DOMINION TERMINAL ASSOCIATES

PIER 11 FACILITY

AIR QUALITY MODIFICATION APPLICATION
REGISTRATION NO. 60997
AIRS ID NO. 51-700-00074

DIVISION OF AIR QUALITY
TIDEWATER REGION

Submittal Date: 5/7/2004

Dominion Terminal Associates

P.O. Box 967 A
Newport News, VA 23607
(757) 245-2275

C. Log
60971-700-0004
Shelf - HSE-Mashaw
Dominion Terminal Assoc. Inc

DTA

May 3, 2004

Virginia Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462

Attention: Mr. David A. Mashaw

Dear Mr. Mashaw,

Dominion Terminal Associates (DTA) in collaboration with our consultant, Simpson Weather Associates (SWA), is providing for your review and approval a permit application for adding vessel unloading to our STATIONARY SOURCE PERMIT. Included are the DEQ application forms and supporting spreadsheet information. We have also included with the application three drawings showing the schematic arrangement of the equipment and material transfers. In this cover letter we briefly describe the approach taken and its rationale.

Need for a permit revision

Dominion Terminal Associates has determined that the market for coal has made it important to our continued success in the coal industry that we prepare to unload coal from vessels as well as from rail cars. To do so will require the installation of ship unloading equipment at the pier. The new equipment will include:

- Two grab unloaders using state of the art, environmentally friendly technology
- Two negative pressure hoppers (w/ baghouses) to receive the coal from the grabs
- Up to five additional conveyer belts to move coal from the ships to the storage area.

No request for additional annual throughput is being made. The coal brought in by rail plus that brought in by vessel will not exceed the current permitted limit of 24,000,000 tons. Using the same equipment, and still not exceeding the tonnage limits, we also propose handling limestone in similar sizing as the coal, up to 500,000 tons per year.

No request is being made for increasing the allowable annual average ground storage from the current limit of 975,000 tons. The rationale articulated in the 1989 permit application for expansion from 68 to 101 acres still applies:

- Better pile management through greater flexibility in locating shipments for transfer

- Lower height of piles through more acreage and better access
- Reduced bulldozer traffic through better access to piles by the stacker/reclaimers.

Permit modifications requested

In 2002, DTA was issued a modified permit to build a synfuel plant to process 12,264,000 tons per year. Reconsideration of the market for synfuel has led DTA to revise its needs downward to 5,000,000 tons per year. DTA wishes to use this permit application to have this limit lowered, in part, to offset the expected increase in allowable emissions from the coal import activities. In fact, the vessel unloading is computed (AP-42) to produce ~10tons PM/year while the reduced synfuel activity is computed to remove 13 tons PM/year. Additionally, as we have not yet begun construction of the Synfuel facility (contracts have yet to be finalized with Synfuel plant owners), we would request an extension on our allowed time frame to begin construction. It is our understanding that approval for extension of the time was granted in a letter from David Mashaw on April 12, 2004.

As mentioned above, this application for a permit modification is primarily driven by the need to have vessel unloading capabilities. Best available technology equipment is planned to minimize fugitive dust emissions within allowable limits. Panels lowered under the path of the grab-hopper route will eliminate any coal being dropped into the river.

We would also like to point out at this time that the schematics provided, and the equipment and transfers shown and listed are approximations based upon preliminary engineering activity. Some modifications may be made, but we anticipate that the information provided shows maximums.

Additionally, the Form 7 section on **FUEL-BURNING EQUIPMENT AND STATIONARY COMBUSTION ENGINES** is submitted only as a possibility. It is expected that the final design will incorporate two barge mounted cranes as indicated on the enclosed drawing number 2022-2030, but the exact specifications of the cranes have not been selected and the manner in which they will be provided has not been determined, i.e., contracted, leased or purchased. The form is submitted on one of the possible cranes that are being considered.

There are several substantive changes in this permit application compared to that prepared for the 2002 modification. Prior to the 2002 permit modification for synfuel operations, the PM limit was 60.8 tons/year. Given that the AP-42 computation of increased emissions from the synfuel activity was < 10 tons/year, the revised permit limit of 112.7 tons appeared to be higher than would have been estimated. A review of the supporting documentation that was provided along with the permit application indicated that a value of 90.27 tons/year was introduced as the estimated pile emissions based upon the K-factor program appended to the permit. However, that number comes from a spreadsheet program (different than the K-factor logic required by permit) developed by DEQ to estimate annual emissions from the facility. The value, 90.27, is an empirical calibration factor and is not to be used as "a maximum" value for controlled emissions. It is independent of facility size, annual storage or weather. That same end-of-year program also was designed and calibrated when the DTA facility was 68 acres large and

applied to all fugitive emissions, not just piles. Thus the use of the 90.27 value was doubly without merit. This current permit application reverts back to the computational approach used in the successful 1989 permit application for expansion where pile emissions were computed according to the approach outlined in AP-42.

A second substantial change in this permit modification application relates to the use of 99% control efficiency for all transfer points and processing activities in the 2002 permit application. In our current application we assign control efficiencies that are consistent with the published "EPA Accepted Control Device Efficiencies". While this increases the estimates of emissions at most of the points of coal handling, the net result is a lower annual limit for PM emissions from the terminal than is currently permitted since the 90.27 is not employed as the estimate of pile emissions only.

While DEQ Form 7 is used in this permit application, we have provided much of the required information in the form of a Microsoft Excel spreadsheet. A CD with the data is included to allow DEQ staff to manipulate the data as they see fit during their review of the application.

The net result of the recompilation of maximum controlled PM and PM10 emissions is a major reduction in the permit limits down from 112.7 tons/year to 65.7 tons/year. We would request that you advise us of the implications of this reduction below the 100Ton/year value that triggers PSD and Title V actions. This is especially true for the PM-10 amounts which are down from 21.9 to 11.83 tons/year. In fact these values include fugitive emissions which may or may not be used depending upon source classification.

End of year estimates of facility emissions

All past and current permits for DTA have not included a method for estimating total annual emissions (in tons). However, for the past 10 years or more, DTA has used a DEQ spreadsheet tool for estimating those emissions. SWA has expressed reservations about its use since the tool has some shortcomings:

- The tool was developed using a few (< 10) TSP monitor results during the late 80's. It was intended to estimate total emissions from the coal storage facility based upon empirically adjusted relationships between average tonnage on the ground in 45 one-acre piles, annual weather related "stress" as measured by the K-factor and the efficiency of the facility in adhering to the K-factor system's call for spray cycles.
- The tool was never re-calibrated for expansion in 1989 from 68 to 101 acres and thus would exaggerate the required height of the piles if more than 975,000 tons were to be stored (current permit allows 1,400,000 tons).
- The tool was also not recalibrated for synfuel operations. It would be very difficult to recalibrate, since you need uncontrolled emissions for an extended period as was the case during a portion of the 1980's study period due to inoperative equipment.
- The tool does not consider annual throughput (e.g. it estimates the same emissions for 1,000,000 tons/year as for 24,000,000 tons/year.)

During this permit modification process, we recommend retiring the DEQ spreadsheet for estimating annual emissions and replacing it with an estimator that is based directly upon the permit methodology of emission calculations. The proposed total annual emissions (TAE) estimator has three terms:

- *Term 1* scales to the annual throughput (TP in mega tons) and thus is related specifically to the emissions during unloading, processing, stackout, reclaiming and loading.
- *Term 2* scales to the annual average amount of coal being stored on the ground (GS in mega tons) and thus relates to pile size/height.
- *Term 3* expresses the degree to which the terminal has been faithful in adherence (Eff_r) to the K-factor requests for water spray cycles.

The suggested estimator for annual PM emissions (tons) is:

$$TAE\ (PM) = \{(TP/24)*56.5 + (GS/.975)*9.2\}* (Eff_r/Eff)$$

$$TAE\ (PM10) = .18 * TAE\ (PM)$$

The numerical values come from the AP-42 process summarized in the application material. The Eff values are obtained as follows:

- Eff_r is computed from 8 years of hourly weather data obtained from the DTA tower by simulating the K-factor system and the subsequent computation of control efficiency based upon DEQ logic used in the K-factor algorithm. Thus, we have derived an upper limit for computed efficiency should the terminal follow the K-factor demands faithfully. That value based upon data from 1996-2003 is 83.04%.
- Eff is computed daily by the K-factor software and is averaged for the year. Over the past few years that value has been around the mid to high 70's. The reason for being less than the 83% appears to be operational problems during extended freeze periods.

One aspect of this approach is less than rigorous in that the (Eff_r/Eff) term is applied to both the GS activities and the TP activities. In actuality, the cannons do not affect the dust control at the ship loader (for example). However, SWA suggests that the Eff term be used to indicate the level of attention and performance, in general, at the DTA facility. This assumption does act to increase the TAE over that which would result from applying the multiplier to just the GS terms, but we suggest a preference for the overstatement rather than a possible understatement.

For example, the TAE (PM) for 2003 would have been:

$$\{5.175/24*56.5 + .320/.975*9.2\} * 83.04/66.2 = 19.1 \text{ tons}$$

Summary

1. Current permit is for:
    a. 24,000,000 tons/year throughput
    b. 12,264,000 tons/year processing of raw coal into synfuel

c. 1,400,000 tons maximum ground storage on 101 acres.

2. DTA wishes to have an Air Permit to Operate with the following:
   a. 24,000,000 tons/year throughput of all coal products
   b. 5,000,000 tons/year processing of raw coal into synfuel
   c. 10,000,000 tons/year maximum unloading of raw coal from vessels (remainder would be from rail cars)
   d. 975,000 tons maximum average ground storage on the 101 acres.
3. DTA has computed the new controlled emissions limit for PM to be 65.7 tons/year and for PM-10, 11.8 tons/year.
4. DTA is recommending the retirement of the current DEQ end-of-year spreadsheet for estimating annual emissions. In its place, DTA offers an algorithm that is traceable to the methodology used during permitting to estimate total emissions.

If you have any questions, please feel free to call. Your favorable consideration of this application is much appreciated.

Best Regards,

D. R. Wagoner
Superintendent Engineering/Maintenance

cc:

G. D. Emmitt
Senior Scientist
Simpson Weather Associates, Inc.
Charlottesville, Va. 22902

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Department of Environmental Quality

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x __ PROCESS FLOW DIAGRAM/SCHEMATIC

x __ MSDS or CPDS SHEETS

x __ ESTIMATED EMISSIONS CALCULATIONS

__ STACK TESTS

__ AIR MODEL DATA

_____

_____

_____

_____

_____

_____

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.

I certify that I understand that the existence of a permit under [Article 6 of the Regulations] does not shield the source from potential enforcement of any regulation of the board governing the major NSR program and does not relieve the source of the responsibility to comply with any applicable provision of the major NSR regulations.

SIGNATURE: D R Wagoner DATE: 5/8/04

NAME: Daniel R. Wagoner

TITLE: Superintendent Engineering/Maint REGISTRATION

COMPANY: Dominion Terminal Associates NUMBER: 60997

References: Virginia Regulations for the Control and Abatement of Air Pollution (Regulations), 9 VAC 5-20-230B and 9 VAC 5-80-1140E. See reverse of this form for instructions.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

DOCUMENT CERTIFICATION FORM

INSTRUCTIONS FOR USE

Various provisions of the Regulations for the Control and Abatement of Air Pollution require that certain documents submitted to the Board or the Department be signed by a responsible official with certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. Documents covered by this requirement include, but are not limited to, permit applications, registrations, emission statements, emission testing and monitoring reports, or compliance certifications. The certification should include the full name, title, signature, date of signature, and telephone number of the responsible official. A responsible official is defined as follows (Regulations, 9 VAC 5-20-230A.):

a. For a business entity, such as a corporation, association or cooperative, a responsible official is either:

(1) The president, secretary, treasurer, or a vice-president of the business entity in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the business entity; or

(2) A duly authorized representative of such business entity if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or (ii) the authority to sign documents has been assigned or delegated to such representative in accordance with procedures of the business entity.

b. For a partnership or sole proprietorship, a responsible official is a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency, a responsible official is either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Certification is required with each application submittal, including amendments to an application (i.e. new pages, revisions to existing pages and other amendments to application information).

Reference: Regulations, 9 VAC 5-80-1140D. Letters, phone calls, etc. are considered additional supplementary information to the certified application submittal.

COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PERMIT APPLICATION GENERAL INFORMATION

PERSON COMPLETING FORM	DATE	REGISTRATION NUMBER
George D. Emmitt, Simpson Weather Associates, Inc.	5/8/04	60997

REASON(S) FOR SUBMISSION:

☐ STATE OPERATING PERMIT — THIS PERMIT IS APPLIED FOR PURSUANT TO PROVISIONS OF THE VIRGINIA ADMINISTRATIVE CODE, 9 VAC 5 Chapter 80, Article 5 (SOP)

☐ NEW (Greenfield) SOURCE

☒ MODIFICATION of a SOURCE

☐ RELOCATION of a SOURCE

THIS PERMIT IS APPLIED FOR PURSUANT TO THE FOLLOWING PROVISION(S) OF THE VIRGINIA ADMINISTRATIVE CODE:

- ☒ 9 VAC 5 Chapter 80, Art. 6 (MINOR SOURCES)
- ☐ 9 VAC 5 Chapter 80, Art. 8 (PSD MAJOR SOURCES)
- ☐ 9 VAC 5 Chapter 80, Art. 9 (NON-ATTAINMENT MAJOR SOURCES)

☐ Non-Binding Letter of EXEMPTION

☐ **AMENDMENT to a Permit dated:** _____ **Permit type:** ☐ **SOP** (Art.5) ☐ **NSR** (Art.6)

Amendment Type:

- ☐ **Administrative Amendment**
- ☐ **Minor Amendment**
- ☐ **Significant Amendment**

THIS AMENDMENT IS REQUESTED PURSUANT TO THE PROVISIONS OF:

☐ 9 VAC 5-80-970 (SOP Adm.)	☐ 9 VAC 5-80-1270 (NSR Adm.)
☐ 9 VAC 5-80-980 (SOP Minor)	☐ 9 VAC 5-80-1280 (NSR Minor)
☐ 9 VAC 5-80-990 (SOP Sig.)	☐ 9 VAC 5-80-1290 (NSR. Sig.)

Complete Pages 1, 2, and 3 and refer to the above checked provisions for additional information requirements. Form 7 pages may be used to satisfy those requirements.

☐ **REGISTRATION/REGISTRATION UPDATE**

☐ **NOTIFICATION OF OWNERSHIP OR NAME CHANGE – EFFECTIVE DATE:** _____
(Complete Pages 1, 2 and 3 ONLY)

☐ **OTHER (SPECIFY):** _____

COMPANY AND DIVISION NAME:
Dominion Terminal Associates

MAILING ADDRESS:
P.O. Box 967-A, Newport News, VA 23607

TELEPHONE NUMBER:	NUMBER OF EMPLOYEES AT SITE:	PROPERTY AREA AT SITE:
757-245-2275	59	

EXACT SOURCE LOCATION – INCLUDE NAME OF CITY (COUNTY) AND FULL STREET ADDRESS OR DIRECTIONS:
Pier 11, Harbor Road, Newport News, VA 23607

PERSON TO CONTACT ON AIR POLLUTION MATTERS – NAME AND TITLE:	PHONE NUMBER:
Dan Wagoner Superintendent Engineering/Maintenance	757-245-2275 ext. 305
	FAX NUMBER: 757-247-9729
	E-MAIL ADDRESS: dwagoner@dominionterminal.com

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

FOR OFFICIAL USE ONLY

COUNTY CODE:	PLANT ID NUMBER:	LAT/LONG:

GENERAL INFORMATION INSTRUCTIONS

REASON FOR SUBMISSION - check the appropriate box(es) and the applicable regulation(s).

1. "STATE OPERATING PERMIT" means that you are either an existing source applying for an operating permit, or are a NEW (Greenfield) SOURCE applying for a State Operating Permit concurrently with a permit to construct and operate the NEW (Greenfield) SOURCE. State Operating Permits are normally optional, and are requested for one of the reasons stated in 9 VAC 5-80-800 C.
2. "NEW (Greenfield) SOURCE" means that you are either constructing emission units at a new facility where no facility now exists, or you are constructing emission units at a facility that previously had no emission units at the facility. The NEW (Greenfield) SOURCE is (or may be) subject to permit review requirements.
3. "MODIFICATION of a SOURCE" means that (1) you already have emission units at your facility, (2) you are making physical or operational changes to the facility, (3) those proposed changes could result in a net emission increase of a regulated pollutant (or the emission of a regulated pollutant not presently being emitted), and (4) that physical or operational change is (or may be) subject to permit review requirements.
4. "RELOCATION of a SOURCE" means that you are relocating emission units from a facility in one location to a new or existing facility in another location, and that relocation is (or may be) subject to permit review.
5. "Non-Binding Letter of EXEMPTION" means that you are applying for written confirmation that a particular change is not subject to permit review under 9 VAC 5, Chapter 80, Articles 6, 8, or 9.
6. "PERMIT AMENDMENT" means that you have an effective air permit for your source, and you need changes made to that permit that do not qualify as a "MODIFICATION of a SOURCE".
7. "REGISTRATION/REGISTRATION UPDATE" means that you are applying to register a source that is not otherwise subject to permit review under 9 VAC 5, Chapter 80, Articles 6, 8 or 9, or you are applying to update a previous registration. See 9 VAC 5-20-160 of the regulations.
8. "NOTIFICATION of OWNERSHIP OR NAME CHANGE" means that you simply notifying DEQ of the changes as required by regulation. Requests to update a permit for the change shall be made as a "PERMIT AMENDMENT" request instead of a NOTIFICATION. Include the effective date of the change in your request.
9. "OTHER (SPECIFY)" means you intend to make a change to your facility, you do not know what air permitting requirements apply, and you wish for DEQ to evaluate the change for you and determine which requirements apply. Fill out the Form 7 as completely as possible and describe in a letter what you wish to do.

The listed regulations detail the various types of air pollution permits. Please indicate which of these you believe are applicable to this application. (More than one may apply). Sections of the regulations may be downloaded from the DEQ web site at http://www.deq.state.va.us/. Copies of the regulations are available for purchase from the WestGroup by calling 1-800-328-4880 (Air regulations are contained in Volume 6, Title 9 of the Virginia Administrative Code).

COMPANY AND DIVISION NAME - list the official company name and the division if applicable.

MAILING ADDRESS - list the mailing address that corresponds to the facility on this application.

TELEPHONE NUMBER - list the phone number at the facility.

NUMBER OF EMPLOYEES AT SITE - list the number of employees at the facility.

PROPERTY AREA AT SITE - list the area in acres.

EXACT SOURCE LOCATION - provide a description of the facility location indicating street address or directions to facility; provide a map pinpointing the exact source location and specify where the plant property boundaries are, if requested by the regional office; provide a plant layout with dimensions of all buildings (height, length, width) at the facility indicating all stack and emission point locations by stack or reference number, if requested.

PERSON TO CONTACT ON AIR POLLUTION MATTERS - provide the name/title of a contact person for air pollution matters.

PHONE NUMBER - provide a phone number at which DEQ staff can reach the contact person.

FAX PHONE NUMBER - provide the fax number of the contact person, if there is one.

-MAIL ADDRESS - provide an E-mail address of the contact person, if you wish to communicate with DEQ by e-mail.

FOR OFFICIAL USE ONLY - provided for use by the DEQ regional office.

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

COMPANY NAME	DATE	REGISTRATION NUMBER
Dominion Terminal Associates	5/8/04 1Dkt	**60997**

FOR PORTABLE PLANTS:

IS THIS FACILITY DESIGNED TO BE PORTABLE? [ ] YES [X] NO

- IF YES, IS THIS FACILITY ALREADY PERMITTED AS A PORTABLE PLANT? [ ] YES [ ] NO PERMIT DATE: _____

IF NOT PERMITTED, IS THIS AN APPLICATION TO BE PERMITTED AS A PORTABLE PLANT? [ ] YES [ ] NO

IF PERMITTED AS A PORTABLE FACILITY, IS THIS A NOTIFICATION OF RELOCATION? [ ] YES [ ] NO

- DESCRIBE THE NEW LOCATION OR ADDRESS (INCLUDE A SITE MAP): _____

- WILL THE PORTABLE FACILITY BE CO-LOCATED WITH ANOTHER SOURCE? [ ] YES [ ] NO REG. NO.: _____
- WILL THE PORTABLE FACILITY BE MODIFIED OR RECONSTRUCTED AS A RESULT OF THE RELOCATION? [ ] YES [ ] NO
- WILL THERE BE ANY NEW EMISSIONS OTHER THAN THOSE ASSOCIATED WITH THE RELOCATION? [ ] YES [ ] NO
- IS THE FACILITY SUITABLE FOR THE AREA TO WHICH IT WILL BE LOCATED? (ATTACH DOCUMENTATION.) [ ] YES [ ] NO

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

Coal, coke, synfuel and significant handling, storage and vessel loading facility modified to include vessel unloading equipment, and the handling of limestone.

LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE(S) FOR THE FACILITY:

4 4 9 1				
PRIMARY SIC	SECONDARY SICs			

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

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	90 – 120 days post-Approval	Approx. 9 – 12 months thereafter
Modification of existing process or equipment		
Start-up dates	April, 2006	June, 2006

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

GENERAL INFORMATION (continued) INSTRUCTIONS

COMPANY NAME - give the company name, the date completed, and the registration number assigned to the facility if applicable.

IS THE FACILITY DESIGNED TO BE PORTABLE? - 9 VAC 5-80-1110 B defines "portable", to mean an emissions unit that is designed to have the capability of being moved from one location to another for the purpose of operating at multiple locations and storage when idle. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. If this facility is already permitted as a portable facility, list the date of the effective permit.

IS THIS AN APPLICATION TO BE PERMITTED AS A PORTABLE PLANT? - if the facility is designed to be portable, indicate whether or not you wish to have the permit contain specific conditions that will acknowledge this fact, so that the facility may be relocated without a new permit in accordance with 9 VAC 5-80-1320 A.1.c.

IS THIS A NOTIFICATION OF RELOCATION OF A PORTABLE FACILITY? - 9 VAC 5-80-1320 A.1.c allows the relocation of a properly permitted portable facility to be exempt from permitting requirements, as long as it meets certain requirements, one of which is timely notification of the relocation. This notification should be sent to the Director of the DEQ Regional Office into whose area of responsibility the facility will be relocated. The 15-day notification period begins when DEQ receives the notification. Submission of pages 1, 2, and 3 of this form 7 may be used for that notification (with "RELOCATION of a SOURCE" marked on Page 2). However, use of this form for that purpose is not required. Note that a site map and documentation of site suitability should accompany this form or whatever means of notification is used. Include the registration number of any stationary source that will be co-located with the portable facility at the new site.

Site suitability may be documented by the use of a properly certified Local Governing Body Certification Form from the locality to which the facility will be relocated, although that form is not required for this purpose. Contact the appropriate DEQ Regional Office for instructions. DEQ will make a determination of site suitability based upon regional and local requirements.

PRODUCTS MANUFACTURED/SERVICED - indicate the type of business in which this facility is engaged, listing products produced and/or services performed.

SIC CODE(S) - provide all 4-digit Standard Industrial Classification Code(s) for this facility and for the process(es). Place primary SIC in the first set of blocks.

FACILITIES UNDER COMMON OWNERSHIP - list the facilities in Virginia that are owned by the applicant company, its subsidiaries, and its parent company.

MILESTONE DATES - list all dates pertinent to this application as accurately as possible. For start-up dates, provide each relevant date as it might affect emissions, e.g., start-up of each unit, modification of each unit, imposition of or changes in permitted emissions for each unit.

PROCESS, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME **Dominion Terminal Associates**	DATE 5/8/04 TDW	REGISTRATION NUMBER: **60997**

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
CR-1	0	Crusher	Fully-enclosed double-roll crusher		1000	700	6,850	2,500,000
CR-2	0	Crusher	Fully-enclosed double-roll crusher		1000	700	6,850	2,500,000
SS-1	0	Screen	Fully-enclosed double deck screen		700	700	6,850	2,500,000
SS-2	0	Screen	Fully-enclosed single deck screen		700	700	6,850	2,500,000
SS-3	0	Screen	Fully-enclosed double deck screen		700	700	6,850	2,500,000
SS-4	0	Screen	Fully-enclosed single deck screen		700	700	6,850	2,500,000

* 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.

PROCESS, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 TDA	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
OS-1	0	Open Stockpile #1	Material Storage		350,000 tons			
								24,000,000
OS-2	0	Open Stockpile #2	Material Storage		350,000 tons			
								24,000,000
OS-3	0	Open Stockpile #3	Material Storage		350,000 tons			
								24,000,000
OS-4	0	Open Stockpile #4	Material Storage		350,000 tons			
								24,000,000
OS-5	0	Open Stockpile #5	Material Storage		40,000 tons			
								5,000,000
OS-6	0	Open Stockpile #6	Material Storage		50 tons			
								2,000
OS-7	0	Open Stockpile #7	Material Storage		20,000 tons			
								5,000,000

* 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.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME **Dominion Terminal Associates**	DATE 5/18/04 7 Days	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BS-1	0	Storage Silo #1	Fully-enclosed w/baghouse		1,000 tons	2,740	65,753	24,000,000
BS-2	0	Storage Silo #2	Fully-enclosed w/baghouse		3,800 tons	2,740	65,753	24,000,000
BS-3	0	Storage Silo #3	Fully-enclosed w/baghouse		4,100 tons	2,740	65,753	24,000,000
BS-4	0	Plant #1 -- Feed Bin	Fully-enclosed with water/chemical solution		50 tons	700	6,850	2,500,000
BS-5	0	Plant #1 – Pugmill Bin	Fully-enclosed in building		5 tons	700	6,850	2,500,000
BS-6	0	Plant #2 – Pugmill Feed Bin	Fully-enclosed in building		5 tons	700	6,850	2,500,000
BS-7	0	Plant #2 – Feed Bin	Full-enclosed with water/chemical solution		50 tons	700	6,850	2,500,000
BS-8	0	Plant #2 – Pugmill Bin	Fully-enclosed in building		5 tons	700	6,850	2,500,000
BS-9	0	Plant #2 – Pugmill Feed Bin	Fully-enclosed in building		5 tons	700	6,850	2,500,000

* 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.

PROCESS..G, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-01	0	Rotary Dump Discharge Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-02	0	Silo #1 Feed Belt	Fully-enclosed belt conveyor		6800	,740	65,753	24,000,000
BC-03	0	Silo #1 Discharge Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-04	0	Stockpile Feed Belt	Belt conveyor (yard)		6800	2,740	65,753	24,000,000
BC-05	0	CC/Coke Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-06	0	CC/Coke Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-07	0	*Stockpile Feed Belt	Belt conveyor (yard)		6800	2,740	65,753	24,000,000

* 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.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME **Dominion Terminal Associates**	DATE 5/8/04 TDRev	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-08	0	CC/Coke Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-09	0	CC/Coke Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-10	0	Loadout Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-11	0	Silo Transfer Belt	Bully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-12	0	Silo Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-13	0	Stockpile Belt	Belt conveyor (yard)		6800	2,740	65,753	24,000,000

* 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.

PROCESS. ..., MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 7 Days	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-14	0	Clean Coal Stockpile Feed Belt	Fully-enclosed belt conveyor		6800	6800	13,700	5,000,000
BC-15	0	Crusher Feed Belt	Fully-enclosed belt conveyor		1500	1400	13,700	5,000,000
BC-16	0	Screen Oversize Belt	Fully-enclosed belt conveyor		100	0.23	5.48	2,000
BC-17	0	Plant Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-18	0	Pugmill Bin Feed Belt	Bully-enclosed belt conveyor		700	700	6,850	2,500,000
BC19	0	Pugmill Mixer Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-20	0	Pug Mixer Discharge Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000

* 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.

PROCESS, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/18/04	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-21	0	Spreader Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-22	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	2,282	833,000
BC-23	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	2,282	833,000
BC-24	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	2,282	833,000
BC-25	0	Screen SS-2 Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-26	0	Recirculating Belt	Fully-enclosed belt conveyor		100	0.23	5.48	2,000
BC-27	0	Screen SS-2 Discharge Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000

* 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.

PROCESSING, MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/18/04 7 DAW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-28	0	Synfuel Stacking Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-29	0	Screen SS-3 Oversize Belt	Fully-enclosed belt conveyor		100	.23	5.48	2,000
BC-30	0	Plant Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-31	0	Pugmill Bin Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-32	0	Pugmill Mixer Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-33	0	Pug Mixer Discharge Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-34	0	Spreader Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000

* 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.

PROCESS[illegible], MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 7 DAYS	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-35	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	2,282	833,000
BC-36	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	2,282	833,000
BC-37	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	5,600	833,000
BC-38	0	Screen SS-4 Feed Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-39	0	Recirculating Belt	Fully-enclosed belt conveyor		100	0.23	5.48	2,000
BC-40	0	Screen SS-4 Discharge Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-41	0	Synfuel Stacking Belt	Fully-enclosed belt conveyor		700	700	6,850	2,500,000
BC-42	0	Synfuel Product Transfer Belt	Fully-enclosed belt conveyor		1500	1,400	13,700	12,264,000
BC-43	0	CC/RC Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000

* 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.

PROCESS..., MANUFACTURING, SURFACE COATING AND DEGREASING OPERATIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 7 DRW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	PROCESS OR OPERATION NAME	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MAXIMUM RATED CAPACITY _____/HR**	MAXIMUM EXPECTED FEED INPUT** / MAXIMUM EXPECTED FEED OUTPUT** _____/HR	_____/DAY	_____/YEAR
BC-44	0	CC/RC Transfer Belt	Fully-enclosed belt conveyor		6800	2,740	65,753	24,000,000
BC-45	4	BC-48 or BC-49 → BC-46 Transfer Belt	Fully-enclosed belt conveyor		6800	1,142	27,400	10,000,000
BC-46	4	BC-45 to BC-47 or BC-7	Fully-enclosed belt conveyor		6800	1,142	27,400	10,000,000
BC-47	4	BC-46 to BC-4	Full-enclosed belt conveyor		6800	571	13,700	5,000,000
BC-48	4	Hopper to BC-45	Enclosed with baghouse		3400	571	13,700	5,000,000
BC-49	4	Hopper to BC-45	Enclosed with baghouse		3400	571	13,700	5,000,000
UL-1	4	Grab Vessel Unloader	Enclosed		2000	571	13,700	5,000,000
UL-2	4	Grab Vessel Unloader	Enclosed		2000	571	13,700	5,000,000
BH-1	4	Receiving Hopper	Enclosed with baghouse		3400	571	13,700	5,000,000
BH-2	4	Receiving Hopper	Enclosed with baghouse		3400	571	13,700	5,000,000

* 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.

PROCESS OPERATIONS INSTRUCTIONS

UNIT REF. NO. - assign a unique reference number for each entry.

MODIFICATION CODE - Choose a code and insert:

0. - No change.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

PROCESS OR OPERATION NAME - label each emission unit with the applicable process or operation, starting with initial step in the manufacturing process, followed by succeeding logical manufacturing steps until the process is complete.

EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER - give the nameplate information or equivalent, one line per emission unit.

DATE OF MFR. OR CONST. - give the date that each emission unit was installed, constructed in place, or manufactured.

MAXIMUM RATED CAPACITY - maximum rated input capacity of the process or operation, in units of measure per hour.

MAXIMUM EXPECTED FEED INPUT AND OUTPUT - provide maximum amount of feed material expected to be processed (hourly, daily, and yearly) and or output as needed. Specify units. If maximum expected feed input is higher than the historical actual emissions, attach justification per 9 VAC 5-80-40.F.4.e of the Regulations. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 TDRW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
OS-1	0	Fugitive	SW-CS	TSP/M-10	Open Stockpile No. 1	099	see note below	see note below	Existing PM-10 Monitor
OS-2	0	Fugitive	SW-CS	TSP/M-10	Open Stockpile No. 2	099	as per above	as per above	Existing PM-10 Monitor
OS-3	0	Fugitive	SW-CS	TSP/PM-10	Open Stockpile No. 3	099	as per above	as per above	Existing PM-10 Monitor
OS-4	0	Fugitive	SW-CS	TSP/PM-10	Open Stockpile No. 4	099	as per above	as per above	Existing PM-10 Monitor
OS-5	0	Fugitive	SW-CS	TSP/PM-10	Open Stockpile No. 5	099	as per above	as per above	Existing PM-10 Monitor
OS-6	0	Fugitive	SW-CS	TSP/PM-10	Open Stockpile No. 6	099	as per above	as per above	Existing PM-10 Monitor
OS-7	0	Fugitive	SW-CS	TSP/PM-10	Open Stockpile No. 7	099	as per above	as per above	Existing PM-10 Monitor

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 TORW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
CR-1	0	Source	CS-FC	TSP/M-10 – Opacity	Double Roll Crusher	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
CR-2	0	Source	CS-FC	TSP/M-10 – Opacity	Double Roll Crusher	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
SS-1	0	Source	CS-FC	TSP/PM-10 – Opacity	Double Deck Screen	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
SS-2	0	Source	CS-FC	TSP/PM-10 – Opacity	Single Deck Screen	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
SS-3	0	Source	CS-FC	TSP/PM-10 – Opacity	Double Deck Screen	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
SS-4	0	Source	CS-FC	TSP/PM-10 – Opacity	Single Deck Screen	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04	REGISTRATION NUMBER: 60997

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UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BS-1	0	Fugitive	SW-FE	TSP/M-10 – Opacity	Storage Silo #1	99/10a	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-2	0	Fugitive	SW-FE	TSP/M-10 – Opacity	Storage Silo #2	99/10a	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-3	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Storage Silo #3	99/10a	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-4	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Plant #1 – Feed Bin	99	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-5	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Plant #1 – Pugmill Feed Bin	99	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-6	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Plant #2 – Pugmill Bin	99	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-7	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Plant #2 – Feed Bin	99	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-8	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Plant #2 – Pugmill Feed Bin	99	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BS-9	0	Fugitive	SW-FE	TSP/PM-10 – Opacity	Plant #2 – Pugmill Bin	99	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/1/04 7 Days	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-1	0	TP-03	TC-FC	TSP/M-10 – Opacity	Rotary Dumper Discharge Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-2	0	TP-04	TC-BH	TSP/M-10 – Opacity	Silo #1 Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-3	0	TP-06	TC-PC	TSP/PM-10 – Opacity	Silo #1 Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity by Evaluation – Method 9
BC-4	0	TP-06A	TC-PE	TSP/PM-10 – Opacity	Stockpile Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-5	0	TP-12	TC-PC	TSP/PM-10 – Opacity	CC/Coke Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-6	0	TP-12	TC-PC	TSP/PM-10 – Opacity	CC/Coke Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 TDRev	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-7	0	TP-13	TC-PC	TSP/M-10 – Opacity	Stockpile Feed Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-8	0	TP-81	TC-PC	TSP/M-10 – Opacity	CC/Coke Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-9	0	TP-82	TC-BH	TSP/PM-10 – Opacity	CC/Coke Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-10	0	TP-87	TC-PE	TSP/PM-10 – Opacity	Loadout Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation—Method 9
BC-11	0	TP-84	TC-BH	TSP/PM-10 – Opacity	Silo Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-12	0	TP-86	TC-BH	TSP/PM-10 – Opacity	Silo Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-13	0	TP-78	TC-PC	TSP/PM-10 – Opacity	Stockpile Reversing Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 TDRW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-14	0	TP-16	SL-CS	TSP/M-10 – Opacity	Clean Coal Stockpile Feed Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-15	0	TP-18	TC-FC	TSP/M-10 – Opacity	Crusher Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-16	0	TP-81	TC-FC	TSP/PM-10 – Opacity	CC/Coke Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-17	0	TP-24	TC-PC	TSP/PM-10 – Opacity	Screen SS-1 Oversize Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation—Method 9
BC-18	0	TP-27	TC-FC	TSP/PM-10 – Opacity	Screen SS-1 Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-19	0	TP-28	TC-FC	TSP/PM-10 – Opacity	Pugmill Bin feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-20	0	TP-30	TC-FC	TSP/PM-10 – Opacity	Pugmill Mixer Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 TDRev	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-21	0	TP-32	TC-FC	TSP/M-10 – Opacity	Pugmill Mixer Discharge Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-22	0	TP-33-36-39	TC-FC	TSP/M-10 – Opacity	Spreader Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-23	0	TP-35	TC-FC	TSP/PM-10 – Opacity	Briquetter Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-24	0	TP-38	TC-FC	TSP/PM-10 – Opacity	Briquetter Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation—Method 9
BC-25	0	TP-41	TC-FC	TSP/PM-10 – Opacity	Briquetter Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-26	0	TP-42	TC-FC	TSP/PM-10 – Opacity	Screen SS-2 Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLU..ON CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/18/04 TDRev	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-27	0	TP-43	TC-FC	TSP/M-10 – Opacity	Recirculating Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-28	0	TP-45	TC-FC	TSP/M-10 – Opacity	Screen SS-2 Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-29	0	TP-46	SL-CS	TSP/PM-10 – Opacity	Synfuel Stacking Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-30	0	TP-49	TC-FC	TSP/PM-10 – Opacity	Crusher Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation—Method 9
BC-31	0	TP-52	TC-FC	TSP/PM-10 – Opacity	Screen SS-3 Oversize Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-32	0	TP-55	TC-FC	TSP/PM-10 – Opacity	Plant Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-33	0	TP-56	TC-FC	TSP/PM-10 – Opacity	Pugmill Bin Feed Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/18/04 7 Dlw	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-34	0	TP-58	TC-FC	TSP/M-10 – Opacity	Pugmill Mixer Feed Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-35	0	TP-60	TC-FC	TSP/M-10 – Opacity	Pugmill Mixer Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-36	0	TP-61-64-67	TC-FC	TSP/PM-10 – Opacity	Spreader Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-37	0	TP-63	TC-FC	TSP/PM-10 – Opacity	Briquetter Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation—Method 9
BC-38	0	TP-66	TC-FC	TSP/PM-10 – Opacity	Briquetter Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-39	0	TP-69	TC-FC	TSP/PM-10 – Opacity	Silo Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLU..ON CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/18/04 7 DRW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MODE CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-40	0	TP-70	TC-FC	TSP/M-10 – Opacity	Screen SS-4 Feed Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-41	0	TP-71	TC-PC	TSP/M-10 – Opacity	Recirculating Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-42	0	TP-73	TC-FC	TSP/PM-10 – Opacity	Screen SS-4 Discharge Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-43	0	TP-74	SL-CS	TSP/PM-10 – Opacity	Synfuel Stacking Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation—Method 9
BC-44	0	TP-76	TC-FC	TSP/PM-10 – Opacity	Stockpile Loadout Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 7 DAYS	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO.	DEVICE REF. NO.	POLLUTANT/PARAMETER (See instructions)	AIR POLLUTION CONTROL EQUIPMENT				MONITORING INSTRUMENTATION
					MANUFACTURER AND MODEL NUMBER	TYPE (USE CODE L)	% EFFICIENCY		SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED
							DESIGN	ACTUAL	
BC-45	4	TP-94	TC-PC	TSP/M-10 – Opacity	Coal Transfer Belt	099	see note below	see note below	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-46	4	TP-95	TC-PC	TSP/M-10 – Opacity	Coal Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-47	4	TP-96	TC-PC	TSP/PM-10 – Opacity	Coal Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-48	4	TP-97	TC-BH	TSP/PM-10 -- Opacity	Coal Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9
BC-49	4	TP-98	TC-BH	TSP/PM-10 -- Opacity	Coal Transfer Belt	099	as per above	as per above	Existing PM-10 Monitor and Visual Opacity Evaluation – Method 9

NOTE: See .xls spreadsheet entitled "Air Pollution Control and Calculated Emissions"

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
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) water spray when needed

AIR POLLUTION CONTROL AND MONITORING EQUIPMENT INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:

0. - No change.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

VENT/STACK NO. - assign a unique vent/stack number for each vent or stack through which the process or equipment identified by this reference number exhausts.

DEVICE REF. NO. - assign a unique pollution control device reference number(s).

POLLUTANT/PARAMETER - list all pollutants emitted from this process/equipment that are controlled and/or monitored. List all surrogate parameters of the process/equipment that are monitored (e.g. - opacity, CO_2, etc.).

Air Pollution Control Equipment:

MANUFACTURER AND MODEL - list the manufacturer and model of the control equipment associated with the pollutant listed in the preceding column.

TYPE - identify the type of control equipment by using Code L.

PERCENT EFFICIENCY - list the design and actual control efficiency for the control equipment and associated pollutant.

Monitoring Instrumentation:

MONITOR MANUFACTURER AND MODEL NUMBER - list the manufacturer and model number of the stack gas monitor used to measure emissions of the specified pollutant at this emission point. List opacity monitors in association with particulate/PM_{10} emissions.

SPECIFY TYPE OF RECORDER TO BE USED - list the type of recorder associated with the monitor (e.g. strip chart, data logger, etc.)

AIR POLLU..ON CONTROL EQUIPMENT - SUPPLEMENTAL INFORMATION:

COMPANY NAME	DATE 5/8/04 SDRW	REGISTRATION NUMBER: 60997

DEVICE REF. NO.	TYPE (Use Code L)	LIQUID FLOW RATE(gpm) (Codes 4,5, 6,7,13,15)	LIQUID MEDIUM (Codes 4,5,6,7, 13,15)	CLEANING METHOD (Codes 9, 10,13,14)	NUMBER OF FIELDS (Code 9)	NUMBER OF SECTIONS (Codes 9,10)	AIR-TO-CLOTH RATIO (fpm) (Code 10)	FILTER MATERIAL (Code 10)	INLET TEMP (EF)	REGENERATION METHOD & CYCLE TIME (sec) (Code 14)	CHAMBER TEMP. (EF) (Codes 11,12)	RETENTION TIME (sec) (Codes 11,12)	PRESSURE DROP (in. H_2O) (if Codes 3,4,5,6,7, 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
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)

AIR POLLUTION CONTROL EQUIPMENT (SUPPLEMENTAL INFORMATION) INSTRUCTIONS

DEVICE REF. NO. - continue assigned reference number(s) from previous page(s).

TYPE - identify the type(s) of control equipment by using Code L. Code L offers a wide array of control equipment types to choose from, and many will not apply to a given situation. The other columns suggest codes to use from the Code L selection.

NOTE: For the remaining spaces, the applicable control device type numbers (see Code L) for which this information is required are listed in parentheses on the form.

LIQUID FLOW RATE - list in gallons per minute.

LIQUID MEDIUM - specify the type of liquid used in the control equipment, and the pH. For condensers, specify inlet temperatures of condensing medium (water, glycol, etc.) and inlet temperature of gas stream.

CLEANING METHOD - specify the method of cleaning the control equipment (e.g., a baghouse, No. 10a).

NUMBER OF SECTIONS/FIELDS - list the number of fields or chambers for ESPs (No. 9), or number of chambers for baghouses (No. 10).

AIR-TO-CLOTH RATIO - list in feet per minute or as specified by manufacturer (cubic feet per minute gas flow to square feet of cloth).

FILTER MATERIAL - list the type of material used for the baghouse filters.

INLET TEMP. - list the temperature at the inlet of the control equipment in degrees Fahrenheit.

REGENERATION METHOD & CYCLE TIME - list the regeneration method (steam stripping, hot air, etc.) and cycle time in seconds for adsorbers (No. 14). If regeneration is done offsite, please so state.

CHAMBER TEMP. - list the combustion temperature of afterburner chamber in degrees Fahrenheit.

RETENTION TIME - list the retention time for afterburners in seconds.

PRESSURE DROP - list the pressure drop across the control equipment in inches of water.

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: **1**

4. Number of compartments online during normal operation and conditions: **1**

5. Gas flow rate into baghouse: **8,000** ACFM @ **Ambient** °F and **14.7** PSIA

6. Total cloth area: **2396** ft^2

7. Operating air to cloth ratio: **7.5 : 1** ft/min

8. Filter media type: **Polyester fabric**

9. Stabilized static pressure drop across baghouse: **2** inches H_2O

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: _____ lb/hr and **20** grains/ACF

    Exiting baghouse: _____ lb/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: **FE-BH**

2. Manufacturer's name and model identification: **Johnson Marsh Skykleen PCSB 10-10 Dust Collector**

3. Number of compartments in baghouse: **1**

4. Number of compartments online during normal operation and conditions: **1**

5. Gas flow rate into baghouse: **18,000** ACFM @ **Ambient** °F and **14.7** PSIA

6. Total cloth area: **2396** ft^2

7. Operating air to cloth ratio: **7.5 : 1** ft/min

8. Filter media type: **Polyester fabric**

9. Stabilized static pressure drop across baghouse: **2** inches H_2O

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: _____ lb/hr and **20** grains/ACF

    Exiting baghouse: _____ lb/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 +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.**

PROPOSED MAXIMUM CRITERIA POLLUTANT EMISSIONS:

COMPANY NAME Dominion Terminal Associates	DATE 5/18/04 Todd	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MODE CODE	*MAXIMUM* EMISSION RATES TO ATMOSPHERE OF *CRITERIA* POLLUTANTS														STATE OPERATING PERMIT EMISSION CAP (Yes/No)	BASIS OF ESTIMATE (USE CODE M)
		PM * (PARTICULATE MATTER)		PM_{10}* (10 μM OR SMALLER PARTICULATE MATTER)		SO_2 (SULFUR DIOXIDE)		NO_X (NITROGEN OXIDES)		CO (CARBON MONOXIDE)		VOC* (VOLATILE ORGANIC COMPOUNDS)		Pb (LEAD)			
		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		
CR-1																	
CR-2																	
SS-1																	
SS-2																	
SS-3																	
SS-4																	

SEE ATTACHED .xls spreadsheet entitled "AIR POLLUTION CONTROL AND CALCULATED EMISSIONS"

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)

* PM, PM_{10}, and VOCs should also be split up by component and reported under TOXIC OR HAZARDOUS POLLUTANTS.

PROPOSED MAXIMUM CRITERIA POLLUTANT EMISSIONS INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:

0. - No change.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS - list the emission rates to the atmosphere for the pollutants indicated in pounds per hour and tons per year. Provide detailed calculations including assumed control efficiency of control equipment (if applicable) and hours used per year.

STATE OPERATING PERMIT EMISSION CAP - State "yes" or "no" as follows: "Yes" means that the applicant voluntarily requests an emission cap for the unit in question that is lower than allowable emissions for the unit; "no" means no such request is made. A "yes" answer should be accompanied by underlining the proposed emissions of the pollutant for which the cap is sought, in the tons per year column.

BASIS OF EMISSION ESTIMATES - Indicate how emissions listed have been derived by using Code M. Include all calculations.

CRITERIA POLLUTANTS are defined as follows:
Particulate Matter (PM) - any airborne finely divided solid material with an aerodynamic diameter smaller than 100 micrometers.
Carbon monoxide (CO) - colorless, odorless, tasteless gas.
Particulate (PM_{10}) - particulate matter with an aerodynamic diameter less than or equal to 10 micrometers.
Sulfur oxides (SOx) - measured as sulfur dioxide (SO_2).
Nitrogen Oxides (NOx) - all oxides of nitrogen except nitrous oxide.
Lead (Pb) - metal.
Volatile Organic Compounds (VOCs) - (see definition in 9 VAC 5-10-20.) Do not include acetone as a VOC. Do not include perchloroethylene as a VOC, but list it as a hazardous air pollutant (HAP) on the next page. The following compounds are currently exempt from the definition of VOC (however, items 3 and 4 below are still to be reported as toxic pollutants on the next page):

1. Methane
2. Ethane
3. 1,1,1-trichloroethane (methyl chloroform)
4. Methylene chloride
5. Trichlorofluoromethane (CFC-11)
6. Dichlorodifluoromethane (CFC-12)
7. Chlorodifluoromethane (CFC-22)
8. Trifluoromethane (FC-23)
9. 1,1,2-trichlorotrifluoroethane (CFC-113)
10. 1,2-dichlorotetrafluoroethane (CFC-114)
11. Chloropentafluoroethane (CFC-115)
12. Dichlorotrifluoroethane (HCFC-123)
13. Tetrafluoroethane (HFC-134a)
14. Dichlorofluoroethane (HCFC-141b)
15. Chlorodifluoroethane (HCFC-142b)

Note: PM, PM10 and VOC emissions should also be split up by toxic component and reported as TOXIC POLLUTANTS on the next page.

PAST ACTU _ CRITERIA POLLUTANT EMISSIONS:

COMPANY NAME	DATE 5/8/04 DRW	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	*AVERAGE ACTUAL* ANNUAL EMISSIONS TO ATMOSPHERE OF *CRITERIA* POLLUTANTS FOR THE PERIOD: _____, 20___ TO _____, 20____.							BASIS OF ESTIMATE (USE CODE M)
		PM (PARTICULATE MATTER)	PM_{10} (10 μM OR SMALLER PARTICULATE MATTER)	SO_2 (SULFUR DIOXIDE)	NO_X (NITROGEN OXIDES)	CO (CARBON MONOXIDE)	VOC (VOLATILE ORGANIC COMPOUNDS)	Pb (LEAD)	
		tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	

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)

PAST ACTUAL CRITERIA POLLUTANT EMISSIONS INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:

0. - No change.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

***AVERAGE ACTUAL* EMISSIONS TO ATMOSPHERE OF *CRITERIA* POLLUTANTS FOR THE PERIOD** - list the two-year period for which actual emission are averaged. Emissions are to be averaged over the last 24 consecutive months, unless another 24 consecutive month period is MORE reflective of NORMAL operations. If another period is used, please attach an explanation for using the different period.

PAST ACTUAL EMISSIONS AVERAGE for EACH POLLUTANT - list the average ACTUAL annual emissions to the atmosphere for the pollutants indicated in tons per year for each emission unit with MODIFICATION CODES 1, 2, 3 or 5. Be careful to include debottlenecked emission units (MOD CODE 3). The average is calculated using actual annual emissions for the past 24 consecutive months. If there is another 24 consecutive month period that is more reflective of NORMAL operations, that period may be used with DEQ concurrence.

BASIS OF EMISSION ESTIMATES - Indicate how the emissions listed have been derived using Code M. Include all calculations.

CRITERIA POLLUTANTS are defined as follows:
Particulate Matter (PM) - any airborne finely divided solid material with an aerodynamic diameter smaller than 100 micrometers.
Carbon monoxide (CO) - colorless, odorless, tasteless gas.
Particulate (PM_{10}) - particulate matter with an aerodynamic diameter less than or equal to 10 micrometers.
Sulfur oxides (SOx) - measured as sulfur dioxide (SO_2).
Nitrogen Oxides (NOx) - all oxides of nitrogen except nitrous oxide.
Lead (Pb) - metal.
Volatile Organic Compounds (VOCs) - (see definition in 9 VAC 5-10-20.) Do not include acetone as a VOC. Do not include perchloroethylene as a VOC, but list it as a hazardous air pollutant (HAP) on the next page. The following compounds are currently exempt from the definition of VOC (however, items 3 and 4 below are still to be reported as toxic pollutants on the next page):

1. Methane
2. Ethane
3. 1,1,1-trichloroethane (methyl chloroform)
4. Methylene chloride
5. Trichlorofluoromethane (CFC-11)
6. Dichlorodifluoromethane (CFC-12)
7. Chlorodifluoromethane (CFC-22)
8. Trifluoromethane (FC-23)
9. 1,1,2-trichlorotrifluoroethane (CFC-113)
10. 1,2-dichlorotetrafluoroethane (CFC-114)
11. Chloropentafluoroethane (CFC-115)
12. Dichlorotrifluoroethane (HCFC-123)
13. Tetrafluoroethane (HFC-134a)
14. Dichlorofluoroethane (HCFC-141b)
15. Chlorodifluoroethane (HCFC-142b)

SOURCE-WIDE TOXIC OR HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS FROM THE PROPOSED FACILITY:

COMPANY NAME	DATE 5/8/04 Y Draw	REGISTRATION NUMBER: 60997

SOURCE-WIDE MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)*						**TOXIC OR HAP WAS ALSO REPORTED ON PAGE 15 AS:(PM/PM_{10} /VOC or N/A)	STATE OPERATING PERMITS EMISSION CAP (YES/NO)	BASIS OF ESTIMATES (USE CODE M)	UNIT REF. NO.	MOD CODE	VENT/ STACK NO.
TOXIC OR HAZARDOUS POLLUTANT (HAP) NAME	CAS #	IF CONTROLLED AS PROPOSED		WITHOUT THE PROPOSED CONTROLS							
		lb/hr	tons/yr	lb/hr	tons/yr						

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)

* Toxic Pollutant means a 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 PM, PM_{10}, or VOC on page 15.

SOURCE-WIDE TOXIC OR HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS INSTRUCTIONS

PROPOSED FACILITY - complete this page for any new emissions or increased emissions of toxic Pollutants or HAPs resulting from the Proposed Facility (from a new plant, or from any new, modified, reconstructed, or debottlenecked processes or equipment at an existing plant. It is not necessary to list each toxic or HAP emitted from the source unless so directed by the DEQ Regional Office. Then, for each toxic pollutant listed, which is not exempt by 9 VAC 5-60-300 C.3, 4 or 5, or D, E, or F or 9 VAC 5-80-1320 F of the Regulations, list the total source-wide emissions of that pollutant. Compliance is based on total toxic emissions from the source.

Reproduce these pages as necessary to provide information on the applicable toxic and HAP pollutants.

TOXIC OR HAP POLLUTANT NAME - List each toxic or HAP for which there are new or increased emissions from any emission unit at the source, as a result of the proposed changes.

CAS NO. - list the Chemical Abstract Services (CAS) number for each listed pollutant.

MAXIMUM EMISSION RATES TO ATMOSPHERE OF TOXIC POLLUTANTS - list the source-wide emission rates to the atmosphere for all listed toxic or HAP pollutants. in pounds per hour and tons per year per pollutant. List both the controlled emission rates and the emission rates without the proposed controls. . The controlled emission rates may be used to set air permit limits. Provide detailed calculations of the emission rates, using (for the proposed controlled emission rates) the proposed control efficiency of control equipment, and using the proposed limits on material, throughput and/or hours of operation per year.

Note: Any PM, PM10, or VOC emissions with Toxic Pollutant components should be also be listed on this page as TOXIC POLLUTANTS.

TOXIC OR HAP ALSO REPORTED ON PAGE 15 AS: (PM/PM_{10}/VOC or N/A) - Specify which pollutants are also reported as components of PM, PM_{10}, or VOC on page 15.

STATE OPERATING PERMIT EMISSION CAP - State "yes" or "no" as follows: "Yes" means that the applicant voluntarily requests an emission cap for the unit in question that is lower than the current allowable emissions for the unit; "no" means no such request is made. A "yes" answer should be accompanied by underlining the proposed emissions of the pollutant for which the cap is sought, in the tons per year column.

BASIS OF EMISSION ESTIMATES - Use Code M to indicate how the emissions that are listed, have been derived.

UNIT REF. NO. - continue assigned reference number(s) from previous page(s). List all emission unit reference numbers that emit this toxic or HAP pollutants.

MODIFICATION CODE - Choose the appropriate code(s) and insert:

0. - No modification.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

VENT/STACK NO. - list the assigned unique vent/stack number for each vent or stack through which the process or equipment identified by this reference number exhausts.

OTHER REGULATED POLLUTANT EMISSIONS FROM THE PROPOSED FACILITY:

COMPANY NAME Dominion Terminal Associates	DATE 5/8/04 7 DAYS	REGISTRATION NUMBER: 60997

UNIT REF. NO.	MOD CODE	VENT/ STACK NO	MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)*						STATE OPERATING PERMITS EMISSION CAP (YES/NO)	BASIS OF ESTIMATES (USE CODE M)
			OTHER REGULATED POLLUTANT NAME*	CAS NO.	IF CONTROLLED AS PROPOSED		WITHOUT THE PROPOSED CONTROLS			
					lb/hr	tons/yr	lb/hr	tons/yr		
UL-1	4	Source		TSP/PM10	see note below	see note below	see note below	see note below	NO	3
UL-2	4	Source		TSP/PM10	as per above	as per above	as per above	as per above	NO	3
BH-1	4	Source		TSP/PM10	as per above	as per above	as per above	as per above	NO	3
BH-2	4	Source		TSP/PM10	as per above	as per above	as per above	as per above	NO	3
BC-45	4	Source		TSP/PM10	as per above	as per above	as per above	as per above	NO	3
BC-46	4	Source		TSP/PM10	as per above	as per above	as per above	as per above	NO	3
BC-47	4	Source		TSP-PM10	as per above	as per above	as per above	as per above	NO	3

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emissions

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)

* Other Regulated Pollutant means any pollutant listed in the definition of "regulated pollutants" in Article 6 (9 VAC 5-80-1110 C) of the Regulations except for the Criteria Pollutants (PM, PM_{10}, SO_2, NO_X, CO, VOC and Pb) and the toxic/HAP pollutants listed on the toxic/HAP pollutant listing in the front of this application.

OTHER REGULATED POLLUTANT EMISSIONS INSTRUCTIONS

PROPOSED FACILITY - complete page for emissions of "Other Regulated Pollutants" from each emission unit.

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:

0. - No modification.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

VENT/STACK NO. - assign a unique vent/stack number for each vent or stack through which the process or equipment identified by this reference number exhausts.

OTHER REGULATED POLLUTANT NAME - List each "other regulated pollutant" emitted from the facility/emission units listed. "Other regulated pollutants' are those pollutants listed in the definition of "regulated pollutants in Article 6 (9 VAC 5-80-1110 C) of the Regulations except for the Criteria Pollutants (PM, PM_{10}, SO_2, NO_X, CO, VOC and Pb) and the toxic/HAP pollutants listed on the toxic/HAP pollutant listing in the front of this application.

CAS NO. - list the Chemical Abstract Services (CAS) number for each listed pollutant.

MAXIMUM EMISSION RATES TO ATMOSPHERE OF OTHER REGULATED POLLUTANTS - list the emission rates to the atmosphere for all pollutants listed in the definition of "regulated pollutants in Article 6 (9 VAC 5-80-1110 C) of the Regulations except for the Criteria Pollutants (PM, PM_{10}, SO_2, NO_X, CO, VOC and Pb) and the toxic/HAP pollutants listed on the toxic/HAP pollutant listing in the front of this application. Give the maximum emission rates of each pollutant in pounds per hour and tons per year per reference number. List both the controlled emission rates and the emission rates without the proposed controls. . The controlled emission rates may be used to set air permit limits. Provide detailed calculations of the emission rates, using (for the proposed controlled emission rates) the proposed control efficiency of control equipment, and using the proposed limits on material, throughput and/or hours of operation per year.

STATE OPERATING PERMIT EMISSION CAP - State "yes" or "no" as follows: "Yes" means that the applicant voluntarily requests an emission cap for the unit in question that is lower than the current allowable emissions for the unit; "no" means no such request is made. A "yes" answer should be accompanied by underlining the proposed emissions of the pollutant for which the cap is sought, in the tons per year column.

BASIS OF EMISSION ESTIMATES - Use Code M to indicate how the emissions that are listed, have been derived.

OPERATING PERIODS: (Optional use, to establish restriction on operating hours.)

COMPANY NAME	DATE 5/8/04 7 Days	REGISTRATION NUMBER: 60997

UNIT REF. NO.	PERCENT ANNUAL USE/THROUGHPUT BY SEASON				NORMAL PROCESS/EQUIPMENT OPERATING SCHEDULE			MAXIMUM EQUIPMENT/PROCESS OPERATING SCHEDULE		
	DECEMBER -------- FEBRUARY	MARCH ----- MAY	JUNE ------ AUGUST	SEPTEMBER --------- NOVEMBER	HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR	HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR

MAXIMUM FACILITY OPERATING SCHEDULE		
HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR

OPERATING PERIODS INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

PERCENT ANNUAL USE/THROUGHPUT BY SEASON - Give the percentage of time the process or equipment was operated (past five years), by the indicated seasons. Do the same for the proposed operation.

NORMAL PROCESS/EQUIPMENT OPERATING SCHEDULE - indicate the normal operating schedule expected for the process equipment.

MAXIMUM PROCESS/EQUIPMENT OPERATING SCHEDULE - indicate the maximum operating schedule expected for the process/equipment.

MAXIMUM FACILITY OPERATING SCHEDULE - indicate the maximum number of hours of operation for the entire facility.

EPA ACCEPTED - CONTROL DEVICE LISTING

Fugitive Dust Sources	Control Device*	Control Device Prefix	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	UD-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 CONVEYING			
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

Coal Handling and Storage Components

Unit Ref #	Description	Eqip Code	Storage (Ktons)	Through Kton(hr)	Through Kton(day)	Through Kton(yr)	Ctrld Eff %	PM ctrld (tons/yr)	PM unctrld (tons/yr)	PM10 ctrld (tons/yr)	PM10 unctrld (tons/yr)
[redacted]	See Drawings	CS-FC		0.700	6.849	2,500	99	0.1625	16.25	0.02925	2.925
	See Drawings	CS-FC		0.700	6.849	2,500	99	0.1625	16.25	0.02925	2.925
	See Drawings	CS-FC		0.700	6.849	2,500	99	1	100	0.18	18
	See Drawings	CS-FC		0.700	6.849	2,500	99	1	100	0.18	18
	See Drawings	CS-FC		0.700	6.849	2,500	99	1	100	0.18	18
	See Drawings	CS-FC		0.700	6.849	2,500	99	1	100	0.18	18
	See Drawings	SW-CS	350			24,000	[redacted]				
	See Drawings	SW-CS	350			24,000					
	See Drawings	SW-CS	350			24,000					
	See Drawings	SW-CS	350			24,000					
	See Drawings	SW-CS	40			5,000					
	See Drawings	SW-CS	0.050			2					
	See Drawings	SW-CS	20			5,000					
	See Drawings	SW-FE	1	2.740	38.356	14,000					
	See Drawings	SW-FE	3.8	2.740	32.877	12,000					
	See Drawings	SW-FE	4.1	2.740	32.877	12,000					
	See Drawings	SW-FE	0.05	0.700	6.849	2,500					
	See Drawings	SW-FE	0.005	0.700	6.849	2,500					
	See Drawings	SW-FE	0.005	0.700	6.849	2,500					
	See Drawings	SW-FE	0.005	0.700	6.849	2,500					
	See Drawings	SW-FE	0.005	0.700	6.849	2,500					
	See Drawings	SW-FE	0.005	0.700	6.849	2,500					
	See Drawings	TC-FC		2.740	38.356	14,000					
	See Drawings	TC-BH		2.740	38.356	14,000					
	See Drawings	TC-PC		2.740	38.356	14,000					
	See Drawings	TC-PE		2.740	57.534	21,000					
	See Drawings	TC-PE		2.740	57.534	21,000					
	See Drawings	TC-PC		2.740	30.137	11,000					
	See Drawings	TC-PC		2.740	30.137	11,000					
	See Drawings	TC-PC		2.740	84.932	31,000					
	See Drawings	TC-PC		2.740	84.932	31,000					
	See Drawings	TC-PC		2.740	65.753	24,000					
	See Drawings	TC-BH		2.740	65.753	24,000					
	See Drawings	TC-PE		2.740	65.753	24,000					

Coal Handling and Storage Components

escription	Eqip Code	Storage (Ktons)	Through Kton(hr)	Through Kton(day)	Through Kton(yr)	Ctrld Eff %	PM ctrld (tons/yr)	PM unctrld (tons/yr)	PM10 ctrld (tons/yr)	PM10 unctrld (tons/yr)
e Drawings	LO-FC		2.740	65.753	24,000					
e Drawings	TC-BH		2.740	32.877	12,000					
e Drawings	TC-BH		2.740	65.753	24,000					
e Drawings	TC-PC		2.740	30.137	11,000					
e Drawings	SL-CS		6.800	13.699	5,000					
e Drawings	TC-FC		1.400	13.699	5,000					
e Drawings	TC-FC		1.400	6.849	2,500					
e Drawings	TC-PC		0.000	0.005	2					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.233	2.283	833					
e Drawings	TC-FC		0.233	2.283	833					
e Drawings	TC-FC		0.233	2.283	833					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.000	0.005	2					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	SL-CS		0.700	6.849	2,500					
e Drawings	TC-FC		1.400	6.849	2,500					
e Drawings	TC-FC		0.000	0.005	2					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-FC		0.233	2.283	833					
e Drawings	TC-FC		0.233	2.283	833					
e Drawings	TC-FC		0.233	2.283	833					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	TC-PC		0.000	0.005	2					
e Drawings	TC-FC		0.700	6.849	2,500					
e Drawings	SL-CS		0.700	6.849	2,500					
e Drawings	TC-FC		1.400	13.699	5,000					

Unit Ref #	[redacted]

Coal Handling and Storage Components

New coal handling components for import of raw coal

Unit Ref #	Description	Eqip Code	Storage (Ktons)	Through Kton(hr)	Through Kton(day)	Through Kton(yr)	Ctrld Eff %	PM ctrld (tons/yr)	PM unctrld (tons/yr)	PM10 ctrld (tons/yr)	PM10 unctrld (tons/yr)
[redacted]	See Drawings	UL-FE			13.699	5,000	70	0.8575616	2.8585386	0.1543611	0.514537
	See Drawings	UL-FE			13.699	5,000	70	0.8575616	2.8585386	0.1543611	0.514537
	See Drawings	TC-BH			13.699	5,000	99	0.0285854	2.8585386	0.0051454	0.514537
	See Drawings	TC-BH			13.699	5,000	99	0.0285854	2.8585386	0.0051454	0.514537
	See Drawings	TC-PC			27.397	10,000	95				
	See Drawings	TC-PC			27.397	10,000	95				
	See Drawings	TC-PC			13.699	5,000	95				
	See Drawings	TC_BH			13.699	5,000	99				
	See Drawings	TC_BH			13.699	5,000	99				

	PM ctrld (tons/yr)	PM unctrld (tons/yr)	PM10 ctrld (tons/yr)	PM10 unctrld (tons/yr)
New PM & PM10 Emissions Only	1.7722939	11.434154	0.3190129	2.058148
Piles (See 1989 permit application)	9.2	92	1.656	16.56
Total intermediate storage/processing	6.0972939	443.93415	1.0975129	79.90815
Transfers	50.495678	313.65846	9.089222	56.45852
Total PM & PM10 (tons/yr)	65.792972	849.59261	11.842735	152.9267

Coal Handling and Storage Components

E factors	[redacted]		[redacted]	[redacted]	**See trans pts on Sheet 2**
Crushers	0.013	lbs/ton	0	lbs/ton	
Transfers	0.0011434	lbs/ton	0.0011434	lbs/ton	
Screens	0.08	lbs/ton	0	lbs/ton	
Throughput	14,000	Ktons	5,000	Ktons	10,000 Ktons
Silt	3.5	%	not used		
Moisture	6.7	%	Based upon average moisture content as measured at DTA		
Avg Wind	10.5	mph	Based upon local weather data		
k	0.74		AP-42		
base	0.0032		AP-42		
EF trans	0.0011434	lbs/ton	AP-42		

Notes: The labels used for components are based upon EPA's suggested categories of dust control and the % control values are consistent with those published as "EPA Accepted Control Device Listing"

The emission factor at transfer points is computed using equations in AP-42

The emission factors for chrushers and screens back calculated from material in permit application (2002)

.0114 and .013 and .0099 for crushers	Used .013
.0249 and .08 and .0250 for screens	Used .08
.0014 for converers/transfer points	Used .00114

Transfer Points

Transfer Point	Control Type	Raw Rail (Ktons)	Synfuel (Ktons)	Raw Ship (Ktons)	Raw reclm (Ktons)	Synfuel reclm (Ktons)	Contrl Eff %	PM Ctrld (tons)	PM Unctrld (tons)	PM-new Ctrld (tons)	PM-new Unctrld (tons)	PM10 Ctrld (tons)	PM10 Unctrld (tons)	PM10-new Ctrld (tons)	PM10-new Unctrld (tons)
1	UD-FC						99	0.040	3.990			0.007	0.718		
2	UD-FC						99	0.040	3.990			0.007	0.718		
3	TC-FC						99	0.080	7.980			0.014	1.436		
4	TC-BH						99	0.080	7.980			0.014	1.436		
5	TC-PC						95	0.399	7.980			0.072	1.436		
6	TC-PC						95	0.399	7.980			0.072	1.436		
6A	TC-PE			5,000			50	3.424	6.840	1.429	2.85	0.616	1.231	0.257	0.513
6B	TC-PE			5,000			50	5.989	11.970	1.429	2.85	1.078	2.155	0.257	0.513
7	LO-RC			5,000			80	2.396	11.970	0.572	2.85	0.431	2.155	0.103	0.513
8		0					95	0.114	2.280			0.021	0.410		
9	TC-PE	0					50	1.710	3.420			0.308	0.616		
10	LO-RC	0					80	0.684	3.420			0.123	0.616		
11	TC-PC	0					95	0.314	6.270			0.057	1.129		
12	TC-PC						95	0.342	6.840			0.062	1.231		
12A	TC-PE			5,000			50	4.854	9.690	1.429	2.85	0.874	1.744	0.257	0.513
12B	TC-PE			5,000			50	8.848	17.670	1.429	2.85	1.593	3.181	0.257	0.513
13	LO-RC			5,000			80	3.539	17.670	0.572	2.85	0.637	3.181	0.103	0.513
15	TC-PC						95	0.143	2.850			0.026	0.513		
16	SL-CS						75	0.713	2.850			0.128	0.513		
17	LO-FC						99	0.014	1.425			0.003	0.257		
18	TC-FC						99	0.014	1.425			0.003	0.257		
19	UL-WS						50	0.001	0.001			0.000	0.000		
20	LO-PC						95	0.000	0.001			0.000	0.000		
21	TC-FC						99	0.000	0.001			0.000	0.000		
22	CS-FC						99	0.014	1.425			0.003	0.257		
23	TC-FC						99	0.000	0.001			0.000	0.000		
24	SL-CS						95	0.000	0.001			0.000	0.000		
25	LO-CS						80	0.000	0.001			0.000	0.000		
26	TC-FC						99	0.014	1.425			0.003	0.257		
27	TC-FC						99	0.014	1.425			0.003	0.257		
28	TC-FC						99	0.014	1.425			0.003	0.257		
29	TC-FC						99	0.014	1.425			0.003	0.257		
30	TC-FC						99	0.014	1.425			0.003	0.257		
31	TC-FC						99	0.014	1.425			0.003	0.257		
32	TC-FC						99	0.014	1.425			0.003	0.257		
33	TC-FC						99	0.005	0.475			0.001	0.086		
34	TC-FC						99	0.005	0.475			0.001	0.086		
35	TC-FC						99	0.005	0.475			0.001	0.086		

Transfer Points

Transfer Point	Control Type	Raw Rail	Synfuel	Raw Ship	Raw reclm	Synfuel reclm	Contrl Eff %	PM Ctrld	PM Unctrld	PM-new Ctrld	PM-new Unctrld	PM10 Ctrld	PM10 Unctrld	PM10-new Ctrld	PM10-new Unctrld
36	TC-FC		[redacted]				99	0.005	0.475			0.001	0.086		
37	TC-FC						99	0.005	0.475			0.001	0.086		
38	TC-FC						99	0.005	0.475			0.001	0.086		
39	TC-FC						99	0.005	0.475			0.001	0.086		
40	TC-FC						99	0.005	0.475			0.001	0.086		
41	TC-FC						99	0.005	0.475			0.001	0.086		
42	TC-FC						99	0.014	1.425			0.003	0.257		
43	TC-FC						99	0.000	0.001			0.000	0.000		
43A	SL-CS						75	0.000	0.001			0.000	0.000		
44	TC-FC						99	0.014	1.425			0.003	0.257		
45	TC-PC						95	0.071	1.425			0.013	0.257		
46	SL-CS						75	0.357	1.425			0.064	0.257		
47	UL-WS						50	0.001	0.001			0.000	0.000		
48	LO-PC						95	0.071	1.425			0.013	0.257		
49	TC-FC						99	0.014	1.425			0.003	0.257		
50	CS-FC						99	0.014	1.425			0.003	0.257		
51	TC-FC						95	0.000	0.001			0.000	0.000		
52	SL-CS						75	0.000	0.001			0.000	0.000		
53	LO-CS						80	0.000	0.001			0.000	0.000		
54	TC-FC						99	0.014	1.425			0.003	0.257		
55	TC-FC						99	0.014	1.425			0.003	0.257		
56	TC-FC						99	0.014	1.425			0.003	0.257		
57	TC-FC						99	0.014	1.425			0.003	0.257		
58	TC-FC						99	0.014	1.425			0.003	0.257		
59	TC-FC						99	0.014	1.425			0.003	0.257		
60	TC-FC						99	0.014	1.425			0.003	0.257		
61	TC-FC						99	0.005	0.475			0.001	0.086		
62	TC-FC						99	0.005	0.475			0.001	0.086		
63	TC-FC						99	0.005	0.475			0.001	0.086		
64	TC-FC						99	0.005	0.475			0.001	0.086		
65	TC-FC						99	0.005	0.475			0.001	0.086		
66	TC-FC						99	0.005	0.475			0.001	0.086		
67	TC-FC						99	0.005	0.475			0.001	0.086		
68	TC-FC						99	0.005	0.475			0.001	0.086		
69	TC-FC						99	0.005	0.475			0.001	0.086		
70	TC-FC						99	0.014	1.425			0.003	0.257		

Transfer Points

Transfer Point	Control Type	Raw Rail	Synfuel	Raw Ship	Raw reclm	Synfuel reclm	Contrl Eff %	PM Ctrld	PM Unctrld	PM-new Ctrld	PM-new Unctrld	PM10 Ctrld	PM10 Unctrld	PM10-new Ctrld	PM10-new Unctrld
71	TC-FC		[redacted]				99	0.000	0.001			0.000	0.000		
71A	SL-CS						75	0.000	0.001			0.000	0.000		
72	TC-FC						99	0.014	1.425			0.003	0.257		
73	TC-PC						95	0.071	1.425			0.013	0.257		
74	SL-CS						75	0.357	1.425			0.064	0.257		
75	LO-FC						99	0.029	2.850			0.005	0.513		
76	TC-PC						95	0.143	2.850			0.026	0.513		
79	TC-PC				[redacted]		95	0.342	6.840			0.062	1.231		
80	TC-PC						95	0.342	6.840			0.062	1.231		
81	TC-BH						99	0.031	3.135			0.006	0.564		
82	TC-PC						95	0.342	6.840			0.062	1.231		
83	TC-PC						95	0.306	6.128			0.055	1.103		
84	TC-BH						99	0.068	6.840			0.012	1.231		
85	TC-PC						95	0.342	6.840			0.062	1.231		
86	TC-PC						95	0.684	13.680			0.123	2.462		
86A	TC-PE						50	6.844	13.680			1.232	2.462		
87	SL-FE						80	2.738	13.680			0.493	2.462		
New Pts															
88	UL-FE		5,000				70	0.858	2.850	0.858	2.85	0.154	0.513	0.154	0.513
89	UL-FE		5,000				70	0.858	2.850	0.858	2.85	0.154	0.513	0.154	0.513
90	TC-BH		5,000				99	0.029	2.850	0.029	2.85	0.005	0.513	0.005	0.513
91	TC-BH		5,000				99	0.029	2.850	0.029	2.85	0.005	0.513	0.005	0.513
92	TC-PC		5,000				95	0.143	2.850	0.143	2.85	0.026	0.513	0.026	0.513
93	TC-PC		5,000				95	0.143	2.850	0.143	2.85	0.026	0.513	0.026	0.513
94	TC-PC		10,000				95	0.286	5.700	0.286	5.7	0.051	1.026	0.051	1.026
95	TC-PC		10,000				95	0.286	5.700	0.286	5.7	0.051	1.026	0.051	1.026
96	TC-PC		5,000				95	0.143	2.850	0.143	2.85	0.026	0.513	0.026	0.513
97	TC-BH		5,000				99	0.029		0.029		0.005		0.005	
98	TC-BH		5,000				99	0.029		0.029		0.005		0.005	
					Totals (tons/year) for new import		=			9.690	48.45			1.744	8.721
										PM ctrl	PM unctrl			PM10 ctrl	PM10 unctrl
					Totals (tons/year) for all transfers, c		=	50.496	313.66			9.089	56.459		
								PM ctrl	PM unctrl			PM10 ctrl	PM10 unctrl		

	[redacted]	[redacted]	coal ship
			Belt terms
EF trans	0.00114 lbs/ton	0.0011 lbs/ton	0.00114 lbs/ton
Ktons/yr	14,000	5,000	10,000
	7,000	2,500	5,000
		833	

FUEL-BU[illegible]NG EQUIPMENT AND STATIONARY COMBUSTION ENGINES (EXCEPT INCINERATORS) (BOILERS, TURBINES, GAS/DIESEL ENGINES, KILNS, ETC.):

COMPANY NAME Dominion Terminal Associates	DATE 5/3/2004	REGISTRATION NUMBER: 60997

UNIT REF. NO.	EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER	DATE OF MFR. OR CONST.	MOD CODE *	MAXIMUM RATED INPUT HEAT CAPACITY FOR EACH FUEL (MILLION BTU/HR)	TYPE OF FUEL	TYPE OF EQUIPMENT (USE CODE A)	MAXIMUM RATED OUTPUT APPROPRIATE TO SOURCE TYPE			USAGE (USE CODE B)
							STEAM QUANTITY (lb/hr)	OUTPUT BRAKE HORSEPOWER (BHP)	ELECTRICAL POWER (KW)	
CB-1	Cummins Diesel Engine QST 30 – G5		4	9.138	Diesel Fuel no 2 Per ASTM D975	16	N/A	N/A	N/A	7
CB-2	Cummins Diesel Engine QST 30 – G5		4	9.138	Diesel Fuel no 2 Per ASTM D975	16	N/A	N/A	N/A	7

* FOR MODIFICATION CODES SEE INSTRUCTIONS ON NEXT PAGE.

Code A - Equipment

BOILER TYPE:
1. Pulverized Coal - Wet Bottom
2. Pulverized Coal - Dry Bottom
3. Pulverized Coal - Cyclone Furnace
4. Spreader Stoker
5. Chain or Travelling Grate Stoker
6. Underfeed Stoker
7. Hand Fired Coal
8. Oil, Tangentially Fired
9. Oil, Horizontally Fired (except rotary cup)
10. Gas, Tangentially Fired
11. Gas, Horizontally Fired

Code A (continued)

12. Wood with Flyash Reinjection
13. Wood without Flyash Reinjection
14. Other Specify

STATIONARY ENGINE TYPE:
15. Combustion Turbine
16. Internal Combustion Engine
17. Other Specify

OTHER COMBUSTION UNITS:
18. Oven / Kiln
19. Rotary Kiln
18. Process Furnace
99. Other Specify

Code B - Usage

1. Steam Production
2. Drying / Curing
3. Space Heating
4. Process Heat
5. Food Processing
6. Electrical Generation
7. Mechanical Work
99. Other

FUEL-BURNING EQUIPMENT AND STATIONARY COMBUSTION ENGINES INSTRUCTIONS

UNIT REF. NO. - assign a unique reference number for each piece of fuel burning equipment. If the facility has other equipment already registered, do not repeat those reference numbers. **NOTE:** Where a unit burns more than one fuel, assign a separate line for each, pegged to the unit (i.e., #1A for oil, #1B for the same unit burning coal, etc.).

EQUIPMENT MANUFACTURER, TYPE AND MODEL NO. - provide the nameplate information for each piece of equipment

DATE OF MFR. OR CONST. - give the date that each emission unit was installed, constructed in place, or manufactured.

MODIFICATION CODE - Choose a code and insert:

0. - No change.
1. - for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

MAXIMUM RATED INPUT HEAT CAPACITY FOR EACH FUEL - provide the manufacturer's maximum rated heat input in Million BTUs per hour based on the nameplate rating or maximum fuel usage.

TYPE OF FUEL - identify all the types of fuel that will be burned by each referenced piece of equipment and the corresponding data for each fuel type. If used in a process, relate this to the appropriate process.

TYPE OF EQUIPMENT - use Code A at the bottom of the page.

MAXIMUM RATED OUTPUT APPROPRIATE TO SOURCE TYPE - provide the maximum rated output capacity in units consistent with your operation. Examples: if a boiler is to be installed to generate process steam, then report pounds of steam per hour or boiler horsepower; if a turbine is to be installed to generate electricity, report kilowatts of electricity; if a diesel engine is to be installed to power a blower, report the output brake horsepower (Also known as mechanical horsepower).

USAGE - Use Code B at the bottom of the page.

STACK PARAMETERS AND FUEL DATA:

COMPANY NAME	DATE	REGISTRATION NUMBER: 60997

UNIT REF. NO.	VENT/ STACK NO.	VENT/STACK OR EXHAUST DATA						FUEL(S) DATA						
		VENT/ STACK CONFIG. (USE CODE K)	VENT STACK HEIGHT (feet)	EXIT DIA. (feet)	EXIT GAS VELOCITY (fpm)	EXIT GAS VOLUME (acfm)	EXIT GAS TEMP. (°F)	TYPE OF FUEL	MAX. RATED BURNED/ HOUR (SPECIFY UNITS)	MAX. EXPECTED BURNED/ DAY (SPECIFY UNITS)	MAX. EXPECTED BURNED/ YEAR (SPECIFY UNITS)	HIGHER HEATING VALUE (SPECIFY UNITS)	MAX. % SULFUR	MAX. % ASH

N/A

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)

STACK PARAMETERS AND FUEL DATA INSTRUCTIONS

UNIT REF. NO. - continue the unique assigned reference number(s) from page(s) 3 through 8.

VENT/STACK NO. - one reference number may have many exhaust points. Assign a unique vent/stack number for each vent or stack through which the process or equipment identified by this unit reference number exhausts.

VENT/STACK CONFIGURATION - indicate the appropriate configuration by using Code K.

VENT/STACK HEIGHT - list the exit height (in feet) from the ground level.

EXIT DIAMETER - list the inside diameter (in feet) of the vent/stack at its exit. For rectangular vents, provide length and width (in feet) of the vent/stack at its exit.

EXIT GAS VELOCITY - list the velocity in feet per minute of the stack gas as it exits the vent/stack.

EXIT GAS VOLUME - list the volume of the flow in actual cubic feet per minute.

EXIT GAS TEMPERATURE - list the temperature in degrees Fahrenheit.

TYPE OF FUEL - identify all the types of fuel that will be burned by each referenced piece of equipment and the corresponding data for each fuel type.

MAXIMUM RATE BURNED PER HOUR - provide the maximum rated fuel input at maximum design capacity in units such as pounds, gallons or cubic feet per hour.

MAXIMUM EXPECTED AMOUNT OF FUEL BURNED PER DAY - provide the maximum amount of fuel input expected in 24 hours. Use units corresponding to fuel type (e.g. tons for solid fuels, etc.).

MAXIMUM EXPECTED AMOUNT OF FUEL BURNED PER YEAR - provide the maximum amount of fuel input expected in one year. Use units corresponding to fuel type (e.g. tons for solid fuels, etc.).

HIGHER HEATING VALUE - provide the higher heating value of the specified fuel in BTUs per unit of fuel.

MAXIMUM PERCENT SULFUR - identify the highest percent sulfur content for the fuel.

MAXIMUM PERCENT ASH - identify the highest percent ash content for the fuel.

TRC
Environmental
Consultants, Inc.

800 Connecticut Blvd., East Hartford, CT 06108 (203) 289-8631

DAVE EMMITT

October 18, 1989

Mr. Thomas N. Houck, P.E.
Dominion Terminal Associates
Harbor Road, Pier 11
P. O. Box 967-A
Newport News, Virginia 23607

Dear Tom:

Enclosed please find a permit application and supporting basis report. This cover letter includes a verbal summary of the permit application.

Need for a Revised Permit

Dominion Terminal Associates plans an increase in the physical size of their operating area. This increase in acreage (from 68 to 101 acres) will allow for:

- Better pile management through greater flexibility in locating shipments for transfer.
- Lower height of piles through more acreage and better access.
- Reduced bulldozer traffic through better access to piles by the stacker/reclaimer equipment.

While the increase in acreage can be called a physical "expansion" the actual operational changes could better be described as "debottlenecking", i.e., increasing the area of storage and pile management in order to attain a larger capability for throughput.

Permit Modifications

The present permit is based upon maximum allowable emissions, annual throughput and maximum allowable tons in storage.

Dominion Terminal Associates is requesting only one substantive change in the permit, i.e. an increase of the maximum allowable quantity of coal storage from a maximum 1 million tons on the ground to a maximum of 1.4 million tons on the ground (Specific Condition 5). As an allowable average, there will be 975,000 tons on the ground. Peak pile heights will be reduced from 75 feet to

28.4 feet because of the better pile management obtainable through increased acreage. On average, pile heights will be reduced from 28.3' (650,000 tons) to 22.5' (850,000 tons).

Due to the uncertainty in emission factors for fugitive emissions, Dominion Terminal is not asking for any change in maximum allowable emissions. The maximum emissions calculated in this permit application are 60.8 tons per year of total suspended particulate and 26.4 tons per year of particulate matter less than 10 microns in diameter.

The calculated reductions in maximum emissions from the original permit (91.4 tons per year of total suspended particulate) occur because of slight changes in the facility as-built versus the design and the use of new published emission factors, including those recommended by EPA (AP-42). These changes result in a calculation that the allowable emissions (to be compared to the original application) would be 60.8 tons per year of TSP and 26.4 tons per year of PM_{10}.

These maximum emissions are a decrease in emissions. This is true primarily because the calculated emissions from storage pile wind erosion for the proposed maximum of 1.4 million tons stored on 101 acres are much less than the originally permitted 1 million tons on 66 acres. The reason is that lower pile heights and less disturbances of the piles result in better pile management and less wind erosion per quantity of coal stored.

The original permit application did not include the propane fired heaters used to thaw coal cars prior to offloading were not included. These emissions are included in the attached permit application. The use of the heaters results in only 0.004 tons per year of particulate matter emissions which are all smaller than 10 microns.

Allowable emission changes and permit conditions are summarized in Table I.

Actual Emissions

Dominion Terminal has been operating at less than maximum capacity, in part, because of the limited area and, in part, because of market conditions. Using the same calculation techniques, an estimate has been made of actual emissions for 1987, 1988 and under proposed operation. These calculations are not required in the permit application, but may be helpful in explaining the "expansion." Table II shows a summary of actual emissions. The proposed operation case assumes 17,500,000 tons per year throughput (a 45% increase) which is the forecast for improved market conditions but is still well below the current allowable throughput of 25,000,000 tons per year. A reduction of allowable throughput to 20,000,000 tons per year is shown in Table I and reflected in the permit application. It is also assumed that there will be an average of 850,000 tons stored at the facility. These projected actual emission are still substantially less than allowable.

The increases in expected actual emissions are not as great a percentage increase as expected from 45% greater throughput because the increased acreage will lead to better pile management. This calculation has also not taken credit for an increased and enhanced spray system, including closer spacing, whose control may be better than 90%.

TRC wishes to acknowledge the assistance and work of Dr. David Emmitt of Simpson Weather Associates who provided invaluable understanding of the terminal operations and the calculations of wind erosion from storage piles.

It is clear that the "expansion" will result in a decrease in allowable emissions and that actual emissions as calculated will not increase as much as the increased throughput would indicate and in reality may not increase.

If you or anyone else has questions about the enclosed, please call.

Sincerely,

TRC ENVIRONMENTAL CONSULTANTS, INC.

Gale F. Hoffnagle, CCM
Vice President
and Technical Director

GFH/wpc
Enclosures

TABLE I
SUMMARY OF ALLOWABLE EMISSIONS
DOMINION TERMINAL ASSOCIATES

	Allowable Emissions Tons/Year		Allowable Throughput Millions Tons/Year	Maximum Allowable Storage Millions of Tons
	TSP	PM_{10}		
Original Permit	91.4	NA	25	1
Recalculated Original Permit	60.8	26.4	25	1
Proposed Permit Modification	51.9	22.3	20	1.4

TABLE II
SUMMARY OF ACTUAL EMISSIONS
DOMINION TERMINAL ASSOCIATES

	1987	1988	Proposed
Coal Handling			
Throughput (Millions of Tons)	9.9	12.0	17.4
Emissions			
TSP (tons/year)	16.6	20.0	31.0
PM_{10} (tons/year)	7.7	9.3	14.4
Wind Erosion from Piles			
Storage (millions of tons)	0.585	0.586	0.850
Emissions			
TSP (tons/year)	4.5	5.5	7.8
PM_{10} (tons/year)	1.6	1.9	2.7
Total			
TSP (tons/year)	21.1	25.5	38.8
PM_{10} (tons/year)	9.3	11.2	17.1

BASIS FOR SAPCB PERMIT MODIFICATION APPLICATION

Submitted to:

Dominion Terminal Associates
Newport News, Virginia

TRC Project Number 5974-T11

October 18, 1989

Submitted by:

John E. Yocom, P.E.
TRC Environmental Consultants, Inc.

G. David Emmitt, Ph.D.
Simpson Weather Associates, Inc.

1.0 BASIS FOR PERMIT APPLICATION

1.1 Applicable References

A. AP-42 (9/88)

B. Dominion Terminal Associates, SAPCB Form 7, Submitted July, 6, 1981.

C. TRC Environmental Consultants, "Determination of Fugitive Coal Dust Emissions from Rotary Railcar Dumping", May 1984.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations

The existing facility and the proposed modification have been divided into three emission sources:

Coal Receiving Area
Coal Transfer and Storage Area
Coal Loadout Area

Note that the coal piles may be emitting while the terminal is inoperative.

1.2.1 Assumptions for Computations For Air Emissions From Dumping/ Stacking/Reclaiming Operations

1) Annual throughput of coal is 20,000,000 tons.
2) Dumping capacity - maximum 5150 TPH based on 100 tons/car and 2.3 min/2 car cycle time, average 2874 TPH based on grade change, switching and delivery delays.
3) Stacking capacity - maximum 5900 TPH, average 2874 TPH with delays.
4) Reclaiming capacity - 20,000 to 188,000 ton capacity ships will be loaded at a design rate of 6,500 TPH and an average rate of 3,614 TPH with delays.
5) Pile height of 27.8' and an average annual storage capacity of 975,000 tons has been used in pile emission calculations.

1.2.2 Control Efficiencies

The following control efficiencies are used in this application and are based on previously filed air pollution reports:

1) 90% control for enclosed transfers where wet suppression with surfactants is used.

2) 75% control for transfer using lowering chutes and for open discharges using wet suppression.

3) 90% control for storage piles and their maintenance using wet dust suppression.

4) 99% control for baghouse dust collection and surge bin hoppers.

5) 50% control for spray controls on bucket wheel stacker/reclaimers in the reclaiming mode.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations - continued

1.2.3 Equipment Transfer Tonnage Rates

	Maximum (TPH)	Average (TPH)
Car Dumpers	5150	2874
Conveyer C-1 and C-2	5150	2874
Conveyer C-3 and C-5	5900	2874
Conveyer C-4 and C-7: Stacking	5900	2874
Reclaiming	6200	3614
Conveyer C-6, C-8 and C-9	6200	3614
Conveyer C-10	6500	3614

Total suspended particulate (particle) emissions from each source point or area were calculated as follows:

Annual Uncontrolled Emissions
Ton/Yr = Process Flow Rate (Ton/Yr) x Emission Factor (lb/ton)

Annual Controlled Emissions
Ton/Yr = Annual Uncontrolled Emissions (Ton/Yr) x (100 - Percent Dust Control Efficiency)/100

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations - continued

1.2.4 Rotary Car Dumper (From "Determination of Fugitive Coal Dust Emissions from Rotary Railcar Dumping" TRC Environmental Consultants, May 1984.)

TRC emission factor (EF) for Maryland site = EF_{TSP} = 0.001 lb/ton

Aerodynamic particle size multiplier (k) for PM10 = 0.35 (Table 11.2.3-2, AP-42, 9/88)

$EF_{PM10} = EF_{TSP} \times k = 0.001(0.35) = 0.00035$ lb/ton

To account for differences in silt and moisture content between the Maryland site and DTA, the emission factors were multiplied by the following correction factor as follows:

$$EF_{DTA} = EF_{MD} \times (S_D/S_M)/(M_D/M_M)^{1.4}$$

where,
S_D = Silt Content of Coal @ DTA = 6.17%
S_M = Silt Content of Coal @ Md. Site = 2.16%
M_D = Moisture Content of Incoming Coal @ DTA = 5.5%
M_M = Moisture Content of Coal @ Md. Site = 4.46%

Silt and moisture values were determined from samples collected at DTA and the Maryland site, with the exception of M_D, which was estimated from moisture data from companies supplying coal to DTA.

Emission factors were calculated as follows:

$$EF_{TSP} = 0.001 \times (6.17/2.16)/(5.5/4.46)^{1.4}$$
$$= 0.00213 \text{ lb/ton}$$

$$EF_{PM10} = 0.00035 \times (6.17/2.16)/(5.5/4.46)^{1.4}$$
$$= 0.000746 \text{ lb/ton}$$

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations - continued

1.2.5 Transfer Points (From AP-42, 9/88)

$EF = k \times (0.0032)(U/5)^{1.3}/(M/2)^{1.4}$ (lb/ton)

where,
k = Aerodynamic particle size multiplier
$k_{TSP} = 0.74$
$k_{PM10} = 0.35$

U = Mean wind speed = 10.7 mph (from National Climate Center Data for Norfolk, Virginia).

M = Moisture content of coal = 5.5% for incoming coal, = 6.5% for outgoing coal

Emission factors for dumping/stacking incoming coal are calculated as follows:

$EF_{TSP} = 0.74 \times (0.0032)(10.7/5)^{1.3}/(5.5/2)^{1.4}$
$= 0.00154$ lb/ton

$EF_{PM10} = 0.35 \times (0.0032)(10.7/5)^{1.3}/(5.5/2)^{1.4}$
$= 0.00073$ lb/ton

Emission factors for reclaiming/loading outgoing coal are calculated as follows:

$EF_{TSP} = 0.74 \times (0.0032)(10.7/5)^{1.3}/(6.5/2)^{1.4}$
$= 0.00122$ lb/ton

$EF_{PM10} = 0.35 \times (0.0032)(10.7/5)^{1.3}/(6.5/2)^{1.4}$
$= 0.00058$ lb/ton

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations - continued

1.2.6 Storage Piles - Comparisons between current and proposed DTA ground storage.

1.2.6.1 Assumptions for pile emission calculations for permitted ground storage and throughput

Bulk density of coal: 60 lb/ft^3 (962 kg/m^3)

Angle of repose: 37°

Stackout (SO) Refresh: Entire average pile surface

Reclaim (RC) Refresh: Entire average pile surface

Bulldozing done on same day as SO or RC

Average pile base: (230 x 300) = 69,000 ft^2
5' Margin area/pile: 8,500 ft^2

Total base area/pile: 77,500 ft^2

	Current	Proposed
Permitted peak ground storage (tons):	1.0 x 10^6	1.4 x 10^6
Permitted average ground storage (tons):	1.0 x 10^6	.975 x 10^6
Permitted annual throughput (tons):	25.0 x 10^6	20.0 x 10^6
Average stackout tonnage:	7400	7400
Average # SO/day:	9.26	7.40
Average reclaim tonnage:	20,316	20,316
Average # of RC/day:	3.37	2.70

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations - continued

1.2.6 Storage Piles - continued

1.2.6.2 Allowable emissions both current and proposed and net % change

	Current Allowable	Proposed Allowable	% Change
Annual throughput (tons)	25 x 10^6	20 x 10^6	
Average tons on ground	1.0 x 10^6	0.975 x 10^6	
Number of piles:	15	22.8	+52
Tonnage of average pile:	66,666	42,763	-36
Height of average pile:	75' (22.9 m)	27.8' (8.5 m)	-63
Surface area of avg. pile:	85,205 ft^2 (7,920 m^2)	77,489 ft^2 (7,203 m^2)	-9
Area disturbed/day:	1,760,163 ft^2 (100,030 m^2)	782,639 ft^2 (72,736 m^2)	-27
Annual TSP emissions:			
Uncontrolled:	162.8 tons	92.0 tons	-43
90% controlled:	16.3 tons	9.2 tons	-43
Annual PM10 emissions[1]			
Uncontrolled:	57.0 tons	32.2 tons	-43
90% controlled:	5.7 tons	3.2 tons	-43

[1] The fraction of PM10 particles in TSP is assumed to be 0.35; therefore, annual PM10 emissions were calculated by multiplying annual TSP emissions by 0.35.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.2 Description of Emission Calculations - continued

1.2.7 Other Emission Sources

1.2.7.1 Propane-fired thaw shed

Manufacturer and Model number: Solar Flow, #1RT-350
Rated heat capacity: 35 MBTU/hr
Rated heat content of propane: 1000 BTU/ft^3
Rated fuel consumption: 35,000 ft^3/hr (102 heaters, 350 ft^3/hr/heater)

Actual heat capacity: 35.413 MBTU/hr
Actual heat content of propane: 2516 BTU/ft^3
Annual fuel consumption (1987): 85,900 gallons = 3.13 million ft^3

Hourly fuel consumption:

$$\frac{35{,}413{,}000 \text{ BTU/hour}}{2516 \text{ BTU/ft}^3} = 14{,}075 \text{ ft}^3\text{/hour propane}$$

The amount of sulfur and ash in the fuel is assumed to be negligible.

Emission rates were calculated as follows:

Compound	Emission Rate (lb/1000 gal. LPG)	Annual Consumption (x 1000 gal. LPG)	Annual Emissions (tons/yr)
Particulate	0.265	85.90	0.0114
Sulfur oxides	0.014	85.90	0.0006
Carbon monoxide	3.10	85.90	0.1331
Nitrogen oxides	12.40	85.90	0.5326
VOCs			
Non-methane	0.25	85.90	0.0197
Non-methane	0.27	85.90	0.0116
		TOTAL VOCs	0.0223

[1] Emission rates for LPG from Table 1.5-1, A-42 (9.88)

[2] Average value from Table 1.5-1, AP-42, (9/88)

The propane heater is used approximately 222 hours a years, depending on the ambient temperture. The heater is used during December, January, and February at an average rate of 18.5 hours/week.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.3 Terminal Emissions

1.3.1 Operation Description

The following section describes individual transfer components and operating procedures of the coal terminal.

Modes of Operation	Source Point and Area No.	Description
1,2,3	1.	Coal discharged from railcars into hopper.
1,2,3	2.	Coal fed onto Conveyer C-1 by vibrating feeders.
1,2,3	3.	Conveyor C-1 discharges onto Conveyor C-2.
1,2,3	4a.	Conveyor C-2 discharges at Tower TT-1.
1,2,3	4b.	Surge Silo SS-1.
1,2,3	5.	Surge Silo SS-1 discharges onto Conveyor C-3.
1,2,3	6.	Conveyor C-3 discharges onto Conveyor C-4, C- 5 or C-6 at Tower TT-2.
2	7.	Conveyor C-4 discharges onto S/R #1 Elevating Conveyor.
2	8.	S/R #1 Elevating Conveyor discharges onto S/R #1 Boom Conveyor.
2	9.	S/R #1 Boom Conveyor discharges (Stacking Mode).
4	10.	S/R #1 Boom Conveyor loads (Reclaiming Mode).
4	11.	S/R #1 Boom Conveyor discharges onto Conveyor C-4.
4	12.	Conveyor C-4 discharges onto Conveyor C-6.
3	13.	Conveyor C-5 discharges onto Conveyor C-7 at Tower TT-3.
3	14.	Conveyor C-7 discharges onto S/R #2 Elevating Conveyor.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.3 Terminal Emissions - continued

1.3.1 Operation Description -continued

Modes of Operation	Source Point and Area No.	Description
3	15.	S/R #2 Elevating Conveyor discharges onto S/R #2 Boom Conveyor.
3	16.	S/R #2 Boom Conveyor discharges (Stacking).
5	17.	S/R #2 Boom Conveyor loads (Reclaiming Mode).
5	18.	S/R #2 Boom Conveyor discharges onto C-7.
5	19.	Conveyor C-7 discharges onto Conveyor C-8 at Tower TT-3.
5	20a.	Conveyor C-8 discharges at Tower TT-4 (if going to Surge Silo SS-2) or onto Conveyor C- 11 (if going to Surge Silo SS-3).
5	20b.	Surge Silo SS-2 or SS-3.
1,4,6	21.	Conveyor C-6 discharges onto Conveyor C-9 at Tower TT-3.
1,4,6	22a.	Conveyor C-9 discharges at Tower TT-4 (if going to Surge Silo SS-2) or onto Conveyor C- 11 (if going to Surge Silo SS-3).
1,4,6	22b.	Surge Silo SS-2 or SS-3.
1,4,5,6	23.	Surge Silos SS-2 and SS-3 feed coal by vibrating feeders onto Conveyor C-12.
1,4,5,6	24.	Conveyor C-12 discharges onto Conveyor C-10.
1,4,5,6	25.	Pier Conveyor C-10 discharges onto Shiploader Boom Conveyor.
1,4,5,6	26.	Coal discharge from Shiploader Boom Conveyor through a telescoping chute into the ship.
6	27.	R-3 Boom Conveyor loads (Reclaiming Mode).
6	28.	R-3 Boom Conveyor discharges onto C-13.
6	29.	Conveyor C-13 discharges onto C-5 or C-6.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.3 Terminal Emissions - continued

1.3.2 Terminal Operating Modes

In calculating annual emissions, the total time the facility is expected to operate in one of the following six modes was used. It should be noted that the facility can operate in certain combinations of these modes (i.e. Modes 2 and 5, Modes 2 and 6, Modes 3 and 4, and Modes 3 and 6).

Mode	Description	Hours/Year[1]
No.1	Coal loaded directly to ship	557
No.2	Coal transferred from dumper to S/R #1	3201
No.3	Coal transferred from dumper to S/R #2	3201
No.4	Coal transferred from S/R #1 to vessel	1926
No.5	Coal transferred from S/R #2 to vessel	1395
No.6	Coal transferred from R #3 to vessel	2214

The terminal will operate 24 hours per day, 365 days per year.

[1] Maximum number of hours operations expected to occur.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.3 Terminal Emissions - continued

1.3.3 Emissions from Material Transfer Points

The maximum annual emissions of fugitive dust from the facility is summarized in Table 1. Maximum hourly emission rates for TSP and PM10 are summarized in Table 2 and Table 4, respectively. Maximum annual emission rates for TSP and PM10 are summarized in Table 3 and Table 5, respectively.

TABLE 1

TABLE 1

AS-BUILT ANNUAL EMISSIONS
20,000,000 TPH THROUGHPUT

EMISSION POINTS	MODES	HOURS	AVERAGE FLOW-RATE (TPH)	EMISSION FACTOR TSP (#/TON)	EMISSION FACTOR PM-10 (#/TON)	CON-TROL (%)	AVG HOURLY TSP EMISSION (#/HR)	AVG HOURLY PM-10 EMISSION (#/HR)	AVERAGE EMISSIONS TSP (TONS/YR)	YEARLY EMISSIONS PM-10 (TONS/YR)
1	1,2,3	6958.4	2874	0.0021	0.00075	90%	0.612	0.214	2.130	0.746
2	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
3	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
4(a)	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
4(b)	1,2,3	6958.4	2874	0.0015	0.00073	99%	0.044	0.021	0.154	0.073
5	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
6	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
7	2	3200	2874	0.0015	0.00073	90%	0.444	0.210	0.710	0.336
8	2	3200	2874	0.0015	0.00073	90%	0.444	0.210	0.710	0.336
9	2	3200	2874	0.0015	0.00073	75%	1.110	0.525	1.776	0.840
10	4	1920.8	3614	0.0012	0.00058	50%	2.209	1.045	2.122	1.004
11	4	1920.8	3614	0.0012	0.00058	90%	0.442	0.209	0.424	0.201
12	4	1920.8	3614	0.0012	0.00058	90%	0.442	0.209	0.424	0.201
13	3	3200	2874	0.0015	0.00073	90%	0.444	0.210	0.710	0.336
14	3	3200	2874	0.0015	0.00073	90%	0.444	0.210	0.710	0.336
15	3	3200	2874	0.0015	0.00073	90%	0.444	0.210	0.710	0.336
16	3	3200	2874	0.0015	0.00073	75%	1.110	0.525	1.776	0.840
17	5	1394.4	3614	0.0012	0.00058	50%	2.209	1.045	1.540	0.729
18	5	1394.4	3614	0.0012	0.00058	90%	0.442	0.209	0.308	0.146
19	5	1394.4	3614	0.0012	0.00058	90%	0.442	0.209	0.308	0.146
20(a)	5	1394.4	3614	0.0012	0.00058	90%	0.442	0.209	0.308	0.146
20(b)	5	1394.4	3614	0.0012	0.00058	99%	0.044	0.021	0.031	0.015
21	1,4,6	4698.4	3614	0.0012	0.00058	90%	0.442	0.209	1.038	0.491
22(a)	1,4,6	4698.4	3614	0.0012	0.00058	90%	0.442	0.209	1.038	0.491
22(b)	1,4,6	4698.4	3614	0.0012	0.00058	99%	0.044	0.021	0.104	0.049
23	1,4,5,6	6092.8	3614	0.0012	0.00058	90%	0.442	0.209	1.346	0.637
24	1,4,5,6	6092.8	3614	0.0012	0.00058	90%	0.442	0.209	1.346	0.637
25	1,4,5,6	6092.8	3614	0.0012	0.00058	90%	0.442	0.209	1.346	0.637
26	1,4,5,6	6092.8	3614	0.0012	0.00058	75%	1.105	0.522	3.365	1.592
27	6	2219.2	3614	0.0012	0.00058	50%	2.209	1.045	2.451	1.159
28	6	2219.2	3614	0.0012	0.00058	90%	0.442	0.209	0.490	0.232
29	6	2219.2	3614	0.0012	0.00058	90%	0.442	0.209	0.490	0.232
									---	---
								SUBTOTAL =	35.591	16.572
								PILE EMISSION =	9.200	3.220
									---	---
								TOTAL (tons/yr) =	44.791	19.792

TRC

TABLE 2

TABLE 2

AS-BUILT
AVERAGE ANNUAL PM10 EMISSION RATES (lb/hr)

20,000,000 TONS PER YEAR
THROUGHPUT

EMISSION POINT	No.1	No.2	No.3	No.4	No.5	No.6
1	0.214	0.214	0.214			
2	0.210	0.210	0.210			
3	0.210	0.210	0.210			
4(a)	0.210	0.210	0.210			
4(b)	0.021	0.021	0.021			
5	0.210	0.210	0.210			
6	0.210	0.210	0.210			
7		0.210				
8		0.210				
9		0.525				
10				1.045		
11				0.209		
12				0.209		
13			0.210			
14			0.210			
15			0.210			
16			0.525			
17					1.045	
18					0.209	
19					0.209	
20(a)					0.209	
20(b)					0.021	
21	0.209			0.209		0.209
22(a)	0.209			0.209		0.209
22(b)	0.021			0.021		0.021
23	0.209			0.209	0.209	0.209
24	0.209			0.209	0.209	0.209
25	0.209			0.209	0.209	0.209
26	0.522			0.522	0.522	0.522
27						1.045
28						0.209
29						0.209
SUBTOTAL =	2.874	2.230	2.440	3.051	2.842	3.051
EMISSION =	0.735	0.735	0.735	0.735	0.735	0.735
(tons/yr) =	3.609	2.965	3.175	3.786	3.577	3.786

TRC

TABLE 3

TABLE 3

AS-BUILT
AVERAGE ANNUAL PM10 EMISSION RATES (lb/hr)

20,000,000 TONS PER YEAR
THROUGHPUT

MODE	HOURLY EMISSION (lb/hr)	HOURS OF OPERATION 1988 (hr)	1988 ANNUAL EMISSION (ton)
1	2.874	558.4	0.802
2	2.230	3200	3.568
3	2.440	3200	3.904
4	3.051	1920.8	2.930
5	2.842	1394.4	1.982
6	3.051	2219.2	3.386
		SUBTOTAL =	16.572
		PILE EMISSION =	3.220
		TOTAL (tons/yr) =	19.792

TRC

TABLE 4

TABLE 4

AS-BUILT
AVERAGE ANNUAL TSP EMISSION RATES (lb/hr)

20,000,000 TONS PER YEAR
THROUGHPUT

EMISSION POINT	No.1	No.2	No.3	No.4	No.5	No.6
1	0.612	0.612	0.612			
2	0.444	0.444	0.444			
3	0.444	0.444	0.444			
4(a)	0.444	0.444	0.444			
4(b)	0.044	0.044	0.044			
5	0.444	0.444	0.444			
6	0.444	0.444	0.444			
7		0.444				
8		0.444				
9		1.110				
10				2.209		
11				0.442		
12				0.442		
13			0.444			
14			0.444			
15			0.444			
16			1.110			
17					2.209	
18					0.442	
19					0.442	
20(a)					0.442	
20(b)					0.044	
21	0.442			0.442		0.442
22(a)	0.442			0.442		0.442
22(b)	0.044			0.044		0.044
23	0.442			0.442	0.442	0.442
24	0.442			0.442	0.442	0.442
25	0.442			0.442	0.442	0.442
26	1.105			1.105	1.105	1.105
27						2.209
28						0.442
29						0.442
SUBTOTAL =	6.234	4.874	5.318	6.451	6.009	6.451
EMISSION =	2.100	2.100	2.100	2.100	2.100	2.100
(tons/yr) =	8.334	6.974	7.418	8.551	8.109	8.551

TRC

TABLE 5

TABLE 5

AS-BUILT
AVERAGE ANNUAL TSP EMISSION RATES (tons/yr)

20,000,000 TONS PER YEAR
THROUGHPUT

MODE	AVERAGE HOURLY EMISSION (lb/hr)	HOURS OF OPERATION 1988 (hr)	ANNUAL EMISSION (ton)
1	6.234	558.4	1.741
2	4.874	3200	7.799
3	5.318	3200	8.509
4	6.451	1920.8	6.195
5	6.009	1394.4	4.190
6	6.451	2219.2	7.158
		SUBTOTAL =	35.591
		PILE EMISSION =	9.200
		TOTAL (tons/yr) =	44.791

TRC

Accretion Technologies, LLC

PRODUCT INFORMATION

FTH-100

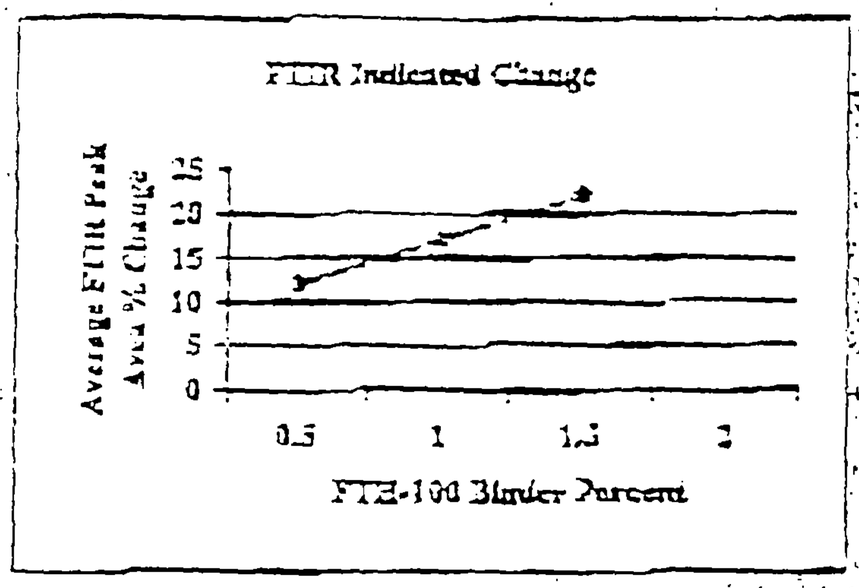
FTH-100 is an organic additive produced from renewable resources designed to provide the chemical bonding required in the SynFuel manufacturing process without any adverse effect to utilization or the environment.

FTH-100 Benefits

1. *Produced from natural polymers.*
2. *Environmentally renewable resource.*
3. *Low viscosity for ease of application.*
4. *Very stable emulsion eliminates heated storage.*
5. *Permanently bonds to the fuel source and remains water resistant.*
6. *Neutral pH protects equipment from corrosion and deterioration.*
7. *Retains fuel combustion & coking properties.*
8. *Positive BTU addition of approximately 8,300 BTU/lb.*
9. *Ash and sulfur addition of less than 0.001%.*
10. *Positive environmental impact.*

FTIR Test Information

SynFuel samples produced with FTH-100 submitted to Combustion Resources, inc for Fourier-transformed infrared (FTIR) analysis obtained the following indicated change.



According to Combustion Resources, the previously performed statistical analyses on multiple coal samples suggest that, in general, an average peak area difference of greater than 15% represents a significant change in the functional groups indicated.

SynFuel Binder

Accretion Technologies, LLC
300 Business Center Drive, Suite 302, Pittsburgh, PA 15205
Telephone (724) 941-9075 FAX (724)941-9464

Technical Data Sheet

Product: FTH-100

RCRA Metals

Metals	Result	EPA Method
Arsenic	<1.0	206.2
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

All data reported in mg/l

Technical Data Sheet

Product: FTH-100

Semi-Volatile Organics by Method 8270

CAS#	Compound	Concentration (ug/Kg)	
62-75-9	N-Nitrosodimethylamine	8,000	U
110-86-1	Pyridine	8,000	U
97-63-2	Ethyl methacrylate	8,000	U
123-63-7	Paraldehyde	8,000	U
109-06-8	2-Picoline	16,000	U
10595-95-6	Nitrosomethylethylamine	8,000	U
66-27-3	Methyl methanesulfonate	8,000	U
108-95-2	Phenol	8,000	U
55-18-5	N-Nitrosodiethylamine	8,000	U
62-50-5	Ethyl methanesulfonate	8,000	U
62-53-3	Aniline	8,000	U
76-01-7	Pentachloroethane	8,000	U
111-44-4	bis (2-Chloroethyl) ether	16,000	U
95-57-8	2-Chlorophenol	8,000	U
541-73-1	1,3-Dichlorobenzene	8,000	U
100-44-7	Benzyl chloride	8,000	U
106-46-7	1,4-Dichlorobenzene	8,000	U
100-51-6	Benzyl alcohol	8,000	U
95-50-1	1,2-Dichlorobenzene	8,000	U
95-48-7	2-Methylphenol	8,000	U
39638-32-9	bis (2-Chloroisopropyl) ether	8,000	U
108-39-4	3-Methylphenol	8,000	U
106-44-5	4-Methylphenol	8,000	U
930-55-2	N-Nitrosopyrrolidine	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	Hexachloroethane	8,000	U
98-95-3	Nitrobenzene	8,000	U

Product: FTH-100

Semi-Volatile Organics by Method 8270

CAS#	Compound	Concentration (ug/Kg)	
100-75-4	N-Nitrosopiperidine	8,000	U
78-59-1	Isophorone	8,000	U
88-75-5	2-Nitrophenol	8,000	U
105-67-9	2,4-Dimethylphenol	8,000	U
108-70-3	1,3,5-Trichlorobenzene	8,000	U
98-87-3	Benzal chloride	8,000	U
65-85-0	Benzoic acid	990	J
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-Chloroaniline	8,000	U
87-65-0	2,6-Dichlorophenol	16,000	U
95-54-5	o-Phenylenediamine	8,000	U
122-09-8	dimethylphenylethylamine	8,000	U
1888-71-7	Hexachloropropene	8,000	U
87-68-3	Hexachlorobutadiene	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-Phenylenediamine	8,000	U
94-59-7	Safrole	8,000	U
106-50-3	m-Phenylenediamine	8,000	U
91-57-6	2-Methylnaphthalene	8,000	U
90-12-0	1-Methylnaphthalene	8,000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	8,000	U
634-90-2	1,2,3,5-Tetrachlorobenzene	8,000	U
77-47-4	Hexachlorocyclopentadiene	8,000	U
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-Chloronaphthalene	8,000	U

Product: FTH-100

Semi-Volatile Organics by Method 8270

CAS#	Compound	Concentration (ug/Kg)	
634-66-2	1,2,3,4-Tetrachlorobenzene	8,000	U
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-Dinitrophenol	32,000	U
100-02-7	4-Nitrophenol	8,000	U
132-64-9	Dibenzofuran	8,000	U
121-14-2	2,4-Dinitrotoluene	8,000	U
608-93-5	Pentachlorobenzene	8,000	U
134-32-7	2-Naphthylamine	16,000	U
606-20-2	2,6-Dinitrotoluene	8,000	U
134-32-7	1-Naphthylamine	16,000	U
58-90-2	2,3,4,6-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-Nitroaniline	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

Product: F1H-100

Semi-Volatile Organics by Method 8270

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.

Technical Data Sheet

Product: FTH-100

TCLP Metals

Metals	Result	Limits	EPA Method
Arsenic	0.046	5.0	206.2
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

All data reported in ppm

Technical Data Sheet

Product: FTH-100

Calorific Content by ASTM D-240

Test	Result
Calorific Content	8,826 BTU/lb

Reported on an as is basis

ACCRETION TECHNOLOGIES
MATERIAL SAFETY DATA SHEET

Product Name: FTH-100

Preparation date: 8/16/00

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FTH-100

MSDS REVISION #: 001

SYNONYMS: 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	%	CAS No.	Exposure Limits
Organic resins	30-60	Proprietary	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	7732-18-5	Not established

SECTION 3 - HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

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 irritation.

Section 3 continued on next page

SECTION 3 - HAZARDS IDENTIFICATION (continued)

SKIN:

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

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: ~500° F (100° C)

FLASH POINT METHOD: PMCC

UPPER EXPLOSION LIMIT: Unavailable
LOWER EXPLOSION LIMIT: Unavailable
AUTOIGNITION TEMPERATURE: Unavailable
SENSITIVITY/SPARKS: Unknown
SENSITIVITY/STATIC ELECTRICITY: 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.

SECTION 7 - HANDLING AND STORAGE

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.

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.

ENGINEERING CONTROLS:

Provide sufficient ventilation to maintain exposure below level of overexposure.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Brown liquid @ 68° F (20° C)
ODOR:	Slight bland
SPECIFIC GRAVITY:	>0.998
VAPOR PRESSURE (mm Hg):	17.5 @ 68° F (20° C)
VAPOR DENSITY (Air = 1):	Lighter than air
INITIAL BOILING POINT:	212° F (100° C)
EVAPORATION RATE: (Ethyl Ether = 1)	<1
SOLUBILITY in WATER:	Dispersible
VOLATILE %:	Unavailable
pH:	5-7
pH METHOD:	Unavailable

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 11 - TOXICOLOGICAL INFORMATION

No data available.

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.

SECTION 14 - TRANSPORT INFORMATION

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

SECTION 16 - OTHER INFORMATION

HAZARD RATING:

HEALTH	1	0 - LEAST
FIRE	1	1 - SLIGHT
REACTIVITY	0	2 - MODERATE
OTHER	-	3 - HIGH
		4 - EXTREME

HAZARD RATING METHOD: NFPA

REASON FOR REVISION:

Updated flash point information (Section 5).

****END OF REPORT****

Technical Data Sheet

Product: FTH-100

Volatile Organics by Method 8240

CAS#	Compound	Concentration (ug/Kg)	
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	Acetone	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	U
79-01-6	Trichloroethane	26	U
124-48-1	Dibromochloromethane	26	U
79-00-5	1,1,2-Trichloroethane	26	U
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
108-10-1	4-Methyl-2-Pentanone	280	
591-78-6	2-Hexanone	79	U
127-18-4	Tetrachloroethane	26	U
79-34-5	1,1,2,2-Tetrachloroethane	53	U

Product: FTH-100

Volatile Organics by Method 8240

CAS#	Compound	Concentration (ug/Kg)	
108-88-3	Toluene	1,300	E
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	360	
100-42-5	Styrene	63	
1330-20-7	Total xylenes	340	
74-88-4	Iodomethane	53	U
107-02-8	Acrolein	640	U
107-13-1	Acrylonitrile	26	U
75-69-4	Trichlorofluoromethane	26	U
107-05-1	3-Chloropropene	79	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoromethane	53	U
354-58-5	1,1,1-Trichloro-2,2,2-trifluoromethane	53	U
74-95-3	Dibromomethane	53	U
4170-30-3	Crotonaldehyde	530	U
106-93-4	1,2-Dibromoethane	26	U
630-20-6	1,1,1,2-Tetrachloroethane	26	U
764-71-0	cis-1,4-Dichloro-2-butene	79	U
96-18-4	1,2,3-Trichloropropane	79	U
764-71-0	trans-1,4-Dichloro-2-butene	79	U
96-18-4	Ethylmethacrylate	53	U
96-12-8	1,2-Dibromo-3-chloroptropane	53	U

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.

Technical Data Sheet

Product: FTH-100

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

Test	Detection Limit	Result
EOH in soil	70mg/kg	<70mg/kg

Reported on dry weight basis

Technical Data Sheet

Product: FTH-100

Polynuclear Aromatic Hydrocarbons by EPA Method 625/8270C

Compound	Concentration (ug/Kg)	Flag
Acenaphthene	<100,000	U
Acenaphthylene	<100,000	U
Anthracene	<100,000	U
Benzo (a) anthracene	<100,000	U
Benzo (a) pyrene	<100,000	U
Benzo (b) fluoranthene	<100,000	U
Benzo (g,h,i) perylene	<100,000	U
Benzo (k) fluoranthene	<100,000	U
Chrysene	<100,000	U
Dibenzo (a,h) anthracene	<100,000	U
Fluoranthene	<100,000	U
Fluorene	<100,000	U
Indeno (1,2,3-cd) pyrene	<100,000	U
Naphthalene	<100,000	U
Phenanthrene	<100,000	U
Pyrene	<100,000	U

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.

OCR

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

DOMINION TERMINAL ASSOCIATES
PIER II FACILITY

AIR QUALITY MODIFICATION APPLICATION
REGISTRATION NO. 60997
AIRS ID NO. 51-700-00074

DIVISION OF AIR QUALITY .004
0
TIDEWATER REGION

Submittal Date: 61i zooL4

Dominion Terminal Associates PO. Box 967A
Newport News, VA 23607
(757) 245-2275

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May 1,2004
Virginia Department of Environmental Quality
5636 Southem Boulevard
Virginia Beach, VA 23462 MAY 2004
REGL-i'vt-L) -@"i

Attention: Mr. David A. Mashaw DEOTIDEWAi-ER
REGIONALOFFICE

Dear Mr. Mashaw, t6e C? 77

Dominion Terminal Associates (DTA) in collaboration with our consultant, Simpson Weather Associates (SWA), is providing for your review and approval a permit application for adding vessel unloading to our STATIONARY SOURCE PERMIT. Included are the DEQ application forms and supporting spreadsheet information. We have also included with the application three drawings showing the schematic arrangement of the equipment and material transfers. In this cover letter we briefly describe the approach taken and its rationale.

Need for a permit revision

Dominion Terminal Associates has determined that the market for coal has made it important to our continued success in the coal industry that we prepare to unload coal from vessels as well as from rail cars. To do so will require the installation of ship unloading equipment at the pier. The new equipment will include:

• Two grab unloaders using state of the art, environmentally friendly technology

• Two negative pressure hoppers (w/ baghouses) to receive the coal from the grabs

• Up to five additional conveyer belts to move coal from the ships to the storage area.

No request for additional annual throughput is being made. The coal brought in by rail plus that brought in by vessel will not exceed the current permitted limit of 24,000,000 tons. Using the same equipment, and still not exceeding the tonnage limits, we also propose handling limestone in similar sizing as the coal, up to 500,000 tons per year.

No request is being made for increasing the allowable amiual average ground st
orage
from the current limit of 975,000 tons. The rationale articulated in the 1989
 permit
application for expansion from 68 to IO 1 acres still applies:

Better pile management through greater flexibility in locating shipments for
transfer

• Lower height of piles through more acreage and better access
• Reduced bulldozer traffic through better access to piles by the stacker/reclaimers.

Permit modifications requested

In 2002, DTA was issued a modified pen-nit to build a synfuel plant to process 12,264,000 tons per year. Reconsideration of the market for synfuel has led DTA to revise its needs downward to 5,000,000 tons per year. DTA wishes to use this permit application to have this limit lowered, in part, to offset the expected increase in allowable emissions from the coal import activities. In fact., the vessel unloading is computed (AP-42) to produce -I Otons PM/year while the reduced synfuel activity is computed to remove 13 tons PM/year. Additionally, as we have not yet begun construction of the Synfuel facility (contracts have yet to be finalized with Synfuel plant owners), we would request an extension on our allowed time frame to begin construction. It is our understanding that approval for extension of the time was granted in a letter from David Mashaw on April 12, 2004.

As mentioned above, this application for a permit modification is primarily driven by the need to have vessel unloading capabilities. Best available technology equipment is planned to minimize fugitive dust emissions within allowable limits. Panels lowered under the path of the grab-hopper route will eliminate any coal being dropped into the river.

We would also like to point out at this time that the schematics provided, and the equipment and transfers shown and listed are approximations based upon preliminary engineering activity. Some modifications may be made, but we anticipate that the information provided shows maximums.

Additionally, the Form 7 section on FUEL-BURNING EQUIPMENT AND STATIONARY COMBUSTION ENGINES is submitted only as a possibility. It is expected that the final design will incorporate two barge mounted cranes as indicated on the enclosed drawing number 2022-2030, but the exact specifications of the cranes have not been selected and the manner in which they will be provided has not been determined, i.e., contracted, leased or purchased. The form is submitted on one of the possible cranes that are being considered.

There are several substantive changes in this permit application compared to that prepared for the 2002 modification. Prior to the 2002 permit modification for synfuel operations, the PM limit was 60.8 tons/year. Given that the AP-42 computation of increased emissions from the synfuel activity was < IO tons/year, the revised permit limit of 1 12.7 tons appeared to be higher than would have been estimated. A review of the supporting documentation that was provided along with the permit application indicated that a value of 90.27 tons/year was introduced as the estimated pile emissions

based upon
the K-factor program appended to the permit. However, that number comes from a
spreadsheet program (different than the K-factor logic required by permit) developed by
DEQ to estimate annual emissions from the facility. The value, 90.27, is an empirical
calibration factor and is not to be used as 4'a maximum" value for controlled emissions. It
is independent of facility size, annual storage or weather. That same end-of-year
program also was designed and calibrated when the DTA facility was 68 acres large and

applied to all fugitive emissions, not just piles. Thus the use of the 90.27 value was doubly without merit. This current permit application reverts back to the computational approach used in the successful 1989 permit application for expansion where pile emissions were computed according to the approach outlined in AP-42.

A second substantial change in this permit modification application relates to the use of 99% control efficiency for all transfer points and processing activities in the 2002 permit application. In our current application we assign control efficiencies that are consistent with the published "EPA Accepted Control Device Efficiencies". While this increases the estimates of emissions at most of the points of coal handling, the net result is a lower annual limit for PM emissions from the terminal than is currently permitted since the 90.27 is not employed as the estimate of pile emissions only.

While DEQ Form 7 is used in this permit application, we have provided much of the required information in the form of a Microsoft Excel spreadsheet. A CD with the data is included to allow DEQ staff to manipulate the data as they see fit during their review of the application.

The net result of the recompilation of maximum controlled PM and PM IO emissions is a major reduction in the permit limits down from 112.7 tons/year to 65.7 tons/year. We would request that you advise us of the implications of this reduction below the I OOTon/year value that triggers PSD and Title V actions. This is especially true for the PM- I 0 amounts which are down from 21.9 to I 1. 83 tons/year. In fact these values include fugitive emissions which may or may not be used depending upon source classification.

End of year estimates of facility emissions

All past and current permits for DTA have not included a method for estimating total annual emissions (in tons). However, for the past IO years or more, DTA has used a DEQ spreadsheet tool for estimating those emissions. SWA has expressed reservations about its use since the tool has some shortcomings:

• The tool was developed using a few (< IO) TSP monitor results during the late 80's. It was intended to estimate total emissions from the coal storage facility based upon empirically adjusted relationships between average tonnage on the ground in 45 one-acre piles, annual weather related "stress" as measured by the K-factor and the efficiency of the facility in adhering to the K-factor system's call for spray cycles.

• The tool was never re-calibrated for expansion in 1989 from 68 to IO 1 acres and thus would exaggerate the required height of the piles if more than 975,000 tons were to be stored (current permit allows 1,400,000 tons).

• The tool was also not recalibrated for synfuel operations. It would be very difficult to recalibrate, since you need uncontrolled emissions for an extended

period as was the case during a portion of the 1980's study period due to inoperative equipment.
• The tool does not consider annual throughput (e.g. it estimates the same emi ssions
for 1,000,000 tons/year as for 24,000,000 tons/year.)

During this permit modification process, we recommend retiring the DEQ spreadsheet for estimating annual emissions and replacing it with an estimator that is based directly upon the permit methodology of emission calculations. The proposed total annual emissions (TAE) estimator has three terms:

• Term I scales to the annual throughput (TP in mega tons) and thus is related specifically to the emissions during unloading, processing, stackout, reclaiming and loading.

• Term 2 scales to the annual average amount of coal being stored on the ground (GS in mega tons) and thus relates to pile size/height.

• Term 3 expresses the degree to which the terminal has been faithful in adherence (Eff,) to the K-factor requests for water spray cycles.

The suggested estimator for annual PM emissions (tons) is:

TAE (PM) = f (TP/24) * 5 6.5 + (GS/. 975) * 9.21 * (Eff,/Eff)

TAE (PM IO) =. 18 * TAE (PM)

The numerical values come from the AP-42 process summarized in the application material. The Eff values are obtained as follows:

• Eff, is computed from 8 years of hourly weather data obtained from the DTA tower by simulating the K-factor system and the subsequent computation of control efficiency based upon DEQ logic used in the K-factor algorithm. Thus, we have derived an upper limit for computed efficiency should the terminal follow the K-factor demands faithfully. That value based upon data from 1996-2003 is 83.04%.

• Eff is computed daily by the K-factor software and is averaged for the year. Over the past few years that value has been around the mid to high 70's. The reason for being less than the 83% appears to be operational problems during extended freeze periods.

One aspect of this approach is less than rigorous in that the (Eff,/Eff) term is applied to both the GS activities and the TP activities. In actuality, the cannons do not affect the dust control at the ship loader (for example). However, SWA suggests that the Eff term be used to indicate the level of attention and performance, in general, at the DTA facility.

This assumption does act to increase the TAE over that which would result from applying the multiplier to just the GS terms, but we suggest a preference for the overstatement rather than a possible understatem ent.

For example, the TAE (PM) for 2003 would have been:

f 5.175/24*56.5 + .320/.975*9.21 * 83.04/66.2 = 19.1 tons

Summary

1. Current permit is for:

a. 24,000,000 tons/year throughput

b. 12,264,000 tons/year processing of raw coal into synfuel

c. 1,400,000 tons maximum ground storage on IO 1 acres.

2. DTA wishes to have an Air Permit to Operate with the following:
a. 24,000,000 tons/year throughput of all coal products
b. 5,000,000 tons/year processing of raw coal into synfuel
c. I 0,000,000 tons/year maximum unloading of raw coal from vessels (remainder would be from rail cars)
d. 975,000 tons maximum average ground storage on the IO 1 acres.
3. DTA has computed the new controlled emissions limit for PM to be 65.7 tons/year and for PM- IO, H. 8 tons/year.
4. DTA is recommending the retirement of the current DEQ end-of-year spreadsheet for estimating annual emissions. In its place, DTA offers an algorithm that is traceable to the methodology used during permitting to estimate total emissions.
If you have any questions, please feel free to call. Your favorable consideration of this application is much appreciated.

Best Regards,

D. R. Wagoner
Superintendent Engineering/Maintenance

cc:
G. D. Emmitt
Senior Scientist
Simpson Weather Associates, Inc.
Charlottesville, Va. 22902

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COMMONWEALTH OF VIRGINIA
Department of Environmental Quality

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DEQ T

OIFIFA@
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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)

Icertifyunderpenaltyof lawthatthis documentandaflattachments[as notedabove]wer
epreparedundermy
direction orsupervision in accordance with a system designedto assure thatqual
ifiedpersonnelproperlygatherand
evaluate the information submitted. Based on my inquiry of the person orperso
ns 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 forsubmitting
false information, including the possibility of fine and imprisonment for know
ing violations.

I certify that I understand that the existence of a permit under[Article 6 of the Regulations] does not shield the
source from potential enforcement of any regulation of the board goveming the major NSR program and does not
relieve the source of the responsibility to comply with any applicable provisi on of the major NSR regulations.

-1 Oa
SIGNATURE: DATE: is

NAME:

TITLE: REGISTRATION

COMPANY: A@ N U M B E R: 6CM-)

'References: Virginia Regulations for the Control and Abatement of Air Polluti on (Regulations), 9 VAC 5-20-230B and 9 VAC 5-80-1140E. See reverse of this form for instructions.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

DOCUMENT CERTIFICATION FORM

INSTRUCTIONS FOR USE

Various provisions of the Regulations for the Control and Abatement of Air Pol lution require that certain documents submitted to the Board or the Department be signed by a responsible official with certification that the inf ormation contained in the statement is accurate to the best knowledge ofthe individual certifying the statement. Documents covered by this requirement in clude, but are not limited to, permit applications, registrations, emission statements, emission testing and monitoring reports, or compliance certificati ons. The certification should include the full name, title, signature, date o f
signature, and telephone number of the responsible official. A responsible of ficial is defined as follows (Re-gulations, 9 VAC 5-20-230A.):

a. For a business entity, such as a corporation, association or cooperative, a responsible officiai is either:

(1) The president, secretary, treasurer, or a vice-president of the business e ntity in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the business enti ty; or

(2) A duly authorized representative of such business entity if the representa tive is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 19 80 dollars), or (ii) the authority to sign documents has been assigned or delegated to such representative in accordance with procedures of the busin ess entity.

b. For a partnership or sole proprietorship, a responsible official is a gener al partner or the proprietor, respectively.

C. For a municipality, state, federal, or other public agency, a responsible o fficial is either a principal executive officer or ranking elected official. A

principal executive officer of a federal agency includes the chief executive o fficer having responsibility for the overall operations of a principal geographic unit of the agency.

Certification is required with each application submiftal, including amendment s to an application

(i.e. new pages, revisions to existing pages and other amendments to applicati on information).

Reference: Regulations, 9 VAC 5-80-1140D. Letters, phone calls, etc. are cons idered additional supplementary information to the certified application submittal.

COMMONWEALTH OF VIRGINIA DEPARTNi- . f OF ENVIRONMENTAL QUALITY
AIR PERMIT APPLICATION GENERAL INFORMATION

PERSON COMPLETING FORM DATE REGISTRATION NUMBER

'5// y ^ -7
George D. Emmift, Simpson Weather Associates, Inc.

REASON(S) FOR SU13MISSION:

El STATE OPERATING PERMIT THIS PERMIT IS APPLIED FOR PURSUANT TO PROVISIONS OF THE
VIRGINIA ADMINISTRATIVE CODE, 9 VAC 5 Chapter 80, Article 5 (SOP)

F-INEW (Greenfield) SOURCE THIS PERMIT IS APPLIED FOR PURSUANT TO THE FOLLOWING PROVISION(S) OF THE VIRGINIA ADMINISTRATIVE CODE:
F)T_] MODIFICATION of a SOURCE F_X] 9 VAC 5 Chapter 80, Art. 6 (MINOR SOURCES)

F-I 9 VAC 5 Chapter 80, Art. 8 (PSD MAJOR SOURCES)

RELOCATION of a SOLTRCE El 9 VAC 5 Chapter 80, Art. 9 (NON-ATTAINMENT MAJOR SOURCES)

Non-Binding Letter of EXEMPTION

ANENDNENT to a Permit dated: Permit type: = SOP(Art.5) = NSR (Art.6)

Amenclment Type: THIS AMENDMENT IS REQUESTED PURSUANT TO THE PROVISIONS OF:

Administrative Amendment 9 VAC 5-80-970 (SOP Adm.) 9 VAC 5-80-1270 (NSR Adm.)

Minor Amendment 9 VAC 5-80-980 (SOP Minor) 9 VAC 5-80-1280 (NSR Minor)

Significant Amendment 9 VAC 5-80-990 (SOP Sig.) 9 VAC 5-80-1290 (NSR. Sig.)

CompleLe Pages 1, 2, anci 3 anci refer Lo Lhe above checked provisions for additional
informaLion requiremenLs. Form 7 pages may be used Lo saLisfy those requirenLS.

REGISTRATION/REGISTRATION UPDATE

NOTIFICATION OF OWNERSHIP OR NAME CHANGE - EFFECTIVE DATE:
(Complete Pages 1, 2 and 3 ONLY)

OTHER (SPECIFY):

COMPANY AND DIVISION NAME:
Dominion Terminal Associates

MAILING ADDRESS:
P.O. Box 967-A, Newport News,.VA 23607

TELEPHONE NUMBER: NUMBER OF EMPLOYEES AT SITE: PROPERTY AREA AT SITE:
757-245-2275 59

EXACT SOURCE LOCATION - INCLUDE 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:
Dan Wagoner 757-245-2275 ext. 305
Superintendent FAX NUMBER:
Engineering/Maintenance 757-247-9729

E-MAIL ADDRESS:
dwagoner@dominionterminal.com

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

FOR OFFICIAL USE ONLY
COUNTY CODE: PLANT ID NUMBER: LAT/LONG:

GENERAL INFORMATION INSTRUCTIONS

REASON FOR SUBMISSION - check the appropriate box(es) and the applicable regul ation(s).

1. "STATE OPERATING PERMIT" means that you are either an existing source apply ing for an operating permit,
or are a NEW (Greenfield) SOURCE applying for a State Operating Permit concurr ently with a permit to
construct and operate the NEW (Greenfield) SOURCE. State Operating Permits ar e normally optional, and
are requested for one of the reasons stated in 9 VAC 5-80-800 C.
2. "NEW (Greenfield) SOURCE" means thatyou are either constructing emission un its ata newfacilitywhere no
facility now exists, or you are constructing emission units at a facility that previously had no emission units at
the facility. The NEW (Greenfield) SOURCE is (or may be) subject to permit re view requirements.
3. "MODIFICATION of a SOURCE" means that (1) you already have emission units a t your facility, (2) you are
making physical or operational changes to the facility, (3) those proposed cha nges could result in a net
emission increase of a regulated pollutant (or the emission of a regulated pol lutant not presently being
emitted), and (4) that physical or operational change is (or may be) subject t o permit review requirements.
4. "RELOCATION of a SOURCE" means that you are relocating emission units from a facility in one location to a
new or existing facility in another location, and that relocation is (or may b e) subject to permit review.
5. "Non-Binding Letter of EXEMPTION" means that you are applying for written c onfirmation that a particular
change is not subject to permit review under 9 VAC 5, Chapter 80, Articles 6, 8, or 9.
6. "PERMIT AMENDMENT" means that you have an effective air permit for your sou rce, and you need changes
made to that permit that do not qualify as a "MODIFICATION of a SOURCE".
7. "REGISTRATION/REGISTRATION UPDATE" means that you are applying to register a source that is not
otherwise subject to permit review under 9 VAC 5, Chapter 80, Articles 6, 8 or 9, or you are applying to update
a previous registration. See 9 VAC 5-20-160 of the regulations.
8. "NOTIFICATION of OWNERSHIP OR NAME CHANGE" means that you simply notifying DEQ of the changes
as required by regulation. Requests to update a permit for the change shall b e made as a "PERMIT
AMENDMENT" request instead of a NOTIFICATION. Include the effective date of t he change in your request.
9. "OTHER (SPECIFY)" means you intend to make a change to your facility, you d o not knowwhat air permitting
requirements apply, and you wish for DEQ to evaluate the change for you and de termine which requirements
apply. Fill out the Form 7 as completely as possible and describe in a letter what you wish to do.

The listed regulations detail the various types of air pollution permits. Ple ase indicate which of these you believe are
applicable to this application. (More than one may apply). Sections of the re gulations may be downloaded from the
DEQwebsiteathttp://www.deg.state.va.us/. Copiesoftheregulationsareavailablefor purchasefromtheWestGroup
by calling 1-800-328-4880 (Air regulations are contained in Volume 6, Title 9 of the Virginia Administrative Code).

COMPANY AND DIVISION NAME - list the official company name and the division if applicable.

MAILING ADDRESS - list the mailing address that corresponds to the facility on this application.

TELEPHONE NUMBER - list the phone number at the facility.

NUMBER OF EMPLOYEES AT SITE - list the number of employees at the facility.

PROPERTY AREA AT SITE - list the area in acres.

EXACT SOURCE LOCATION - provide a description of the facility location indicating street address or directions to facility;
provide a map pinpointing the exact source location and specify where the plant property boundaries are, if requested by the
regional office; provide a plant layout with dimensions of all buildings (height, length, width) at the facility indicating all stack and
emission point locations by stack or reference number, if requested.

PERSON TO CONTACT ON AIR POLLUTION MATTERS - provide the name/title of a contact person for air pollution matters.

PHONE NUMBER - provide a phone number at which DEQ staff can reach the contact person.

FAX PHONE NUMBER - provide the fax number of the contact person, if there is one.
.-MAIL ADDRESS - provide an E-mail address of the contact person, if you wish to communicate with DEQ by e-mail.

FOR OFFICIAL USE ONLY - provided for use by the DEQ regional office.

COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PERMITAPPLICATION GENERAL INFORMATION (continued)

COMPANY NAME DATE REGISTRATION NUMBER_

Dominion Terminal Associates 5/j/04 60997

FOR PORTABLE PLANTS:
NO
IS THIS FACILITY DESIGNED TO BE PORTABLE? El YES FX
- IF YES, IS THIS FACILITY ALREADY PERMITTED AS A PORTABLE PLANT? E:1 YES E:1
NO PERMIT DATE:

IF NOT PERMITTED, IS THIS AN APPLICATION TO BE PERMITTED AS A PORTABLE PLANT?
El YES El NO

IF PERMITTED AS A PORTABLE FACILITY, IS THIS A NOTIFICATION OF RELOCATION? YES
  NO
DESCRIBE THE NEW LOCATION OR ADDRESS (INCLUDE A SITE MAP):

WILL THE PORTABLE FACILITY BE CO-LOCATED WITH ANOTHER SOURCE? YES F--1 NO REG.
 NO.@
WILL THE PORTABLE FACILITY BE MODIFIED OR RECONSTRUCTED AS A RESULT OF THE REL
OCATION? F-I YES NO
WILL THERE BE ANY NEW EMISSIONS OTHER THAN THOSE ASSOCIATED WITH THE RELOCATIO
N? F-1 YES F-I NO

IS THE FACILITY SUITABLE FOR THE AREA TO WHICH IT WILL BE LOCATED? (ATTACH DOC
UMENTATION.) 1:1 YES NO_

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

Coal, coke, synfuel and significant handling, storage and vessel loading facil
ity modified to
include vessel unloading equipment, and the handling of limestone.

LIST THE STANDARD INDUSTRIAL CLASSIFICATION (S C) D (S) F R THE FACILITY:
4 1 4 1 9 Fi-I I I i I I I I I I I I I I I I
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 includes
 a new emissions unit or modification to
existing operations.

MILESTONES* STARTING DATE ESTIMATED COMPLETION DATE

-New equipment installation 90 - 120 days post-Approval Approx. 9 - 12 months
thereafter

Modification of existing process or equipment

Start-up dates IApril, 2006 June,2006

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

GENERAL INFORMATION (continued) INSTRUCTIONS

COMPANY NAME - give the company name, the date completed, and the registration number assigned to the facility if applicable.

IS THE FACILITY DESIGNED TO BE PORTABLE? - 9 VAC 5-80-1 1 1 0 B defines "portable", to mean an emissions unit that is designed to have the capability of being moved from one location to another for the purpose of operating at multiple locations and storage when idle. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. If this facility is already permitted as a portable facility, list the date of the effective permit.

IS THIS AN APPLICATION TO BE PERMITTED AS A PORTABLE PLANT? - if the facility is designed to be portable, indicate whether or not you wish to have the permit contain specific conditions that will acknowledge this fact, so that the facility may be relocated without a new permit in accordance with 9 VAC 5-80-1320 A. l.c.

IS THIS A NOTIFICATION OF RELOCATION OF A PORTABLE FACILITY? - 9 VAC 5-80-1320 A. 1.c allows the relocation of a properly permitted portable facility to be exempt from permitting requirements, as long as it meets certain requirements, one of which is timely notification of the relocation. This notification should be sent to the Director of the DEQ Regional Office into whose area of responsibility the facility will be relocated. The 15-day notification period begins when DEQ receives the notification. Submission of pages 1, 2, and 3 of this form 7 may be used for that notification (with "RELOCATION of a SOURCE" marked on Page 2). However, use of this form for that purpose is not required. Note that a site map and documentation of site suitability should accompany this form or whatever means of notification is used. Include the registration number of any stationary source that will be co-located with the portable facility at the new site.

Site suitability may be documented by the use of a properly certified Local Governing Body Certification Form from the locality to which the facility will be relocated, although that form is not required for this purpose. Contact the appropriate DEQ Regional Office for instructions. DEQ will make a determination of site suitability based upon regional and local requirements.

PRODUCTS MANUFACTURED/SERVICED - indicate the type of business in which this facility is engaged, listing products produced and/or services performed.

SIC CODE(S) - provide all 4-digit Standard Industrial Classification Code(s) for this facility and for the process(es). Place
,)rimary SIC in the first set of blocks.

FACILITIES UNDER COMMON OWNERSHIP - list the facilities in Virginia that are owned by the applicant company, its subsidiaries, and its parent company.

MILESTONE DATES - list all dates pertinent to this application as accurately as possible. For start-up dates, provide each relevant date as it might affect emissions, e.g., start-up of each unit, modification of each unit, imposition of or changes in
'tted em'ssions for each unit.
perml I

PROCES'-- 3, MANUFACTURING, SURFACE COATING AND DEGREASING JPERATIONS:

COMPANY NAME Dominion Terminal Associates DATE TJYI. REGISTRATION NUMBER: 6099
7

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m
0 MAXIMUM EXPECTED FEED INPUT**
D MAXIMUM
RATED MAXIMUM EXPECTED FEED OUTPUT**
UNIT c DATE OF CAPACITY
REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
NO. D NAME AND MODEL NUMBER CONST. /HR** _1HR /DAY /YEAR
E I - -

CR-1 0 Crusher Fully-enclosed double-roll crusher 1000
700 6,850 2,500,000

CR-2 0 Crusher Fully-enclosed double-roll crusher 1000
700 6,850 2,500,000

SS-1 0 Screen Fully-enclosed double deck screen 700
700 6,850 2,500,000

SS-2 0 Screen Fully-enclosed single deck screen 700
700 6,850 2,500,000

SS-3 0 Screen Fully-enclosed double deck screen 700
700 6,850 2,500,000

SS-4 0 Screen Fully-enclosed single deck screen 700
700 6,850 2,500,000

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 handled.
For modification codes see next page.

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

PROCESS. @, MANUFACTURING, SURFACE COATING AND DEGREASING _'PERATIONS:

COMPANY NAME Dominion Terminal Associates DATE Li REGISTRATION NUMBER: 60997
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0 MAXIMUM EXPECTED FEED INPUT**

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RATED MAXIMUM EXPECTED FEED OUTPUT**

UNIT c DATE OF CAPACITY
REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
NO. D NAME AND MODEL NUMBER CONST. IHR** IHR /DAY NEAR

E I

OS-1 0 Open Stockpile #1 Materiai Storage 350,000 tons
24,000,000

OS-2 0 Open Stockpile #2 Material Storage 350,000 tons
24,000,000

OS-3 0 Open Stockpile #3 Material Storage 350,000 tons

1 24,000,000

OS-4 0 Open Stockpile #4 Material Storage 350,000 tons
24,000,000

OS-5 0 Open Stockpile #5 Material Storage 40,000 tons

1 5,000,000

OS-6 0 Open Stockpile #6 Material Storage 50 tons
2,000

OS-7 0 Open Stockpile #7 Material Storage 20,000 tons
5,000,000

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 handled.
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.

PROCESSlvv6, MANUFACTURING, SURFACE COATING AND DEGREASING %jPERATIONS:

COMPANY NAME Dominion Terminal Associates DATE JO REGISTRATION NUMBER: 60997

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0 MAXIMUM EXPECTED FEED INPUT**
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RATED MAXIMUM EXPECTED FEED OUTPUT**
UNIT c DATE OF CAPACITY
REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
NO. D NAME AND MODEL NUMBER CONST. 1HR** IHR /DAY /YEAR
E I -

BS-1 0 Storage Silo #1 Fully-enclosed w/baghouse 1,000 tons
2,740 65,753 24,000,000

BS-2 0 Storage Silo #2 Fully-enclosed w/baghouse 3,800 tons
2,740 65,753 24,000,000

BS-3 0 Storage Silo #3 Fully-enclosed w/baghouse 4,100 tons
2,740 65,753 24,000,000

BS-4 0 Plant #1 -- Feed Bin Fully-enclosed with water/chemical solution 50 ton
s
700 6,850 2,500,000

BS-5 0 Plant #1 - Pugmill Bin Fully-enclosed in building 5 tons
700 6,850 2,500,000

BS-6 0 Plant #2 - Pugmill Feed Bin Fully-enclosed in building 5 tons
700 6,850 2,500,000

BS-7 0 Plant #2 - Feed Bin Full-enclosed with water/chemical solution 50 tons
700 6,850 2,500,000

BS-8 0 Plant #2 - Pugmill Bin Fully-enclosed in building 5 tons
700 6,850 2,500,000

BS-9 0 @ Plant #2 - Pugmill Feed Bin Fully-enclosed in building 5 tons
700 6,850 21500,000
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 handled.
For modification codes see next page.

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

PROCESS.-J, MANUFACTURING, SURFACE COATING AND DEGREASING .,PERATIONS: DATE S)
 ISTRATION NUMBER: 60997
COMPANY NAME Dominion Terminal Associates Y)o REG

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m MAXIMUM EXPECTED FEED INPUT**
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D MAXIMUM MAXIMUM EXPECTED FEED OUTPUT**
 RATED
 UNIT c DATE OF CAPACITY
 REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
NO. D NAME AND MODEL NUMBER CONST. IHR** IHR /DAY IYEAR
E I -

BC-01 0 Rotary Dump Discharge Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-02 0 Silo #1 Feed Belt Fully-enclosed belt conveyor 6800
1740 65,753 24,000,000

BC-03 0 Silo #1 Discharge Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-04 0 Stockpile Feed Belt Belt conveyor (yard) 6800
2,740 65,753 24,000,000

BC-05 0 CC/Coke Transfer Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-06 0 CC/Coke Transfer Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-07 0 *Stockpile Feed Belt Belt conveyor (yard) 6800
2,740 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 handled.
 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.

PROCES&,@.j, MANUFACTURING, SURFACE COATING AND DEGREASING vPERATIONS:

COMPANY NAME Dominion Terminal Associates DATE REGISTRATION NUMBER: 60997

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RATED MAXIMUM EXPECTED FEED OUTPUT**
 UNIT c DATE OF CAPACITY
 REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
 NO. D NAME AND MODEL NUMBER CONST. IHR** /HR /DAY /YEAR
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BC-08 0 CC/Coke Transfer Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-09 0 CC/Coke Transfer Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-10 0 Loadout Belt Fully-enclosed belt conveyor 6800
1 2,740 65,753 24,000,000

BC-1 1 0 Silo Transfer Belt Bully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-12 0 Silo Transfer Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-13 0 Stockpile Belt Belt conveyor (yard) 6800 -

1 2,740 65,753 24,000,000

Includeflowdiagram(processschematic)relatingprocessstepsandanarrativedescripti
onincludingfeedmaterials,productmaterials,reactionintermediatesandby-products;
attachappropriateMSDSor
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 applica
ble. Maximum Expected Feed Input for state operating permits shall be based o
n historical high or attach justification.

PROCESS- J, MANUFACTURING, SURFACE COATING AND DEGREASING -PERATIONS:

COMPANY NAME Dominion Terminal Associates DATE REGISTRATION NUMBER: 60997

m 0 D UNIT c REF. 0 NO. D E	MAXIMUM EXPECTED FEED INPUT** MAXIMUM RATED MAXIMUM EXPECTED FEED OUTPUT** DATE OF CAPACITY PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR NAME AND MODEL NUMBER CONST. 1HR** IHR /DAY NEAR			
BC-14	0 Clean Coal Stockpile Feed Belt Fully-enclosed belt conveyor	6800	6800	13,700 5,000,000
BC-15	0 Crusher Feed Belt Fully-enclosed belt conveyor	1500	1400	13,700 5,000,000
BC-16	0 Screen Oversize Belt Fully-enclosed belt conveyor	100	0.23	5.48 2,000
BC-17	0 Plant Feed Belt Fully-enclosed belt conveyor	700	700	6,850 2,500,000
BC-18	0 Pugmill Bin Feed Belt Bully-enclosed belt conveyor	700	700	6,850 2,500,000
BC19	0 Pugmill Mixer Feed Belt Fully-enclosed belt conveyor	700 -	700	6,850 2,500,000
BC-20	0 Pug Mixer Discharge Belt Fully-enclosed belt conveyor	700 -	700	6,850 2,500,000

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.

PROCESb. J, MANUFACTURING, SURFACE COATING AND DEGREASING _'PERATIONS:

COMPANY NAME Dominion Terminal Associates DATE REGISTRATION NUMBER: 60997

NO.	m 0 E	D NAME AND MODEL NUMBER	MAXIMUM EXPECTED FEED INPUT** MAXIMUM RATED MAXIMUM EXPECTED FEED OUTPUT** UNIT c PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE	DATE OF CAPACITY MFR. OR CONST.	IHR** /HR	/DAY	[YEAR
BC-21	0	Spreader Belt	Fully-enclosed belt conveyor		700	700	6,850 2,500,000
BC-22	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	233	2,282 833,000
BC-23	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233		
	1				233	2,282	833,000
BC-24	0	Briquetter Discharge Belt	Fully-enclosed belt conveyor		233	2,282	833,000
BC-25	0	Screen SS-2 Feed Belt	Fully-enclosed belt conveyor		700	700	6,850 2,500,000
BC-26	0	Recirculating Belt	Fully-enclosed belt conveyor		100	0.23	5.48 2,000
BC-27	0	Screen SS-2 Discharge Belt	Fully-enclosed belt conveyor		700	700	6,850 2,500,000

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.

PROCESSi.-. .31 MANUFACTURING, SURFACE COATING AND DEGREASING yrIERATIONS:

COMPANY NAME Dominion Terminal Associates DATE REGISTRATION NUMBER: 60997

NO.	m 0 D E	NAME AND MODEL NUMBER	PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE	MFR. OR CONST.	MAXIMUM EXPECTED FEED INPUT** 1HR**	MAXIMUM EXPECTED FEED OUTPUT** /HR	RATED CAPACITY /DAY	UNIT c DATE OF NEAR
REF.	I							
BC-28	0	Synfuel Stacking Belt	Fully-enclosed belt conveyor	700	700	6,850	2,500,000	
BC-29	0	Screen SS-3 Oversize Belt	Fully-enclosed belt conveyor	100	.23	5.48	2,000	
BC-30	0	Plant Feed Belt	Fully-enclosed belt conveyor	700	700	6,850	2,500,000	
BC-31	0	Pugmill Bin Feed Belt	Fully-enclosed belt conveyor	700				
1				700	6,850	2,500,000		
BC-32	0	Pugmill Mixer Feed Belt	Fully-enclosed belt conveyor	700	700	6,850	2,500,000	
BC-33	0	Pug Mixer Discharge Belt	Fully-enclosed belt conveyor	700	700	6,850	2,500,000	
BC-34	0	Spreader Belt	Fully-enclosed belt conveyor	700	700	6,850	2,500,000	

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.

PROCEM. j, MANUFACTURING, SURFACE COATING AND DEGREASING @,PERATIONS:

COMPANY NAME Dominion Terminal Associates DATE REGISTRATION NUMBER: 60997

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0 MAXIMUM EXPECTED FEED INPUT**
D MAXIMUM
 RATED MAXIMUM EXPECTED FEED OUTPUT**
 UNIT c DATE OF CAPACITY
 REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
NO. D NAME AND MODEL NUMBER CONST. 1HR** IHR /DAY /YEAR
E

BC-35 0 Briquetter Discharge Belt Fully-enclosed belt conveyor 233
233 2,282 833,000

BC-36 0 Briquetter Discharge Belt Fully-enclosed belt conveyor 233
233 2,282 833,000

BC-37 0 Briquetter Discharge Belt Fully-enclosed belt conveyor 233

1 233 5,600 833,000

BC-38 0 Screen SS-4 Feed Belt Fully-enclosed belt conveyor 700
700 6,850 2,500,000

BC-39 0 Recirculating Belt Fully-enclosed belt conveyor 100
 0.23 5.48 2,000

BC-40 0 Screen SS-4 Discharge Belt Fuliy-enclosed belt conveyor 700
700 6,850 2,500,000

BC-41 0 Synfuel Stacking Belt Fully-enclosed belt conveyor 700
700 6,850 2,500,000

BC-42 0 Synfuel Product Transfer Belt Fully-enclosed belt conveyor 1500 1,40
0 13,700 12,264,000

BC-43 0 CC/RC Transfer Belt Fully-enclosed belt conveyor 6800
 2,740 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 handled.
 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.

PROCESS...J, MANUFACTURING, SURFACE COATING AND DEGREASING vPERATIONS:

COMPANY NAME Dominion Terminal Associates DATES e'0q REGISTRATION NUMBER: 6099
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0 MAXIMUM EXPECTED FEED INPUT**
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RATED MAXIMUM EXPECTED FEED OUTPUT**
UNIT c DATE OF CAPACITY
REF. 0 PROCESS OR OPERATION EQUIPMENT MANUFACTURER, TYPE MFR. OR
NO. D NAME AND MODEL NUMBER CONST. /HR** /HR /DAY IYEAR
E I -

BC-44 0 CC/RC Transfer Belt Fully-enclosed belt conveyor 6800
2,740 65,753 24,000,000

BC-45 4 BC-48 or BC-49 - BC-46 Transfer Fully-enclosed belt conveyor 6800
Belt 1,142 27,400 10,000,000

BC-46 4 BC-45 to BC-47 or BC-7 Fully-enclosed belt conveyor 6800
1,142 27,400 10,000,000

BC-47 4 BC-46 to BC-4 Full-enclosed belt conveyor 6800
571 13,700 5,000,000

BC-48 4 Hopper to BC-45 Enclosed with baghouse 3400
571 13,700 5,000,000

BC-49 4 Hopper to BC-45 Enclosed with baghouse 3400
571 13,700 5,000,000

UL-1 4 Grab Vessel Unloader Enclosed 2000
571 13,700 5,000,000

UL-2 4 Grab Vessel Unloader Enclosed 2000
571 13,700 5,000,000

BH-1 4 Receiving Hopper Enclosed with baghouse 3400 571 13,700 5,000,000

BH-2 4 Receiving Hopper Enclosed with baghouse 3400
571 13,700 5,000,000
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 handled.
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.

PROCESS OPERATIONS INSTRUCTIONS

UNIT REF. NO. - assign a unique reference number for each entry.

MODIFICATION CODE - Choose a code and insert.-
0. - No change.
1 .- for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

PROCESS OR OPERATION NAME - label each emission unit with the applicable proce ss or operation, starting with initial step in the manufacturing process, foll owed by
succeeding logical manufacturing steps until the process is complete.

EQUIPMENT MANUFACTURER, TYPE AND MODEL NUMBER - give the nameplate information or equivalent, one line per emission unit.

DATE OF MFR. OR CONST. - give the date that each emission unit was installed, constructed in place, or manufactured.

MAXIMUM RATED CAPACITY - maximum rated input capacity of the process or operat ion, in units of measure per hour.

MAXIMUM EXPECTED FEED INPUT AND OUTPUT - provide maximum amount of feed materi al expected to be processed (hourly, daily, and yearly) and or output as
needed. Specify units. If maximum expected feed input is higher than the his torical actual emissions, attach justification per 9 VAC 5-80-40.F.4.e ofthe R egulations.
These numbers may be used to establish air permit limits and should be consist ent with calculated emissions.

AIR POLLU,.JN CONTROL AND MONITORING EQUIPMENT:

MPANY NAME Dominion Terminal Associates DATE a Lf REGISTRATION NUMBER: 60997
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0 AIR POLLUTION CONTROL EQUIPMENT INSTRUMENTATION
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0 TYPE SPECIFY TYPE, MEASURED
UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANTIPARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL

OS-1 0 Fugitive SW-Cs TSP/M-10 Open Stockpile No. 1 099 see note below see not
e below Existing PM-10 Monitor

OS-2 0 Fugitive SW-Cs TSP/M-10 Open Stockpile No. 2 099 as per above as per ab
ove Existing PM-10 Monitor

OS-3 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 3 099 as per above as per a
bove Existing PM-10 Monitor

OS-4 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 4 099 as per above as per a
bove Existing PM-10 Monitor

OS-5 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 5 099 as per above as per a
bove Existing PM-10 Monitor

OS-6 0 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 6 099 as per above as per a
bove Existing PM-10 Monitor

OS-7 Fugitive SW-Cs TSP/PM-10 Open Stockpile No. 7 099 Existing PM-10 Monitor
as@bq@ve___as per above

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR, JLLUTION CONTROL AND MONITORING EQUIPMENT:

OMPANY NAME Dominion Terminal Associates DATE o4 REGISTRATION NUMBER: 60997
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UNIT D VENT] DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANTIPARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor and Visual
CR-1 0 Source CS-FC TSP/M-1 0 - Opacity Double Roll Crusher 099 see note below
 below Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
CR-2 0 Source CS-FC TSP/M-1 0 - Opacity Double Roll Crusher 099 as per above a
s per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
SS-1 0 Source CS-FC TSP/PM-10 - Opacity Double Deck Screen 099 as per above as
 per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
SS-2 0 Source CS-FC TSP/PM-10 - Opacity Single Deck Screen 099 as per above as
 per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
SS-3 0 Source CS-FC TSPIPM-10 - Opacity Double Deck Screen 099 as per above as
 per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
SS-4 0 Source CS-FC TSP/PM- 1 0 - Opacity Single Deck Screen 099 as per above
as per above Opacity Evaluation - Method 9

NOTE: See x1s spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLLL JN CONTROL AND MONITORING EQUIPMENT:

OMPANY NAME Dominion Terminal Associates DATE S-JY/oq REGISTRATION NUMBER: 609 97

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UNIT D VENT/ DEVICE TYPE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER (USE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER CODE L) DESIGN ACTUAL
Existing PM-10 Monitor and Visual
BS-1 0 Fugitive SW-FE TSP/M-1 0 - Opacity Storage Silo #1 99/1 Oa see note bel ow see note below Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BS-2 0 Fugitive SW-FE TS P/M- IO - Opacity Storage Silo #2 99/1 Oa as per abov e as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BS-3 0 Fugitive SW-FE TSP/PM-10 - Opacity Storage Silo #3 99/1 Oa as per above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BS-4 0 Fugitive SW-FE TSP/PM-10 - Opacity Plant #1 - Feed Bin 99 as per above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BS-5 0 Fugitive SW-FE TSP/PM-1 0 - Opacity Plant #1 - Pugmill Feed Bin 99 as p er above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BS-6 0 Fugitive SW-FE TSP/PM-10 - Opacity Plant #2 - Pugmill Bin 99 as per abo ve as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BS-7 Fugitive SW-FE TSP/PM-1 0 - Opacity Plant #2 - Feed Bin 99 Opacity Evalua tion - Method 9
0 as per above -as per above
Existing PM-10 Monitor and Visual
BS-8 0 Fuaitive SW-FE TSP/PM-1 0 - Opacity Plant #2 - Pugmill Feed Bin 99 as p er above as per above Opacity Evaluation - Method 9
Existing PM-10 Monitor and Visual
BS-9 O_ Fugitive SW-FE TSP/PM-10 - Opacity Plant #2 - Pugmill Bin 99 as per ab ove as per above

NOTE: See x1s spreadsheet entitled "Air Pollution Control and Calculated Emiss ions"

AIR POLLU..JN CONTROL AND MONITORING EQUIPMENT:

MPANY NAME Dominion Terminal Associates DATE lu 4 REGISTRATION NUMBER: 60997

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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANTIPARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor and Visual
BC-1 0 TP-03 TC-FC TSP/M-1 0 - Opacity Rotary Dumper Discharge Belt 099 see no
te below below Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-2 0 TP-04 TC-BH TSP/M-1 0 - Opacity Silo #1 Feed Belt 099 as per above as p
er above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-3 0 TP-06 TC-PC TSP/PM-1 0 - Opacity Silo #1 Discharge Belt 099 as per abov
e as per above Opacity by Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-4 0 TP-06A TC-PE TSP/PM-10 - Opacity Stockpile Feed Belt 099 as per above a
s per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-5 0 TP-12 TC-PC TSP/PM-10 - Opacity CC/Coke Transfer Belt 099 as per above
as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-6 0 TP-12 TC-PC TSP/PM- 1 0 - Opacity CC/Coke Transfer Belt 099 as per abov
e as per above Opacity Evaluation - Method 9
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NOTE: See x1s spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLLL ON CONTROL AND MONITORING EQUIPMENT:

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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANTIPARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor and Visual
BC-7 0 TP-13 TC-PC TS P/M-1 0 - Opacity Stockpile Feed Belt 099 see note below
below Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-8 0 TP-81 TC-PC TSP/M-1 0 - Opacity CC/Coke Transfer Belt 099 as per above
as per above Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
BC-9 0 TP-82 TC-BH TSP/PM-10 - Opacity CC/Coke Transfer Belt 099 as per above
as per above Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
BC-10 0 TP-87 TC-PE TSP/PM-1 0 - Opacity Loadout Belt 099 as per above as per
above Opacity Evaluation-Method 9

Existing PM-1 0 Monitor and Visual
BC-1 I 0 TP-84 TC-BH TSP/PM-10 - Opacit Silo Transfer Belt 099 as per above as
per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-12 0 TP-86 TC-BH TSP/PM-1 0 - Opacity Silo Transfer Belt 099 as per above
as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual

BC-13 0 TP-78 TC-PC TSP/PM-10 - Opacity Stockpile Reversing Belt 099 @er abov
e as per above Opacity Evaluation - Method 9

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLLL JN CONTROL AND MONITORING EQUIPMENT:

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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor an sua
BC-1 4 0 TP-16 SL-CS TSP/M-1 0 - Opacity Clean Coal Stockpile Feed Belt 099 se
e note below below Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-15 0 TP-18 TC-FC TS P/M- 1 0 - Opacity Crusher Feed Belt 099 as per above
as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-16 0 TP-81 TC-FC TSP/PM-1 0 - Opacity CC/Coke Transfer Belt 099 as per abo
ve as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
0 TP-24 TC-PC TSP/PM-1 0 - Opacity Screen SS-1 Oversize Belt 099 as per above
as per above Opacity Evaluation-Method 9
BC-17
Existing PM-10 Monitor and Visual
BC-18 0 TP-27 TC-FC TSP/PM-1 0 - Opacity Screen SS-1 Discharge Belt 099 as pe
r above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-19 0 TP-28 TC-FC TSP/PM-1 0 - Opacity Pugmill Bin feed Belt 099 as per abo
ve as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-20 TP-30 TC-FC TSP/PM-1 0 - Opacity Pugmill Mixer Feed Belt 099 Opacity Ev
aluation - Method 9
0 as per above as per above

NOTE: See.xIs spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLLU..jN CONTROL AND MONITORING EQUIPMENT:

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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor and Visual
BC-21 0 TP-32 TC-FC TSP/M-1 0 - Opacity Pugmill Mixer Discharge Belt 099 see n
ote below below Opacity Evaluation - Method 9

TP-33- Existing PM-1 0 Monitor and Visual
BC-22 0 36-39 TC-FC TSP/M-10 - Opacity Spreader Belt 099 as per above as per a
bove Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-23 0 TP-35 TC-FC TSP/PM-1 0 - Opacity Briquetter Discharge Belt 099 as per
above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-24 0 TP-38 TC-FC TSP/PM-1 0 - Opacity Briquetter Discharge Belt 099 as per
above as per above Opacity Evaluation-Method 9

Existing PM-1 0 Monitor and Visual
BC-25 0 TP-41 TC-FC TSP/PM-1 0 - Opacity Briquetter Discharge Belt 099 as per
above as per above Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
BC-26 0 TP-42 TC-FC TSP/PM-1 0 - Opacity Screen SS-2 Feed Belt 099 as per abov
e as per above Opacity Evaluation - Method 9

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLL6. - JN CONTROL AND MONITORING EQUIPMENT:

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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-1 0 Monitor and Visual
BC-27 0 TP-43 TC-FC TSP/M-10 - Opacity Recirculating Belt 099 see note below b
elow Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-28 0 TP-45 TC-FC TS P/M- 1 0 - Opacity Screen SS-2 Discharge Belt 099 as pe
r above as per above Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
BC-29 0 TP-46 SL-CS TSP/PM-1 0 - Opacity Synfuel Stacking Belt 099 as per abov
e as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-30 0 TP-49 TC-FC TSP/PM-1 0 - Opacity Crusher Feed Belt 099 as per above as
 per above Opacity Evaluation-Method 9

Existing PM-10 Monitor and Visual
BC-31 0 TP-52 TC-FC TSP/PM-10 - Opacity Screen SS-3 Oversize Belt 099 as per a
bove as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-32 0 TP-55 TC-FC TSP/PM- 1 0 - Opacity Plant Feed Belt 099 as per above as
per above Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
BC-33 TP-56 TC-FC TS P/PM- 1 0 - Opacity Pugmill Bin Feed Belt 099 Opacity Eva
luation - Method 9
0 as per above _ as per above

NOTE: See xis spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLLL JN CONTROL AND MONITORING EQUIPMENT:

OMPANY NAME Dominion Terminal Associates DATE REGISTRATION NUMBER: 60997

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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
I see note Existing PM-10 Monitor and Visual
BC-34 0 TP-58 TC-FC TSP/M-1 0 - Opacity Pugmill Mixer Feed Belt 099 see note b
elow below Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-35 0 TP-60 TC-FC TSP/M-1 0 - Opacity Pugmill Mixer Discharge Belt 099 as pe
r above as per above Opacity Evaluation - Method 9

TP-61 - Existing PM-1 0 Monitor and Visual
BC-36 0 64-67 TC-FC TSP/PM-1 0 - Opacity Spreader Belt 099 as per above as per
 above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-37 0 TP-63 TC-FC TSP/PM-1 0 - Opacity Briquetter Discharge Belt 099 as per
above as per above Opacity Evaluation-Method 9

Existing PM-1 0 Monitor and Visual
BC-38 0 TP-66 TC-FC TSP/PM-1 0 - Opacity Briquetter Discharge Belt 099 as per
above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-39 0 TP-69 TC-FC TSP/PM-1 0 - Opacity Silo Transfer Belt 099 as per above a
s per above Opacity Evaluation - Method 9

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

AIR POLLU..jN CONTROL AND MONITORING EQUIPMENT:

OMPANY NAME Dominion Terminal Associates DATE ri REGISTRATION NUMBER: 60997

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 UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
 REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor and Visual
BC-40 0 TP-70 TC-FC TSP/M-1 0 - Opacity Screen SS-4 Feed Belt 099 see note bel
ow below Opacity Evaluation - Method 9

Existing PM-10 Monitor and Vis ual
BC-41 0 TP-71 TC-PC TS P/M- 1 0 - Opacity Recirculating Belt 099 as per above
as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-42 0 TP-73 TC-FC TSPIPM-1 0 - Opacity Screen SS-4 Discharge Belt 099 as per
 above as per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-43 0 TP-74 SL-CS TSP/PM-1 0 - Opacity Synfuel Stacking Belt 099 as per abov
e as per above Opacity Evaluation-Method 9

Stockpile Loadout Transfer Existing PM-10 Monitor and Visual
BC-44 0 TP-76 TC-FC TSP/PM-1 0 - Opacity Belt 099 as per above as per above Op
acity Evaluation - Method 9

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NOTE: See xis spreadsheet entitied "Air Pollution Control and Calculated Emiss
ions"

AIR POLLL. . JN CONTROL AND MONITORING EQUIPMENT:

OMPANY NAME Dominion Terminal Associates DATE S-jy),u REGISTRATION NUMBER: 609
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UNIT D VENT/ DEVICE (USE POLLUTANT, AND RECORDER
REF. E STACK REF. POLLUTANT/PARAMETER MANUFACTURER CODE USED
NO. NO. NO. (See instructions) AND MODEL NUMBER L) DESIGN ACTUAL
see note Existing PM-10 Monitor and Visual
BC-45 4 TP-94 TC-PC TSP/M-10 - Opacity Coal Transfer Belt 099 see note below b
elow Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
BC-46 4 TP-95 TC-PC TSP/M-10 - Opacity Coal Transfer Belt 099 as per above as
per above Opacity Evaluation - Method 9

Existing PM-1 0 Monitor and Visual
BC-47 4 TP-96 TC-PC TSP/PM-1 0 - Opacity Coal Transfer Belt 099 as per above a
s per above Opacity Evaluation - Method 9

Existing PM-10 Monitor and Visual
Opacity Evaluation - Method 9
BC-48 4 TP-97 TC-BH TSP/PM-10 Opacity Coal Transfer Belt 099 as per above as
per above

Existing PM-10 Monitor and Visual
Opacity Evaluation - Method 9
BC-49 4 TP-98 TC-BH TSP/PM-10 OgK@ty Coal Transfer Belt 099 as per above as p
er above

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions"

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 (D 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 (e) other (specify)
12. Direct Flame Afterburner 15. Condenser (specify)
99. Other (specify) water spray when needed

AIR POLLUTION CONTROL AND M011,.. ORING EQUIPMENT INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:
0. - No change.
1 .- for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

VENT/STACK NO. - assign a unique vent/stack number for each vent or stack thro ugh which the process or equipment identified by this reference number exhaust s.

DEVICE REF. NO. - assign a unique pollution control device reference number(s).

POLLUTANT/PARAMETER - list all pollutants emitted from this process/equipment that are controlled and/or monitored. List all surrogate parameters ofthe process/equipment that are monitored (e.g. - opacity, C02, etc.).

Air Pollution Control Equipment.

MANUFACTURER AND MODEL - list the manufacturer and model of the control equipm ent associated with the pollutant listed in the preceding column.
TYPE - identify the type of control equipment by using Code L.

PERCENT EFFICIENCY - list the design and actual control efficiency for the con trol equipment and associated pollutant.

Monitoring Instrumentation:

MONITOR MANUFACTURER AND MODEL NUMBER - list the manufacturer and model number of the stack gas monitor used to measure emissions of the
specified pollutant at this emission point. List opacity monitors in associat ion with particulate/PMIO emissions.

SPECIFY TYPE OF RECORDER TO BE USED - list the type of recorder associated wit h the monitor (e.g. strip chart, data logger, etc.)

AIR POLLU.. iN CONTROL EQUIPMENT - SUPPLEMENTAL INFORMATION.

OMPANY NAME DATE REGISTRATION NUMBER: 60997

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REF. NO.	LIQUID FLOW RATE(gpm) (Use Code L)	LIQUID MEDIUM TYPE (Codes 4,5, 6,7,13,15)	AIR-CLEANING METHOD (Codes 4,5,6,7, 13,15)	REGENERATION METHOD OF OPERATION (Codes 9, 10,13,14)	PRESSURE CHAMBER NUMBER OF SECTIONS (Code 9)	RETENTION TIME (sec) (Codes 9,11 (Code 14)	DROP CLOTH FILTER & CYCLE (Code 10) (Code 10) (Code 10)	TEMP. (EF) (Codes 3, 4,5,6,7, 11,12)	TIME (sec) (if applicable) (fpm)	(in. H20) (Codes 11,12)
DEVICE	TYPE	RATE	METHOD	NUMBER	NUMBER	CLOTH	FILTER &	CYCLE	TEMP. (EF)	TIME (sec) (in. H20)

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
8. Mist eliminator (a)baghouse (c) activated alumina
(b) other (specify) (d)silica gel
1 1. Catalytic Afterburner (e) other (specify)
12. Direct Flame Afterburner 15. Condenser (specify)
99. Other (specify)

AIR POLLUTION CONTROL EQUIPMENT (SU, . LEMENTAL INFORMATION) INSTRUCTIONS

DEVICE REF. NO. - continue assigned reference number(s) from previous page(s) .

TYPE - identify the type(s) of control equipment by using Code L. Code L offer s a wide array of control equipment types to choose from, and many will not ap ply to a
given situation. The other columns suggest codes to use from the Code L selec tion.

NOTE: For the remaining spaces, the applicable control device type numbers (se e Code L) for which this information is required are listed in parentheses on the form.

LIQUID FLOW RATE - list in gallons per minute.

LIQUID MEDIUM - specify the type of liquid used in the control equipment, and the pH. For condensers, specify inlet temperatures of condensing medium (wate r, glycol,
etc.) and inlet temperature of gas stream.

CLEANING METHOD - specify the method of cleaning the control equipment (e.g., a baghouse, No. 1 Oa).

NUMBER OF SECTIONS/FIELDS - list the number of fields or chambers for ESPs (No . 9), or number of chambers for baghouses (No. 10).

AIR-TO-CLOTH RATIO - list in feet per minute or as specified by manufacturer (cubic feet per minute gas flow to square feet of cloth).

FILTER MATERIAL - list the type of material used for the baghouse filters.

INLET TEMP. - list the temperature at the inlet of the control equipment in de grees Fahrenheit.

REGENERATION METHOD & CYCLE TIME - list the regeneration method (steam strippi ng, hot air, etc.) and cycle time in seconds for adsorbers (No. 14). If regeneration is done offsite, please so state.

CHAMBER TEMP. - list the combustion temperature of afterburner chamber in degr ees Fahrenheit.

RETENTION TIME - list the retention time for afterburners in seconds.

PRESSURE DROP - list the pressure drop across the control equipment in inches of water.

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 Identification Number: FE-BH
2. Manufacturer's name and model idenffication: Johnson Mamh Skvkleen PCSB 104 0 Dust Collector
3. Number of compartments in baghouse: 1
4. Number of compartments online during normal operabon and condifions: 1
5. Gas flow rate into baghouse: 8,000 ACFM Ambient oFand 14.7 PSIA
6. Total cloth area: 2396 fe
7. Operabng air to cloth ratio: 7.5: 1 fttmin
8. Filter media type: Polyester fabric
9. Stabilized statc pressure drop across baghouse: 2 inches H20
10. Baghouse operation is:
0 CoMnuous 0 Automatic 0 Intermittent
I 1.- Method used to clean bags:
0 Shaker N Pulse jet 0 Reverse jet
12. Emission rate of parficulate matter entering and e)Mng baghouse at ma)dmum design operafing
condifions:
Entering baghouse: lb/hr and 20 grainstACF
Exifing baghouse: lb/hr and .015 grains/ACF
13. Guaranteed minimum baghouse collecfion effidency: 99 %
14. Provide a written descripfion of the capture system (e.g. hooding and duct work arrangement), size
of ductwork and hoods and air volume, capacity and operating homepower of fan:

Ductwork +20" pit)e - Fan 9200 SCFM 01 10"' WC & 701

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.

BAGHOUbf- AIR POLLUTION CONTROL DE`Vi%;E SHEET
BAGHOUSE NO. 2 - SURGE SILO NO. 2 & 3 OD SS-2 and BS-3)
Complete a Baghouse Air Pollufion Control Device Sheet for each baghouse contr ol device.
1. Baghouse Control Device ldeatificabon Number: FE-BH
2. Manufacturer'snameandmodelidentficabon: JohnsonMarshSkykleenpcsBIO-lODustCo llector
3. Number of compartments in baghouse:1
4. Number of compartrnents online during normal operation and condifions:1
5. Gas flow rate into baghouse: 18,000 ACFM @ Ambient OFand 14.7 PSIA
6. Total cloth area: 2396 fe
7. Operating air to cloth ratio: 7.5: 1fttmin
8. Filter media type: Polyester fabric
9. Stabdized static pressure drop across baghouse:2inches H20
10. Baghouse operation is:
0 Continuous 0 Automatic 0 lnterrr*tent
11. Method used to clean bags:
0 Shaker Pulse jet 0 Reverse jet
12. Emission rate of particulate matter entering and eidbng baghouse at ma)dmu rn design operating
condifions:
Entering baghouse: lb/hr and 20 grains/ACF
Exifing baghouse: lb/hr and .015 grains/ACF
13. Guaranteed minimum baghouse collection effidency: 99 %
14. Provide a wriden descripbon of the capture system (e.g. hooding and ductwo rk arrangement), size
of ductwork and hoods and air volume, capacity and operafing horsepower of fan :
Ductwork+50'-singlefanondischargeof2houses:DiR2din rallel-Fan20.700ACFM -101WC

Ri & '

I S. Describe the method of dis@sal for the collected material: Ba-ahouse is a bin vent. MaterW is drooDed
directly from the bags back to the silo.

PROPOSEL .,AXIMUM CRITERIA POLLUTANT EMISSIONS:

COMPANY NAME Dominion Terminal Associates DATEs-1?14 REGISTRATION NUMBER: 6099
7

m MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS
UNIT 0
REF. D PM PM10* S02 Nox co V0C* Pb STATE
NO. (10 AM OR (VOLATILE OPERATING BASIS OF
c (PARTICULATE SMALLER (SULFUR (NITROGEN (CARBON ORGANIC (LEAD) PERMIT ESTIMAT
E
0 MATTER) PARTICULATE DIOXIDE) OXIDES) MONOXIDE) COMPOUNDS) EMISSION (USE CODE

D MA ER) CAP M)
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 (Yes/No)

CR-1

CR-2

SS-1

SS-2

SS-3

SS-4

SEE ATTACHED.xis spreadsheet entitled "AIR POLLUTION CONTROL AND CALCULATED EM
ISSIONS"

Code M - Emission Estimate Method 63rovide detailed calculations including ass
umed 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)
* PM, PM10, and VOCs should also be split up by component and reported under T
OXIC OR HAZARDOUS POLLUTANTS.

PROPOSED MAXIMUM CRITERIA POLLUTANT EMISSIONS INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:
0. - No change. 3. - for changes in related equipment.
1. - for increase in regulated limit. 4. - for new emissions unit(s).
2. - for physical change in emissions unit. 5. - for replacement emissions uni t(s).

MAXIMUM EMISSION RATES TO ATMOSPHERE OF CRITERIA POLLUTANTS - list the emissio n rates to the atmosphere for the pollutants indicated in pounds per hour and tons peryear. Provide detailed
calculations including assumed control efficiency of control equipment (if app licable) and hours used per year.

STATE OPERATING PERMIT EMISSION CAP - State "yes" or "no" as follows: "Yes" me ans that the applicant voluntarily requests an emission cap forthe unit in que stion that is lowerthan allowable emissions for
the unit; "no" means no such request is made. A "yes" answer should be accomp anied by underlinin-q the proposed emissions of the pollutant for which the ca p is sought, in the tons per year column.

BASIS OF EMISSION ESTIMATES - Indicate how emissions listed have been derived by using Code M. Include all calculations.

CRITERIA POLLUTANTS are defined as follows:
Particulate Matter (PM) - any airborne finely divided solid material with an a erodynamic diameter smaller than 100 micrometers.
Carbon monoxide (CO) - colorless, odorless, tasteless gas.
Particulate (PM,o) - particulate matter with an aerodynamic diameter less than or equal to 1 0 micrometers.
Sulfur oxides (SOx) - measured as sulfur dioxide (SOA
Nitrogen Oxides (NOx) - all oxides of nitrogen except nitrous oxide.
Lead (Pb) - metal.
Volatile Organic Compounds (VOCs) - (see definition in 9 VAC 5-10-20.) Do not include acetone as a VOC. Do not include perchloroethylene as a VOC, but list it as a hazardous air pollutant (HAP) on the next
page. The following compounds are currently exempt from the definition of VOC (however, items 3 and 4 below are still to be reported as toxic pollutants on the next page):
1 . Methane
2. Ethane
3. 1,1,1-trichloroethane (methyl chloroform)
4. Methylene chloride
5. Trichlorofluoromethane (CFC-1 1)
6. Dichlorodifluoromethane (CFC-12)
7. Chlorodifluoromethane (CFC-22)
8. Trifluoromethane (FC-23)
9. 1, 1,2-trichlorotrifluoroethane (CFC-1 13)
10. 1,2-dichlorotetrafluoroethane (CFC-1 14)
1 1. Chloropentafluoroethane (CFC-1 15)
12. Dichlorotrifluoroethane (HCFC-123)
13. Tetrafluoroethane (HFC-134a)
14. Dichlorofluoroethane (HCFC-141b)
15. Chlorodifluoroethane (HCFC-142b)

Note: PM, PM1 0 and VOC emissions should also be split up by toxic component a nd reported as TOXIC POLLUTANTS on the next page.

PAST ACTL - CRITERIA POLLUTANT EMISSIONS:

COMPANY NAME DATE Q REGISTRATION NUMBER. 60997

m
0 AVERAGE ACTUAL ANNUAL EMISSIONS TO ATMOSPHERE OF CRITERIA POLLUTANTS FOR THE PERIOD: 120- TO 20
D

UNIT REF. NO.	PM (PARTICULATE MATTER)	PM10 (10 liM OR SMALLER PARTICULATE MATTER)	voc (VOLATILE ORGANIC COMPOUNDS)	Pb (LEAD)	BASIS OF ESTIMATE CODE M	NOx (NITROGEN OXIDES)	co (CARBON MONOXIDE)
	tons/yr	tons/yr	tons/yr	tons/yr		tons/yr	tons/yr

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)

PAST ACTUAL CRITERIA POLLLi..-%NT EMISSIONS INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and insert:
0. - No change. 3. - for changes in related equipment.
1. - for increase in regulated limit. 4. - for new emissions unit(s).
2. - for physical change in emissions unit. 5. - for replacement emissions uni t(s).

AVERAGEACTUAL EMISSIONS TO ATMOSPHERE OF CRITERIA POLLUTANTS FOR THE PERIOD - list the two-year period for which actual emission are averaged. Emissions ar e to be averaged overthe
last 24 consecutive months, unless another 24 consecutive month period is MORE reflective of NORMAL operations. If another period is used, please attach an explanation for using the different period.

PAST ACTUAL EMISSIONS AVERAGE for EACH POLLUTANT - list the average ACTUAL ann ual emissions to the atmosphere for the pollutants indicated in tons per year for each emission unit with
MODIFICATION CODES 1, 2, 3 or 5. Be careful to include debottlenecked emission units (MOD CODE 3). The average is calculated using actual annual emissions forthe past24 consecutive months. Ifthere is
another 24 consecutive month period that is more reflective of NORMAL operatio ns, that period may be used with DEQ concurrence.

BASIS OF EMISSION ESTIMATES - Indicate how the emissions listed have been deri ved using Code M. Include all calculations.

CRITERIA POLLUTANTS are defined as follows:
Particulate Matter (PM) - any airborne finely divided solid material with an a erodynamic diameter smaller than 1 00 micrometers.
Carbon monoxide (CO) - colorless, odorless, tasteless gas.
Particulate (PMIO) - particulate matter with an aerodynamic diameter less than or equal to 1 0 micrometers.
Sulfur oxides (SOx) - measured as sulfur dioxide (SOA
Nitrogen Oxides (NOx) - all oxides of nitrogen except nitrous oxide.
Lead (Pb) - metal.
Volatile Organic Compounds (VOCs) - (see definition in 9 VAC 5-10-20.) Do not include acetone as a VOC. Do not include perchloroethylene as a VOC, but list it as a hazardous air pollutant (HAP) onthe next
page. The following compounds are currently exempt from the definition of VOC (however, items 3 and 4 below are still to be reported as toxic pollutants on the next page):
1 . Methane
2. Ethane
3. 1,1,1-trichloroethane (methyl chloroform)
4. Methylene chloride
5. Trichlorofluoromethane (CFC-1 1)
6. Dichlorodifluoromethane (CFC-12)
7. Chlorodifluoromethane (CFC-22)
8. Trifluoromethane (FC-23)
9. 1, 1,2-trichlorotrifluoroethane (CFC-1 13)
10. 1,2-dichlorotetrafluoroethane (CFC-1 14)
1 1. Chloropentafluoroethane (CFC-1 15)
12. Dichlorotrifluoroethane (HCFC-123)
13. Tetrafluoroethane (HFC-134a)
14. Dichlorofluoroethane (HCFC-141b)
15. Chlorodifluoroethane (HCFC-142b)

SOURCE-W.. --'TOXIC OR HAZARDOUS AIR POLLUTANT (HAP) EMISSIONb. ROM THE PROPO
SED FACILITY:

COMPANYNAME DATE 4 REGISTRATION NUMBER: 60997

STATE
SOURCE-WIDE MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify polluta
nt)* **TOXIC OR OPERATING m
HAP WAS

IF CONTROLLED AS WITHOUT THE PROPOSED ALSO PERMITS BASIS OF 0

PROPOSED CONTROLS REPORTED EMISSION ESTIMATES D

TOXIC OR HAZARDOUS ON PAGE 15 CAP c VENT/

AS:(PM/PM,o (YES/NO) (USE CODE UNIT 0 STACK
POLLUTANT (HAP) NAME CAS lb/hr tons/yr lb/hr tons/yr NOC or N/A) M) REF. NO. D
NO.

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)

ToxicPollutantmeansapollutantonthedesignatedlistatthefrontofthisapplication.
Particulatematterandvolatileorganiccompoundsarenottoxicpollutantsasgenericclas
sesofsubstances,but
individual substances within these classes may be toxic pollutants because the
ir toxic properties or because a TLV (tm) has been established. See the toxic
pollutant listing in the front ofthis application.
Specify which pollutants are also reported as components of PM, PMjo, or VOC o
n page 15.

OUS AIR t -.-.LUTANT (HAP) EMISSIONS INSTRUCTIONS
SOURCE-WIDE TOXIC OR HAZARD

ions of toxic pollutants or HAPS
this page for any new emissions or increased emiss ed, or debottlenecked
PR POSED FACILITY - complete plant, or from any new, modified, .recon3truct it ted from the source
1@@o_sed FacilitY (from a new st each toxic Or HAP em
resulting from the it is not necessary to li 9 VAC 5-

processes or equipment at an existing plant. ilutant listed, which is not exem pt by
unless so directed by the DEQ Regional office. Then, for each toxic PO s, list the total source-wide emissions of

60-300 C.3f 4 or 5f or D, E, or F or 9 VAC 5-80-1320 F of the rce.
that pollutant. COmpliance is based on total toxic emissions from the sou e pages as necessary to provide information on the applicable toxic and HAP po llutants.

d emissions from any ernission unit at the source, as a result of the proposed changes.
TOXIC OR HAP POLLUTANT NAME - List each toxic or HAP for which there are new o r increase

CAS NO. - list the Chemical Abstract Services (CAS) number for each listed pol lutant. osphere for all listed toxic or HAP pollutants. in pounds per hour and tons per year per

MAXIMUM EMISSION RATES To ATMOSPHERE OF TOXIC POLLUTANTS - list the source-wid e emission rates to the atm ay be used to set air permit limits. PrOvide detai led calculations of the

pollutant. List both the controlled emission rates and the emission rates with out the proposed controls. . The controlled emission rates m operation per yea r.

emission rates, using (for the proposed controlled emission rates) the propose d control efficiency of control equipment, and using the proposed limits on ma terial, throughput and/or hours of

Note: Any PM, PMI 0, or VOC emissions with Toxic Pollutant components should b e also be listed on this page as TOXIC POLLUTANTS.
TOXIC OR HAP ALSO REPORTED ON PAGE 15 A& (PM/PM10/VOC or N/A) - Specify which pollutants are also reported as components of PM, PM,o, or VOC on page 15. low er than the current allowable
- State "yes" or "no" as follows: "Yes" means that the applicant voluntarily r equests an emission cap for the unit in question that is column.

STATE OPERATING PERMIT EMISSION CAP an Ilutant for which the cap is sought, in the tons per year

emissions for the unit; "no" means no such request is made. A "yes" swer shoul d be accompanied by under_fini-ng. the proposed emissions of the po

cate how the emissions that are listed, have been derived
BASIS OF EMISSION ESTIMATES - Use Code M to indi
UNIT REF. NO. - continue assigned reference number(s) from previous page(s). List all emission unit reference numbers that emit this toxic or HAP pollutan ts.

MODIFICATION CODE - Choose the appropriate code(s) and insert'.
0. - No modification. 3. - for changes in related equipment.

1. - for increase in regulated limit. 4. - for new emissions unit(s).

2. - for physical change in emissions unit. 5. - for replacement emissions unit(s).

VENTISTACK NO. - list the assigned unique vent/stack number for each vent or stack through which the process or equipment identified by this reference number exhausts.

OTHER RE@- -LATED POLLUTANT EMISSIONS FROM THE PROPOSED FA(,.-,TY:

COMPANY NAME Dominion Terminal Associates DATE E;J4o4 I REGISTRATION NUMBER: 6
0997

m MAXIMUM EMISSION RATES TO ATMOSPHERE OF POLLUTANT (Specify pollutant)*
0
D WITHOUT THE PROPOSED
IF CONTROLLED AS PROPOSED CONTROLS
c STATE
0 OPERATING BASIS OF
UNIT D OTHER REGULATED PERMITS ESTIMATES
REF. E VENT/ POLLUTANT EMISSION CAP
NO. STACK NO NAME* CAS NO. lb/hr tons/yr lb/hr tons/yr (YES/NO) (USE CODE M)

UL-1 4 Source see note below see note below see note below see note below NO 3

TSP/PM10
UL-2 4 Source as per above as per above as per above as per above NO 3
TSP/PM10
BH-1 4 Source as per above as per above as per above as per above NO 3
TSP/PM10
BH-2 4 Source as per above as per above as per above as per above NO 3
TSP/PM10
BC-45 4 Source as per above as per above as per above as per above NO 3
TSP/PM10
BC-46 4 Source Tsp/pmlo as per above as per above as per above as per above No
3
BC-47 4 Source TSP-PM10 asperabove as per above as per above as per above NO 3

NOTE: See xls spreadsheet entitled "Air Pollution Control and Calculated Emiss
ions
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)

Other Regulated Pollutant means any pollutant listed in the definition of "reg
ulated pollutants" in Article 6 (9 VAC 5-80-1 1 1 0 C) of the Regulations exce
pt forthe Criteria Pollutants (PM, PM10, S02, NOx,
CO, VOC and Pb) and the toxic/HAP pollutants listed on the toxic/HAP pollutant
listing in the front of this application.

OTHER REGULATED POLLUTP-%.. i'EMISSIONS INSTRUCTIONS

PROPOSED FACILITY - complete page for emissions of "Other Regulated Pollutants " from each emission unit.

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

MODIFICATION CODE - Choose a code and inserL
0. - No modification. 3. - for changes in related equipment.
1. - for increase in regulated limit. 4. - for new emissions unit(s).
2. - for physical change in emissions unit. 5. - for replacement emissions uni t(s).

VENT/STACK NO. - assign a unique vent/stack number for each vent or stack thro ugh which the process or equipment identified by this reference number exhaust s.

OTHER REGULATED POLLUTANT NAME - List each "other regulated pollutant" emitted from the facility/emission units listed. "Other regulated pollutants' are th ose pollutants listed in the definition of"regulated
pollutants in Article 6 (9 VAC 5-80-1 1 1 0 C) of the Regulations except for t he Criteria Pollutants (PM, PM10, S02, NOx, CO, VOC and Pb) and the toxic/HAP pollutants listed on the toxic/HAP pollutant listing in the
front of this application.

CAS NO. - list the Chemical Abstract Services (CAS) number for each listed pol lutant.

MAXIMUM EMISSION RATES TO ATMOSPHERE OF OTHER REGULATED POLLUTANTS - list the emission rates to the atmosphere for all pollutants listed in the definition o f"regulated pollutants in Article 6 (9
VAC5-80-1110C)oftheRegulationsexceptfortheCriteriaPollutants(PM,PM11,SO2,NOx,C 0, VOCandPb)andthetoxic/HAPpollutantslistedonthetoxie/HAPpollutantlistinginthe frontofthisapplication.
Givethemaximumemissionrates ofeachpollutantinpoundsperhourandtonsperyearperref erencenumber. Listboththecontrolledemissionratesandtheemissionrateswithoutthe proposedcontrols. The
controlled emission rates may be used to set air permit limits. Provide detai led calculations of the emission rates, using (for the proposed controlled emi ssion rates) the proposed control efficiency of control
equipment, and using the proposed limits on material, throughput and/or hours of operation per year.

STATE OPERATING PERMIT EMISSION CAP - State "yes" or "no" as follows: "Yes" me ans that the applicant voluntarily requests an emission cap forthe unit in que stion that is lowerthan the current allowable
emissions for the unit; "no" means no such request is made. A "yes" answer sh ould be accompanied by underlining the proposed emissions of the pollutant for which the cap is sought, in the tons peryear column.

BASIS OF EMISSION ESTIMATES - Use Code M to indicate how the emissions that ar e listed, have been derived.

OPERATft- . -ERIODS: (Optional use, to establish restriction on operating hour z:@.,

COMPANY NAME DATE REGISTRATION NUMBER: 60997

NORMAL PROCESS/EQUIPMENT OPERATING PERCENT ANNUAL USE/THROUGHPUT BY SEASON					MAXIMUM EQUIPMENT/PROCESS OPERATING SCHEDULE					
UNIT REF. NO. .	DECEMBER FEBRUARY	MARCH MAY	JUNE AUGUST	SEPTEMBER NOVEMBER	HOURSPER DAY	DAYS PER WEEK	WEEKS PER YEAR	HOURSPER DAY	DAYS PER WEEK	WEEKS PER YEAR

MAXIMUM FACILITY OPERATING SCHEDULE

HOURS PER DAY	DAYS PER WEEK	WEEKS PER YEAR

OPERATING PERIL,-S INSTRUCTIONS

UNIT REF. NO. - continue assigned reference number(s) from previous page(s).

PERCENT ANNUAL USEITHROUGHPUT BY SEASON - Give the percentage of time the proc ess or equipment was operated (past five years), by the indicated seasons. Do the same for the proposed operation.

NORMAL PROCESS/EQUIPMENT OPERATING SCHEDULE - indicate the normal operating sc hedule expected for the process equipment.

MAXIMUM PROCESS/EQUIPMENT OPERATING SCHEDULE - indicate the maximum operating schedule expected for the process/equipment.

MAXIMUM FACILITY OPERATING SCHEDULE - indicate the maximum number of hours of operation for the entire facility.

EPA ACCEPTED - CONTROL DEVICE LISTING
Fugitive Dust Sources Control Device* Control Device Prefix 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 Solubon UD-FC 99
Dump Bins Full Enclosure with water sprays UD-FW 90
CRUS"ING AND SCREENING
Crushing or Screening Full Enck*ure Vented to Baghouse CS-BH 99
Crushing or Screening Wet Suppression with Chernicals CS-CS 90
Crushing or Screening Full Enckrsure with Water Spray CS-FW 90
Crushing or Screening Full Enclosure/Wet SuppressiorVChemicals CS-FC 99
Crushing or Screening Full enclosure CS-FE 80
TRANSFER AND CONVEYING
Conveyor Transfer Point Full Enclosure Vented to Bagtwuse TC-BH 99
Conveyor Transfer Point Full Enclosure wdh Water Spray TC-FW 90
Corweyor Transfer Point FE and Water Spray wM ChemicW Solution TC-FC 99
Conveyor Transfer Point PE and Water Spray with Chemic-al SolWon 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 -7 WW-FE 100

STORAGE
Loading onto Piles Full Enclosure SL-FE 80
Loading onto Piles Telescopic Chute SL-TC 75
Loading onto Ples Wet Suppression with Chemical Solution SL-CS 75
Loading orito Piles Wind Guard SL-WG 50
Wind Erosion Full Encbsure SW-FE 100
Wind Erosion Wet Suppression with Chemical Solution SW-CS 99
Wind Erosion Water Spray SW-Ws 75
LOADING OUT
From Stockpdes Wet Suppression wdh Chemical Sdution LO-CS 95
Frofn 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 Solubon 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 wfth Water Spray HR-WS 70

Coal Handling and Storage Components

Storage Through Through Through Ctild Eff PM ctrld PM unctrld PM IO ctrld PM IO unctrld

Unit Ref Description Eqip Code (Ktons) Kton(hr) Kton(day) Kton(yr) % oons/yo Oons/yo Oons/yr) (tons/yr)

See Drawings CS-FC 0.700 6.849 2,500 99 0.1625 16.25 0.02925 2.925

See Drawings CS-FC 0.700 6.849 2,500 99 0.1625 16.25 0.02925 2.925

See Drawings CS-FC 0.700 6.849 2,500 99 1 100 0.18 1 8

See Drawings CS-FC 0.700 6.849 2,500 99 1 100 0.18 1 8

See Drawings CS-FC 0.700 6.849 2,500 99 1 100 0.18 1 8

See Drawings CS-FC 0.700 6.849 2,500 99 1 100 0.18 1 8

See Drawings SW-CS 350 24,000

See Draviings SW-CS 350 24,000

See Drawings SW-CS 350 24,000

See Drawings SW-CS 350 24,000

See Drawings SW-CS 40 5,000

See DrmMngs SW-CS 0.050 2

See Drawings SW-CS 20 5,000

See Drawings SW-FE 1 2.740 38.356 14 000

See DravAngs SW-FE 3.8 2.740 32.877 12:000

See Drawingr. SW-FE 4.1 2.740 32.877 12 000"
0

-FE 0.05 0.700
See Drawings SW 6.849 2:50

0.005
Sm Drawings SW-FE 0.700 6.849 2,500

See Drawings SW-FE 0.005 0.700 8.849 2,500

See DravAngs SW-FE 0.005 0.700 6.849 2,500

See Drawings SW-FE 0.005 0.700 6.849 2,500

See Drawings SW-FE 0.005 0.700 8.849 2,500

0
See Drawings TC-FC 2.740 38.356 14,0

See Drawings TC-BH 2.740 38.356 14,000

See Drawings TC-PC 2.740 38.356 14,000

See Drawings TC-PE 2.740 57.534 21,000

See Drawings TC-PE 2.740 57.534 21,000.'..!@::.-,;!`:":'

11,00
See Drawings TC-PC 2.740 30.137 0

See Drawings TC-PC 2.740 30.137 11,00

0
See Drawings TC-PC 2.740 84.932 31,00

see Drawings TC-PC 2.740 84.932 31,000

See Drawings TC-PC 2.740 65.753 24,000

o
See Drawngs TC-BH 2.740 65.753 24,00

See Drawings TC-PE 2.740 65.753 24,000

Coal Handling and Storage Components

Storage ,scription	Through Eqip	Through Code	Through (tons/yr)	Ctdd Eff (tons/yr)	PM ctrid (tons/yr)	PM unctdd (tons/yr)	PM IO ctrld %	PM 10 unctrid %
a Drawings	LO-FC		2.740	65.753	24,000			
e Drawings	TC-BH		2.740	32.877	12,000			
e Drawings	TC-BH		2.740	65.753	24,000			
e Drawings	TC-PC		2.740	30.137	11,000			
e Drawings	SL-CS		6.800	13.699	5,000			
e Drawings	TC-FC		1.400	13.699	5,000			
e Drawings	TC-FC		1.400	6.849	2,500			
e Drawings	TC-PC		0.000	0.005	2			
ZL.								
e Drawings	TC-FC		0.700	6.849	2,500::,			
e Drawings	TC-FC		0.700	6.849	2,500			
e DraWngs	TC-FC		0.700	6.849	2,500			
e Dravvings	TC-FC		0.700	6.849	2,500			
e Drawings	TC-FC		0.700	6.849	2,500 -			
e Drawings	TC-FC		0.233	2.283	833			
e Drdwngs	TC-FC		0.233	2.283	833			
e DraWngs	TC-FC		0.233	2.283	833			
e Drawings	TC-FC		0.700	6.849	2,500			
e Drawings	TC-FC		0.000	0.005	2			
e Drawings	TC-FC		0.700	6.849	2,500			
e Drawings	SL-CS		0.700	6.849	2,500			
1.400 6.849								
e Drawings	TC-FC		2,500					
e Drawings	TC-FC		0.000	0.005	2			
e DraWngs	TC-FC		0.700	6.849	2,500			
e Drawings	TC-FC		0.700	6.849	2,500			
e Drawings	TC-FC		0.700	6.849	2,500			
e Drawings	TC-FC		0.700	6.849	2,500.			
e Drawings	TC-FC		0.700	6.849	2,500			
e Drawings	TC-FC		0.233	2.283	833			
e Drawings	TC-FC		0.233	2.283	833.@. p			
2.283								
e Drawings	TC-FC		0.233	833				
e Drawings	TC-FC		0.700	6.849	2,500			
e Drawings	TC-PC		0.000	0.005	2			
e Drawings	TC-FC		0.700	6.849	2 500			
e Drawings	SL-CS		0.700	6.849	2:500			
!e Drawings	TC-FC		1.400	13.699	5,000			

Unit Ref # I

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Coal Handling and Storage Components

New coal handling components for import of raw coal

Storage Unit Ref	Through Description	Through Eqip	Through Code	Ctrid Eff (Ktons)	PM ctrid (Kton(hr)	PM unctrid (Kton(day)	PM IO ctdd (Kton(yr)	PM1 0 unctrid % oons/yo ons/yr)	unctrid (tons/yr)	(tons/yr)
See Drawings		UL-FE		13.699	5,000	70	0.8575616	2.8585386	0.1543611	0.514537
See Drawings		UL-FE		13.699	5,000	70	0.8575616	2.8585386	0.1543611	0.514537
See Drawings		TC-BH		13.699	5,000	99	0.0285854	2.8585386	0.0051454	0.514537
See Drawings		TC-BH		13.699	5,000	99	0.0285854	2.8585386	0.0051454	0.514537
See DravAngs		TC-PC		27.397	10,000					
See Drawings		TC-PC		27.397	10,000					
See Drawings		TC-PC		13.699	5,000					
See Drawings		TC BH		13.699	5,000					
See Dravvings		TC-BH		13.699	5,000					

	PM ow (tons/yr)	PM uncM (tons/yo	PMIO cw (tons/yr)	PMI 0 UM&W (tons/yr)
New PM & PMIO Emissions Only	1.7722939	11.434154	0.3190129	2.058148
Piles (See 1989 permit application)	9.2	92	1.656	16.56
Total intermediate storage/processing	6.0972939	443.93415	1.0975129	79.90815
Transfers	50.495678	313.65846	9.089222	56.45852
Total PM & PM10 (tons/yr)	65.792972	849.59281	11.842735	152.9267

Coal Handling and Storage Components

E factors S" trafts pts on ShW 2
Crushers 0.013 lbs/ton 0 lbs/ton
Transfers 0.0011434 lbs/ton 0.001 1434 lbs/ton
Screens 0.08 lbs/ton 0 lbs/ton

Throughput 14,000 Ktons 5,000 Ktons 1 0,000 Ktons

Silt 3.5 % not used
Moisture 6.7 % Based upon average moisture content as measured at DTA
Avg Wind 10.5 mph Based upon local weather data
k 0.74 AP-42
base 0.0032 AP-42
EF trans 0.0011434 lbs/ton AP-42

Notes: The labels used for components are based upon EPA's suggested categorie
s of dust control and the
% control values are consistent with those published as "EPA Accepted Control
Device Listing"

The emission factor at transfer points is computed using equations in AP-42

The emission factors for chrushers and screens back calculated from matedal in
 permit application (2002)
.01 14 and .01 3 and .0099 for crusher's Used .01 3
.0249 and .08 and .0250 for screens Used .08
.0014 for converers/transfer points Used .001 14

Transfer Points

Transfer Point	Control Type	Raw Rail (Ktons)	Synfuel Ship (Ktons)	Raw reclm (Ktons)	Synfuel reclm (Ktons)	Contri Eff %	PM Ctrid (tons)	PM Unctrid (tons)	PM-new Ctrid (tons)	PM-new Unctrld (tons)	PM10 Ctrld (tons)	PM10 Unctrid (tons)	Pmlo-new Ctrid (tons)	Pmlo-new Unctrid (tons)
1	UD-FC	99	0.040	3.990	0.007	0.718								
2	UD-FC	99	0.040	3.990	0.007	0.718								
3	TC-FC	99	0.080	7.980	0.014	1.436								
4	TC-SH	99	0.080	7.980	0.014	1.436								
5	TC-PC	95	0.399	7.980	0.072	1.436								
6	TC-PC	95	0.399	7.980	0.072	1.436								
6A	TC-PE	5,000	50	3.424	6.840	1.429	2.85	0.616	1.231	0.257	0.513			
6B	TC-PE	5,000	50	5.989	11.970	1.429	2.85	1.078	2.155	0.257	0.513			
7	LO-RC	5,000	80	2.396	11.970	0.572	2.85	0.431	2.155	0.103	0.513			
8	0	95	0.114	2.280	0.021	0.410								
9	TC-PE	0	50	1.710	3.420	0.308	0.616							
10	LO-RC	0	80	0.684	3.420	0.123	0.616							
11	TC-PC	0	95	0.314	6.270	0.057	1.129							
12	TC-PC	95	0.342	6.840	0.062	1.231								
12A	TC-PE	5,000	50	4.854	9.690	1.429	2.85	0.874	1.744	0.257	0.513			
12B	TC-PE	5 000	50	8.848	17.670	1.429	2.85	1.593	3.181	0.257	0.513			
13	LO-RC	5:000	80	3.539	17.670	0.572	2.85	0.637	3.181	0.103	0.513			
15	TC-PC	95	0.143	2.850	0.026	0.513								
16	SL-CS	75	0.713	2.850	0.128	0.513								
17	LO-FC	99	0.014	1.425	0.003	0.257								
18	TC-FC	99	0.014	1.425	0.003	0.257								
19	UL-WS	50	0.001	0.001	0.000	0.000								
20	LO-PC	95	0.000	0.001	0.000	0.000								
21	TC-FC	99	0.000	0.001	0.000	0.000								
22	CS-FC	99	0.014	1.425	0.003	0.257								
23	TC-FC	99	0.000	0.001	0.000	0.000								
24	SL-CS	95	0.000	0.001	0.000	0.000								
25	LO-CS	80	0.000	0.001	0.000	0.000								
26	TC-FC	99	0.014	1.425	0.003	0.257								
27	TC-FC	99	0.014	1.425	0.003	0.257								
28	TC-FC	99	0.014	1.425	0.003	0.257								
29	TC-FC	99	0.014	1.425	0.003	0.257								
30	TC-FC	99	0.014	1.425	0.003	0.257								
31	TC-FC	99	0.014	1.425	0.003	0.257								
32	TC-FC	99	0.014	1.425	0.003	0.257								
33	TC-FC	99	0.005	0.475	0.001	0.086								
34	TC-FC	99	0.005	0.475	0.001	0.086								
35	TC-FC	99	0.005	0.475	0.001	0.086								

Transfer Points

Transfer Point	Control Type	Raw Rail	Synfuel Ship	Raw reclm	Synfuel reclm	Contrl Eff %	PM Ctrld	PM Unctrld	PM-new Ctrid	PM-new Unctrid	PM1 0 Ctrid	PM10 Unct rld
Pmlo-new Ctrld	PM10-new Unctrld											
36	TC-FC	99	0.005	0.475	0.001	0.086						
37	TC-FC	99	0.005	0.475	0.001	0.086						
38	TC-FC	99	0.005	0.475	0.001	0.086						
39	TC-FC	99	0.005	0.475	0.001	0.086						
40	TC-FC	99	0.005	0.475	0.001	0.086						
41	TC-FC	99	0.005	0.475	0.001	0.086						
42	TC-FC	99	0.014	1.425	0.003	0.257						
43	TC-FC	99	0.000	0.001	0.000	0.000						
43A	SL-CS	75	0.000	0.001	0.000	0.000						
44	TC-FC	99	0.014	1.425	0.003	0.257						
45	TC-PC	95	0.071	1.425	0.013	0.257						
46	SL-CS	75	0.357	1.425	0.064	0.257						
47	UL-WS	50	0.001	0.001	0.000	0.000						
48	LO-PC	95	0.071	1.425	0.013	0.257						
49	TC-FC	99	0.014	1.425	0.003	0.257						
50	CS-FC	99	0.014	1.425	0.003	0.257						
51	TC-FC	95	0.000	0.001	0.000	0.000						
52	SL-CS	75	0.000	0.001	0.000	0.000						
53	LO-CS	80	0.000	0.001	0.000	0.000						
54	TC-FC	99	0.014	1.425	0.003	0.257						
55	TC-FC	99	0.014	1.425	0.003	0.257						
56	TC-FC	99	0.014	1.425	0.003	0.257						
57	TC-FC	99	0.014	1.425	0.003	0.257						
58	TC-FC	99	0.014	1.425	0.003	0.257						
59	TC-FC	99	0.014	1.425	0.003	0.257						
60	TC-FC	99	0.014	1.425	0.003	0.257						
61	TC-FC	99	0.005	0.475	0.001	0.086						
62	TC-FC	99	0.005	0.475	0.001	0.086						
63	TC-FC	99	0.005	0.475	0.001	0.086						
64	TC-FC	99	0.005	0.475	0.001	0.086						
65	TC-FC	99	0.005	0.475	0.001	0.086						
66	TC-FC	99	0.005	0.475	0.001	0.086						
67	TC-FC	99	0.005	0.475	0.001	0.086						
68	TC-FC	99	0.005	0.475	0.001	0.086						
69	TC-FC	99	0.005	0.475	0.001	0.086						
70	TC-FC	99	0.014	1.425	0.003	0.257						

Transfer Points

Transfer Control Raw Synfuel Raw Raw Synfuel Contrl PM PM PM-new PM-new PM1 0 PM10 Pmlo-new PM10-new
Point Type Rail Ship reclm reclm Eff % Ctrld Unctrld Ctrid Unctrld Ctrld Unc trld Ctrld Unctrid
71 TC-FC 99 0.000 0.001 0.000 0.000
71A SL-CS 75 0.000 0.001 0.000 0.000
72 TC-FC 99 0.014 1.425 0.003 0.257
73 TC-PC 95 0.071 1.425 0.013 0.257
74 SL-CS 75 0.357 1.425 0.064 0.257
75 LO-FC 99 0.029 2.850 0.005 0.513
76 TC-PC 95 0.143 2.850 0.026 0.513
79 TC-PC 95 0.342 6.840 0.062 1.231
80 TC-PC 95 0.342 6.840 0.062 1.231
81 TC-SH 99 0.031 3.135 0.006 0.564
82 TC-PC 95 0.342 6.840 0.062 1.231
83 TC-PC 95 0.306 6.128 0.055 1.103
84 TC-BH 99 0.068 6.840 0.012 1.231
85 TC-PC 95 0,342 6.840 0.062 1.231
86 TC-PC 95 0.684 13.680 0.123 2.462
86A TC-PE 50 6.844 13.680 1.232 2.462
87 SL-FE 80 2.738 13.680 0.493 2.462

New Pts
88 UL-FE 5,000 70 0.858 2.850 0.858 2.85 0.154 0.513 0.154 0.513
89 UL-FE 5,000 70 0.858 2.850 0.858 2.85 0.154 0.513 0.154 0.513
90 TC-BH 5,000 99 0.029 2.850 0.029 2.85 0.005 0.513 0.005 0.513
91 TC-BH 5,000 99 0.029 2.850 0.029 2.85 0.005 0.513 0.005 0.513
92 TC-PC 5,000 95 0.143 2.850 0.143 2.85 0.026 0.513 0.026 0.513
93 TC-PC 5,000 95 0.143 2.850 0.143 2.85 0.026 0.513 0.026 0.513
94 TC-PC 10,000 95 0.286 5.700 0.286 5.7 0.051 1.026 0.051 1.026
95 TC-PC 10,000 95 0.286 5.700 0.286 5.7 0.051 1.026 0.051 1.026
96 TC-PC 5,000 95 0.143 2.850 0.143 2.85 0.026 0.513 0.026 0.513
97 TC-SH 5,000 99 0.029 0.029 0.005 0.005
98 TC-BH 5,000 99 0.029 0.029 0.005 0.005
Totals (tonstyear) for new import, 9.690 48.45 1.744 8.721
PM etri PM undd PMI 0 ctri PMIO unctri
Totals (tonstyear) for all transfers, c 50.496 313.66 9.089 56.459
PM ctd PM unctd PM IO ctA PM IO unctd

coal ship so twm
EF trans 0.001 14 lbs/ton 0.001 1 lbs/ton 0.00114 lbs/ton
Ktonstyr 14,000 5,000 10,000
7,000 2,500 5,000
833

FUEL-BUi - NG EQUIPMENT AND STATIONARY COMBUSTION ENGINES ("ACEPT INCINERATORS)
(BOILERS, TURBINES, GAS/DIESEL ENGINES, KILNS, ETC.):

COMPANY NAME Dominion Terminal Associates DATE 5JIR4 REGISTRATION NUMBER: 6099 7

m 0 D HEAT c 0 UNIT NO.	EQUIPMENT MANUFACTURER, MODELNUMBER	TYPE CONST.	DATE OF BTU/HR)	D FUEL CODEA)	EQUIPMENT (MILLION	STEAM TYPE OF (lb/hr)	BRAKE (USE	ELECTRI CAL USAGE QUANTITY HORSEPOWER (BHP)	POWER (KW)	(USE CODE B)
REF. AND MFR. OR E MAXIMUM RATED OUTPUT APPROPRIATE TO RATED SOURCE TYPE INPUT CAPACITY FOR EACH TYPE OF OUTPUT										
Diesel Fuel no										
CB-1	Cummins Diesel Engine Per ASTM QST 30 - G5 D975	4	9.138	2	16	N/A	N/A	N/A		7
Diesel Fuel no										
CB-2	Cummins Diesel Engine Per ASTM QST 30 - G5 D975	4	9.138	2	16	N/A	N/A	N/A		7

FOR MODIFICATION CODES SEE INSTRUCTIONS ON NEXT PAGE.

Code A - Equipment Code A (continued) Code B - Usage

BOILER TYPE:
1. Pulverized Coal - Wet Bottom
2. Pulverized Coal - Dry Bottom
3. Pulverized Coal - Cyclone Furnace
4. Spreader Stoker
5. Chain or Travelling Grate Stoker
6. Underfeed Stoker
7. Hand Fired Coal
8. Oil, Tangentially Fired
9. Oil, Horizontally Fired (except rotary cup)
1 0. Gas, Tangentially Fired
1 1. Gas, Horizontally Fired
12. Wood with Fiyash Reinjection
13. Wood without Flyash Reinjection
14. Other Specify

STATIONARY ENGINE TYPE:
15. Combustion Turbine
16. Internal Combustion Engine
17. Other Specify

OTHER COMBUSTION UNITS:
18. Oven / Kiln
19. Rotary Kiln
18. Process Furnace
99. Other

1. Steam Production
2. Drying / Curing
3. Space Heating
4. Process Heat
5. Food Processing
6. Electrical Generation
7. Mechanical Work
99. Other

FUEL-BURNING EQUIPiviENT AND STATIONARY
COMBUSTION ENGINES INSTRUCTIONS

UNIT REF. NO. - assign a unique reference number for each piece of fuel burni ng equipment. If the facility has other equipment already registered, do not repeatthose
reference numbers. NOTE: Where a unit burns more than one fuel, assign a sepa rate line for each, pegged to the unit (i.e., *1A for oil, #1 B for the same u nit burning
coal, etc.).

EQUIPMENT MANUFACTURER, TYPE AND MODEL NO. - provide the nameplate information for each piece of equipment

DATE OF MFR. OR CONST. - give the date that each emission unit was installed, constructed in place, or manufactured.

MODIFICATION CODE - Choose a code and insert:
0. - No change.
1 .- for increase in regulated limit.
2. - for physical change in emissions unit.
3. - for changes in related equipment.
4. - for new emissions unit(s).
5. - for replacement emissions unit(s).

MAXIMUM RATED INPUT HEAT CAPACITY FOR EACH FUEL - provide the manufacturer's m aximum rated heat.input in Million BTUs per hour based on the nameplate
rating or maximum fuel usage.

TYPE OF FUEL - identify all the types of fuel that will be burned by each refe renced piece of equipment and the corresponding data for each fuel type. If u sed in a
process, relate this to the appropriate process.

TYPE OF EQUIPMENT - use Code A at the bottom of the page.

MAXIMUM RATED OUTPUT APPROPRIATE TO SOURCE TYPE - provide the maximum rated ou tput capacity in units consistent with your operation. Examples: if a
boiler is to be installed to generate process steam, then report pounds of ste am per hour or boiler horsepower; if a turbine is to be installed to generate electricity, report
kilowatts of electricity; if a diesel engine is to be installed to power a blo wer, report the output brake horsepower (Also known as mechanical horsepower).

USAGE - Use Code B at the bottom of the page.

STACK PA. -AMETERS AND FUEL DATA:

COMPANY NAME DATE REGISTRATION NUMBER: 60997

VENT/STACK OR EXHAUST DATA							FUEL(S) DATA				
UNIT NO.	VENT/ STACK NO.	EXIT CONFIG. CODE K)	RATED STACK DIA. (feet)	EXPECTED EXIT VELOCITY (fpm)	EXPECTED EXIT VOLUME (acfm)	HIGHER GAS TEMP. ('F)	TYPE OF FUEL	MAX. BURNED/ (SPECIFY UNITS)	MAX. BURNED/ (SPECIFY UNITS)	MAX. HEATING (SPECIFY UNITS)	VALUE MAX.% UNITS) SULFUR	ASH
A												
A												
S, \j												

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)

STACK PARAMETERS AN6. tJEL DATA INSTRUCTIONS

UNIT REF. NO. - continue the unique assigned reference number(s) from page(s) 3 through 8.

VENT/STACK NO. - one reference number may have many exhaust points. Assign a unique vent/stack number for each vent or stack through which the process or equipment identified by this unit reference number exhausts.

VENT/STACK CONFIGURATION - indicate the appropriate configuration by using Cod e K.

VENT/STACK HEIGHT - list the exit height (in feet) from the ground level.

EXIT DIAMETER - list the inside diameter (in feet) of the vent/stack at its ex it. For rectangular vents, provide length and width (in feet) of the vent/sta ck at its exit.

EXIT GAS VELOCITY - list the velocity in feet per minute of the stack gas as i t exits the vent/stack.

EXIT GAS VOLUME - list the volume of the flow in actual cubic feet per minute.

EXIT GAS TEMPERATURE - list the temperature in degrees Fahrenheit.

TYPE OF FUEL - identify all the types of fuel that will be burned by each refe renced piece of equipment and the corresponding data for each fuel type.

MAXIMUM RATE BURNED PER HOUR - provide the maximum rated fuel input at maximum design capacity in units such as pounds, gallons or cubic feet per hour.

MAXIMUM EXPECTED AMOUNT OF FUEL BURNED PER DAY - provide the maximum amount of fuel input expected in 24 hours. Use units corresponding to fuel type (e.g. tons for solid fuels, etc.).

MAXIMUM EXPECTED AMOUNT OF FUEL BURNED PER YEAR - provide the maximum amount o f fuel input expected in one year. Use units corresponding to fuel type (e.g. tons for solid fuels, etc.).

HIGHER HEATING VALUE - provide the higher heating value of the specified fuel in BTUs per unit of fuel.

MAXIMUM PERCENT SULFUR - identify the highest percent sulfur content for the f uel.

MAXIMUM PERCENT ASH - identify the highest percent ash content for the fuel.

800 Connecticut Blvd.. East Hartford, CT 06108 (203) 289-8631
Environmenital

f."."onsultantsv Inc.

October 18, 1989

Mr. Thomas N. Houck, P.E.

Dominion Terminal Associates

Harbor Road, Pier 11

P. 0. Box 967-A

Newport News, Virginia 23607

Dear Tom:

Enclosed please find a permit application and supporting basis report.

This cover letter includes a verbal summary of the permit application.

Need for a Revised Permit

Dominion Ter-minal Associates plans an increase in the physical size of their operating area. This increase in acreage (from 68 to 101 acres) will allow for:

* Better pile management through greater flexibility in locating shipments for transfer.

0 Lower height of piles through more acreage and better access.

* Reduced bulldozer traffic through better access to piles by the stacker/reclaimer equipment.

While the increase in acreage can be called a physical "expansion" the actual operational changes could better be described as "debottlenecking", i.e., increasing the area of storage and pile management in order to attain a larger capability for throughput.

Permit Modifications

The present permit is based upon maximum allowable emissions, annual throughput and maximum allowable tons in storage.

. Dominion Terminal Associates is requesting only one substantive change in the permit, i.e. an increase of the maximiun allowable quantity of coal storag
e
from a maximum 1 million tons on the ground to a maximum of 1.4 million tons on the ground (Specific Condition 5). As an allowable average, there will be 975,000 tons on the ground. Peak pile heights will be reduced from 75 feet to

Hartford, CT - Denver. CO - Los Aiigeles. CA - Somerset, NJ - Washington, DC - Seattle. WA

A 'TX Company

28.4 feet because of the better pile management obtainable through increased acreage. On average, pile heights will be reduced from 28.3' (650,000 tons) to 22.5' (850,000 tons).

Due to the uncertainty in emission factors for fugitive emissions, Dominion Terminal is not asking for any change in maximum allowable emissions. The maximum emissions calculated in this permit application are 60.8 tons per year of total suspended particulate and 26.4 tons per year of particulate matter less than 10 microns in diameter.

The calculated reductions in maximum emissions from the original permit (91.4 tons per year of total suspended particulate) occur because of slight changes in the facility as-built versus the design and the use of new published emission factors, including those recommended by EPA (AP-42). These

changes result in a calculation that the allowable emissions (to be compared to the original application) would be 60.8 tons per year of TSP and 26.4 tons per year of PM10.

These maximum emissions are a decrease in emissions. This is true primarily because the calculated emissions from storage pile wind erosion for the proposed maximum of 1.4 million tons stored on 101 acres are much less than the originally permitted 1 million tons on 66 acres. The reason is that lower pile heights and less disturbances of the piles result in better pile management and less wind erosion per quantity of coal stored.

The original permit application did not include-the-p-rgpane fired heaters ___'@These emissions
used to thaw coal cars prior to off loading we-re not ded--
are included in the attached permit applic on. The use of the heaters results in only 0. 004 tons per year of particulate matter emissions which are

all smaller than 10 microns.

Allowable emission changes and permit conditions are summarized in Table I.

Actual:,Emissions

-Dominion Terminal has been operating at less than maximum c .apacity, in -part, because of the limited area and, in part, because of market conditions.

Usin the same calculation techniques, an estimate has been made of actual .9
emissions for 1987, 1988 and under proposed operation. These calculations are

not required in the pemit application, but may be helpful in explaining the "expansion." Table II shows a summary of actual emissions. The proposed operation -case assumes 17,500,000 tons per year throughput (a -45% increase) -whir-h 'is the forecast for improved market conditions but is still well belo w
.the current allowable throughput of 25,000,000 tons per year. A -reduction o f
allowable throughput to 20,000.,000 tons per-year .is shown in Table I and reflected in the permit -application. It is also assumed that there will be an

.average of 850,.000 tons stored zt the facility. . These proDe cted actual
.emissionare still substantial'ly less than allowable.

T?C

The increases in expected actual emissions are not as great a percentage increase as expected from 45% greater throughput because the increased acreage

will lead to better pile management. This calculation has also not taken credit for an increased and enhanced spray system, including closer spacing, whose control may be better than 90%.

TRC wishes to acknowledge the assistance and work of Dr. David Emmitt of Simpson Weather Associates who provided invaluable understanding of the terminal operations and the calculations of wind erosion from storage piles.

It is clear that the "expansion" will result in a decrease in allowable emissions and that actual emissions as calculated will not increase as much as

the increased throughput would indicate and in reality may not increase.

If you or anyone else has questions about the enclosed, please call.

Sincerely,

TRC ENVIRONMENTAL CONSULTANTS, INC.

&TL.
a F. Hof:nag
Vice President
and Technical Director

GFH/wpc
Enclosures

T?C

TABLE I
SUMMARY OF ALLOWABLE EMISSIONS
DOMINION TERMINAL ASSOCIATES

	Maximum Allowable Emissions Tons/Year TSP	Allowable Throughput Millions Tons/Year PMJO	Allowable Storage Millions of Tons
Original Pemit	91.4	NA	25 1
Recalculated Original Permit	60.8	26.4	25 1
Proposed Permit Modification	51.9	22.3	20 1.4

T?C

TABLE II
SUMMARY OF ACTUAL EMISSIONS
DOMINION TERMINAL ASSOCIATES

	1987	1988	Proposed
Coal Handling			
Throughput (Millions of Tons)	9.9	12.0	17.4
Emissions			
TSP (tons/year)	16.6	20.0	31.0
PM10 (tons/year)	7.7	9.3	14.4
Wind Erosion from Piles			
Storage (millions of tons)	0.585	0.586	0.850
Emissions			
TSP (tons/year)	4.5	5.5	7.8
PM10 (tons/year)	1.6	1.9	2.7
Total			
TSP (tons/year)	21.1	25.5	38.8
PM10 (tons/year)	9.3	11.2	17.1

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BASIS FOR SAPCB PERMIT MODIFICATION APPLICATION

Submitted to:

Dominion Terminal Associates
Newport News, Virginia

TRC Project Number 5974-Tll

October 18, 1989

Submitted by:

John E. Yocom, P.E.
TRC Environmental Consultants, Inc.

G. David Emmitt, Ph.D.
Simpson Weather Associates, Inc.

1.0 BASIS FOR PERMIT APkICATION

1.1 Appl@Sable Referenc-es

A. AP-42 (9/88)

B. Dominion Terminal Associates, SAPCB Form 7,
Submitted July, 6, 1981.

C. TRC Environmental Consultants, "Determination of Fugitive Coal Dust Emissions from Rotary Railcar Dumping", May 1984.

1.0 BASIS FOR PERMIT APPLICATION continued

1.2 Description of Emission Calculations

The dxisting facility and the proposed modification have been divided into three emission sources:

Coal Receiving Area
Coal Transfer and Storage Area
Coal Loadout Area

Note that the coal piles may be emitting while the terminal is inoperative.

1.2.1 Assumptions for Computations For Air Emissions From Dumping/ Stacking/Reclaiming Operations

1) Annual throughput of coal is 20,000,000 tons.
2) Dumping capacity - maximum 5150 TPH based on 100 tons/car and 2.3 min/2 car cycle time, average 2874 TPH based on grade change, switching and delivery delays.
3) Stacking capacity maximum 5900 TPH, average 2874 TPH with delays.
4) Reclaiming capacity 20,000 to 188,000 ton capacity ships will be loaded at a design rate of 6,500 TPH and an average rate of 3,614 TPH with delays.
5) Pile height of 27.8' and an average annual storage capacity of 975,000 tons has been used in pile emission calculations.

1.2.2 Control Efficiencies

The following control efficiencies are used in this application and are based on previously filed air pollution reports:

1) 90% control for enclosed transfers where wet suppression with surfactants is used.

2) 75% control for transfer using lowering chutes and for open discharges using wet suppression.

3) 90% control for storage piles and their maintenance using wet dust suppression.

4) 99% control for baghouse dust collection and surge bin hoppers.

5) 50% control for spray controls on bucket wheel stacker/reclaimers in the reclaiming mode.

1.2 Descr@iption of Emission Calculations - continued

1.2.3 Equipment Transfer Tonnage Rates

	Maximum (TPH)	Average (TPH)
Car Dumpers	5150	2874
Conveyer C-1 and C-2	5150	2874
Conveyer C-3 and C-5	5900	2874
Conveyer C-4 and C-7: Stacking	5900	2874
Reclaiming	6200	3614
Conveyer C-6, C-8 and C-9	6200	3614
Conveyer C-10	6500	3614

Total suspended particulate (particle) emissions from each source point or area were calculated as follows:

Annual Uncontrolled Emissions
Ton/Yr = Process Flow Rate (Ton/Yr) x Emission Factor (lb/ton)

Annual Controlled Emissions
Ton/Yr = ArLyiual Uncontrolled Emissions (Ton/Yr) x (100 - Percent Dust Control Efficiency)/100

1.0 BASIS FOR PERMIT APPLICATION continued

1.2 Desctiption of Emission Calculations - continued

1.2.4 Rotary Car Dumper (From "Determination of Fugitive Coal Dust Emissions from Rotary Railcar Dumping" TRC Environmental Consultants, May 1984.)

TRC emission factor (EF) for Maryland site = EFTSP 0-001 lb/ton

Aerodynamic particle size multiplier (k) for PM10 0.35 (Table 11.2.3-2, AP-42, 9/88)

EFpMlo = EFTSP X k = 0.001(0.35) = 0.00035 lb/ton

To account for differences in silt and moisture content between the Maryland site and DTA, the emission factors were multiplied by the following correction factor as follows:

EFDTA = EFMD X (SD/SM)/(MD/MM) 1-4

where,
SD = Silt Content of Coal @ DTA = 6.17%
SM = Silt Content of Coal @ Md. Site = 2.16%
MD = Moisture Content of Incoming Coal @ DTA = 5.5%
MM = Moisture Content of Coal @ Md. Site = 4.46%

Silt and moisture values were determined from samples collected at DTA and the Maryland site, with the exception of MD, which was estimated from moisture data from companies supplying coal to DTA.

Emission factors were calculated as follows:

EF TSP = 0-001 x (6.17/2.16)/(5.5/4.46)1.4
=0.00213 lb/ton

EFpMlo = 0.00035 x (6.17/2.16)/(5.5/4.46)1.4
=0.000746 lb/ton

1.0 BASIS FOR PERMIT APPLICATION continued

1.2 Descr'@.ption of Emission Calculations - continued

1.2.5 Transfer Points (From AP-42, 9/88)

EF = k x (0.0032)(U/5)l.3/(M/2)l-4 (lb/ton)

where,
k = Aerodynamic particle size multiplier
kTSP 0.74
kpMlo 0.35

U = Mean wind speed = 10.7 mph (from National Climate Center Data for Norfolk, Virginia).

M = Moisture content of coal = 5.5% for incoming coal, = 6.5% for outgoing coal

Emission factors for dumping/stacking incoming coal are calculated as follows:

EF TSP = 0.74 x (0.0032)(10.7/5)1-3/(5.5/2)1.4
= 0.00154 lb/ton

EFpMlo = 0.35 x (0.0032)(l0.7/5)l.3/(5.5/2)l.4
= 0.00073 lb/ton

Emission factors for reclaiming/loading outgoing coal are calculated as follows:

EF TSP = 0.74 x (0.0032)(l0.7/5)l.3/(6.5/2)l.4
= 0.00122 lb/ton

EFpMlo = 0.35 x (0.0032)(l0.7/5)l.3/(6.5/2)l.4
= 0.00058 lb/ton

1.0 BASIS FOR PERMIT APPLICATION continued

1.2 Description of Emission Calculations - continued

1.2.6' Storage Piles - Comparisons between current and proposed DTA ground storage.

1.2.6.1 Assumptions for pile emission calculations for permitted ground storage and throughput

Bulk density of coal: 60 lb/ft3 (962 kg/m3)

Angle of repose: 370

Stackout (SO) Refresh: Entire average pile surface

Reclaim (RC) Refresh: Entire average pile surface

Bulldozing done on same day as SO or RC

Average pile base: (230 x 300) = 69,000 ft2
5' Margin area/pile: 8,500 ft2

Total base area/pile: 77,500 ft2

	Current	Proposed
Permitted peak ground storage (tons):	1.0 x 106	1.4 x 106
Permitted average ground storage (tons):	1.0 x 106	.975 x 106
Permitted annual throughput (tons):	25.0 x 106	20.0 x 106
Average stackout tonnage:	7400	7400
Average # SO/day:	9.26	7.40
Average reclaim tonnage:	20,316	20,316
Average # of RC/day:	3.37	2.70

-gE-0 Aq SUOTSSTtUB dSl
Tenuue BuTATdTqlntu Aq P84PTnoleo BJaM SUOTSSTtUa Mid Tenuuv aao;ajelqq
IgE-0 aq o-4 paumsse ST UT JO UOTq0?JJ BLI.1
 dSl SaTDT-4 IL>d 0-[Wd

SU04 Z-E SuO4 L-9 :P9TTOJ4u00 %06
CT7- SU04 Z'ZE suO4 O'Lg :PaTTOJ4uODufl
SUOTSSTWa 0INd Tpnuuy
T

ct- SU04 Z-6 suoq C-91 :P9TTOJ4uO0 %06
E7v- SuOl O'Z6 suOl 8'Z9T :P9lT0J4u00ufl
:SUOTSSTU'9 dSl TenuuV

(.ZW 9EL'ZL) (ZW DCO'OOT)
LZ- Z49 6E9'ZSL Z49 E9T'09L'T :Alep/paqjnqSTP EBIV

(Ztu EOZ'L) (ZUI OZ6'L)
6- z4; 68t'LL zq; 90z'ss :BTTd -f)Ae go eaje aop;jns

C9- (ul q'g) R'LZ (w 6'ZZ) GL :BTTd 9b?aBAP JO 4'qf)TBH

9E- E9L,Z:v 999,99 :9TTd BbeJaAe 90 BBPuuOl

ZG+ SIZZ 91 :SBTTd go jaqumN

90T X GL6'0 90T X O'T punoa5 uo suoq af)pja,&,V

901 X OZ 90T X GZ (suoq) qndtibnoatp lpnuuv

abueqo % alqemOTTV BTqlemOTTV
 P8sOdOJd 4uajjno

abuetjo % qau pue pasodoad pue quaiino tpoq SUOTSSTUIB ajqemoTTV Z-9-Z-T

penUTqUOD - sBTTd a5e@JOI 9-Z-T

penUTqUOD - SUOT4eTnDTe3 UOTSSTUra Jo uoTqdTiosecl Z-1

penUTqUOO - NOILVOIlddV iiwdad Z10a SIM 0-1

1.0 BASIS FOR PERMIT APPLICATION continued

1.2 Description___of Emission Calculations - continued

1.2.7 Other Emission Sources

1.2.7.1 Propane-fired thaw shed

Manufacturer and Model number: Solar Flow, #lRT-350
Rated heat capacity: 35 MBTU/hr
Rated heat content of propane: 1000 BTU/ft3
Rated fuel consumption: 35,000 ft3/hr (102 heaters,
350 ft3/hr/heater)

Actual heat capacity: 35.413 MBTU/hr
Actual heat content of propane: 2516 BTU/ft3
Annual fuel consumption (1987): 85,900 gallons = 3.13
million ft3

Hourly fuel consumption:
35,413,000 BTU/hour
2516 BTU/ftj 14,075 ft3/hour propane

The amount of sulfur and ash in the fuel is assumed to be negligible.

Emission rates were calculated as follows:

Compound	Emission Rate (lb/1000 gal. LPG)	Annual Consumption (x 1000 gal. LPG)	Annual Emissions (tons/yr)
Particulate	0.265	85.90	0.0114
Sulfur oxides	0.014	85.90	0.0006
Carbon monoxide	3.10	85.90	0.1331
Nitrogen oxides	12.40	85.90	0.5326
vocs			
Non-methane	0.25	85.90	0.0197
Non-methane	0.27	85.90	0.0116

TOTAL VOCs 0.0223

1 Emission rates for LPG from Table 1.5-1, A-42 (9.88)

2 Average value from Table 1.5-1, AP-42, (9/88)

The propane heater is used approximately 222 hours a years, depending on the ambient temperture. The heater is used during December, January, and February at an average rate of 18.5 hours/week.

1.0 BASIS FOR PERMIT APPLICATION continued

1.3 Term'inal Emissions

1.3.1 Operation Descriptio

The following section describes individual transfer components and operating procedures of the coal terminal.

Modes of Operation	Source Point and Area No.	Description
1,2,3	1.	Coal discharged from railcars into hopper.
1,2,3	2.	Coal fed onto Conveyer C-1 by vibrating feeders.
1,2,3	3.	Conveyor C-1 discharges onto Conveyor C-2.
1,2,3	4a.	Conveyor C-2 discharges at Tower TT-1.
1,2,3	4b.	Surge Silo SS-1.
1,2,3	5.	Surge Silo SS-1 discharges onto Conveyor C-3.
1,2,3	6.	Conveyor C-3 discharges onto Conveyor C-4, C- 5 or C-6 at Tower TT-2.
2	7.	Conveyor C-4 discharges onto S/R #1 Elevating Conveyor.
2	8	S/R #1 Elevating Conveyor discharges onto S/R #1 Boom Conveyor.
2	9.	S/R #1 Boom Conveyor discharges (Stacking Mode).
4	10.	S/R #1 Boom Conveyor loads (Reclaiming Mode).
4	11.	S/R 'ml Boom Conveyor discharges onto Conveyor C-4.
4	12.	Conveyor C-4 discharges onto Conveyor C-6.
3	13.	Conveyor C-5 discharges onto Conveyor C-7 at Tower TT-3.
3	14.	Conveyor C-7 discharges onto S/R #2 Elevating Conveyor.

1.0 BASIS FOR PERMIT APPLICATION continued

1.3 Termihal Emissions - continued

1.3.1 Operation Descriptio -continued

Modes of Operation | Source Point and Area No. | Description

3 15. S/R #2 Elevating Conveyor discharges onto S/R #2 Boom Conveyor.

3 16. S/R #2 Boom Conveyor discharges (Stacking).

5 17. S/R #2 Boom Conveyor loads (Reclaiming Mode).

5 18. S/R #2 Boom Conveyor discharges onto C-7.

5 19. Conveyor C-7 discharges onto Conveyor C-8 at Tower TT-3.

5 20a. Conveyor C-8 discharges at Tower TT-4 (if going to Surge Silo SS-2) or onto Conveyor C- 11 (if going to Surge Silo SS-3).

5 20b. Surge Silo SS-2 or SS-3.

1,4,6 21. Conveyor C-6 discharges onto Conveyor C-9 at Tower TT-3.

1,4,6 22a. Conveyor C-9 discharges at Tower TT-4 (if going to Surge Silo SS-2) or onto Conveyor C- 11 (if going to Surge Silo SS-3).

1,4,6 22b. Surge Silo SS-2 or SS-3.

1,4,5,6 23. Surge Silos SS-2 and SS-3 feed coal by vibrating feeders onto Conveyor C-12.

1,4,5,6 24. Conveyor C-12 discharges onto Conveyor C-10.

1,4,5,6 25. Pier Conveyor C-10 discharges onto Shiploader Boom Conveyor.

1,4,5,6 26. Coal discharge from Shiploader Boom Conveyor through a telescoping chute into the ship.

6 27. R-3 Boom Conveyor loads (Reclaiming Mode).

6 28. R-3 Boom Conveyor discharges onto C-13.

6 29. Conveyor C-13 discharges onto C-5 or C-6.

1.0 BASIS FOR PERMIT APPLICATION - continued

1.3 Termifial Emissions - continued

1.3.2 Terminal Operating Modes

In calculating annual emissions, the total time the facility is expected to operate in one of the following six modes was used. It should be noted that the facility can operate in certain combinations of these modes (i.e. Modes 2 and 5, Modes 2 and 6, Modes 3 and 4, and Modes 3 and 6).

Mode	Descriptio	Hours/Year!
No.1	Coal loaded directly to ship	557
No.2	Coal transferred from dumper to S/R #1	3201
No.3	Coal transferred from dumper to S/R #2	3201
No.4	Coal transferred from S/R #1 to vessel	1926
No.5	Coal transferred from S/R #2 to vessel	1395
No.6	Coal transferred from R #3 to vessel	2214

The terminal will operate 24 hours per day, 365 days per year.

Maximum number of hours operations expected to occur.

1.3 Termihal Emissions - continued

1.3.3 Emissions from Material Transfer Points

The maximum annual emissions of fugitive dust from the facility is summarized in Table 1. Maximum hourly emission rates for TSP and PM10 are summarized in Table 2 and Table 4, respectively. Maximum annual emission rates for TSP and PM10 are summarized in Table 3 and Table 5, respectively.

ThBLE 1

AS-BUILT ANNUAL EMISSIONS
20,000,000 TPH THROUGHPUT

FLOW- EMISSION POINTS	MODES	AVG HOURLY EMISSION RATE (TPH)	AVG HOURLY TSP FACTOR (i/TOX)	AVERAGE PH-10 COX- (//TON)	YEAUY HOURS (t)	EMISSION TROL (I/RR)	EMISSION ERISSION (I/HR)	TSP (TONS/YR)	PH-10 (TONS/YR)
1	1,2,3	6958.4	2874	0.0021	0.00075	90t	0.612	0.214	2.130	0.746
2	1,2,3	6958.4	2874	0.0015	0.00073	901	0.444	0.210	1.545	0.731
3	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
4(a)	1,2,3	6958.4	2874	0.0015	0.00073	901	0.444	0.210	1.545	0.731
4(b)	1,2,3	6958.4	2874	0.0015	0.00073	991	0.044	0.021	0.154	0.073
5	1,2,3	6958.4	2874	0.0015	0.00073	901	0.444	0.210	1.545	0.731
6	1,2,3	6958.4	2874	0.0015	0.00073	90%	0.444	0.210	1.545	0.731
7	2	3200	2874	0.0015	0.00073	901	0.444	0.210	0.710	0.336
8	2	3200	2874	0.0015	0.00073	901	0.444	0.210	0.710	0.336
9	2	3200	2874	0.0015	0.00073	751	1.110	0.525	1.776	0.840
10	41920.8	3614	0.0012	0.00058	50%	2.209	1.045	2.122	1.004
11	41920.8	3614	0.0012	0.00058	90%	0.442	0.209	0.424	0.201
12	41920.8	3614	0.0012	0.00058	901	0.442	0.209	0.424	0.201
13	3	3200	2874	0.0015	0.00073	90t	0.444	0.210	0.710	0.336
14	3	3200	'2874	0.0015	0.00073	901	0.444	0.210	0.710	0.336
15	3	3200	2874	0.0015	0.00073	90%	0.444	0.210	0.710	0,336
16	3	3200	2874	0.0015	0.00073	75%	1.110	0.525	1.776	0.840
17	51394.4	3614	0.0012	0.00058	501	2.209	1.045	1.540	0.729
18	51394.4	3614	0.0012	0.00058	90%	0.442	0.209	0.308	0.146
19	51394.4	3614	0.0012	0.00058	901	0.442	0.209	0.308	0.146
20(a)	51394.4	3614	0.0012	0.00058	90%	0.442	0.209	0.308	0.146
20(b)	51394.4	3614	0.0012	0.00058	99%	0.044	0.021	0.031	0.015
21	1,4,6	4698.4	3614	0.0012	0.00058	901	0.442	0.209	1.038	0.491
22(a)	1,4,6	4698.4	3614	0.0012	0.00058	90%	0.442	0.209	1.038	0.491
22(b)	1,4,6	4698.4	3614	0.0012	0.00058	99%	0.044	0.021	0.104	0.049
23	1,4,5,6	6092.8	3614	0.0012	0.00058	90%	0.442	0.209	1.346	0,637
24	1,4,5,6	6092.8	3614	0.0012	0.00058	90%	0.442	0.209	1.346	0.637
25	1,4,5,6	6092.8	3614	0.0012	0.00058	90%	0.442	0.209	1.346	0.637
26	1,4,5,6	6092.8	3614	0.0012	0.00058	751	1.105	0.522	3.365	1.592
27	62219.2	3614	0.0012	0.00058	50%	2.209	1.045	2,451	1.159
28	62219.2	3614	0.0012	0.00058	90%	0.442	0.209	0,490	0.232
29	62219.2	3614	0.0012	0.00058	901	0.442	0.209	0.490	0.232
								35.591	16.572
PILE EMISSION =								9.200	3.220
TOTAL (tons/yr) =								44.791	19.792

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TABLE 2 7.! J, T 2

AS-BUILT
AVERAGE AFNUkL PM10 EMISSION RATES (lb/hr)

20,000,000 TONS PER YKAR
 THROUGHPUT

POINT	EMISSION N0.1	No. 2.	No.3.	Xo. 4 -	-No..5 -	No,-.6 -
1	0.214	0.214	0.214			
2	0.210	0.210	0.210			
3	0.210	0.210	0.210			
4(a)	0.210	0.210	0.210			
4(b)	0.021	0.021	0.021			
5	0.210	0.210	0.210			
6	0.210	0.210	0.210			
7	0.210					
8	0.210					
9	0.525					
10	1.045					
11	0,209					
12	0.209					
13	0.210					
14	0.210					
15	0.210					
16	0.525					
17	1.045					
18	0.209					
19	0.209					
20(a)	0.209					
20(b)	0.021					
21	0.209	0.209	0.209			
22(a)	0.209	0.209	0.209			
22(b)	0.021	0.021	0.021			
23	0.209	0.209	0.209	0.209		
24	0.209	0.209	0.209	0.209		
25	0.209	0.209	0.209	0.209		
26	0.522	0.522	0.522	0.522		
27	1.045					
28	0.209					
29	0.209					
SUBTOTAL =	2.874	2.230	2.440	3.051	2.842	3.051
EMISSION =	0.735	0.735	0.735	0.735	0.735	0.735
(tons/yr) =	3.609	2.965	3.175	3.786	3.577	3.786

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TABLE 3 El

AS-BUILT
AVERAGE kNHUAL PH10 EMISSION RATES (lb/hr)

20,000,000 TONS PER YEKR
THROUGHPUT

MODE	HOURLY EMISSION (lb/hr)	HOURS OF OPERATION 1988 (hr)	ANNUAL EMISSION (ton)
1	2.874	558.4	0.802
2	2.230	3200	3.568
3	2.440	3200	3.904
4	3.051	1920.8	2.930
5	2.842	1394.4	1.982
6	3.051	2219.2	3.386

SUBTOTAL = 16.572
PILE EMISSION = 3.220

TOTAL (tons/yr) = 19.792

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TABLE 4 E 4

AS-BUILT
kV M GE ANNUAL TSP EMISSION RATES (lb/hr)

20,000,000 TONS PER YEAR
THROUGHPUT

EMISSION POINT	No.1	No.2	Xo.3	No.4	Ko.5	Xo.6
1	0.612	0.612	0.612			
2	0.444	0.444	0.444			
3	0.444	0.444	0.444			
4(a)	0.444	0.444	0.444			
4(b)	0.044	0.044	0.044			
5	0.444	0.444	0,444			
6	0.444	0.444	0.444			
7	0.444					
8	0.444					
9	1.110					
10	2.209					
11	0.442					
12	0.442					
13	0.444					
14	0.444					
15	0.444					
16	1.110					
17	2.209					
18	0.442					
19	0.442					
20(a)	0.442					
20(b)	0.044					
21	0.442	0.442	0.442			
22(a)	0.442	0.442	0.442			
22(b)	0.044	0.044	0.044			
23	0.442	0.442	0.442	0.442		
24	0.442	0.442	0.442	0.442		
25	0.442	0.442	0.442	0.442		
26	1.105	1.105	1.105	1.105		
27	2.209					
28	0.442					
29	0.442					
SUBTOTAL =	6.234	4.874	5.318	6.451	6.009	6.451
ERISSION =	2.100	2.100	2.100	2.100	2.100	2.100
(tons/yr) =	8.334	6.974	7.418	8.551	8.109	8.551

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TABLE 5 T T. F 5

AS-BUILT
AVERAGE "NUAL TSP EXISSION RATES (tons/yr)

20,000,000 TONS PER YEAR
THROUGHPUT

MODE	AVERAGE HOURLY EMISSION (lb/hr)	HOURS OF OPERATION _1988 (br)	ANNUAL EMISSION (ton)
1	6.234	558.4	1.741
2	4.874	3200	7.799
3	5.318	3200	8.509
4	6.451	1920.8	6.195
5	6.009	1394.4	4.190
6	6.451	2219.2	7.158

SUBTOTAL = 35.591
PILE EHISSIOH = 9.200

TOTAL (tons'/yr) = 44.791

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Ac!---z:bcn TechrCICgISS, LLC
C@--nter Sij@a

Technical Data Sheet

Product FTH-100

RCRA Metals

met&_ Result -EPA Me

Arsenic <1.0 206.2
Barium <1.0 200.7
Cadmium <0.05 200.7
Chmmium <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 daI2 reported in mg/(

Technical Data Sheet

Product: FTH- I 00

Semi-Volatile Org=ics by MetLwd 8270

CAS# Cc=gund - - Concentmtion (ugmal

62-75-9 N-Nitvsodimethylamine 8,000 u
110-86-1 ?yridinu 8,000 u
97-63-2 Ethyl MeAcryLlItu 8,000 u
123-63-7 ?araldahydc 3,000 u
109-06-8 2-Picali= 16,000 u
10$95-95-6 Nitmsomethylethylarrine 8,000 u
66-27-3 methyl 8,000 u
108-95-14, Phcaol 8,000 u
55-18-5 N-N-hroso& 8,000 u
62-50-5 Ethyl MdhAnCsUff=ts 8,000 u
62-53-3 Aailine 8,000 u
76-01-7 Pentichloroetiume 8,000 u
111-44-4 bis (2-C2doroctIVI) ether 16,000 u
95-57-8 2-Chlorophenal 8,000 u
541-73-1 l,3-DicWorube=cnc 8.000 u
100-44-7 Benzyl cbloride 8,000 u
106-46-7 1,4_DichIorobe=ene 8,000 u
100-51-6 Bmzy) alcohol 8,000 u
95-50-1 1,2-Dichlomb==e 8,000 u
95-48-7 2-Me-thylphcaol 87000 u
39638-3.2-9 bis (2-Chloroisoprupyl) ether 81000 u
109-39-4 3-Methylpheml 8,000 Ti
106A4-5. 4-Methylphenol 8,000 u
930-55-2 N-Nlitrosppyrrolidi= 8,000 u
59-89-2 N-Nitro3omorpholine 8,000 u
98-86-2 Acetophenonc 8,000 u
621-64-7 N-Nitrow-Di-n-Propylarxitte 8,000 u
636-21-5 o-Toluidine hydrochloride 3,000 LT
67-72-1 H=achI=8ths= 81000 u
98-95-3 Nitrob==e 8,000 u

.-Mjl IMIZ:01 DOU-sz--orly

Product: FTH- I 00

Semi-Volatile Organics by Method 8270

CAS# CopMund CoacgLtition (UZT.,q)

100-75-4 N-Nitwopipaddine 8,000 u
78-59-1 rone 8,000 u
98-75-5 2-Nitropbanol 8.000 u
105-67-9 2,4-Dimethyl ot 8,000 u
108-70-3 1.3,5-Tdr. mbcaze= 8,000 u
98-37-3 Ekmzzl chLoridc 81000 Ti
65-85-0 Benzoic add 990 1
111-91-1 bis (2-CWorcethomy) mediane 8,000 Ti
120-93-2 274-Dichlmapheml 8,000 u
120-82-1 1,2,4-TrichI__'L__ Z=C 8,000 u
91-20-3 NapthAmc 8,000 u
106-47-9 4-Chlomani@ 8,000 u
97-65-0 2.6-Dichloroph=1 16,000 u
95-54-5 o-Phenylemedimmine 8,000 u
122-09-8 dimethylphcaylethybunine 8,OW u
1888-71-7 Hexach1upiinupenc 8,000 u
87-68-3 I4cx=Worobut&&e= 8,000 u
87-61-6 f,2,3-TrIcUorab==e 8,000 Ti
9847-7 -Bcnwrichloride 1 rj,000 u
924-16-3 N-Nitw3o-di-n-butyUmffic 3,000 u
59-50-7 4-Chloro-3-methylphenol 8,000 u
106-50-3 P-?hcnyIencdi;dnine 8,000 Ti
94-59-7 Sidole 8,000 u
106-50-3 m-Phanylenediamine spooo u
91-57--6 2-MckInaphth9=,a 8,000 u
90-12-0 1-MdhyhuqhfbaI=c 87000 u
95-94-3 1,2,4.5-TctmchIordb=zcoc 8,000 u
634-90-2 1,2,3,5-Tet=hImobcnzew 8,000 u
77-47-4 JJv=hWrvcycIop=ta&=c 8,000 Ti
88-06-2 2.4,6-Trichlorupb=ol 161000 u
95,95-4 2,4,5-TricbI=phctoI 16,000 u
120-58-1 laosafrole 16,000 u
91-58-1 2-M 8,000 u
90-13-1 I-Chlo aphibalcnc 3,000 u

Product: FTH- I 00

Semi-Volatile Organicsby Method 8270

CAs# Comip-Qund Concentration fux/K-g)

634-66-2 1 A3,4-Tatrachlorobem= 8,000 u
83-74-4 2-Niuvauffi= 8,000 u
130-15-4 1,4-Nap&hcquin= 16,000 u
100,25-4 1,4-Dinitmbenzene 16,000 u
131-11-3 'Dimethyl Fbf'nalate 8,000 u
20&96-8 Ac=aphthyleze 8,000 u
99-09-2 3-Nitcanffine 16,000 u
83-3.2-9 Acensphthene 8,000 u
51-29-5 2.4-nini=phmul 32,000 u
100-02-7 4-Nkmphenol 8,000 u
132-64-9 8,000 u
121-14-2 2,4-Dinitrotoluane 8,000 u
608-93-5 pent2CwCrvb== 8,000 u
134-32-7 2-Nuphthytmina 16,000 u
606-20-2 2,6-Din?a*toIucnc 8,000 Ti
134-32-.7 1 -N2phthyLimine 16)000 u
58-90-2 2,3,4,r5-TcftwbIm-uph=oI 16,000 u
84-66-2 Diethylp&JWatc 8,000 u
297-97.2 8,000 u
7005-72-3 4-CbIorapheqyI-ph=yicthcr 8,000 Ti
86-73-7 FIUOn= 81000 u
10"1-6 4-NitmaulUnc 16,000 u
99-55-8 5-Nifto-o-toluidim 16,000 u
534-52-1 4,6-Dinib-o.2-mcthyjph=oI 24,000 u
86-3D-6 N-N:_drosodiph=ybgtinc (1) 8,000 u
122-39-4 Diphmybmine 8,000 u
99-35-4 1,3,5-Trinitrobenzanc 16,000 u
1M-66-7 1,2.DiphenyIhy&a-zinc 8,000 u

Product: FTH- I 00

Semi-Volatilc Organics by Method 8270

u- Lxgcatw c=p=d wu =abmW bw nm dcwct:& The arnple quandration UTnit must be correctc4 for d4utkm and for pemcat molskm
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;tidit-Atod the premcc of a ommpaund tha meets the id=dfx-&4cm critaia but the v=It is Ins
th= ftm =0 quA=ftatWa limit but *,=Lt= dm mm.
B- 7'bis Mg is uwd wt= dw inalyw is found izx the amciated bLmk as wal I as in the samplc. It
lcnms pozibkVp@lc blimk caatmmin- 04 and wam the data u= to takc
acdcnL
E- TbLis flag id=df1= cmupona& whose co=wntz4=s =cced the cali'bruban range of the GC-ANIS
ws&un== fbr the spomfic jiudyw&

tqn-4 Sta/100'i

Technical Data Sheet

Product: FTH-1 00

TCLP Metals

Metals Fzwult - umits EPA Method

Arsenic 0.046 5.0 208.2
Barium -CO.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

All dat-a reported in ppm

'Voo-I BID/303'.4

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

Resu
Calorfflc Content 8,826 STUAb
Reported on an a;s is basis

Product Name: FTH-100 Prepara'tion date: S/f-8/00

SECMON I C14EMICAL PRODUCT AND COMPANY IIIF-NTIFICAT10N .7

PRODUCT NAME: FrH-1 00 MSDS REVISION 001

SYNONYMS: None

DISTRIBUTED BY: Accretion Technologies
300 Busbi= Center Drive, Suits 302
Plftsburgh, PA 15205

PHONE NUMBER: (304) 552-2919

SECTION 2 COMPOSITIONANFORMATION ON INGAMIENTS

Comognent % CAS No. Exposure Limfts

Organic resinz 30-60 Propriet2ry Not w7tabli-shiad
Surfactant blend 1-10 Proprietary Not established
Guar gum 1-10 9000-30-0 Not est2blishad
FaM alcohollfatzy acid 1-10 Pruprfctory Nct established
Water 30-60 773.@!-l 8-6 Not est-abliahed

-SECTION 3 - HAZAR13S IDBMFICATION

EMERGENCYOVERVIEW
Product is a brown liquid with a srighT, bland odor. The product may cause ey
e
irritation. Avoid contact with skin, eyes and clothing. Wear protective goj@
gleS
and gloves when handling thLs product. Wash thoroughly after handling.

POTENTIAL HEALTH EFFECTS

EYES;
Can cause irritaton.

Section 3 continued on next page

Product Narne: FTH-100 Preparation date: 811-6100

SECT10N 3 - HAURDS IDENTIFICATION (=Minued)

SKIN:
Prolonged or repeated contact may slight irritation. Persons with pre-exisdng skin condidons are particularly susceptible.

INGESTION (swallowins):
May cause irrita ion of the mouth and throat, nausea, vomiting and diarrhea.

INHALATION (breathing);
Spray or mist may cause initation to the no4e, throat and lungs. Flersons wit h
pre-existrig lung disorders are particularfy susceptible,

CHRONIC EFFECTS/CARCINOGENICITY:
Thls product (or component) Is no-t listed in IARC Monographs, the NTR Seventh Annual Report or the ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

SF-CTION 4 FIRSTAIDMLASURES

EYE CONTACT:
Rush with large amounts of water for at least 15 minutes, lifting upper and lower licLs occasionally. Get rnedical attention.

SKIN CONTACT:
Wash exposed area with soap and water. Launder contaminated elcrthing before reuse.

INGESTION (sw-allowing):
Immediately drink two large glasses of water. Call a physician, Do NOT induce vomiting unie'ss' instructed to do sio by physician. Never give anything by mouth to an unconscious person.

INHALATION (breiithing):
If affected, move to frouh air.

Product Nama: FTH-l co Preparation datc; 81*6/00

SECTION 5 - FIRE FIG@MNG MEASURES

FLASH POINT: 500" F 0 OW C) FL-AsH POINT METHOD: PMCC

UPPER ExPLoSION UMfT: Unavailabic
LOWEFI EXPLOSiON LIMIT: Unavailable
AUTOIGNITION TEMPERATURE: Unavailable
SEENSITIVITY/SPARK5: Unknown
SENS17VITY/STATIC ELECTFtICITY: Unknown

EXTINGUISHING MEDIA:
Dry chemical, water fog, and regular foam

r-IRE AND EXPLOSION HAZARDS:
None known. Product contains a largi; amount of water, and would not normally bum.

FIRE-FIGHTING EaUIPMENT;
Keep personno-I removed from and upwind. Wear full protective clothing and self-contained breathing apparaWs with full faCg-
piece.

SECMON 6 - ACCIOMTAL RELEASE MEASUFIES

Flersons not vvearing PrOtective equipment shokild be excluded from the area o
f
the spill untfl clean up has been completed. Dike area of spill to prevent apreading and pump liquid to SSIvage tank. Absorb remaining liquid on vermiculite, floor absorbarTt cr Othet 2bsorbent material and shovel iiito containers.

SECT10N 7 - HAN13UNG AN13 STORAGE

HANDUNG:
Avoid cOntact with skin, eyes and clothing- Wash thoroughly af ter handling.

STORAGE:
Keep In closed or covered conTainers when ncrt in use. Store in cool dry plac
e
with adequ.-ft ventilation.

730-@ ato/zlo'd

Product Name: FTH-100 Preparation date: 8/1 6/00

SECTION 8 - WOSURE CONMOLSMERSONAL PROTECTION

RESPIRATORY PROTECTION:
Not required under norrnal conditions.

SKIN PROTECTION:
Wear protective gloves ituch as Neoprene or Suna-N.

EYE PROTECTION:
Chernical,osplash gaggfos in compliance wfth OSHA regulailons are advized.

OTHER PROTECTION:
Norrnal wcrk clcthing covering arms and logs are recommended.

ENC31NEERING CONTROLS:
Providesufficient ventilation to mairTtain exposure below level of overexposur
e.

SEC I !ON 9 :- PHYSICAL AND CHEMICAL PROPEmlES

APPEARANCE: Brown liquid @ 68' F (20' C)
ODOR: Slight bland
SPECIFIC GRAVITY: >0.9$8
VAPOR PRESSUFIE (mm Hg): 17.5 @ 68" F (20" C)
VAPOR DENSITY (Air = i).- Lighter then air
INITIAL BOJUNG POINT: 21 2" F (1 000 C)
EVAPORATION RATE
(Ethyl E-ther = 1)
SOLUBILJTY in WATER: Dispersible
VOLATILE Unavailable
pH: - 5-7
pH METHOD: Unavailable

via-i

F'roduct Name: FTH-1 00 Preparation date: 81116/00

SECTION IO - STABIUTY AND REACTIVtTY

STABILrTY icanditions to avoid):
Stable under nonnal conditions.

INCOMPATIBILMES (materiWs to avoid):
Avoid corTtact wft strong oxfdizinSI agents and strong mineral acids.

DECOMPOSITION:
Not available.

HAZAfiDOUS POLYMEFilZATION:
Can riot accur.

$RCTION I 1 - TOYJCOLOGICAL INFORMATION

No data available.

SEC-nON 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 of dirt roads. Tne rnixture was allowed to dry, then mixed with water and allowed to stand. The water was then tested in aquatic toxicity nudies, anct found to be non-toxicto Dophnia magna.

SECTION 13 - DI-SPOSAL CONSIDERATIONS

Incineration 1:3 ..The recommended disposal rnethad for all chemical wastes. Ma-terial collected an absorbtpnt materlal may be deposited In a landfill in accordance with all applicable local. =te and federal regulatlons.

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

SECTION 14 - TRANSPORT INFORMATION

Product Name: FTH-100 Preparation date: 8/1""6/00

Not regulated under current DOT, IMO, or (CAO regulations.
SECTION 15 - AMULATORY INFORMATION

TSCA INFORMATION:
All componeffts in this product are in compliance with TSCA Inventory requiremenr.s.

SARA 31 3 INFORMATION:
SARA requires submission iof annual reports of release of tnxic chernicals, th at
appear In 40 CFR .372. This information nwst be inchided in all MSIDS ftt are copied and distributad for tf@ mearial.

Components present in thi3 product at a level that could requirs reporting und er
the statute are: None

SECTION 16 - OTHF-R INFORMA11ON

HAZARD RATING:
HEALTH I 0 - LEAST
FiRrz 1 1 - SUGHT
REACTIVITY 0 2 - MODERATE
OTHER - 3 - HIGH
4 - EXTREME
HAZARD RATING MMOD: NFPA

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

rne product informatiQn contained herein Is beOevqd to be. ar-curate as of tti o date of the WlaterW Safety
Dtta Sheet and Is pmv(ded without warranty, expresGed " Implied. x3 w the rQsu fts crf use of this
Inform2flan or the product to which it relatas. Recloknt amumes all mponsibil i-ty for the um of this
iihfomuMon and the um (alone ar In combinadon wfth soy other productj, acrage or dispo3w of the producT,
Including any ru*ultant pertii@al injury at piroperty daffiage.

*END OF REPORT"

TC cal Data Sheet

Product: FTH- I 00

Volatfle Organics by Method 8240

ca@ CgMund colicent-i-tion (twu

74-87-3 Ctammethanc 23 1
74-83-9 26' u
75-01-4 Vinyl chlmide 53 u
75-00-3 Chkwoedme 53 u
75-09-2 Mathylcae chloride 1,700 BE
67-64-1 Acetone 2,800 BE
75-15-0 Carbon dLmMde 22
75-33-4 I'l-Dicbf mth= 26
75-34-3 1,1-Di - --- -n-a 26
540-59-0 1.2-Dich1mvethm (toW) 26 u
67-66-3 Chlomform 27
107-06-2 1,2-DicbIa=tb=c 26 u
73-93-3 2-Butanone 830 B
71-55-6 1,1pl-TfiChI0mCdm= 26 u
56-23-5 Carbon rctacblo4da 26 u
108-05-4 Vinyl accbtte 53 u
75-27-4 Bro 26 u
78-87-5 1.2-Dichl 26 u
10061-01-5 cis-1,3-Dichl ppopane 26 v
79-01-6 Trichloructh=e 26 u
12448-1 Dibro= ane 26 u
79-00-5 I'l .2-Trfcbloroathane 26 u
71-43-2 Bcnzme 150
10061-02-6 Tram-1,3-Di OFOPC= 26 u
110-75-8 2-Chlmodlaylvinylether 53 Ti
75-25-2 Br=ofo= 53 u
108-10-1 4-Methyl-2-Pentmone 280
591-78.6 2-Hcxwone 79
127-1&4 Tewachloructhace 26 u
79-34-5 1.1,42-Tetrachlaroerbane 53 u

Product: FTH- I 00

Volatile Organics by mcthod &24o

CA94 Comvo=d,- Cancentmian (uz/Kgl

10848-3 TQIUZW 1,300 E
109-90-7 Chi - - 26 u
100-41-4 Bthylm=c 360
100-42-5 Sryrc= 63
1330-20-7 Total xyl=cs 340
74-88-4 am 2fle- 53 u
107-02-8 AcroLdn 640 u
107-13-1 Acrylonitrfle 26 T-T
75-69-4 Tricwcm M n 26 11
107-05-1 34MMrcpropme 79 u
7&13-1 1,1,2--rrkh1am-l,2.2-f-Tj b*"e 53 u
354-59-5 1,1.1-Trkh1oro-2,2 53 u
74-95-3 Dlbr=cmcth= 53 u
4170-30-3 Cwwtaidehyde 530 u
106-93-4 J,2-Dftirnie+'ham-e 26 u
630-20-6 41,1,24reft=121crodhane 26 u
764-71-0 cis-1,4-Dichloto-2-bu=e 79 u
96-18-4 1,2,3-Trichloropropane 79 u
764-71-0 ft=s-M-Dichloro-2-butme 79 u
9&18-4 EdaytWotbacrylatc 53 u
96-12-8 1,2-Di-bmmo-3-cb1mvV*pwe 53 u

u- Tn-41tows mup=d wa amdy=d but mc dctmtc& The saaMle qi=tibadun liftfit m= b
c
c cult L, W -1 for =a for p=Cw maistm
j- cam an csftzmd va= This ft is used caer wh= coom*ifign da=cmftdcn fQr
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than the ==pie - - - - i1c3dion IL-Bit bm smxter thm tem.
B- 7bis Mg is uW whea the analyte is fammi in the asociated blank as well as i
n the sarapte- It
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El- 7%ix && idemELrm com vrho" ccuc=uzdous exoccd dm calibrati= rdage cithe GC
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lr4uum=t for tbc SPCGMC. awlysi&

Technical Data Sheet

Product: FTH-1 00

Extractable Organic Halides in Soil
by EPA 6M4-U408

LeA Detection Lima RgSutt
EOH in soil 70mog <70mgikg

Reported on dry weight bal-ii-5

Technical Data Sheet

Product: FTH-100

Polynuclear Aromafic Hydrocarbons by EPA Method 62518270C

Commmd C=C=tMdan (Ugffal-, Flag

Ac=anh..tj3p"C r,1003000 u
<100,000 ti
<100,000 u
<100,000 u
(a) virew <100,000 Ti
Bcam (b) <1007000 u
Bcm (gjli) PWkm <100,000 Ti
B= (k) ltlhcma <100,000 u
Cbrysenr_ <IKOOO u
DU== (ah) <100,000 u
Fluamnthcna <100,000 Ti
Fluor= <100,000 u
Pno (1.2,3-oA) pyrme <100,000 Ti
Naphtbalene <100.000 u
PhCn-xntbr=c <100,000 u
PYM= <100,000 Ti

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.d;cutcdthopmocceofacompoundthumccuthe mdficadmIlrit A-battheretultislass
then tho ==tplc - "Antfudw Ualb ba pcatcr thm zaa.
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he sample- It
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zso-i