lprovide detailed calculations including ass umed control effidiency of control equiprrient to support reported values.)

 Stack Test (include a copy of summary)
 Material Balance (include calculations)
 Emission Factor (identify source) and include calculations
 Other (describe)
 \* TSP, PMio, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS: -T-DATE 10-15-02 -FREGISTRATION NUMBER 60997 Fc oMPANY NAME Dominion Terminal Associates m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS 0 D TOTAL 10 pm or sulfur nitrogen carbon volatile SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES' COMPOUNDS STATE 0 (TSP) (PM I o) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING PERMIT BASIS OF UNIT D EMISSION REF. E CAP ESTIMATE NO. lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/ hr tons/yr lb/hr tons/yr I (Yet/No) JUSE CODE M) BS-1 0 1 0.00 0.00 I 0.00 0.00 NO 99 BS-2 0 1 0.00 0.00 0.00 I 0.00 I NO 1 99 BS-3 0 0.00 0.00 0.00 0.00 NO 99 BS-4 4 0.00 0.00 0.00 0.00 NO 99 BS-5 4 0.00 0.00 0.00 0.00 NO 99 BS-6 4 0.00 0.00 0.00 0.00 NO 99 BS-7 4 0.00 0.00 0.00 0.00 NO 99 BS-8 4 0.00 0.00 0.00 0.00 NO 99 SS-9 4 0.00 0.00 0.00 0.00 NO 99 Code M - Emission Estimate Method (provide detailed calculations including ass umed control ofiiciency of control equipnient to support reported values.1 1. Stack Test (include a copy of summary) 2. Material Balance (include calculations) 3. Emission Factor (identify source) and include calculations 99. Other (describeYully-enclosed in building or fully-enclosed wlwatef and ch emical solution

\* TSP, PMlo, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS: -FREGISTRATION NUMBER 60997 [COMPANY NAME Dominion Terminal Associates DATE10-15-02 m MAXIAWN EMISSION RATES TO ATMOSPHERE OF CREETIA POLLUTANTS 0 D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES' COMPOUNDS STATE 0 (TSPI (Pmlol (SO2) (NOx) (CO) (VOCI (Pb) OPERATING UNIT D PERMIT BASIS OF REF. E EMISSION ESTIMATE CAP NO. I lb/hr tons/yr lb/hr tonslyr lb/hr tonstyr lb/hr tonslyr lb/hr tons/yr l b/hr tons/yr lb/hr tons/yr I (Yes/Nol (USE CODE Ml BC 1 0 0.04 0.16 0.02 0.08 1 NO 2 BC-2 0 0.04 0.16 0.02 0.08 I NO 2 BC-3 0 0.01 0.05 0.01 0.03 NO 2 BC-4 I 0 0.01 0.05 0.01 0.03 NO 2 BC-5 0 0.01 1 0.05 0.01 1 0.03 No 2 BC-6 0 0.01 0.05 0.01 0.03 NO 2 0.05 0.01 1 0.03 NO 2

Code M - Emission Estimate Method lprovide detailed calculations including ass unied oontrol efficiency of control equiprrient to supporl reported values.)

 Stack Test (include a copy of summary)
 Material Balance (include calculations)
 Emission Factor (identify source) and include calculations
 Other (describe)
 \* TSP, PMio, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS: -FREGISTRATION NUMBER 60997 Fc oMPANY NAME Dominion Terminal Associates DATE 10-15-02 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRFTERFA POLLUTANTS 0 D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES' COMPOUNDS STATE 0 (TSP) (Pmlo) (SO2) (NOx) (VOC) (Pb) OPERATING UNIT D PERMIT BASIS OF REF. E EMISSION CAP ESTIMATE NO. I I lb/hr tonstyr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/y r lb/hr tonslyr lb/hr tons/yr (Yen/No) (USE CODE M) sc-8 0 0.03 0.13 0.01 1 0.06 1 1 NO 2 BC-9 0 0.01 0.06 0.01 0.03 1 NO 2 EC-10 0 0.03 1 0.13 0.01 0.06 NO 2 BC-1 I 0 0.01 0.06 0.01 1 0.03 1 1 NO 2 BC-1 2 0 0.03 0.13 0.01 0.06 I NO 2 8 3 --- 0.13 0.01 0.06 1 1 1 1 NO 2 SC-14 4 0.02 0.08 0.01 1 0.04 NO 2

Code M - Emission EAtimate Method (provide detailed calculations including ass umed control efficiency of control equipment to support reported values.)

 Stack Test (imelude a copy ol sLwnmary)
 Material Balance (include calculations)
 Emission Factor (identify source) and include calculations
 Other (describel
 \* TSP, PMio, and VOCs should also be split up by component and raported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS:

Fc oMPANY NAME Dominion Terminal Associates -1 DATE 10-1 5-02TREGISTRATION NUM BER 60997

M MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS Ω D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES' COMPOUNDS STATE 0 (TSP) (Pmlo) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING UNIT D PERMIT BASIS OF REF. E EMISSION NO. I lb/hr CAP ESTIMATE tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tonslyr I lb/hr tons/ yr lb/hr tons/yr (Yes/Nol (USE CODE Ml BC-1 5 41 0.02 0.08 0.01 1 0.04 1 NO 2 BC-1 6 41 0.01 0.04 0.00 0.02 1 NO 2 BC-1 7 41 0.00 I 0.00 0.00 0.00 NO 2 BC-le 4 0.01 0.04 0.00 1 0.02 NO 2 SC-19 4 0.01 0.04 0.00 0.02 No 2 BC-20 1 41 0.01 0.04 0.00 1 0.02 NO 2 BC-21 41 0.01 0.03 0.00 0.01 I I No 2 8 -22 41 0.00 I 0.01 I 0.00 0.00 I I I I NO 2 Code M - Emission Estimate Method lprovide detailed calculations including ass umed control officioney of control equipment to support reported values.) 1. Stack Test (include a copy of summary@ 2. Material Balance (include calculations) 3. Emission Factor (identify source) and include calculations 99. Other (describe) \* TSP, PMio, and VOCs should also be sptit up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS: -FDATE 10-15-02 -FREGISTRATION NUMBER 60997 [COMPANY NAME Dominion Terminal Associates m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITER14 POLLUTANTS 0 D TOTAL 10 PM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES\* COMPOUNDS STATE 0 (TSP) (Pmlo) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING UNIT D PFRMIT BASIS OF REF. E EMISSION ESTIMATE CAP NO. lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tonslyr lb/hr tons/yr I lb/hr tonslyr lb/hr tons/yr (YeSINO) IUSE CODE M) SC-23 4 0.00 0.01 0.00 0.00 I NO\_ 2 BC-24 4 0.00 0.01 0.00 0.00 No 2 BC-25 4 0.00 0.01 0.00 I 0.00 NO 2 B -26 41 0.01 0.03 0.00 0.01 NO 2 BC-27 4 1 0.00 0.00 0.00 0.00 NO 2 SC-28 41 0.01 0.03 0.00 I 0.01 NO 2 BC-29 41 0.01 0.03 0.00 0.01 NO 2 BC-30 4@ 0.01 0.04 0.00 0.02 NO 2 Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equiprrient to support reported values.) 1. Stack Test (include a copy of summary) 2. Material Balance (include calculations) 3. Emission Factor (identify source) and include calculations 99. Other (describe) \* TSP, PMio, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

MPANY NAME Dominion Terminal Associates -T DATE 10-1 5-02 ] REGISTRATION NUMBE R 60997 [ CO ] m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS 0 D TOTAL 10 VM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PARTICULATES PARTICULATES\* COMPOUNDS STATE 0 (TSP) (Pmlo) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING UNIT D PERMIT BASIS OF REF. E EMISSION ESTIMATE CAP NO. lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb /hr tons/yr lb/hr tons/yr lyetimo) (USE CODE Ml BC-31 1 4 1 0.00 0.00 0.00 0.00 I NO 2 s -32 41 0.01 0.04 0.00 1 0.02 1 NO 2 SC-33 4 0.01 0.04 0.00 0.02 1 NO 2 BC-34 4 0.01 0.04 1 0.00 0.02 1 1 NO 2 BC-35 1 41 0.01 0.03 0.00 0.01 I NO 2 BC-36 41 0.00 0.01 0.00 0.00 I I I I NO 2

BC-37 41 0.00 I 0.01 0.00 0.00 No 2

CRITERIA POLLUTANT EMISSIONS:

Code M - Emission Estimate Method lprovide detailed calculations including ass umed controi efficiency of control equiprrwnt to support reported values.)

1. Stack Test (include a copy of Summary)

2. Material Balance (include calculations)

3. Emission Factor (identify source) and include calculations

99. Other (describe)

 $\ast$  TSP, PMio, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS:

COMPANY NAME Dominion Terminal Associates -FDATE 10-15-02] REGISTRATION NUMBER 60997

m MAXIMU\*f EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS Ω D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD C PAFITICULATES PARTICULATES' COMPOUNDS' STATE 0 (TSP) tpmlo) (S02) (NOX) (CO) (VOC) (Pb) OPERATING UNIT D PERMIT BASIS OF REF. EMISSION E CAP ESTIMATE NO. lb/hr tons/yr lb/hr tons/yr lb/hr tonslyr lb/hr tons/yr lb/hr tons/yr lb/ hr tons/yr lb/hr tonslyr I IY"/No) iUSE CODE M) BC-38 41 0.00 0.01 I 0.00 0.00 NO 2 BC-39 41 0.00 0.01 0.00 0.00 NO 2 BC-40 41 0.01 1 0.03 0.00 I 0.01 NO 2 BC-41 4 0.00 0.00 0.00 0.00 NO 2 BC-42 4 0.01 0.03 1 0.00 0.01 NO 2 BC-43 4 0.03 0.14 0 01 1 0.06 NO 2 BC-44 4 0.01 0.05 0.01 0.03 NO 2

Code M - Emission Estimate Method lprovide detailed calculations including ass umed control efficiency of control equipment to support reported values.)

 Stack Test (include a copy of summary)
 Material Balance (include calculations)
 Emission Factor (identify source) and include calculations
 Other (describe)
 \* TSP, PMlo, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

CRITERIA POLLUTANT EMISSIONS:

COMPANY NAME Dominion Terminal Associates DATE 10-15-02] REGISTRATION NUMBER 6 0997

m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS
0
D TOTAL 10 pM OR SULFUR NITROGEN CARBON VOLATILE
SUSPENDED SMALLER DIOXIDE OXIDES MONOXIDE ORGANIC LEAD
C PARTICULATES PARTICULATES' COMPOUNDS STATE
0 (TSP) (Pmio) (SO2) (NOx) (CO) (VOC) (Pb) OPERATING
UNIT D PERMIT BASIS OF
REF. E EMISSION ESTIMATE
CAP
NO. lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/hr tons/yr lb/h
hr tons/yr lb/hr tons/yr (Yes/Nol JUSE CODE M)
BC-45 4 0.04 0.16 0.02 0.08 NO 2
BC-47 4 0.04 1 0.16 0.02 0.08 NO 2
BC-48 4 0.04 0.16 0.02 0.08 I NO 2

Code M - Emisition Estimate Method (provide detailed calculations including as sumed control efficiency of control equiprrient to support reported values.)

 Stack Test (include a copy of summary)
 Material Balance (include calculations)
 Emission Factor (identify source) and include calculations
 Other (describe)
 \* TSP, PMio, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: DATE 1 0 --- RFEGISTRATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates -15- 2 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTA T (Specify pollutant)\* 0 D CONTROLLED UNCONTROLLED C 0 STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENT/ NAME EMISSION CAP NO. STACK NO CAS # lb/hr tons/yr lb/hr tons/yr IYES/NO) (USE CODE M) CR-1 4 Source TSP 0.07 0.30 7.0 30.66 PM10 0.035 0.145 3.29 14.41 No 2 4 Source TSP 0.07 0.30 7.0 30@66 PM10 0.035 0.145 3.29 14.41 No 2 4 Source TSP 0.35 1.5325 35.0 153.3 SS-1 PM10 0.165 0.72 16.45 72.05 No Source TSP 0.35 1.5325 35.0 153.3 SS-2 4 PM10 0.165 0.72 16.45 72.05 No 2 Source TSP 0.35 1.5325 35.0 153.3 SS-3 4 PMIO 0.165 0.72 16.45 72.05 No 2 TSP 0.35 1.5325 35.0 153.3 SS-4 4 Source I PM10 0.165 1 0.72 16.45 .6@5 No 2 -Co-de M - Emission Estimate Method (provide detailed calculations including a ssumed control efficiency of control equipment, if applicable) 1. Stack Test (include a copy) 2, Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) It you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the fTont of this appliCa tiDn. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because their toxic properties r because a TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components of TSP, PMio, orVOCson the previous page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: DATE 10-1 5- REGISTRATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates 2 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)\* 0 D CONTROLLED UNCONTROLLED C 0 STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENT/ NAME EMISSION CAP NO. I STACK NO CAS # lb/hr tons/yr lb/hr tonstyr (YES/NO) (USE CODE M) BS-4 4 Fugitive TSP 0.00 0.00 0.00 0.00 PM10 0.00 0@00 0.00 0.00 No 99 4 Fugitive TSP 0.00 0.00 0.00 0.00 PM10 0.00 0@00 0.00 0.00 No 99 4 Fugitive TSP 0.00 0.00 0.00 0.00 SS-6 PM10 0.00 0.00 0.00 0.00 No 99 BS-7 4 Fugitive TSP 0.00 0.00 0.00 0.00 PMIO 0.00 0.00 0.00 0.00 No 99 BS-8 4 Fugitive TSP 0.00 0.00 0.00 0.00 PM10 0.00 0.00 0.00 0.00 No 99 BS-9 4 Fugitive TSP 0.00 0.00 0.00 0.00 PM10 0.00 0.00 0.00 0.00 No 99 Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable) 1. Stack Test (include a copy) 2. Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) -FULL Y-ENCLOSED IN BUILDING OR FULL Y-ENCLOSED WIWA TER & CHEMICAL SOLUTION If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutantsbacauseth eirtoxicpropertiesor becausea TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components of TSP, Pmlo, or VOCs on the previous page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT lspecify pollutant)" 0 D CONTROLLED UNCONTROLLED 0 STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENT/ NAME EMISSION CAP NO. STACK NO CAS lb/hr tons/yr lb/hr tons/yr (YESINO) (USE-CODE Ml OS-5 4 Fugitive TSP 0.01 0.04 0.90 3.92 PM10 0.00 0.02 0.42 1.84 No 2 4 Fugitive TSP 0.00 0.00 0.00 0.02 OS-6 PM10 0.00 0.00 0.00 0.01 No 2 4 Fugitive TSP 0.01 0.04 0.90 3.92 OS-7 PMIO 0.00 0.02 0.42 1.84 No 2

Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable)

Stack Test (include a copy)
 Material Balance (include calculations)
 Emission Factor (identify)
 Other (describe)

If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because their toxic propertiesor because a TLV (tm) has been established. See the toxic pollutant listing in the front o f this application, Specify which pollutants are also reported as components o f TSP, PMio, orVOCsonthe previous page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)\* 0 D CONTROLLED UNCONTROLLED С O STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENT/ NAME EMISSION CAP NO. STACK NO CAS # lb/hr tons/yr lb/hr tons/yr IYES/NO) IUSE CODE M) FBC-14 4 TP-16 TSP 0.02 0.08 1.87 8.18 PM10 0.01 0.04 0.88 3.87 No 2 4 TP-18 TSP 0.02 0.08 1.87 8.18 1 BC-1 5 PM10 0.01 0.04 0.88 3.87 No 2 4 TP-21 TSP 0.01 0.04 0.93 4.09 SC-16 PM10 0.00 0.02 0.44 1.94 No 2 4 TP-24 TSP 0.00 0.00 0.00 0.00 BC-1 7 PMIO 0.00 0.00 0.00 0.00 No 2 4 TP-27 TSP 0.01 0.04 0.93 4.09 BC-18 PMIO 0.00 0.02 0.44 1.94 No 2 4 TP-28 TSP 0.01 0.04 0.93 4.09 EC\_19 I I PM10 0.00 1 0.02 0.44 1.94 No 2 Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable) 1. Stack Test (include a copy) 2. Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic poliutants because their toxic properties r because a TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components of TSP, PMio, orVOCsontheprevious page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTA T (Specify pollutant)\* Ω D CONTROLLED UNCONTROLLED С O STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENTI NAME EMISSION CAP NO. STACK NO CAS # lb/hr tonslyr lb/hr tons/yr (YESINO) IUSE CODE M) BC-20 4 TP-30 TSP 0.01 0.04 0.93 4.09 PM10 0.00 0.02 0.44 1.94 No 2 4 TP-32 TSP 0.01 0.03 0.62 2.73 BC-21 PMIO 0.00 0.01 0.30 1.29 No 2 4 TP-33-36-39 TSP 0.00 0.01 0.21 0.91 BC-22 PM10 0.00 0.00 0.10 0.43 No 2 4 TP-35 TSP 0.00 0.01 0.21 0.91 PM10 0.00 0@00 0.10 0.43 No -2 4 TP-38 TSP 0.00 0.01 0.21 0.91 Bq-24 -@ \_ I - PM10 0.00 0.00 0.10 1 0.43 No 2 Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable) 1. Stack Test (include a copy) 2. Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter andvolatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutantabecause t heirtoxicpropertiesor becausea TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components of TSP, PMlo, or VOCson thaprevious page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTA T (Specify pollutant)\* Ω D CONTROLLED UNCONTROLLED С 0 STATE OPERATIN BASIS OF UNIT D PERMITS ESTIMATES REF. E VENT/ NAME EMISSION CAP NO. STACK NO CAS lb/hr tons/yr lb/hr tons/yr (YES/NO) (USE CODE Ml BC-25 4 TP-41 TSP 0.00 0.01 0.21 0.91 PM10 0.00 0.00 0.10 0.43 No 2 4 TP-42 TSP 0.01 0.03 0.62 2.73 BC-26 PM10 0.00 0.01 0.30 1.29 No 2 4 TP-43 TSP 0.00 0.00 0.00 0.00 BC-27 PM10 0.00 0.00 0.00 0.00 No 2 4 TP-45 TSP 0.01 0.03 0.62 2.73 BC-28 PM10 0.00-0.01 0.30 1.29 No ----2 4 TP-46 TSP 0.01 0.03 0.62 2.73 BC-29 PM10 0.00 0.01 0.30 1.29 No 4 TP-49 TSP 0.01 0.04 0 93 4.09 L B-c --.3 0----L- PM10 0.00 0.02 --0'44 1.94 No 2 Code M - Emission Estimate Method (provide detailed calculations includina ass umed control efficiency of control equiprnent, if applicable) 1. Stack Test (include a copy) 2. Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because

theirtoxicpropertiesor becausea TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components ofTSP, PMio, orVOCson the previous page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY:

COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997

m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTA T (Specify pollutantl\*  $\mathbf{0}$ 

D CONTROLLED UNCONTROLLED

c
0 STATE OPERATING BASIS OF
UNIT D PERMITS ESTIMATES
REF. E VENT/ NAME EMISSION CAP
NO. STACK NO CAS # lb/hr tons/yr lb/hr tons/yr (YES/NO) (USE CODE M)

BC-31 4 TP-52 TSP 0.00 0.00 0.00 0.00 PM10 0.00 0.00 0.00 0.00 No 2

4 TP-55 TSP 0.01 0.04 0.93 4.09 BC-32 PMIO 0.00 0.02 0.44 1.94 No 2

4 TP-56 TSP 0.01 0.04 0.93 4.09 PM10 0.00 0.02 0.44 1.94 No 2

4 TP-58 TSP 0.01 0.04 0.93 4.09 1 SC-34 PM10 0.00 0.02 0.44 - 1-.94 No 2-----

4 TP-60 TSP 0.01 0.03 0.62 2.73

SC-35 PM10 0.00 0.01 0.30 \_\_\_\_J\_-1.29 No 2

Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable)

1. Stack Test (include a copy)

2. Material Balance (include calculations)

3. Emission Factor Jidentity)

99. Other (describe)

If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this app(ica tion. Particulate matter and volatile

organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because their toxic propertiesor because a

TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components of TSP, PMlo, or VOCS on the previous

page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: DATE 10-15-0--] REGISTRATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates 2 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTA T (Specify pollutant)\* 0 D CONTROLLED UNCONTROLLED C 0 STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENTT NAME EMISSION CAP NO. STACK NO CAS lb/hr tons/yr lb/hr tonstyr (YESINOI (USE CODE Ml SC-36 4 TP-61 TSP 0.00 0.01 0.21 0.91 PMIO 0.00 0.00 0.10 0.43 No 2 4 TP-63 TSP 0.00 0.01 0.21 0.91 PM10 0.00 0.00 0.10 0.43 No 2 4 TP-66 TSP 0.00 0.01 0.21 0.91 BC-38 PM10 0.00 0.00 0.10 0.43 No 2 4 TP-69 TSP 0.00 0.01 0.21 0.91 BC-39 PM10 0.00 0.00 0.10 0.43 No 4 TP-70 TSP 0.01 0.03 0.62 2.73 L 01-40 PM10 0.00 0.01 0.30 1.29 No 2 Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable) 1. Stack Test (include a copy) 2. Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter andvolatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because theirtoxic properties r because a TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components of TSP, PMio, or VOCs on the previous page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY:

COMPANY NAME Dominion Terminal Associates DATE 10-15-02 REGISTRATION NUMBER 60 997

m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)\*  $\mathbf{0}$ 

D CONTROLLED UNCONTROLLED

С

0 STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENTI NAME EMISSION CAP NO. I STACK NO CAS # lb/hr tons/yr lb/hr tons/yr (YES/NO) (USE CODE M) 4 TP-71 TSP 0.00 0.00 0.00 0.00

PM10 0.00 0.00 0.00 0.00 No 2

4 TP-73 TSP 0.01 0.03 0.62 2.73 BC-42 PM10 0.00 0.01 0.30 1.29 No 2

4 TP-74 TSP 0.01 0.03 0.62 2.73 BC-43 PM10 0.00 0.01 0.30 1.29 No 2

4 TP-76 TSP 0.01 0.05 1.25 5.47 BC-44 PM10 0.01 0.03 0.59 2.59 No 2

Code M Emission Estimate Method (provide detailed calculations including assum ed control efficiency of control equipment, if applicable)

Stack Test (include a copy)
 Material Balance (include calculations)
 Emission Factor (identify)
 Other (describe)

If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a poliutant on the designated list at the front of this applica tion. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because their toxicproperties or because a TLV (tm) has been established. See the toxic pollutant listing in ihe front o f this application. Specify which pollutants are also reported as components of TSP, PMIo, orVOCson thaprevious page.

TOXIC OR HAZARDOUS OR OTHER REGULATED POLLUTANT EMISSIONS FROM PROPOSED FACILI TY: DATE 10-15-0--] REGISTRATION NUMBER 60997 COMPANY NAME Dominion Terminal Associates 2 m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTA T (Specify pollutant1\* 0 D CONTROLLED UNCONTROLLED C 0 STATE OPERATING BASIS OF UNIT D PERMITS ESTIMATES REF. E VENT/ NAME EMISSION CAP NO. STACK NO CAS # lblhr tons/yr lb/hr tons/yr (YES/NO) (USE CODE M) BC45 4 TP-89 TSP 0.01 0.05 1.22 5.34 PM10 0.01 0.03 0.58 2.52 No 2 4 TP-91 TSP 0.01 0.05 1.22 5.34 BC-46 PM10 0.01 0.03 0.58 2.52 No 2 4 TP-92 TSP 0.01 0.05 1.22 5.34 BC-47 PM10 0.01 0.03 0.58 2.52 No 2 4 TP-93 TSP 0.01 0.05 1.22 5.34 BC-48 PM10 0.01 0.03 0.58 2.52 No 2 Code M - Emission Estimate Method (provide detailed calculations including ass umed control efficiency of control equipment, if applicable) 1. Stack Test (include a copy) 2. Material Balance (include calculations) 3. Emission Factor (identify) 99. Other (describe) If you have other regulated pollutants, list as the first CAS number. Toxic P ollutant means a pollutant on the designated list at the front of this applica tion. Particulate matter and volatile organic compounds are not toxic pollutants as generic classes of substances, b ut individual substances within these classes may be toxic pollutants because their toxic propertiesor because a TLV (tm) has been established. See the toxic pollutant listing in the front o f this application. Specify which pollutants are also reported as components

of TSP, Pmio, or VOCs on he previous page.

EPA ACCEPTED - CONTROL DEVICE LISTING Fugitive Dust Sources Control Device. Control Device Prefix Control Efficienc UNLOADING From Railcar or Truck Fufl Enclosure Vented to Baghouse UL-BH 99 From Railcar or Truck Full Enclosure UL-FE 70 From Railcar or Truck Wet Suppression with Chemical Solution UL-CS 80 From Railcar or Truck Water Spray UL-WS 50 Dump Bins FE and Water Sprays with Chemir-al Solution UD-FC 99 Dump Bins Full Enclosure with water sprays UD-FW 90 CRUSHING AND SCREENING Crushing or Scre Full Enc(osure Vented to Baghouse CS-BH 99 Crushing or Screening Wet Suppression with Chemicals CS-CS 90 Crushing or Scre Full Enclosure with Water Spray CS-FW 90 Crushing or Screening ull Enclosure/Wet Suppression/Chemicals CS-FC 99 Crushing or Screening Full enclosure CS-FE 80 TRANSFER AND CONVEYING Conveyor Transfer Point Full Enclosure Vented to Baghouse TC-BH 99 Conveyor Transfer Point Full Enclosure vAth Water Spray TC-FW 90 Conveyor Transfer Point FE and Water Spray with Chemical Solution TC-FC 99 Conveyor Transfer Point PE and Water Spray with Chemical Solution TC-PC 95 Conveyor Transfer Point Full enclosure TC-FE 80 Conveyor Transfer Point Water spray TC-WS 70 Conveyor Transfer Point Partial Enclosure TC-PE 50 CLEANING Wet Wash Operations Full Enclosure WW-FE 100 STORAGE Loading onto Piles Full Enclosure SL-FE 80 -Loading onto Piles Telescopic Chute SL-TC 75 Loading onto Piles Wet Suppression with Chemical Solution SL-CS 75 -Loading onto Piles Wind Guard SL-WG 50 Wind Erosion Full Enclosure SW-FE 100 Wind Erosion Wet Suppression with Chemical Solution SW-CS 99 Wind Erosion Water Spray SW-Ws 75 LOADING OUT -Frorn Stockpiles Wet Suppression with Chemical Solution LO-CS 95 From Stockpiles Under-pile Conveyor with Water Sprays LO-UC 85 From Stockpiles Bucket Wheel Reclaimer LO-RC 80 LOADING To Railcar, Barge or Truck Wet Suppression wfth Chemical Solution LR-CS 80 -To Railcar, Barge or Truck Telescopic Chute with Water Sprays LR-TW 90 HAULROADS Unpaved Water Truck with Chemical Solution HR-CS 85 -Unpaved Water Truck with Water Spray HR-WS 70
For purposes of a General Permit for coal handling and preparation facilities, the following emission calculation methods will provide an adequate estimate of facility emissions fr om point sources and fugitive emission sources. However, where source (facility) specific tests are availab le, such information is Other emission factors may be acceptable provided documentation a preferable. s to accuracy and appropriateness are provided by the applicant. Completely fill out the following fNPUTS pages with all requested facility spe cific information. INPUTS Page I Include all information for each emission source and Name of applicant: Domini on Terminal Associates transfer point as listed in the permd application. Name of plant: Pier 11 Faci lity Modification October, 2002 1. CRUSHING AND SCREENING (including all primary and secondary cmshers and scr eens) Number of Max. raw coal Max. raw coal Corytrol Control Crushers input per input per Device Efficiency and Screens hour(Tons) year(Tons) 10 Number % 2 700 6,132,000 CS-FC 99 Secondary CrushEing@j I Screening 700 5,132,000 CS-FC 2. TRANSFER POINTS (Including all conveyor transfer points, equipment transfer points etc.) PM PM-10 k article Size Muftiplier (dimensionless) 0.74 1 U= Mean Wind Speed (mph) 10 5 [obtained troM NWS Transfer Transfer Point Desciiption Mateflat Maximtjm control Contra[ Point Include ID Numbers of all conveyors, Moisture Transfer Rate Device Effic iency ID No. crushers, screens, stockpiles, etc. involved Content % \_T P-H I TPY 11 0 Numbe % TP-01 Railcar Dump #1 to Belt BC-01 6 1,370 12,000,000 UD-FC 99 TP-02 Railcar Dump #2 to Beft BC-01 6 1,370 12,000,000 UD-FC 99 TP-03 Beft BC-01 to Beft SC-02 6 2,740 24,000,000 TC-FC 99 TP-04 Batt BC-02 to Surge Silo #1 (BS-01) 6 2.740 24,000,000 TC-BH 99 TP-05 Silo #1 to Belt BC-03 6 2,740 24,000,000 LO-BH 99 TP-06 Belt BC-03 to Beft BC-04 6 913 8,000,DDO TC-FC 99 TP-07 Beft BC-04 to Stockpile 6 913 8,000,000 LO-RC 99 TP-08 Belt BC-03 to Belt BC-05 6 1,826 16,000,000 TC-FC 99 TP-09 Beft BC-05 to Beft BC-1 3 6 913 8,000,000 TC-FC 99 TP-10 Bett BC-1 3 to Stockpile 6 913 8,000,000 LO-RC 99 TP-1 I Belt BC-05 to Beft BC-06 6 913 8,000,000 TC-FC 99 TP-12 Beft BC-06 to Beft BC-07 6 913 8,000,000 TC-FC 99 TP-13 Belt BC-07 to Stockpile 6 913 8,000,000 LO-RC 99 TP-14 Stockpile to Belt BC-1 3 6 1,400 12,264,000 LO-RC 99 TP-15 Beft BC-1 3 to Beft BC-1 4 6 1,400 12,264,000 TC-FC 99 TP-16 Bett BC-14 to Synfuel Feed Stockpile 6 1,400 12,264,000 TC-PC 99 TP-17 StDckpile to Beft BC-1 5 6 1,400 12,264,000 TC-FC 99 TP-18 Bett BC-1 5 tD Crushers CR- 1 ICR-2 6 1,400 12,264,000 TC-FC 99 TP19 Stockpile to Bin #4 6 700 6,132,0010 LO-FC 99 TP20 Bin #4 to Bett BC- 1 6 6 700 6,132,000 LO-FC 99

TP21 Beft BC- 1 6 to Crusher 6 700 6,132,000 TC-FC 99 TP22 Crusher CR- I tD Screen SS- 1 6 700 6,132,000 CS-FC 99 TP23 Screen SS-1 to Oversize Bett BC-1 7 6 0.23 2,000 LO-FC 99 TP24 Belt BC-1 7 to Stockpile 6 0.23 21000 TC-PC 99 TP25 Oversize Stockpile to Feed Stockpile 6 0.23 2,000 LO-RC 99 TP26 Screen SS-1 to Beft BC- 1 8 6 700 6,132,000 LO-FC 99 TP27 Beft BC-1 8 to Belt BC-1 9 6 700 6,132,000 TC-FC 99 TP28 Belt BC-19 to Pugmill Feed Bin BS-5 6 700 6,132,000 TC-FC 99 TP29 Pug. Feed Bin to Bett BC-20 6 700 6,132,000 LO-FC 99 TP30 Beft BC-20 to Pugmill Mixer BS-6 6 700 6,132,000 TC-FC 99 TP32 Beft BC-21 tD Beft BC-21 8 700 6,132,000 LO-FC 99 TP33 Bett BC-21 tD Beft BC-22 8 700 6,132,000 TC-FC 99 TP34 Briquefter #1 to Belt BC-23 8 233 2,044,000 LO-Fc 99 TP35 Belt BC-23 to Belt BC-26 8 233 2,044,000 TC-FC 99 TP36 Beft BC-22 to Briguetter #2 8 233 2,044,000 TC-FC 99

TP37 Briquetter #2 to Beft BC-24 8 233 2,044,000 LO-FC 99 TP38 Beft BC-24 to Beft BC-26 8 233 2,044,000 TC-FC 99 TP39 Beit BC-22 to Briguetter #3 8 233 2,0",000 TC-FC 99 TP40 Briquetter #3 to Bett BC-25 8 233 2,044,000 LO-FC 99 TP41 Beft BC-25 to Beft BC-26 8 233 2,044,0D0 TC-FC 99 TP42 Beft BC-26 to Screen SS-2 8 700 6,132,000 TC-FC 99 TP43 Screen SS-2 to Recirculafing beft BC-27 8 0.23 21000 LO-FC 99 TP44 Screen SS-2 to Beft BC-28 8 700 6,132,000 LO-FC 99 TP45 Beft BC-28 to Belt BC-29 8 700 6,132,000 LO-FC 99 TP46 Belt BC-29 to Synfuel Stockpile OS-7 8 700 6,132,000 TC-FC 99 TP48 Bin #7 to Beft BC-30 6 700 6,132,000 LO-FC 99 TP49 Belt BC-30 to Crusher 6 700 6,132,000 TC-FC 99 TP51 Screen SS-3 to Oversize Belt BC-31 6 0.23 2,000 LO-FC 99 TP52 Belt BC-31 to OversizeStockpile 6 0.23 2,000 TC-PC 99

TP53 Oversize Stockpile to Feed Stockpile 6 0.23 2,000 LO-RC 99 TP54 Screen SS-3 to Bett BC-32 6 700 6,132,000 LO-FC 99 TP55 Beft BC-32 to Bett BC-33 6 700 6,132,000 TC-FC 99 TP56 Belt BC-33 to Pugmill Feed Bin BS-8 6 700 6,132,000 TC-FC 99 TP57 Pug. Feed Bin to Beft BC-34 6 700 6,132,000 LO-FC 99 TP58 Belt BC-34 to Pugmill Mixer BS-9 6 700 6,132,000 TC-FC 99 TP59 Pug. Mixer to Belt BC-35 8 700 6,132,000 LO-FC 99 TP60 Beft BC-35 to Beft BC-36 8 700 6,132,000 TC-FC 99 TP61 Bett BC-36 to Briguetter #4 8 233 2,044,000 TC-FC 99 TP62 Briquefter #4 to Beft BC-37 8 233 2,044,000 LO-Fc 99 TP63 Belt BC-37 to Beft BC-40 8 233 2,044,000 TC-FC 99 TP64 Beft BC-36 to Briguetter #5 8 233 2,044,000 TC-FC 99 TP65 Briqueder #5 to Bett BC-38 8 233 2,0444,000 LO-FC 99 TP66 Beft BC-38 tD Belt BC-40 8 233 2,044,000 TC-FC 99 TP67 Beft BC-36 to Briguetter \*6' 8 233 2,044,000 TC-FC 99 TP68 Briguetter #6 to Bett Br-39 8 233 2,044,000 LO-FC 99 TP69 Belt BC-39 to Beft BC-40 8 233 2,044,000 TC-FC 99 TP70 Beft BC-40 to Screen SS4 8 700 6,132,000 TC-FC 99 TP71 Screen SS4 to Recirculating beft BC41 8 0.23 2,000 LO-FC 99 TP72 -Screen SS-4 to Beft BC42 8 0.23 2,000 LO-FC 99 TP73 Beft BC-42 to Soft BC43 8 1 700 6,132,000 TC-FC 99 TP74 Belt BC-43 to Synfuel Stockpile OS-7 8 700 6,132,000 TC-PC 99 TP75 Synfuel Stockpile to Belt BC-44 8 700 6,132,000 LO-FC 99 TP76 Belt SC-44 to Belt BC-1 3 8 1,400 12,264,000 TC-FC 99 TP77 CoaUCoke Stockpile to Belt BC- 1 3 6 1.340 11,736,000 LO-RC 99 TP78 Belt BC-1 3 to Beft BC-06 7 2,740 24,000,000 TC-FC 99 TP79 Beft BC-06 to Bett BC-08 7 2,740 24,000,000 TC-FC 99 TP80 Bett SC-08 to Belt BC-09 7 2,740 24,000,000 TC-FC 99 TP81 Belt BC-09 to Surge Silo #2 BS-2 7 1,370 12,000,000 TC-BH 99 TP82 Silo BS-2 to Beft BC-1 2 7 1,370 12,000,000 LO-BH 99 TP83 13aft BC-09 to Belt BC-1 1 7 1,370 12,000,000 TC-FC 99 TP84 Belt BC-1 1 to Surge Silo #3 BS-3 7 1,370 12,000,000 TC-BH 99 TP85 lsiio BS-3 to Beft BC-1 2 7 1,370 12,000,000 LO-BH 99 @ @Ellt -12toBeltBC-10 - 7 2,740 J@4:@000,000 TC-FC 99 TP87 I Belt BC- IO to Barge 7 1 2,740 124,000,000 1 ET@FC9@9

TP88 Beft #3 to Bett #45 6 2,740 24,000,000 TC-FC 99 TP89 Beft #45 to Beft #1 3 6 2,740 24,000,000 TC-FC 99 TP90 Bett # 1 3 to Beft #46 6 2,740 24,000,000 TC-FC 99 TP91 Beft #46 to Beft #4 6 2,740 24,000,000 TC-FC 99 TP92 Beft #4 to Beft #47 6 2,740 24,000,000 TC-FC 99 TP93 Belt to Belt "8 6 2,740 24,000,000 TC-FC 99 3. WIND EROSION OF STOCKPILES (including all stockpiles of raw coal, clean coa l, coal refuse, etc.)

p = number of days per year with precipitation >0.01 inch 15 1
f = percentage of time that the unobstructed wind speed 201INWS Data
exceeds 12 mph at the mean pile heicht

Source Stockpile Silt Stockpile Control Control ID No Description Content of base area Device Efficiency Material % Max. sqft ID Number %

OS-1 CC/Coke or Synfuel 3.5 440,670 SW-Cs 99 OS-2 CC/Coke or Synfuel 3.5 388,125 SW-Cs 99 OS-3 CC/Coke or Synfuel 3.5 388,125 SW-Cs 99 OS4 CC/Coke or Synfuel 3.5 504.000 SW-Cs 99 OS-6 CC 3.5 200,000 SW-Cs 99 OS-6 CC 3.5 1,000 SW-Cs 99 OS-7 Synfuel 3.5 200,000 SW-Cs 99

## INPUTS

4. UNPAVED HAULROADS (Including all equipment traffic involved in process, hau l trucks. ondloaders, etc.) PM PM-10 k = partici size mugiplier I-S = silt content of road surface material 511 p = number of days per year wfth precipitation >0.01 inch

Number Mean Mean Miles Ma)dmum Maxmu: Control Control Item Description Of Vehicle Vehicle per Trips Per Trip. P Device Efficiency -Number I I wheels Weight(tons) Speed (mph) Tdp Hour Year ID Numbe %

1 NO CHANGE RECOMMENDED 2 3 4 5 6 81 91

## Page 3

trucksetc.) I= Industrial augmentation factor (dimension less) n = number of traffic lanes S = surface material silt content L = surface dust loading (lb/mile) Mean Miles Maximum Maximum Control Control lte Description Vehicle per Trips Per Trips Per Device Efficiency umm I Tdp Hour Year D Numbe -N ber Weight (tons 11 % I NO CHANGE RECOMMENDED 2 3 4 5 61 71 81

I DO NOT enter data on this Va @e@

EMISSIONS SUMMARY Name of applicant: Dominion Terminal Associates Name of plant: Pier I 1 Facility

Particulate Mafter or PM (for Major Source Determination)

F@ @Uncontrolled PM Controlled P\_M\_\_\_1 I lb/hr I TPY lb/hr TPY I

FUGITIVE EMISSIONS

-Stockpile Emissions 1 9.50 1 41.62 0.10 0.42 -Unpaved Haulroad Emissions 0.00 I 0.00 0.00 I 0.00 -Paved Haulroad Emissions 0.00 0.00 0.00 I 0.00

1 Fugitive emissions Total 9.60 41.62 0.10 I OA2

POINT SOURCE EMISSIONS

Equipment Emissions \_::@84.00 1 367-92 1 0.84 3.68 -Transfer Point Emissions 100.37 1 466.04 1.00 4.64

Point Source Emissions Totar 184.77 1 833.96 1.84 &32 I'Note: Point Source Total Controlled PM TPY emissions is used fbr Major Sourc e determination (see below)

Facility Emissions Total 193.87 875.58 1.93 8.74

Facility Potential to Emit (PTE) (Baseline Emissions) 8.32 \*(Based on Point Source Total controlled PM TPY emissions from above) CANNOT F XCEED 250 TPY

Particulate Mafter under 10 microns, or PM-10 (for Major Source Determination)

Uncorytrolled PM-10 Controlled EM-10 lb/hr TPY lb/hr TPY

FUGITIVE EMISSIONS

-Stockpile Emissions 1 4.47 1 19.56 0.04 0.20 -Unpaved Haulroad Emissions 0.00 0. 0.00 0.00 Paved Haufroad ErrWssions 0.00 0.00 0.00 0.00

Fugitive Emissions Total 4.47 19.56 0.04 0.20

POINT SOURCE EMISSIONS

Equipment Errgssions 39.48 1 @.92 0.39 1.73 -Transfer Point Emissions 47.29 219.56 0.47 2.20

Point Source Emissions Totar 1 86.77 392.49 0.87 3.92 I'Note Point Source Total Controlled PM-10 TPY emissions is used for Major Sou rce determination - Cannot exceed 100 TPY Controlled

sions Total 91.24 412.06 0.91 4.12

I DO NOT enter data on this page

1. Emissions From CRUSHING AND SCREENING
PM PM-10
Uncontrolled r- Controlled Uncontrolled Controlled
SOUR lb[hr I lb/hr
EMISSION CE I TPY I TPY lb/hr TPY lb/hr TPY
Primary Crushing 14.00 61.32 0.14 1 0.61 28.82 0.07 0.29
Secondary Crushing 0.00 0.00 I 0.00 I 0.00 1 0.00 I 0.00 I 0.00 L@0.00@@
Screening lu.uU iutj.rju I U. tu J.U1 it J:e.9U I 144.1IJ U.33 1.
TOTAL 11 84.00 1 367.92 1 0.gTT---TMJI 39.48 1 172.92 0.39 L 1.73

Source: Air Polludon Engineering Manual and References

## EMISSION FACTORS

Piimary Crushing lb/ton processed (maximum raw coal input) Secondary Crushin lb/ton processed (maximum raw coal input) Screening lb/ton processed (maximum raw coal input)

Assumption that PM-10 is 47% of PM (based on particle size multiplier)

2. Emissions From TRANSFER POINTS

Transfer PM PM-10 Point Uncontrolled F- Controlled uncontrollE@:@ Controlled IC) No lbihr TPY lb/hr TPY lb/hr TPY

TP-01 i.83 8.01 0.02 0.08 0.86 3.79 0.01 0.04 TP-02 1.83 8.01 0.02 0.08 0.86 3.79 0.01 0.04 TP-03 3.66 16.01 0.04 0A6 1.73 7.57 0.02 0.08 TP-04 3.66 16.01 0.04 0.16 1.73 7.57 0.02 0.08 TP-05 3.66 16.01 0.04 0.16 1.73 7.57 0.02 0.08 TP-06 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-07 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-08 2.44 10.68 0.02 0.11 1.15 5.05 0.01 0.05 TP-09 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-1 0 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-1 1 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-1 2 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-13 1.22 5.34 0.01 0.05 0.58 2.52 0.01 0.03 TP-1 4 1.87 8.18 0.02 0.08 0.88 3.87 0.01 0.04 TP-1 5 1.87 8.18 0.02 0.08 0.88 3.87 0.01 0.04 TP-16 1.87 8.18 0.02 0.08 0.88 3.87 0.01 0.04 TP-1 7 1.87 8.18 0.02 0.08 0.88 3.87 0.01 0.04 TP-18 1.87 8.18 0.02 0.08 0.88 3.87 0.01 0.04 TP19 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP20 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP21 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP22 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP26 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP27 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP28 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP29 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP30 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP31 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP32 0.62 2.73 b.ol 0.03 0.30 1.29 0.00 0.01 TP33 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 TP34 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP35 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP36 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.013 TP37 0.21 0.91 0.00 0.01 0.10. 0.43 0.00 0.00 TP38 0.21 0.91 0.00 0.01 0.10 0.43 0.(0 0.00 TP39 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP40 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP41 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP42 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP44 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP45 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP46 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP47 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP48 0.93 4.OT 0.01 0.04 0.44 1.94 0.00 0.02 TP49 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP50 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP54 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02 TP55 0.93 4. 0.01 0.04 0.44 1.94 0.00 0.02 TP56 0.93 4.09 0 01 0.04 0.44 1.94 0.00 0.02 TP57 0.93 4.09 0.01 0.04 0.44 1.94 0.00 0.02

TPSS0.934.090.010.040.441.940.000.02TP590.622.730.010.030.301.290.000.01TP600.622.73-0.010.030.301.290.00TP610.210.910.000.010.100.430.000.00

TP62 0.21 0.91 0.00 0.01 0.10 0.43 0.U0 0.00 TP63 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP64 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP65 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TPE56 0.21 0.91 0.00 0.01 0.10 0.43 0.00 6.00 TP67 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00, TP68 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP69 0.21 0.91 0.00 0.01 0.10 0.43 0.00 0.00 TP70 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP73 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP74 0.62 2.73 0.01 0.03, 0.30 1.29 0.00 0.01 TP75 0.62 2.73 0.01 0.03 0.30 1.29 0.00 0.01 TP-76 1.22 5.47 0.01 0.05 0.58 2.59 0.01 0.03 TPT7 1.22 7.83 0.01 0.08 0.58 3.70 0.01 0.04 TP78 1.22 12.90 0.01 0.13 0.58 6.10 0.01 0.06 TP79 1.22 12.90 0.01 0.13 0.58 6.10 0.01 0.06 TP80 1.22 12.90 0.01 0.13 0.58 6.10 0.01 0.06 TP81 1.22 6.45 0.01 0.06 0.58 3.05 0.01 0.03 TP82 1.47 6.45 0.01 0.06 0.70 3.05 0.01 0.03 TP83 1.47 6.45 0.01 0.06 0.70 3.05 0.01 0.03 TP84 1.47 6.45 0.01 0.06 0.70 3.05 0.01 0.03 TP85 1.47 6.45 0.01 0.06 0.70 3.05 0.01 0.03 TP86 2.95 12.90 0.03 0.13 1.39 6.10 0.01 0.06 TP87 2.95 12.90 0.03 0.13 1.39 6.10 0.01 0.06 TP89 3.66 16.01 0.04 0.16 1.73 7.57 0.02 0.08 TP90 3.66 16.01 0.04 0.16 1.73 7.57 0.02 0.08 TP91 3.66 16.01 0.04 0.16 1.73 7.57 0.02 0.08 TP92 3.66 16.01 0.04 , 0.16 1.73 7.57 0.02 0.08 TP93 3.66 16.01 0.04 0.16 1.73 7.57 0.02 0.(8  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$ 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$ 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$ 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$ 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 0.00 0. 0.00 0.00 0.00 0.00 0. 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$ TOTALS 100.37 466.04 1.00 4.64 47.29 219.56 0.47 2.20

```
2. Emissions From TRANSFER POINTS (Condnued)
Source:
AP-42 Fifth Edibon
13.2.4 Aggregate Handling and Storage Piles
Emissions From Batch Drop
E = k'(0.0032) * [(U/5)Al .3y[(W2)111.41 = pounds/ton
Wherei PM PM-10
Particle Size Multiplier (dimensionless) 1 0.74 J@M
Mpan VVinef Arm
Material Moisture Content
Assumptions:
k - Particle size multiplier
For PM (< or equal to 30 \text{ um}) k = 0.74
For PM-i 0 (< or equal to I Oum) k = 0.35
For PM E(M) = 0.0062125 * [I/((M/2)Al .4)] = pounds/ton
For PM-10 E(M) = 0.0029383 [11((M/2)AJ.4)] = poundsiton
For lb/hr [lb/tonj*[ton/hr] = [lb/hr]
For Tons/year [lb/lonj'(ton/yrj*[ton/2000lbj = [ton/yrl
```

I DO NOT enter data on this page 3. Emissions From MND EROSION OF STOCKPILES stockpile PM PM-10 ID No Uncontrolled oEn t@,o 1:1 Uncontrolled Controlled lb/hr TPY lb/hr TPY lb/hr TPY lb/hr TPY OS-1 1.97 8.64 0.02 0.09 0.93 4.06 0.01 0.04 OS-2 1.74 7.61 0.02 0.08 0.82 3.58 0.01 0.04 OS-3 1.74 7.61 0.02 0.08 0.82 3.58 0.01 0.04 OS-4 2.26 9.88 0.02 0.10 1.06 4.65 0.01 0.05 OS-5 0.90 3.92 0.01 0.04 0.42 1.84 0.00 0.02 OS-7 0.90 3.92 0.01 0.04 0.42 1.84 0.00 0.02  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$  $0 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$ .00 0.00 0.00 0.00 0.00 0.1D0 0.00 0.00 0 DI 0.00 0.00 0.00 0.00 0.00 I 0.00 I 0.00 0.00 .@@l 9.50 41.62 6.1UT-U-4211 4.47 1 19.56 1 Source: Air Po#udon Engineeting Manual Storage Pile Wind Erosion (Active Storage) E = 1.7 - [s/1.5j - [(365-p)1235j\*[fl1 51 = (lbidaylacre)]Where: S = silt content of material p = number of days with 70.01 inch of precipitation per year f percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height For PM E(s) = 1.3374,941 \* s = lb/day/acreFor PM-10 E(s) = 0.6286222 \* s = lb/day/acreFor lb[hr [lb/day/acrej'[day/24hrj'[base area of pile (acres)] lb/hr For Ton/yr (lb/day/acrel\*[365day/yrl'(Ton/20001b]\*[base area of pile (acres)] Tonlyr

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4. Emissions From UNPAVED HAULROADS
item PM PM-10
No. Uncontrolled Contro(led Uncontrolled Controlled
lb/hr TPY lb/hr TPY lb/hr TPY lb/hr TPY
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.00 0.00 0.00 22@j 0.00 0.
.00 0.00 0.00 0.00 11 0.00 I 0.00 I 0.00 I 0.
Source:
AP-42 Fifth Edffion
13.2.2 Unpaved Roads
Emission Estimate For Unpaved Haulroads
E = k'(5.9) - (s/1 2) - (S/30)'(W/3)110.7 - (w/4)A0.5*((365-p)/365) lb Vehicle Mile
Traveled (VMT)
Where:
k = particle size multiplier
S = silt content of road surface material (%)
S = Mean vehicle speed (mph)
W Mean vehicle weight (tons)
W mean number of wheels per vehicle
p number of days per year with precipitation >0.01 inch -----
Assumptions:
k - Particle size multiplier
For PM (< or equal to 30 \text{um}) k = 0.80
For PM-IO (< or equal to IOum) k = 0.36
For PM E(S,W,w)= 1.1207306*(S/30)'[(WI3)A0.71*[(w/4)A0.51=lb/VMT
For PM-10 E(S,W,w)= 0.5043288 '(S/30) * f(W/3)A0.7]'[(w/4)A0.5] = lb/VMT
For lb/hr [lb/VMT] * [VMT/trip] ' [Tdps/Hourl = lb/hr
For Tons/yr flhWT] * [VMTttdpi * (Trips/Year] * (Ton/20001b] = Tons/year
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DO NOT enter data on this page 5. Emissions From INDUSTRIAL PAVED HAULROADS Item PM PM-10 No Uncontrolled Ent@r. d @11@e LJncontrolled Controlfed lb/hr TPY lb/hr TPY lb/hr TPY lb/hr TPY  $2 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$  $4 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00 \ 0.00$  $0.00\ 0.00\ 0.00\ 0.00\ 0.00\ 0\ 00\ 0.00\ 0.00$ 0.00 0.00 0 ,Do 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 .@TAL@S 0.00 0.2E@@F---UZGT- 0.00 0.9q@M Source: AP-42 83'Edffion 11.2.6 INDUSTRIAL PAVED ROADS Emission Estimate For Paved Haulroads E = 0.077 \* I ' [4/nj \* [s/1 0] ' [Ul 0001 \* [W/31A 0.7 = lb / Vehicle Mile Tr aveled (VMT) Where: I Industrial augmentation factor (dimensionless) n number of traffic lanes S surface material silt content (%) L surface dust loading, (lb/mile) W average vehicle weight, (ton) For PM E(W) = 0.61446 [W/3]AO.7 = (IbNMT)For PM-10 E(W) = 0.2887962 [(W/3)110.7] = (lb/VMT)For lb/hr [lb/VM11 ' [VMT/trip] ' [Trips/Hour] = lb/hr For Tons/yr [lb/VMT] ' IVMT/trip] ' [Trips/Year] ' [Ton/20001b] Tons/year

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5. Emissions From INDUSTRIAL PAVED HAULROADS
ltern PM PM-10
No Uncontrolled I c @roll@ Uncontrolled I Controlled
@j lb/hr I TPY I lb/hr I TPY 11 lb/hr I TPY I lb/hr I TPY
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0.00 0.00 I 0.00 j 0.00 0.00 I 0.(O I 0.
Source:
AP-42 83'Edffion
11.2.6 INDUSTRIAL PAVED ROADS
Emission Estimate For Paved Haulroads
E = 0.077 * I ' [4/nj ' [s/101 * [U1000] * [W/3]Ao .7 = 1b Vehicle Mile Travel
ed (VMT)
Where:
I = Industrial augmentation factor (dimensionless)
n = number of traffic lanes
S = surface material silt content
L = surface dust loading, (lb/mile)
W = average vehicle weight, (ton)
For PM E(W) = 0,61446 (W/31-0.7 = (lb/VMT)
For PM-10 E(W) = 0.2887962 [(W/3)-0.71 = (IbNMT)]
For lb/hr [lb/VMT] ' [VMT/trip] * [Trips/Hour] = lb/hr
For Tons/yr [lb/VMTj ' [VMT/trip] * [Trips/Year] ' [Ton/20001b] = Tonslyear
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ZCO au@,ine=,a Cantef- Cr-,,Ie, SQ@U M\_@' (-,\_41 941-3076 FkX Technical Data Sheet Product: FTH-100 RCRA Metals Metals Result EPA MethoA Arsenic <1.0 208.2 Barium <1.0 200.7 Cadmium <0.05 200.7 chromium <1.0 200.7 Lead 0.22 239.2 Mercury <0.002 245.1 Selenium <0.5 270.2 Silver <2.0 200.7 An data reported in mg/i

Pq(1-4 Egg'd

Technical Data Sheet Product: FTH-100 Semi-Volatfic Organics by MetLwd 8270 CAS# CoMound Concentration (ugXg) 62-75-9 N.NitvscdjnwtbLyjxrmin 8,000 u 110-36-1 Pyxidinc 8,000 u 97-63-2 Ethyl wdd=YIztC 8,000 u 123-63-7 Paraldehydc 8,000 u 109-06-8 2-Picalinc 16,000 u 10595-95-6 N-itrosomethylehylurine 8,000 u 66-27-3 Mcthyl methancsulfbnat@ 8,000 u 108-95-12 Phcaol 8,000 u 55-18-5 N-N-itrosodiethylmninc 8,000 u 62-50-5 Ethyl metbanesulfb=re 8,000 u 62-53-3 Aniline 8,000 LT 76-4)1-7 Pcnfnrhlaroctiume 8,000 u 111-44-4 bis (2-C3ilomtbyl) erher 16,000 u 95-57-8 2-Chlorophenal 8,000 u 541-73-1 1,3-Dichloroben=c 8.000 u 100-44-7 Be=yl cbloride 8,000 u 106-46-7 1,4@Dichlorob=ene 8,000 u 100-51-6 Benzy] alcohol 8,000 Ii 9S-50-1 1,2-Dich1=bcz=e 8,000 u 95-48-7 2-Mathylphcnot 8,000 u 39638-3.2-9 bis (2-Chloroisopropyl) ed= 8,000 u 108-39-4 3-Methylphemi 8,000 Ti 106-44-5. 4-Methylpl=ol 8,000 u 930-55-2 N-NitrosaMolidinc 8,000 u 59-89-2 N-Nitrosomorpholine 8,000 u 98-86-2 Acetophcnone 8,000 u 621-64-7 N-Nitroso-Di-n-pMylarrdne 8,000 u 636-21-5 o-Toluidine hy\*ochloride 8,000 T-T 67-72-1 H=Whl=atb= 81000 u 98-95-3 Nitrob=cne 8,000 u

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Page 3 Product: FTH-1 00 Semi-Volatfle Organicsby Methad 8270 CAS4 Comygund Conceqtra@ @mu 634-66-2 I,2,3,4-Tatrachloroba== 8,000 li 88-74-4 2-Niuvauffim A,000 u 130-15-4 1,4-N;&p&hcquiv= 16,000 u IOG-25-4 1,4-Dinitmbw=e 16,000 u 131-11-3 JDimethyl te 8,000 iu 208-96-8 Ac=2phthylenE 8,000 u 99-09-2 3-Nitvaniline 16,000 u 83-3.2-9 Acen\*thene 8,000 u 51-29-5 2,4-Dinitmphenol 32,000 u 100-02-7 4-Ni=phenol 8,000 u 132-64-9 Dil=zofur= 8,000 u 121-14-2 2,4-Dinitzotolucta 8,000 u 608-93-5 pentwwazQba== 8,000 u 134-32-7 2-Naphthylmine 16,000 u 606-20-2 2,6-Diaitrotolucac 8,000 u 134-32-7 1 -NaphthyLumine 16,000 u 58-90-2 2,.3,4,5-Tctachlm-uph=l 16,000 u "6-2 Diethylphth2late 8,000 u 297-97.2 Zinaphos 8,000 u 7005-72-3 4-Chlorvpheqyl-ph=ylcthcr 8,000 Ti 86-73-7 Flucn= 8,000 Ti 100-01-6 4-Nitoanilinc 16,000 u 99-55-8 5-Nlft-o-@taluidine 16,000 u 534-52-1 4,6-Dinitro-2-methylphewl .24,000 u 36-30-6 N-ANitmaodiphmyLlmite (1) 8,000 u 122-39-4 Diph=yhmine 8,000 u 99-35.4 1,3,5-Trinitrobem7enc 16,000 u 122-66-7 1,2-Diphenylhydrmdne 8,000 u

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Technical Data Sheet Product: FTH-1 00 TCLP Metals Metals Rasult - UMft\$ EPA Method Arsenic 0.046 5.0 206.2 Barium -C0.50 100 208.1 Cadmium <0.005 1.0 213.2 Chrurnium <0.05 5.0 218.1 Lead <0.05 5.0 239.1 Memury <0.001 U 245.1 Selenium 0.01 1.0 270.2 Silver <0.005 5.0 272.1 All data reported in ppm

vgo-i BID/sca-4 zs[@-j gooz-9 Z-gily

Technical Data Sheet Product: FTH-100 Calorific Content by ASW D-240

:[eat Result Caloriffc Content 8,826 BTUAb Reported on an as is basis

0/3GO, dzga-i

Pace I of 6 ACCRETION TECHNOLOGIES MATERIALSAFM DATA SHEET Plroduct Name: FrH-100 Preparation date: Sll 6/00 SECTION I C14EMICAL PRODUCT AND COMPANY lt3ENTIFICATION PRODUCT NAME: FrH-1 00 MSDS REVISION 001 SYNONYMS: None DISTRIBUTF-0 BY. Accretion Technologies 300 Busbiess Center Drive, Suite 302 Ptnsburgh, PA 15205 PHONE NUMBER: (304) 552-2919 rION 2 - COMPOSITION GNFORMTION ON INGRMIF-NTS Compone % CAS No. Exposure Limits Organic resin.3 30-60 Propriet2ry Not wst2blizhad Sur-factant blend 1-io Propeietary Not established Guar gum 1-10 9000-30-0 Not established Fany alcohollfatty acid 1-10 Proprictziry Not established Water 30-60 77V-1 S-E Not eszabilahed -SECTION 3 - HAZARDS IDE "FICATION EMERGENCY OVERVIEW Product is a brown liquid wiih a sright, bland odor. The product rnay cause e ve irritation. Avoid contac-t with skin, eyes and clothing. Wear protective goj ggles and gloves when handling thLs product. Wash thoroughly after handling. POTENTIAL HEALTH EFFECTS EYES; Can cause irrita-tion. Section 3 cominued on next pago 730-1 310/alo-d

ACCRETION TECHNOLOGIES Paae 2 of 6 MATERIAL SAFETY DATA SHEET Product Name: FTH-100 Preoaration date: 811 6100 SECTION 3 - HAZARDS IDENTIFICATION (cominued) SKIN: Prolonged or repeated contact may slight irritation, Persons whh pre-existing skin condidons are particulariy susceptible. INGESTION (swallowing): May cause irritation of the mouth and throat. nausea, vomiting and diarrhea. INHALATION (breathing): Spray or mist may cause irritation to the nose, throat and fungs. Persons wit h pre-existing lung disorders are partleutariy susceptible. CHRONIC EFFECTSICARCINOGENICITY: This product (or component) Is not listed in [ARC Monographs, the NTP Seventh Armual Report of the ACGIH TLVs as a carcinogen or pgtentia( carcinogen. OSHA doer. not regulate it as a carcinogen. F@7 SECTION 4 -.FIRST AID MLASURES EYE CONTACT: Rush with large amounts of water for Q-t least 15 minutes, lifting upper and lower lids occasionally. Got rnedical attention. SKIN CONTACT: Wash exposed area with soap and wa-ter. Launder contamina-ted clathirig before rouse. INGES-1710N (swallowing): Immediately drink two large glasses of water. Call a physician. Do NOT induc е vomiting urdess' instructed to do so by physician. Never give anything by mouth to an unconscious person. INHAL-ATION (breathing): If affected, move to freeh air.

ACCRETION TECHNOLOGIES P2qL- 3 Of 6 MATERLAL SAFETY DATA SHEE7 Product Name: IFTH-100 Preparation date: 8/@6100 SECTION 5 - PRE FIG@MNG MEASURES E:@.@ -F-1-ASH POINT: -500- F (100- C) FLASH POINT METHOD: PMCC UPPER EXPLOSION LIMIT: Unavailabic LOWER EXPLOSION UMIT: Unavailable AUTOIGNITION TEMPERATURE: Unavailable SENSITIVITY/SPARI(5: Unknawn SEINSITiVITY/STATIC ELECTRICITY: Unknown EXTINGUISHING MEDIA: Dry chemlcal, water fog, and regular foam ;riRE AND EXPLOSION HAZARDS: None known. Product contains a large amount of Yvater, and would not norinally bum. FIRE-FIGHTING EQUIPMENT; Keep personno-I reMoved from and upwirid. Wear full protective clothing and self-contained breathing apparat-us with full face-piece-L SECTION 6 - ACCIDMTAL REI PA E MEASURES Flersons not wearing protective equipment shakild be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, tioor absorberrt or other 2bsorbant material and shovel irito contairiers. SECTION 7 - HANDUNG AND STORAGE HANOLING: Avcid contact with skin, eyes and clothing- Wash -thoroughly after handling. STORAGE: Keep In closed or cuvered containers vyhen nat in use. Store in cool dry plac with sdGquatp. ventilabon. 731-i CO/ZIO'd

Paga 4 of 6 ACCRETION TECHNOLOGIES MATERIAL SAFETY DATA SHEET Product Name: FrH-100 Preparation date: 8/1 6100 SECTION 8 - EXPOSURE CONTROLSMEFISONAL PROTECTION **RESPIRATORY PROTECTION:** Not required under norrnal conditions. SKIN PROTECTION: Wear protzotive gloves such as Neoprene or Buna-N. EYE PROTECTION: Chemical spla3h gaggles in compliance with OSHA regulailons are advised. OTHER PROTECTION: Normal work clothing covering arms and legs are recommended. ENCIINEERING CONTROLS: Provide, 5ufficient ventilation to mairrlzin exposure below level of overexposu re, SE"ON 9 @- PHYSICAL AND CHEMICAL PROPEFrrIES APPEARANCE: Brown liquid @ 58' F (20' C) COOFi: Slight bland SPECIFIC GRAVITY: >0.998 VAPOR PRESSURE (mm Hg): 17.5 @ 68'3 F (20" C) VAPOR DENSAY (Air = 1). Ughter than air iNITIAL 1301UNG POINT: 21 2" F (1 00" C) EVAPORATION RATE: <1 (Ethyl E-ther = 1)SOLUBIUTY in WATER: Dispersible VOLATILE Unavailable рН: - 5-7 pH METHOD: Unavailable

D/E Lo'd Zia-I uEWOL GOOZ-9Z-Jny

ACCRETION TECHNOLOGIES pane 5 of 6 MATEFIIAL SAFETY DATA SHEET Product Name; FTH-100 Preparation date: Bil 6/00 F\_ sr:CTION io - STABIUTY AND IREACTIVTTY STABILITY (conditions to avoid): Stable under normal conditions. INCOMPATIBILMES (materials to avoitl): Avoid contact with svong oxidizing agents and strong mineral acids. DECOMPOSITION. Not available. HAZARDOUS POLYMEFILZATION: Can not occur. SECTION 11 - TOXICOLOGICALINFORMATION No data available. SECTION 12 - ECOLOGICAL INFORMTION In an effort to demonstrate the safety of the product when used as a dust control agerit, 82 grams of product were mixed with 1,890 grams of aggregate, typical af dirt roads. The rnixture was allowed to dry, then mbced with water and allowed to stand. The water was then tested in aquatic toxicit V studies, and found to be non-toxic to Dapi7nia magna. SECNON 13 - DISPOSAL CONSIDERATIONS Incineration is -the recommended disposal method for all chemical wastes. Material caftected on absorb2nt materlal may be deposited In a landfill in accordance with all applicable local. state and federal regulatlans. This product, if disposed of, is not considered a hazardous waste under curren RCRA definidons. SECTION 14 - TRANSPORT INFORMATION yga-I COMO d 230-i gooz-gz-any

ACCRETION TECHNOLOGIES page 6 of 6 MATERIAL SAFETY DATA SHEET Product Name: FTH-100 Preparation date: 811t/00 Not regulated under current DOT, IMO, or ICAO regulations. SECTION 15 - RMULATORY INFORMATION TSCA INFORMATION; All componerrts in this product are in compliance with TSCA Inventory requirements. SARA 31 3 INFORMATION: SARA requires subrnission of annual reports of release of toxic chomir-als tha appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributad for this matarial. Cornponents present in thi3 product at a level that could requirEt reporting u rider the statute are: None SECTICN 16 - DTHF-R INFORMATION HAZARD RATING: HEALTH 1 0 - LEAST FiRE 1 1 - SUGHT REACTIVITY 0 2 - MODEFLATE OTHER - 3 - HIGH 4 – EXTREME HAZARD RATING METHOD: NFPA REASON FOR REVISION: Updated flash point information (Section 5). 7-me product infornu-don contained herein is beueved to 1,%-- accurate as of t he date of The Matariai Safety Data SheeL and Es pr9wided without wwmnty, expresGW or Implied. as w the resuf t af use af this Informagan or the ptoduct to which it relatac. Recliakh-n assumes all respons ibility for the u--\* of this itifomuMan and tho u= (alone or In camUnation with any other product), swrage or disposW of the product, inctuding any ru\*ultant Msijiml injury or property daniage. ""ENE) OF REP(RT\*"-&

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Technical Data Sheet Product: FTH- I 00 Volatfle Organics by Method 8240 gAs# Comppund Concentmticm (uzT%i) 74-87-3 chlcffumcthimc 23 1 74-83-9 26' u 75-01-4 Vinyl chlmide 53 u 75-00-3 53 'U 75-09-2 Mathylene chloride 1,700 BE 67-64-1 Acabone 2,800 BE 75-15-0 Carbun dbulfide 22 1 75-33-4 lj-Dichloroedw= 26 u 75-34-3 1,1-DicWorocdw= 26 Ti 540-59-0 1,2-Di anp (total) 26 u 67-66-3 C331mmfbrm 27 107-06-2 1,2-Dichla=thmc 26 u 7S-93-3 2-Butanone 830 13 71-55-6 I,1,1-TriChl0roCtb= 26 u 56-23-5 Cafbon retwhLodde 26 u 108-05-4 Vinyl acebite 53 u 75-27-4 Bromodichloramethane 26 u 78-87-5 1,2-Dichlmmpmpa= 26 u 10061-01-5 cis-1,3-Dichlaropropane 26 Ti 79-01-6 Tricblomc6anv 26 u 12448-1 Di-brorno efl=C 26 u 79-00-5 1, I, 2-Tficbloroe0mne 26 u 71-43-2 Benzme ISO 10061-02-6 Trans-1,3-Di 26 u 110-75-8 2-Chloroethylvinylether 53 u 75-25.2 l3r=,afbrm 53 u 108-10-1 4-Methyl-2-Pentanone zso 591-78-6 2-Hcxmone 79 u 1.27-18-4 Tetrachloructhace 26 u 79-34-5 1,12.2-Tetracblamethane 53 Ti

FIOMU'd ZSB-i - -=AA .

Page 2 Product: FIH-100 Volatile Organicsby mcthod 8240 CASA Compoind Concentration (Ug/K@j 10848-3 TOIUCac 1,300 E 109-90-7 7w-nc 26 u 100-41-4 BthyMcaz=C 360 100-42-5 Sryr=c 63 1330--20-7 Total xyl=cs 340 74-88-4 Iod=,dffi;me 53 u 107-02-8 AcroLein 640 u 107-13-1 Acrylouftrile 26 T.T 75-69-4 TricWomflumomedme 26 u 107-05-1 3-0doropropm 79 u 7&13-1 i,1,2--rrkhIom-1,2.2-trj 53 u 354-59-5 1, 1. I -Trichloro-2,2,7-Adf luommedia= 53 u 74-95-3 Mfomomedme 53 u 4170-30-3 Cxo=aIdehydc 530 u 106-93-4 1,2-Dft=acthane 26 u 630-20-6 1,1,1,2-Tch=hjorocthane 26 u 764-71-0 cis-1,4-@chloto-2-bu=e 79 u 96-18-4 1.2,3-Trichloropropane 79 u 764-71-0 tr=s-1.4-Dichloro-2-butme 79 u 9&18-4 EthylwofhaeTylate 53 u 96-12-8 1,2-Dtbromo-3-chlcroj=p:ane 53 u Ti- Indica= o=po=d wu auahr=d but not dctwtc& The zamplc qu=titldon 11=t Inust bC ew,Lcdcd for daution ad for; -r -, mow= j- Lidicam an csdmzted vah= This ft is uscd cithrr wb= CW=uttift IL COCC="tion fQr =wivcly Wadi6ed mWwsds whc= a 1: I impoe is amuned, or whcn the mass spectral dam incli-antad dw presc= of a tha mects the idendfitadoa r, i, r a but ffin rwult is less than the ample q=ndmfion linxit bux sr=tcr thm tao. B- This flag is uwd when dn =alyte Is found in die usochmed blank as well as i n the le. It indicatm pagsibldprobablc blmk cofiturkmdon and www the datm u= to ts6 aPpropr iALactim E- 7bis flag ideaffies compounds whwje con==2dous ==W the c.2Ebr,,di= range of tfie G4--MS IrLsuumcat for tbc spcdlr. aoalysis.

Technical Data Sheet Product: FTH-100 E-xtractable organic Kalldes in Soil by EPA 6M4-8"0S je;5t Detection Limft Rewft EOH in soil 70m@Vkg <70mgtkg Reported on dry weight basis

PSO-1 II(VOID'd Z30-1 Boaz-92-2nv

Sn,o Dzp jo as= mv!@ddw zrq Ca ;Mm lqcP 010 =Mm P= WTcM=CM= @ICMR VMRO'dPMM" SMEMPU! 11,21 alp uj VP \*mlq pcqvpom \*T V! PI'MJ 5! m4m alp W" STU -9 =Lp =4=fi Mq lpn goq . 4WWD 21d,= og mqj smi q lMr-u M ;nq 9MI I"P Plld" UO Wo"Lld VLP PaMT -onrL mqm j2tpm p=n sl Beg mi % x)j pua uol .Tnlt .p 3DJ pw== aq vw= lw QVU PO pu M pwArw a& poodm= Im"IM -ri q WFMP=b 2]da= 000,001> 000400T> n aualkd (p,@-E'Z'J) OU2p'aj ri 000,001> 000'001> ==CMU 0001001> ,=qTw-mnLj 000'DOT> o==npm (0) M=q-la DDOLDOI> 2=gf..UD n 000,00> C=Warjon:g (31) O=ff awg-md (ilqlg) cz=,a OWOOI> 0001001> (q) ==ari ODO"001> (e) ==la a ooo"ool> (T-) czaaa n 000,001> ===Uqmv fl 000,001> a=TAq;qdm=V fl 00orDolt.. mmqlqdm=V M51-703 pano=o:) pOtD2X Vga 4 SUOq=30IPXH042MOJV XWI:)"U'@JOCI 001-Hla 43UPO-la laa,qs 'Pr-(I I=raq:)ajL

Aus-ZS-2000 '"lam Froor T-05Z P-0191019 F-DEA